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AU SABLE FORKS FLOOD WALL PROJECT

HAMLET OF AU SABLE FORKS, TOWN OF JAY, ESSEX COUNTY, NEW YORK

ENVIRONMENTAL ASSESSMENT

New York State Governor's Office of Storm Recovery
New York State Homes and Community Renewal
U.S. Department of Housing and Urban Development

August 13, 2020

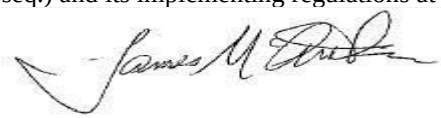
DRAFT

AU SABLE FORKS FLOOD WALL PROJECT

Environmental Assessment

August 13, 2020

Project Name:	Au Sable Forks Flood Wall Project
Project Location:	14233 and 14235 NYS Route 9N Hamlet of Au Sable Forks, Town of Jay, Essex County, New York
Federal Agency:	US Department of Housing and Urban Development
Responsible Entity:	New York State Homes and Community Renewal (HCR) Governor's Office of Storm Recovery (GOSR)
Responsible Agency's Certifying Officer:	James McAllister, Certifying Environmental Officer Governor's Office of Storm Recovery 500 Bi-County Boulevard, Suite 300 Farmingdale, NY 11735 (646) 256-9485; James.McAllister@stormrecovery.ny.gov
Project Sponsor:	Essex County
Primary Contact:	Anna Reynolds, Director Essex County Community Resources 7533 Court Street, P.O. Box 217 Elizabethtown, New York 12932 Phone: (518) 873-3630 Email: areynolds@co.essex.ny.us
Project NEPA Classification:	24 CFR 58.36 (Environmental Assessment)

Environmental Finding:	☒ Finding of No Significant Impact - The project will not result in a significant impact on the quality of the human environment.
	☐ Finding of Significant Impact - The project may significantly affect the quality of the human environment.
Certification	The undersigned hereby certifies that New York State Homes and Community Renewal has conducted an environmental review of the project identified above and prepared the attached environmental review record in compliance with all applicable provisions of the National Environmental Policy Act of 1969, as amended (42 USC Sec. 4321 et seq.) and its implementing regulations at 24 CFR Part 58.
Signature	 James McAllister

Environmental Assessment Prepared By:	Tectonic Engineering & Surveying PO Box 37, 70 Pleasant Hill Road Mountainville, NY 10953

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CERTIFICATION OF NEPA CLASSIFICATION

It is the finding of the New York State Housing Trust Fund Corporation that the activity(ies) proposed in this 2020 CDBG-DR project, Au Sable Forks Flood Wall Project, are:
Project Year Project Name

Check the applicable classification.

☐ Exempt as defined in 24 CFR 58.34 (a).

☐ Categorically Excluded as defined in 24 CFR 58.35(b).

☐ Categorically Excluded as defined in 24 CFR 58.35(a) and no activities are affected by federal environmental statues and executive orders [i.e., exempt under 58.34(a)(12)].

☐ Categorically Excluded as defined in 24 CFR 58.35(a) and some activities are affected by federal environmental statues and executive orders.

☒ "Other" neither exempt (24 CFR 58.34(a)) nor categorically excluded (24 CFR 58.35).

☒ Part or all of the project is located in an area identified as a floodplain or wetland. For projects located in a floodplain or wetland, evidence of compliance with Executive Orders 11988 and/or 11990 is required.

Signature of Certifying Officer	August 13, 2020 Date
James McAllister Print Name	Certifying Officer Title

DRAFT

CERTIFICATION OF SEQRA CLASSIFICATION

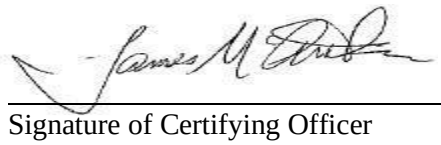
It is the finding of the New York State Housing Trust Fund Corporation that the activity(ies) proposed in this 2020 CDBG-DR project, Au Sable Forks Flood Wall Project, are:
Project Year Project Name

Check the applicable classification:

- ☐ Type I Action (6NYCRR Section 617.4)
- ☒ Type II Action (6NYCRR Section 617.5)
- ☐ Unlisted Action (not Type I or Type II Action)

Check if applicable:

- ☐ Environmental Impact Statement (EIS) Prepared
- ☐ Draft EIS
- ☐ Final EIS



Signature of Certifying Officer — August 13, 2020 (Date)

James McAllister (Print Name) — Certifying Officer (Title)

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]**:**
Essex County is requesting CDBG-DR funding for the Au Sable Forks Flood Wall Project (Project) which is located on the south bank of the West Branch Ausable River immediately west of the bridge above the West Branch Ausable River on NY-9N (14233 and 14235 NYS Route 9N), hamlet of Au Sable Forks, Town of Jay, Essex County, New York. The Project involves the installation of approximately 185 linear feet of reinforced concrete flood wall ranging in height above grade from a minimum of 3 feet to a maximum of 5.9 feet, approximately 210 linear feet of a berm ranging in height from 0 feet to 3 feet, stormwater improvements with a backflow prevention outfall, and a sump pump adequate to handle stormwater flows that may get trapped behind the wall during a river flood event. The wall and berm will provide protection for approximately 6 to 7 buildings bound to the north by the West Branch of the Ausable River and the Town's sanitary sewer pump station that floods spilling sanitary waste into the Au Sable River. Additionally, the wall and berm will provide the erosion and sedimentation improvements. Project location maps are included in **Attachment 1**. Project design plans are included in **Attachment 2**.

The proposed flood wall and berm are aligned to be located within the ineffective flow area created by the bridge opening and buildings to limit impacts to water surface elevation and velocity. A Hydraulic Engineering Center River Analysis System (HEC-RAS) model was developed for the Project utilizing adjusted USGS Stream Stats estimated mean annual flows from approximately 1924 to 2015. The USGS Stream Stats flow estimates for the West Branch were increased by approximately 20% based on a more detailed study of the flow record summarized in **Attachment 3** and completed by ESPC Civil and Environmental Engineering, Fitzgerald Environmental Associates, LLC, and Community Roots, on March 31, 2017. In summary, the USGS Gauge near Au Sable Forks (#4275500) was statistically analyzed to determine the various design flow events and compared to the Stream Stats estimate at the same location as the USGS Gauge.

The adjusted Q10 (streamflow at this station has been as high as this only 10% of the time) and Q25 (streamflow at this station has been as high as this only 25% of the time) flows for the West Branch utilized in the HEC-RAS model were estimated at 8,800 cubic feet per second (CFS) and 10,800 CFS, respectively. The Q25 HEC-RAS model results were utilized to determine the elevations for the top of the floodwall and berm. The Q10 and Q25 HEC-RAS modeling results showed negligible water surface and velocity increases due to the proposed Project. The Q10 estimated water surface elevation increased by 0.00 feet to 0.04 feet, and the cross-sectional velocity only increased by 0.05 feet per second just at the bridge opening. The Q25 estimated water surface elevation increased by 0.02 feet to 0.03 feet within the Project area, and the cross-sectional velocity only increased by 0.02 feet per second approaching the bridge (**Attachments 3, 4 and 5)**.

The updated HEC-RAS model shows that there will be minimal impacts to the water surface elevation and velocity as a result of the barrier while reducing the impacts of flooding at this location and locations downstream by maintaining the flows within the existing river channel, thereby eliminating that source of erosion and sedimentation. The proposed flood barrier will not modify the existing flow patterns and will not create adverse impacts to the river flows or aesthetics. No work will be completed in the floodway (**Attachments 4 and 5**).

The West Branch Ausable River is a National Wild and Scenic River. Because the wall and berm will be adjacent to the river, a variance is required from Adirondack Park Association (APA) prior to construction. As part of the APA variance process, a public notice regarding the request for a variance and a remote public meeting was held in July 2020. No public comments were received by APA regarding the variance. The APA anticipates issuing the variance in mid-November. Tree removal is required for the construction of wall and berm. The project area is in proximity of the northern long-eared bat (NLEB), a NYS and USFWS listed threatened Species and USFWS listed endangered Indiana bat (IB). Therefore, trees must be cut between November 1 and March 31 when bats are in hibernacula to prevent any take. If trees need

to be cut outside of this timeframe, the New York State Department of Environmental Conservation (NYSDEC) Division of Wildlife and USFWS need to be consulted prior to tree removal. USFWS issued section 4(d) of the Endangered Species Act of 1973 (Act), as amended, for the NLEB and that provides measures that are necessary and advisable to provide for the conservation of the NLEB. The 4(d) rule allows incidental take of the NLEB outside the hibernacula such as which could occur when trees are removed between April 1 through October 31 of any given year. If trees need to be removed during the active season of the NLEB, USFWS must be consulted using the 4(d) rule procedures. There is no 4(d) for the IB and therefore, no incidental take. If trees cannot be removed between November 1 and March 31, an emergent survey for the IB must be completed and provided to the USFWS and USFWS consulted prior to tree removal. NYSDEC approval and USFWS concurrence is required prior to any tree removal outside of November 1 and March 31 of any given year.

Permits from the NYSDEC and Army Corps of Engineers are required before construction can begin. Additionally, easements must be obtained from private property owners.

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:
During Hurricane Irene and Tropical Storm Lee Au Sable Forks was particularly hit hard because debris including trees accumulated on the upstream side of the Jersey Bridge. This caused water to back up and find a path around the obstructed bridge. The river overtopped its banks and ran along Main Street, flooding houses and businesses located well out of the mapped FEMA 500-year floodplain. Multiple businesses along Main Street in Au Sable Forks, lost thousands of dollars of inventory and/or were forced to close for a prolonged period of time. The hamlet is located at the confluence of the East and West Branch of the Ausable River making it prone to flooding as was experienced during Hurricane Irene and Tropical Storm Lee.

The purpose of the proposed Project is to decrease flooding in the Hamlet of Au Sable and provide flood protection for the buildings located on the southern bank of the West Branch on the upstream side of the Main Street Bridge in the Hamlet of Au Sable Forks. More specifically, the Project will provide protection for approximately 6 to 7 buildings bound to the north by the West Branch of the Ausable River, to the east by Main Street, to the south by Forge Street, and to the west by residential properties that adjoin the West Branch. Businesses contained within these buildings include a law office, two hair salons, a bar, a clothing store, a liquor store, and a post office. In addition to the erosion and sedimentation improvements, the proposed flood barrier will provide protection for the Town's sanitary sewer pump station that periodically floods spilling sanitary waste into the Au Sable River thereby reducing river pollution. Implementation of the Project will lead to decreased risk of future flooding, protection of critical infrastructure, and will help protect public and private assets from future flood and debris damage.

Existing Conditions and Trends [24 CFR 58.40(a)]:
Au Sable Forks is a hamlet in Clinton County and Essex County, New York. The Ausable River drains a watershed area of 234 square miles and originates on the north slope of Mount Marcy in the Town of Keene, New York. It flows north for approximately 36 miles before joining the East Branch to form the Ausable River at Au Sable Forks. The mainstem Ausable River flows generally northeast before emptying into Lake Champlain in the Town of Au Sable, New York.

During Hurricane Irene and Tropical Storm Lee, and in many previous and subsequent events, the hamlet of Au Sable Forks suffered flood damage arising from poor stormwater drainage as well as riverine flooding. The hamlet is located at the confluence of the East and West Branches of the Ausable River, so flood impacts are exacerbated due to the hamlet's geographic setting.

As a result of Hurricane Irene and previous storms, such as occurred in 1996, the hamlet has had many buyouts, home elevations, and other changes to reduce flood risk. However, Hurricane Irene demonstrated

that even properties located outside the 500-year floodplain (as defined by FEMA) can be subject to inundation. Debris jams on bridges caused flooding down Main Street, and other structure suffered damage to due surface runoff (poor storm drainage). Flooding is a recurring problem in parts of the hamlet, disrupting business and damaging property. The proposed Project will help protect life and safety throughout the hamlet of Au Sable Forks by protecting residents from flood impacts.

In the past, actions were taken to prevent flooding in the hamlet that have been unsuccessful including sandbags and pumping flood waters. The construction of a wall and berm will provide a permanent remedy to limit the extent and magnitude of the periodic flooding in the hamlet.

Funding Information
Estimated Total HUD Funded Amount: $925,962.62
Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]: $925,962.62

Compliance with 24 CFR 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	**Compliance determinations**
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6		
Airport Hazards 24 CFR Part 51 Subpart D	Yes ☐ No ☒	Based on guidance provided by HUD via Fact Sheet #D1[1], the National Plan of Integrated Airport Systems (NPIAS) was reviewed for civilian, commercial service and military airports located near the Project area. An Airport Hazards map showing the Project area, airport locations, heliport locations, and their associated buffers is included in **Attachment 6**. There are no civilian, commercial service airports located within 2,500 feet of the proposed Project area. There are no military airports located within 15,000 feet of the Project area. No additional review is required.
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes ☐ No ☒	Based on the USFWS Coastal Barrier Resources System Map[2], the Project is not located in, or immediately adjacent to (within 150 feet), a Coastal Barrier Resource System Unit or Otherwise Protected Area. The USFWS Coastal Barrier Resources System Map is included in **Attachment 6**. No additional review is required.
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes ☐ No ☒	The Project is located within the 100-year floodplain (FIRM 3602650004D, effective 6/17/2002), as documented in the FEMA National Flood Hazard Layer Map included in *Appendix I* of **Attachment 7**. However, proof of National Flood Insurance

[1] Fact Sheet #D1: Siting HUD-Assisted Projects in Accident Potential Zones. https://www.michigan.gov/documents/mshda/mshda_cd_nsp2_air_accident_315724_7.pdf

[2] USFWS Coastal Barrier Resources System mapper. https://www.fws.gov/ecological-services/habitat-conservation/cbra/maps/mapper.html

Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]		Program insurance is not required, as the proposed Project does not involve insurable structures. No additional review is required.
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5		
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes No ☐ ☒	The proposed Project is located in Essex County, which is listed as a current attainment county for particulate matter ($PM_{2.5}$ or PM_{10}), carbon monoxide, and ozone. Therefore, a conformity and screening analysis was not performed according to the requirements of 40 CFR 93, Subpart B (federal general conformity regulations). The proposed Project would not generate significant levels of vehicular traffic; therefore, no exceedances of the National Ambient Air Quality Standard (NAAQS) associated with carbon monoxide (CO) or particulate matter (PM) is anticipated occur. The proposed Project will not result in siting any new source of air pollutants. The proposed Project will not adversely affect the State Implementation Plan (SIP). Any air quality impacts would be short-term and localized during construction and, therefore, no significant adverse impacts to air quality are anticipated. However, it is recommended that construction activities are conducted in such a way as to ensure acceptable air quality during these activities (e.g., through minimization of volatile organic compounds and nitrogen oxides emissions, mindful operation of gas-powered construction equipment to avoid prolonged idling, or fugitive dust management during construction). It is also recommended that low-VOC materials and inventory and energy star efficient equipment are used, as practicable. *Idling Restriction*. In addition to adhering to the local law restricting unnecessary idling on roadways, on-site vehicle idle time will also be restricted to five minutes for all equipment and vehicles that are not using their engines to operate a loading, unloading, or processing device (e.g., concrete mixing trucks) or otherwise required for the proper operation of the engine. *Utilization of Newer Equipment*. U.S. Environmental Protection Agency's (EPA) Tier 1 through 4 standards for non-road engines regulates the emission of criteria pollutants from new engines,

Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93		including PM, CO, NOx, and hydrocarbons (HC). All non-road construction equipment with a power rating of 50 horsepower (hp) or greater would meet at least the Tier 2 emissions standard to the extent practicable. *Best Available Tailpipe Reduction Technologies*. Non-road diesel engines with a power rating of 50 hp or greater and controlled truck fleets (i.e., truck fleets under long-term contract with the Project) including but not limited to concrete mixing and pumping trucks would utilize the best available tailpipe (BAT) technology for reducing DPM emissions. Diesel particulate filters (DPFs) have been identified as being the tailpipe technology currently proven to have the highest reduction capability. Construction contracts would specify that all diesel non-road engines rated at 50 hp or greater would utilize DPFs, either installed by the original equipment manufacturer (OEM) or retrofitted. Retrofitted DPFs must be verified by EPA. Active DPFs or other technologies proven to achieve an equivalent reduction may also be used.
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes ☐ No ☒	The Project is not located within the New York State Coastal Boundary[3]; the Project is not located within a Local Waterfront Revitalization Program Community as shown in the NYS Department of State (DOS) Coastal Boundary map, included as part of **Attachment 6**. No additional review is required.
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes ☐ No ☒	The Project area is not listed on an EPA Superfund National Priorities or CERCLA list or equivalent State list. A review of the EPA Facilities Database provides no indication of past uses of the Project area that could have contaminated the Project area, or potentially adversely affect the occupants of the Project area. The Project area is not located within 3,000 feet of a toxic or solid waste landfill site. The Project area is not listed on the NYSDEC Bulk Storage, Spill Incidents, or Environmental Site Remediation Database. Based on a review of available environmental records for the Project area and surrounding area, the Project area is unlikely to contain hazardous

[3] New York Department of State Geographic Information Gateway. https://appext20.dos.ny.gov/coastal_map_public/map.aspx

Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)		materials, contamination, toxic chemicals and gases, or radioactive substances, which would constitute a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Project area. Therefore, a Phase I Environmental Site Assessment (ESA) or Phase II Investigation is not warranted. Maps, EPA documents, and NYSDEC documents are included in **Attachment 8**. No additional review is required.
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes ☒ No ☐	A formal request was submitted to the New York Natural Heritage Program (NY NHP) for records of threatened or endangered species in the vicinity of the proposed Project. On January 13, 2020, a response was received from the NY NHP stating that their database contained records of rare or state-listed animals or plants, or significant natural communities within the vicinity of the proposed project site. These records indicated that there is a documented winter hibernaculum of the state and federally threatened northern long-eared bat (NLEB) located within two miles from the Project. Also, the NY NHP records request response indicated that the Project is located within 0.5 mile of a documented location of the Appalachian tiger beetle, which is rare in New York and of conservation concern. The NY NHP recommended that the Project be conducted so as to avoid as much possible detrimental impacts, including run-off and erosion to the West Branch Ausable River and its shoreline. The NY NHP records request response is included in **Attachment 9**. To ensure that there are no detrimental impacts to the West Branch Ausable River and its shoreline, the Project will involve the incorporation of Best Management Practices (BMPs) to prevent the potential runoff of construction-related pollutants and sediment. During the course of construction, the work will be conducted in a manner as to prevent or reduce to a minimum any damage to the stream from pollution by debris, sediment, or other foreign material, or from manipulation of equipment and/or materials in or near the stream. The Project will involve the use of silt fence and/or silt sock prior to the commencement of disturbance of the existing ground surface to prevent stormwater runoff from leaving the Project area and entering the West Branch Ausable River. Erosion control structures

Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402		will remain in place until a stable growth of vegetation is present in all disturbed areas. In response to the permit application for the proposed Project, NYSDEC provided jurisdictional comments stating that the NHP identified NLEB, a listed threatened species, near the project rea. Due to the proximity of the bats, if trees need to be cut, it must be done between November 1 and March 31. If trees need to be cut outside of this timeframe, the NYSDEC Division of Wildlife needs to be consulted (**Attachment 9)**. The U.S. Fish and Wildlife Service (USFWS) lists the Indiana bat (federally endangered) and northern long-eared bat (federally threatened) as the only threatened, endangered, proposed, or candidate species that may occur within the boundaries of the proposed Project. The Project requires tree removal in order to install the flood wall. The trees proposed for removal are located on a small strip of forested habitat immediately adjacent to West Branch Ausable River in a developed residential and commercial area. The Project will involve the removal of approximately eight (8) trees, which includes the following: five (5) 7" maple trees, one (1) 26" maple tree, one (1) 8" maple tree, and one (1) clump of ash trees. Several trees that are greater than or equal to 3 inches in diameter may provide suitable roosting habitat for the Indiana bat (IB) and/or northern long-eared bat (NLEB). To minimize potential impacts to the IB and NLEB, tree clearing will take place from November 1 to March 31, which is outside of the active season of the IB and NLEB. Trees that are proposed to be removed are part of a small strip of forested habitat located immediately adjacent to residential and commercial development. Any bats living in the vicinity of the Project area would still be able to breed, feed, and find shelter. Similar habitat (forested creek corridor surrounded by residential and commercial development) is located immediately east and west of the Project area. Bats would not have to fly long distances to get to alternative foraging habitat, as tracts of forested habitat are located along the Ausable River east and west of the proposed Project, as well as immediately north of the Project area. The forested tracts of land

Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402		are accessible via strips of forested habitat along the West Branch Ausable River. Since 1) tree clearing will be conducted when bats are hibernating, 2) the Project will not impact a large area of suitable habitat relative to the surrounding landscape, and 3) the Project will not impact high-quality habitat, a "may affect, not likely to adversely affect" determination is warranted for the NLEB and IB. Project information was submitted to the USFWS on March 5, 2020 for concurrence with the "may affect, not likely to adversely affect" determination for the northern long-eared bat and Indiana bat. A response was received from the USFWS on May 8, 2020, which indicated that the USFWS concurred with GOSR's "may affect, not likely to adversely affect" determination." The USFWS concurrence correspondence and consultation package are included in **Attachment 9**. If tree removal must occur during the active season of bats, both NYSDEC and USFWS must to consulted and approvals and concurrences obtained from the agencies. The National Marine Fisheries Service (NMFS) ESA Section 7 Mapper indicates that the Project is not located within the range of any ESA protected species under the jurisdiction of the NMFS. A NMFS ESA Section 7 Mapper is included in **Attachment 9**.
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes No ☐ ☒	Not applicable. This criterion is applicable to HUD-assisted projects that involve new residential construction, conversion of non-residential buildings to residential use, rehabilitation of residential properties that increase the number of units, or restoration of abandoned properties to habitable condition. The proposed Project does not involve these activities, nor does it involve the introduction of bulk storage of hazardous materials. No additional review is required.
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes No ☐ ☒	The Project is not located within a New York State (NYS) Agricultural District[4] as identified by New York State and the University of Cornell in **Attachment 10**. The USDA NRCS Soil Resource

[4] NYS Agricultural Districts. http://www.agriculture.ny.gov/ap/agservices/agricultural-districts.html

Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658		Report, included in **Attachment 10**, classifies the soil in the Project area as "Farmland of Statewide Significance", which is used to classify soils that do not meet the criteria for prime farmland or prime farmland if drained, but that are high quality soils for agricultural production that can produce fair to good crop yields when managed using sound agricultural practices. The Project is located in a hamlet that is characterized by residential and commercial development. The Project does not involve new construction, acquisition of undeveloped land, or conversion that would convert agricultural land to a non-agricultural use. Therefore, the Project is in compliance with the requirements of the Farmlands Protection Policy Act of 1981. No additional review required.
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes No ☒ ☐	The Project is located within the 100-year floodplain (FIRM 3602650004D, effective 6/17/2002), as documented in the FEMA National Flood Hazard Layer Map included in *Appendix I* of **Attachment 7**. Based on the revised flood barrier plans and elevations provided in the Adirondack Park Association (APA) variance application, the proposed Project is not located in the floodway (**Attachment 11)**. During the course of construction, the work will be conducted in a manner as to prevent or reduce to a minimum any damage to the stream from pollution by debris, sediment, or other foreign material, or from manipulation of equipment and/or materials in or near the stream. Water that is used for wash purposes or other similar operations, which could cause the water to become polluted with sand, silt, cement, oil, or other impurities, will not be returned directly to the stream. The Project will involve the use of silt fence and/or silt sock prior to the commencement of disturbance of the existing ground surface to prevent stormwater runoff from leaving the Project area and entering the West Branch Ausable River. Erosion control structures will remain in place until a stable growth of vegetation is present in all disturbed areas. An 8-step Floodplain Management Determination was completed pursuant to 24 CFR 55.20. See Floodplain Management & Wetlands Protection Determination, annexed hereto as **Attachment 7**. The 8-step process concluded that due to the nature of the proposed action, prohibition of this work

Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55		within a floodplain area is not practicable. Several alternatives were considered to prevent flooding of the hamlet of Au Sable Forks from the West Branch Ausable River including sandbags and pumping flood waters which have been unsuccessful. The floodwall alternative was selected through studies including stream flow modeling. The modeling showed that the flood depth and velocities were too great for natural methods to provide necessary protection. Under the "no action" alternative, a subsequent storm event could result in catastrophic flooding of the community of Au Sable Forks, potentially resulting in the loss of life. Federal financial assistance will support activities representing a long-term public investment in infrastructure that is necessary to protect the community of Au Sable Forks and the well-being of its residents and local economy. The "no action" alternative would provide no protection to the Project area or adjacent community from future flood events, as mitigation would be compromised due to lack of financial support. Thus, the "no action" alternative is not feasible in relation to the desired objective of creating area resiliency to future flooding events. The impacts of the flood wall and berm within the floodplain of the Au Sable have been considered in the design development through modeling to ensure that the structure would not exacerbate flooding up or downstream of the wall and berm. The design and modeling have been reviewed by the APA, NYSDEC and ACOE through the permit application process. All work will be completed in accordance with permit conditions to ensure the protection of the floodplain. Additionally, no equipment will be stored in the floodplain. In accordance with 24 CFR 55.20, on March 14, 2020, the "Notice of Early Public Review of a Proposed Activity in Wetlands and 100-Year Floodplain" was published in the Sun Community News newspaper, with the 15-day period expiring on March 30, 2020. No public comments were received. A "Combined Notice of Finding of No Significant Impact, Notice of Intent to Request Release of Funds, and Final Notice and Public Explanation of a

		Proposed Activity in a 100-Year Floodplain and Wetlands" was published on August 18, 2020.
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800; Tribal notification for new ground disturbance. **Historic Preservation** National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800; Tribal notification for new ground disturbance.	Yes ☐ No ☒	On December 31, 2019, the New York State Historic Preservation Office (SHPO) reviewed the proposed Project and provided a determination that "no historic properties, including archaeological and/or historic resources will be affected by this undertaking." This determination is included as part of **Attachment 12**. Additionally, as the construction work solely involves work in previously disturbed soils, there is no adverse effect on tribal resources; no consultation with the applicable Tribal Historic Preservation Officers is required. In the event of any inadvertent discoveries of human remains and/or cultural resources including, but not limited to, funerary objects, sacred objects and objects of cultural patrimony are made during execution of the Project scope, then work shall be halted immediately and the SHPO and THPO of all appropriate Tribes, Nations and Communities shall be consulted before work can be resumed. No additional review is required.
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	Yes ☐ No ☒	The Project use is not a noise-sensitive use, and the funded scope of work is defined as minor, or non-substantial. The proposed activities are not expected to generate excessive noise during the short-term construction work and will adhere to local noise control standards. The proposed Project will be completed in accordance with all applicable federal, state and local permit requirements and conditions. Therefore, the proposed Project would not generate any significant adverse noise impacts. No additional review is required.
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes ☐ No ☒	The proposed Project is not located within the surficial bounds of a designated sole source aquifer. A Sole Source Aquifer Map is included in **Attachment 6**. No additional review is required.
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes ☒ No ☐	According to federal and state wetland maps, the proposed Project is partially located within and is located adjacent to federally mapped and state

Wetlands Protection Executive Order 11990, particularly sections 2 and 5		designated wetlands as shown in *Appendix II* of **Attachment 7**. On June 11, 2020 a wetland delineation was completed for the proposed floodwall and berm. According to the Adirondack Park Agency wetlands mapping, no wetlands are indicated near the proposed floodwall or anywhere on the subject property. No wetlands were identified in the area of disturbance associated with the proposed floodwall and adjacent low-lying areas. Approximately 75 feet to the west of the proposed floodwall is a small wetland isolated from the West Branch Ausable River by a cobble/gravel berm (**See Attachment 13**). During the course of construction, the work will be conducted in a manner as to prevent or reduce to a minimum any damage to the stream from pollution by debris, sediment, or other foreign material, or from manipulation of equipment and/or materials in or near the stream. Water that is used for wash purposes or other similar operations, which could cause the water to become polluted with sand, silt, cement, oil, or other impurities, will not be returned directly to the stream. The Project will involve the use of silt fence and/or silt sock prior to the commencement of disturbance of the existing ground surface to prevent stormwater runoff from leaving the Project area and entering the West Branch Ausable River. Erosion control structures will remain in place until a stable growth of vegetation is present in all disturbed areas. Project implementation would be conditioned upon issuance of applicable federal, state, and municipal permits. The proposed Project would be constructed in accordance with federal, state, and municipal permit requirements and their conditions which are protective of wetlands. Best management practices will be implemented during construction to prevent impacts to the floodplain and wetlands adjacent to the proposed Project. An 8-step Floodplain Management Determination was completed pursuant to 24 CFR 55.20. See Floodplain Management & Wetlands Protection Determination, annexed hereto as **Attachment 7**. The 8-step process concluded that due to the nature

Wetlands Protection Executive Order 11990, particularly sections 2 and 5		of the proposed action, prohibition of this work within a floodplain is not practicable. In accordance with 24 CFR 55.20, on March 14, 2020, the "Notice of Early Public Review of a Proposed Activity in Wetlands and 100-Year Floodplain" was published in the Sun Community News newspaper, with the 15-day period expiring on March 30, 2020. No public comments were received. A "Combined Notice of Finding of No Significant Impact, Notice of Intent to Request Release of Funds, and Final Notice and Public Explanation of a Proposed Activity in a 100-Year Floodplain and Wetlands" was published on August 18, 2020.
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes ☒ No ☐	The Project is located immediately adjacent to a Nationwide Rivers Inventory[5] (NRI) listed waterway; this waterway, the West Branch Ausable River, is listed as a scenic river of outstandingly remarkable value. GOSR sent a letter to the National Park Service for consultation in accordance with the Wild and Scenic Rivers Act on March 6, 2020. GOSR did not receive a response from the National Park Service (NPS). In accordance with guidance from the Council on Environmental Quality (CEQ), if you do not hear from the NPS within 30 days, you may proceed as long as the proposed action would not have an adverse effect on the "outstandingly remarkable values" (ORVs) of a NRI segment or could foreclose options to classify any portion of the NRI segment as wild, scenic, or recreational river areas. The action agency is obligated to "…take care to avoid or mitigate adverse effects on the rivers identified in the Nationwide Inventory…" The West Branch Ausable River is designated as a protected stream with a classification of C (T). In accordance with Environmental Conservation Law (ECL) Article 15, Title 5 and 6 NYCRR Part 608.2, any disturbance to the bed or banks of a protected stream requires a Protection of Waters permit. An application for Section 401- Clean Water Act Water Quality Certification, Article 15 Title 5 Excavation and Fill in Navigable Waters and Article 15 Title 5 Stream Disturbance has been submitted to the NYSDEC on April 15, 2020. Project activities will be completed in accordance with permit requirements and conditions. Any permits required

[5] U.S. Department of Interior: Nationwide Rivers Inventory. http://www.nps.gov/ncrc/programs/rtca/nri/states/ny.html

Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)		by the NYSDEC shall be obtained before commencing work. Because the flood wall is adjacent to a National Wild and Scenic River a variance for the flood wall is required by the Adirondack Park Agency (APA). On October 10, 2019 a Jurisdictional Inquire Form was submitted to APA. APA responded that a variance was required form the Agency for the project as proposed, as the project does not comply with the shoreline restrictions set forth in Section 806 of the APA Act. The project as proposed does not meet the setback requirements. The flood wall cannot provide flood protection for the buildings including residents and businesses located on the southern bank of West Branch if it is located outside of the setback requirements. These buildings and adjacent road areas are frequently flooded because the West Branch at this location becomes shallower. The flood wall will be in an area where there are numerous buildings and roads and will blend into existing land use and form. The wall will be faced with stone or brick veneer or stamped with a pattern to improve aesthetics. Methods that have been implemented in the past, such as sandbags and pumping. During the development of the flood mitigation project flow modeling was performed to determine the river characteristics. It was determined that the flood depth and velocities were too great for natural methods to provide the necessary protection. The purpose of the proposed Project is to implement a permanent flood barrier to protect the structures and properties that are impacted by the flooding. Several different types of barriers were considered, including a planted berm along the entire alignment of the barrier. It was determined that the portion of the barrier that is situated away from the primary channel of the river and that only would experience flood depths of 2-3 feet would be appropriate for a planted berm, and that is what the final design reflects. A planted berm or other non-structural method was determined infeasible for the remaining sections of the barrier due to flood depth and water velocities. In addition, an earthen berm would require a very large footprint that would further constrict the river in this location and exacerbate flooding and cause downstream impacts.

Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)		The APA variance application has been submitted to APA provides a detailed description of requirement of the flood wall placement. (See **Attachment 11**, Appendix D of the APA application
ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	Yes No ☐ ☒	The Project is not located in an area defined by the NYSDEC as a potential environmental justice area[6], as shown by the map included in **Attachment 6**. Therefore, the proposed Project would not contribute to, or promote, environmental injustice. No additional review is required.

[6] NYSDEC Environmental Justice. https://www.dec.ny.gov/public/333.html

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27]
Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate.

All conditions, attenuation or mitigation measures have been clearly identified.

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.
(1) Minor beneficial impact
(2) No impact anticipated
(3) Minor Adverse Impact – May require mitigation
(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
LAND DEVELOPMENT		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	The Adirondack Park Agency (APA) Land Use Area Classification map, as shown in **Attachment 3**, illustrates that the Subject Property is located within an area that is designated as a "Hamlet." According to the APA, hamlets are the growth and service centers of the Park where the Agency encourages development. Intentionally, the Agency has very limited permit requirements in hamlet areas. Activities there requiring an Agency permit are erecting buildings or structures over 40 feet in height, projects involving more than 100 lots, sites or units, projects involving wetlands, airports, watershed management projects, and certain expansions of buildings and uses. Hamlet boundaries usually go well beyond established settlements to provide room for future expansion. According to the Citizen's Guide to Adirondack Park Agency Land Use Regulations, the intended purpose of the classification system is to channel growth into the areas where it can best be supported and to minimize the spread of development in areas less suited to sustain such growth. The proposed Project will not involve or result in new growth or the spread of development in areas less suited to sustain such growth. The proposed flood barrier would be constructed using reinforced concrete with a simulated rock surface. The proposal would not be decremental to the existing conditions. The proposed location for the flood barrier will not require

Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design		significant modification of the topography and will not require removal of vegetation above the limits imposed by the APA. There are existing walls on both sides of the river at this location now. The existing retaining wall on the south side (subject site) is currently a short wall, approximately 5.5 feet tall and about 33 feet long, there is a second wall running perpendicular to the river that is about 2 feet tall and 86 feet long, but neither are adequate to protect against current storm events and conditions. The existing wall on the north side is much taller and covered with graffiti.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	The proposed Project is intended to protect the community of Au Sable Forks from flood impacts, improve existing stormwater drainage infrastructure, and enhance resilience. U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) maps provide information on soils types and properties that influence development of building sites. According to the USDA NRCS Soil Map data for soil classification, the proposed Project area is located in a soil map unit that is designated as "Colton very gravelly loamy sand, 0 to 3 percent slopes" and "water." The soil in the Project area is classified as "Farmland of Statewide Significance", which is used to classify soils that do not meet the criteria for prime farmland or prime farmland if drained, but that are high quality soils for agricultural production that can produce fair to good crop yields when managed using sound agricultural practices. The Project is located in a hamlet that is characterized by residential and commercial development. The Project does not involve new construction, acquisition of undeveloped land, or conversion that would convert agricultural land to a non-agricultural use. The riverbank in this area is low and comprised of potentially erodible and highly erodible soils, and building materials left over from prior activities in the area. Four (4) test borings were drilled to determine the existing soils qualities and suitability for the proposed project. Through their analysis it was determined that the site had approximately 4 to 8 feet of fill type soils underlain by indigenous alluvium soils. The fill type soils were described as brown, brown-black sand with varying amounts of intermixed gravel, silt, slag, ash, wood, cinders, concrete, and/or brick. The indigenous soils were generally described as brown to brown-gray sand with varying amounts of intermixed silt and gravel, brown gravel with intermixed sand and trace silt. These soils were also laden with boulders. Groundwater was encountered at 6 feet in test boring B-1 but may vary seasonally and with weather.

Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design		The fill type soils were deemed unsuitable for bearing the flood barrier and should be removed to the indigenous soils layer and replaced with structural fill. The indigenous soils have a maximum allowable soil bearing pressure of 4,000 psf and would have less than an inch of settlement. The Project will involve the incorporation of BMPs to prevent the potential runoff of construction-related pollutants and sediment. During the course of construction, the work will be conducted in a manner as to prevent or reduce to a minimum any damage to the stream from pollution by debris, sediment, or other foreign material, or from manipulation of equipment and/or materials in or near the stream. Water that is used for wash purposes or other similar operations, which could cause the water to become polluted with sand, silt, cement, oil, or other impurities, will not be returned directly to the stream. The Project will involve the use of silt fence and/or silt sock prior to the commencement of disturbance of the existing ground surface to prevent stormwater runoff from leaving the Project area and entering the West Branch Ausable River. Erosion control structures will remain in place until a stable growth of vegetation is present in all disturbed areas. All work will be completed in accordance with site plans and in accordance with all applicable federal, state and local regulations, laws and permit requirements and conditions.
Hazards and Nuisances including Site Safety and Noise	2	Based on a review of available environmental records for the proposed Project and surrounding area, the proposed Project is unlikely to be impacted by hazardous materials, contamination, toxic chemicals and gases, and radioactive substances. No hazards are anticipated to affect the health and safety of occupants or conflict with the intended utilization of the proposed Project. A review of New York State and Federal records, including maps, NYSDEC reports, and US EPA reports, are included as part of **Attachment 8**. The proposed Project is not a noise-sensitive use. The proposed activities are not expected to generate excessive noise during the short-term construction work and will adhere to local noise control standards. The proposed Project will be completed in accordance with all applicable federal, state and local permit requirements and conditions. Therefore, the proposed Project would not generate any significant adverse noise impacts.
Energy Consumption	2	The proposed Project will cause a temporary increase in energy consumption in the form of fossil fuels for construction equipment necessary for construction activities. However, the proposed Project will not increase long-term energy consumption.

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		
Employment and Income Patterns	2	The proposed Project would not adversely affect employment opportunities or income patterns, would not impact traffic and potential customer access to residences and businesses in the area, either during construction or operation.
Demographic Character Changes, Displacement	2	The Project is not expected to cause any change in the demographic character of the area. This Project does not involve residential development or activities. There is no known potential for the Project to cause the displacement of individuals or families, destroy jobs, local businesses or public community facilities, or disproportionately affect particular populations.

Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	2	The Project will not introduce any new populations that would increase the student population of the area. As such, the Project will not have an impact on educational or cultural facilities.
Commercial Facilities	2	The Project will not introduce any new commercial development that would require additional retail services or other commercial facilities.
Health Care and Social Services	2	The proposed Project will not introduce any new development that would require the availability of additional routine or emergency health services.
Solid Waste Disposal / Recycling	2	The proposed Project will not introduce any new development that would generate solid waste. BMPs will be utilized during construction to prevent soil and/or debris from being washed off-site.
Waste Water / Sanitary Sewers	2	The proposed Project will not introduce any new development that would generate waste water. BMPs will be utilized during construction to prevent soil and/or debris from being washed off-site. No additional waste water will be generated during construction.
Water Supply	2	The proposed Project will not significantly increase demand for water. The proposed Project will install a public drinking fountain and a fire protection system at the floating dock. As such, the proposed Project will not have an impact on local water supplies.
Public Safety - Police, Fire and Emergency Medical	2	The proposed Project will not generate new demand for police, fire, or emergency services. The proposed Project will not impact traffic. Therefore, there will be no adverse effect on the access and travel time for emergency services.

Parks, Open Space and Recreation	2	This Project will not introduce new development that would generate demand for open space resources or impede open space access. Therefore, there will be no adverse effect on parks, open space, or recreation.
Transportation and Accessibility	2	Other than limited trips generated by construction vehicles during a short window of construction, the proposed Project will not introduce new development that generates continuing demand for transportation access or transportation services.

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	2	According to the NYSDEC, there are no unique geological features located on or adjacent to the proposed Project. According to NYSDEC's Environmental Resource Map, the proposed Project is located adjacent to a NYSDEC designated pine-northern hardwood significant natural community. This data layer identifies locations within ½ mile of an identified significant natural community as shown in **Attachment 6**. The Project is located in the hamlet of Au Sable Forks, is surrounded by residential and commercial development, and will not impact this significant natural community. The AuSable River is a National Wild and Scenic River. As such, much consideration was taken to identify flood mitigation actions that would not impact the natural beauty of the river. The location of the flood wall is within a developed section of the river where there are other walls and buildings. The wall will be constructed materials like the surrounding structures. **Attachment 11** describes in detail requirement for placing the flood wall in the setback of the river and construction elements to limit impacts visual to the river. The proposed Project will protect the community of Au Sable Forks from flood impacts during future storm events. The proposed Project will not introduce new demand for groundwater or surface water, nor would the proposed Project introduce septic flows that may affect groundwater. Additionally, the proposed Project will not significantly increase impervious surfaces. Unique natural features or water resources are not expected to be permanently affected by this proposed Project.
Vegetation, Wildlife	2	The proposed Project will not introduce nuisance or non-indigenous species of vegetation. Project activities will primarily occur in mowed lawn habitat that does not provide habitat for any rare, threatened, or endangered species. The Project is anticipated to involve tree removal in order to install

Vegetation, Wildlife		the flood wall. The trees proposed for removal are located on a small strip of forested habitat immediately adjacent to West Branch Ausable River in a developed residential and commercial area. The Project will involve the removal of approximately eight (8) trees, which includes the following: five (5) 7" maple trees, one (1) 26" maple tree, one (1) 8" maple tree, and one (1) clump of ash trees. Several trees that are greater than or equal to 3 inches in diameter may provide suitable roosting habitat for the northern NLEB and/or Indiana bat. To minimize potential impacts to the IB and NLEB, tree clearing will take place from November 1 to March 31, which is outside of the active season of the IB and NLEB. Trees that are proposed to be removed are part of a small strip of forested habitat located immediately adjacent to residential and commercial development. Any bats living in the vicinity of the Project area would still be able to breed, feed, and find shelter. Similar habitat (forested creek corridor surrounded by residential and commercial development) is located immediately east and west of the Project area. Bats would not have to fly long distances to get to alternative foraging habitat, as tracts of forested habitat are located along the Ausable River east and west of the proposed Project, as well as immediately north of the Project area. The forested tracts of land are accessible via strips of forested habitat along the West Branch Ausable River. The Project will is not likely to adversely affect any rare, threatened, or endangered species or their habitat. Permits required for the Project will be obtained before commencing work. Project activities will be completed in accordance with all applicable federal, state and local permit requirements and conditions. Additionally, BMPs and erosion control measures will be incorporated into the proposed Project to ensure there are no adverse impacts to vegetation and wildlife. For a detailed Endangered Species analysis, see the Endangered Species section (Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402).
Other Factors		There are no other factors identified or evaluated for the proposed Project.

Attachment 1: Project Location Maps
- Street Map
- Topographic Map
- Aerial Photograph

Attachment 2: Project Design Plans
Attachment 3: Long Term Community Recovery Strategy (LTCR)
Attachment 4: Adirondack Park Agency Application for Variance from Shoreline Restrictions. Au Sable Forks Flood Barrier – Town of Jay, NY. Appendix B only.
Attachment 5: Adirondack Park Agency Application for Variance from Shoreline Restrictions. Au Sable Forks Flood Barrier – Town of Jay, NY. Appendix E only.
Attachment 6: Project Reference Maps
- Airport Hazards Map
- USFWS Coastal Barrier Resources System Map
- NYS DOS Coastal Boundary Map
- US EPA Sole Source Aquifer Map
- NYSDEC & NPS Wild and Scenic Rivers Map
- NYSDEC Potential Environmental Justice Areas Map
- NYSDEC Environmental Resource Mapper

Attachment 7: 24 CFR Part 55 – 8-Step Determination: Floodplain Management and Wetlands Protection Determination
- Appendix I
  - FEMA National Flood Hazard Layer Map
- Appendix II
  - USFWS NWI Map
  - NYSDEC Waterways Map
  - APA Wetlands Map
- Appendix III
  - Early Notice of a Proposed Activity in a 100-Year Floodplain and Wetlands
- Appendix IV
  - Affidavit for Early Notice of a Proposed Activity in a 100-Year Floodplain and Wetlands

Attachment 8: HUD Environmental Standards Review
- HUD Environmental Report Maps and US EPA NEPAssist Map
- NYSDEC Reports for Spills, Environmental Remediation Sites, or Bulk Storage Sites Located on, or Within Close Proximity to the Project Area
- US EPA Permitted Facilities Located on or Within 3,000 Feet of the Project Area and in Non-compliance with US EPA Permit Requirements

Attachment 9: Endangered Species Compliance Documents
- NYNHP Environmental Resource Map and Information
- USFWS Section 7 Consultation Response
- USFWS Section 7 Consultation Package
- NMFS ESA Section 7 Mapper

Attachment 10: Agricultural and NRCS Soil Resource Documents
- New York State Agricultural Districts Map
- USDA NRCS Soil Resource Map
- USDA NRCS Farmland Classification

Attachment 11: Adirondack Park Agency Application for Variance from Shoreline Restrictions. Au Sable Forks Flood Barrier – Town of Jay, NY. Appendix D only.
Attachment 12: SHPO Documentation
- SHPO Response

Attachment 13: Fitzgerald Environmental Associates, LLC. Memorandum. Subject Au Sable Forks Proposed Floodwall – Wetland Delineation. June 11, 2020.

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]:

- Federal Aviation Administration (FAA)
- Federal Emergency Management Agency (FEMA)
- United States Environmental Protection Agency (USEPA)
- United States Fish and Wildlife Service (USFWS)
- United States Department of Agriculture (USDA)
- Natural Resources Conservation Service (NRCS)
- United States Department of Interior (USDOI)
- National Parks Service (NPS)
- United States Geological Survey (USGS)
- New York State Department of Environmental Conservation (NYSDEC)
- Natural Heritage Program (NHP)
- New York State Department of State (NYSDOS)
- New York State Historic Preservation Office (SHPO)
- NY Rising Community Reconstruction Program Plan for the Towns of Jay and Keene, March 2014.

List of Environmental Permits Obtained or Potentially Required:

- USACE – Section 404 of the Clean Water Act Permit
- USACE – Section 10 of the Rivers and Harbors Act (if West Branch Ausable River is considered a navigable water by the USACE)
- NYSDEC Stream Disturbance – Under Article 15, Title 5
- NYSDEC – Water Quality Certification – Under Section 401 – Clear Water Act
- Adirondack Park Agency Variance
- Town of Jay Floodplain Development Permit

Other:

- November 1 and March 31 when bats are in hibernacula to prevent any take. If trees need to be cut outside of this timeframe, the New York State Department of Environmental Conservation (NYSDEC) Division of Wildlife and USFWS need to be consulted prior to tree removal.
- Design Changes must be reviewed by APA.

Public Outreach [24 CFR 50.23 & 58.43]:

- August 18, 2020 – Publication of a Combined Final Notice and Public Review of a Proposed Activity in a 100-year Floodplain and Wetland, Notice of Finding of No Significant Impact, and Notice of Intent to Request Release of Funds.
- March 14, 2020 – Publication of Notice of Early Public Review of a Proposed Activity in 100-year Floodplain and Wetland.
- NYRCR – Towns of Jay and Keene – Public Meeting: May 2014
- NYRCR – Towns of Jay and Keene – Public Meeting: February 2014
- NYRCR – Towns of Jay and Keene – Public Meeting: November 2013
- NYRCR – Towns of Jay and Keene – Public Meeting: October 2013
- NYRCR – Towns of Jay and Keene – Public Meeting: September 2013

Cumulative Impact Analysis [24 CFR 58.32]**:**
The Project was evaluated according to draft plans which encompassed all proposed actions. There are no other known future projects in the vicinity of the Au Sable Forks Flood Wall Project that would create adverse environmental or social impacts in the area. The Project is compatible with the existing land use and will contribute to community resiliency and will reduce its vulnerability to flooding.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]:
The primary alternative for the proposed Project is the "no action" alternative. The "no action" alternative for not funding this project would not address the purpose and need of the proposed action. Without the proposed action, the impacted community would be left more susceptible to future flooding events in this area than it would after the implementation of the proposed action. Therefore, the "no action" alternative examined is not considered desirable and the proposed action is still practicable in light of exposure to flood hazards in the floodplain, possible adverse impacts on floodplain, the extent to which it may aggravate current hazards to other floodplains, and the potential to disrupt natural and beneficial functions and values of floodplains. Additionally, implementation of the proposed action will abide by all applicable state and local codes for floodplain development. As such, the impact of the proposed action on a floodplain would be less than the "no action" alternative.

Summary of Findings and Conclusions:
The preceding Statutory Checklist, Environmental Assessment Checklist and the discussion below document that the proposed work will comply with regulations in 24 CFR part 58 and that there are no direct or cumulative adverse environmental impacts anticipated as a result of the proposed action.

Mitigation Measures and Conditions [40 CFR 1505.2(c)]

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/ conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Any change to the approved scope of work will require re-evaluation by the Certifying Officer for compliance with NEPA and other laws and Executive Orders.

This review does not address all federal, state and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state and local laws. Failure to obtain all appropriate federal, state and local environmental permits and clearances may jeopardize federal funding.

If there is any unanticipated discovery of endangered or threatened species, cultural resources, soils contamination, or any other conditions affecting the factors, executive orders, stipulations, and/ or regulations discussed within this assessment, work shall be halted immediately and the appropriate agency will be consulted before work can be resumed.

Law, Authority, or Factor	Mitigation Measure
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	An 8-step Floodplain Management and Wetlands Protection Determination was completed pursuant to 24 CFR 55.20. The 8-step process concluded that due to the nature of the proposed action, prohibition of this work within the floodplain is not practicable.

Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	A Town of Jay Floodplain Development Permit may be required prior to commencement of Project activities if required. The proposed Project will be completed in accordance with all applicable federal, state and local permit requirements and conditions.
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	An 8-step Floodplain Management and Wetlands Protection Determination was completed pursuant to 24 CFR 55.20. The 8-step process concluded that due to the nature of the proposed action, prohibition of this work within floodplain is not practicable. Permits required for the Project will be obtained before commencing work. The Project will involve the incorporation of BMPs to prevent the potential runoff of construction-related pollutants and sediment. During the course of construction, the work will be conducted in a manner as to prevent or reduce to a minimum any damage to the stream from pollution by debris, sediment, or other foreign material, or from manipulation of equipment and/or materials in or near the stream. Water that is used for wash purposes or other similar operations, which could cause the water to become polluted with sand, silt, cement, oil, or other impurities, will not be returned directly to the stream. The Project will involve the use of silt fence and/or silt sock prior to the commencement of disturbance of the existing ground surface to prevent stormwater runoff from leaving the Project area and entering the West Branch Ausable River. Erosion control structures will remain in place until a stable growth of vegetation is present in all disturbed areas. Project activities will be completed in accordance with all applicable federal, state and local laws, regulations, and permit requirements and conditions. The following permits are anticipated to be required for the Project and, if necessary, will be obtained prior to the commencement of Project activities: • USACE – Section 404 of the Clean Water Act Permit • USACE – Section 10 of the Rivers and Harbors Act (if West Branch Ausable River is considered a navigable water by the USACE) • NYSDEC Stream Disturbance – Under Article 15, Title 5 • NYSDEC – Water Quality Certification – Under Section 401 – Clear Water Act • Adirondack Park Agency Variance
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	The Project is anticipated to involve minor tree removal in order to install the flood wall. The trees proposed for removal are located on a small strip of forested habitat immediately

Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	adjacent to West Branch Ausable River in a developed residential and commercial area. The Project will involve the removal of approximately eight (8) trees, which includes the following: five (5) 7" maple trees, one (1) 26" maple tree, one (1) 8" maple tree, and one (1) clump of ash trees. Several trees that are greater than or equal to 3 inches in diameter may provide suitable roosting habitat for the northern NLEB and/or Indiana bat. To minimize potential impacts to the IB and NLEB, tree clearing will take place from November 1 to March 31, which is outside of the active season of the IB and NLEB. Trees that are proposed to be removed are part of a small strip of forested habitat located immediately adjacent to residential and commercial development. Any bats living in the vicinity of the Project area would still be able to breed, feed, and find shelter. Similar habitat (forested creek corridor surrounded by residential and commercial development) is located immediately east and west of the Project area. Bats would not have to fly long distances to get to alternative foraging habitat, as tracts of forested habitat are located along the Ausable River east and west of the proposed Project, as well as immediately north of the Project area. The forested tracts of land are accessible via strips of forested habitat along the West Branch Ausable River.
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	The Project is located immediately adjacent to a Nationwide Rivers Inventory[7] (NRI) listed waterway; this waterway, the West Branch Ausable River, is listed as a scenic river of outstandingly remarkable value. GOSR sent a letter to the National Park Service for consultation in accordance with the Wild and Scenic Rivers Act on March 6, 2020. GOSR did not receive a response from the National Park Service (NPS). In accordance with guidance from the Council on Environmental Quality (CEQ), if you do not hear from the NPS within 30 days, you may proceed as long as the proposed action would not have an adverse effect on the "outstandingly remarkable values" (ORVs) of a NRI segment or could foreclose options to classify any portion of the NRI segment as wild, scenic, or recreational river areas. The action agency is obligated to "…take care to avoid or mitigate adverse effects on the rivers identified in the Nationwide Inventory…"

[7] U.S. Department of Interior: Nationwide Rivers Inventory. http://www.nps.gov/ncrc/programs/rtca/nri/states/ny.html

Determination:

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Standard Conditions for All Projects

Any change to the approved scope of work will require re-evaluation by the Certifying Officer for compliance with NEPA and other laws and Executive Orders.

This review does not address all federal, state and local requirements. Acceptance of federal funding requires recipient to comply with all federal state and local laws. Failure to obtain all appropriate federal, state and local environmental permits and clearances may jeopardize federal funding.

Preparer Signature: _____ Date: August 11, 2020

Name/Title/Organization: Lori Bart, Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.

Certifying Officer Signature: _____ Date: August 11, 2020

Name/Title: James McAllister – Environmental Certifying Officer

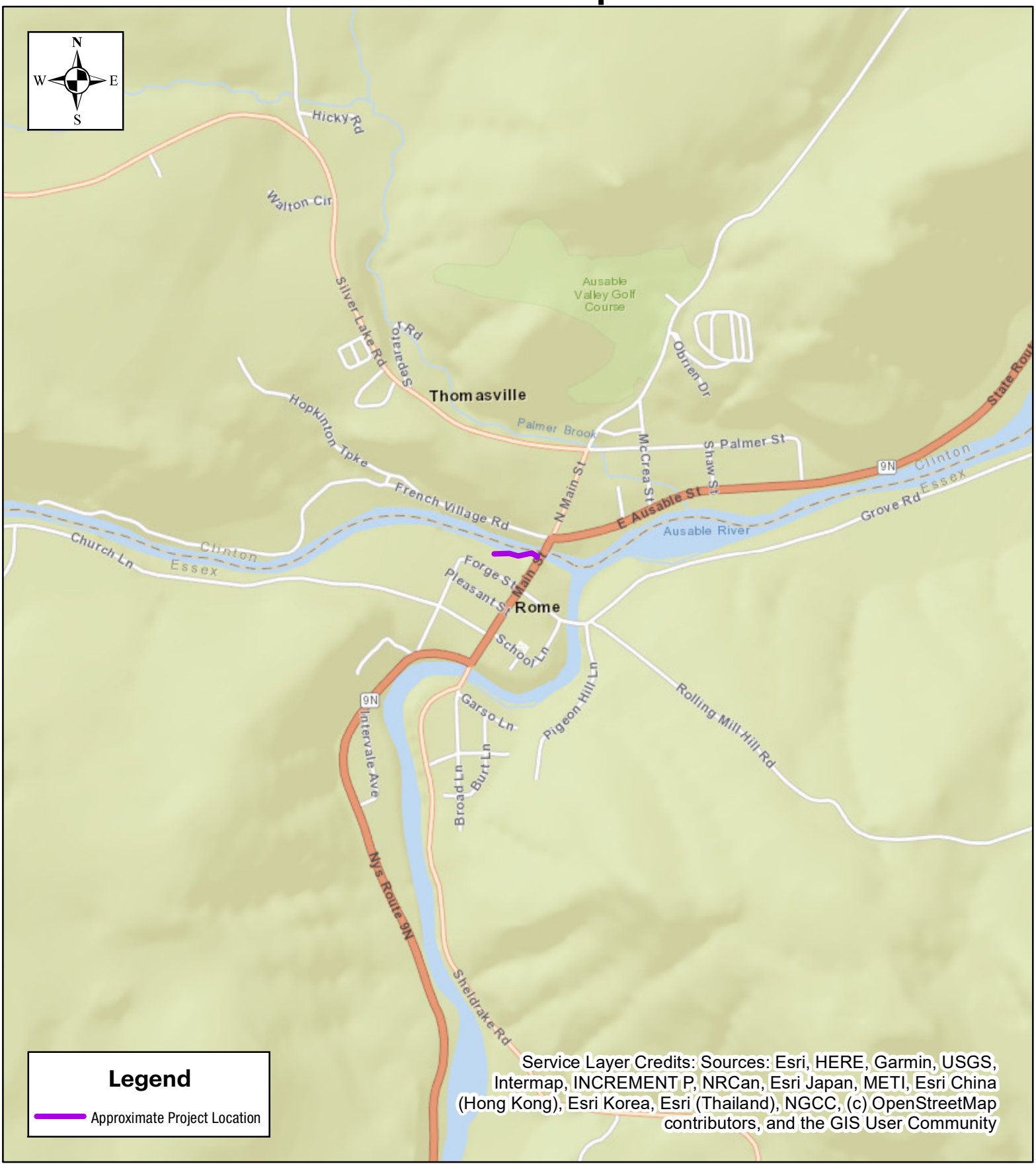
This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

Attachment 1

Project Location Maps

Street Map
Topographic Map
Aerial Photograph

Street Map



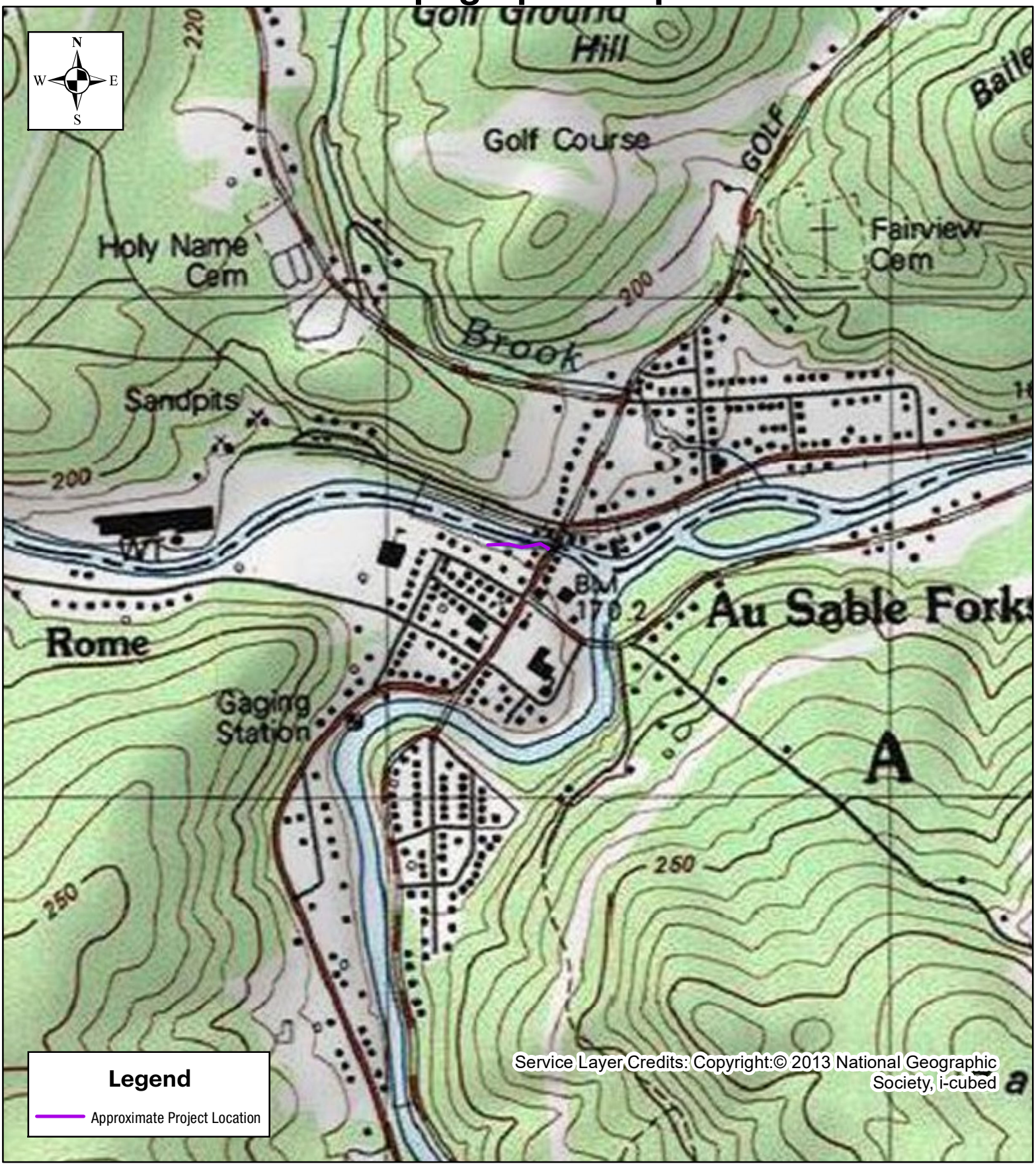
Tectonic

1:14,000

0 800 1,600 3,200 Feet

Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

Topographic Map



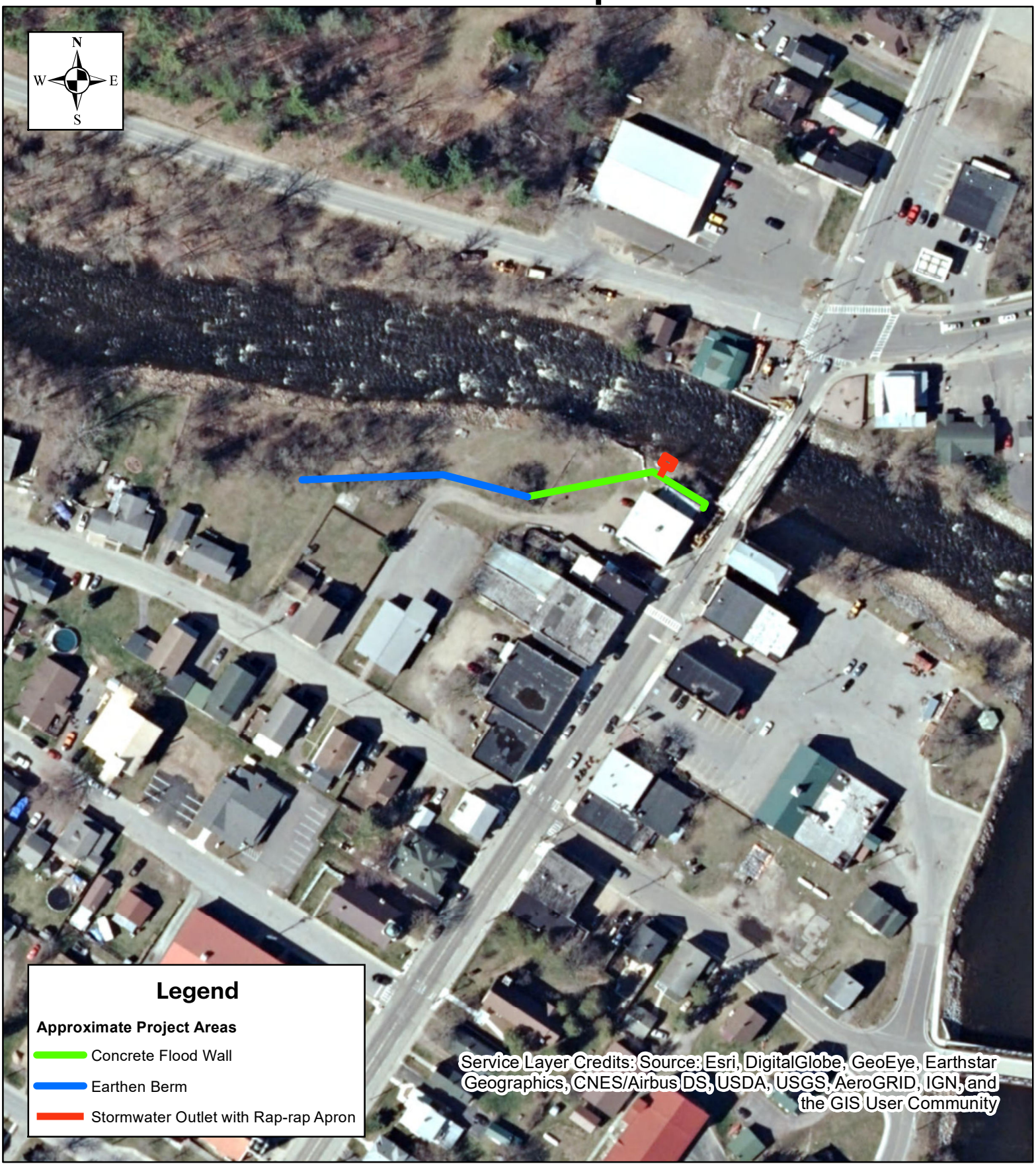
Tectonic

1:10,000

0 550 1,100 2,200 Feet

Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

Aerial Map



Tectonic

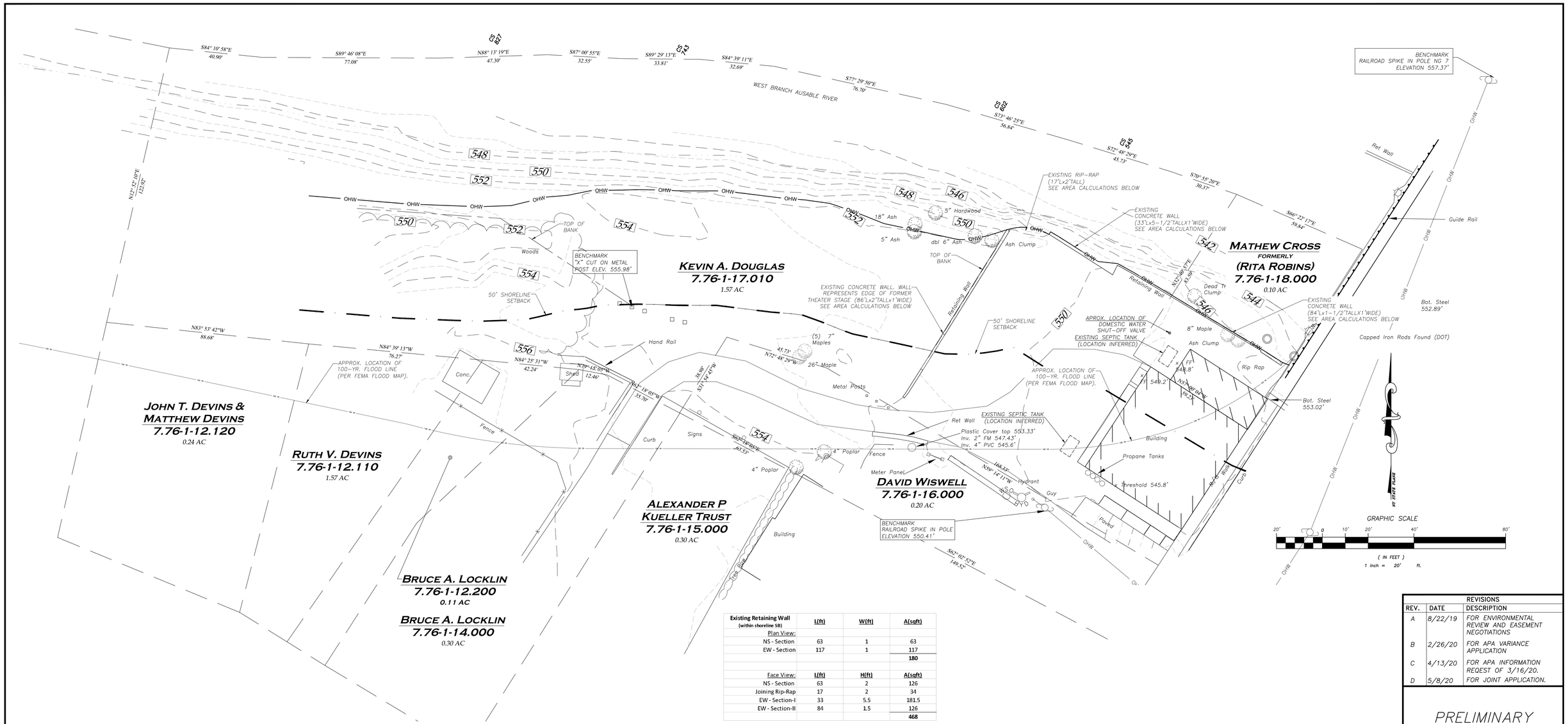
1:1,500

0 85 170 340 Feet

Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

Attachment 2

Project Design Plans



Existing Retaining Wall (within shoreline 50)	L(ft)	W(ft)	A(sqft)
Plan View:			
NS - Section	63	1	63
EW - Section	117	1	117
			180
Face View:	L(ft)	H(ft)	A(sqft)
NS - Section	63	2	126
Joining Rip-Rap	17	2	34
EW - Section-I	33	5.5	181.5
EW - Section-II	84	1.5	126
			468

INDEX OF SHEETS

SHEET C-1 EXISTING CONDITIONS
SHEET C-2 DEMOLITION AND EROSION CONTROL PLAN
SHEET C-3 SITE PLAN/FLOOD WALL ELEVATION
SHEET C-4 WALL SECTIONS AND DETAILS

PROPERTY NOTES

1. PROPERTY INFORMATION
   JURISDICTION: TOWN OF AU SABLE FORKS
   ESSEX COUNTY, NY

   MINIMUM SETBACK REQUIREMENTS: NONE

   A). TAX MAP: 7.76-1-17.010
   DEED BOOK: 1057, PAGE 85
   14233 NYS ROUTE 9N

   OWNER:
   KEVIN A. DOUGLAS
   23 BROAD LANE
   AU SABLE FORKS 12912

   B). TAX MAP: 7.76-1-18.000
   DEED BOOK: 950, PAGE 177
   14235 NYS ROUTE 9N

   OWNER:
   RITA ROBINS
   PO BOX 460
   AU SABLE FORKS, NY 12912

1. ALL PROPERTY DATA OBTAINED FROM ESSEX COUNTY TAX MAPS.
2. EXISTING INFORMATION SHOWN HEREON WAS TAKEN FROM A TOPOGRAPHIC SURVEY PERFORMED BY DARRAH LAND SURVEYING PLLC, LAKE LUZERNE, NY, ON JANUARY 17, 2019.
3. ADJOINING OWNER INFORMATION WAS TAKEN FROM ESSEX COUNTY GIS ON JANUARY 18, 2020.

ABBREVIATIONS

A.B.	ANCHOR BOLT	EQUIP.	EQUIPMENT	LVL	LAMINATED VENEER LUMBER	S.P.F.	SPRUCE PINE FIR
ADD'L.	ADDITIONAL	EX. or EXIST.	EXISTING	M.O.	MASONRY OPENING	SOUTH. PINE	SOUTHERN PINE
A.F.F.	ABOVE FINISHED FLOOR	EXP. BOLT	EXPANSION BOLT	MAX.	MAXIMUM	SCJ	SAW CUT CONTROL JOINT
APPROX.	APPROXIMATELY	EXP. JT.	EXPANSION JOINT	MECH.	MECHANICAL	SCH.	SCHEDULE
ARCH.	ARCHITECTURAL	F.N.	PLYWOOD FIELD NAIL	MEP	MECH./ELEC./PLUMBING	SECT.	SECTION
BM.	BEAM	F/RAIL	FACE OF GUIDERAIL	MEZZ.	MEZZANINE	SHT.	SHEET
B/DECK	BOTTOM OF DECK	F.S.	FAR SIDE	mil.	1/1000 INCH	SLBB	SHORT LEGS BACK TO BACK
B/FTG.	BOTTOM OF FOOTING	FDN.	FOUNDATION	MIN.	MINIMUM	SLV	SHORT LEG VERTICAL
B/STL.	BOTTOM OF STEEL	FIN.	FINISH	N.S.	NEAR SIDE	SPEC.	SPECIFICATIONS
BOT. or BOTT.	BOTTOM	FLG.	FLANGE	O.F.	OUTSIDE FACE	SQ.	SQUARE
C.F.	COLD FORMED	FLR.	FLOOR	O.H.W.M.	ORDINARY HIGH WATER MARK	STA.	STATION
C.J.	CONTROL JOINT	FTG.	FOOTING	OPNG.	OPENING	STD.	STANDARD
C-C.	CENTER TO CENTER	FT	FOOT or FEET	P.A.F.	POWDER ACTUATED FASTENER	STIFF.	STIFFENER
CL.	CLEAR	ga.	GAUGE	P.E.M.B.	PRE-ENGINEERED METAL BUILDING	STL.	STEEL
C.M.U.	CONCRETE MASONRY UNIT	GALV.	GALVANIZED	P.E.N.	PLYWOOD EDGE NAILING	STRUCT.	STRUCTURAL
CMP	CORRUGATED METAL PIPE	GPM	GALLONS PER MINUTE	P.J.F.	PRE-FORMED JOINT FILLER	T & B	TOP AND BOTTOM
COL.	COLUMN	GR.	GRADE	P.W.	PLYWOOD	T & G	TONGUE AND GROOVE
CONC.	CONCRETE	GTG.	GRATING	PC	POINT OF CURVE	T/BMWK	TOP OF EMBANKMENT
CONN.	CONNECTION	G.W.B.	GYPSUM WALL BOARD	PCC	POINT OF CHANGE OF CURVE	T/BENCH	TOP OF FLOOD BENCH
CONT.	CONTINUOUS	H.	HIGH	PI	POINT OF TANGENT INTERSECTION	T/DECK	TOP OF DECK
COORD.	COORDINATE	H.S.	HIGH STRENGTH	PL.	PLATE	T/FTG.	TOP OF FOOTING
D. or DP.	DEEP or DEPTH	H.D.G.	HOT DIP GALVANIZED	PPT	PRESSURE PRESERVATIVE TREATED	T/HEADWALL	TOP OF HEADWALL
DEG.	DEGREES	HDPE	HIGH DENSITY POLYETHYLENE	PT	POINT OF TANGENT	T/WALL	TOP OF WALL
DET.	DETAIL	HGR.	HANGER	PVC	POINT OF VERTICAL CURVE	T/WINGWALL	TOP OF WINGWALL
DIA.	DIAMETER	HORIZ.	HORIZONTAL	PVT	POINT OF VERTICAL TANGENT	T/STL.	TOP OF STEEL
d.o.	DITTO	HSS	HOLLOW STRUCTURAL STEEL	QTY.	QUANTITY	THK.	THICK or THICKNESS
DWG.	DRAWING	HT.	HEIGHT	R.O.	ROUGH OPENING	TS	TUBE STEEL
E/S	EDGE OF SHOULDER	I.F.	INSIDE FACE	RD	ROAD	TYP.	TYPICAL
E/P	EDGE OF PAVEMENT	IN.	INCH or INCHES	REF.	REFERENCE or REFER	U.N.O.	UNLESS NOTED OTHERWISE
E.W.	EACH WAY	INFO.	INFORMATION	REINF.	REINFORCEMENT	U.S.	UNDERSIDE
EA.	EACH	INV.	INVERT	REQ'D.	REQUIRED	VERT.	VERTICAL
E.C.	EPOXY COATED	L.W.	LIGHTWEIGHT	RT.	RIGHT	V.I.F.	VERIFY IN FIELD
EL.	ELEVATION	LBS.	POUNDS	RTE	ROUTE	WD.	WIDE or WIDTH
ELEC.	ELECTRICAL	LF.	LINEAR FEET	S.C.	SLIP CRITICAL	WF	WIDE FLANGE
EMBED.	EMBEDMENT	LG.	LONG or LENGTH	S.F.	SQUARE FEET	WT.	WEIGHT
EQ. or EQUIV.	EQUIVALENT	LLBB	LONG LEGS BACK TO BACK	S.S.	STAINLESS STEEL	WCJ	WALL CONTROL JOINT
EQ. SP.	EQUAL SPACING	LLV	LONG LEG VERTICAL	S.I.F.	STEP IN FOOTING	W.W.F.	WELDED WIRE FABRIC
		LT.	LEFT	S.O.G.	SLAB ON GRADE		

SURVEY NOTES

1. TOPOGRAPHIC & PLANEMETRIC INFORMATION SHOWN HEREON WAS COMPILED FROM AN ACTUAL FIELD SURVEY CONDUCTED ON JANUARY 17, 2019.
2. NORTH ORIENTATION AND BEARING BASE PER NY STATE PLANE COORDINATE SYSTEM.
3. THE LOCATION OF UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS, IF ANY EXIST, OR AS SHOWN HEREON, ARE NOT CERTIFIED. THERE MAY BE OTHER UNDERGROUND UTILITIES, THE EXISTENCE OF WHICH ARE UNKNOWN. SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES. THE UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION MUST BE NOTIFIED PRIOR TO CONDUCTING TEST BORINGS, EXCAVATION AND CONSTRUCTION.
4. HORIZONTAL COORDINATES RELATIVE TO THE NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE. BASED ON THE NORTH AMERICAN DATUM OF 1983, EPOCH:2018.79609.
5. ELEVATIONS RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 GEOID12B.
6. HORIZONTAL COORDINATE AND ELEVATION UNITS ARE U.S. SURVEY FEET, ONE FOOT CONTOUR INTERVAL.
7. REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION OF THE AUTHOR AND / OR COPYRIGHT HOLDER IS OBTAINED.
8. A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.
9. FIELD DATA CAPTURE TOOK PLACE WITH AN ACCUMULATED SNOW COVER OF 6" TO 14". EVERY EFFORT HAS BEEN MADE TO PREPARE A COMPLETE PLOTTING OF THE CONDITIONS.

REVISIONS

REV.	DATE	DESCRIPTION
A	8/22/19	FOR ENVIRONMENTAL REVIEW AND EASEMENT NEGOTIATIONS
B	2/26/20	FOR APA VARIANCE APPLICATION
C	4/13/20	FOR APA INFORMATION REQEST OF 3/16/20.
D	5/8/20	FOR JOINT APPLICATION.

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Queensbury, New York 12804
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SCALE:	AS SHOWN	DRAWN BY:	SRA
DATE:	8/22/19	ENG. BY:	RAL
PROJ. NO:	18-380	CHK'D BY:	ES

CLIENT NAME
ESSEX COUNTY COMMUNITY RESOURCES

DRAWING TITLE
AUSABLE FORKS FLOOD BARRIER

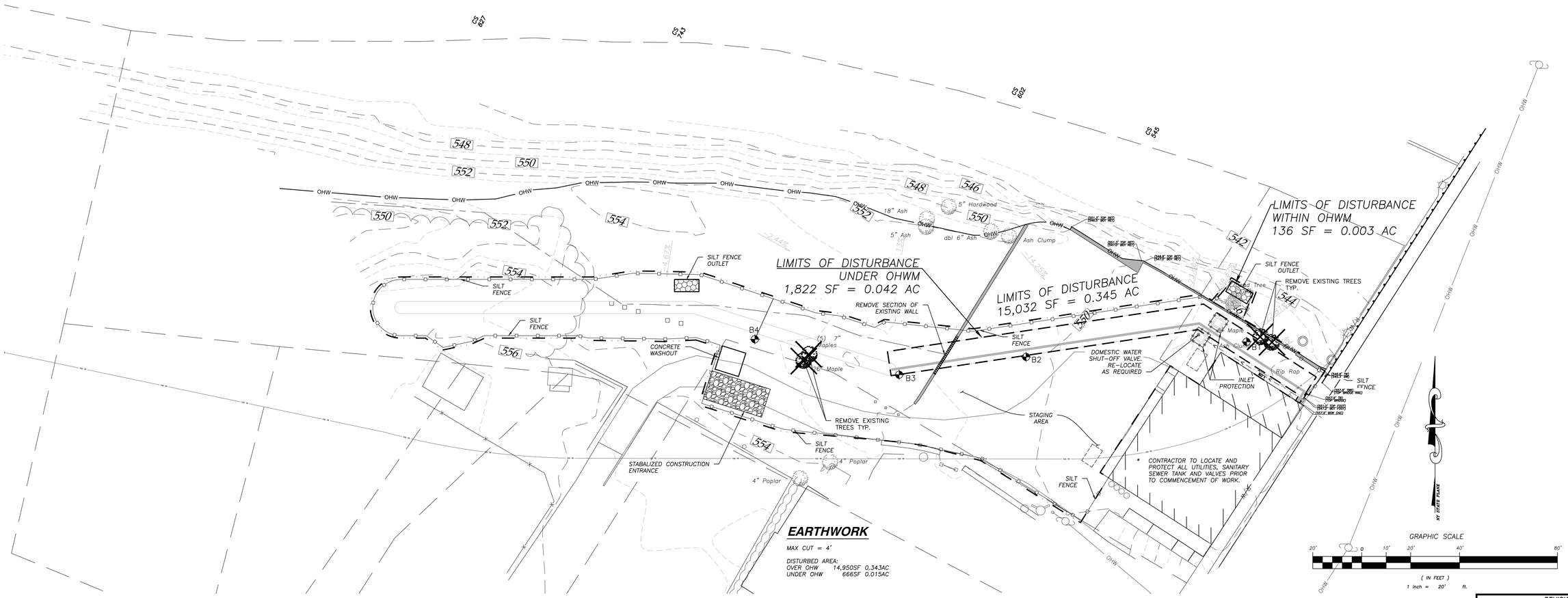
EXISTING CONDITIONS

DRAWING NO. C-1

SHT. 1 OF 4

REV. B

S:\Drawings\ESPC\18-380 AuSable Forks Flood Wall\18-380_Civil_Base.dwg, 5/8/2020 8:58:41 AM, , AutoCAD PDF (General Documentation).pc3



EARTHWORK

MAX CUT = 4'

DISTURBED AREA:
OVER OHW 14,950SF 0.343AC
UNDER OHW 666SF 0.015AC

DEMO / EROSION CONTROL LEGEND

- OHW — ORDINARY HIGH WATER MARK
- SILT FENCE
- TREE TO BE REMOVED
- SHRUB TO BE REMOVED
- TREE PROTECTION FENCE
- SILT FENCE OUTLET
- STABILIZED CONSTRUCTION ENTRANCE
- AREA TO BE DEMOLISHED

GENERAL NOTES

1. STREAM PROTECTION: DURING THE COURSE OF CONSTRUCTION, THE WORK SHALL BE CONDUCTED IN A MANNER AS TO PREVENT OR REDUCE TO A MINIMUM ANY DAMAGE TO THE STREAM FROM POLLUTION BY DEBRIS, SEDIMENT OR OTHER FOREIGN MATERIAL, OR FROM MANIPULATION OF EQUIPMENT AND/OR MATERIALS IN OR NEAR THE STREAM.
2. WATER WHICH HAS BEEN USED FOR WASH PURPOSES OR OTHER SIMILAR OPERATIONS WHICH CAUSE THIS WATER TO BECOME POLLUTED WITH SAND, SILT, CEMENT, OIL, OR OTHER IMPURITIES, SHALL NOT BE RETURNED DIRECTLY TO THE STREAM. IF WATER IS USED FROM THE STREAM, AN INTAKE OR TEMPORARY DAM SHALL BE CONSTRUCTED TO PROTECT AND MAINTAIN WATER RIGHTS AND TO PROTECT FISH LIFE DOWNSTREAM.
3. THE CONSTRUCTION DOCUMENTS HAVE BEEN PREPARED BASED ON FIELD INSPECTIONS AND OTHER AVAILABLE INFORMATION. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS TO THE CONSTRUCTION DETAILS AND WORK QUANTITIES.
4. UNDERGROUND PIPELINE AND UTILITY LOCATIONS, IF INDICATED, ARE BASED ON VISUAL EVIDENCE ABOVE EXISTING GRADE AND ARE APPROXIMATE ONLY. THE LOCATIONS OF ALL UTILITIES SHALL BE DETERMINED PRIOR TO COMMENCING CONSTRUCTION AND PROTECTED OR REROUTED AS REQUIRED TO PREVENT DAMAGE OR INTERRUPTION OF UTILITY SERVICE.
5. SUBMITTALS: THE CONTRACTOR SHALL SUBMIT MIN. (5) COPIES OF SHOP DRAWINGS AND SUBMITTALS FOR THE FOLLOWING ITEMS FOR REVIEW BY ESSEX COUNTY AND THE ENGINEER. IN LIEU OF (5) HARD COPIES, (1) COPY OF SHOP DRAWINGS AND SUBMITTALS MAY BE TRANSMITTED ELECTRONICALLY. NO FABRICATION OF THESE ITEMS SHALL BE PERMITTED UNTIL THE SUBMITTALS HAVE BEEN REVIEWED AND ACCEPTED.
   - A. CONCRETE MIX DESIGNS
   - B. CONCRETE REINFORCING STEEL SHOP DRAWINGS
   - C. SILT FENCE
   - D. ADHESIVE GROUT
   - E. JOINT SEALANTS AND CAULKING
   - F. BACKFILL, EMBANKMENT, AND SUBBASE MATERIAL
   - G. SEALANTS AND PENETRATING SEALER
   - H. GEOTEXTILE FABRICS
   - I. EXCAVATION SHORING PLAN
7. THE WORK SHALL CONFORM WITH THE REQUIREMENTS OF NYSDOT SPEC SECTION 107-05 – "SAFETY AND HEALTH REQUIREMENTS" AT ALL TIMES.

EARTHWORK NOTES

1. EXCAVATION SHALL BE TO ELEVATIONS INDICATED WITH A TOLERANCE OF PLUS OR MINUS 1". EXCAVATIONS SHALL BE OF SUFFICIENT SIZE FOR PLACING AND REMOVING FORMS, AS WELL AS INSPECTIONS.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL STAKE OUT ALL IMPROVEMENTS AND VERIFY GRADES AND ELEVATIONS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. BACKFILL MATERIALS SHALL BE SELECT STRUCTURAL FILL CONFORMING WITH NYSDOT SPEC SECTION 203. ALL BACKFILL SHALL BE PLACED IN MAXIMUM 12" LIFTS AND COMPACTED TO 95% OF THE MAXIMUM DENSITY AS ESTABLISHED THROUGH THE MODIFIED PROCTOR COMPACTION TEST PER ASTM D1557.
4. MATERIAL STOCKPILES, IF REQUIRED, SHALL BE LOCATED WHOLLY WITHIN THE WORK AREA. ADDITIONAL SILT FENCES SHALL BE PROVIDED AT THE BASE OF ALL STOCKPILES AND AS DIRECTED IN THE FIELD BY THE ENGINEER OR THE OWNER.
5. ALL TRENCHES AND OTHER EXCAVATED SIDE SLOPES INDICATED ON THE DRAWINGS ARE DIAGRAMMATIC ONLY AND ARE NOT INTENDED TO INDICATE A STABLE EXCAVATION SLOPE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY AND STABILITY OF ALL EXCAVATION SLOPES, SHEETING, SHORING, TRENCH BOXES, AND ANY OTHER MEANS REQUIRED FOR A SAFE WORK ENVIRONMENT AND FOR PROTECTION OF ADJACENT ROADWAYS AND OTHER STRUCTURES. ALL EXCAVATION WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING REGULATORY AGENCIES:
   - –SUBPART 23–4, "EXCAVATION OPERATIONS", OF NEW YORK DEPARTMENT OF LABOR INDUSTRIAL CODE RULE 23.
   - –SUBPART P, "EXCAVATIONS" OF THE UNITED STATES DEPARTMENT OF LABOR OSHA REGULATIONS FOR CONSTRUCTION.
   - –ALL OTHER MUNICIPAL, COUNTY, STATE OR FEDERAL AGENCIES, REGULATIONS OR LAWS PERTAINING TO EXCAVATION SAFETY AS MAY APPLY AT THE WORK SITE.
6. THE MORE STRINGENT PROVISION IN EACH OF THE ABOVE CODES SHALL APPLY. THESE PROVISIONS SHALL BE CONSIDERED MINIMUM REQUIREMENTS AND SHALL BE INCREASED IF NECESSARY TO PROVIDE SAFE WORKING CONDITIONS.
7. ALL NEW GRADES SHALL BE BLENDED SMOOTHLY WITH EXISTING GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN NEW GRADING AND EXISTING SURFACES TO REMAIN.
8. GEOTEXTILE FABRIC SHALL COMPLY WITH NYSDOT STANDARD SPEC. SECTION 737-01. ALL FABRIC SHALL APPEAR ON THE NYSDOT LIST OF APPROVED MATERIALS FOR THE USAGE INDICATED.
9. TOPSOIL, SEEDING AND MULCHING SHALL COMPLY WITH NYSDOT STANDARD SPEC. SECTION 713. CONTRACTOR SHALL ONLY USE NATIVE SEED MATERIAL FOR SITE RESTORATION.
10. CONTRACTOR SHALL NOTE THAT AMBIENT AIR TEMPERATURE DURING THE CONSTRUCTION PERIOD FOR THIS PROJECT MAY BE BELOW FREEZING. CONTRACTOR SHALL PROTECT ALL SUB-GRADES AND PREVIOUSLY INSTALLED BACKFILL LIFTS FROM FREEZING. COSTS FOR ALL BLANKETS, GROUND HEATERS OR OTHER ACCEPTABLE METHODS AS REQUIRED TO PROTECT IN-PLACE SOILS FROM FREEZING SHALL BE INCLUDED IN HIS BID. THE PLACEMENT OF FILL MATERIALS ON FROZEN SOILS OR USE OF FROZEN BACKFILL MATERIALS IS STRICTLY PROHIBITED.

EROSION CONTROL NOTES

1. ALL SILT FENCES AND SILT SOCKS SHALL BE IN PLACE AT LOCATIONS INDICATED IN ACCORDANCE WITH THE DETAILS BEFORE COMMENCEMENT OF ANY DISTURBANCE OF EXISTING GROUND SURFACE.
2. ALL EXPOSED CUT AND FILL EARTHWORK SURFACES SHALL BE COVERED WITH MIN. 3" OF TOPSOIL AND TURFED IN ACCORDANCE WITH NYSDOT SPEC. SECTION 713, UNLESS NOTED TO BE COVERED BY PAVEMENT OR STRUCTURES.
3. ALL AREAS UNWORKED FOR MORE THAN 14 DAYS MUST BE SEEDED WITH ANNUAL RYE GRASS AND PROTECTED WITH STRAW MULCH.
4. AFTER EVERY STORM EVENT IN EXCESS OF 1/2" RAINFALL, INSPECT ALL SILT FENCES. REMOVE ACCUMULATED MATERIAL, FILL ERODED AREAS AND RESET SILT FENCES AND SILT SOCKS.
5. ENCLOSE ALL STOCKPILES WITH SILT FENCE OR SILT SOCKS.
6. EROSION CONTROL MEASURES SHALL CONFORM WITH THE REQUIREMENTS OF NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
7. THE CONTRACTOR SHALL PROVIDE A DUMPSTER AT THE SITE FOR DISPOSAL OF DEBRIS, GARBAGE AND LITTER.
8. SILT FENCES AND SILT SOCKS SHALL REMAIN IN PLACE UNTIL A STABLE GROWTH OF TURF IS PRESENT AT ALL DISTURBED AREAS.
9. THE CONTRACTOR SHALL PROVIDE AN APPROVED SECONDARY CONTAINMENT SYSTEM AT EACH SITE FOR ALL FUEL AND PETROLEUM PRODUCTS TEMPORARILY STORED ON THE SITE.

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CLIENT NAME
ESSEX COUNTY
COMMUNITY RESOURCES

DRAWING TITLE
AUSABLE FORKS
FLOOD BARRIER

DEMOLITION AND
EROSION CONTROL PLAN

DRAWING NO. C-2
SHT. 2 OF 4
REV. B

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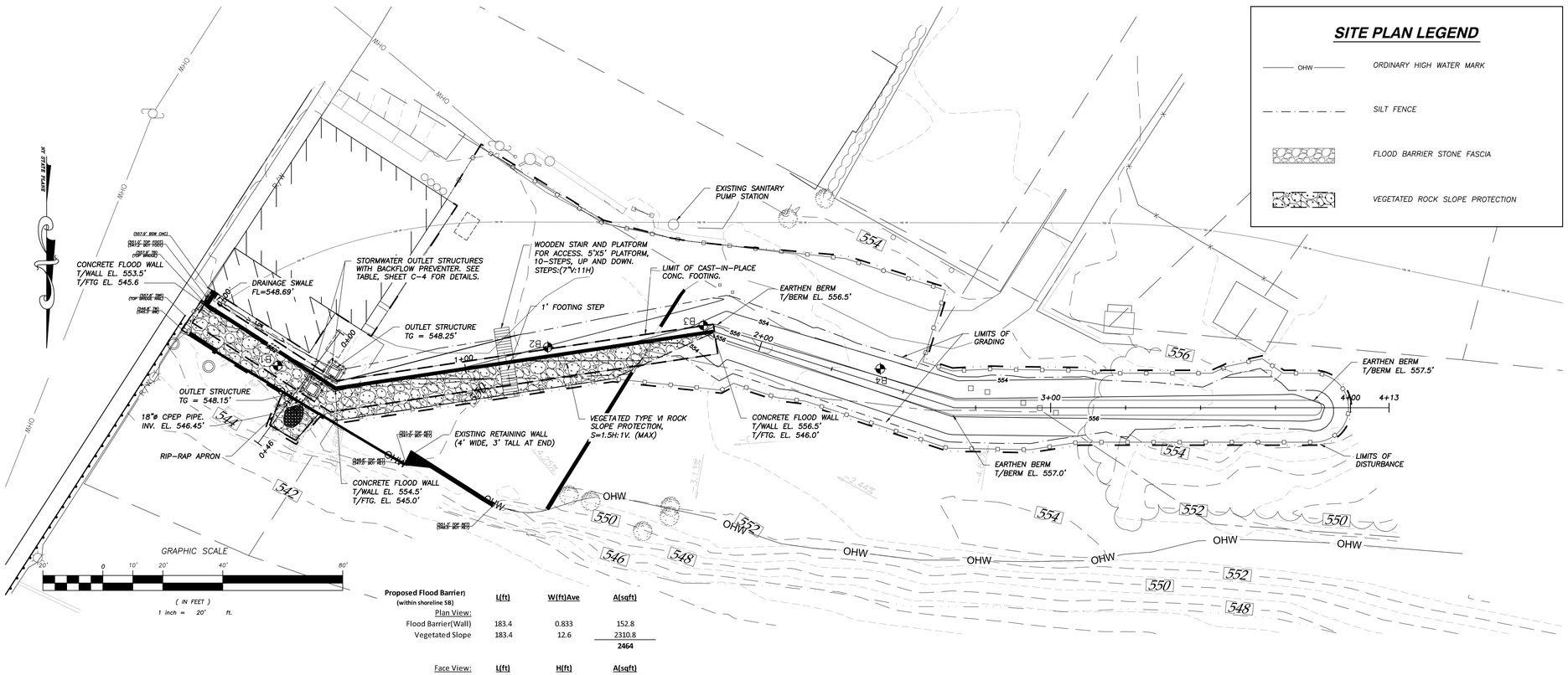
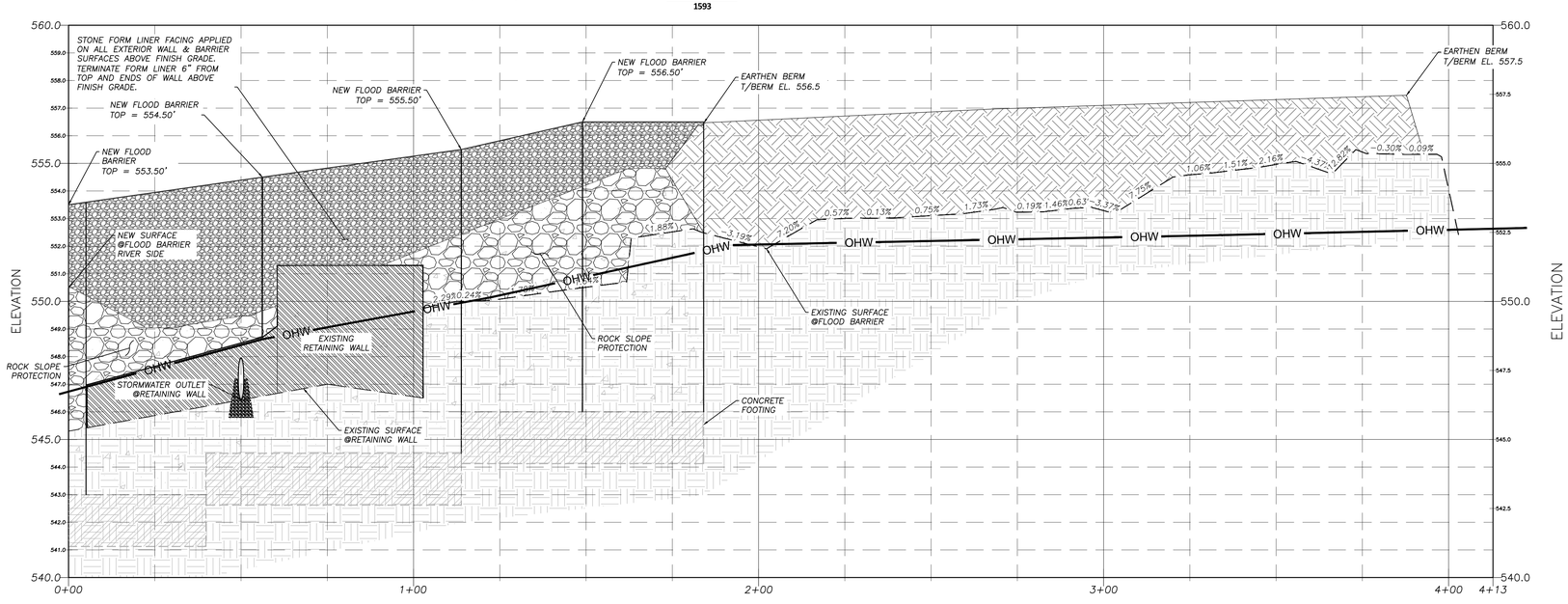
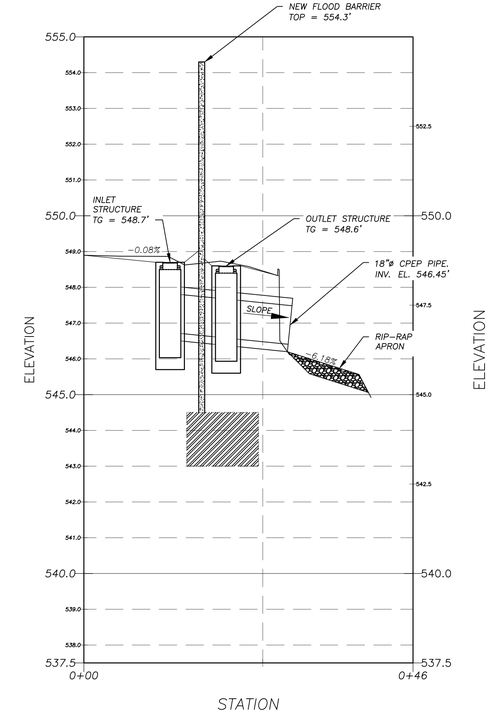


Proposed Flood Barrier) (within shoreline SB)	L(ft)	W(ft)Ave	A(sqft)
Plan View:			
Flood Barrier(Wall)	183.4	0.833	152.8
Vegetated Slope	183.4	12.6	2310.8
			2464

Face View:	L(ft)	H(ft)	A(sqft)
Flood Barrier(Wall)	183.4	varies	1011.2
Vegetated Slope	183.4	varies	581.7
			1593



PROFILE: AU SABLE FORKS - FLOOD BARRIER
(VIEW FROM RIVER)
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=2.5'



WALL CROSS SECTION @ 0+46.29'
(CATCH BASIN CROSS SECTION)
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

CONCRETE NOTES

1. CAST-IN-PLACE CONCRETE FOR THE FOR FLOODWALL SHALL CONFORM TO NYSDOT SPEC. SECTION 501, CLASS A.
2. CONCRETE WORK SHALL BE PERFORMED IN STRICT CONFORMANCE WITH THE REQUIREMENTS OF NYSDOT SPEC. SECTION 555, "STRUCTURAL CONCRETE".
3. CONTRACTOR TO NOTE THAT AMBIENT AIR TEMPERATURE DURING THE CONSTRUCTION PERIOD ANTICIPATED FOR CONSTRUCTION OF CONCRETE WORK FOR THIS PROJECT MAY REQUIRE PROVISIONS FOR COLD WEATHER CONCRETING. CONTRACTOR SHALL INCLUDE IN HIS BID ALL LABOR AND MATERIALS NECESSARY FOR SUCH COLD WEATHER CONCRETING PROVISIONS. NO ADDITIONAL PAYMENT FOR COLD WEATHER CONCRETE WORK SHALL BE PERMITTED.
4. ALL REINFORCING STEEL SHALL BE EPOXY COATED IN CONFORMANCE WITH THE REQUIREMENTS OF NYSDOT SPEC SECTION 709-04, UNLESS NOTED OTHERWISE. REINFORCING STEEL SHALL BE PLACED IN CONFORMANCE WITH THE REQUIREMENTS OF NYSDOT SPEC. SECTION 556.
5. THE OWNER SHALL RETAIN A TESTING LABORATORY CERTIFIED BY THE NYS DEPARTMENT OF TRANSPORTATION TO CONDUCT CONCRETE TESTING DURING CONSTRUCTION. REPRESENTATIVES OF THE TESTING LABORATORY SHALL BE PRESENT ON-SITE DURING ALL CONCRETE PLACEMENT OPERATIONS AS SPECIFIED IN NYSDOT SPEC. SECTION 555. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND COORDINATING WITH THE TESTING LABORATORY FOR THE FOLLOWING TESTING SERVICES:

   -SAMPLING FRESH CONCRETE: ASTM C172 EXCEPT AS MODIFIED FOR SLUMP TO COMPLY WITH ASTM C94.

   -SLUMP: ASTM C143, ONE TEST AT THE POINT OF DISCHARGE FOR EACH SET OF COMPRESSIVE TEST SPECIMENS. PERFORM ADDITIONAL TESTS WHEN THE CONSISTENCY OF THE CONCRETE APPEARS TO CHANGE.

   -AIR CONTENT: ASTM C173, VOLUMETRIC METHOD OR ASTM C231, PRESSURE METHOD FOR EACH SET OF COMPRESSIVE TEST SPECIMENS.

   -CONCRETE TEMPERATURE: ASTM C1064 FOR EACH SET OF COMPRESSIVE TEST SPECIMENS. TEST HOURLY WHEN AIR TEMPERATURE FALLS BELOW 40 DEG. F. OR WHEN AIR TEMPERATURE EXCEEDS 80 DEG, F.

   -COMPRESSIVE TEST SPECIMENS: ASTM C31 ONE SET OF 4 STANDARD CYLINDERS FOR EACH COMPRESSIVE STRENGTH TEST. MOLD AND STORE CYLINDERS FOR LABORATORY CURED TEST SPECIMENS.

   -COMPRESSIVE STRENGTH TESTS: ASTM C39, ONE SET FOR EACH DAY'S PLACEMENT EXCEEDING 5 CU. YDS. PLUS ONE ADDITIONAL SET FOR EACH ADDITIONAL 20 CU. YDS. PLACED IN ANY ONE DAY. TEST ONE SAMPLE AT 7 DAYS AND TWO AT 28 DAYS, WITH ONE SAMPLE HELD IN RESERVE FOR LATER TESTING. WHEN FREQUENCY OF TESTING WILL PROVIDE LESS THAN 5 STRENGTH TESTS CONDUCT ADDITIONAL TESTS FROM RANDOMLY SELECTED BATCHES.

   -TEST REPORTS: TEST RESULTS WILL BE REPORTED IN WRITING TO ESSEX CO. DPW AND TO THE ENGINEER WITHIN 24 HOURS OF THE TESTS. REPORTS SHALL CONTAIN THE PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF PLACEMENT, NAME OF THE TESTING SERVICE, CONCRETE TYPE AND CLASS, LOCATION OF THE CONCRETE IN THE STRUCTURE, DESIGN COMPRESSIVE STRENGTH, BATCH PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH AND TYPE OF BREAK FOR BOTH 7 AND 28 DAYS TESTS.

REVISIONS

REV.	DATE	DESCRIPTION
A	8/22/19	FOR ENVIRONMENTAL REVIEW AND EASEMENT NEGOTIATIONS
B	2/26/20	FOR APA VARIANCE APPLICATION
C	4/13/20	FOR APA INFORMATION REQEST OF 3/16/20.
D	5/8/20	FOR JOINT APPLICATION.

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SCALE:	AS SHOWN	DRAWN BY:	SRA
DATE:	8/22/19	ENG. BY:	RAL
PROJ. NO:	18-380	CHK'D BY:	ES

CLIENT NAME
ESSEX COUNTY
COMMUNITY RESOURCES

DRAWING TITLE
AUSABLE FORKS
FLOOD BARRIER

SITE PLAN AND
FLOOD WALL ELEVATIONS

DRAWING NO. C-3
SHT. 3 OF 4
REV. B

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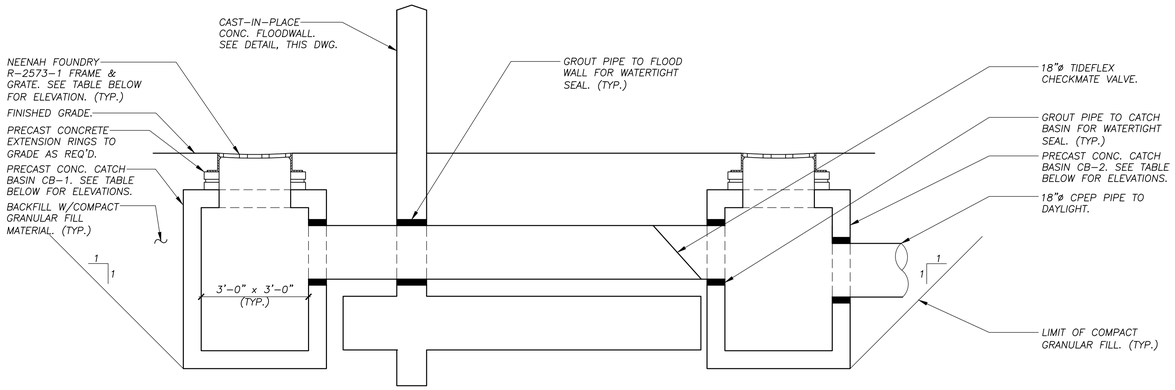

CATCH BASIN SCHEDULE			
CATCH BASIN ID#	INLET INVERT EL.	OUTLET INVERT EL.	RIM EL.
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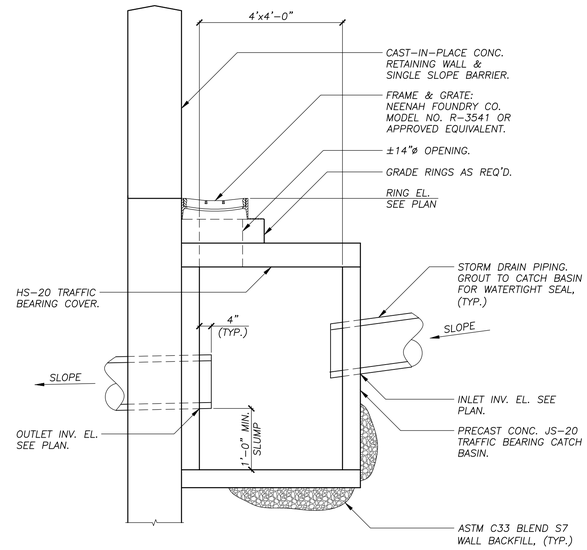
CB-2	544.86'	544.36'	548.60'

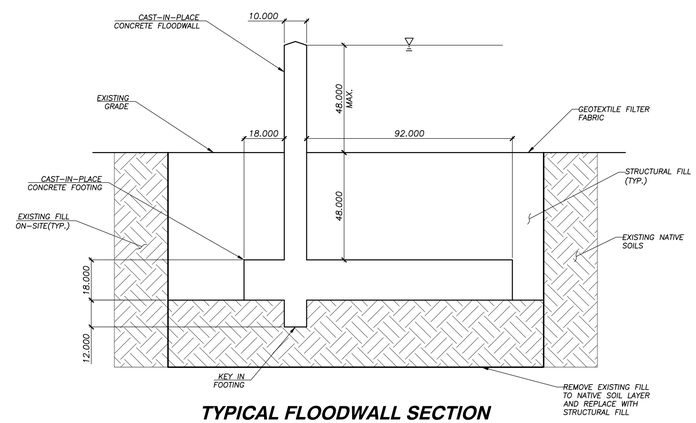
CATCH BASIN DETAIL

1/2"=1'-0"



TYPICAL CATCH BASIN DETAIL

N.T.S.



TYPICAL FLOODWALL SECTION

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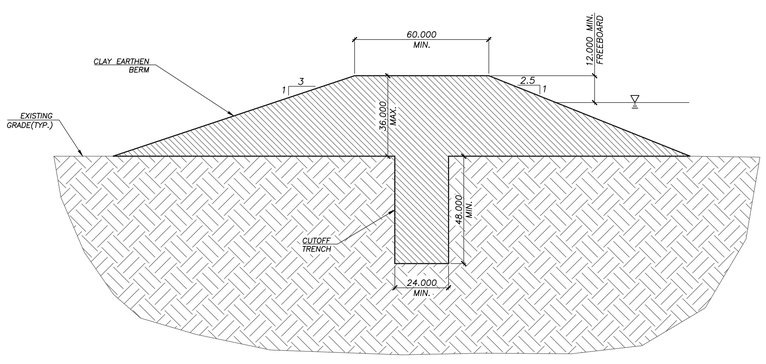

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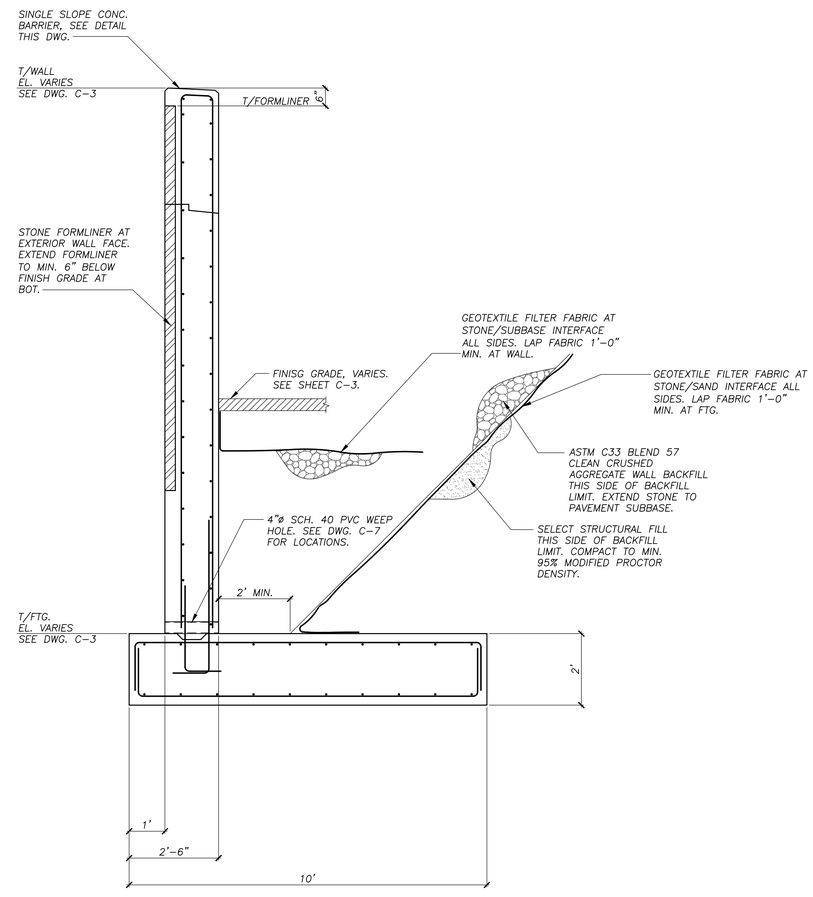

TYPICAL WALL SECTION (WALL STA. 0+00.00 TO 3+87.87)

1/2"=1'-0"

REVISIONS		
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CLIENT NAME
ESSEX COUNTY COMMUNITY RESOURCES

DRAWING TITLE
AUSABLE FORKS FLOOD BARRIER

WALL SECTIONS AND DETAILS

DRAWING NO. C-4

SHT. 4 OF 4

REV. A

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Attachment 3

Long Term Community Recovery Strategy (LTCR)

Attachment C

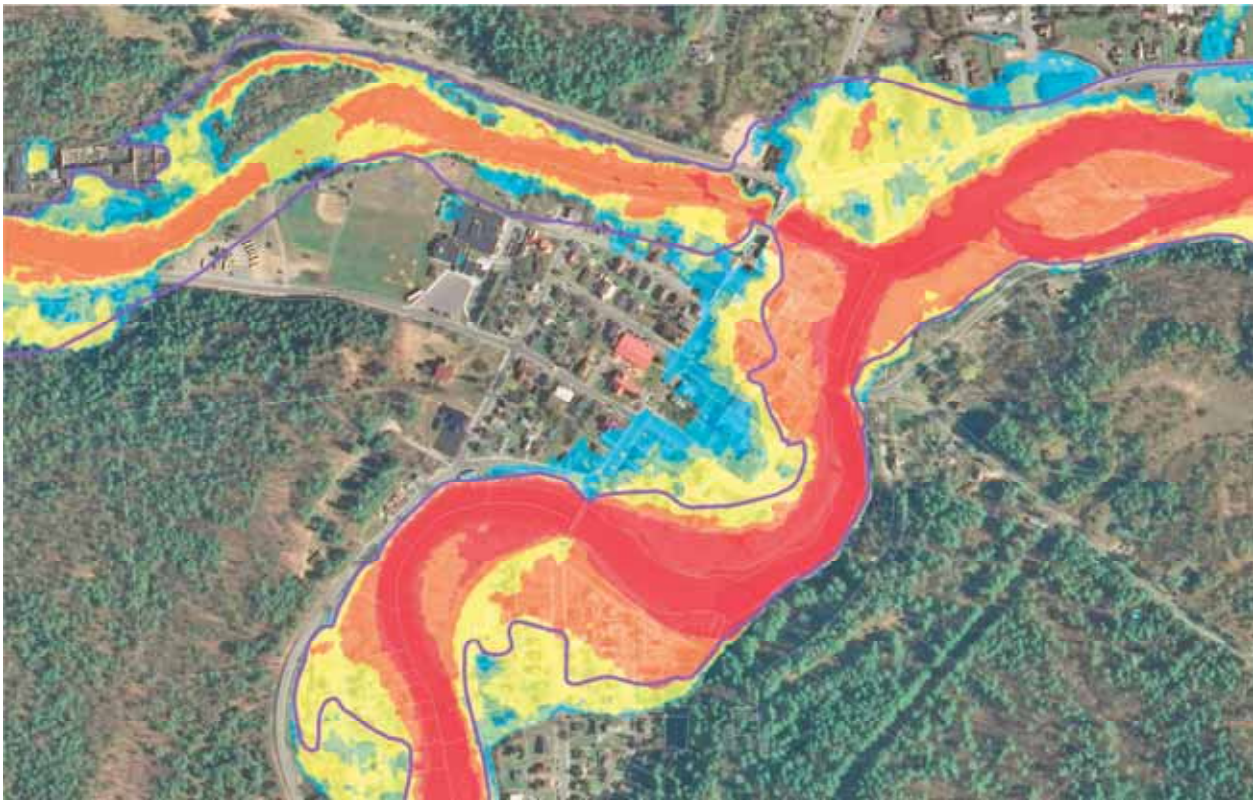
Long Term Community Recovery Strategy (LTCR)

(Submitted Electronically)

Au Sable Forks Long Term Community Recovery Strategy

Town of Jay, New York

March 31, 2017



This document was prepared with funding provided by the New York State Department of State under Title 3 of the Environmental Protection Fund.

Executive Summary

The Au Sable Forks Long Term Community Recovery (LTCR) Strategy has been developed for the Town of Jay, New York to enhance recovery and resiliency of Au Sable Forks. The Au Sable Forks LTCR Strategy builds upon the good work of the NY Rising Community Reconstruction Plan for the Towns of Jay and Keene. It has been prepared by the "Project Team" of ESPC Civil and Environmental Engineering (ESPC), Fitzgerald Environmental Associates (FEA), and Community Roots, LLC (CR), in close collaboration with the Town of Jay, Essex County Community Resources Department, New York State Department of State, and the Au Sable LTCR Strategy Steering Committee.

The Au Sable Forks LTCR Strategy summarizes the information gathering, public outreach and collaboration, and analysis and other work completed by the Project Team and identifies 19 potential strategies for implementation. The following eight strategies are deemed high priority.

Policy and Program Recommendations

- **Update Flood Regulations**. Review the existing "Flood Damage Prevention" law to ensure consistency with federal and state standards. Reference updated mapping and establish benchmarks.
- **Flood Depth Mapping**. In the process of developing the Au Sable Forks LTCR, the Project Team prepared updated flood mapping in the vicinity of the Hamlet of Au Sable Forks and flood depth maps depicting several flood scenarios. This mapping should be used as a planning tool in the future and incorporated into the reviews completed under the Flood Damage Prevention Law and into the development of a new Site Plan Review Ordinance.
- **Education Program for Debris Removal / Channel Work**. Provide technical training to Public Works staff and contractors to improve their understanding of floodplain management and stream dynamics for disaster response.
- **Emergency Response Training**. Expand Swift Water Training among Fire Department members.

Flood Resiliency Projects

- **West Branch – Flood Wall / Levee**. Provide flood protection for the buildings located on the southern bank of the West Branch on the upstream side of the Main Street Bridge with a flood wall and berm that would minimize loss of floodplain storage.
- **Residential Re-location Plan for Jersey and Intervale Neighborhoods**. Develop a long-term relocation plan for the relocation of approximately 28 residences that are prone to flooding during extreme flood events to another neighborhood within the Town of Jay.
- **East Branch Floodplain Protection Area – East of Hamlet of Jay**. Permanently protect approximately 40 acres of floodplain through easements and/or purchase of development rights.
- **East Branch Floodplain Protection Area – West of Hamlet of Jay**. Permanently protect approximately 75 acres of floodplain through easements and/or purchase of development rights.

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- Public Meeting Advertisements (poster, postcards, newspaper, on-line bulletin board)
- Public Meeting Presentation / Minutes

Appendix E Implementation Table of Recommended Strategies and Projects

1.0 Project Overview

The Town of Jay, New York has received funding from the New York State Department of State (DOS) to complete this Au Sable Forks Long Term Community Recovery (LTCR) Strategy. The Au Sable Forks LTCR Strategy was developed by a consultant team (referred to as the "Project Team") retained by the Town of Jay, comprised of ESPC Civil and Environmental Engineering (ESPC), Fitzgerald Environmental Associates (FEA), and Community Roots, LLC (CR). The Project Team worked in cooperation with the Au Sable Forks LTCR Steering Committee, the County of Essex, and the New York State DOS.

The scope of the Au Sable Forks LTCR Strategy is to develop a comprehensive strategy to enhance recovery and resiliency of Au Sable Forks. In accordance with the DOS grant requirements, specific work program tasks were followed and are documented in this report. The outcome of the Au Sable Forks LTCR Strategy is the identification and prioritization of specific projects and tasks, with the establishment of a funding strategy to position the community to apply for additional grant funding for implementation.

The study area is defined specifically as the limits of the Au Sable Forks Hamlet as identified on the Adirondack Park Land Use and Development Plan (APLUDP) Map, located in Essex County and illustrated in Figure 1.

Figure 1: Au Sable Forks LTCR Strategy Study Area (outline in yellow)

2.0 Existing Conditions and Related Projects

2.1 Au Sable Forks Flood History and Risk

Watershed Background

The hamlet of Au Sable Forks is situated at the confluence of the East Branch and West Branch of the Ausable River (Figure 2). The East Branch drains an area of approximately 200 square miles originating from the eastern slopes of Mount Marcy. Two large lakes (Upper and Lower Ausable Lake) are located along the East Branch as it flows out of the headwaters. As the river leaves the mountainous headwaters, it meanders northward through a wide and gently sloping valley shared with NY Route 73 and then NY Route 9N. The West Branch watershed is located to the west over a spine of tall mountains. The watershed drains an area of approximately 230 square miles including Lake Placid and Whiteface Mountain.

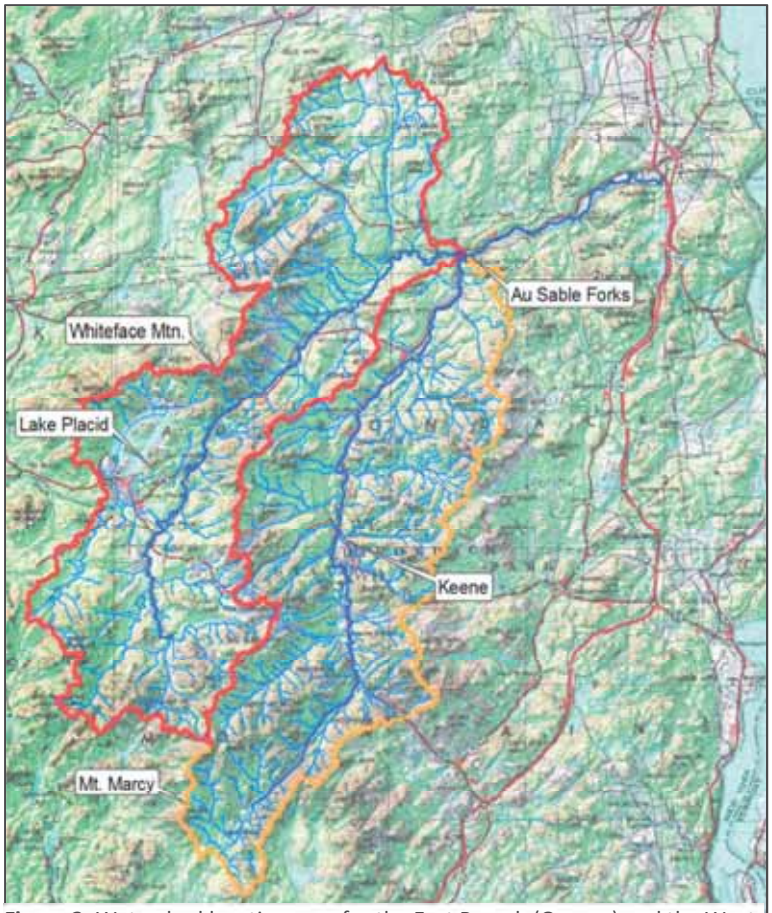


Figure 2: Watershed location map for the East Branch (Orange) and the West Branch (Red) draining to the confluence in Au Sable Forks.

Both watersheds are narrow and long with numerous steep tributaries entering the main stems as they approach the confluence in Au Sable Forks. The mainstem of the West Branch descends over a series of higher slope "steps" such as Quarry Pool, Monument Falls, High Gorge Falls, etc. The East Branch headwaters descend steeply in Keene before transitioning into a wider, unconfined valley through the Town of Jay.

Flood History

The United States Geological Survey (USGS) operates continuous stream gaging stations on both the East Branch (immediately upstream of Au Sable Forks) and on the Ausable River (approximately 2 miles downstream of the East Branch/West Branch confluence). Analysis of the long-term peak flow gaging records from 1924 to 1999 estimated the flow level for the 100-year and the 500-year storms (Lumia et al., 2006). Both gages recorded a major flood near or exceeding the estimated 500-year event on January 19th, 1996. The East Branch also recorded a 100-year event on September 22nd, 1938 (Figure 3).

The historic flood flows witnessed during Tropical Storm Irene (TS Irene) on the evening of August 28th, 2011 were approximately 25-30% greater than those recorded during a major flood in 1996. Major floods in the 1800's, including the "freshet of 1856", were described as catastrophic to the industrial development in Au Sable Forks (Barton and Loguidice, 2006). Limited additional information is available to describe flooding along the Ausable River prior to 1924.

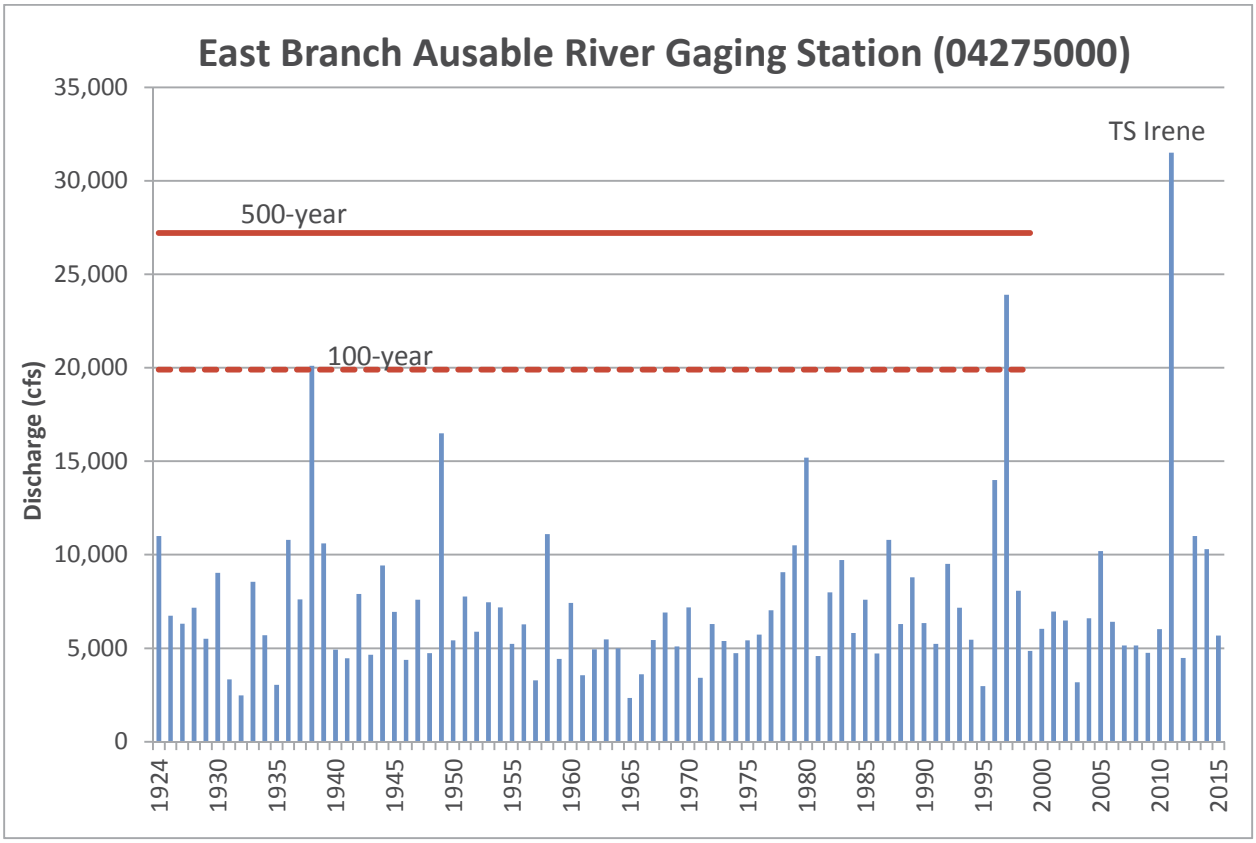


Figure 3: Peak streamflow record from the USGS gaging station on the East Branch Ausable River. The horizontal lines represent the estimated 100-year and 500-year flows based on an analysis of gaging records from 1924-1999, as reported in Lumia et al., 2006.

Flood Risk

Many of the residences and businesses in the hamlet of Au Sable Forks are situated in locations vulnerable to flooding. This all-too-common scenario in the Northeast is a relic of historical use of the river to power mills. Over the last century, settlement patterns in the hamlet resulted in neighborhoods developing in areas that were once used for only agriculture (i.e., Jersey neighborhood), resulting in many homes located on a frequently flooded bend of the river. Today, there are approximately 19 businesses found within the 100-year floodplain in the Jay-portion of the hamlet of Au Sable Forks. When accounting for updated flow estimates based on changes in climate and hydrology, an estimated 91 residences and businesses are found in the flood zone for an extreme flood event like Tropical Storm Irene (approximate 500-year storm).

2.2 NY Rising Community Reconstruction Plan (NYRCRP) for the Towns of Jay and Keene

The NY Rising Community Reconstruction Program (NYRCRP) is part of the Governor's Office of Storm Recovery (GOSR), which was created by Governor Andrew M. Cuomo following Tropical Storms Irene and Lee in 2011 and Super Storm Sandy in 2012. The NYRCRP for the Towns of Jay and Keene provided a community overview, an assessment of risks and needs, reconstruction and resiliency strategies, and an implementation plan for them.

The NYRCRP resulted in an implementation plan that separated recommendations into: (1) Proposed Projects – projects proposed for funding; (2) Featured Projects – projects and actions identified as important but not proposed for funding through the NYRCR Program; and, (3) Additional Resiliency Recommendations – projects that are highlighted but not in either of the other two categories. Following is a listing of the projects and recommendations that relate to and are specific to the Au Sable Forks LTCR project area from each category. Additional commentary is provided for the Proposed and Featured Projects to indicate current status since the NYRCRP was released in 2014.

Proposed Projects

- Development and implementation of an enhanced Site Plan Review Process – *Not implemented*.
- Water Rescue Equipment for Jay – *Equipment has been purchased*.
- Best Management Practice (BMP) education program for debris removal, in-channel response and recovery, and erosion and sedimentation control – *Not implemented*.
- Rome Dam Engineering Study – *In progress*.
- Au Sable Forks water building relocation and upgrade – *This project is currently in the design phase with expected construction in 2017 or 2018.*
- Au Sable Forks comprehensive stormwater and flood mitigation study – *Not implemented*.
- Rolling Mill Hill water infrastructure protection – *Not implemented*.
- Priority culvert replacement project – *Not implemented. (This project would occur primarily outside of the hamlet of Au Sable Forks but would result in benefits to the hamlet.)*

Featured Projects

- APLUDP land reclassification and hamlet expansion – *Not implemented*.
- Necessary emergency support equipment and shelter upgrades for Jay – *Not implemented*.
- LiDAR Acquisition –*Completed in 2016*.
- Ice Jam Study – *The Rome Dam Study that is currently in progress will include some level of ice jam study.*
- Conservation easements and Purchase of Development Rights to protect floodplains from development – *Not directly implemented, but addressed in the Ausable River Watershed Management Plan (see Section 2.2).*
- New Grove Road Bridge – *This bridge was replaced, construction completed in 2015.*

- Restoration program for the East Branch of the Ausable River - *Not implemented. (This project would occur primarily outside of the hamlet of Au Sable Forks but would result in benefits to the hamlet.)*

Additional Resiliency Recommendations

- Strengthen First Responders' Capabilities
- Enhance Floodplain Management and Stream Outreach
- Update FEMA Flood Insurance Rate Maps (FIRM)
- Improve Resilience Through Data Backup
- Promote Main Street Revitalization
- Building Code Improvements
- Improve Transportation Infrastructure
- Remediate Black Brook Paper – Floodplain Reconnection

The Au Sable Forks LTCR Strategy funds were originally awarded in 2012, but the project was delayed to allow for the completion of the NYRCRP for the Towns of Jay and Keene due to the clear overlapping objectives of the two programs. One of the goals (see Section 4.0) of creating and implementing the Au Sable Forks LTCR Strategy is to build upon, not duplicate, what has been recommended and what is currently being implemented under the NY Rising Program.

2.3 Ausable River Watershed Management Plan

The Ausable River Watershed Management Plan (ARWMP) was finalized in June 2016 by the Ausable River Association (AsRA) with funding by the NYS DOS and in cooperation with numerous agencies and organizations. The ARWMP provides a comprehensive view of the Ausable River and its watershed and proposes priorities and projects that will help restore and sustain a healthy river ecosystem.

It is very important to coordinate the goals and the results of the Au Sable Forks LTCR Strategy with those of the ARWMP. As such, representatives of AsRA have been invited to the coordination meetings and to join the Steering Committee for the LTCR Strategy and have provided input into the development of the Au Sable Forks LTCR Strategy.

2.4 USGS LiDAR for the Ausable River Watershed

The U.S. Geological Survey (USGS) has undertaken a project to obtain updated ground surface elevation data in the Ausable River watershed using a survey technology known as LiDAR. The most recent previous LiDAR data for the project area was developed from mapping created in 2002. One of the Featured Projects of the NYRCRP is to obtain updated LiDAR data. During the development of the Au Sable Forks LTCR Strategy, the Project Team coordinated with USGS to obtain the latest LiDAR data for use in creating models for identifying projects and mapping for planning tools. Initially the LiDAR data was to be released in February 2016 but, due to errors detected in the QA/QC process, its release has been delayed to April or May of 2016, which is past the completion deadline for the Au Sable Forks LTCR Strategy.

2.5 Other Planning Efforts

The Project Team also reviewed the following documents summarizing other planning efforts that are relevant to creating a long-term community recovery strategy for Au Sable Forks:

- *Flood Damage Prevention (Town of Jay Local Law, 2002);*
- *High Peaks Waterfront Revitalization Strategy (2010);*
- *Town of Jay Comprehensive Plan (1980);*
- *Town of Jay – Au Sable Forks Downtown Revitalization Plan (2005); and,*
- *Ausable River Watershed Management Strategy (2008).*

3.0 Community Outreach

The Au Sable Forks LTCR Strategy has involved a great deal of community outreach to various parts of the community. Over the course of this project, the Project Team has reached out to local government officials, businesses, emergency responders, and the general public. Each of these groups had a different perspective to add to the discussion.

One of the first things that the Project Team did in preparing for conducting community outreach for the Au Sable Forks LTCR Strategy was to review all public outreach documents that were generated for the NYRCRP process. These included meeting agendas, meeting minutes, flyers, and press releases. Reviewing these documents helped the Project Team to avoid duplicating previous efforts.

3.1 Project Kick-Off

An initial Kick-Off conference call was conducted on November 25, 2015 and included the Town of Jay, Essex County, NYS DOS, and a member of the Project Team. The purpose of the call was to confirm scope of work tasks, schedule, communication protocol, deliverables, invoicing procedures and other technical and administrative items.

An on-site project Kick-Off meeting took place on December 10, 2015. In addition to the Project Team, meeting attendees included Essex County officials, Town of Jay officials, Au Sable River Association representative, etc. Please see Appendix D for a meeting summary, including a list of attendees.

At this meeting, the Project Team collected a variety of background information, confirmed the geographic focus of the project, and learned from those assembled what focus areas were covered by NY Rising and what areas were not. At this meeting, it became clear that three areas that had not been dealt with through NY Rising were key areas of focus; these were the Jersey neighborhood, the Intervale neighborhood and Main Street.

3.2 Steering Committee

The Steering Committee was created and held its first meeting on March 2, 2016. The Steering Committee consists of the following individuals:

- Robbie Lincoln – Department of Public Works director

- Kevin Douglas – Business owner
- Scott McDonald – Co-chair of NY Rising
- Archie Depo, Town Supervisor
- Russ Coonradt – Town employee
- Chad Garcia – Resident
- Kelley Tucker – Au Sable River Association

The Steering Committee also met on March 15, 2016 prior to the Public Meeting. At this meeting, the Project Team introduced the process they have been working through and discussed possible strategies.

Please see Appendix D for a summary of the March 15 meeting.

3.3 Business Breakfast Meeting

On February 2, 2016, a business breakfast was held to learn more from businesses about their experiences and needs. Outreach was done by the Town of Jay; invitations were hand delivered to area businesses. One property owner attended, Kevin Douglas, who also became a member of the Steering Committee. Kevin owns an historic property on Main Street that is home to two businesses – a hair salon and a lawyer's office. He explained his extensive issues with flooding during TS Irene and in other events. Kevin is open to the idea of a floodwall on his property. He has already moved all of his utilities to upper floors of his building.

Please see Appendix D for a summary of the February 2 business breakfast meeting.

3.4 Emergency Response Meeting

On February 2, 2016, an emergency response meeting was held with fire chiefs from the Town of Jay, which is served by three fire houses. At this meeting, the assembled fire chiefs discussed challenges and opportunities seen in responding to emergencies such as flooding and potential opportunities for consolidating and/or working together to acquire and share resources. The Town of Jay has received funds for swift water equipment, which have been put in place. In addition, they are in the process of renovating their Au Sable Forks fire station. One additional need discussed by the fire chiefs is training on swift water equipment; there is currently only one emergency responder trained to use the swift water equipment. In the event of another flood, it will be important to be able to quickly deploy the swift water equipment; trained personnel will be key to this. There may be ways of creating a consortium to apply for training funds; there is already a precedent for these fire stations banding together for other funding opportunities. Another need across the Jay fire stations is additional members. It may make sense to consider incentives to attract new members.

Please see Appendix D for a summary of the February 2 emergency response meeting.

3.5 Public Community Meeting

A public community meeting was held on Tuesday, March 15, 2016. A significant amount of outreach was done to alert community members, businesses and government officials of this meeting. This outreach included postcards, flyers, press releases and postings on the Jay Community News.

This meeting provided an opportunity to introduce the project and project goals, the Project Team and Steering Committee. Community members also had an opportunity to share their experiences during TS Irene and other flooding events. The Project Team shared its draft strategies and gathered input on the applicability and priority of strategies from the perspective of community members.

Please see Appendix D for a summary of the March 15 public community meeting, including a list of attendees.

In preparation for the Public Community Meeting, a SurveyMonkey survey was developed to collect additional information on people's experiences during TS Irene and other flooding events. The link to the survey was included in all outreach materials prepared for the meeting. In addition, printed copies were made available to the Town of Jay, for inclusion in their outreach and marketing of the meeting. Please see Appendix D for the survey and results. Unfortunately, this survey did not provide much in the way of information. Despite the survey being started by 18 people, only 2 people (or 11 percent) completed the survey and provided information about flooding at their location during past floods. Eight of 18 (or 44 percent) said that they did have flood impacts to share.

4.0 Project Goals

Following the initial project coordination, the kick-off meetings, and first Steering Committee meeting and after soliciting feedback from those engaged in the Au Sable Forks LTCR Strategy, the Project Team drafted the following project goals, drawing on the results of the information gathering and assessment.

The goals of the Au Sable Forks Long Term Community Recovery (LTCR) Strategy are to:

1. ***Identify flood vulnerabilities for community assets.***
2. ***Develop strategies to make the community more disaster resistant and flood resilient. This project will:***
   - ***Build upon the NY Rising Community Reconstruction Plan for the Towns of Jay and Keene (not repeat or re-create what has been or is being implemented already).***
   - ***Provide a clear roadmap for implementing identified strategies and recommendations.***
   - ***Identify strategies for flood resiliency specifically for the Jersey and Intervale neighborhoods.***
   - ***Identify strategies to support Au Sable Forks businesses, particularly along and near Main Street.***

The draft goals were presented at the Public Meeting and have so far been accepted by those present as well as by the Steering Committee. Any modifications as a result of comments received during the public review of the Draft Au Sable Forks LTCR Strategy will be incorporated into the final document.

5.0 Strategies and Projects to Protect Au Sable Forks

5.1 Municipal Policy and Program Recommendations

5.1.1 Land Use Development Regulations

Reducing flood risk involves a continuous process of policy evaluation and adjustments to minimize risks through protection, prevention, planning, and education. The Project Team reviewed municipal policies, plans, and regulations as applicable to evaluate whether adequate mechanisms are in place to protect people, businesses and infrastructure from flooding as can be controlled by new development and re-development.

Comprehensive Plan

The Jay Comprehensive Plan has been adopted by the Town of Jay. The Comprehensive Plan was developed in 1980 and is therefore extremely out of date. It is a planning document that provides a vision for the Town and guidelines regarding design and management within the town but does not establish rules that can be enforced to ensure that development in the town adheres to that vision. It is also the legal basis for establishing land use regulation and should be updated.

Flood Regulations

The Town of Jay does have a local law entitled "Flood Damage Prevention" which was established in 2002. The Flood Damage Prevention Law establishes a Special Flood Hazard Area (SFHA) referencing the Flood Insurance Rate Map (FIRM) of 2002 and corresponding Flood Insurance Study (FIS). The law requires a flood permit to be obtained for development within the SFHA. Construction standards for within the SFHA are also established and include requirements such as no fill in the floodplain unless it can be demonstrated that there will be no rise in the flood surface elevation, anchoring, construction methods and materials, and protection of utilities. It also requires the first floor of new residential construction to be a minimum of two feet above the base flood elevation (or three feet above in Zone A) and for the lowest floor of new commercial construction to be two feet above the base flood elevation or flood-proofed.

Regarding the Flood Damage Prevention Law, the following actions are recommended to further protect the residents and businesses of Au Sable Forks:

- Have the law reviewed and updated to ensure it is consistent with federal and state standards;
- Require repaired and rebuilt structures to be constructed so that the first floor is higher than the base flood elevation, not just new construction;
- Instead of defining the SFHA by the 2002 FIRM, set the SFHA at the most recent recorded flood for the area or in accordance with a flood map using updated data (see Section 5.1.5); and,
- Create benchmarks for rebuilding after a disaster to ensure that rebuilding does not violate town and federal requirements.

Site Plan Review and Zoning Ordinance

The Town of Jay currently does not have a zoning ordinance or site plan review ordinance in place. It is recommended that the town create and adopt a zoning ordinance and a site plan review ordinance, which would require applicants proposing new commercial development to submit a site development plan for review and approval. The site development plan should specify the present characteristics of a particular parcel of land and its surroundings and describe intended activities and their potential impact on the community and adjacent neighborhood. Site development plans illustrate the intended design, arrangement and uses of the land to be improved and they describe the physical, social and economic effects of the proposed development on the community.

Information on factors - such as means of access, parking, landscaping, buffers, architectural features, location of structures, impact on adjacent land uses, and other elements related to the health, safety and general welfare of the community - are often considered during the review of the plan. In most communities, the responsibility for reviewing the site development plan typically falls to the Planning Board.

Typical language in a site plan review ordinance stipulates what should be submitted as part of a site plan application and provides standard objectives the Planning Board should use in reviewing the application such as means of access, ingress/egress, stormwater, lighting, signage, landscaping, buffers, etc. In addition to the standard objectives, it is recommended that the town include an objective that directly relates to the Flood Damage Prevention Local Law. This will ensure that all uses requiring site plan approval in the SFHA are in compliance with this law, helping to mitigate and prevent future damage. It can also be used as a tool to effect the protection of floodplains (see Section 5.2.1).

The Town of Jay does not currently have a separate Planning Board, which would need to be re-established in order to implement the new ordinances.

Additional information including language for developing a local land use regulation can be found in the following technical series documents by the New York State Division of Local Government Services located via the following links:
https://www.dos.ny.gov/lg/publications/Adopting_Zoning_for_the_First_Time.pdf
https://www.dos.ny.gov/lg/publications/Creating_the_Community_You_Want.pdf
https://www.dos.ny.gov/lg/publications/Guide_to_Planning_and_Zoning_Laws.pdf
https://www.dos.ny.gov/lg/publications/Site_Plan_Review.pdf

Other local laws may also be considered that could improve flood resiliency for the hamlet including a stormwater management law and a stream corridor protection law.

5.1.2 Education Program for Debris Removal / Channel Work

Looking back at the 2011 emergency flood recovery work that occurred in rivers throughout New York and the greater Northeast, many experts concluded that a significant portion of the work made the river and adjacent infrastructure *more vulnerable* to damage during subsequent floods. In most cases, the reason for this was that the people directing and carrying out the work lacked proper training in river and floodplain dynamics. Training is needed to break the cycle of flood recovery activities that leave

post-flood river channels located near public infrastructure and private property more impacted and more vulnerable to damages from future flooding. The NYRCRP Report highlighted a strategy for enhancing education and outreach regarding floodplain management and stream dynamics. The strategy indicated a need to provide technical training to local Highway Department Staff, contractors, and others involved in flood recovery work in rivers. The strategy was developed by the NYRCRP Planning Committee in conjunction with the Ausable River Association, Essex County Soil and Water Conservation District (ECSWCD), NYSDEC, and other stakeholders in Keene and Jay.

While the strategy outlined in the NYRCRP report has not been funded by New York State, other training efforts have been implemented with other sources of funding. Dave Reckahn of ECSWCD has implemented two trainings for Publics Works employees and contractors in the region, funded by the Lake Champlain Basin Program (LCBP). The first training was a 1-day workshop in Keene Valley in the fall of 2014 and the second was a 3-day training in Keene and Willsboro in the fall of 2015. These trainings focused on best management practices (BMPs) for in-stream work such as sediment and debris removal, channel and bank stabilization, and other activities that impact river processes during flood recovery.

Parallel guidance and training efforts have been underway in Vermont since 2011, and are starting to come together with New York efforts through a project funded by LCBP. The Vermont Agency of Natural Resources (VTANR) sponsored a project to develop “Standard River Management Principles and Practices” which was completed in 2014 (Schiff et al., 2014). This guidance document defines practices and decision-making processes to assist state and federal agencies, municipalities, nonprofit organizations, and landowners with river management techniques that reduce future flood and erosion risks. Following up on this effort, the LCBP funded the development of “Advanced Flood Recovery and River Management Training Modules” along with outreach and pilot training in Vermont and New York. The modules are currently being developed by Roy Schiff (Milone and MacBroom, Inc.) and Evan Fitzgerald (Fitzgerald Environmental Associates) and a training session for channel and bank stabilization practices will occur in New York in the spring of 2016 in coordination with Dave Reckahn of ECSWCD.

Our Project Team recommends that Public Works employees in the Town of Jay, and contractors that work for the town, attend these training sessions and others in the future to build their knowledge base and capacity so they can carry out flood recovery work more effectively in the future. In addition, stream restoration experts from the US Fish and Wildlife Service (USFWS) may be available to provide technical assistance to the town during emergency flood recovery.

5.1.3 Emergency Response

The Town of Jay is home to three fire departments: one in Au Sable Forks, one in Jay, and one in Upper Jay. Based on discussions with Town of Jay fire chiefs at a meeting on February 2, 2016, several New York Rising strategies have already, or are in the process of being, implemented to improve emergency response capabilities since TS Irene flooded the Au Sable River.

Water Rescue Equipment

Water rescue equipment has been obtained through a grant from the New York State Department of Homeland Security. Five fire departments (Au Sable Forks, Jay, Upper Jay, Keene and Keene Valley) formed a consortium to apply for the grant. The $37,000 grant provided boats, floatation gear, wetsuits and other water rescue equipment that is spread out across the districts.

Necessary emergency support equipment and shelter upgrades for Jay

In August 2015, voters approved a bond for a 3-phase project to make upgrades to the Au Sable Forks Fire House. This fire house is ground zero for emergency response for the Town of Jay. Phase 1 of this project has begun and will include a new roof, repairs to the electrical and heating systems and renovated bathrooms that will meet ADA requirements. Additional phases will better accommodate trucks and radio equipment.

According to fire chiefs, there are two additional challenges to be addressed to further support emergency response, in the wake of TS Irene.

1. **Swift Water Training.** There are currently very few fire department members who are trained to use the recently acquired water rescue equipment. The departments are interested in collaborating to bring the training to more members and potentially offset costs. This may be done through another consortium approach, where fire departments collaborate to access joint funding.
2. **Recruitment.** All three departments struggle with recruitment of new members and would benefit from a county-wide recruitment strategy and more financial incentives for people to join. This is an ongoing issue for fire departments across the country.

   There are a variety of possible incentives to engage new recruits.

   - Some communities offer an **hourly rate** (for example, minimum wage) for time spent responding to calls.
   - **Monthly allowances** are another option; these are not meant to be compensation for the work emergency responders perform, but compensate them for out-of-pocket expenses they incur in responding to alarms, attending training and other activities. Or they can be based on rank, participation and/or training.
   - Other departments may offer **retirement funds or pension plans**, paid on a per call basis.
   - **Tax cuts.** In Pennsylvania, volunteer emergency response personnel are awarded a $100 income tax cut. On the federal level, a $1,000 income tax credit has been proposed.
   - **Other incentives encourage volunteers to spend time at the fire station,** by providing game rooms, television rooms, and wireless Internet access.
   - Some communities can extend **health insurance** to the firefighters that serve their community in return for volunteering, but the cost can be high. Those who have

insurance on their own could use the plan to pay for co-payments. Another option is to allow members to buy into the town insurance plan.

- Building the pipeline of volunteers means **engaging youth, by setting up junior programs.**
- **Education and training reimbursements or scholarships** can be an incentive for those interested in furthering their education.
- **Other options include:**
    - Awards, like a firefighter of the year award or service awards (5, 10, 15, 20 year awards, etc.)
    - Appreciation events, such as an annual family picnic.
    - Leadership retreats
    - Gear like jackets, t-shirts, etc.
    - Disability insurance
    - Income replacement insurance
    - Sleepover and/or station responsibilities – live in opportunities
    - Life insurance
    - Recruiting drives with gifts for members
    - Trips to National Fire Academy and National Fire Conferences and Expos
    - Memberships paid to fire organizations.
    - Personnel board with pictures.
    - Public relations assignments (fairs, schools, etc.)

In discussions with fire chiefs, it became clear that road infrastructure is the most important aspect of resiliency for first responders, because, without it, they cannot reach residents in need. The road, sidewalk and drainage projects being planned for Au Sable Forks will be essential to maintaining road resiliency.

The group also discussed the high cost of maintaining three departments that serve the Town of Jay but both chiefs at the meeting felt consolidation was not possible due to geographic and road infrastructure constraints.

Funding Opportunities

The Federal Emergency Management Administration (FEMA) has a variety of possible grants to support the region's needs.

Staffing for Adequate Fire & Emergency Response Grants (SAFER)

This opportunity is for fire departments: national, state, local; or tribal organizations that represent the interests of firefighters.

The Staffing for Adequate Fire and Emergency Response Grants (SAFER) was created to provide funding directly to fire departments and volunteer firefighter interest organizations to help them increase or

maintain the number of trained, "front line" firefighters available in their communities. The goal of SAFER is to enhance the local fire departments' abilities to comply with staffing, response and operational standards established by the NFPA (NFPA 1710 and/or NFPA 1720). For details visit http://www.nfpa.org/freeaccess.

Assistance to Firefighters Grant Program

The primary goal of the Assistance to Firefighters Grants (AFG) is to enhance the safety of the public and firefighters with respect to fire-related hazards by providing direct financial assistance to eligible fire departments, nonaffiliated Emergency Medical Services (EMS) organizations, and State Fire Training Academies (SFTA) for critically needed resources to equip and train emergency personnel to recognized standards, enhance operations efficiencies, foster interoperability, and support community resilience. For more information, visit https://www.fema.gov/welcome-assistance-firefighters-grant-program

5.1.4 Business Preparedness and Retention

Small businesses are key to a small community's vitality and the quality of life of a community's residents. Emergencies like TS Irene can cause businesses to close temporarily or permanently, causing a hardship for community residents. It was critical in this study to better understand the needs of businesses before, during and after an emergency. Tops Market, for example, is a key anchor store in the community of Au Sable Forks. The loss of this business in particular would be a tremendous loss for the residents of Au Sable Forks, forcing them to travel longer distances to shop for basic needs, like food. It is critical to consider strategies that will support the business community so that downtown Au Sable Forks can continue to be a vital community center.

Background

To engage businesses that did not attend the Business Breakfast (held February 2, 2016), Community Roots worked with existing business directories and the office of the Jay Town Supervisor to generate a list of businesses and landlords holding property on Main Street in the hamlet of Au Sable Forks. Each business or landlord received a phone call and/or email to gather input on their experience with flooding (including business impacts), any flood-proofing measures they have taken and ideas about strategies or investments that would support the resiliency of the Au Sable Forks business community.

Summary of Results

Eighteen businesses or property owners were contacted and interviews were completed with Dee's Haircrafting, James E Marineau Jr. Law Office, Rusty Zipper, Community Bank and Tops Market. Other businesses and property owners did not respond to requests for an interview.

Valerie Daniels, the Branch Manager at Community Bank, reported that they experienced flooding during TS Irene. The bank's pump in the basement stopped working due to the lack of power; as a result, the basement of the bank had approximately two inches of water in it. The bank closed the day after the storm hit, because it was without power and employees were unable to cross the bridge to access the bank.

Tops Market experienced significant damage and flooding during TS Irene. The Manager of Tops Market, Kathy Desautels, reported that the store lost the entire bottom shelf of groceries, all the computer equipment and years of records located in the office. The store was closed for three days and staff members from many other surrounding stores came in to help with the clean-up. After the storm, the market purchased 2,000 sand bags in an attempt to protect the store from future flooding. They have engaged an emergency crew to come to put out the sandbags and help to move equipment, like computers, that is low to the floor.

Other businesses did not report significant flooding impacts or closures due to flooding.

Strategies

There are a number of basic business preparedness and retention strategies that can be implemented to ensure that businesses in Au Sable Forks are prepared for future flooding and other emergencies.

1. Have the right insurance coverage for business interruption.
2. Develop a continuity of operations plan.
3. Floodproof and elevate utilities.
4. Plan ahead. Regularly back up computer data and store important tax and financial records and information such as insurance policy details in a flood-safe place.
5. Train employees so they know what actions to take in the event of a disaster or after receiving a flood warning. Train staff on procedures to shut down the business and how to deploy loss reduction measures, like relocating equipment and inventory to upper floors and deploying door and window dams to reduce flooding.
6. Pay attention to emergency alerts.

It may make sense to start by counseling businesses about insurance and flood-proofing. FEMA and state agencies may have resources for technical assistance around assisting businesses to be disaster resilient.

It will be important to ensure that Tops Market is able to remain open through and after future emergencies. Tops is a key anchor store for the community of Au Sable Forks and beyond. There are few grocery stores in the region. The loss of a grocery store means the loss of a major piece of a community, forcing residents to drive many miles to buy groceries, in essence creating a potential food desert. The loss of a grocery store can be especially problematic for the elderly, as it may be hard for them to drive farther distances.

The hamlet of Au Sable Forks, Town of Jay, Essex County and other agencies, such as the local Small Business Development Center (SBDC) and Small Business Administration (SBA) may be the drivers of these strategies. There also may be an opportunity to utilize expertise at the university and college level to achieve this level of preparedness.

Funding Opportunities for Business Strategies

General Preparedness Information from SBA

The Small Business Administration (SBA) offers businesses resources to help be more prepared for emergencies. This may include the following:

- Create a preparedness program for your business
- Identify critical business systems [PDF]
- Create an emergency communications plan [PDF]
- Test your business systems
- Enroll in the Red Cross Ready Rating Program
- Build a disaster preparedness kit
- Learn about SBA's Disaster Assistance programs (online course)

FEMA Disaster Assistance

After a disaster, the first point of contact for businesses should be the Federal Emergency Management Administration (FEMA). Businesses should contact FEMA directly to apply for assistance, which includes money for housing and essential expenses, such as food and clothing; and critical personal expenses, such as medication. To learn more about FEMA and how to access assistance, explore the following resources:

- Disaster Assistance Available from FEMA
- Contact FEMA and Apply for Assistance

Disaster and Economic Injury Loans

The SBA and the United States Department of Agriculture (USDA) provide low interest loans to businesses and individuals to repair or replace real estate, personal property, machinery and equipment, inventory and business assets that have been damaged or destroyed in a declared disaster.

- Home and Property Disaster Loans
  Renters and homeowners alike may borrow up to $40,000 to repair or replace clothing, furniture, cars, appliances, etc. damaged or destroyed in the disaster. Homeowners may apply for up to $200,000 to repair or replace their primary residence to its pre-disaster condition.
- Disaster Assistance Loans
  SBA provides low interest disaster loans to homeowners, renters, businesses of all sizes and private, nonprofit organizations to repair or replace real estate, personal property, machinery & equipment, inventory and business assets that have been damaged or destroyed in a declared disaster.
- Economic Injury Loans
  If a small business or private, nonprofit organization has suffered economic injury, regardless of

physical damage, and is located in a declared disaster area, it may be eligible for financial assistance from the U.S. Small Business Administration.

- Military Reservist Economic Injury Disaster Loans
  Provides funds to eligible small businesses to meet their ordinary and necessary operating expenses that they were unable to meet due to an essential employee being "called-up" to active duty in their role as a military reservist.
- Farm Emergency Loans
  Offers emergency loans to help producers recover from production and physical losses due to drought, flooding, other natural disasters, or quarantine.

The Farm Service Agency also provides a disaster assistance guide for farmers and ranchers for natural disaster losses resulting from drought, flood, fire, freeze, tornadoes, and pest infestation.

Employment Assistance

- Disaster Unemployment Assistance
  Supplies information on financial assistance for self-employed individuals who have lost their jobs due to federally declared disasters.
- Midwest Flood Recovery Assistance
  Covers National Emergency Grants for temporarily employing displaced workers.

Tax Relief Assistance

- Federal Tax Relief for Individuals and Businesses
  Lists tips and resources to help individuals and business located in federally declared disaster areas.
- Disaster Losses Kit for Businesses
  Provides tax information for claiming unreimbursed casualty losses on property that was destroyed by a natural disaster.

Planning for Disasters in Advance

Small business owners invest a tremendous amount of time, money and resources to make their ventures successful, yet, many owners fail to properly plan and prepare for disaster situations. According to the Institute for Business and Home Safety, an estimated 25 percent of businesses do not reopen following a major disaster.

The resources provided below will get businesses started on the process of advance planning.

- Small Business Disaster Preparedness Guide

Offers information to help prepare businesses for a disaster and apply for a disaster loan from the SBA.

- PrepareMyBusiness.Org

Agility Recovery Solutions offers business continuity planning tips for small businesses.

- Emergency Management Guide for Business and Industry

Gives step-by-step advice on how to create and maintain a comprehensive emergency management plan.

- Protect Your Business from Disaster

Supplies information on how to protect property from natural disasters.

Getting Back in Business: Disaster Recovery

Before a disaster strikes, it is important to preserve equipment and the business records a business will need to help get back on track.

- Protecting Your Tax and Financial Records

Gives tips and advice from the IRS on protecting tax and financial records.

- Standard Checklist Criteria for Business Recovery

Offers a checklist of creating a business recovery manual for medium to large businesses.

5.1.5 Flood Depth Mapping

Flood depth maps were developed for the hamlet of Au Sable Forks as a tool for flood hazard planning, buyouts, and implementation of floodproofing projects. Below is a summary of the technical methods used to develop the maps. A discussion of the utility of these maps follows the methods.

Hydrologic Analysis

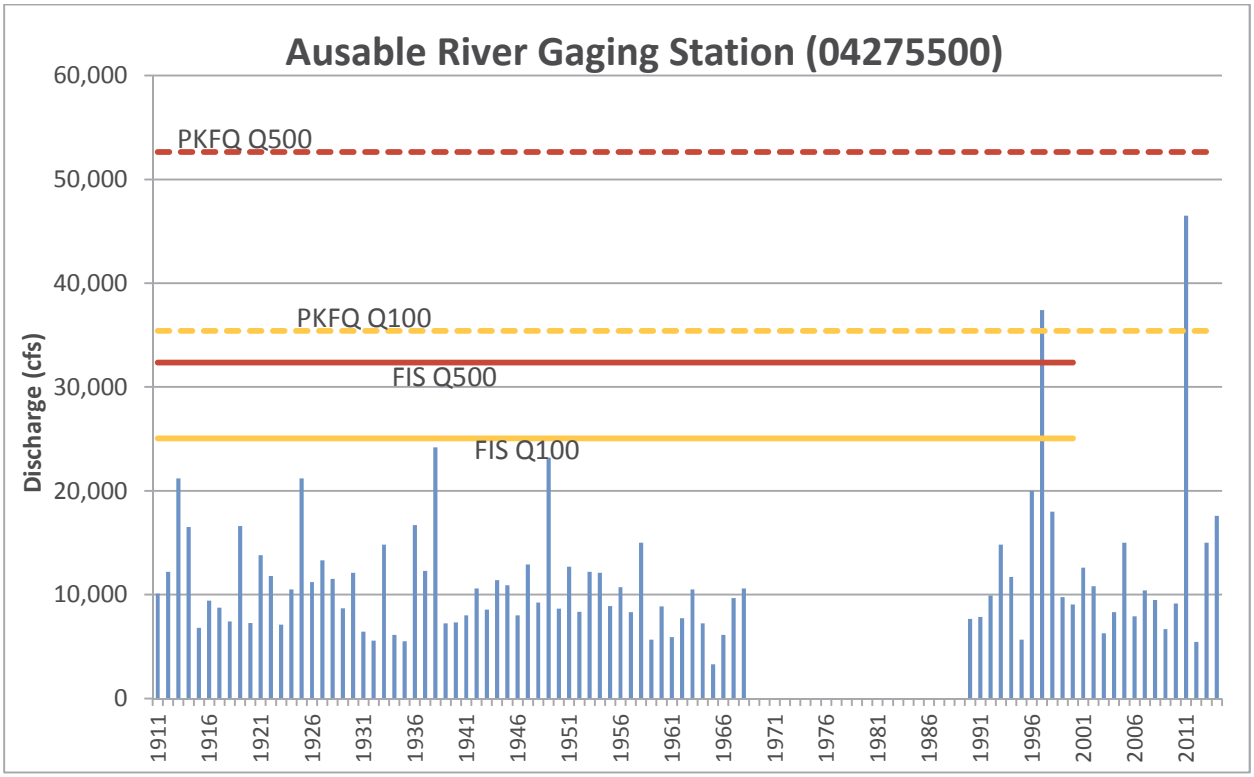
The 100-year (Q100) and 500-year (Q500) discharges for the East Branch of the Ausable River and for the Ausable River were included in the 2002 Flood Insurance Study (FIS) hydraulic model obtained from the FEMA Engineering Library. The estimated discharges selected for that study were calculated from the USGS gaging station data available at the time of the FIS. The historic flood flows observed during TS Irene have had a large influence on predicted values for large storms, dramatically redefining the magnitude of the Q100 and Q500 flow events in many watersheds throughout the region. USGS PEAKFQ software was used to re-analyze the peak flow gaging record for the two watersheds and included all data through the 2015 water year. This analysis indicated a major increase in the predicted discharge for the Q100 and Q500; the updated Q100 is now estimated to be larger than the previously calculated Q500 (Figures 3 and 4). The FIS included estimated flows for the West Branch, which is not gaged for direct comparison to the East Branch and to the Ausable River. It is likely that the FIS flows were based on a comparison between the two gages over the period of record. The West Branch drains a watershed that is almost 20% larger than the East Branch; however, due to differences in watershed slope, precipitation patterns, and watershed storage areas, the East Branch has higher predicted flows. Updated flows for the West Branch were estimated using the same ratio between the Q500 flows on the

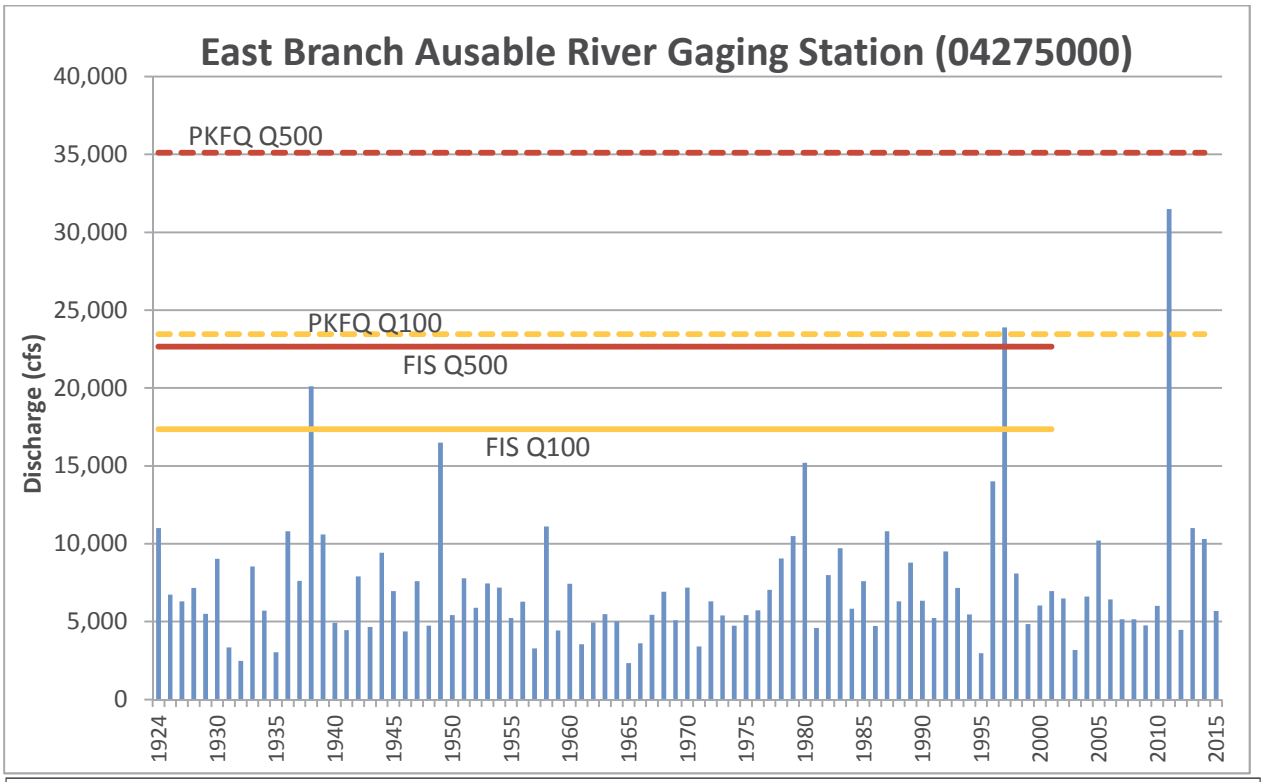
East Branch and West Branch from the FIS (Table 1). It is important to note that TS Irene was a significantly larger flood on the East Branch; however the West Branch has had several large flood events (e.g., 1996) that were not as significant on the East Branch.

Table 1: Estimated flows for the Q100 and Q500 floods

Watershed	USGS Gage	FIS Q100	FIS Q500	PEAKFQ Q100	PEAKFQ Q500
East Branch	04275000	17,360	22,660	23,470	35,110
West Branch	Not Gaged	14,000	19,700	18,917*	30,511*
Ausable River	04275500	25,060	32,350	35,400	52,630

* flow estimated based on scaling factor used to calculate West Branch flows from FIS





Figures 3 and 4: Annual peak flows from the USGS gaging stations on the Ausable River and East Branch Ausable River. Orange and red lines indicate the Q100 and Q500 flows calculated for the FIS and using PEAKFQ.

Hydraulic Analysis and Flood Depth Mapping

One-dimensional hydraulic models were developed for the FIS on the East Branch and on the West Branch. Both models included the confluence and a portion of the Ausable River going downstream from Au Sable Forks. The East Branch model was developed from cross-sections collected along the channel for approximately 13 miles extending to the town boundary between Jay and Keene. The West Branch model extended approximately 3,700 feet upstream of the confluence. The Project Team obtained a copy of the East Branch model from the FEMA Engineering Library; however the West Branch model was not available. The cross-sections used to create both models were based on a combination of ground survey data and LiDAR derived digital elevation model (DEM), collected for the FIS in May-June 2002. The water surface elevations estimated from the FIS hydraulic models were used to delineate the 100-year and 500-year flood extents along the study area.

Updated hydraulic models were created for the East Branch and the West Branch. The FIS HEC-2 model for the East Branch was converted to HEC-RAS format; the West Branch model was recreated using the LiDAR DEM and the location of the FIS cross-sections. A total of 9 cross-sections were added to the East Branch model and 11 cross-sections were added to the West Branch model to increase the resolution and accuracy of flood mapping within the hamlet of Au Sable Forks. The bridge geometry for the Broad Street and Grove Road bridges was updated with the current plans and record drawings. The existing FIS cross-sections were extended to include the areas flooded during TS Irene. Minor adjustments were

made as needed to the channel bottom geometry and to the manning's roughness coefficients. Both models were run using steady state flows as calculated in the PEAKFQ analysis and with the flows from the original FIS to verify model calibration. The hydraulic model runs were based on estimated floodwaters and did not account for sediment, debris, or ice in the channel, all of which can affect floodwater depths and velocities on the East and West Branch.

The HEC-RAS model (USACE, 2010) calculates a water surface elevation at each cross-section for the specified flows. These elevations can be used to create an elevation surface that drapes over the ground surface DEM to show the extent and depth of inundation at a given flow. The water surface elevations at each cross-section are converted into a Triangulated Irregular Network (TIN) using the cross-section lines as a "soft break." The TIN was next converted into a DEM with 1m grid cells to match up with the ground surface DEM. The flood depths were calculated using the "minus" function within the raster math toolset to simply subtract the ground elevation from the water surface elevation. Any area where the ground surface was at a higher elevation than the water surface was calculated as a negative value, and these values were filtered out. Based on these water depth rasters, flood depth and flood extent maps were developed for the hamlet to show areas at risk of damage based on the updated predicted flow levels (Appendix B).

A HEC-RAS model was developed for simulating TS Irene flooding. Peak flow records for the East Branch (31,500cfs) and the Ausable River (46,500cfs) were recorded at the USGS gaging stations. The West Branch discharge was calculated from these gage records by subtracting the East Branch flow from the Ausable River. A 45-minute time shift was applied to the East Branch record to account for the 12,000 feet of channel between the two stations (Figure 5). This method produced an estimated TS Irene peak discharge of 15,300cfs for the West Branch. Flood depth mapping from this model matched up very well with reported flood levels from community members and supported observations that flooding was less significant along the West Branch (Appendix B).

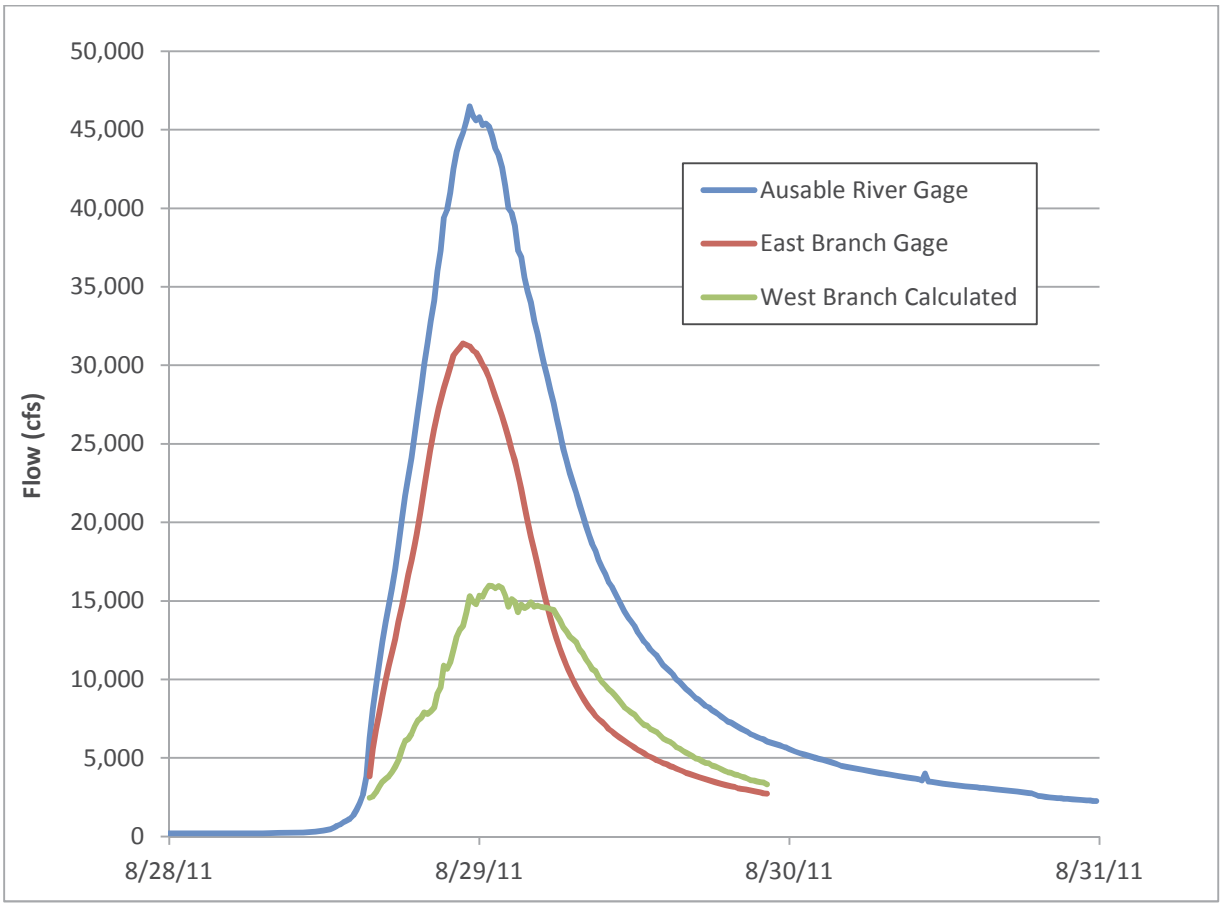


Figure 5: TS Irene flow levels from the USGS gaging stations on the East Branch and the Ausable River were used to calculate flows for the West Branch.

How to Use Flood Depth Mapping

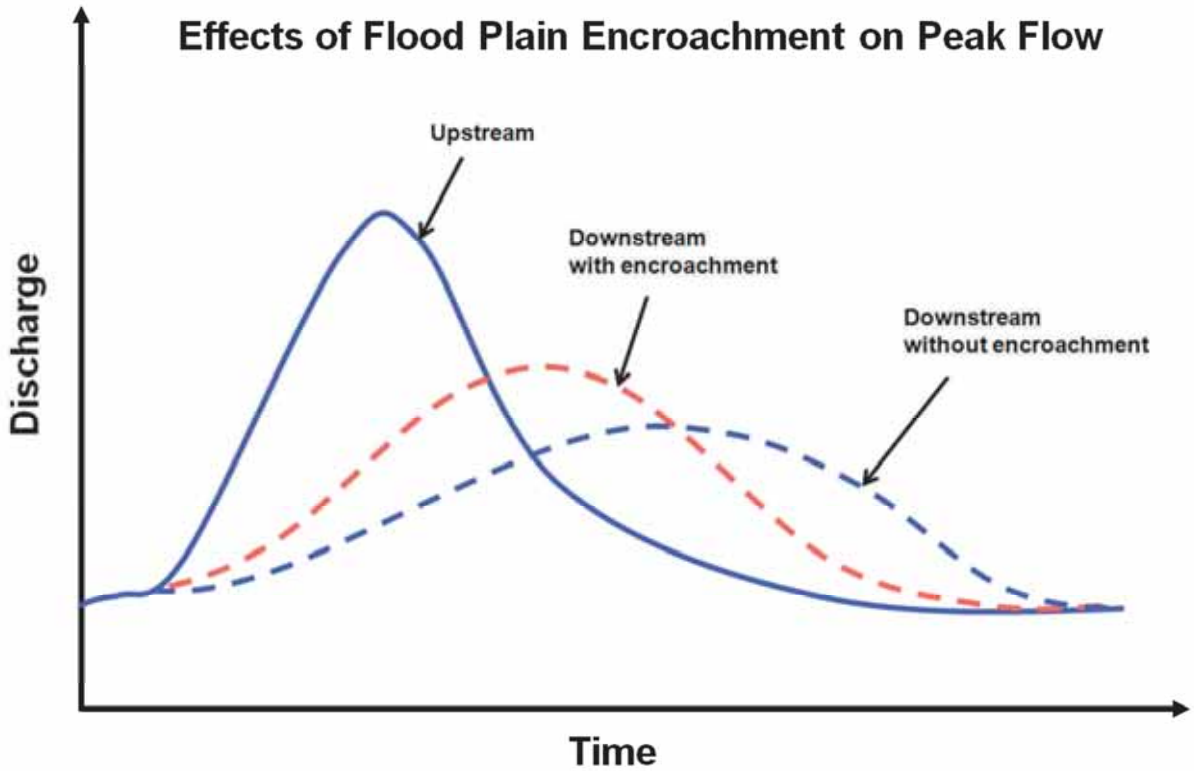
Given that updated floodplain mapping from FEMA is likely to be many years away, the flood depth maps provided in Appendix B can be used as a tool by the Town of Jay to better understand current flood risk in light of a changing climate, and to offer better guidance to protect the town's citizens and business owners. Specifically, our Project Team recommends that the Town of Jay use the maps to:

- Inform its citizens about increasing flood risk due to increasing runoff in the Ausable River watershed associated with climate change.
- Inform town officials of flood risks during review of proposed building or infrastructure projects in the hamlet.
- Guide projects aimed at reducing flood risks for residents and businesses, such as floodproofing projects or FEMA-sponsored buyouts.

5.2 Conceptual Design Projects

5.2.1 Floodplain Protection Areas

Intact floodplains reduce flood risks for downstream areas and provide invaluable ecosystem services. Protecting intact and functioning floodplains from being filled, developed, or further degraded helps offset historical impacts from floodplain encroachment on downstream flooding (Figure 6). With the trend of more frequent heavy rainfall events (NCA, 2014) and more frequent floods in the Northeast (Armstrong et al., 2012), protection of floodplains in the Ausable River watershed upstream of the hamlet of Au Sable Forks is a critical strategy. Under current Town zoning, these floodplains can be developed as long as the minimum National Floodplain Insurance Program (NFIP) standards are met: mainly that the first floor of the building is elevated above the base flood elevation. Some of these lands may be protected from intensive development based on Adirondack Park Agency land use classifications and regulations. The town could take additional steps to permanently protect these areas from development through strategies outlined in the NYRCRP report: conservation easements and purchase of development rights.



U.S Army Corps of Engineers, 1980, Effect of Flood Plain Encroachment on Peak Flow (http://www.hec.usace.army.mil/publications/ResearchDocuments/RD-14.pdf)

Figure 6: USACE Model of Effect of Flood Plain Encroachment on Peak Flow.

The Project Team identified potential floodplain protection areas on the East and West Branches of the Ausable River that could benefit the hamlet of Au Sable Forks. ESPC and FEA used the FEMA Flood Insurance Study and available LiDAR elevation data to evaluate the degree of river-floodplain

connectivity. Areas with significantly sized floodplains (i.e., greater than 10 acres) that are accessed by the river in moderate to large floods were identified on maps and visited in the field in early February 2016. Intact floodplains on the East Branch deemed higher priority (Figure 7) were further explored and documented in GIS and discussed with Kelley Tucker of the Ausable River Association.

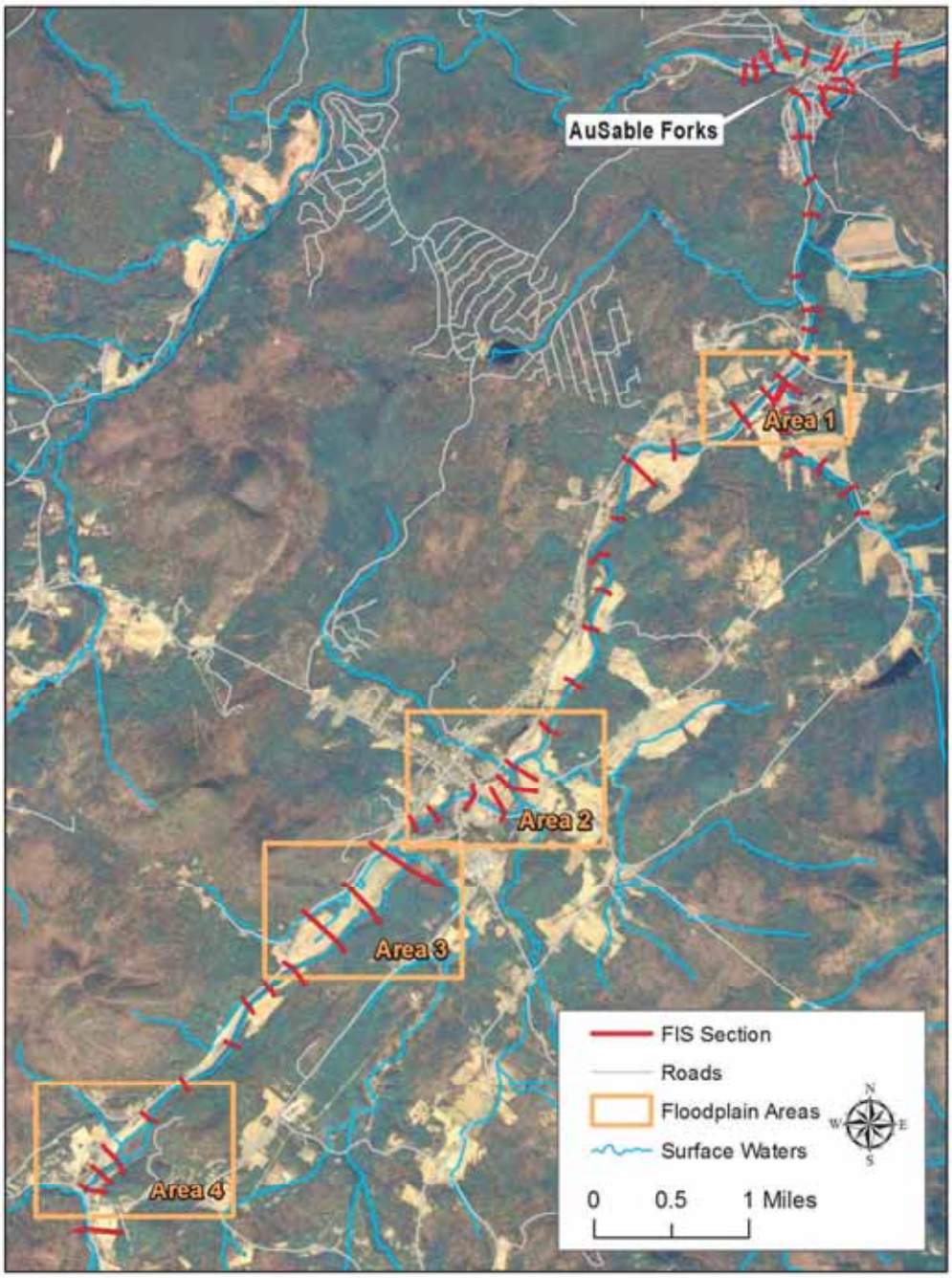


Figure 7: Potential Floodplain Protection Areas on the East Branch of the Ausable River Upstream of Au Sable Forks.

5.2.1.1 East Branch Floodplain Protection Area #1: Upstream of Stickney Bridge Road

A long stretch of the East Branch upstream of the Stickney Bridge Road crossing may have been historically straightened, and is now confined between two roads. For approximately 3,000 feet upstream of the bridge, the river is bound by Route 9N to the west and Carey and Clark Roads to the east (Figure 8). An old river meander scar appears to be visible to the east of Clark Road; however historical USGS topographic maps suggest that the river has been in its current location since the late 1800's (UNH, 2015). The right bank floodplains covering approximately 15 acres are not accessed by the river except for the largest floods. The floodplains would be accessible during the 10-year flood were it not for the elevated road right on the bank which creates a small levee. Protecting this floodplain and allowing the river to flood the adjacent undeveloped land to the east (and potentially develop more sinuosity) would require the relocation of the roads out of the floodplain. The feasibility of this project would need to be studied in more detail; the project may be challenging as Clark Road serves a residence to the south, and Carey Road connects to County Highway 9S to the north.

Figure 8: East Branch Floodplain Protection Area #1 upstream of Stickney Bridge Road.

5.2.1.2 East Branch Floodplain Protection Area #2: East of hamlet of Jay

There are accessible floodplains downstream of the hamlet of Jay along Stickney Bridge Road. These floodplains are situated on both banks about a quarter mile downstream of the covered bridge where the Rocky Branch meets the East Branch (Figure 9). These floodplains are accessible during the 10-year

flood (and larger floods) and cover approximately 40 acres. There appear to be four primary landowners associated with these floodplains. The Ausable River Association (AsRA) is currently working with one landowner on the east bank near the confluence with Rocky Branch to stabilize banks and improve aquatic habitat conditions.

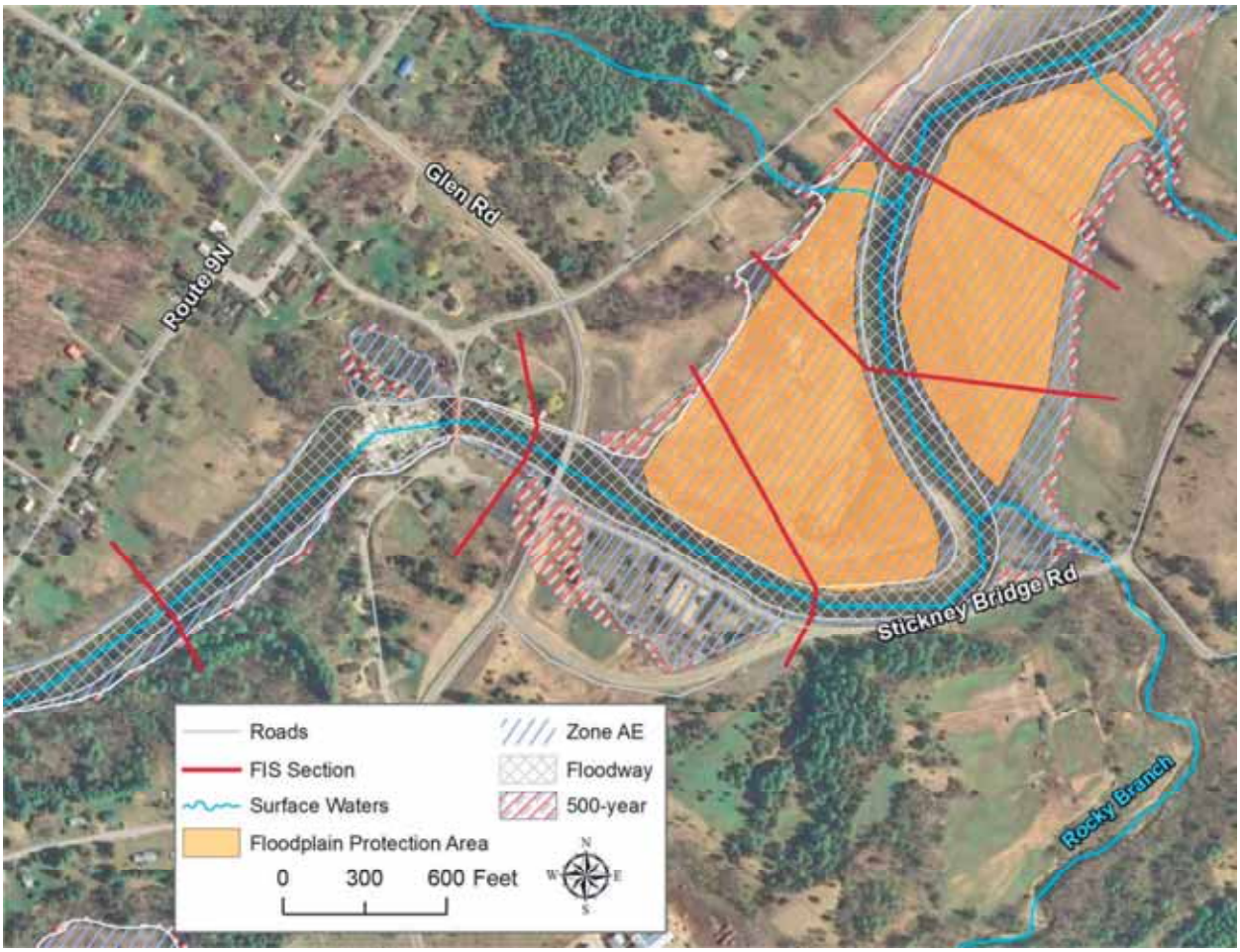


Figure 9: East Branch Floodplain Protection Area #2 near the hamlet of Jay.

5.2.1.3 East Branch Floodplain Protection Area #3: West of hamlet of Jay

There are accessible, undeveloped floodplains upstream of the hamlet of Jay to the east of Route 9N. These floodplains are situated on the west bank about a half mile upstream of the covered bridge (Figure 10). These floodplains are accessible during the 10-year flood (and larger floods) and cover approximately 75 acres. There appear to be two primary landowners associated with these floodplains. AsRA has expressed an interest in improving the riparian conditions of this stretch of the river using native tree plantings.

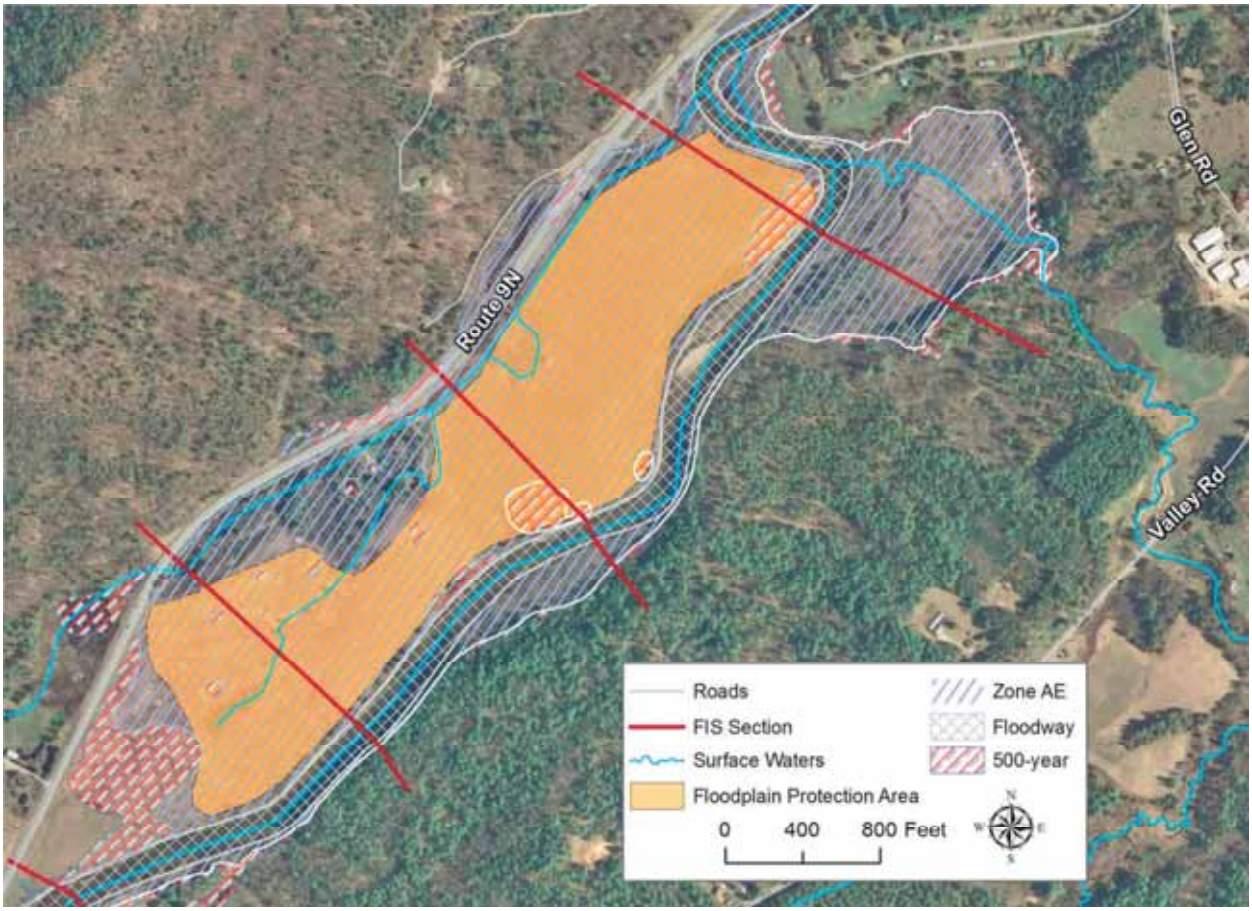


Figure 10: East Branch Floodplain Protection Area #3 near the hamlet of Jay.

5.2.1.4 East Branch Floodplain Protection Area #4: Within the hamlet of Upper Jay

There are accessible, undeveloped floodplains within the hamlet of Jay downstream (east) of the Route 9N bridge. These floodplains are situated on the west bank along an area where the channel splits around an island (Figure 11). These floodplains are accessible during the 10-year flood (and larger floods) and cover approximately 15 acres. There appear to be two primary landowners associated with these floodplains, including the Upper Jay Fire District. AsRA has expressed an interest in improving the conditions of this stretch of the river, potentially through in-stream improvements with woody debris structures and native tree plantings. This will be explored by AsRA in greater detail in 2017.

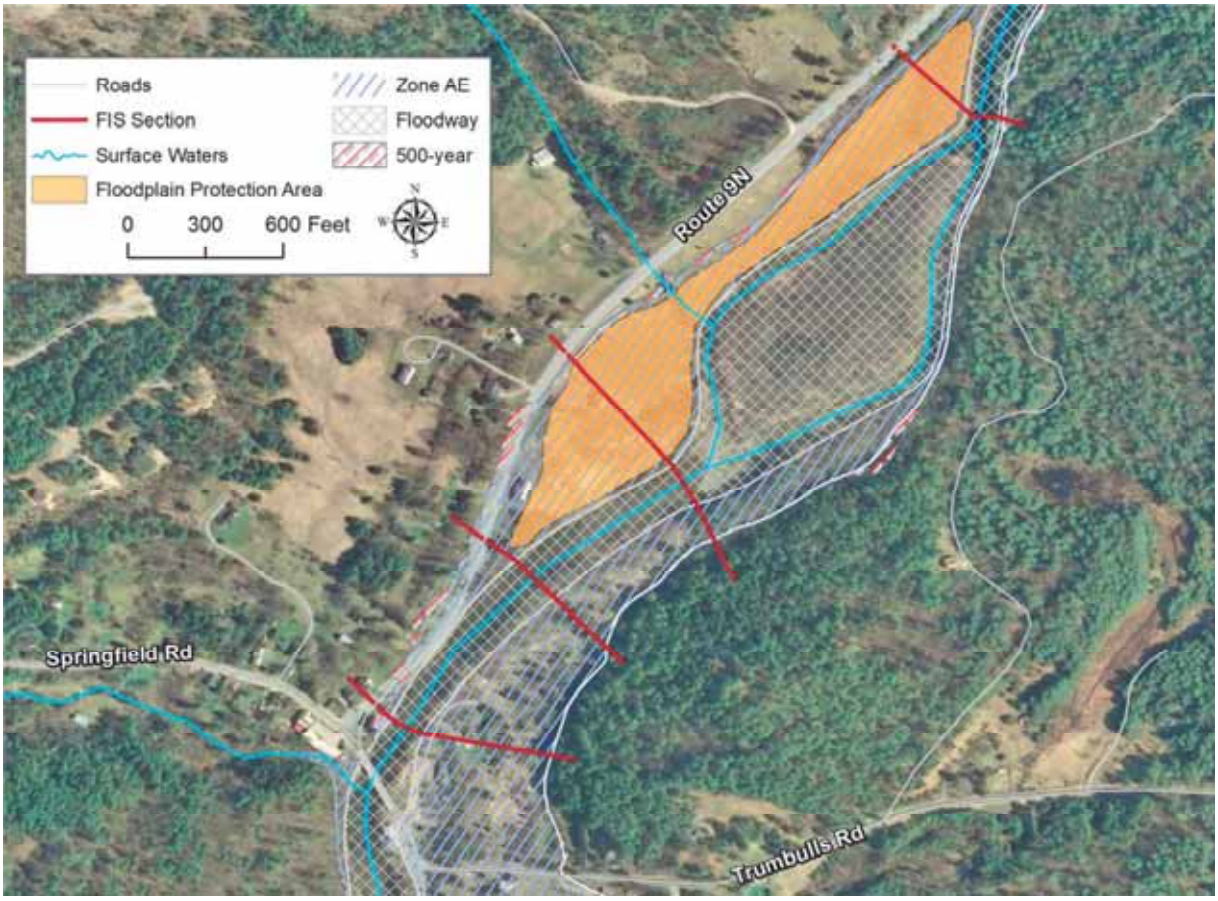


Figure 11: East Branch Floodplain Protection Area #4 within the hamlet of Upper Jay.

5.2.1.5 East Branch Floodplain Protection Area #5: Marcy Field in Keene

The NYRCRP report highlighted the floodplains along Marcy Field in Keene as a potential floodplain reconnection that could add at least 300 acre-feet of storage and reduce flooding downstream. However, their analysis suggested that the costs would outweigh the benefits, as the project would require capital costs of over $1 million for drainage structure improvements, grading, etc. This project should be left on the table and reconsidered in the future if conditions change along the Route 73 corridor (i.e., NYSDOT proposed improvements in this area) such that the projected costs would be reduced.

5.2.1.6 West Branch Floodplain Protection Area #1: Abandoned Rogers Paper Mill

The NYRCRP report highlighted the Rogers Paper Mill in Black Brook on the West Branch of the Ausable River as a potential floodplain reconnection that could reduce flooding downstream in the hamlet of Au Sable Forks (Figure 12). However, the analysis suggested that the costs would outweigh the benefits, as the project would require significant excavation and there are concerns about contamination at the site. Although our Project Team did not conduct further analysis of this site, the flood depth mapping developed for the hamlet of Au Sable Forks suggests that a floodplain reconnection on the north bank at

the mill site could reduce the impacts of flooding on residences along Church Lane, and possibly reduce impacts downstream near the Route 9N bridge. Although deemed unfeasible in the NYRCRP report, this project should also be left on the table and reconsidered in the future if conditions change such that the benefits would outweigh the costs.

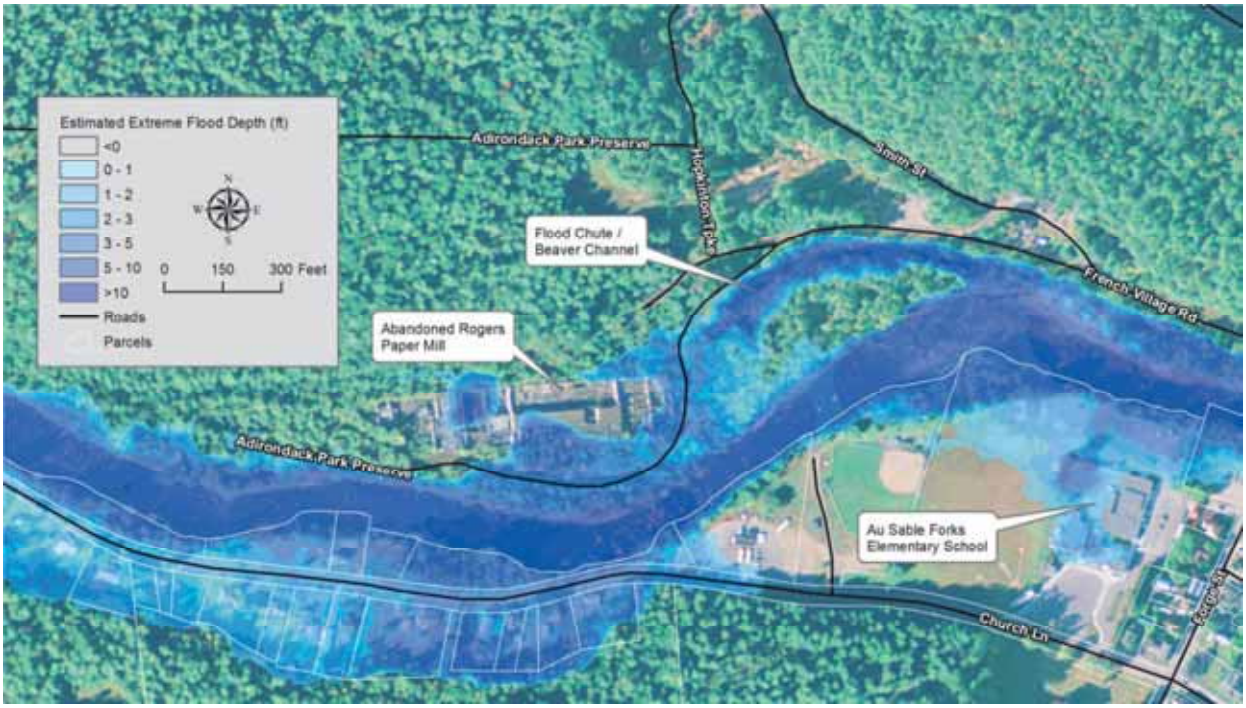


Figure 12: Abandoned Rogers Paper Mill along the West Branch of the Ausable River in Black Brook.

5.2.2 East Branch – Jersey Cut Flood Protection

The low-lying Jersey and Intervale neighborhoods are vulnerable to frequent flooding from ice jams and heavier rain events. In outreach efforts for this project, it became clear that these two neighborhoods pose a significant concern to the community, and were not addressed in the NYRCRP report.

The premise of this conceptual design project is to provide an overflow floodplain cut through the northern portion of the neighborhood to increase conveyance capacity around the Jersey Bridge. This conceptual project assumed that the Jersey Bridge structure is causing a constriction that has backwater impacts to the Intervale and Jersey neighborhoods. TS Irene was also observed to overflow the Jersey Bridge and caused a spilt flow north down Main Street.

The proposed floodplain cut would lower a 3.6 acre portion of the Jersey neighborhood by approximately 4 to 6 feet, creating a large floodplain bench for floodwaters to flow around and under the Jersey Bridge. This floodplain cut would involve approximately 50,000 cubic yards of excavation, 1,420 linear feet of road and sidewalk reconstruction, modifications to existing utilities (ie., sewer, water, and stormwater), and 3 home buyouts. The estimated cost range for implementing this project is

$2-$3 million. This design concept would also increase the flooding frequency for the northern portions of Broad Street, Sheldrake Road (Route 9R), Burt Lane, and Garso Drive within the floodplain cut area, which in turn would result in additional road maintenance. However, the cost of this design concept is considerably less than the estimated cost to provide a new Jersey Bridge with a longer span ($6-$8 million). An overview map of the Jersey Cut Project is provided in Figure 13 and also in Appendix C.

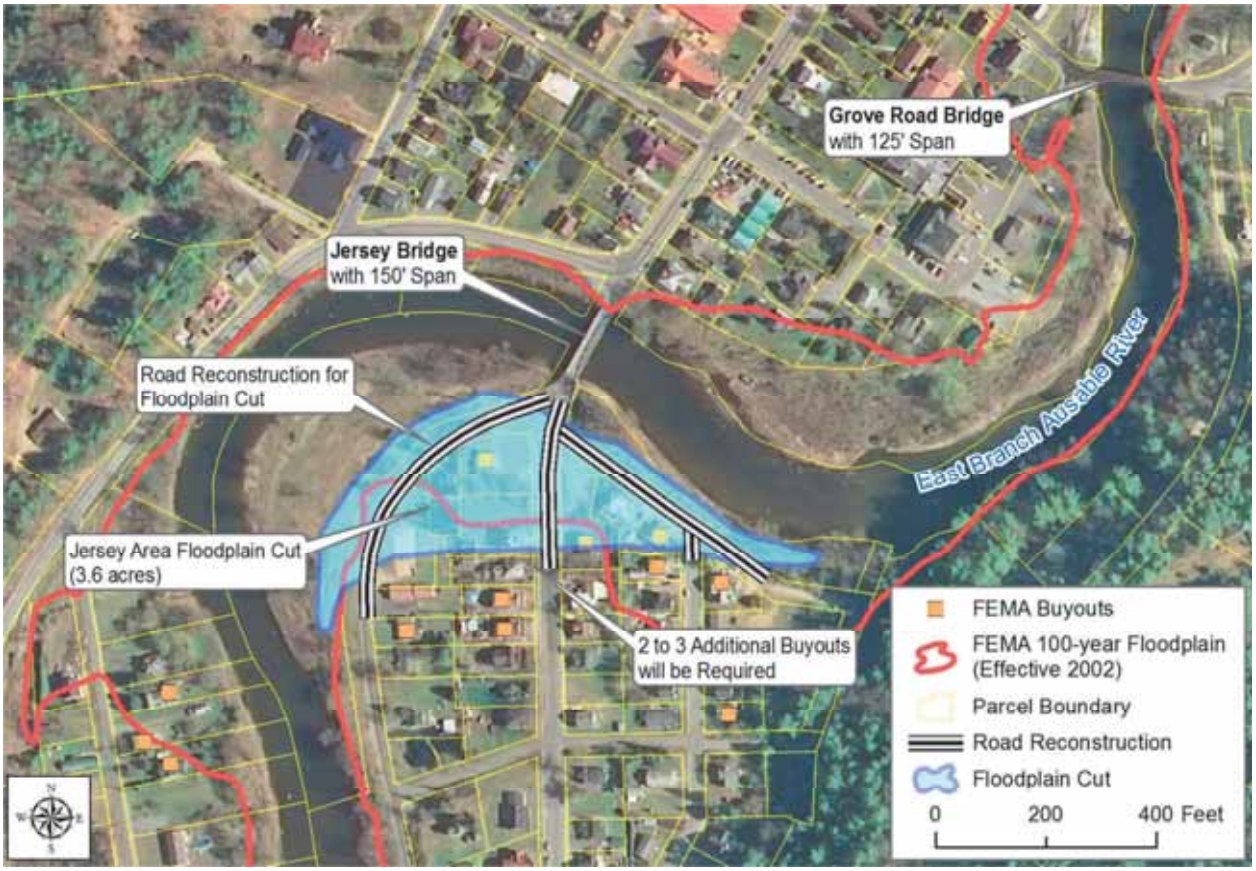


Figure 13: Overview Map of Jersey Neighborhood Floodplain Cut Project.

The hydraulic impact of this conceptual project was modeled utilizing the updated FEMA FIS HEC-RAS model of the East Branch. The hydraulic modeling simulations estimated that this project would result in an approximate 0.5 to 0.8 foot decrease in water surface elevation within the Jersey neighborhood for the 100-year peak flow. This resultant decrease in water surface elevation is relatively low given the project cost.

The simulated implementation of the floodplain cut project did not show a significant mitigating effect on the surrounding higher areas of the floodplain as expected, leading the Project Team to conduct a more in-depth review of the hydraulic dynamics of the East Branch River Corridor through the project area. This analysis determined that the constricted river corridor located immediately downstream of the Jersey neighborhood and continuing through the Grove Road Bridge is controlling river hydraulics. This restricted river corridor segment causes a significant backwater effect, which in turn further

intensifies flooding of the Intervale and Jersey neighborhoods. Based on interviews with residents from the Jersey neighborhood, this constricted river reach also results in frequent ice jams, which also cause flooding to the neighborhoods with backwater entering the Jersey neighborhood from the northeast portion. Consequently, this constricted river reach would need to be widened for the Jersey Floodplain Cut project to have any significant reductions to 100-year flood water surface elevations.

This proposed floodplain cut project was an attempt to improve the flood resilience for the Jersey and Intervale neighborhoods and mitigate the split flow down Main Street that occurred during TS Irene. However, since the constricted river reach downstream of the Jersey neighborhood is controlling hydraulics, this floodplain project is not effective as a stand-alone project. This project is only recommended as part of a larger project, which would include the widening of the downstream river corridor.

5.2.3 East Branch – Channel Widening Flood Protection

The intent of this ambitious project is to widen a constricted portion of the East Branch River Corridor to help mitigate backwater and ice jam flooding to the Jersey and Intervale neighborhoods and to stop the split flow north down Main Street at the Jersey Bridge. This proposed river corridor widening project would start downstream at the confluence with the West Branch, and continue approximately 3,700 feet upstream. Per the USGS Regionalized Equation for Bankfull Width in the Adirondack Region, the calculated bankfull channel width for the East Branch is approximately 150 feet (USGS, 2007). Using typical multipliers of 1.2 to 1.5, the target corridor width for the East Branch was estimated to be approximately 180 to 200 feet through the project area.

The 3,700 linear foot river widening project would involve approximately 80,000 to 100,000 cubic yards of excavation, replacement of the newly constructed Grove Road Bridge with a 180-feet span structure, possible replacement of the Jersey Bridge with a 180-feet span structure, 2 to 4 property buyouts, utility modifications, bank stabilization, and plantings. The widened river corridor would have a bankfull width of approximately 150 feet with flood benches to provide a total river corridor width of approximately 180 to 200 feet. The low flow channel should include features that also enhance aquatic habitat and provide appropriate channel roughness. If both the Jersey and Grove Road Bridges are replaced, the estimated cost of this project is in the $15 to $20 million range. If the Jersey Floodplain Cut Project is implemented in lieu of replacing the Jersey Bridge, the estimated project cost is in the $10 to $15 million range. The channel work for this project is estimated at $1 to $2 million as a majority of the project costs would be for bridge replacements and utility modifications. An overview map of the East Branch River Corridor Widening Project is provided in Figure 14, and also in Appendix C.

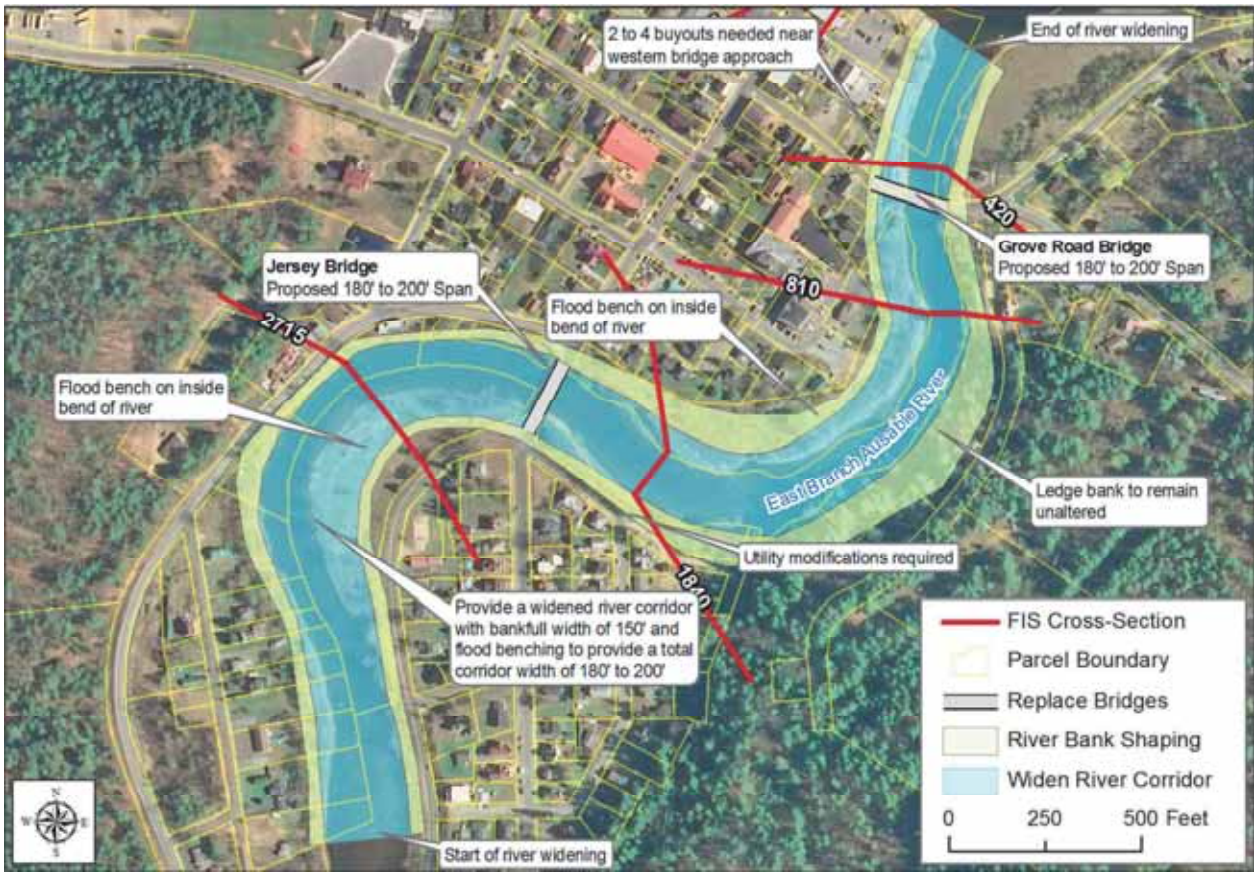


Figure 14: Overview Map of East Branch River Corridor Widening Project.

The hydraulic impact of this conceptual project was modeled utilizing an updated FEMA FIS HEC-RAS model of the East Branch. The hydraulic modeling simulations estimated that this project would result in a significant decrease in 100- and 500-year flood depths to the Jersey and Intervale neighborhoods. The 100-year flood depths were reduced by approximately 1.5 to 2.0 feet in these neighborhoods, which resulted in most of the structures being removed from the 100-year flood inundation limits. However, a 500-year scale flood event would still result in inundation limits similar to what was observed during TS Irene, but the flood depths would be approximately 1 to 2 feet lower. This project also appears to prevent the split flow down Main Street that occurred at the Jersey Bridge, and also reduces the flood inundation limits near the town buildings along School Street. Figure 15 and Figure 16 illustrate the reduction of flood depths and inundation limits for the River Corridor Widening Project for the 100-year and estimated TS Irene events, respectively.

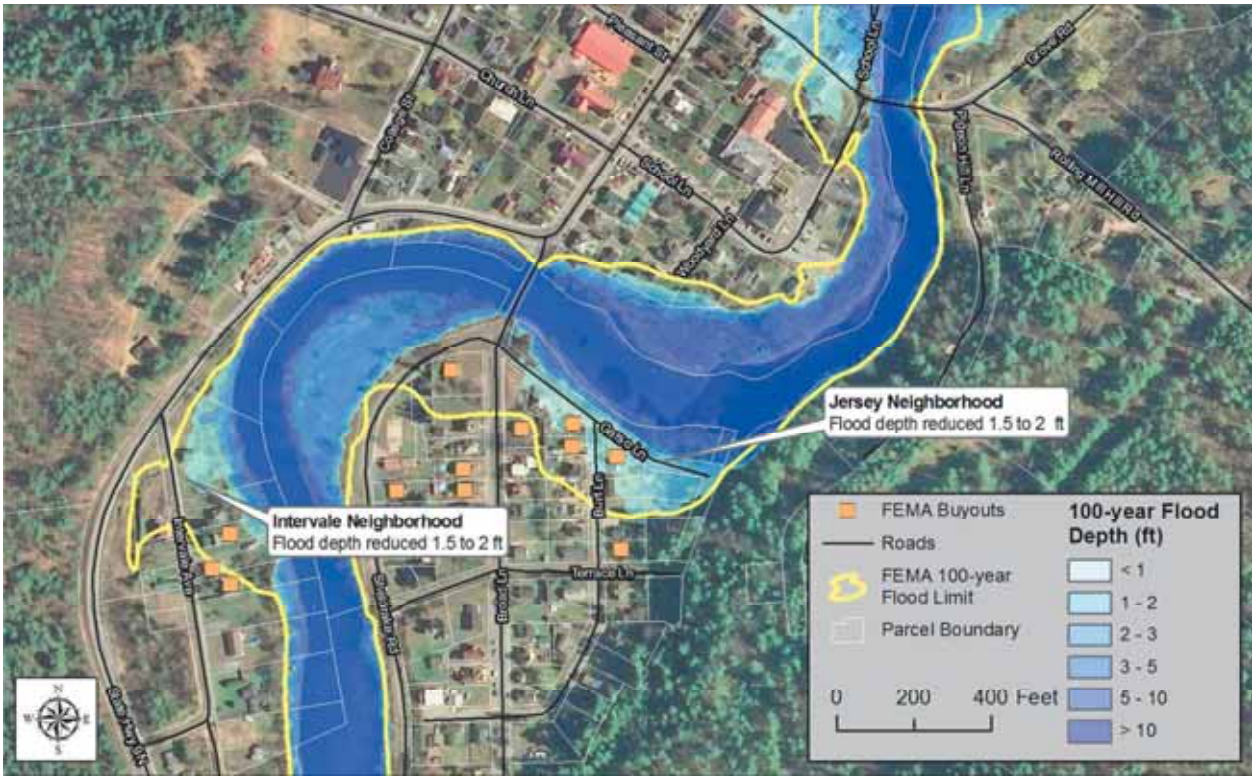


Figure 15: East Branch River Widening 100-year Flood Depth and Inundation limits.

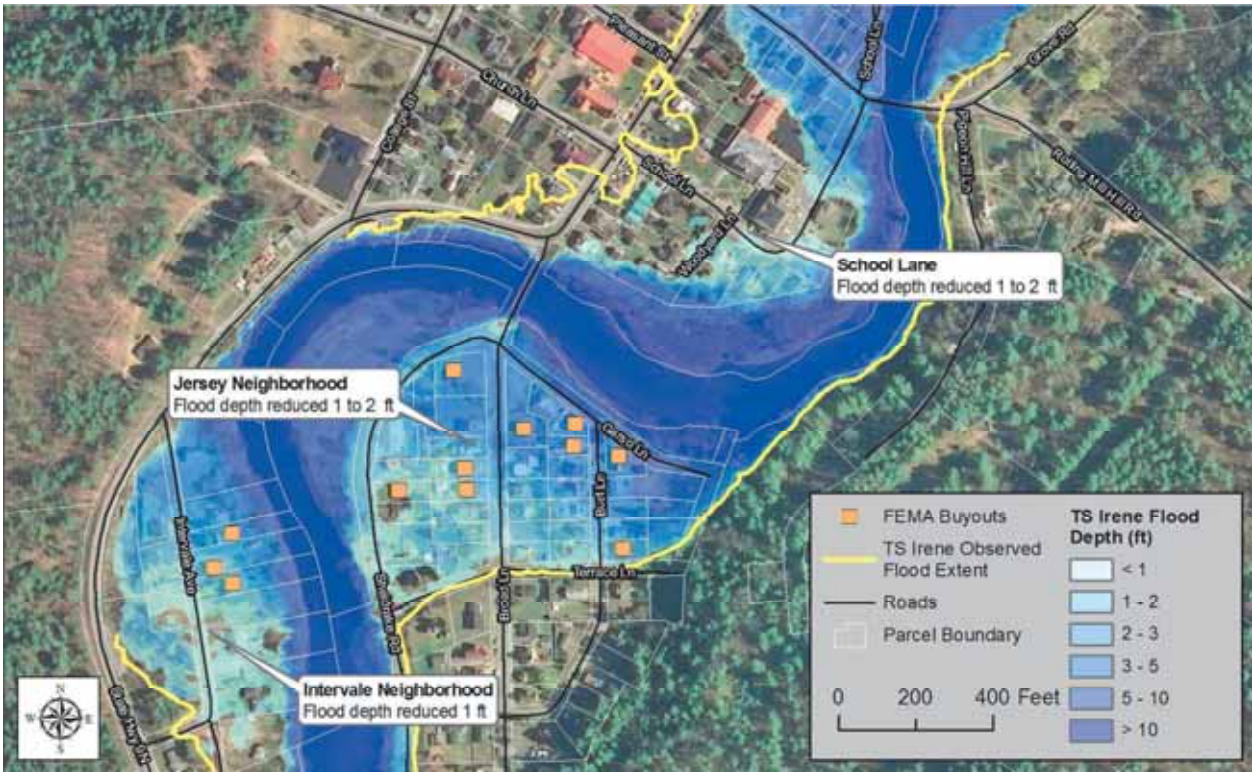


Figure 16: East Branch River Widening TS Irene Flood Depth and Inundation limits.

Although this project greatly improves flood resiliency, especially for the more flood-prone areas within the study limits, the overall cost and scope of this project may be too ambitious for a town the size of Jay to implement in the short term. The replacement bridges, which are both under Essex County jurisdiction, are the biggest ticket items for this project. In addition, the Grove Road Bridge was very recently replaced at an approximate cost of approximately $3 million, which would also add to the relative cost of this project. It should also be noted that many homes within the vulnerable portions of the Jersey and Intervale neighborhoods would still be flooded during a 500-year scale event like TS Irene. Consequently, while this project would go a long way to improve flood resiliency, it is recommended as a low priority project in the short term. However, this project should be considered as a long-term goal that could be implemented incrementally over an extended (50-plus-year) time-frame.

In general, most bridges require replacements within 50 to 80 years, depending on materials and maintenance. When these bridges are due for replacement, it is recommended that the new structures have a minimum span of approximately 180 feet. It is also recommended that the town consider River Corridor Planning and Zoning measures that would prevent development within the widened River Corridor area. In addition, opportunities to move utilities away from existing riverbanks should be considered such as relocating sewer pump stations further away from the river when they require replacement or when other opportunities present themselves. Channel improvements, right of way acquisitions, and buyouts could also incrementally occur when opportunities present themselves.

The Project Team did hydraulically evaluate a smaller scale river-widening project, which would start downstream of the Jersey neighborhood and extend to the existing Grove Road Bridge. This project showed little hydraulic benefit, as the existing Grove Road Bridge with a 125 feet span restricts the river corridor causing backwater impacts. However, this smaller scale river corridor project should be evaluated as part of an ice jam study to see if it could help to mitigate ice jam flooding to the Jersey area, as this section of the River was flagged as a frequent ice jam location.

5.2.4 West Branch – Flood Wall / Levee

The intent of this project is to provide flood protection for the buildings located on the southern bank of the West Branch on the upstream side of the Main Street Bridge. More specifically, this project seeks to provide protection for approximately 6 to 7 buildings bound to the north by the West Branch of the Ausable River, to the east by Main Street, to the south by Forge Street, and to the west by residential properties that adjoin the West Branch. Businesses contained within these buildings include a law office, two hair salons, a bar, a clothing store, a liquor store, and a post office.

The southern West Branch riverbank within the project area becomes shallower as the river approaches the Main Street (Route 9N) Bridge, which exposes the basements of the nearby buildings to frequent nuisance flooding from ice jams and heavier rain events. Figure 17 is a photo taken of the southern riverbank, which helps to illustrate the vulnerability of these buildings.

Figure 17: Photo of southern West Branch riverbank taken by the Project Team from the northern bank.

This project would involve approximately 170 linear feet of reinforced concrete flood wall ranging in height above grade from a minimum of 3 to a maximum of 8 feet (depending on final engineering design), approximately 210 linear feet of a levee/berm ranging in height from 0 to 3 feet, stormwater improvements with a backflow prevention outfall, and a sump pump adequate to handle stormwater flows that may get trapped behind the wall during a flood event.

The alignment of the flood wall should generally follow the current effective 100-year FEMA floodplain to prevent encroachment on the adjacent floodplain, loss of floodplain storage, and associated adverse hydraulic impacts (i.e., increased velocity and scour potential to adjacent or downstream properties). We completed a cursory hydraulic analysis of the site using the HEC-RAS model to evaluate the potential effect of the wall on floodwaters. We found that a 3-4-foot wall would be tall enough to prevent floodwaters from entering the buildings during moderate floods (i.e., 10-year flood and smaller). Without accounting for ineffective flow areas around the buildings, which would reduce negative hydraulic effects, the wall would only have a minor effect on surface water elevation (rise of 2-3 inches) and velocity (10% increase) in the vicinity of the site. However, if the project were to move forward these issues should be explored in more detail during future design phases to ensure that downstream impacts are minimized.

The concrete flood wall would connect downstream to the bridge abutment of the replacement Main Street Bridge and continue west upstream until the height above grade reaches approximately 3 feet.

The flood wall could be faced with a stone or brick veneer or stamped with a pattern to improve aesthetics if preferred by the town. Assuming that the reinforced concrete wall footing will be a maximum of 5 to 6 feet below grade (which is dependent on soil conditions), the approximate cost range for this project is $150,000 to $200,000. An overview map of this project is provided in Figure 18 and also attached in Appendix C. Typical cross-sections of a reinforced concrete flood wall and levee/berm are provided in Figure 19.

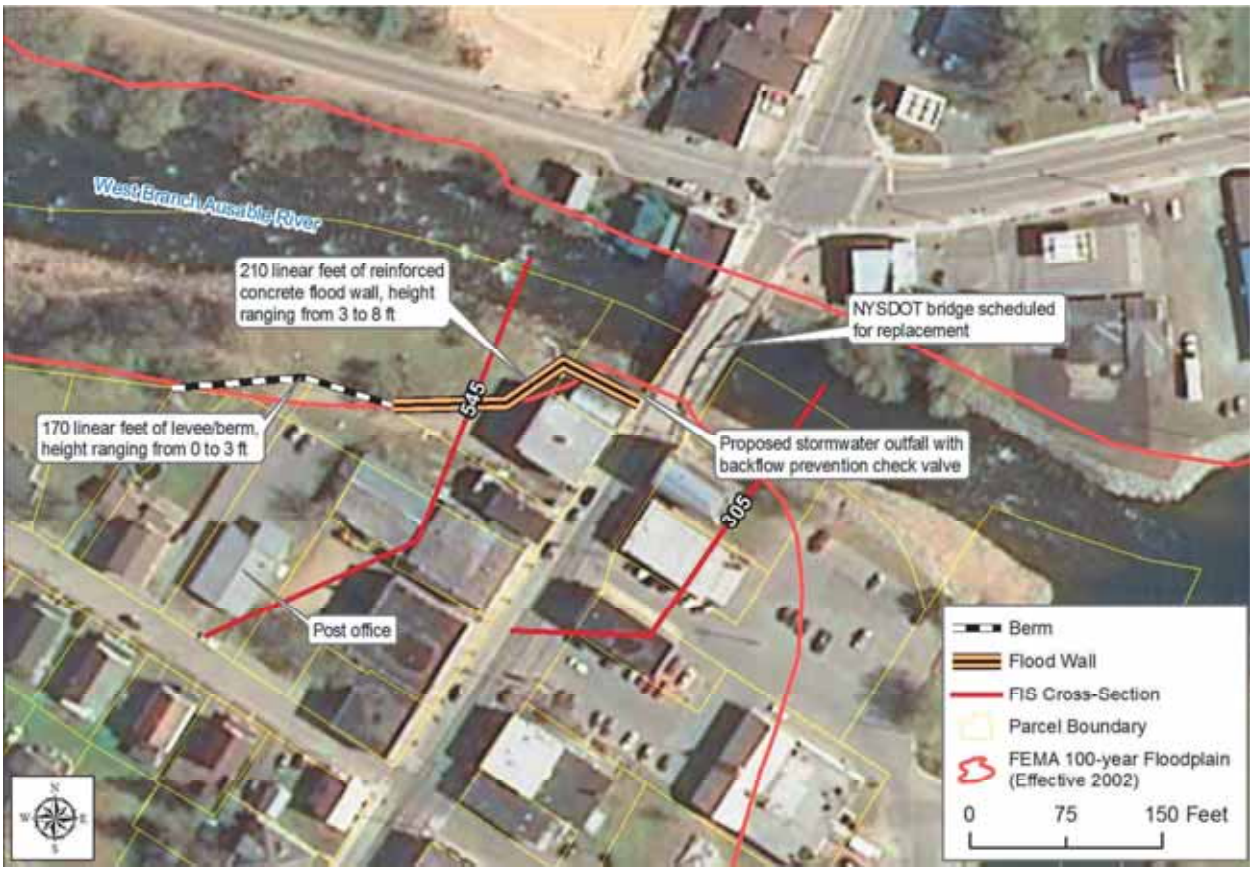


Figure 18: Overview Map of Flood Wall / Berm Project.

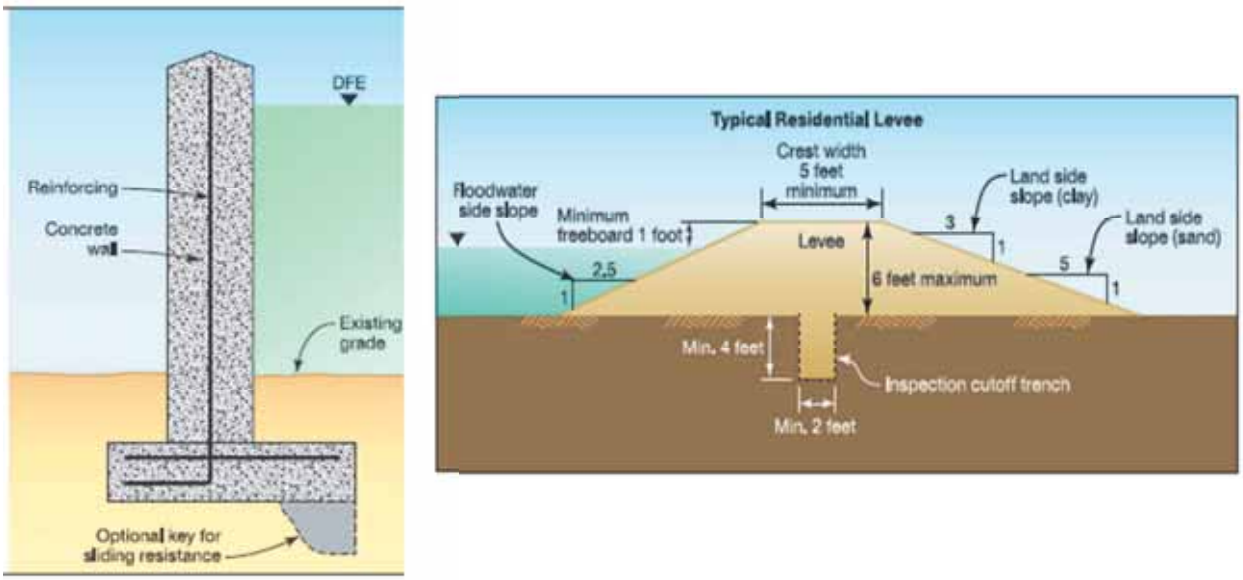


Figure 19: Typical Floodwall and Levee Section from Chapter 5 of the FEMA Engineering Principles and Practices for Retrofitting Flood-Prone Residential Structures.

This project appears feasible for implementation with regard to funding, permitting, easement acquisition, and constructability and is recommended as a high priority project. Ideally, this project would be constructed at the same time as the Route 9N replacement bridge to capitalize on the economy of scale of the bridge project. Based on preliminary hydraulic modeling, this flood wall concept could provide protection up to a 100-year flood event. However, this will need to be confirmed with updated hydraulic modeling, detailed design, and topographic information.

5.2.5 West Branch Floodplain Cut at East / West Confluence

The intent of this project is to improve the confluence geometry to help ease ice jamming, bank erosion, and nuisance flooding. The proposed floodplain cut would lower an approximate 0.5-acre area within the Town of Black Brook by approximately 4 feet to provide a flood bench on the northern side of the confluence. In addition, this project could provide an opportunity to improve the main river channel geometry at this critical location at improving channel transitions. Due to the confluence geometry and the depth and velocity of floodflows toward this site from the East Branch, it is also anticipated that toe armoring along the bank may be required to prevent unchecked erosion and channel migration that could potentially threaten Route 9N. However, a more naturalized approach to bank stabilization, involving bioengineering, natural channel design techniques, and riparian plantings should be explored for this site. Figure 20 provides a conceptual overview map for this project.

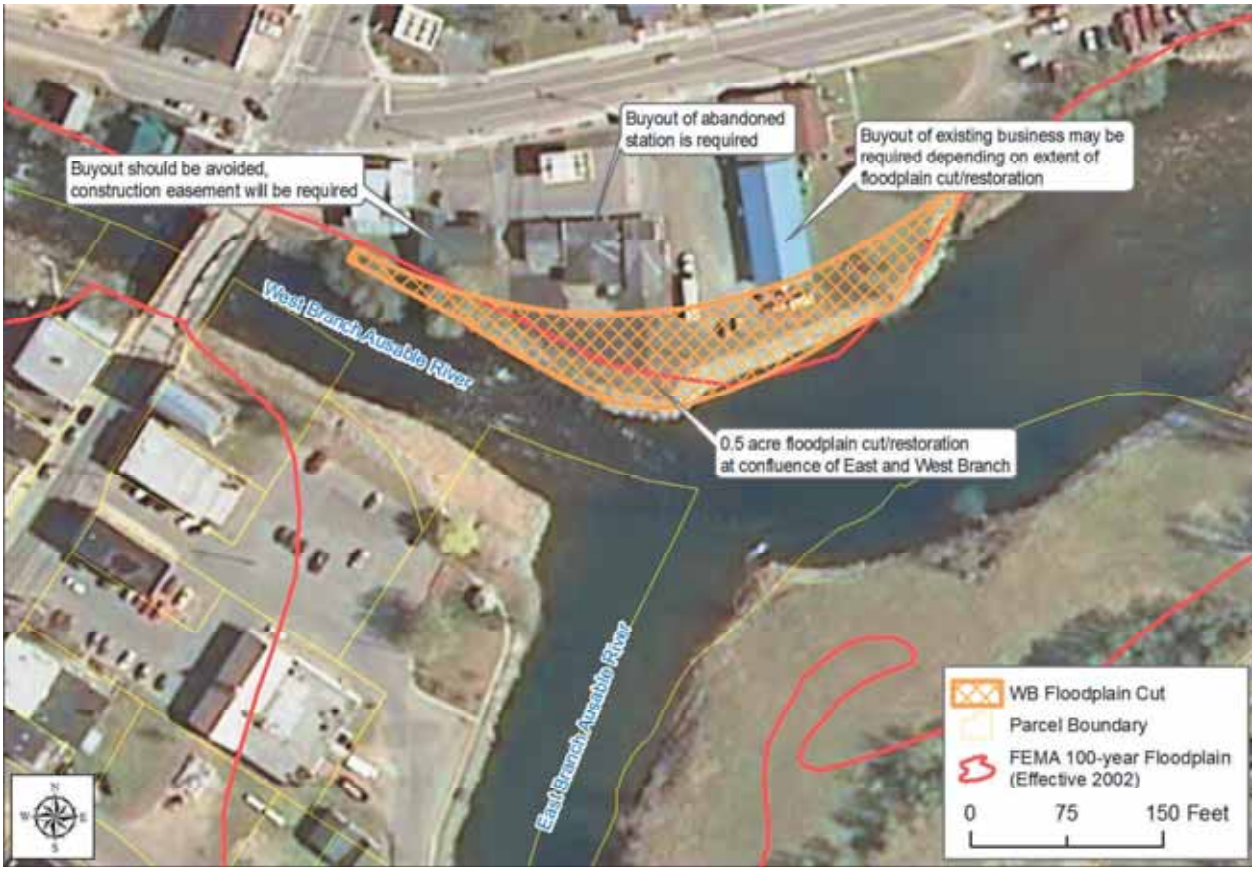


Figure 20: Overview Map of Floodplain Cut at Confluence.

This floodplain cut project would involve approximately 3,500 cubic yards of excavation, buyouts of 1 to 2 properties, riverbank toe armoring, plantings, and channel improvements. One of the buyout properties under consideration is an abandoned gas station/motel, which may have some environmental liability associated with the underground fuel tanks. The other property contains two connected buildings that both appear to house active businesses. Depending on the extent of the final floodplain cut, there may be an opportunity to retain both structures and not pursue a buyout. Assuming both properties will require buyout, the estimated cost range for this project is approximately $350,000 to $500,000. Given that this project is located in the Town of Black Brook within Clinton County, a considerable amount of cooperation and coordination between both Towns and Counties would be needed to facilitate implementation. Overall, this project appears feasible from constructability and permitting standpoint, and it is recommended that it be further evaluated as a high priority project.

5.2.6 Flood Proof Residences

The feedback that the Project Team obtained from town officials and community members stressed the significant vulnerability and need to protect the Jersey and Intervale neighborhoods and to minimize flooding on Main Street. As such, the Project Team focused on evaluating potential flood mitigation

measures that would reduce the flood inundation levels in these areas during frequent and extreme events. Unfortunately, as detailed in Section 5.2.2 and 5.2.3, projects that have the potential to alleviate flooding in these areas will require a significant cost with minimal benefit. In situations like these, it is often necessary to turn to a strategy that involves developing measures to help residences and business owners "live with the river." Such measures involve floodproofing existing and proposed structures.

Floodproofing lowers the risk of flooding to specific properties through improvements to the building and/or surroundings. In terms of buildings, floodproofing generally falls within two categories: dry floodproofing and wet floodproofing. Dry floodproofing involves sealing off buildings so that flood waters are prevented from flooding the building. In dry floodproofing, it is important to consider the additional hydraulic forces that will act upon the structure in the event of a flood. In wet floodproofing, flood waters are allowed to enter a structure and measures are implemented to minimize the damage that can occur when flooded. Examples of measures to protect a building using wet floodproofing include moving electrical and mechanical equipment to upper floors, re-wiring electrical systems with immersion resistant components, replacing insulation with immersion resistant materials, and installing flood vents to relieve hydraulic pressure on the building. Typical costs to floodproof existing structures are highly variable with dry floodproofing typically much more costly.

Another method of floodproofing involves raising a building so that the first floor is elevated to above flood levels. Raising a building typically involves jacking up the building off of its foundation and either constructing a new foundation or extending the existing foundation to meet the new elevation of the superstructure. Each house or building must be evaluated on a case specific basis; however, the practice of raising structures has become more and more prevalent and more and more contractors in the northern New York and Vermont region have gained experience in these techniques. Typical costs to raise a single-family residence range from $30,000 to $100,000.

Additional information regarding floodproofing can be found in FEMA publication "Selecting Appropriate Mitigation Measures for Floodprone Structures" (FEMA 551 / March 2007).

5.2.7 Residential Re-location Plan

Many FEMA buy-outs have occurred in Au Sable Forks over the past few decades due to flooding. A high percentage of these have occurred in the Jersey and Intervale neighborhoods. One problem that Jay Town officials have noticed is that when a buyout occurs, the family often will re-locate to a community outside of the Town of Jay, depleting the town of its greatest resource, town residents, and reducing the tax base.

In anticipation of potential future flooding, the town may consider developing a residential re-location plan that assists residents currently situated in flood-prone areas to re-locate to a location that is not prone to flooding and that is also within the Town of Jay. This would require a substantial planning effort with significant public outreach to gain support from the residents that would potentially be relocated as well as other residents that may be impacted by the relocation effort. Such a plan could also serve as a model for other communities facing similar challenges.

6.0 Implementation and Action Plan

The recommendations that have been evaluated and presented in the Au Sable Forks LTCR Strategy have been prioritized and summarized in the Implementation Table located in Appendix E. They have been separated into policy and program recommendations –consisting of policy and planning actions and education and outreach actions – and flood resiliency projects – consisting of channel and infrastructure improvements, actions that protect residences and public safety, and floodplain conservation/reconnection actions. They have also been prioritized considering feasibility and level of benefit, cost and other resources, and relative ease of implementation.

Implementation of these recommendations will require financial resources and capacity. Relative cost and potential funding strategies are provided for each recommendation. Bringing these recommendations to fruition will require significant collaboration, coordination, and perseverance. The Project Team recommends that the following steps be taken to ensure progress is made on these initiatives:

- Continue to include and engage the community. Solicit continued input from individuals and businesses regarding the specific projects to be undertaken and their priority.
- Prioritize 1-2 projects to pursue each year with assistance from the Essex County Planning Office and the NYS Department of State to identify appropriate funding sources and projects.
- Apply for 1-2 grants each year to advance project development and/or designs.
- Establish a Project Champion for each project, preferably an individual or group that has some stake in the project and will keep pushing for its advancement.
- Implement projects as funding allows.
- Monitor project success.

7.0 References

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Appendix A

Project Area Study Map

Appendix A - Map 1

Au Sable Forks
Project Study Area Map

Drawn: JHB and SJD
Date: Mar 29, 2016

Au Sable Forks Hamlet

Long Term Community Recovery Project

Notes:
- This map was prepared with funding provided by the New York Department of State under Title 3 of the Environmental Protection Fund

Appendix B

Flood Depth Maps

Map 1 - Updated100 – Year Flood Depth Map
Map 2 – Updated 500 – Year Flood Depth Map
Map 3 – 100 – Year and 500 – Year Flood Extent Mapping Update
Map 4 - Simulated TS Irene Flood Depth Map

Appendix B - Map 1

Updated 100-year Flood Depth Mapping

Drawn: JHB and EFE
Date: Mar 1, 2017

Au Sable Forks Hamlet

Long Term Community Recovery Project

Notes:
- 100-year floodplain layer from FEMA Flood Insurance Study completed in 2002.
- Updated flood depth mapping is based on flow records from 1924-2015 and reflect increased predicted flows following TS Irene.
- Surface elevations are from 2014/2015 USGS 1m LiDAR data

Appendix B - Map 2

Updated 500-year Flood Depth Mapping

Drawn: JHB and EPF
Date: Mar 1, 2017

Au Sable Forks Hamlet

Long Term Community Recovery Project

Notes:
- 500-year floodplain layer from FEMA Flood Insurance Study completed in 2002.
- Updated flood depth mapping is based on flow records from 1924-2015 and reflect increased predicted flows following TS Irene.
- Surface elevations are from 2014/2015 USGS 1m LiDAR data

Appendix B - Map 3

100-year and 500-year Flood Extent Mapping Updates

Drawn: JHB and EFF
Date: Mar 1, 2017

Au Sable Forks Hamlet

Long Term Community Recovery Project

Notes:
- 100-year and 500-year floodplain limit layers from 2002 FEMA Flood Insurance Study.
- Updated flood extent mapping is based on flow records from 1924-2015 and reflect increased predicted flows following TS Irene.
- Surface elevations are from 2014/2015 USGS 1m LiDAR data

Appendix B - Map 4

Tropical Storm Irene
Flood Depth Mapping

Drawn: JHB and EPF
Date: Mar 1, 2017

Au Sable Forks Hamlet

Long Term Community Recovery Project

Notes:
- 500-year floodplain layer from FEMA Flood Insurance Study completed in 2002.
- TSI Flood Depth mapping based on HEC-RAS model of recrded discharge from USGS gage on East Branch and estimated West Branch flow based on Ausable and East Branch gages.
- Surface elevations are from 2014/2015 USGS 1m LiDAR data

Appendix C

Project Maps and Diagrams

East Branch - Jersey Cut Flood Protection
East Branch – Channel Widening Flood Protection
West Branch – Flood Wall / Levee and Floodplain Cut

Appendix C - Map 1

Jersey Area
Floodplain Cut

Drawn: JHB and SJD
Date: Mar 29, 2016

Au Sable Forks Hamlet

Long Term Community Recovery Project

Notes:
- 100-year floodplain layer from FEMA Flood Insurance Study completed in 2002.
- This map was prepared with funding provided by the New York Department of State under Title 3 of the Environmental Protection Fund

Appendix C - Map 2

East Branch
River Corridor Widening

Drawn: JHB and SJD
Date: Mar 29, 2016

Au Sable Forks Hamlet

Long Term Community Recovery Project

Notes:
- This map was prepared with funding provided by the New York Department of State under Title 3 of the Environmental Protection Fund

Appendix C - Map 3

West Branch Flood Wall and Floodplain Cut

Drawn: JHB and SJD
Date: Mar 29, 2016

Au Sable Forks Hamlet

Long Term Community Recovery Project

Notes:
- 100-year floodplain layer from FEMA Flood Insurance Study completed in 2002.
- Floodwall and levee alignment should follow 100-year floodplain boundary to minimize floodplain impacts
- This map was prepared with funding provided by the New York Department of State under Title 3 of the Environmental Protection Fund

Appendix D

Community Outreach Materials

Kick-Off Conference Call Minutes
On-Site Kick-Off Meeting Minutes
Business Meeting Minutes
Emergency Responder Meeting Minutes
Public Meeting Advertisements (poster, postcards, newspaper, on-line bulletin board)
Public Meeting Presentation / Minutes

Jay/Keene DOS LTCR Strategy Kick-Off Conference Call minutes – 11/25/2015:

Attending: Andy Labruzzo – DOS; Archie Depo – Town of Jay; Garrett Dague – Essex Co.; Eric Sandblom – ESPC (Consultant)
Absent: Bill Ferebee - Town of Keene

Andy provided a brief background on the LTCR funding. The funds were originally awarded in 2012. The projects were put on hold due to the NY Rising Community Reconstruction plans that were proceeding at the same time. The contract expired in 2013, and an extension was granted until March 31, 2016. Garrett asked about the feasibility of granting another extension. Andy stated that another one is not feasible, and all work must be completed by March 31st.

Andy noted that each town has specific set of boilerplate work program tasks that have to be adhered to. All project deliverables are drafts to be submitted to DOS for approval, and all need to contain the standard DOS attribution language. A communication protocol is recommended between all entities, and everyone should receive draft and final deliverables, as well as being cc:'d on all correspondence. Because time is of the essence on project completion, he suggested that if anyone has any questions regarding the grant administration process, do not hesitate to let him know to prevent any unnecessary delays in processing invoices. He noted that all deliverables must reflect work tasks done prior to March 31, 2016.

Andy noted that the work programs were originally the same for both communities, but Keene revised their scope, thus requiring separate contracts. He requested that copies of executed contracts and Procurement Certification forms for both communities be forwarded to him.

For the draft Town of Jay/ESPC contract, he asked about the focus area for the strategy. Eric confirmed that the area will focus on the downtown hamlet area of Ausable Forks. Andy recommended that the project study area be clearly defined in the strategy. He recommended that under "draft goals", a review of existing zoning and local land use regulations be included under Task 3, as well as proposed changes to or recommended land use regulations be incorporated into the final report under Task 4. Garrett noted that the Town does not currently have zoning regulations. Eric noted that he would modify the project schedule to account for the delayed start date, and coordinate with his staff to begin field work on or around December 10th.

Andy noted that a drawdown of funds can be requested, if needed. He asked about the process for invoicing. Archie noted that it was his understanding from discussions with county planning staff that invoicing would be handled by Essex County. Garrett noted that we can do that if that is what the town wants. Archie confirmed that he would prefer the county handle all invoicing for Jay. Andy stressed the importance of insuring that all invoices tie into the work plan

components to avoid red flags and delays in processing. Garrett asked Archie if he could begin to put together candidates to serve on the project steering committee.

Andy stated that, for the Town of Keene LTCR strategy, he thought it important to include and coordinate with Kelly Tucker and the Ausable River Association (ASRA) during the project. He noted that a draft final Ausable River Watershed Management Plan has been submitted to DOS, and he will forward a copy of that plan to everyone. He noted that the scope of work for Keene has been modified, and will focus on the area of Beede Brook.

For the draft Town of Keene/ESPC contract, Andy suggested that data gathering tasks 4A & 4B be moved to Task 4 – "Projects". He also suggested that "alternative" scope-of-work be removed. He said that DOS has approved the other work tasks. He also suggested that the project area of Beede Brook be defined, and included on a map. The deliverables will focus on the Beede Brook study area. He also recommended that land use recommendations be included in the final document.

Eric confirmed that the scope-of-work will include 3 different restoration projects, with schematic-level designs for all 3. Andy explained that DOS is usually involved in the entire spectrum of a project, from initial feasibility and design to implementation, and these strategies should position the communities so they can proceed to the next step of applying for grant funding for implementation.

Andy concluded by requesting that any future meeting minute notes be forwarded to him, as well as any photographs or maps related to Beede Brook for the project file.

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ESPC

engineering and environmental consulting

MEETING NOTES

Jay Long Term Community Recovery Project
Project Coordination Meeting
December 10, 2015 – 10:00 AM
Jay Town Offices, School Street, Au Sable Forks, New York

Attendees: See attached sign-in sheet.

Items discussed (in no particular order):

1. The Consultant Team was introduced: Erik Sandblom, ESPC, Stephen Diglio, ESPC, Evan Fitzgerald, Fitzgerald Environmental, Melissa Levy, Community Roots, Samantha Dunn.

2. Project Limits. The project limits are defined as the Hamlet of Au Sable Forks. The geographic area of the Hamlet of Au Sable Forks includes land in Essex and Clinton Counties. There was some discussion regarding whether the Jay LTCR project should include just the part of the hamlet that is in Essex County or the entire hamlet in both counties. Garrett Dague of the Essex County Planning Department will provide clarification on that.

3. The spelling of Ausable was clarified. When referring to the hamlet the correct spelling is "Au Sable Forks". When referring to the river the correct spelling is "Ausable River".

4. Data Collection / Other Related Projects:
   - River Model. E+E may have obtained the FIS hydraulic model for the Ausable river from FEMA for the New York Rising Project. ESPC will check with Michael Winonin at E+E and ask for it, otherwise the ESPC Team will request the FIS from FEMA.
   - LiDAR Data: One of the outcomes of the NY Rising Community Reconstruction Plan is a featured project to acquire LiDAR data for all of Essex County. This data would be particularly useful in preparing the Jay LTCR Strategy. Members present at the meeting indicated that the LiDAR project was initiated but no one had knowledge of its current status. ESPC will check with E+E and Garrett Dague will also check other sources to see if it is available.
   - The Main Street Bridge over the West Branch of the Ausable River in Au Sable Forks is set for replacement by the NYSDOT in 2016 or 2017. Jeff Fisher is the name of the NYSDOT Engineer for the project and Archie Depot has his contact information.

ERIK SANDBLOM, PC

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WWW.ESPC-CONSULTING.COM

- A study of the Rome Dam is about to be commenced. The contract for the study is about to be awarded and it is expected to be conducted over the winter.
- Mapping of drainage within the hamlet is believed to have been completed by NYSDOT. Contact Tim Preston 518-891-7565 for more information.
- Water building project. This project is currently in design. It involved replacement of the existing water treatment building that is flood-proofed to the 500 year storm event including raising well heads. This project will not involve constructing a new road.
- Draft Ausable River Watershed Management Plan. Kelley Tucker of the Ausable River Association indicated that a draft plan is completed but not yet released to the public. A copy can likely be obtained from Andy Labruzzo of DOS for reference purposes. According to Kelley, the Plan summarizes geographically the locations of wastewater disposal systems, SPDES permits, and includes a geomorphic map of the watershed.
- The Town completed a Revitalization Plan 8-10 years ago. A Comprehensive Plan was also completed further back. Garrett will provide copies of both.

5. Other data / feedback from those present:
   - There currently is no zoning regulation for the Town or the Hamlet. There is a Planning Board and site plan review procedures for new development through the subdivision regulations. There is no flood protection law.
   - Areas in which the NY Rising Community Reconstruction Plan did not address or could have focused more on:
     a) Stormwater issues within the Hamlet. There is no real infrastructure and areas within the hamlet often take time to drain after storm events and every Spring. Water comes in and it can't get out. There are also issues with diches and sinkholes.
     b) Septic issues.
     c) Riverbank restoration. According to Kelley Tucker the major problems within the Ausable watershed include (1) sediment, (2) salt, and (3) phosphorous (from erosion and septic). There are no real upriver issues (other than riverbank erosion on sections from Keene and Upper Jay) influencing the problems at the Au Sable Forks Hamlet. Kelley suggested re-establishing benches and sinuosity.
   - Jersey neighborhood. The most vulnerable locations in the Hamlet are the Jersey Section and Intervale Road on the other side of the

river. Jersey was the most populated section of town. It was heavily hit in 1998 and 2011. There are 35-40 homes left. Seventeen homes were impacted from Irene in the Jersey and Intervale Road areas. Many participated in the FEMA buy-outs. A few re-built and did not participate in the FEMA buyout. Others did not take the buyout and just abandoned the structures. There are 2 abandoned buildings from Irene in these neighborhoods. Archie Depo believes that protecting these neighborhoods from future impact should be the #1 priority.

- Past floods have significantly impacted the Town's tax base. In the whole town of Jay there were 26 FEMA home buyouts from Irene.
- Jersey Bridge. The Jersey Bridge, County Bridge 62, was replaced about 10 years ago. Plans should be available through the County. This bridge is believed to be the cause of significant blockage. Ice issues are also believed to be prevalent.
- Upstream the Ausable river is geomorphically sound. As the rivers pass through Au Sable Forks it loses access to the historic floodplain. The East Branch riparian buffers upstream are more degraded than the West Branch. There has been some river widening and sediment bar development around the Au Sable Forks Hamlet since the the 2011 floods.
- TS Irene brought river levels to the steps of the school building and 1 foot of depth on Main Street.

6. Community Outreach. Past efforts regarding community outreach was discussed as part of the NY Rising as well strategies for the Jay LTCR Strategy.
   - There were 3 Community Meetings conducted for the NY Rising project. They were Town organized. Scott McDonald represented the Town of Jay. Sara Crowle of DOS should have copies of all minutes and agendas from these meetings.
   - Community meetings and workshops can be held in the school gym.
   - Local publications include the Jay Community News. There is also a local business directory
   - The first large community meeting will be targeted for February. If possible the LTCR meeting will be coordinated with the Ausable Watershed Management Plan presentation meeting. The ESPC Team will stay in touch with Kelley Tucker to potentially coordinate the meetings together.
   - Melissa Levy and Samantha Dunn suggested conducting a smaller meeting with business owners in mid-to-late January. Perhaps a breakfast meeting. Archie will help coordinate this.

- There is a particular landlord that owns the majority of real estate affected in the 2011 flooding and was vocal at the NY rising meetings – Jamie Atkins – who should be invited to the Jay LTCR Strategy meetings.

7. Steering Committee. A Steering Committee needs to be assembled for the Jay LTCR Strategy. Archie will take the lead in organizing one.

Attachments: Meeting Sign-In Sheet

AUSABLE FORKS KICK-OFF
LONG TERM COMMUNITY RECOVERY STRATEGY

ERIK SANDBLOM	ESPC	802-383-0486	eriks@espc-consulting.com
Archie Depo	Town of Jay	518-647-2204	Supervisor@TownofJay
GARRETT DAGUE	ESSEX CO. PLANNING	873-3452	GDAGUE@CO.ESSEX.NY.US
Samantha Dunn			
Melissa Levy	Community Roots	802-318-1720	melissa@community-root.com
Stephen Diglio	ESPC	802-383-0486	stephend@KAS-consulting.com
Robert Lincoln	T/o JAY DPW Director	518-225-4599	jayhwy septa@jaydpw.com
Paul Mintz	T/o JAY	518 578-6884	
Chester Pulsifer	T/o JAY	578-3523	Deerslayer12000@Charter.net
Evan Fitzgerald	Fitzgerald Environmental (ESPC team)	802-876-7778	evan@fitzgeraldenvironmental.com
Kelley Tucker	Ausable River Assoc	5183904584	ktucker@ausableriver.org

Au Sable Forks Long Term Recovery Strategy: Business Breakfast Summary

February 2nd , 10:00 to 11:30am

Fire House, Au Sable Forks, NY

Attendance:

Archie Depo, Supervisor, Town of Jay

Robert (Robbie) Lincoln, Highway Superintendent/ Dept. of Public Works Director, Town of Jay & Assistant Fire Chief, Jay

Lewis Axtel, Business Owner, Upper Jay

Kevin Douglas, Landlord, Au Sable Forks

Louis Garso, Fire Chief, Au Sable Forks

Project Team: Melissa Levy, Samantha Dunn, Community Roots, LLC

Background

To begin engaging the Au Sable Forks business community, Community Roots designed and facilitated a "business breakfast" hosted at the Au Sable Forks Fire Department on February 2, 2016. Community Roots developed invitation language and worked with Archie Depo to support outreach to businesses. Archie generated hard copy invitations for the event and took them door-to-door to Main Street businesses. (See Appendix A for Invitation Language.)

Summary of Discussion

The main focus of the business breakfast was to engage local businesses to better understand flooding impacts, identify opportunities and challenges, and identify the most relevant strategies. Due to the low turnout for the event, the discussion was casual. Participants identified specific vulnerabilities and opportunities, discussed impacts on additional businesses, and identified other business owners that should be engaged in this process.

The first part of the discussion focused on the need to address the river upstream of the community and options for dredging a deeper channel and/or building berms to protect property. Town officials did not think that strategies involving getting equipment into the river were possible strategies for flood resiliency at this time.

The group discussed which additional businesses and/or building owners had been affected by Irene and should be engaged through one-on-one discussions, including:

- Dennis Santini – Automotive Repair, Main Street
- Tops Supermarket, Main Street
- 20 Main, Dave Wizwel, Main Street
- Mad River Pizza, Lance Lawrence, Main Street
- Hollywood Theatre, Main Street

Archie shared that the Town will likely be adopting zoning ordinances for the first time; this is an opportunity to integrate flood resiliency into long-term comprehensive planning for the Town.

Kevin Douglas shared his experience as the owner of an historic building on Main Street (14233 NYS Route 9N) that houses two active businesses (hair salon and law office) on the main floor and residential tenants on the upper floor. This is one of the oldest commercial buildings in town, just one of three that survived the 1925 fire. Kevin reported that during Irene there was 6-8 feet of floodwater at the back of the building. Kevin opens the door to the basement when flooding occurs to stabilize the structure but is very concerned about the toll the flooding is taking on the building.

Kevin reported that his tenants did not get flooded. In addition to Irene, he has had significant flooding due to ice jams. Kevin feels that building a flood wall (similar to the one on the north side of the river) is the best strategy for his building. He owns more than an acre of land and is willing to have that land used for construction of such a wall. The group discussed the potential for incorporating the flood wall as part of the bridge replacement that is slated for 2017.

Kevin has moved panel boxes and the water heater out of the basement; he has also strapped down the oil tanks as flood-proofing measures.

Finally, the group discussed stormwater and drainage, which can be a significant problem for Main Street businesses. There is no drainage built into this portion of NYS Route 9N, which is currently asphalt over the original cobblestones. This is a state DOT issue that could also potentially be addressed during the bridge replacement.

Appendix A: Invitation Language

The Town of Jay has received money to continue developing flood resiliency strategies for the hamlet of Au Sable Forks. This new funding has money targeted for engaging local businesses. Please join us for breakfast on February 2nd at 10am to talk about your experience as a business owner and/or landlord.

The purpose of this breakfast is to bring together business owners to talk about their experience post-Irene and to identify challenges and opportunities.

We hope the outcomes of this meeting will help guide strategies and recommendations for investment as the Jay Long Term Community Recovery Strategy is developed and implemented. Please RSVP to Archie Depo at supervisor@townofjay.net and (518) 647-2204.

Appendix B: Meeting Agenda

Au Sable Forks Long Term Recovery Strategy

Business Breakfast: AGENDA

February 2, 2016
Au Sable Forks Fire Dept.
Au Sable Forks, NY

Objectives

- Bring together local business owners
- Identify flooding impacts and challenges specific to businesses
- Identify/prioritize flood resiliency strategies most impactful for businesses

10:00 – 10:10	**Introductions**
10:10 – 10:20	**Au Sable Forks Business Community Challenges/Opportunities**
10:20 – 11:00	**Flooding Impacts & Challenges**
11:00 – 11:25	**Review and Prioritize Strategies**
11:25 - 11:30	**Wrap Up & Next Steps**

Au Sable Forks Long Term Recovery Strategy: Emergency Response Meeting Summary

February 2nd , 11:30 to 12:30

Fire House, Au Sable Forks, NY

Attendance:

Archie Depo, Supervisor, Town of Jay

Robert (Robbie) Lincoln, Assistant Fire Chief, Jay

Louis Garso, Fire Chief, Au Sable Forks

Project Team: Melissa Levy, Samantha Dunn, Community Roots, LLC

Background

Representatives of each of the three fire districts that serve the Town of Jay were invited to the meeting to discuss opportunities for collaboration and flood resiliency strategies that would support emergency response to build on the NY Rising strategy focused on first responders:

Strengthen the capacity of first responders to respond during a natural disaster and manage resources throughout recovery.

One fire chief was unable to attend the meeting, due to a funeral.

Summary of Discussion

The participants discussed progress made on the NY Rising Strategy (as relevant to Au Sable Forks):

Water rescue equipment for Jay – Proposed Project

The water rescue equipment has been obtained through a grant from the New York State Department of Homeland Security. Five fire departments (Au Sable Forks, Jay, Upper Jay, Keene and Keene Valley) joined a consortium to apply for the grant. The $37,000 grant provided boats, flotation gear, wetsuits and other water rescue equipment that is spread out across the districts.

Necessary emergency support equipment and shelter upgrades for Jay – Featured Project

In August 2015, voters approved a bond for a 3-phase project to make upgrades to the Au Sable Forks Fire House. Phase 1 of this project has begun and will include a new roof, repairs to the electrical and heating systems and renovated bathrooms that will meet ADA requirements. Additional phases will better accommodate trucks and radio equipment.

The group identified two additional challenges/opportunities to be addressed to further support emergency response.

1. Swift Water Training. There are currently very few fire department members that are trained to use the water rescue equipment that has been obtained. The departments are interested in collaborating to bring the training to more members and potentially offset costs.
2. Recruitment. All three departments struggle with recruitment of new members and would benefit from a county-wide recruitment strategy and more financial incentives for people to join.

Meeting participants identified the road infrastructure as the most important aspect of resiliency for first responders, because without it, they cannot reach residents in need.

The group discussed the high cost of maintaining three departments that serve the Town of Jay but both chiefs at the meeting felt consolidation was not possible due to geographic and road infrastructure constraints.

Public Meeting

To Discuss Au Sable Forks Resilience

Tuesday, March 15, 2016
5:00 - 6:30 pm

We want to hear about your experiences post-Irene and we want you to help guide strategies for investment as the Jay Long Term Community Recovery Strategy is developed and implemented. Visit this website to help us document flooding in your location: https://www.surveymonkey.com/r/AuSableForksFlooding.

Au Sable Forks Community Center

11 School Lane | **(518) 647-2201**

Please join us

To discuss disaster resilience for Au Sable Forks

TUESDAY, MARCH 15, 2016

5:00 – 6:30 PM

Au Sable Forks Community Center

Please join us

To discuss disaster resilience for Au Sable Forks

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To discuss disaster resilience for Au Sable Forks

TUESDAY, MARCH 15, 2016

5:00 – 6:30 PM

Au Sable Forks Community Center

Town of Jay
11 School Lane
Au Sable Forks, NY 12912

TUESDAY, MARCH 15,

PLEASE JOIN

We want to hear about your experiences post-Irene and we want you to help guide strategies for investment as the Jay Long Term Community Recovery Strategy is developed and implemented.

Please RSVP to Archie Depo at supervisor@townofjay.net and (518) 647-2204.

Recipient

Address Line 1
Address Line 2
Address Line 3
Address Line 4

Visit this website to help us document flooding in your location: https://www.surveymonkey.com/r/AuSableForksFlooding.

Town of Jay
11 School Lane
Au Sable Forks, NY 12912

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Town of Jay
11 School Lane
Au Sable Forks, NY 12912

TUESDAY, MARCH 15,

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Recipient

Address Line 1
Address Line 2
Address Line 3
Address Line 4

Visit this website to help us document flooding in your location: https://www.surveymonkey.com/r/AuSableForksFlooding.

Au Sable Forks Community Flood Information

Please help us to understand flooding impacts in the community by sharing what you know about the location and damage to specific properties in Au Sable Forks.

★ You can complete this form online at: www.surveymonkey.com/r/AuSableForksFlooding

What is the address of the impacted property?

Address: _____

Town: _____

Zip Code: _____

Is this a residence or business?

☐ Residence

☐ Business

☐ Both Residence and Business

Please share the flood impacts at this location:

	Date	**Height of Water from First Floor (+ or -)**	**Documented Damage**
Example	*5/2011*	*- 6 inches*	*Flooded basement; damaged furnace*
Flood Event 1			
Flood Event 2			
Flood Event 3			

Use the back of this form to share additional information.

Please return this form to Archie Depo, Supervisor, Jay Town Offices or bring it to the Public Meeting on March 15th (5pm at the Au Sable Forks Community Center).

PRESS-REPUBLICA 3/13/16

Jay involved in New York Rising process

Meeting Tuesday to focus on disaster preparedness, mitigation efforts

AUSABLE FORKS — The Town of Jay hamlet of AuSable Forks has received funding to determine the next steps to move forward with New York Rising strategies on disaster preparedness and mitigation.

The Rising Community Reconstruction Program is helping communities impacted by tropical storms Irene and Lee and Superstorm Sandy rebuild and become more resilient through community-driven plans.

Jay residents and stakeholders are invited to participate in a public meeting to learn about the New York Rising process, the strategies and projects that are included in the plan and to help prioritize the next steps that will help Jay finish building back.

The forum is set for 5 p.m. Tuesday, March 15, at the AuSable Forks Community Center. Refreshments will be provided.

Residents and businesses are also asked to visit a website to help document flooding in individual locations: www.surveymonkey.com/r/AuSableForksFlooding.

For more information, contact Jay Town Supervisor Archie Depo at adepo@charter.net.

jaynews.org/calendar.html

Apps | Bookmarks | Facebook | Hulu | LinkedIn | NYSDEC | OWA | VTDEC | VTrans | VZW | Pulse | Meetup | GC | Bookmarks | gmap-pedometer.co

HOME | CALENDAR | SERVICES DIRECTORY | CLASSIFIEDS | SEARCH PAST ISSUES | SUBMIT POST

Click on any item for more details

JCN Community Calendar

Today | March 2016 | Print | Week | Month | Agenda

Public Meeting

When	Tue, March 15, 5:00pm – 6:30pm
Where	Au Sable Forks Community Center, 11 School Lane, Au Sable Forks, NY (map)
Description	To discuss Au Sable Forks Resilience post-Irene; Help guide strategies for investment as the Jay Long Term Community Recovery Strategy is developed and implemented. Visit this webiste to help document flooding in your location: https://www.surveymonkey.com/r/AuSableForksFlooding

more details» copy to my calendar»

Sun	Mon	Tue	Wed	Thu	Fri	Sat
28 2pm The Wizard of Oz - V 5:30pm Yoga for the Com	7:30pm Communit			3 omen of Faitl	4 4:30pm Fish Fry - Knights 5:30pm Artist Exhibit Ope	5 9:30am Holy Hikes 11am Women's History M 8pm Steak Dinner and Mu 7pm Music - Latayla Duell 7pm World Music Festival 7:30pm "Climate Change +2 more
6 8am Firehouse Big Break 5:30pm Yoga for the Com				10 cientific Scie	11 7pm Documentary Film "E 7pm Film - "Brooklyn" 7:30pm One Man Theater	12 Film - "Bridge of Spies" 7pm Film - "Brooklyn"
13 5:30pm Yoga for the Com	14	15 5pm Public Meeting 7:30pm Lyceum Series "S	16	17 Saint Patricks Day Dinne 11:30am Au Sable Valley 7pm Performance - "The 7:30pm Play Reading	18 Keene Valley Library Fa 7pm Drama Club Present 7pm Performance - "The 7:30pm Dance Performan 8pm Concert - Cuddle Ma	19 9am Film "Becoming Bulle 7pm Drama Club Present 7pm Music - Julie Robard
20 8:30am Annual Palm Sun 5:30pm Yoga for the Com 6:30pm Full Moon Ceremo	21	22	23	24	25	26 4pm Spaghetti Dinner
27 5:30pm Yoga for the Com	28	29	30	31 5:30pm Mad Hatter's Ball	Apr 1	2 3pm Gospel Choir Concer

Au Sable Forks Long Term Community Recovery Strategy
Public Meeting Summary

March 15, 2016 – 5pm
Au Sable Forks Community Center
Au Sable Forks, NY

Participants:
The Project Team:
Erik Sandblom, ESPC
Evan Fitzgerald, Fitzgerald Environmental Associates
Stephen Diglio, ESPC
Melissa Levy, Community Roots
Samantha Dunn, Community Roots

Steering Committee:
Archie Depo – Town of Jay Supervisor
Scott McDonald – NY Rising Co-chair. Lives in Upper Jay.
Kevin Douglas – business owner
Russ Coonradt– town employee. Lives in Town of Jay.
Chad Garcia - Town of Jay Councilman, lived in Au Sable Forks until Irene.
Robbie Lincoln – Department of Public Works.

Introductions
Michael Mitchell – Au Sable Forks resident in the Intervale, employed by highway department. I lost my home during Irene – we did land mitigation, 5.5 feet of land, new house
Gil Lamarshe – Sheldrake Road – moved here 4 years ago from Florida. I like the river, like the amenities of the Park and the community. We didn't flood but we came close, everyone around us did.
Shaune Lamarsh – Our house flooded in the ice jam. 3 or 4 years ago.
Louis Garso– Au Sable Forks fire district (chief)
Charlene Garso – Au Sable Forks fire district
Jody Hart – Main Street, on NY Rising
Carol Ward – Au Sable resident, live on Jersey, flooded during Irene
Mark Malchoff – work for Lake Champlain Sea Grant in Plattsburgh. We got funding to look at outreach. I found out about the meeting from the newspaper. We got funding to come up with better maps for part of the river – we have GIS products to share with people.
Wayne Frederick – live in Jersey – I flooded twice that year 4 months apart – ice, Irene

Project Partners:

Town of Jay
NYSDOS
Essex County Planning Department
Au Sable River Association

Introductions to the team and the project.
Erik Sandblom of ESPC gave an overview of the project and how it is related to the NY Rising Project and why there is some overlap. The Towns of Jay and Keene have been awarded $9 million to implement strategies from NY Rising, which was created by GOSR after TS Irene, TS Lee and SS Sandy. Erik reviewed proposed projects from NY Rising and other work completed since TS Irene.

There was also a NY Department of State grant to Jay and Keene for the Long Term Community Recovery (LTCR) project, which was revived in 2015, under which this work is happening. He outlined the project area, which is the hamlet of Au Sable Forks. The project deadline is March 31, 2016. The LTCR scope is fixed, but the Project Team has developed an approach within the prescribed scope that addresses items that the community feels that the NY Rising report did not adequately address. The plan for this project is to have a clear roadmap to implement projects to increase flood resiliency, supplementing but not duplicating NY Rising.

Erik reviewed draft project goals that need to be approved by the Steering Committee.

The goals of this project (the Au Sable Forks Long Term Community Recovery (LTCR) Strategy) are to:

1. **Identify flood vulnerabilities for community assets.**
2. **Develop strategies to make the community more disaster resistant and flood resilient.**

This project will:

- Build upon the NY Rising Community Reconstruction Plan for the Towns of Jay and Keene (not repeat or re-create what has been or is being implemented already).
- Provide a clear roadmap for implementing identified strategies and recommendations.
- Identify strategies for flood resiliency specifically for the Jersey and Intervale neighborhoods.
- Identify strategies to support Au Sable Forks businesses, particularly along and near Main Street.

LTCR Scope Tasks Completed to Date

Melissa Levy of Community Roots provided an overview of the work that has been done to date to engage businesses, emergency responders, and residents. Events have included our kick-off meeting, a business breakfast, and an emergency response meeting, in addition to this public meeting. This preliminary outreach, leading up to the public meeting, has led the Project Team to identify that the NY Rising project did not address the Intervale neighborhood, Jersey neighborhood and Main Street businesses.

Sharing Our Experiences

Melissa Levy of Community Roots asked participants to share their experience with flooding, including impacts on services, buildings, property, or municipal infrastructure.

Mike Mitchell – I live at 14 Intervale Avenue. We bought the property. We took on a foot of water inside of the home. It was like a roller coaster in there. Our insurance company took care of us. We removed the old place and did some upgrades to the utilities. We did land mitigation to bring the property up to the water line.

Chad Garcia – I lived at 506 Strawberry Grove. The front of my property was sloped up. The water pressed against the door. It went through the garage and around into the addition we put on the house.

Shaun – I'm very concerned about ice.

Other needs?
Carol – we would be cut off if we lost the bridge. We don't have a fire truck over there. We don't have a way of getting out. If something were to be put into place so that we were taken care of, that would be helpful. I live at 22 Bert Lane; the water was 4 -5 feet.

We discussed a robo-call to let people know what is coming. If you get a call, you have an extra 5 minutes to respond.

Kevin Douglas– My property gets the brunt of the river on Main Street. I have had 6 feet of water at full force. I can speak to the businesses, 20 Main, Aubuchon building; they have had fish in their basement after these storms. I don't know if we can do much about the big storms. I think we can lessen damage by removing utilities out of flood-prone areas. We should move electric services, water tanks, oil tanks. Other tanks are strapped down. I have had oil tanks sucked out of the basement. I had had gas tanks from my property stuck in the bridge.

Does this project include fluvial mapping? When things get high enough, you can get bank failure and fluvial erosion. This project doesn't include that work, but those could be useful maps for this area.

Review and Prioritize Strategies
Evan Fitzgerald of Fitzgerald Environmental Associates provided an overview of the flood resiliency checklist. We will hope to have this completed with the Steering Committee.

Evan also provided a brief overview of trends in climate change and impacts on hydrology, including what data is showing about changes in volume of rain and frequency of flooding.

Evan and Steve DIglio of ESPC presented draft strategies.

Upper Floodplain / Floodplain Protection Areas
Identify areas with extensive floodplain to prioritize areas for protection. Protection could take many forms. This implies that these areas are currently undeveloped. Easements can be purchased. The Town could identify important floodplain areas to say these are important floodplains that deserve more review for development.

- East Branch - Areas 1, 2, 3
- West Branch – Mill Remains and vicinity – potential floodplain reconnection – Could the mill area function as a floodplain?

East Branch Flood Protection / Drop Flood Levels
There was an overview of the understanding of flooding in the area.
- Jersey Cut – description of strategy, discussion of why it would not be as effective as hoped.
- Channel Widening – this would reduce floodwaters but for a TS Irene event, this would not save the Jersey and Intervale neighborhoods. In addition, it would be very expensive ($20-25 million). This would improve flood resiliency but would not solve all of the problems.
- Flood proof (raise) structures
- Re-location (as opposed to buy-out – plan to keep residents in Jay)

West Branch Flood Protection
- Flood Wall – description of the flood wall project. There is a concern that the street water can pool inside wall. There is also a concern about the impact of a wall on the opposite side of the river. The wall on the other side of the river was built in 1938 after the flood. Permitting may be easier because we are out of the river.
  Estimated cost $150-200K

- Main Street Flood Preparedness Plans (flood proof / action plan)

Flood Depth Map – Planning Tool

The current FEMA mapping underestimates the risks for this community. The project team hopes to generate updated flood depth maps to provide data for flood-proofing and/or raising structures off the ground.

There was a brief overview of Municipal Planning Efforts that can be undertaken. The opportunities to enhance emergency response were reiterated (swift water training efforts as well as new ideas for recruitment strategies and incentives). Business Preparedness Opportunities were reviewed, like moving utilities to upper floors, continuity of operations planning, insurance for business continuity, etc.

Wrap Up & Next Steps

All insights and feedback gained as a result of this meeting will be incorporated into the final report, which is due March 31, 2016.

Appendix E

Implementation Table of Recommended Strategies and Projects

Hamlet of Au Sable Forks LTCR Strategy

Recommended Strategies and Projects to Protect Au Sable Forks
March 31, 2017

Legend
● Effective) Limited ○ Ineffective

Project	What is At Risk?	Priority	OBJECTIVES: Reduces Flood Risk (i.e., flood depth)	OBJECTIVES: Protects Businesses, Infrastructure, and Property	FEASIBILITY: Ease of Implementation	FEASIBILITY: Cost Range	FEASIBILITY: Estimated Time for Implementation	Description (Potential Partners)
POLICY & PROGRAM RECOMMENDATIONS								
Policy & Planning Recommendations								
Update Flood Regulations	Businesses & Residences	High	)	●	Moderate	<$10K	1-2 years	Review existing "Flood Damage Prevention" law to ensure consistency with federal and state standards. Reference updated mapping and establish benchmarks for rebuilding after disasters. (NYSDEC; FEMA)
Adopt Site Plan Review Ordinance	Businesses & Residences	Medium	○	●	Moderate	<$10K	1-2 years	Create and adopt a site plan review ordinance for new commercial development. (NYSDOS)
Flood Depth Mapping	Businesses, Residences, & Town Infrastructure	High	○	●	Moderate	<$10K	1-2 years	Incorporate mapping completed as part of this LTCR project into the reviews completed under Flood Damage Prevention Law and Site Plan Review Ordinance.
Education and Outreach Recommendations								
Education Program for Debris Removal/Channel Work	Businesses, Residences, & Town Infrastructure	High	)	●	Easy	<$10K	1-2 years	Provide technical training to Public Works staff and contractors to improve understanding of floodplain management and stream dynamics for disaster response. (ECSWCD, LCBP)
Emergency Response Training	Businesses & Residences	High	○	)	Moderate	$10K-$50K	2-5 years	Expand Swift Water Training among Fire Department members. (FEMA)
Implement Emergency Response Recruitment Strategies	Businesses & Residences	Medium	○	)	Moderate	<$10K	2-5 years	Improve recruitment of new members through incentives such as hourly rates or monthly allowances, tax cuts, and other benefits. (FEMA)
Implement Business Preparedness Strategies	Businesses & Residences	Medium	○	)	Moderate	<$10K	1-2 years	Educate businesses about insurance coverage, development of continuity plans, floodproofing, and other training. (SBA; FEMA, USDA, FSA)

[1]**Reduces Flood Risk** - The proposed project/strategy lowers the flood level.
[2]**Reduces Erosion Risk** - The proposed project/strategy lessens the vulnerability of a location to erosion.

Hamlet of Au Sable Forks LTCR Strategy

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March 31, 2017

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FLOOD RESILIENCY PROJECTS								
Channel/Floodplain and Infrastructure Improvements								
East Branch - Jersey Cut Flood Protection	Businesses, Residences, & Town Infrastructure	Low	)	)	Difficult	$2-3M	2-5 years	Provide an overflow flood plain cut through the northern portion of the neighborhood to increase conveyance capacity around the Jersey Bridge. (FEMA HMGP)
East Branch - Channel Widening Flood Protection	Businesses, Residences, & Town Infrastructure	Low	●	●	Difficult	$15-20M	>5 years	Widen a constricted potion of the East Branch River Corridor to help mitigate backwater and ice jam flooding to the Jersey and Intervale Neighborhoods and to stop the split flow north down Main Street at the Jersey Bridge. (FEMA HMGP)
West Branch - Flood Wall / Levee	Businesses, Residences, & Town Infrastructure	High	○	●	Moderate	$150K-$200K	1-2 years	Provide flood protection for the buildings located on the southern bank of the West Branch on the upstream side of the Main Street Bridge with a flood wall and berm that would minimize loss of floodplain storage. (FEMA HMGP)
West Branch - Floodplain Cut at East/West Branch Confluence	Businesses, Residences, & Town Infrastructure	Medium	)	)	Difficult	$350K-$500K	2-5 years	Floodplain cut on the north bank to create a bench and improve the confluence geometry to help ease ice jamming, bank erosion, and nuisance flooding. (FEMA HMGP; AsRA)
Protection of Residences and Public Safety								
Flood Proof Residences in Jersey and Intervale Neighborhoods	Residences	Medium	○	●	Moderate	>$2M	2-5 years	Floodproof approximately 28 residences that are prone to flooding during extreme flood events, through either wet floodproofing (i.e., elevating utilities) or raising buildings above the desired flood elevation. (FEMA)
Residential Re-location Plan for Jersey and Intervale Neighborhoods	Residences	High	○	●	Difficult	>$3M	>5 years	Relocate approximately 28 residences that are prone to flooding during extreme flood events to another neighborhood within the Town. Summarized costs include approximate buyouts costs only. (FEMA)
Floodplain Conservation/Reconnection								
East Branch Floodplain Protection Area #1: Upstream of Stickney Bridge Road	Businesses, Residences, & Town Infrastructure	Medium	●	●	Difficult	$20K-$50K	2-5 years	Permanently protect approx. 15 acres of floodplain through easements and/or purchase of development rights. Cost range provided is for easements only, and does not include relocating Clark and Carey Roads. (AsRA; Land Trusts)
East Branch Floodplain Protection Area #2: East of hamlet of Jay	Businesses, Residences, & Town Infrastructure	High	●	●	Moderate	$50K-$100K	2-5 years	Permanently protect approx. 40 acres of floodplain through easements and/or purchase of development rights. (AsRA; Land Trusts)
East Branch Floodplain Protection Area #3: West of hamlet of Jay	Businesses, Residences, & Town Infrastructure	High	●	●	Moderate	$100K-$200K	2-5 years	Permanently protect approx. 75 acres of floodplain through easements and/or purchase of development rights. (AsRA; Land Trusts)
East Branch Floodplain Protection Area #4: Within hamlet of Upper Jay	Businesses, Residences, & Town Infrastructure	Medium	)	)	Moderate	$20K-$50K	2-5 years	Permanently protect approx. 15 acres of floodplain through easements and/or purchase of development rights. (AsRA; Land Trusts)
East Branch Floodplain Protection and Reconnection Area #5: Marcy Field in Keene	Businesses, Residences, & Town Infrastructure	Low	●	●	Difficult	>$1M	>5 years	Reconnect a large floodplain storage area (>300 acre-feet) disconnected by Route 73. (FEMA; NYSDOT)
West Branch Floodplain Protection and Reconnection Area #1: Abandoned Rogers Paper Mill	Businesses, Residences, & Town Infrastructure	Low	)	)	Difficult	>$1M	>5 years	Reconnect a large floodplain (>4 acres) at the site of an abandoned paper mill. (FEMA)

[1]**Reduces Flood Risk** - The proposed project/strategy lowers the flood level.

[2]**Reduces Erosion Risk** - The proposed project/strategy lessens the vulnerability of a location to erosion.

Attachment 4

Adirondack Park Agency Application for Variance from Shoreline Restrictions. Au Sable Forks Flood Barrier – Town of Jay, NY. Appendix B only.

Attachment B

OHWM Determination

And

HEC-RAS Modeling Summary

Attachment B

Au Sable Forks Flood Barrier Project - OHWM Determination

As part of the baseline geomorphic conditions assessments performed, determination of OHWM of Au Sable Forks was consistent with USACE guidance in its Regulatory Guidance Letter No. 05-05 dated December 7, 2005. This included field-based observations of bed and bank features including inflection points and scour lines along the banks, changes in sediment size and distribution along depositional features, presence or absence of perennial vegetation along the banks, and debris lines and wracking from high water marks corresponding to known annual high flow events (see example photographs below). These field-based observations of OHWM were further supported by regional hydraulic geometry regressions and reach-specific hydrology and hydraulics calculations, as previously described.

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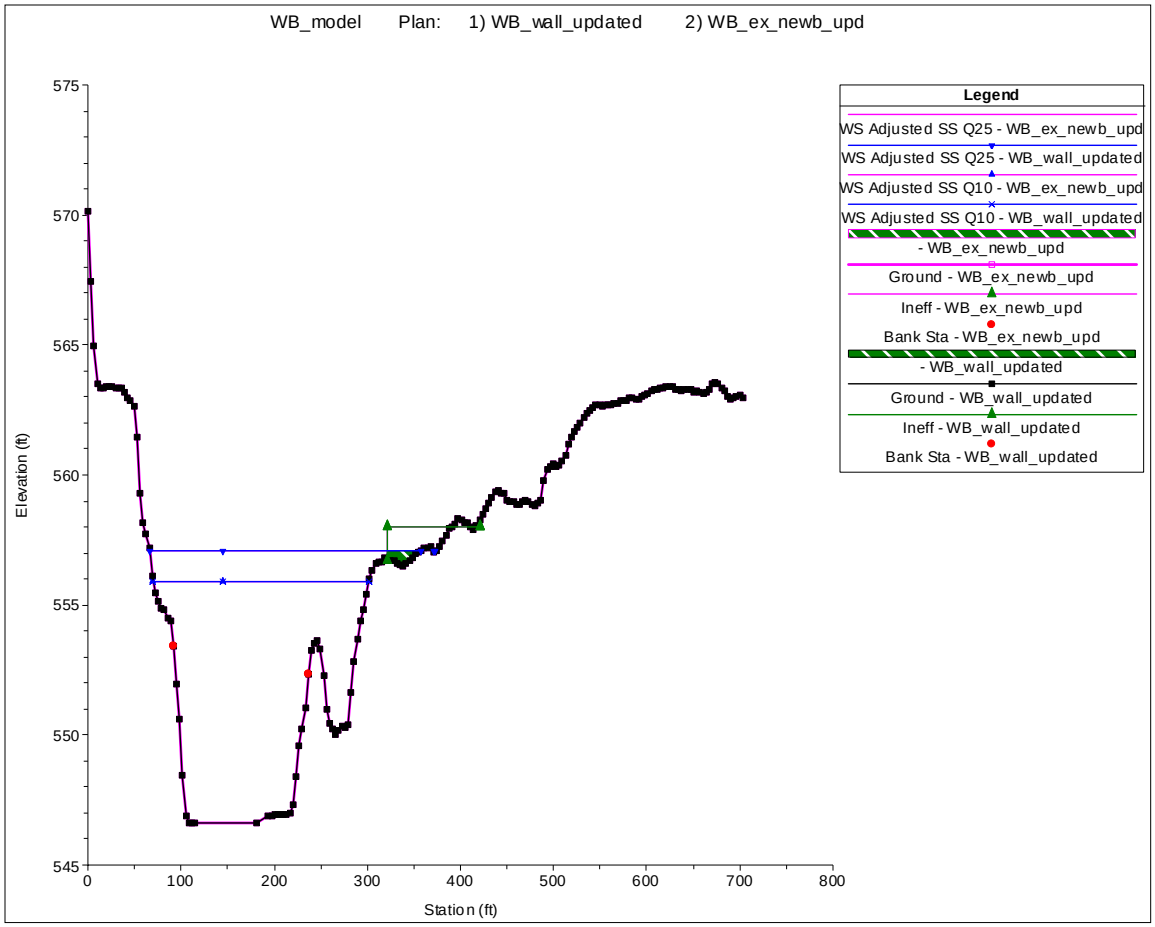
Schoder Rivers Associates; Fitzgerald Environmental Associates; KAS, Inc.
HEC-RAS Modeling Summary for West Branch AuSable River – Proposed Flood Wall, Au Sable Forks, NY
April 14, 2020

HEC-RAS Cross-Section*	Design Flow	Discharge (cfs)	WSE* (ft) Existing	WSE* (ft) Proposed	Channel Velocity Existing (ft/sec)	Channel Velocity Proposed (ft/sec)
827	2-year	4,160	552.66			
	10-Year	8,800	555.90	555.90	6.63	6.63
	25-Year	10,800	557.08	557.07	7.00	7.00
743	2-year	4,160	552.4			
	10-Year	8,800	555.56	555.55	7.08	7.08
	25-Year	10,800	556.73	556.72	7.48	7.51
602	2-year	4,160	552.04			
	10-Year	8,800	555.06	555.06	7.45	7.45
	25-Year	10,800	556.11	556.13	8.26	8.20
545	2-year	4,160	550.13			
	10-Year	8,800	552.64	552.68	13.82	13.72
	25-Year	10,800	553.49	553.51	14.72	14.69
305	2-year	4,160	547.57			
	10-Year	8,800	550.52	550.52	9.02	9.02
	25-Year	10,800	551.23	551.23	9.73	9.73

* See below plots for HEC-RAS Cross-section locations; WSE = Water Surface Elevation

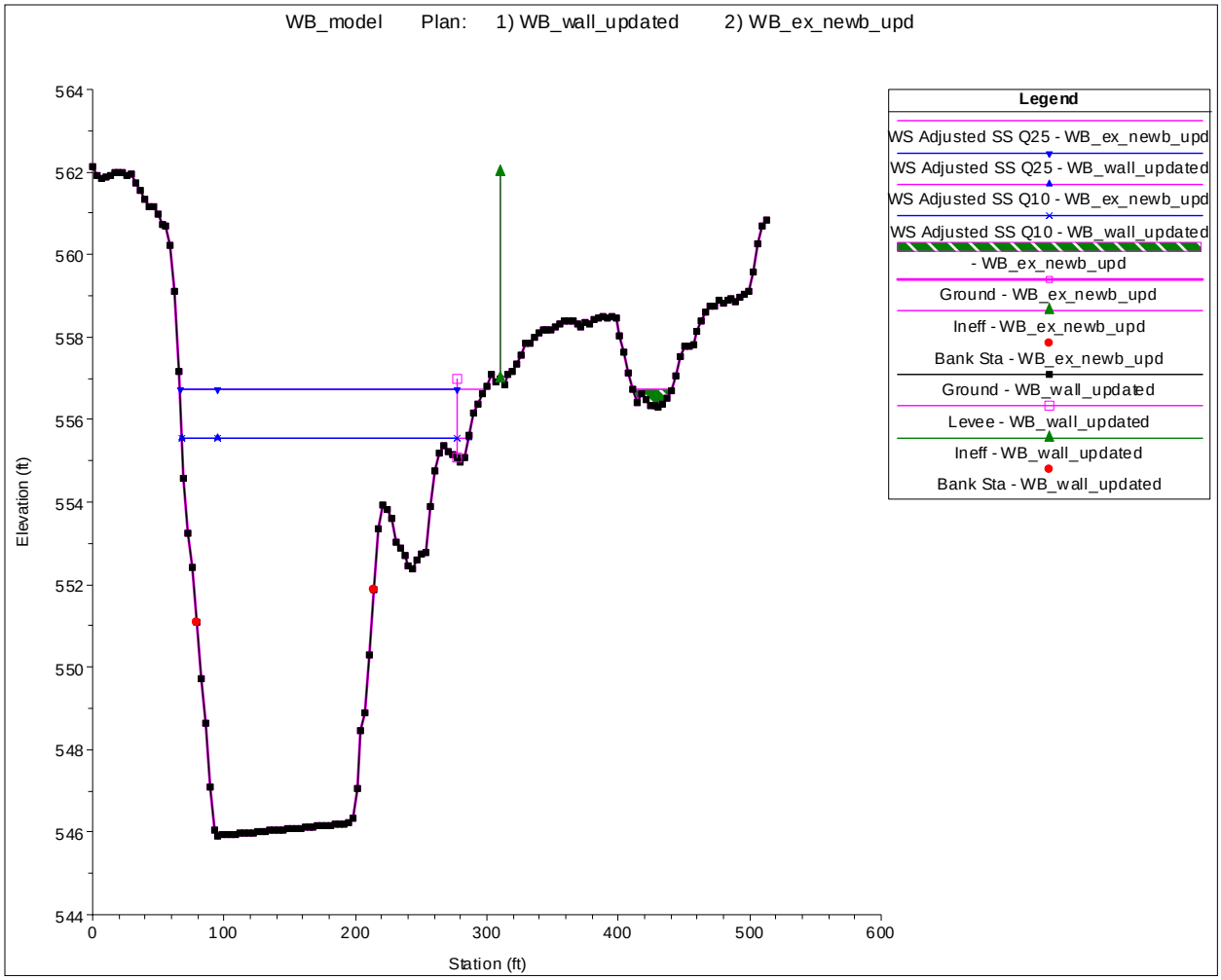
Cross-Section 827 – Upstream of proposed flood wall

Small ineffective flow area representing overbank flow that would be trapped behind the floodwall with no outlet.



Cross-Section 743 – Start of proposed flood wall (berm)

Levee added for floodwall, ineffective flow area in both geometry files for bridge approach.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Elevation (ft)
Station (ft)
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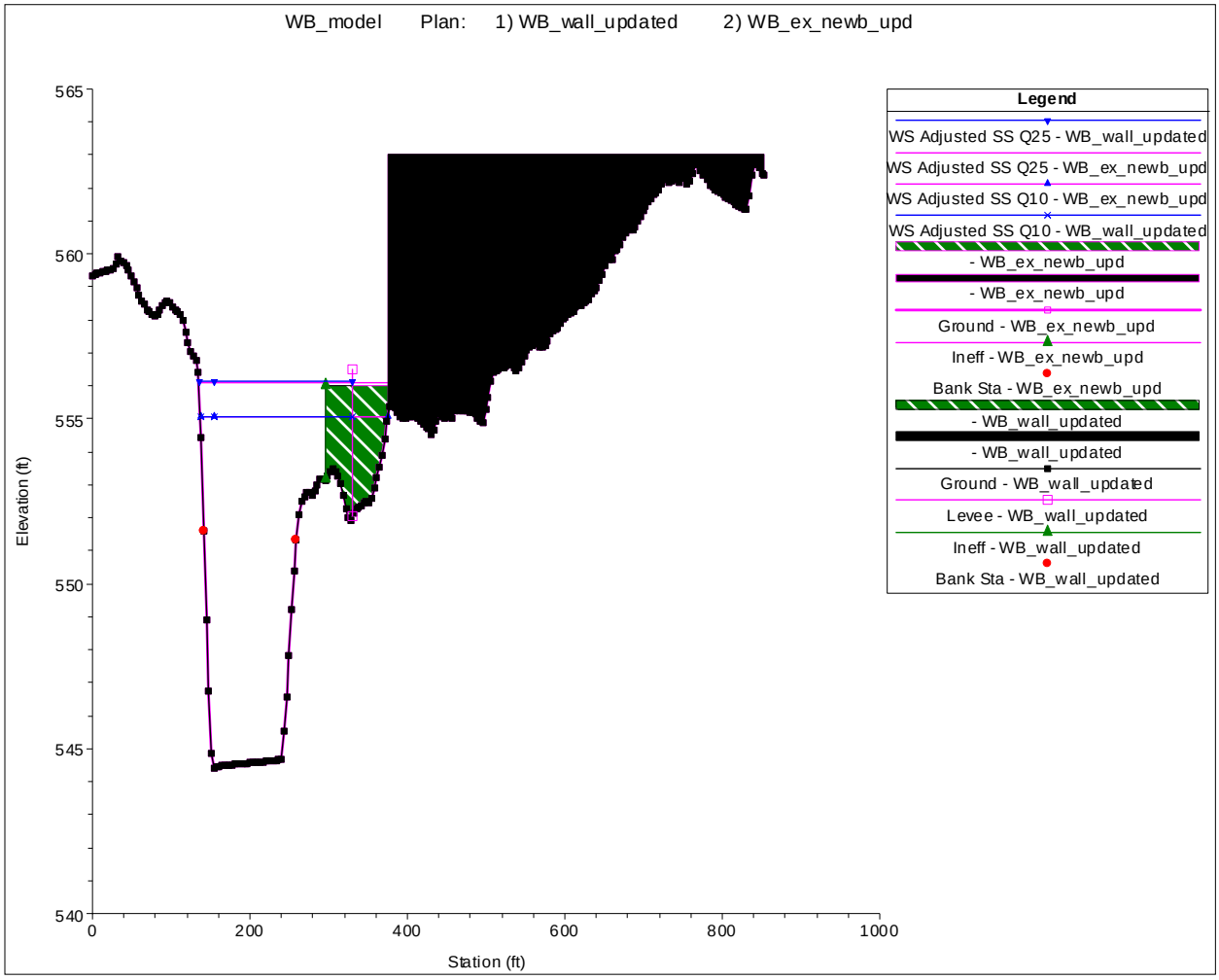
Legend
WS Adjusted SS Q25 - WB_ex_newb_upd
WS Adjusted SS Q25 - WB_wall_updated
WS Adjusted SS Q10 - WB_ex_newb_upd
WS Adjusted SS Q10 - WB_wall_updated
- WB_ex_newb_upd
Ground - WB_ex_newb_upd
Ineff - WB_ex_newb_upd
Bank Sta - WB_ex_newb_upd
Ground - WB_wall_updated
Levee - WB_wall_updated
Ineff - WB_wall_updated
Bank Sta - WB_wall_updated

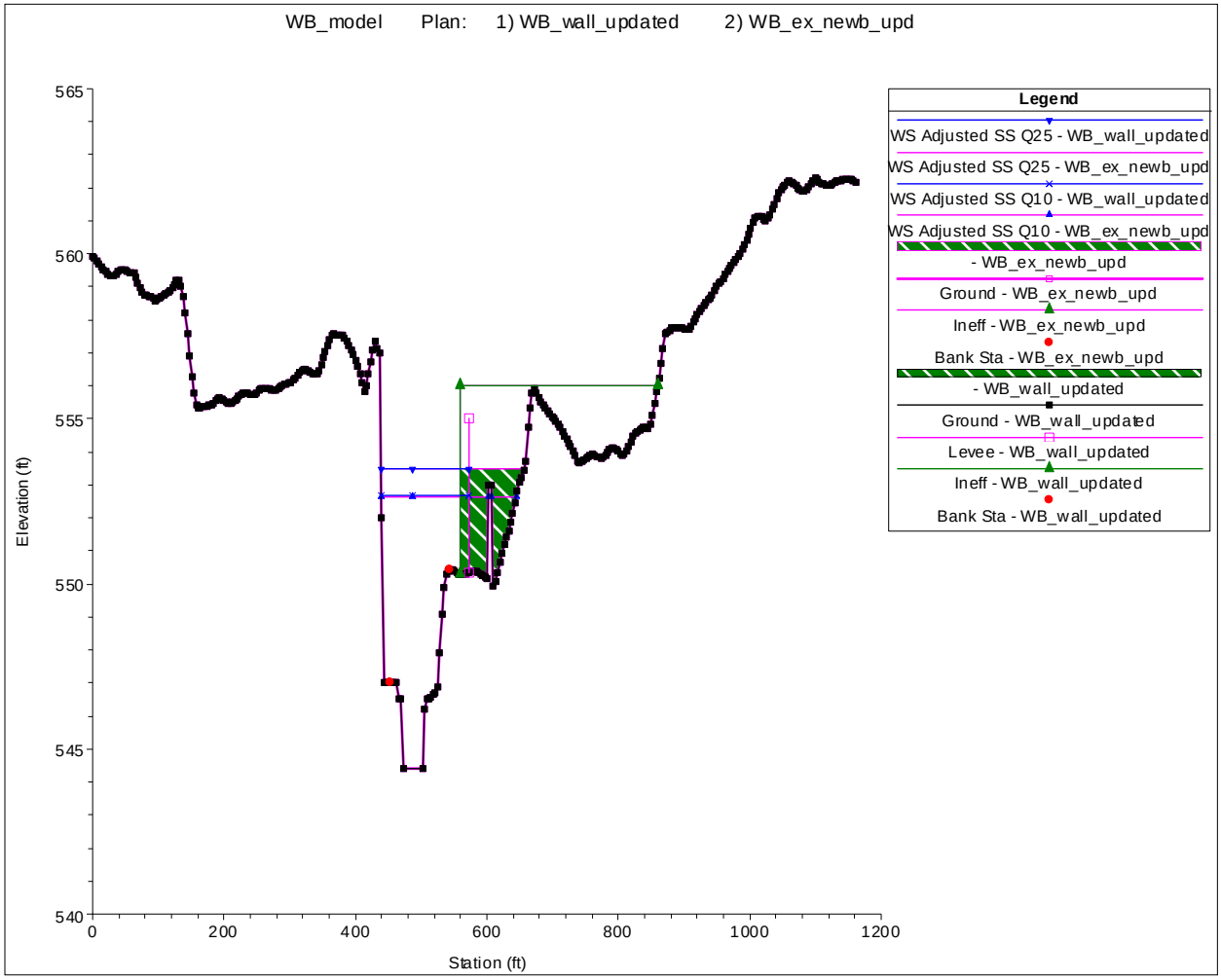
Cross-Section 602 – Start of concrete flood wall

Levee added for floodwall, ineffective flow area in both geometry files for bridge approach, building included as an obstruction.



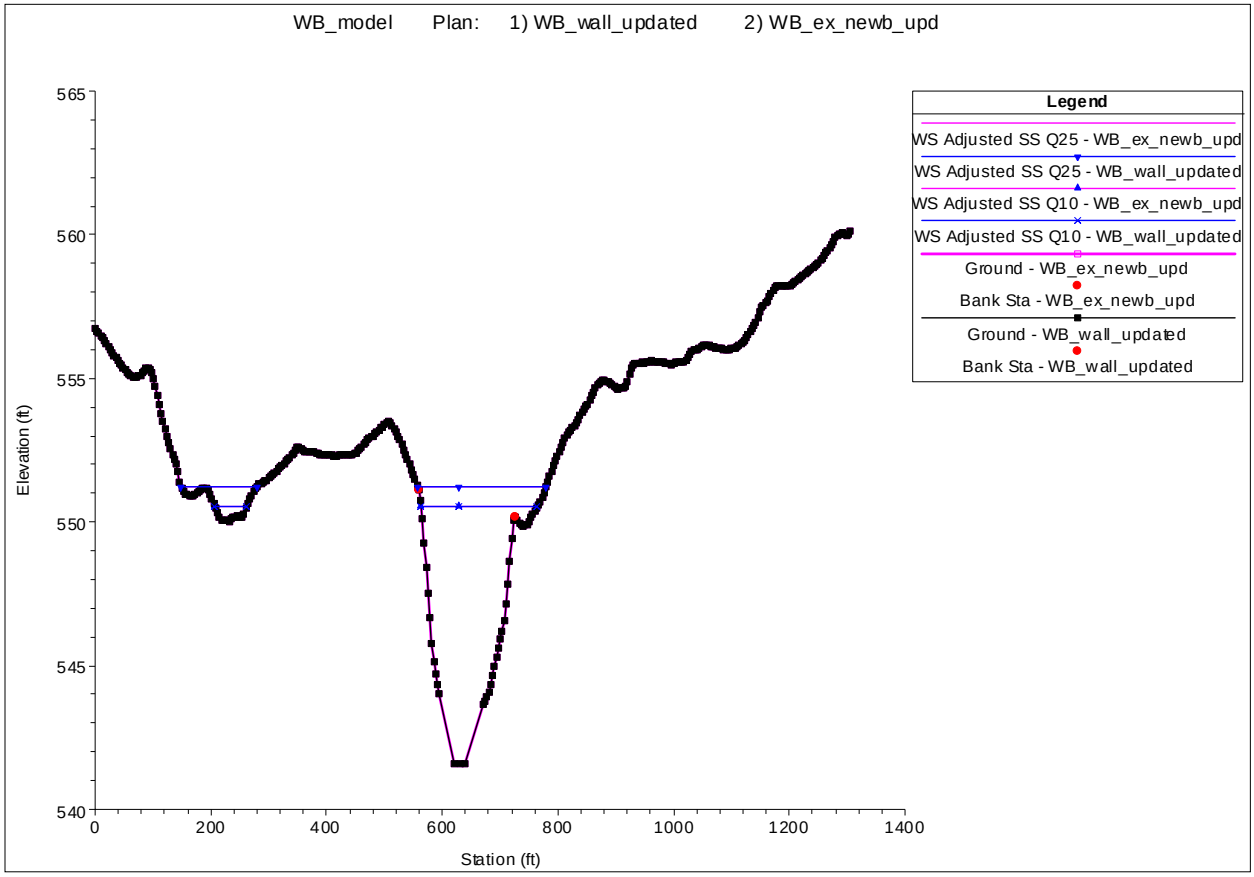
Cross-Section 545 – Upstream bridge approach

Levee added for floodwall, ineffective flow area in both geometry files for bridge approach.



Cross-Section 305 – Downstream of bridge

No proposed changes.



Attachment 5

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Attachment E

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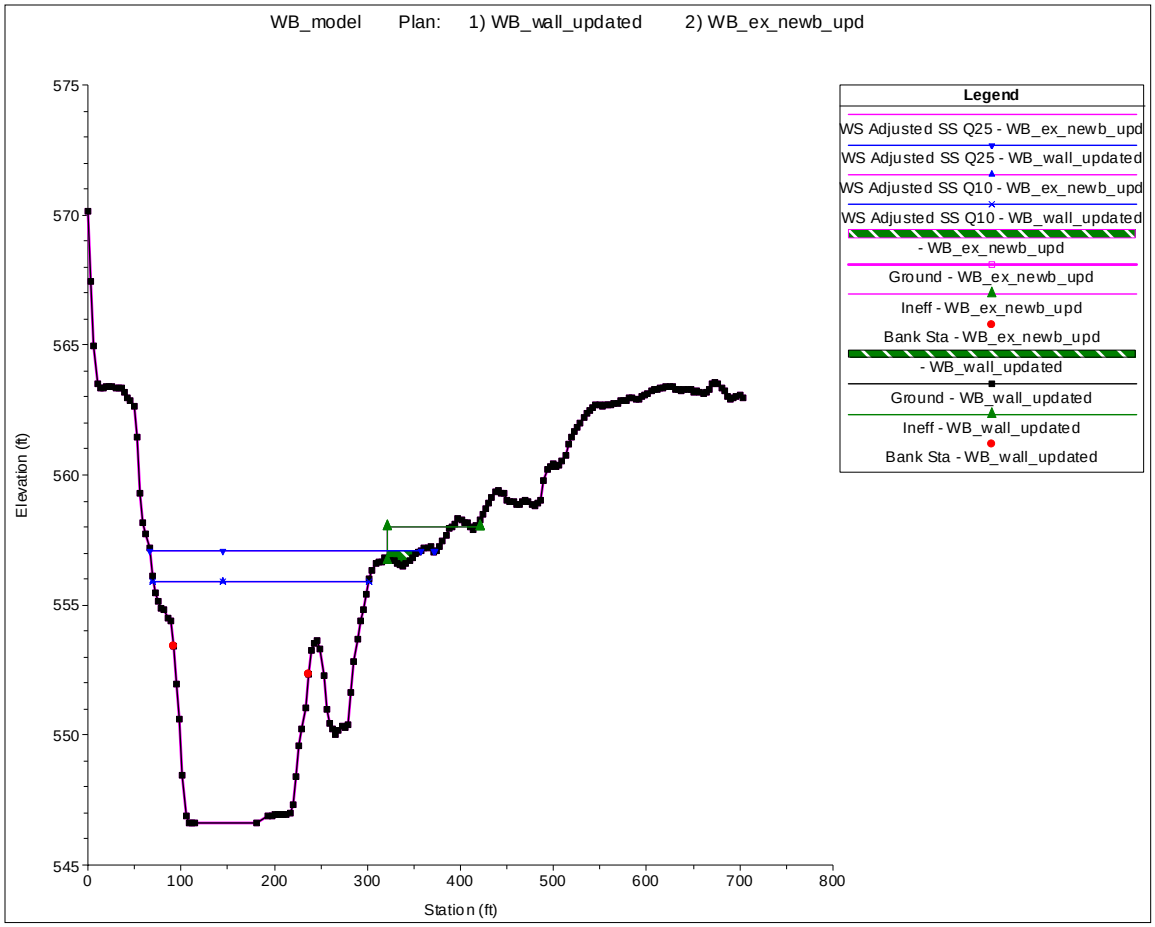

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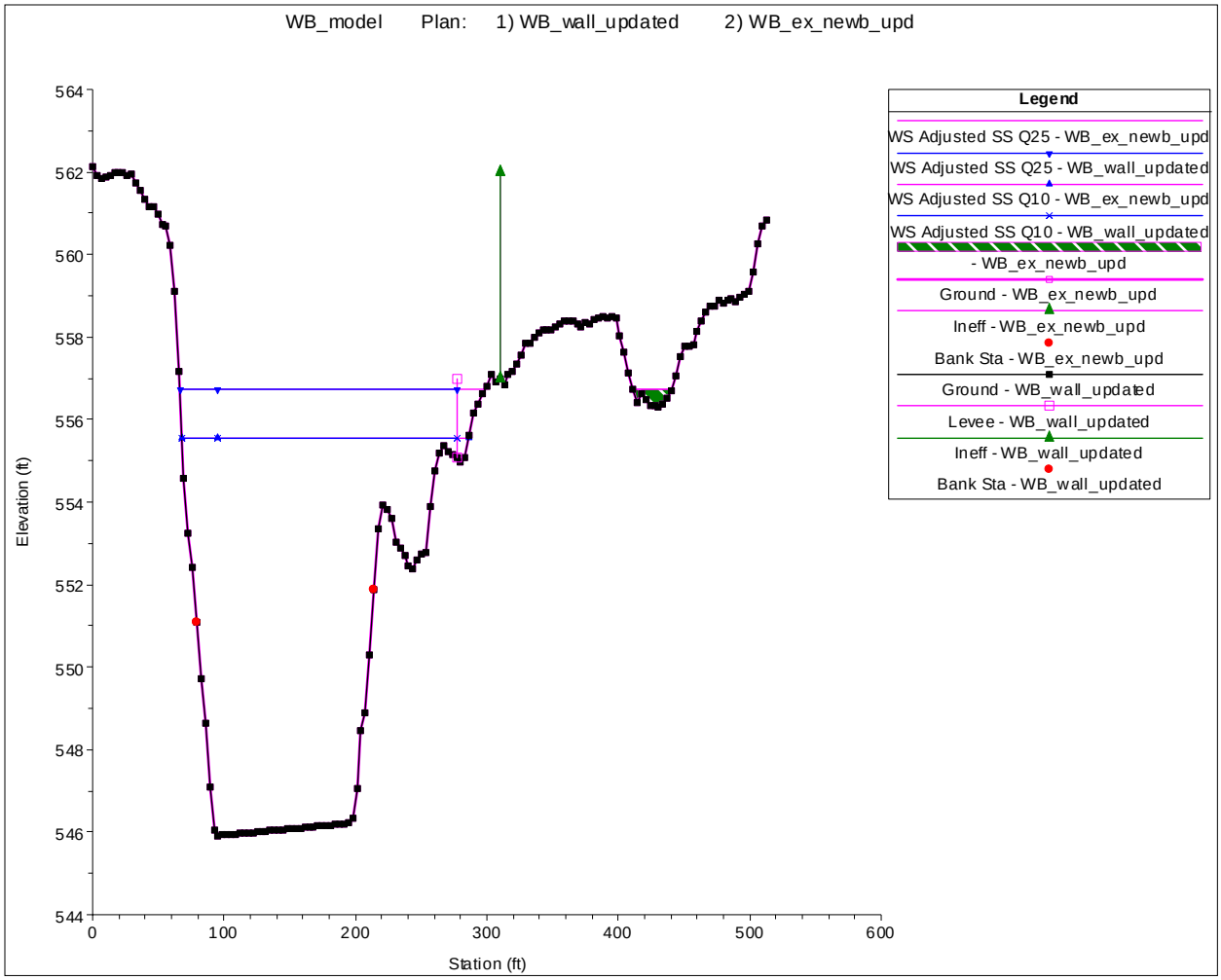
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Legend
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WS Adjusted SS Q10 - WB_ex_newb_upd
WS Adjusted SS Q10 - WB_wall_updated
- WB_ex_newb_upd
Ground - WB_ex_newb_upd
Ineff - WB_ex_newb_upd
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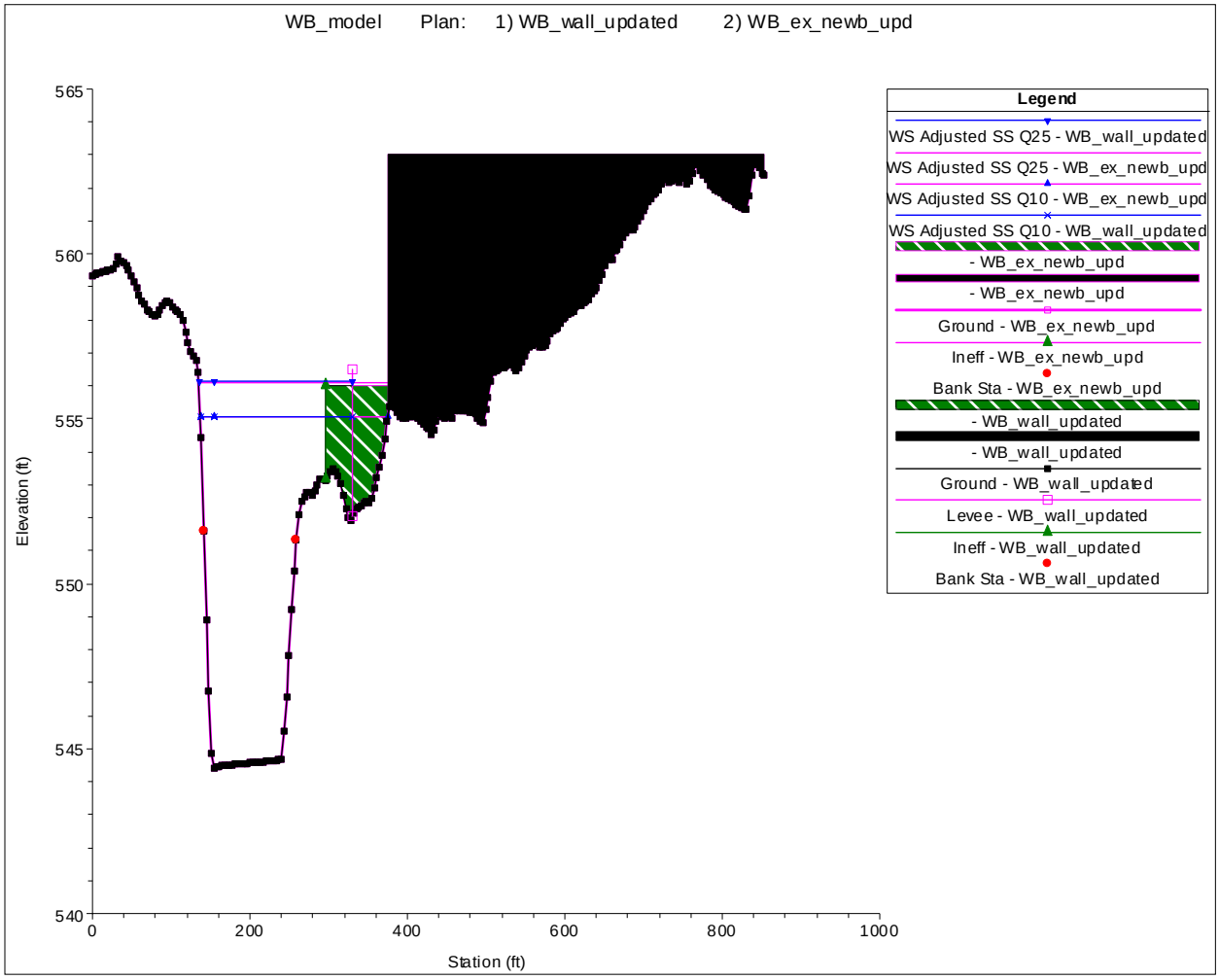

Cross-Section 545 – Upstream bridge approach

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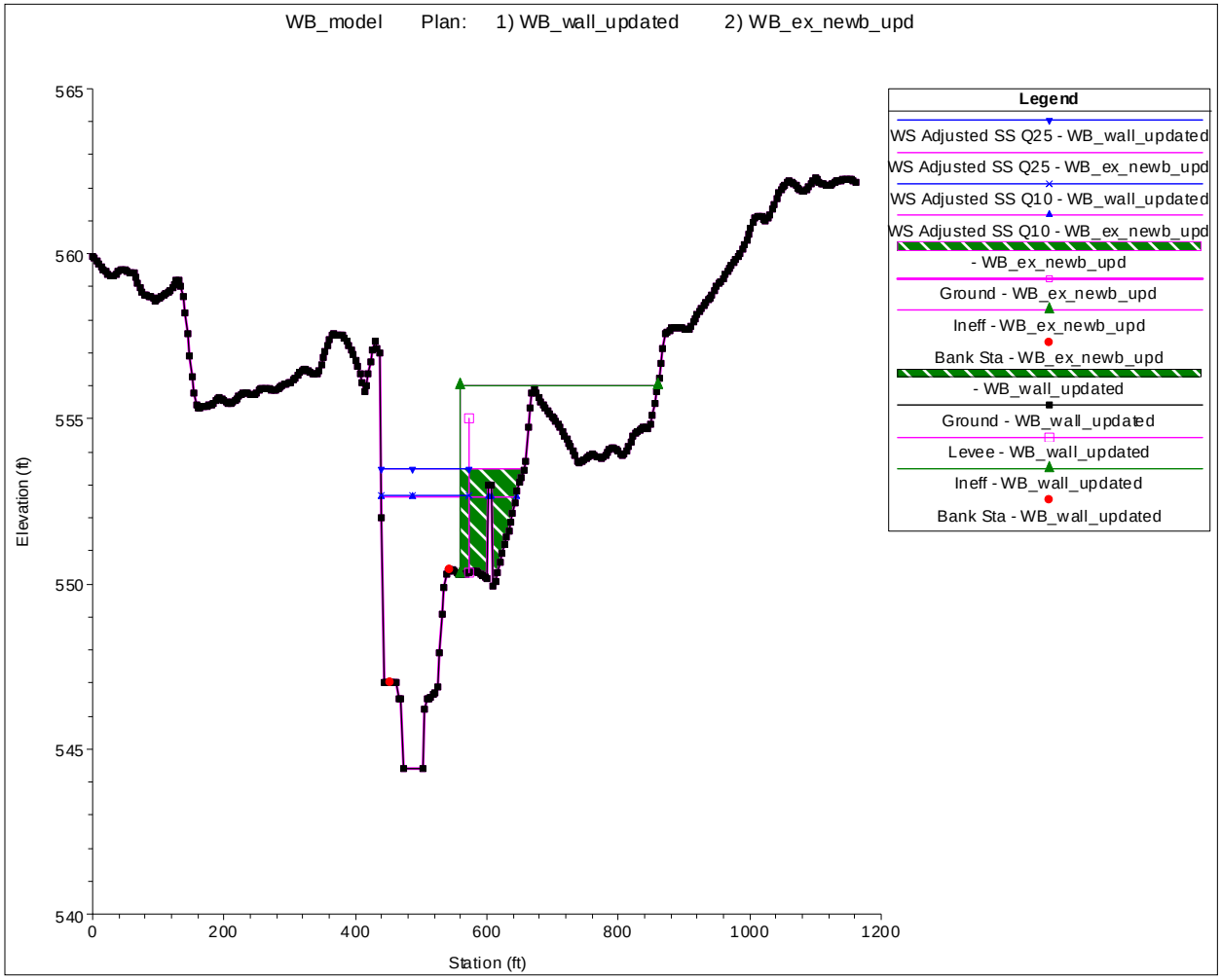

Cross-Section 305 – Downstream of bridge

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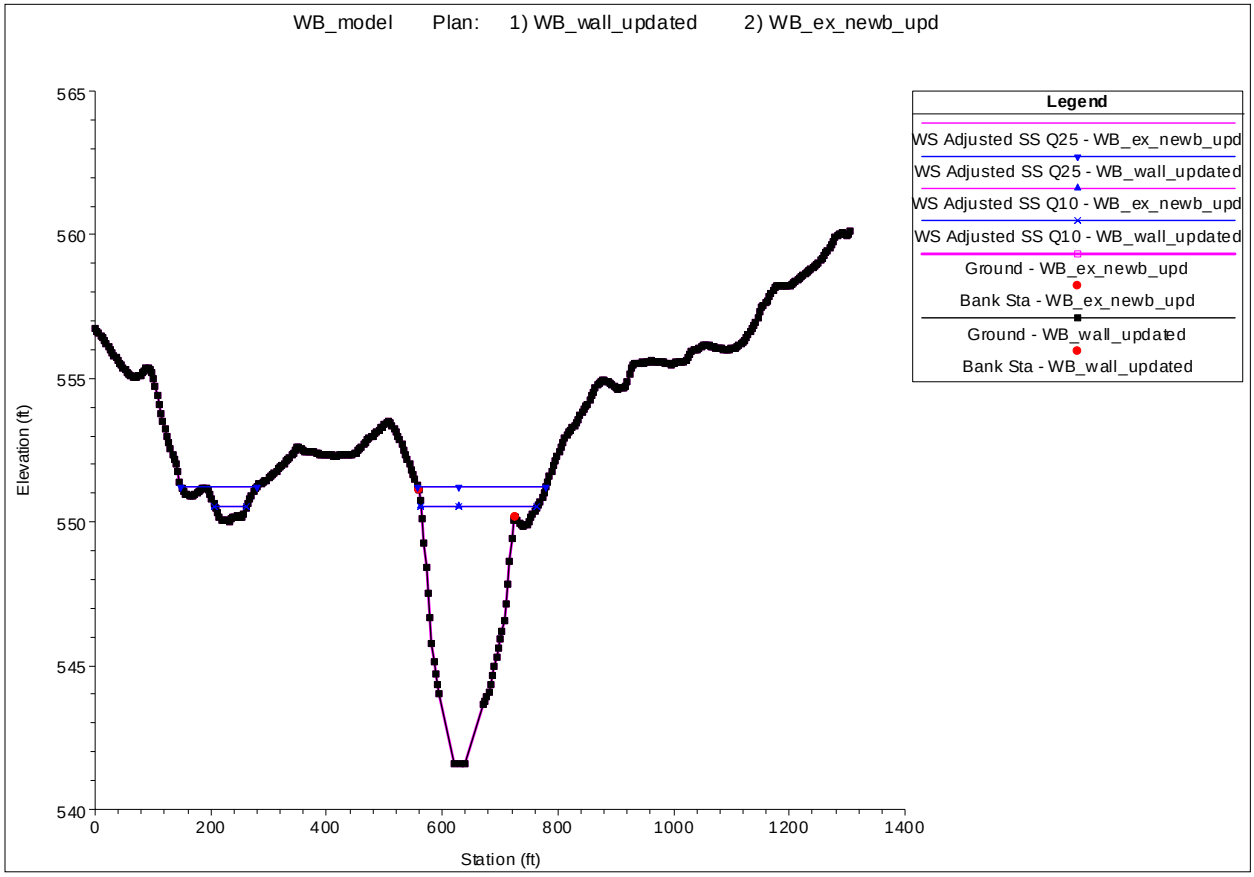
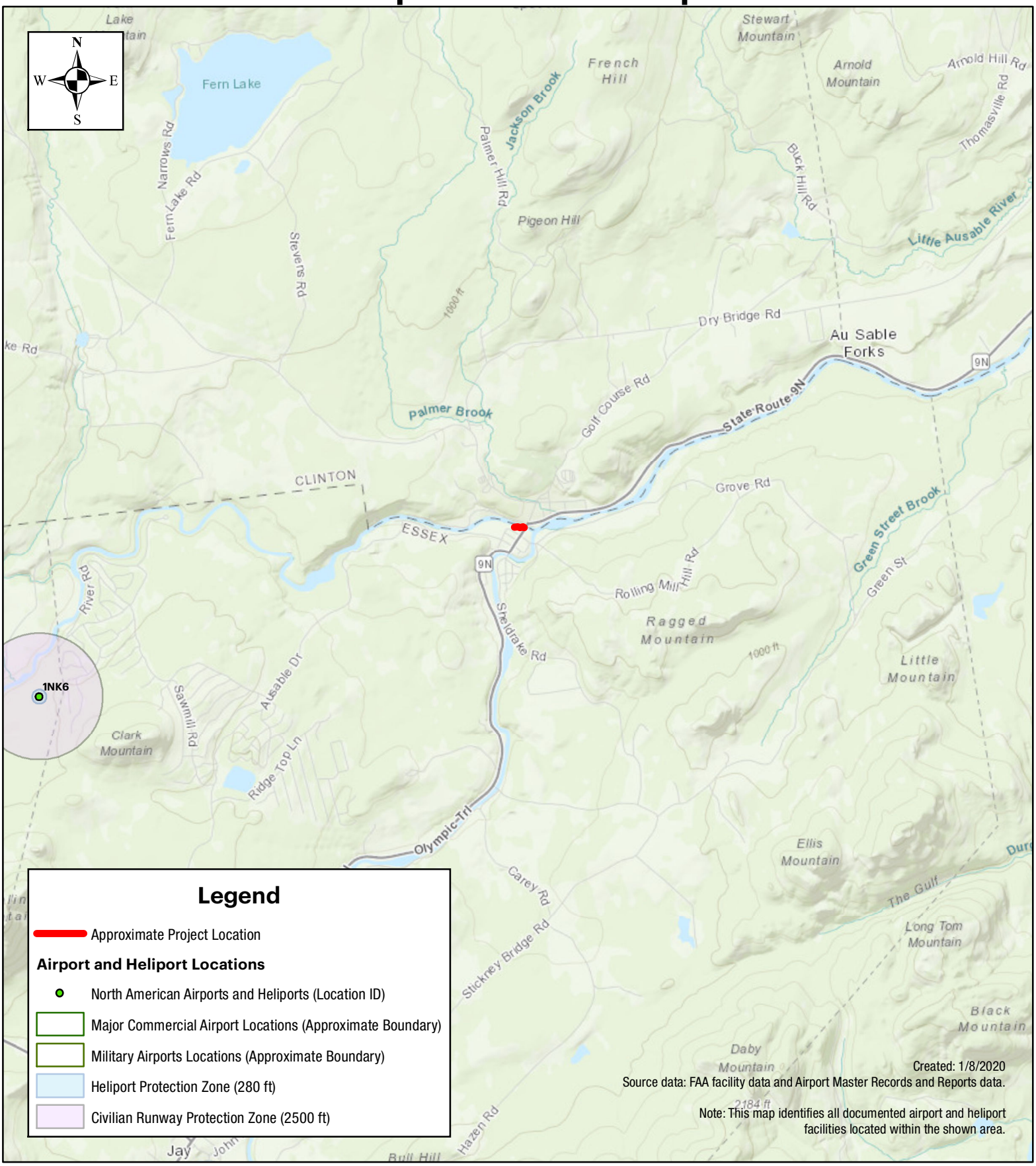


Attachment 6

Project Reference Maps

Airport Hazards Map
USFWS Coastal Barrier Resources System Map
NYS DOS Coastal Boundary Map
US EPA Sole Source Aquifer Map
NYSDEC & NPS Wild and Scenic Rivers Map
NYSDEC Potential Environmental Justice Areas Map
NYSDEC Environmental Resource Mapper
Adirondack Park Agency Land Use Map

Airport Hazards Map



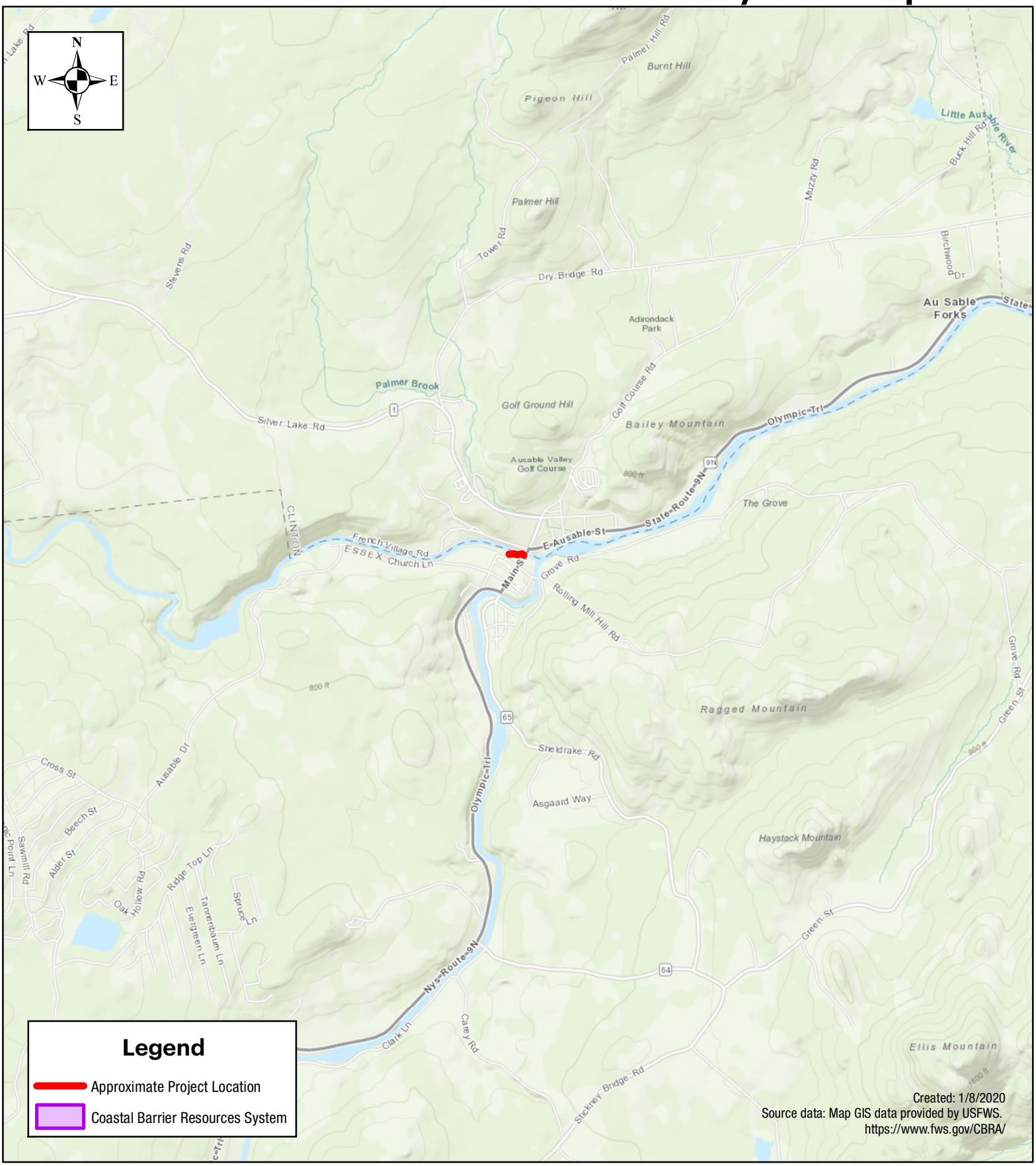
Tectonic

1:60,000

0 3,375 6,750 13,500 Feet

Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

USFWS Coastal Barrier Resources System Map



Tectonic

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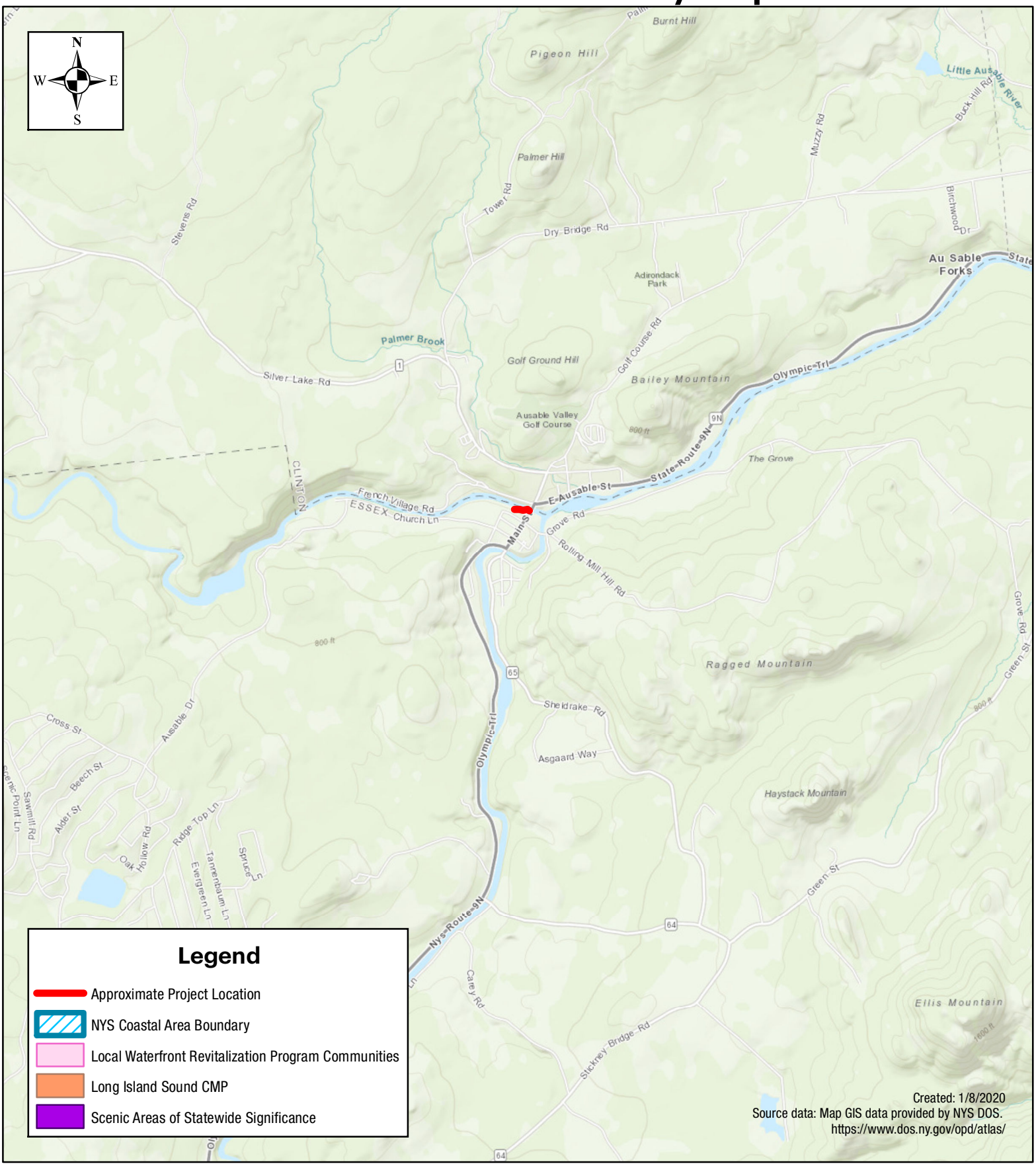
Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

NYS DOS Coastal Boundary Map



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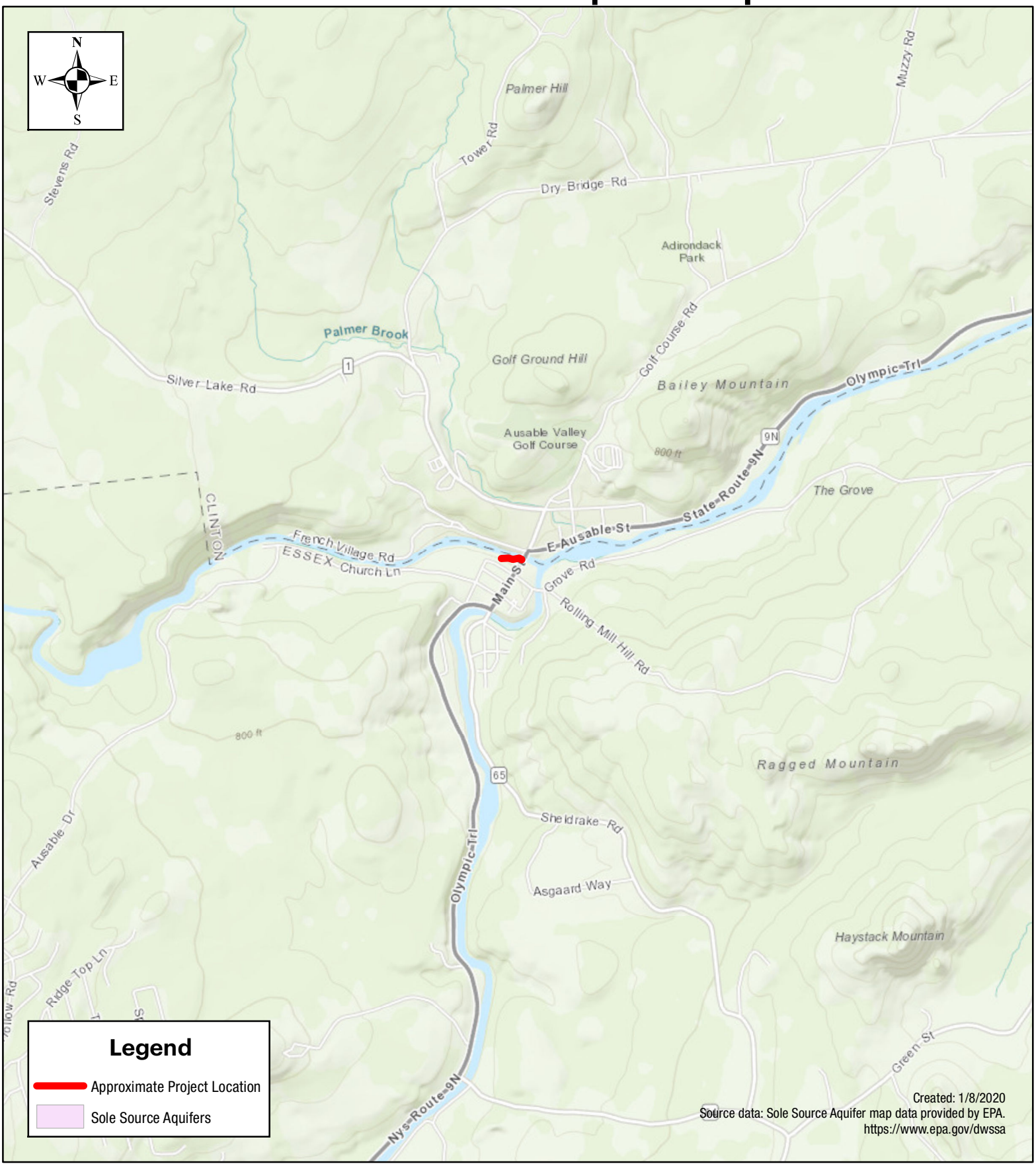
Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

EPA Sole Source Aquifer Map



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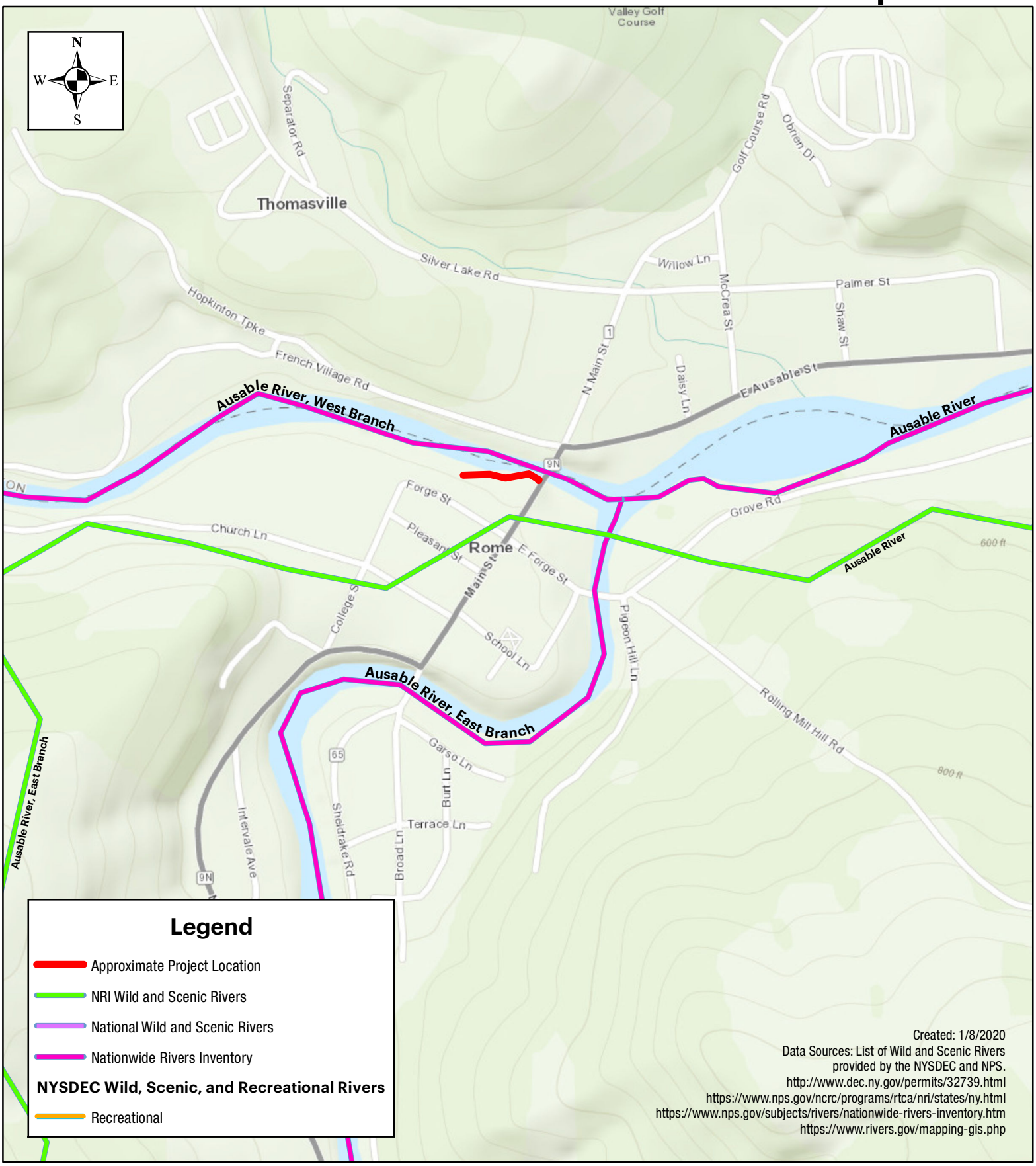
Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

NYSDEC & NPS Wild and Scenic Rivers Map



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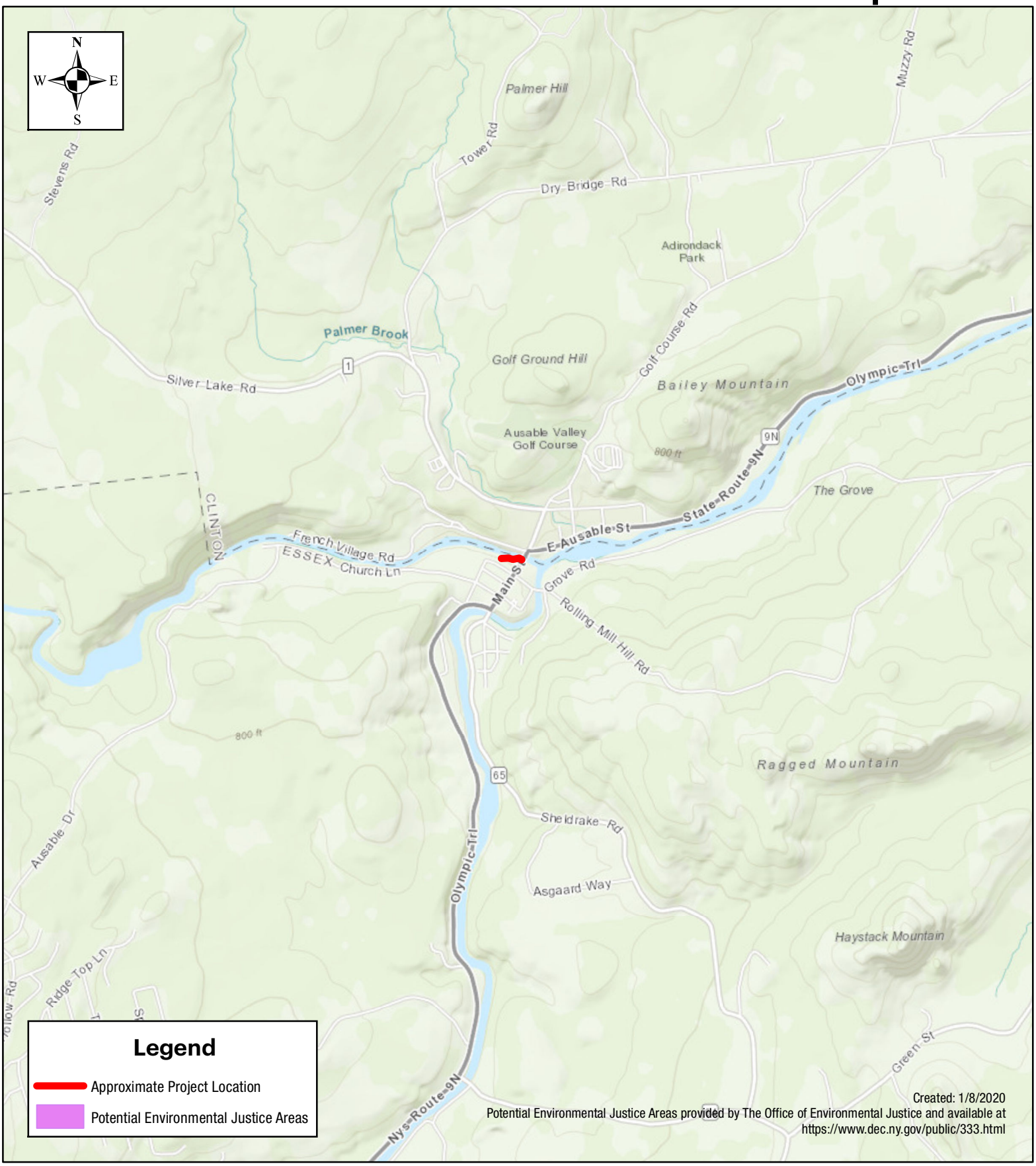
Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

Potential Environmental Justice Areas Map



Tectonic

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0 1,700 3,400 6,800 Feet

Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Environmental Resource Mapper

Base Map: Satellite with Labels Using this map

Search

Tools

Layers and Legend

All Layers

- Unique Geological Features
- Waterbody Classifications for Rivers/Streams
- Waterbody Classifications for Lakes
- State Regulated Freshwater Wetlands (Outside of the Adirondack Park)
  - State Regulated Wetland Checkzone
- Significant Natural Communities
  - Natural Communities Near This Location
- Rare Plants or Animals

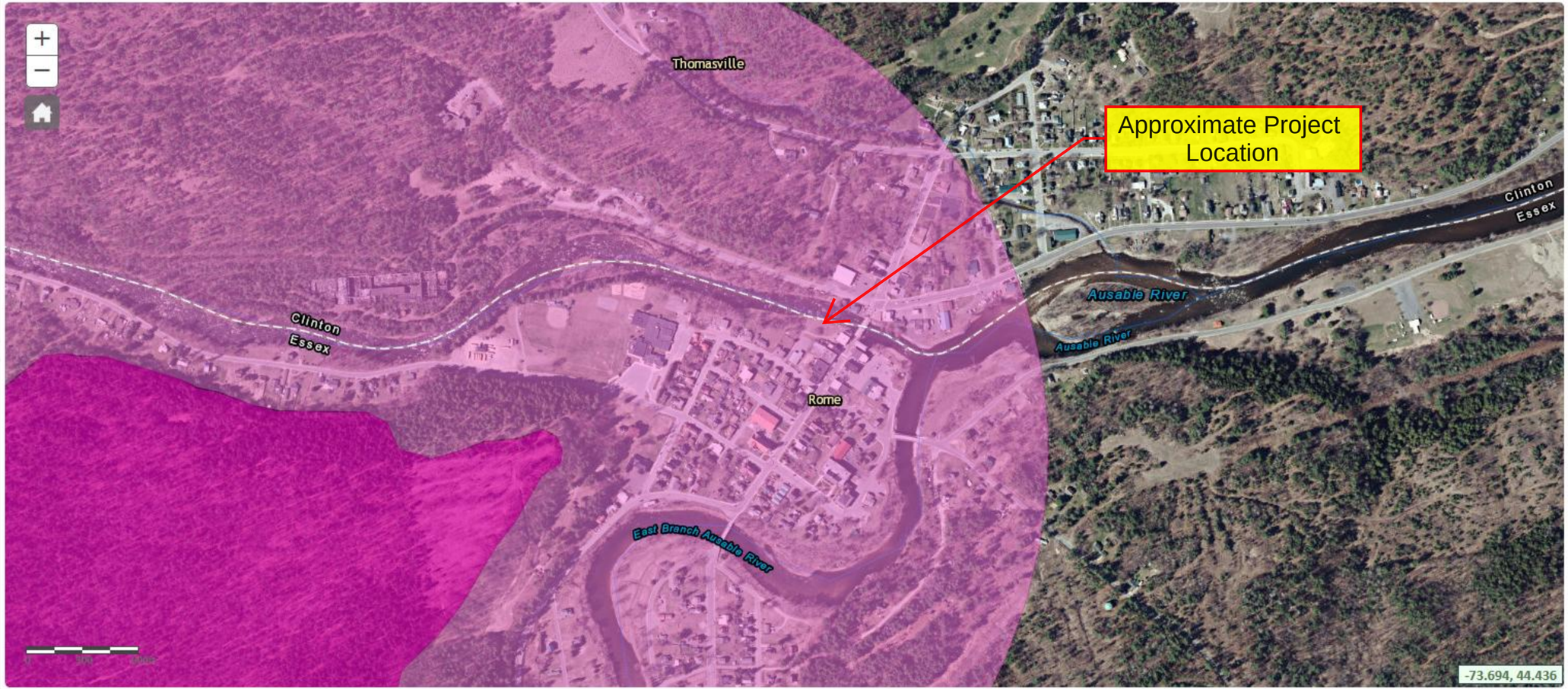
Other Wetland Layers

Reference Layers

Tell Me More...

Need A Permit?

Contacts

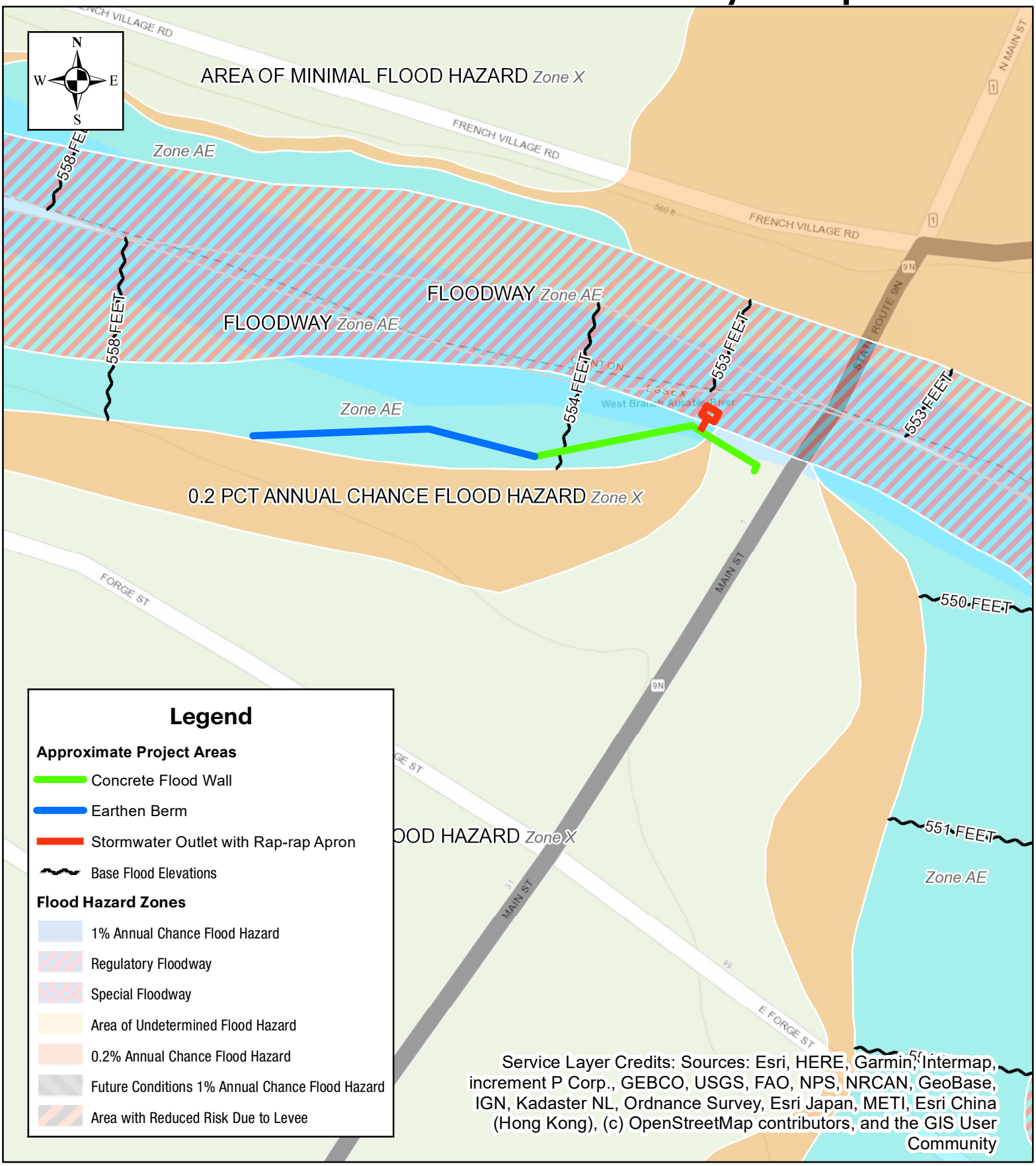


Adirondack Park Land Classification

Appendix I

FEMA National Flood Hazard Map

FEMA National Flood Hazard Layer Map



Tectonic

1:1,200

0 65 130 260 Feet

Ausable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Ausable Forks
Town of Jay
Essex County, New York

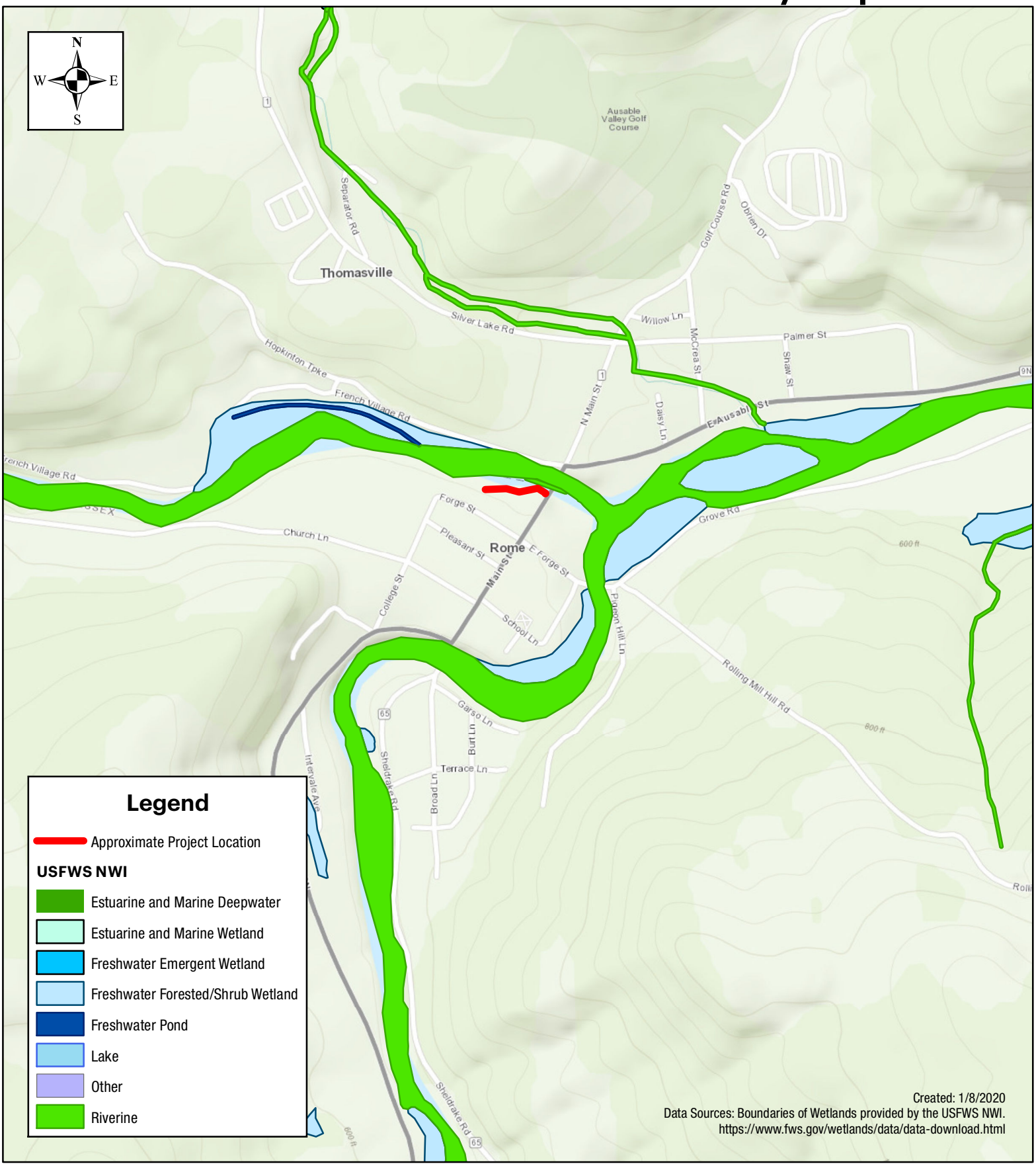
Appendix II

USFWS NWI Map

NYSDEC Waterways Map

APA Wetlands Map

USFWS National Wetlands Inventory Map



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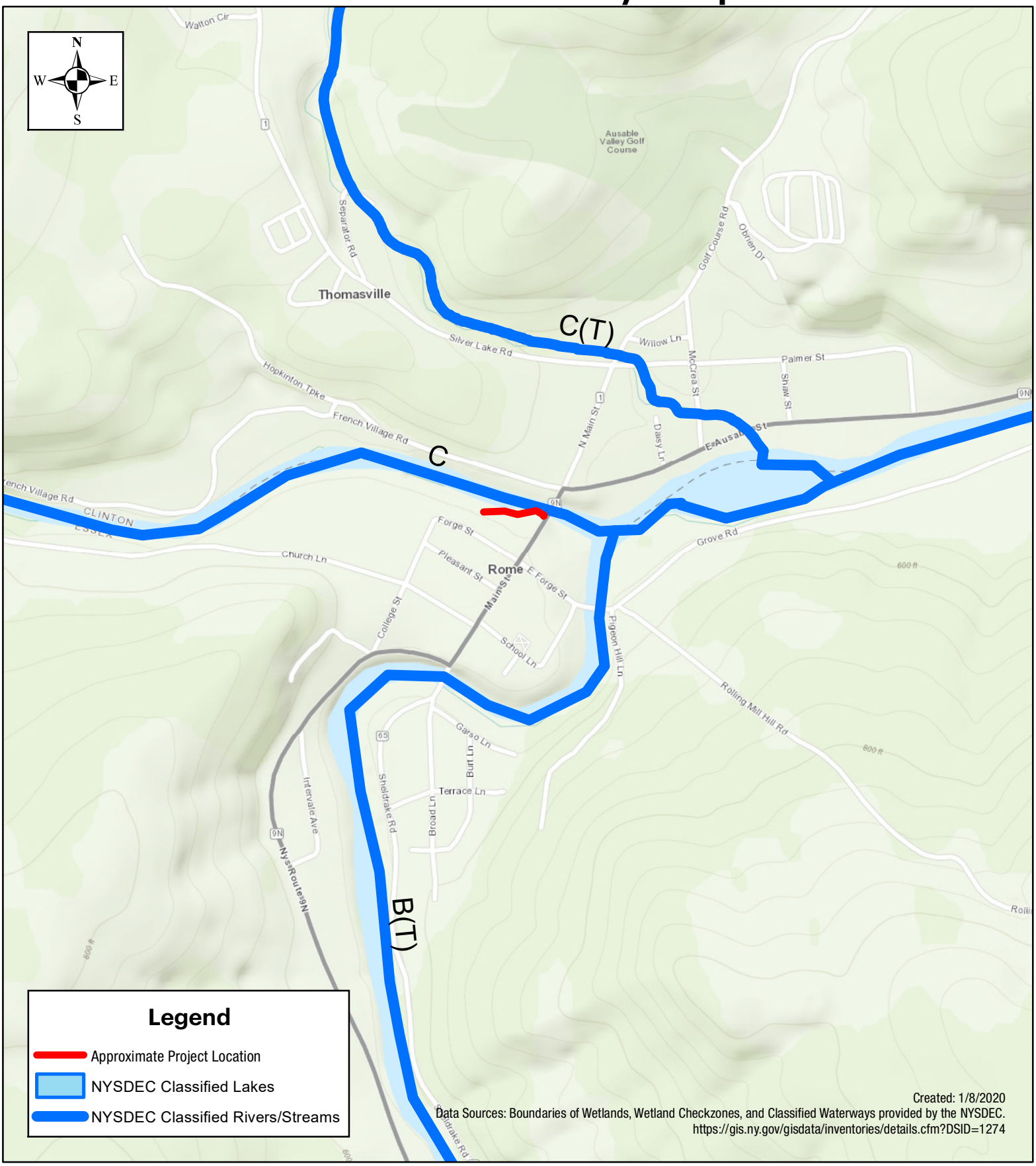
Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

NYSDEC Waterways Map



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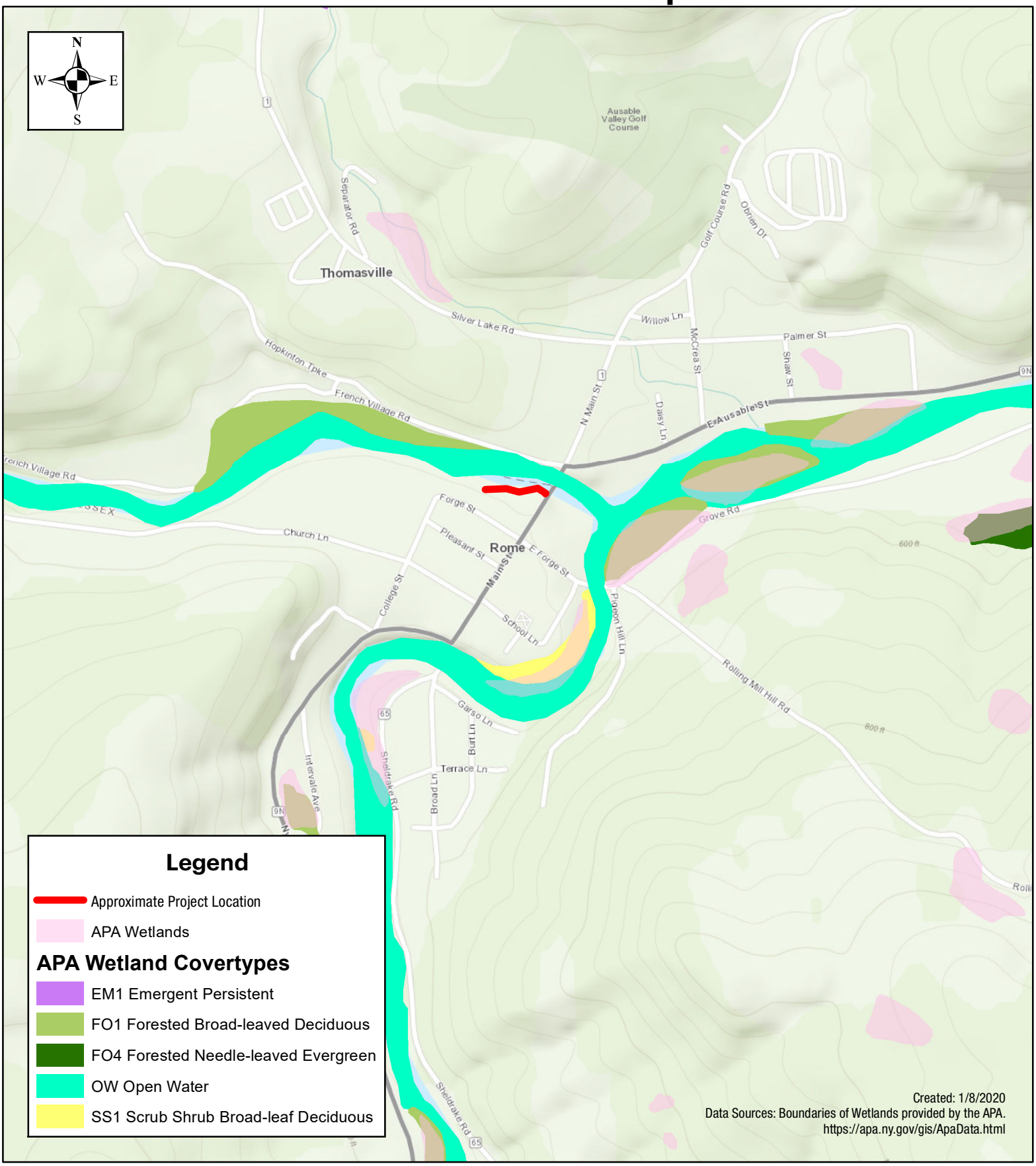
Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

APA Wetlands Map



Tectonic

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Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

Appendix III

Early Notice Of A Proposed Activity In A 100-Year Floodplain And Wetland

EARLY NOTICE OF A PROPOSED ACTIVITY
IN A 100-YEAR FLOODPLAIN AND WETLANDS

AU SABLE FORKS FLOOD WALL PROJECT
14233 AND 14235 NYS ROUTE 9N
HAMLET OF AU SABLE FORKS, TOWN OF JAY
ESSEX COUNTY, NEW YORK
March 14, 2020

To: All Interested Agencies, Groups, and Individuals

This is to give notice that the Governor's Office of Storm Recovery (GOSR), an office of the New York State Housing Trust Fund Corporation (HTFC), has received an application to fund the Au Sable Forks Flood Wall Project (hereinafter, the "Proposed Activity") and is conducting an evaluation as required by Executive Order 11988 and Executive Order 11990 in accordance with U.S. Department of Housing and Urban Renewal (HUD) regulations (24 CFR Part 55). There are three primary purposes for this notice. First, to provide the public an opportunity to express their concerns and share information about the Proposed Activity. Second, adequate public notice is an important public education tool. The dissemination of information about floodplains and wetlands facilitates and enhances governmental efforts to reduce the risks associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the government determines it will participate in actions taking place in floodplains or wetlands, it must inform those who may be put at greater or continued risk. Funding for the Proposed Activity will be provided by the HUD Community Development Block Grant – Disaster Recovery (CDBG-DR) program for storm recovery activities in New York State.

The Proposed Activity would be located on the south bank of the West Branch Ausable River immediately west of the bridge above the West Branch Ausable River on NY-9N, Hamlet of Au Sable Forks, Town of Jay, Essex County, New York. The Proposed Activity will include the installation of an approximately 185-foot long flood wall, an approximately 210-foot-long earthen berm, and stormwater outlet structures with a rip-rap apron.

The Proposed Activity will result in approximately 0.2 acres of permanent impacts in the 100-year floodplain and approximately 0.01 acre of permanent impacts in wetlands (below the ordinary high water mark (OHWM) of the West Branch Ausable River). The disturbance below the OHWM of the West Branch Ausable River is associated with the installation of a rip-rap apron from a stormwater outlet structure with a backflow preventer. The disturbance in the floodplain is associated with the installation of concrete flood wall and earthen berm structures. Project implementation would be conditioned upon issuance of applicable federal and state permits. The Proposed Activity would be constructed in accordance with federal and state permit requirements and their conditions. Best management practices will be implemented during construction to prevent impacts to the floodplain and wetlands adjacent to the Proposed Activity.

Floodplain maps based on the FEMA Base Flood Elevation Maps and wetlands maps based on the National Wetland Inventory and New York State Department of Environmental Conservation (NYSDEC) data have been prepared and are available for review with additional information at http://www.stormrecovery.ny.gov/environmental-docs.

Any individual, group, or agency may submit written comments on the Proposed Activity or request further information by contacting Matt Accardi, New York State Homes & Community

Renewal, Governor's Office of Storm Recovery, 25 Beaver Street, 5th Floor, New York, NY 10004; email: Matt.Accardi@stormrecovery.ny.gov. Standard office hours are 9:00 AM to 5:00 PM Monday through Friday. For more information, call: (212) 480-6265. All comments received by March 30, 2020 will be considered.

Appendix IV

Early Notice Of A Proposed Activity
In A 100-Year Floodplain And Wetland Affidavit

Executive Order 11988 & Executive Order 11990

AFFIDAVIT OF PUBLICATION
State of New York
County of Essex }SS.:

Shannon Christian being duly sworn that she resides in the Town of Westport, County of Essex, New York and that she is the Agent of the VALLEY NEWS SUN a weekly newspaper published at Elizabethtown in the County of Essex, and that the notice, a printed copy of which is hereto attached, was printed in said VALLEY NEWS SUN on the following dates:

03/14/2020

Signed this 16th day of March , 2020

Shannon Christian
Agent

Sworn to before me this 16th day of March , 2020

Tricia M Hood
Notary Public

Tricia M. Hood
Notary Public, State of New York
No. 01HO6306010
Qualified in Essex County

Commission Expires 06/16/2022
242288

LEGALS

EARLY NOTICE OF A PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN AND WETLANDS
AU SABLE FORKS FLOOD WALL PROJECT 14233 AND 14235 NYS ROUTE 9N HAMLET OF AU SABLE FORKS, TOWN OF JAY ESSEX COUNTY, NEW YORK
March 14, 2020
To: All Interested Agencies, Groups, and Individuals
This is to give notice that the Governors Office of Storm Recovery (GOSR), an office of the New York State Housing Trust Fund Corporation (HTFC), has received an

these special areas. Third, as a matter of fairness, when the government determines it will participate in actions taking place in floodplains or wetlands, it must inform those who may be put at greater or continued risk. Funding for the Proposed Activity will be provided by the HUD Community Development Block Grant Disaster Recovery (CDBG-DR) program for storm recovery activities in New York State.
The Proposed Activity would be located on the south bank of the West Branch Ausable River immediately west of the bridge above the West Branch Ausable River on NY-9N, Hamlet of Au Sable Forks, Town of Jay, Essex County, New York. The Proposed Ac-

floodplain is associated with the installation of concrete flood wall and earthen berm structures. Project implementation would be conditioned upon issuance of applicable federal and state permits. The Proposed Activity would be constructed in accordance with federal and state permit requirements and their conditions. Best management practices will be implemented during construction to prevent impacts to the floodplain and wetlands adjacent to the Proposed Activity.
Floodplain maps based on the FEMA Base Flood Elevation Maps and wetlands maps based on the National Wetland Inventory and New York State Department of Environmental Conserva-

480-6265. All comments received by March 30, 2020 will be considered.
VN-03/14/2020-1TC-242288

Attachment 7

24 CFR Part 55
8-Step Determination: Floodplain Management & Wetlands Protection Determination

Au Sable Forks Flood Wall Project
Floodplain Management & Wetlands Protection Determination

August 11, 2020

Introduction & Overview

The purpose of Executive Order (EO) 11988, Floodplain Management, is "to avoid to the extent possible the long- and short-term adverse impacts associated with occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative." The purpose of EO 11990 Protection of Wetlands is "to avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative." This report contains the analysis prescribed by 24 CFR Part 55.

This project involves U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant Program – Disaster Recovery (CDBG-DR) funding for the Au Sable Forks Flood Wall Project (Project). The analysis that follows focuses on the wetland and floodplain impacts associated with this project. Based on the type of land use, facility, and other case characteristics described herein, it is concluded that there is a reasonable basis to proceed with funding for this project/ activity within floodplain and wetland.

Description of Proposed Action & Land Use

The Au Sable Forks Flood Wall Project involves the installation of approximately 185 linear feet of reinforced concrete flood wall ranging in height above grade from a minimum of 3 feet to a maximum of 5.9 feet, approximately 210 linear feet of a levee/berm ranging in height from 0 feet to 3 feet, stormwater improvements with a backflow prevention outfall, and a sump pump adequate to handle stormwater flows that may get trapped behind the wall during a river flood event. The Project is located on the south bank of the West Branch Ausable River immediately west of the bridge above the West Branch Ausable River on NY-9N, Hamlet of Au Sable Forks, Town of Jay, Essex County, New York. The concrete flood wall would connect downstream to the bridge abutment of the replacement Main Street Bridge and continue west upstream until the height above grade reaches approximately 3 feet.

The proposed flood wall and berm were aligned to be located within the ineffective flow area created by the bridge opening and buildings to limit impacts to water surface elevation and velocity. A Hydraulic Engineering Center River Analysis System (HEC-RAS) model was developed for the Project utilizing adjusted USGS Stream Stats estimated flows. The USGS Stream Stats flow estimates for the West Branch were increased by approximately 20% based on a more detailed study of the flow record for the East Branch. In summary, the USGS Gauge near Au Sable Forks (#4275500) was statistically analyzed to determine the various design flow events and compared to the Stream Stats estimate at the same location as the USGS Gauge.

The adjusted Q10 (streamflow at this station has been as high as this only 10% of the time) and Q25 (streamflow at this station has been as high as this only 25% of the time) flows for the West Branch utilized in the HEC-RAS model were estimated at 8,800 cubic feet per second (CFS) and 10,800 CFS, respectively. The Q25 HEC-RAS model results were utilized to determine the elevations for the top of the floodwall and berm. The Q10 and Q25 HEC-RAS modeling results showed negligible water surface and velocity increases due to the proposed Project. The Q10 estimated water surface elevation increased by 0.00 feet to 0.04 feet, and the cross-sectional velocity only increased by 0.05 feet per second just at the bridge opening. The Q25 estimated water surface elevation increased by 0.02 feet to 0.03 feet within the Project area, and the cross-sectional velocity only increased by 0.02 feet per second approaching the bridge.

The HEC-RAS model shows that there will be minimal impacts to the water surface elevation and velocity as a result of the barrier while reducing the impacts of flooding at this location and locations downstream by maintaining the flows within the existing river channel, thereby eliminating that source of erosion and sedimentation. The proposed flood barrier will not modify the existing flow patterns and will not create adverse impacts to the river flows or aesthetics.

During Hurricane Irene and Tropical Storm Lee, the Ausable River was profoundly impacted by rising stormwater: banks collapsed and widened, channels morphed, and debris and sediment were deposited throughout the system. Over-widening of the Ausable River has also slowed water velocities and increased sediment deposition. These factors led to severe flooding of residences and businesses within the Town of Jay.

During Hurricane Irene and Tropical Storm Lee, and in many previous and subsequent events, the hamlet of Au Sable Forks suffered flood damage arising from poor stormwater drainage as well as riverine flooding. The hamlet is located at the confluence of the East and West Branches of the Ausable River, so flood impacts are exacerbated due to the hamlet's geographic setting.

As a result of Hurricane Irene and previous storms, such as occurred in 1996, the hamlet has had many buyouts, home elevations, and other changes to reduce flood risk. However, Hurricane Irene demonstrated that even properties located outside the 500-year floodplain (as defined by FEMA) can be subject to inundation. Debris jams on bridges caused flooding down Main Street, and other structure suffered damage to due surface runoff (poor storm drainage). Flooding is a recurring problem in parts of the hamlet, disrupting business and damaging property. The proposed Project will help protect life and safety throughout the hamlet of Au Sable Forks by protecting residents from flood impacts.

The Project will provide flood protection for the buildings located on the southern bank of the West Branch on the upstream side of the Main Street Bridge in the Hamlet of Au Sable Forks. More specifically, the Project will provide protection for approximately 6 to 7 buildings bound to the north by the West Branch of the Ausable River, to the east by Main Street, to the south by Forge Street, and to the west by residential properties that adjoin the West Branch. Businesses contained within these buildings include a law office, two hair salons, a bar, a clothing store, a liquor store, and a post office. In addition to the erosion and sedimentation improvements the proposed flood barrier will provide, this barrier will also provide protection for the Town's sanitary sewer pump station that floods also, spilling sanitary waste into the Au Sable River thereby reducing river pollution. Implementation of the Project will lead to decreased risk of future flooding, protection of critical infrastructure, and will help protect public and private assets from future flood and debris damage.

Applicable Regulatory Procedure Per EO 11988

The proposed action corresponds with a noncritical action not excluded under 24 CFR §55.12(b) or (c). Funding is permissible for the use in the floodplain and wetlands if the proposed action is processed under §55.20 and the findings of the determination are affirmative to suggest that the Project may proceed.

The Project occurs in a community that is in the regular program of the National Flood Insurance Program (NFIP) and the community is currently in good standing. Substantial Improvement/ Substantial Damage calculations do not apply to this Project. In accordance with definitions set forth in §55.2, the Project involves modification of the 100-year floodplain; therefore, the decision making steps in §55.20 (b), (c), and (g) apply to the Project. As such, the full eight-step floodplain determination process in §55.20 is required and the following analysis examines each step in the floodplain management and wetlands protection determination process.

***Step 1.* Determine Whether the Proposed Action is Located in the 100-year Floodplain (500-year for Critical Actions) or results in New Construction in Wetlands.**

According to the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (**Appendix I**), the Project is located in the 100-year floodplain. According to the U.S. Fish & Wildlife Service (USFWS) National Wetlands Inventory Map, New York Department of Environmental Conservation (NYSDEC) Wetlands and Waterways Map, and Adirondack Park Agency (APA) wetlands maps (**Appendix II**), the Project is located immediately adjacent to wetlands. A wetland delineation completed for the Proposed Action did not identify any wetland in the project area. The Proposed Action is intended to stabilize and protect the hamlet of Au Sable Forks from flooding. All applicable permits from the NYSDEC, USACE, and APA will be obtained prior to the commencement of Project activities, and all permit conditions will be followed.

The Proposed Action will result in approximately 0.2 acres of permanent impacts in the 100-year floodplain. The disturbance in the floodplain is associated with the installation of concrete flood wall and earthen berm structures. Project implementation would be conditioned upon issuance of applicable federal, state, and municipal permits. The Proposed Action would be constructed in accordance with federal, state, and municipal permit requirements and their conditions.

During the course of construction, the work will be conducted in a manner as to prevent or reduce to a minimum any damage to the stream from pollution by debris, sediment, or other foreign material, or from manipulation of equipment and/or materials in or near the stream. Water that is used for wash purposes or other similar operations, which could cause the water to become polluted with sand, silt, cement, oil, or other impurities, will not be returned directly to the stream. The Project will involve the use of silt fence and/or silt sock prior to the commencement of disturbance of the existing ground surface to prevent stormwater runoff from leaving the Project area and entering the West Branch Ausable River. Erosion control structures will remain in place until a stable growth of vegetation is present in all disturbed areas.

***Step 2.* Initiate Public Notice for Early Review of Proposal.**

Because the Proposed Action is located in the floodplain, the Governor's Office of Storm Recovery (GOSR) published an early notice that allowed for public and public agency input on the decision to provide funding for reconstruction and development activities. The early public notice and 15-day comment period is complete. No public comments were received.

An "Early Notice of a Proposed Project in a 100-Year Floodplain and Wetlands" for the Project was published on March 14, 2020 in the Sun Community News newspaper. The 15-day comment period expired at 5 pm on March 30, 2020. The notice targeted local residents, including those in the floodplain. The notice was also sent to the relevant state and federal agencies: Federal Emergency Management Agency (FEMA); U.S. Department of Housing and Urban Development; NYSDEC; NYS Historic Preservation Office (SHPO); USFWS; U.S. Army Corps of Engineers (USACOE); U.S. Environmental Protection Agency (USEPA); APA; and New York State Office of Emergency Management. The notice was also sent to the Town of Jay and Essex County. See **Appendixes III** and **IV** of this Wetlands Protection and Floodplain Management Determination for the notice distributed to these agencies and the associated newspaper notice affidavit.

The early notice stated that the project area fell within wetlands and floodway. Since the date of the early notice publication a wetland delineation was completed; no wetlands are located within the project area. The rip-rap originally located in the floodway has been moved outside the floodway. The project area is not within the floodway.

Step 3. **Identify and Evaluate Practicable Alternatives to Locating the Proposed Action in a 100-year Floodplain (or 500-year Floodplain if a Critical Action) or Wetland.**

The New York State Rising Community Reconstruction Program is structured to provide eligible communities resources and expertise to build communities resilient to future flooding events. This community was impacted by Hurricane Irene and Tropical Storm Lee. Roads, bridges, and culverts washed out, isolating residents, challenging emergency response, and severely disrupting the flow of tourists, local, and commercial traffic to the hamlets within the Towns of Jay and Keene. Au Sable Forks suffered damage from flooding along the East and West Branch. Dozens of houses were severely damaged. Debris built up, causing flood waters to flow down Main Street and impact residences and businesses outside the 500-year FEMA floodplain.

Under the "no action" alternative, a subsequent storm event could result in catastrophic flooding of the community of Au Sable Forks, potentially resulting in the loss of life. Federal financial assistance will support activities representing a long-term public investment in infrastructure that is necessary to protect the community of Au Sable Forks and the well-being of its residents and local economy. The "no action" alternative would provide no protection to the Project area or adjacent community from future flood events, as mitigation would be compromised due to lack of financial support. Thus, the "no action" alternative is not feasible in relation to the desired objective of creating area resiliency to future flooding events.

Step 4. **Identify & Evaluate Potential Direct & Indirect Impacts Associated with Occupancy or Modification of 100-year Floodplain and Potential Direct & Indirect Support of Floodplain and Wetland Development that Could Result from Proposed Action.**

The focus of floodplain evaluation should be on adverse impacts to lives and property, and on natural and beneficial floodplain values. Natural and beneficial values include consideration of potential for adverse impacts on water resources such as natural moderation of floods, water quality maintenance, and groundwater recharge.

According to the FEMA Report - A Unified National Program for Floodplain Management, two definitions commonly used in evaluating actions in a floodplain are "structural" and "non-structural" activities. Per the report, structural activity is usually intended to mean adjustments that modify the behavior of floodwaters through the use of measures such as public works dams, levees and channel work. Non-structural is usually intended to include all other adjustments (e.g., regulations, insurance, etc.) in the way society acts when occupying or modifying a floodplain. These definitions are used in describing impacts that may arise in association with potential advancement of this case.

Natural moderation of floods

The Project is intended to provide additional flood protection and to improve existing stormwater drainage infrastructure. If no action is taken, a subsequent storm event could result in catastrophic flooding of the community of Au Sable Forks, potentially resulting in the loss of life. Federal financial assistance will support activities representing a long-term public investment in infrastructure that is necessary to protect the community of Au Sable Forks and the well-being of its residents and local economy. The intent of the Project is not to develop the floodplain and shoreline to serve a new purpose, but rather to protect the community of Au Sable Forks from future flood impacts and enhance resilience.

Living resources such as flora and fauna

Given the nature of the Project, the potential for an acute or chronic level of water quality impact from the proposed Project is very low. Best management practices (BMPs) will be implemented to protect flora and fauna adjacent to the Project area. During the course of construction, the work will be conducted in a manner as to prevent or reduce to a minimum any damage to the stream from pollution by debris, sediment, or other foreign material, or from manipulation of equipment and/or materials in or near the

stream. Water that is used for wash purposes or other similar operations, which could cause the water to become polluted with sand, silt, cement, oil, or other impurities, will not be returned directly to the stream. The Project will involve the use of silt fence and/or silt sock prior to the commencement of disturbance of the existing ground surface to prevent stormwater runoff from leaving the Project area and entering the West Branch Ausable River. Erosion control structures will remain in place until a stable growth of vegetation is present in all disturbed areas.

The USFWS lists the northern long-eared bat (NLEB) (threatened) and Indiana bat (IB) (endangered) as the only threatened, endangered, proposed, or candidate species that may occur within the boundaries of the proposed Project. The Project is anticipated to involve tree removal in order to install the flood wall. The trees proposed for removal are located on a small strip of forested habitat immediately adjacent to West Branch Ausable River in a developed residential and commercial area. The Project will involve the removal of approximately eight (8) trees, which includes the following: five (5) 7" maple trees, one (1) 26" maple tree, one (1) 8" maple tree, and one (1) clump of ash trees. Several trees that are greater than or equal to 3 inches in diameter may provide suitable roosting habitat for the northern NLEB and/or Indiana bat.

To minimize potential impacts to the IB and NLEB, tree clearing will take place from November 1 to March 31, which is outside of the active season of the IB and NLEB. Trees that are proposed to be removed are part of a small strip of forested habitat located immediately adjacent to residential and commercial development. Any bats living in the vicinity of the Project area would still be able to breed, feed, and find shelter. Similar habitat (forested creek corridor surrounded by residential and commercial development) is located immediately east and west of the Project area. Bats would not have to fly long distances to get to alternative foraging habitat, as tracts of forested habitat are located along the Ausable River east and west of the proposed Project, as well as immediately north of the Project area. The forested tracts of land are accessible via strips of forested habitat along the West Branch Ausable River.

Since 1) tree clearing will be conducted when bats are hibernating, 2) the Project will not impact a large area of suitable habitat relative to the surrounding landscape, and 3) the Project will not impact high-quality habitat, a "may affect, not likely to adversely affect" determination is warranted for the NLEB and IB.

The Project is located within 0.5 mile of a documented location of the Appalachian tiger beetle, which is rare in New York and of conservation concern. The NY Natural Heritage Program recommended that the project be conducted so as to avoid as much possible detrimental impacts, including run-off and erosion to the West Branch Ausable River and its shoreline. BMPs will be implemented to ensure there are no detrimental impacts to the West Branch Ausable River and its shoreline.

Impacts to Property & Lives

The highest priority of this review is to prevent the loss of life. The proposed Project is intended to protect the community of Au Sable Forks from flood impacts, improve existing stormwater drainage infrastructure, and enhance resilience. If no action is taken, a subsequent storm event could result in catastrophic flooding and destruction of the adjacent existing residences and businesses, potentially resulting in the loss of life. Federal financial assistance will support activities representing a long-term public investment in a critical piece of infrastructure that is necessary to protect the community of Au Sable Forks and the well-being of its residents and local economy.

Cultural resources such as archaeological, historic & recreational aspects

The New York State Historic Preservation Office confirmed on December 31, 2019 that there will be "no historic properties, including archaeological and /or historic resources, affected" by the Project, as

documented in **Attachment 10** of the Au Sable Forks Flood Wall Project Environmental Review Record Report.

Agricultural, aquacultural, & forestry resources
The Project is located within the developed hamlet of Au Sable Forks and is surrounded by residential and commercial development. Therefore, impacts to agriculture, aquaculture, and forestry resources are not anticipated. It is possible during the short-term construction activities the disturbance could impact local water quality and this economic sector, although the impact attributable to this use could not be quantitatively derived. However, a qualitative analysis suggests that the impact would be very small and localized as BMPs will be utilized during construction to minimize off-site impacts. During the course of construction, the work will be conducted in a manner as to prevent or reduce to a minimum any damage to the stream from pollution by debris, sediment, or other foreign material, or from manipulation of equipment and/or materials in or near the stream. Water that is used for wash purposes or other similar operations, which could cause the water to become polluted with sand, silt, cement, oil, or other impurities, will not be returned directly to the stream. The Project will involve the use of silt fence and/or silt sock prior to the commencement of disturbance of the existing ground surface to prevent stormwater runoff from leaving the Project area and entering the West Branch Ausable River. Erosion control structures will remain in place until a stable growth of vegetation is present in all disturbed areas. Project activities will be completed in accordance with all applicable federal, state and local permit requirements and conditions.

***Step 5.* Where Practicable, Design or Modify the Proposed Action to Minimize the Potential Adverse Impacts To and From the 100-Year Floodplain and to Restore and Preserve its Natural and Beneficial Functions and Values.**
The intent of the proposed Project is not to develop the floodplain and wetlands to serve a new purpose, but rather to stabilize and protect the hamlet of Au Sable Forks against flooding. The Project would mitigate future flood risk and minimize potential impacts to the surrounding community located within the 100-year floodplain and upslope of the 100-year floodplain. Applicable permits from the NYSDEC, USACE, APA, and Town of Jay will be obtained prior to the commencement of Project activities, and all permit conditions will be followed. BMPs will be employed to preserve natural values, lives, and living resources. Utilizing BMPs will confine impacts to the floodplain and wetlands to the proposed Project location. The Project has been designed to minimize potential adverse impacts to and from the 100-year floodplain and to preserve the natural and beneficial functions and values of the floodplain and wetlands.

***Step 6.* Reevaluate the Alternatives and Proposed Action.**
The proposed Project is intended to protect the community of Au Sable Forks from flood impacts, improve existing stormwater drainage infrastructure, and enhance resilience. The potential alternatives are not practicable or feasible. The “no action” alternative for not funding the Project would not address the purpose and need of the proposed action. Without the proposed action, the impacted community would be left more susceptible to future flooding events in this area than it would after the implementation of the proposed action. Therefore, the “no action” alternative examined is not considered desirable and the proposed action is still practicable in light of exposure to flood hazards in floodplain, possible adverse impacts on floodplain and wetlands, the extent to which it may aggravate current hazards to other floodplains, and the potential to disrupt natural and beneficial functions and values of floodplains and wetlands. Additionally, implementation of the proposed action will abide by all applicable state and local codes for floodplain development.

***Step 7.* Issue Findings and Public Explanation.**
A final notice, formally known as “Final Notice and Public Review of a Proposed Activity in a 100-Year Floodplain and Wetlands”, was published in accordance with 24 CFR 55. This public notice was combined with the “Notice of Finding of No Significant Impact and Notice of Intent to Request Release

of Funds (FONSI-NOIRROF)" on August 18, 2020 in the Sun Community News newspaper. The final notice requires a 7-day comment period after publication; however, the FONSI-NOIRROF requires a 15-day comment period. As such, a 15-day comment period was used for this Final Notice. The 15-day comment period expires at 5pm on September 2, 2020. The combined notice describes the reasons why the Project must be located in the floodplain, alternatives considered, and all mitigation measures to be taken to minimize adverse impacts and preserve natural and beneficial floodplain values. Project activities will be completed in accordance with all applicable federal, state and local regulations.

Step 8. **The Proposed Action Can Be Implemented After the Above Steps Have Been Completed.**
GOSR, operating under the auspices of the New York State Homes and Community Renewal's (NYSHCR) Housing Trust Fund Corporation as the responsible entity, will ensure that the Proposed Action, as described above, is executed and necessary language will be included in all agreements with participating parties. Implementation of the proposed action may require additional local and state permits, which could place additional design modifications or mitigation requirements on the Project. It is acknowledged there is a continuing responsibility by the responsible entity to ensure, to the extent feasible and necessary, compliance with the steps herein.

Attachment 8

HUD Environmental Standards Review

Ausable Forks Flood Project

HUD Environmental Standards Review

Project Area: South Bank of Western Branch Ausable River,
Hamlet of Ausable Forks, Town of Jay,
Nassau County, New York

Introduction:

The purpose of this review is to ensure that the project complies with HUD environmental standards in relation to 24 CFR Part 58.5. Properties that are proposed for use in HUD programs "must be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the property."

A desktop review was performed to identify whether the Property referenced in the title of this document complies with the following criteria:

(i) is not Listed on an U.S. Environmental Protection Agency (EPA) Superfund National Priorities or Comprehensive Environmental Response Superfund National Priorities or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) List, or equivalent State list;

(ii) is not located within 3,000 feet of a toxic or solid waste landfill site;

(iii) does not have an underground storage tank; and

(iv) is not known or suspected to be contaminated by toxic chemicals or radioactive materials.

Summary of Findings

Project Area Records Review

The Ausable Forks Flood Wall Project (Project) involves the construction of an earthen berm and flood wall along the south bank of the Western Branch of the Ausable River. The approximate Project Area is documented on the HUD Environmental Report maps appended to the end of this report.

New York State Department of Environmental Conservation (NYSDEC) Records:

The Project Area is not listed on the NYSDEC Bulk Storage, Spill Incidents, or Environmental Site Remediation Database. As such, these spills are not considered a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Project Site.

EPA Records:

The Project Area is not listed on an EPA Superfund National Priorities or CERCLA list or equivalent State list or EPA Resource Conservation and Recovery (RCRA) database. The Project Area is not located within 3,000 feet of a toxic or solid waste landfill site. The Project Area is not known or suspected to be contaminated by toxic chemicals or radioactive materials.

Surrounding Properties Records Review

NYSDEC Records:

A search of the NYSDEC Spill Incidents Database resulted in the identification of 16 closed spills within 1,000 feet of the Project Area; nine (9) of the closed spills are located across either the East or West Branch of the Ausable River. It should also be noted that, as accurate spill locations in some of the NYSDEC Incident Reports were not always provided in the Report itself, a decision was made to err on the side of caution and assume that these spill incidents were located near the Project Area. A spill closure means that the records and the data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial actions are necessary or the case was closed for administrative reasons (e.g. multiple reports of a single spill consolidated into a single spill number). Based on the above

information, these closed spills are not considered a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Project Area.

According to the NYSDEC Environmental Site Remediation Database, there are no environmental remediation sites within 3,000 feet of the Project Area.

According to NYSDEC Bulk Storage Database, there are seven (7) Bulk Storage site located within 3,000 feet of the Project Area; two (2) facilities are located down-gradient and across the West Branch Ausable River (WBAR) from the Project Area. The WBAR acts as a hydraulic barrier to the Project Area. As such, these two (2) facilities are not considered a hazard that could conflict with the intended utilization of the Project Area. The remaining five (5) facilities are detailed below.

Ausable Forks Bus Garage (Site No: 5-392146) is an active Petroleum Bulk Storage (PBS) facility located at 62 Church Lane, approximately 1,615 feet west and cross-gradient from the Project Area. This facility has two (2) aboveground storage tanks (ASTs) currently in service and four (4) underground storage tanks (USTs) that have been closed and removed from the property. There is one (1) closed spill associated with this facility. Due to the location of this facility, the status of the reported spill, and the nature of the proposed Project, this facility is not considered a hazard that could conflict with the intended utilization of the Project Area.

Ausable Forks Elementary School (Site No: 5-600694) is an active Petroleum Bulk Storage (PBS) facility located at 28 Church Lane, approximately 635 feet west and cross-gradient from the Project Area. This facility has one (1) in service AST, one (1) in service UST, and one (1) UST that has been closed and removed from the property. There are no spills associated with this facility. Due to the location of this facility, the lack of reported spills, and the nature of the proposed Project, this facility is not considered a hazard that could conflict with the intended utilization of the Project Area.

Holy Name Church and School (Site No: 5-228664) is an active Petroleum Bulk Storage (PBS) facility located at 10 Church Lane, approximately 585 feet south and down-gradient from the Project Area. This facility has two (2) in service ASTs, and three (3) USTs that have been closed and removed from the property. There is one (1) closed spill associated with this facility. Due to the location of this facility, the status of the reported spill, and the nature of the proposed Project, this facility is not considered a hazard that could conflict with the intended utilization of the Project Area.

Ausable Forks Volunteer Fire (Site No: 5-011835) is an unregulated/ closed Petroleum Bulk Storage (PBS) facility located on School Ct, approximately 652 feet south and down-gradient from the Project Area. This facility has three (3) USTs that have been closed and removed from the property. There are no spills associated with this facility. Due to the location of this facility, the lack of reported spills, and the nature of the proposed Project, this facility is not considered a hazard that could conflict with the intended utilization of the Project Area.

Town of Jay Community Center (Site No: 5-228664) is an active Petroleum Bulk Storage (PBS) facility located at 11 School Lane, approximately 760 feet south and down-gradient from the Project Area. This facility has two (2) in service ASTs, one (1) in service UST, and two (2) ASTs that have been closed and removed from the property. There are no spills associated with this facility. Due to the location of this facility, the lack of reported spills, and the nature of the proposed Project, this facility is not considered a hazard that could conflict with the intended utilization of the Project Area.

EPA Records:
According to the EPA's Enforcement and Compliance History Online (ECHO) search, there is one (1) EPA-permitted water discharger (NPDES) site and seven (7) hazardous waste (RCRA) sites within 3,000

feet of the Project Area. Of these facilities, the seven (7) RCRA facilities have no reported violations. Facilities with no violations are not considered a hazard as the facilities are in compliance with permit conditions that are enforced and meet standards that protect public health and the environment by preventing releases to the environment. As such, these facilities are not considered a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Project Area. The remaining facility identified below.

The remaining minor-NPDES facility, associated with Lawrence Homes Corporation, is located at 1 North Main Street on the north bank of the WBAR. This facility has a single formal enforcement action from October 28, 2014, and the permit has been inactive for the past three (3) years. Due to the location of this facility across a hydraulic barrier, the inactive permit status, and the nature of the proposed Project, this facility is not considered a hazard that could conflict with the intended utilization of the Project Area.

Conclusion:
Based on a review of available environmental records for the Project Area and surrounding area, the Project Area is unlikely to contain hazardous materials, contamination, toxic chemicals and gases, or radioactive substances, which would constitute a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Project Area. Therefore, a Phase I Environmental Site Assessment (ESA) or Phase II Investigation is not warranted. Maps, NYSDEC reports, and EPA reports are included at the end of this report.

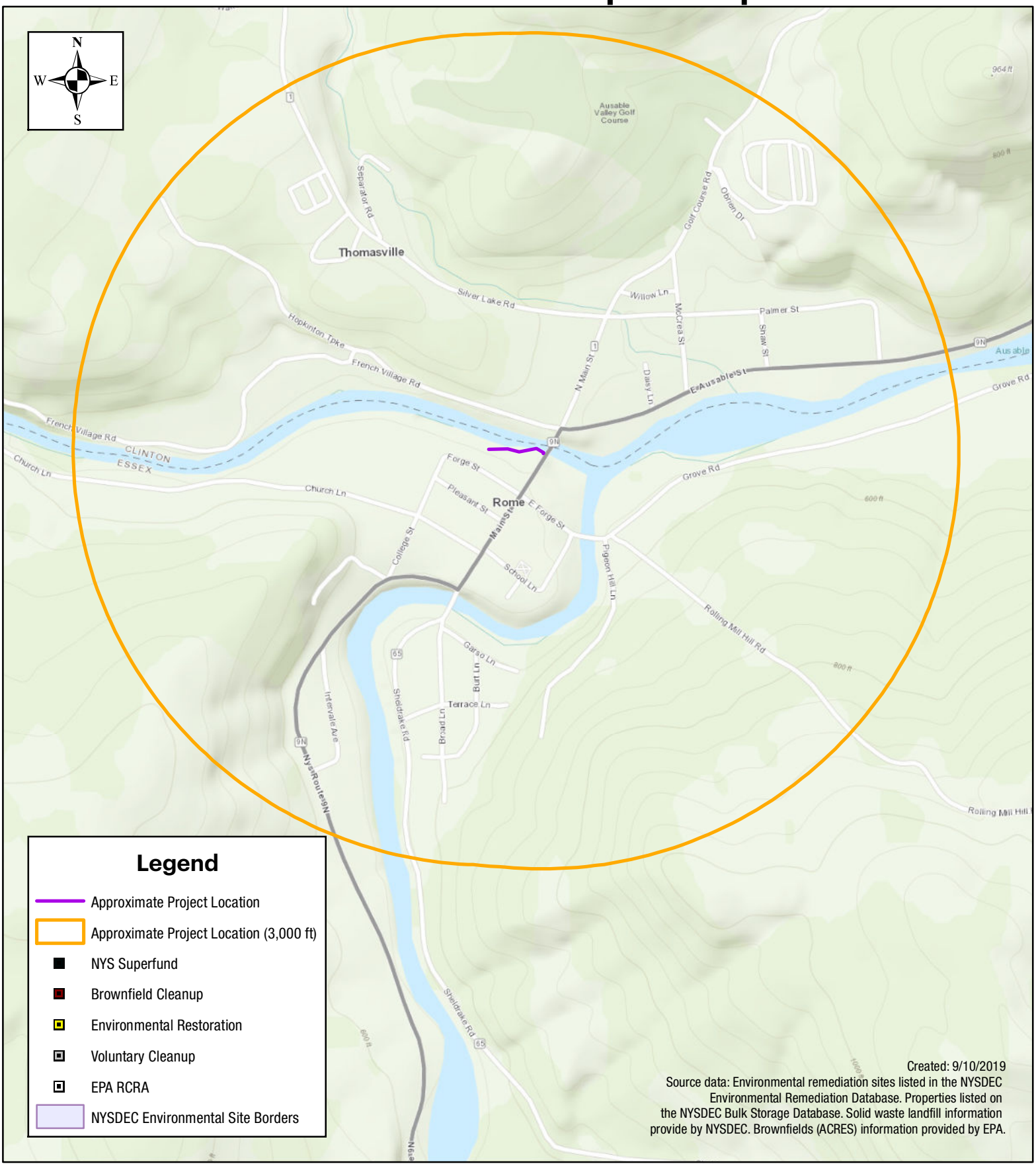
Data Sources:
Tectonic Engineering and Surveying Consultants, P.C. (Tectonic) has reviewed the following sources to make the above determinations: Hazardous Waste records contained in the Resource Conservation and Recovery Act (RCRA) Information System, the Superfund Enterprise Management System (SEMS) for sites listed under CERCLA (otherwise known as Superfund), EPA's Toxic Release Inventory database (TRI), and the EPA Radiation Information Database (RADInfo). RCRA includes data on small and large quantity hazardous waste material generators and handlers. EPA's Toxic Release Inventory provides information on toxic chemical releases and waste management activities by certain industries. The RADInfo database provides information about facilities that are regulated by the U.S. EPA for radiation and radioactivity.

Tectonic reviewed the NYSDEC Environmental Site Remediation Database to assess whether the site is registered as a NYS Superfund or Environmental Restoration site. The NYSDEC Environmental Site Remediation Database includes records of sites that are part of the NYS Superfund, Brownfield Cleanup, Environmental Restoration, and Voluntary Cleanup Programs. The Database also includes a Registry of Inactive Hazardous Waste Disposal Sites. Tectonic reviewed the Small Business Program Supplemental Environmental Checklist to determine if the Project Site has an underground storage tank (which is not a residential fuel tank), or other registered storage tanks. The NYSDEC Bulk Storage Database was reviewed for records of facilities that are or have been regulated according to one of the Bulk Storage Programs - Petroleum Bulk Storage, Chemical Bulk Storage, or Major Oil Facility. The NYSDEC Spill Incidents Database was used to determine the potential effects of spills on or near the Project Site. A desktop review of Google Earth was used in conjunction with a map of active municipal landfills (provided by the NYSDEC), and a list of landfills provided by the NYSDEC to determine whether a non-active or active landfill is located within 3,000 feet of the Project Site.

Maps

HUD Environmental Report Maps
US EPA NEPAssist Map

HUD Environmental Report Maps



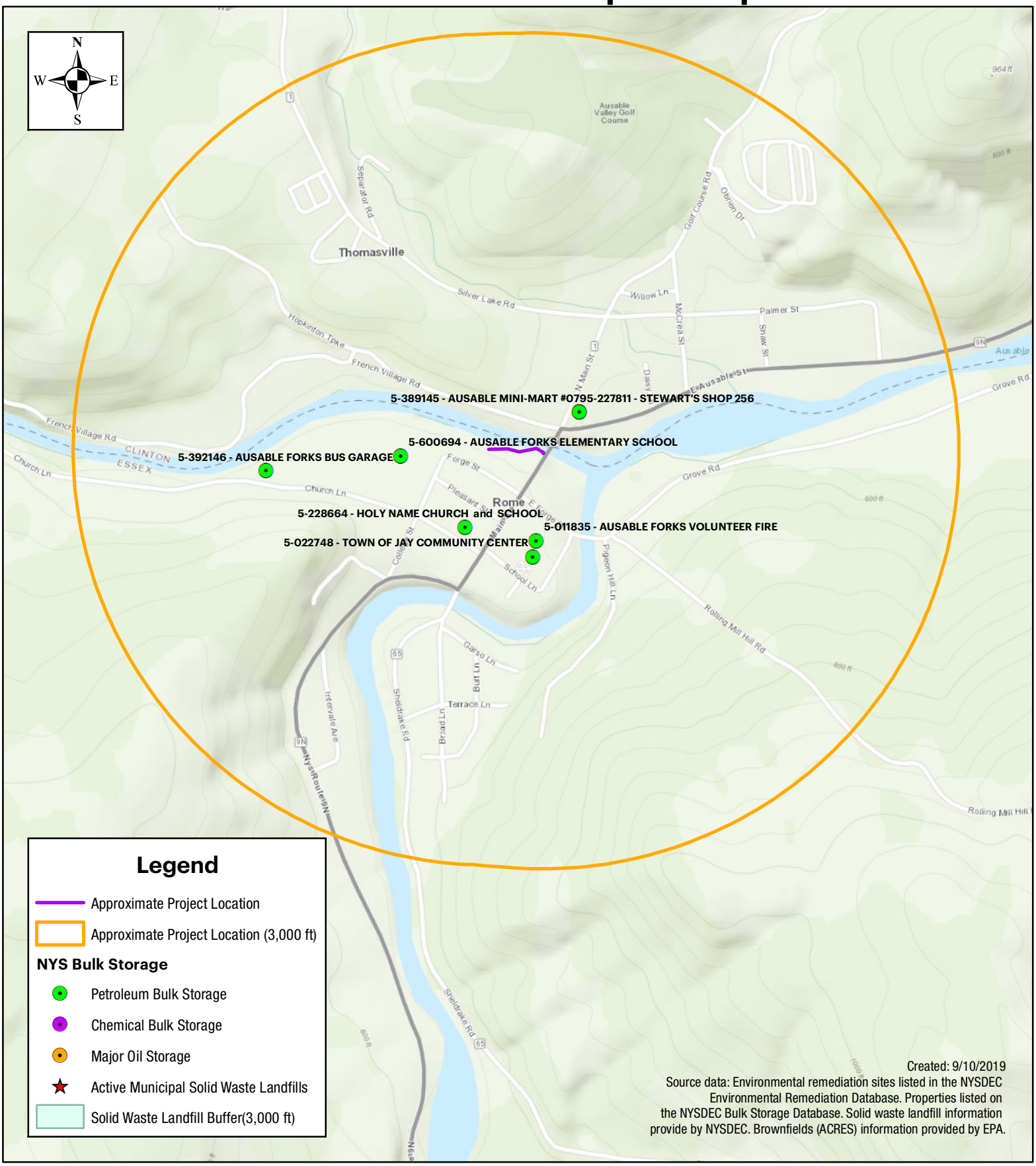
Tectonic

1:11,000

0 625 1,250 2,500 Feet

Ausable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Ausable Forks
Town of Jay
Essex County, New York

HUD Environmental Report Maps



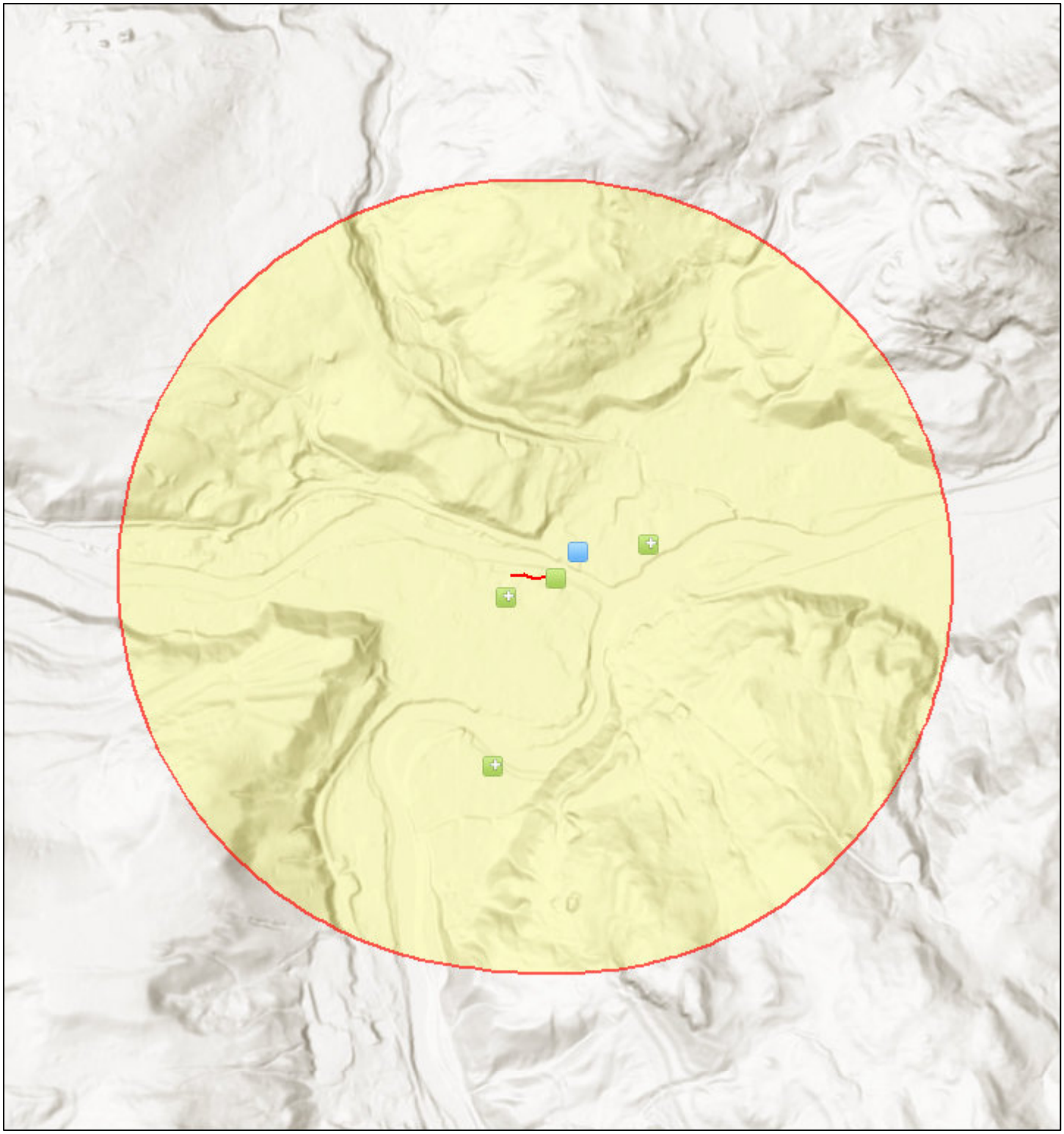
Tectonic

1:11,000

0 625 1,250 2,500 Feet

Ausable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Ausable Forks
Town of Jay
Essex County, New York

Ausable Forks Flood Wall Project



September 10, 2019

1:18,056

0 0.15 0.3 0.6 mi

0 0.25 0.5 1 km

- RCRAINFO (clustered)
- RCRAINFO (single)
- PCS (single)
- Project 1
- Buffer Area

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Environmental Reports

NYSDEC Reports for Spills, Environmental Remediation Sites, or Bulk Storage Sites Located on, or Within Close Proximity to the Project Area

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 1 Rows: 1 to 1

Export XLS Export CSV

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	9509849	11/08/1995	AUSABLE FORKS SERVICE	Essex	JAY	38 FORGE ST

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 5 Rows: 1 to 5

Export XLS Export CSV

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	9001690	05/14/1990	AUSABLE VALLEY CENTRAL	Essex	AUSABLE FORKS	CHURCH STREET
2.	9206286	08/27/1992	HOLY NAME CHURCH	Essex	AUSABLE FORKS	WEST CHURCH ST.
3.	9807091	09/10/1998	AUSABLE FORKS BUS GARAGE	Essex	AUSABLE FORKS	CHURCH ST
4.	0045020	05/04/2000	TRIB TO AUSABLE RIVER	Essex	AUSABLE FORKS	109 CHURCH STREET
5.	1803687	07/05/2018	FILL CONTAINMENT UNDERGROUND TANK	Essex	AUSABLE FORKS	28 CHURCH LANE

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 1 Rows: 1 to 1

Export XLS Export CSV

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	1012069	03/06/2011	SEWAGE PUMP STATIONS	Essex	AUSABLE FORKS	C/O BROAD AND BURT ROAD/ SCHOOL STREET AND GROVE

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 2 Rows: 1 to 2

Export XLS Export CSV

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	9012772	03/12/1991	ELMER WHITMORE	Essex	AUSABLE FORKS	ROLLING MILL HILL ROAD
2.	9605879	08/07/1996	CUMBER RESIDENCE	Essex	AUSABLE FORKS	451 ROLLING MILL HILL RD

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 3 Rows: 1 to 3

Export XLS Export CSV

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	0508214	10/10/2005	JOE GILBERT RES	Clinton	AUSABLE FORKS	655 GROVE RD
2.	0911717	02/02/2010	PRIVATE RESIDENCE	Essex	AUSABLE FORKS	40 GROVE RD
3.	1012069	03/06/2011	SEWAGE PUMP STATIONS	Essex	AUSABLE FORKS	C/O BROAD AND BURT ROAD/ SCHOOL STREET AND GROVE

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 5 Rows: 1 to 5

Export XLS Export CSV

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	8902509	06/10/1989	MAIN STREET	Clinton	AUSABLE FORKS	MAIN STREET
2.	9108111	10/25/1991	IN FRONT OF 20 MAIN	Clinton	AUSABLE FORKS	MAIN STREET
3.	9945161	11/08/1999	MAIN STREET - ROADSIDE	Clinton	AUSABLE FORKS	MAIN ST.
4.	0613509	03/15/2007	20 MAIN TAVERN	Essex	AUSABLE FORKS	MAIN ST
5.	0904343	07/14/2009	DOBRIDE RESIDENCE	Clinton	AUSABLE FORKS	9 NORTH MAIN ST

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 1 Rows: 1 to 1

Export XLS Export CSV

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	9001112	04/25/1990	AUSABLE FORKS	Essex	AUSABLE FORKS	ROUTE 9 & DAISY LANE

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 5-392146
Status: Active
Expiration Date: 06/18/2022
Site Type: PBS
Facility Type: School
Site Name: AUSABLE FORKS BUS GARAGE
Address: 62 CHURCH LANE
Locality: Au Sable Forks
State: NY
Zipcode: 12912
County: Essex

Facility(Property) Owner(s) Information

Facility Owner: AUSABLE VALLEY CENTRAL SCHOOL DISTRICT
1273 RT 9N . CLINTONVILLE, NY. 12924
Mail Contact: AUSABLE VALLEY CENTRAL SCHOOL DISTRICT
1273 ROUTE 9N . CLINTONVILLE, NY. 12924

Facility Operator

Facility Operator: AUSABLE FORKS BUS GARAGE

Tank Information

6 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground including vaulted with no access for inspection	Closed - Removed	2000
002	Underground including vaulted with no access for inspection	Closed - Removed	4000
003	Aboveground on saddles, legs, stilts, rack or cradle	In Service	2000
004	Aboveground - in contact with impervious barrier	In Service	1000
007	Underground including vaulted with no access for inspection	Closed - Removed	2500
008	Underground including vaulted with no access for inspection	Closed - Removed	1000

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 5-600694
Status: Active
Expiration Date: 12/02/2019
Site Type: PBS
Facility Type: School
Site Name: AUSABLE FORKS ELEMENTARY SCHOOL
Address: 28 WEST CHURCH LANE
Locality: Au Sable Forks
State: NY
Zipcode: 12912
County: Essex

Facility(Property) Owner(s) Information

Facility Owner: AUSABLE VALLEY CENTRAL SCHOOL DISTRICT
1273 ROUTE 9N . CLINTONVILLE, NY. 12924
Mail Contact: AUSABLE VALLEY CENTRAL SCHOOL
1273 ROUTE 9N . CLINTONVILLE, NY. 12924

Facility Operator

Facility Operator: AUSABLE FORKS ELEMENTARY SCHOOL

Tank Information

3 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
005	Underground including vaulted with no access for inspection	Closed - Removed	2500
006	Underground including vaulted with no access for inspection	In Service	6000
007	Aboveground on saddles, legs, stilts, rack or cradle	In Service	250

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 5-228664
Status: Unregulated/Closed
Expiration Date: 05/07/2022
Site Type: PBS
Facility Type: Religious Building (Church, Synagogue, Mosque, Temple, etc.)
Site Name: HOLY NAME CHURCH & SCHOOL
Address: 10 CHURCH LANE
Locality: AUSABLE FORKS
State: NY
Zipcode: 12912
County: Essex

Facility(Property) Owner(s) Information

Facility Owner: HOLY NAME CHURCH & SCHOOL
10 CHURCH LANE, PO BOX 719 . AUSABLE FORKS, NY. 12912
Mail Contact: HOLY NAME CHURCH
10 CHURCH LANE . AUSABLE FORKS, NY. 12912

Facility Operator

Facility Operator: HOLY NAME CHURCH & SCHOOL

Tank Information

5 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground including vaulted with no access for inspection	Closed - Removed	8000
002	Underground including vaulted with no access for inspection	Closed - Removed	2000
003	Aboveground on saddles, legs, stilts, rack or cradle	In Service	550
003B	Aboveground on saddles, legs, stilts, rack or cradle	In Service	0
004	Underground including vaulted with no access for inspection	Closed - Removed	500

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 5-011835
Status: Unregulated/Closed
Expiration Date: 09/19/1991
Site Type: PBS
Facility Type: Unknown
Site Name: AUSABLE FORKS VOLUNTEER FIRE
Address: SCHOOL ST
Locality: AUSABLE FORKS
State: NY
Zipcode: 12912
County: Essex

Facility(Property) Owner(s) Information

Facility Owner: AUSABLE FORKS FIRE DISTRICT
SCHOOL ST . AUSABLE FORKS , NY. 12912
Mail Contact: AUSABLE FORKS FIRE DISTRICT
SCHOOL ST . AUSABLE FORKS , NY. 12912

Facility Operator

Facility Operator: AUSABLE FORKS VOLUNTEER FIRE

Tank Information

3 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground including vaulted with no access for inspection	Closed - Removed	1000
002	Underground including vaulted with no access for inspection	Closed - Removed	1000
003	Underground including vaulted with no access for inspection	Closed - Removed	1000

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 5-022748
Status: Active
Expiration Date: 09/19/2021
Site Type: PBS
Facility Type: Municipality (Incl. Waste Water Treatment Plants, Utilities, Swimming Pools, etc.)
Site Name: TOWN OF JAY COMMUNITY CENTER
Address: 11 SCHOOL LANE PO BOX 730
Locality: Au Sable Forks
State: NY
Zipcode: 12912
County: Essex

Facility(Property) Owner(s) Information

Facility Owner: TOWN OF JAY COMMUNITY CENTER
11 SCHOOL LANE, PO BOX 730 . AUSABLE FORKS, NY. 12912
Mail Contact: TOWN OF JAY COMMUNITY CENTER
PO BOX 730 . AUSABLE FORKS, NY. 12912

Facility Operator

Facility Operator: TOWN OF JAY COMMUNITY CENTER

Tank Information

5 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground including vaulted with no access for inspection	In Service	10000
002	Aboveground on saddles, legs, stilts, rack or cradle	Closed - Removed	275
003	Aboveground on saddles, legs, stilts, rack or cradle	Closed - Removed	275
004	Aboveground on saddles, legs, stilts, rack or cradle	In Service	275
005	Aboveground on saddles, legs, stilts, rack or cradle	In Service	275

Refine This Search

Environmental Reports

US EPA Permitted Facilities located on or
within 3,000 feet of the Project Area and in
non-compliance with US EPA permit requirements

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

ADJACENT FAMILY DOLLAR
1 NORTH MAIN STREET, AU SABLE FORKS, NY 12912

FRS (Facility Registry Service) ID: 110063612782
EPA Region: 02
Latitude: 44.4416
Longitude: -73.67549
Locational Data Source: FRS
Industry: No description found
Indian Country: N

Enforcement and Compliance Summary

Statute	Insp (5 Years)	Date of Last Inspection	Compliance Status	Qtrs with NC (Noncompliance) (of 12)	Qtrs with Significant Violation	Informal Enforcement Actions (5 years)	Formal Enforcement Actions (5 years)	Penalties from Formal Enforcement Actions (5 years)	EPA Cases (5 years)	Penalties from EPA Cases (5 years)
CWA	--	--	Not Applicable	0	0	--	1	$1,500	--	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): Minor, (NYU500295)
Resource Conservation and Recovery Act (RCRA): No Information
Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Known Data Problems

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110063612782					N	44.4416	-73.67549
ICIS-NPDES	CWA	NYU500295	Minor: Unpermitted Facility				N	44.44161	-73.67548

Facility Address

System	Statute	Identifier	Facility Name	Facility Address
FRS		110063612782	ADJACENT FAMILY DOLLAR	1 NORTH MAIN STREET, AU SABLE FORKS, NY 12912
ICIS-NPDES	CWA	NYU500295	ADJACENT FAMILY DOLLAR	1 NORTH MAIN STREET, AU SABLE FORKS, NY 12912

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History (5 years)

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
CWA	NYU500295	No	03/31/2019	0	09/06/2019

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12	QTR 13+
	CWA (Source ID: NYU500295)	04/01-06/30/16	07/01-09/30/16	10/01-12/31/16	01/01-03/31/17	04/01-06/30/17	07/01-09/30/17	10/01-12/31/17	01/01-03/31/18	04/01-06/30/18	07/01-09/30/18	10/01-12/31/18	01/01-03/31/19	04/01-09/06/19
	Facility-Level Status	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Quarterly Noncompliance Report History													

Informal Enforcement Actions (5 Years)

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Formal Enforcement Actions (5 Years)

Statute	System	Law/Section	Source ID	Action Type	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty	State/Local Penalty	SEP Cost	Comp Action Cost
CWA	ICIS-NPDES	OTHER	NPDES/NYU500295	Administrative - Formal	NY-LER514009983	State	LAWRENCE HOMES CORPORATION - STORMWATER	10/28/2014	1	10/28/2014	$0	$1,500	$0	$0

Environmental Conditions

Water Quality

Permit ID	Combined Sewer System?	Number of CSO (Combined Sewer Overflow) Outfalls	12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Impaired Waters	Impaired Class	Causes of Impairment(s) by Group(s)	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
NYU500295			041504040206	Lower West Branch Ausable River		303(D) Listed	5	SEDIMENT	No

Water Body Designated Uses

Reach Code	Water Body Name	Exceptional Use	Recreational Use	Aquatic Life Use	Shellfish Use	Beach Closure Within Last Year	Beach Closure Within Last Two Years
04150404001269	West Branch Ausable River	No	No	No	No	No	No

Air Quality

Nonattainment Area?	Pollutant(s)	Applicable Nonattainment Standard(s)
No	Ozone	
No	Lead	
No	Particulate Matter	
No	Carbon Monoxide	
No	Nitrogen Dioxide	
No	Sulfur Dioxide	

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-site Releases	Total Off-site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Demographic Profile

EJSCREEN EJ Indexes

Eleven primary environmental justice (EJ) indexes of EJSCREEN, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJSCREEN provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJSCREEN home page.

Census Block Group EJ Indexes (percentile)	
Particulate Matter (PM 2.5)	52.8
Ozone NATA Diesel PM	49.8
NATA Air Toxics Cancer Risk	54.4
NATA Respiratory Hazard Index (HI)	56.6
Traffic Proximity	44.6
Lead Paint Indicator	22.9
Superfund Proximity	48.3
Risk Management Plan (RMP) Proximity	55.5
Hazardous Waste Proximity	55.5
Wastewater Discharge Proximity	30.9

Number of EJ Indexes Above 80th Percentile
0

View EJSCREEN Report

Demographic Profile of Surrounding Area (3 Miles)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 US Census and American Community Survey data, and are accurate to the extent that the facility latitude and longitude listed below are correct. The latitude and longitude are obtained from the EPA Locational Reference Table (LRT) when available.

General Statistics	
Total Persons	1,900
Population Density	67/sq.mi.
Percent Minority	2%
Households in Area	808
Housing Units in Area	1,041
Households on Public Assistance	7
Persons Below Poverty Level	428

Geography	
Radius of Selected Area	3 mi.
Center Latitude	44.4416
Center Longitude	-73.67549
Land Area	99%
Water Area	1%

Income Breakdown - Households (%)	
Less than $15,000	94 (11.79%)
$15,000 - $25,000	98 (12.3%)
$25,000 - $50,000	228 (28.61%)
$50,000 - $75,000	179 (22.46%)
Greater than $75,000	198 (24.84%)

Age Breakdown - Persons (%)	
Children 5 years and younger	107 (6%)
Minors 17 years and younger	396 (21%)
Adults 18 years and older	1,504 (79%)
Seniors 65 years and older	280 (15%)

Race Breakdown - Persons (%)	
White	1,869 (98%)
African-American	8 (0%)
Hispanic-Origin	12 (1%)
Asian/Pacific Islander	0 (0%)
American Indian	4 (0%)
Other/Multiracial	19 (1%)

Education Level(Persons 25 & older) - Persons (%)	
Less than 9th Grade	86 (6.35%)
9th through 12th Grade	71 (5.24%)
High School Diploma	532 (39.29%)
Some College/2-year	355 (26.22%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	310 (22.9%)

Attachment 9

Endangered Species Compliance Documents

NYNHP Records Request Response
USFWS Section 7 Consultation Response
USFWS Section 7 Consultation Package
NMFS ESA Section 7 Mapper

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

January 13, 2020

Alicia Shultz
Governor's Office of Storm Recovery
38-40 State Street
Albany, NY 12207

Re: Au Sable Forks Flood Wall Project
County: Essex Town/City: Jay

Dear Ms. Shultz:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at the project site.

Within two miles of the project site is a documented winter hibernaculum of **Northern long-eared bat** (*Myotis septentrionalis*, state and federally listed as Threatened). The bats may travel five miles or more from documented locations. The main impact of concern for bats is the removal of potential roost trees. For information about any permit considerations for your project, please contact the Permits staff at the NYSDEC Region 5 Office, Division of Environmental Permits, at dep.r5@dec.ny.gov, 518-623-1286.

Within .5 mile of the project site, along the East Branch Ausable River, is a documented location of **Appalachian tiger beetle** (*Cicindela ancocisconensis*). While not listed as Endangered or Threatened by NYS, this insect is rare in New York and of conservation concern. This species may occur elsewhere along rivers in the area. We recommend that the project be conducted so as to avoid as much as possible detrimental impacts, including run-off and erosion, to the West Branch Ausable River and its shorelines.

For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

Sincerely,

Nick Conrad

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, New York 13045

May 8, 2020

Ms. Alicia Shultz
Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
NYS Homes & Community Renewal
38-40 State Street, 408N, Hampton Plaza
Albany, NY 12207

Dear Ms. Shultz:

This responds to your March 4, 2020, letter regarding the proposed Au Sable Forks Flood Wall Project located in the Hamlet of Au Sable Forks in the Town of Jay, Essex County, New York. We understand that U.S. Department of Housing and Urban Development's (HUD) funding may be involved with the proposed project.

As you are aware, federal agencies have responsibilities under Section 7 of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq*.) to consult with the U.S. Fish and Wildlife Service (Service) regarding projects that may affect federally listed species or designated critical habitat, and confer with the Service regarding projects that are likely to jeopardize federally proposed species and/or adversely modify proposed critical habitat. We understand that New York State Homes & Community Renewal (NYSHCR) has been designated HUD's non-federal representative for the purposes of completing informal consultation pursuant to Section 7(a)(2) of the ESA.

On behalf of HUD, the NYSHCR determined the proposed project may affect, but is not likely to adversely affect, the federally listed threatened northern long-eared bat (*Myotis septentrionalis*). Given the project location, amount of tree removal, and conservation measure to conduct tree removal between November 1 and March 31, we concur with your determination.

No further coordination or consultation under the ESA is required with the Service at this time. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. The most recent compilation of federally listed and proposed endangered and threatened species in New York is available for your information. Until the proposed project is complete, we recommend that you check our website regularly to ensure that listed species presence/absence information for the proposed project is current.*

Any additional information regarding the proposed project and its potential to impact listed species should be coordinated with both this office and with the New York State Department of Environmental Conservation.

Thank you for coordinating with us. We appreciate the opportunity to review this project. Please contact Robyn Niver at 607-753-9334 if there are any questions. Future correspondence with us on this project should reference project file 20I1814.

Sincerely,

David A. Stilwell
Field Supervisor

*Additional information referred to above may be found on our website at: http://www.fws.gov/northeast/nyfo/es/section7.htm.

cc: NYSDEC, Ray Brook, NY

Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

March 4, 2020

Robyn A. Niver
Endangered Species Biologist,
U.S. Fish & Wildlife Service
New York Field Office
3817 Luker Rd.
Cortland, NY 13045

VIA EMAIL: robyn_niver@fws.gov

Re: ESA/MBTA/BGEPA consultation for the Au Sable Forks Flood Wall Project, Hamlet of Au Sable Forks, Town of Jay, Essex County, New York

Dear Ms. Niver:

The Governor's Office of Storm Recovery (GOSR), operating under the auspices of the New York State Homes and Community Renewal's (NYSHCR) Housing Trust Fund Corporation, was established to aid the statewide recovery of disaster-affected communities in New York State. GOSR is administering a U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant for Disaster Recovery (CDBG-DR), including the New York Rising Community Reconstruction (NYRCR) Program. The environmental review for projects funded under the NYRCR Program are processed on a case by case basis in accordance with the United States Fish and Wildlife Service (USFWS) New York Field Office's online project review process. The project described herein was analyzed pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668d); and the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat 755).

The purpose of this letter is to provide the U.S. Fish and Wildlife Service – New York Field Office (USFWS) notice of the proposed project and to document compliance with Section 7 of the Endangered Species Act. We are requesting concurrence from the U.S. Fish and Wildlife Service that the proposed project may affect, but is not likely to adversely affect the Indiana bat and the northern long-eared bat.

1.0 PROJECT DESCRIPTION

Essex County is requesting CDBG-DR funding for the Au Sable Forks Flood Wall Project (Project) which is located on the south bank of the West Branch Ausable River immediately west of the bridge above the West Branch Ausable River on NY-9N, Hamlet of Au Sable Forks, Town of Jay, Essex County, New York. The Project will include the installation of an approximately 185-foot long flood wall, an approximately 210 foot-long earthen berm, and stormwater outlet structures with a rip-rap apron. The implementation of the Project will protect the sewer pump station and other critical infrastructure situated at the confluence of the East and West Branch of the Ausable River from flooding. The Project will involve the removal of approximately eight (8) trees, which includes the following: five (5) 7" maple trees, one (1) 26" maple tree,

one (1) 8" maple tree, and one (1) clump of ash trees. The Project will lessen the chance of raw sewage being discharged into the East Branch during future flood events. Project location maps are included in **Appendix A** and Project site plans are included in **Appendix B**.

During Hurricane Irene and Tropical Storm Lee, the Ausable River was profoundly impacted by rising stormwater: banks collapsed and widened, channels morphed, and debris and sediment were deposited throughout the system. Over-widening of the Ausable River has also slowed water velocities and increased sediment deposition. These factors led to severe flooding of residences and businesses within the Town of Jay. Implementation of the Project will lead to decreased risk of future flooding, protection of critical infrastructure, and will help protect public and private assets from future flood and debris damage.

2.0 ENDANGERED SPECIES ACT, MIGRATORY BIRD TREATY ACT, AND BALD AND GOLDEN EAGLE PROTECTION ACT PROTECTED SPECIES

The USFWS New York Ecological Services Field Office was contacted through the Information, Planning, and Conservation System (IPaC) regarding the potential presence of species under the jurisdiction of the USFWS within the Project area. According to the USFWS Official Species List, there is one (1) federally threatened species (northern long-eared bat) and there is one (1) federally endangered species (Indiana bat) that might potentially occur at the proposed Project location (**Appendix C**). According to the USFWS Official Species List, there is no critical habitat for federally protected threatened and endangered species in the Project area.

The IPaC Resource List (included in **Appendix D**) obtained from the USFWS for the Project area indicates that there is a migratory bird species of concern protected under the Migratory Bird Treaty Act that could potentially be affected by the proposed Project. There are no known breeding bald eagles within the vicinity of the Project area; therefore, no adverse impacts to breeding bald eagles are expected as a result of the Project. The primary nesting season for migratory birds is early April to mid-July. Precautions will be used to protect any migratory birds that may be found in or near the Project area. Such precautions include minimizing construction noise to the extent practicable, using care to avoid birds when operating machinery or vehicles near birds, and general contractor awareness of potential bird presence. We anticipate that these measures should avoid any take of migratory birds.

According to a New York Natural Heritage Program (NYNHP) records request response, the Project is located within two (2) miles of a documented winter hibernaculum of northern long-eared bats (**Appendix E**).

A description of the federally threatened and endangered species identified by USFWS, and an evaluation of the likelihood that this species occurs within the Project area and would be affected by the Project, is provided below. The species description is summarized from the NYSDEC fact sheet and USFWS species profile.

2.1 NORTHERN LONG-EARED BAT

The northern long-eared bat (NLEB) is a medium-sized bat that is distinguished by its long ears, particularly as compared to other bats in its genus. The northern long-eared bat is found across much of the eastern and north central United States. White-nose syndrome is the predominant threat to this bat, especially throughout the northeast where the species has declined by up to 99 percent from pre-white-nose syndrome levels at many hibernation sites. During summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees, using tree species based on suitability to retain bark or provide cavities or crevices. They emerge at dusk to fly through the understory of forested hillsides and ridges feeding on moths, flies, leafhoppers, caddisflies, and beetles or by gleaning insects from

vegetation and water surfaces. Northern long-eared bats spend winter hibernating in caves and mines. This bat prefers habitat with abundant stands of trees with sufficient bark crevices and snags for roosting habitat. Based on a NYNHP records request response, the Project is located within two (2) miles of a documented winter hibernaculum of northern long-eared bats (**Appendix E**).

2.2 INDIANA BAT

The Indiana bat (IB), listed as federally endangered, is a temperate, insectivorous bat. IB hibernate in caves or mines during winter and emerge during the spring, with males dispersing and remaining solitary or forming small bachelor groups until the end of the summer, and pregnant females forming maternity colonies. Summer habitat of the IB generally includes wooded areas, where they roost under loose tree bark on dead or dying trees. The IB consumes a variety of flying insects found along rivers and other inland water bodies, and the IB is sensitive to forested habitat fragmentation and urbanization of habitat that was previously used for roosting. According to a NYNHP records request response, there are currently no documented IB hibernacula in the vicinity of the Project area (**Appendix E**).

The Project is anticipated to involve minor tree removal in order to install the flood wall. The trees proposed for removal are located on a small strip of forested habitat immediately adjacent to West Branch Ausable River in a developed residential and commercial area. The Project will involve the removal of approximately eight (8) trees, which includes the following: five (5) 7" maple trees, one (1) 26" maple tree, one (1) 8" maple tree, and one (1) clump of ash trees. Several trees that are greater than or equal to 3 inches in diameter may provide suitable roosting habitat for the northern NLEB and/or Indiana bat.

To minimize potential impacts to the IB and NLEB, tree clearing will take place from November 1 to March 31, which is outside of the active season of the IB and NLEB. Trees that are proposed to be removed are part of a small strip of forested habitat located immediately adjacent to residential and commercial development. Any bats living in the vicinity of the Project area would still be able to breed, feed, and find shelter. Similar habitat (forested creek corridor surrounded by residential and commercial development) is located immediately east and west of the Project area (see aerial map in **Appendix A**). Bats would not have to fly long distances to get to alternative foraging habitat, as tracts of forested habitat are located along the Ausable River east and west of the proposed Project, as well as immediately north of the Project area. The forested tracts of land are accessible via strips of forested habitat along the West Branch Ausable River.

Since 1) tree clearing will be conducted when bats are hibernating, 2) the Project will not impact a large area of suitable habitat relative to the surrounding landscape, and 3) the Project will not impact high-quality habitat, a **'may affect, not likely to adversely affect'** determination is warranted for the NLEB and IB.

3.0 CONCLUSION

Project implementation would be conditioned upon issuance of applicable federal and state permits and the Project would be constructed in accordance with federal and state permit requirements and their conditions. The proposed Project would not jeopardize the continued existence of ESA species or destroy or adversely modify their critical habitat. For the reasons listed above, we conclude that the proposed Project "**may affect, but is not likely to adversely affect the northern long-eared bat and the Indiana bat**." We request your concurrence with our determinations.

GOSR understands that the USFWS presumes that all activities are implemented as described herein. GOSR will promptly report any departures from the described activities that would change the effect determination above to the New York Field Office. GOSR will provide the New York Field Office with the results of any surveys conducted for the IB and NLEB. Involved parties will promptly notify the New York Field Office upon finding a dead, injured, or sick IB or NLEB. If the USFWS does not respond within 30 days from

submittal of this form, then GOSR may presume that its determination for the project is informed by the best available information and its project responsibilities under Section 7 of the ESA have been fulfilled.

For additional information, please contact me by email at Alicia.Shultz@nyshcr.org or by telephone at (518) 474-0647.

Sincerely,

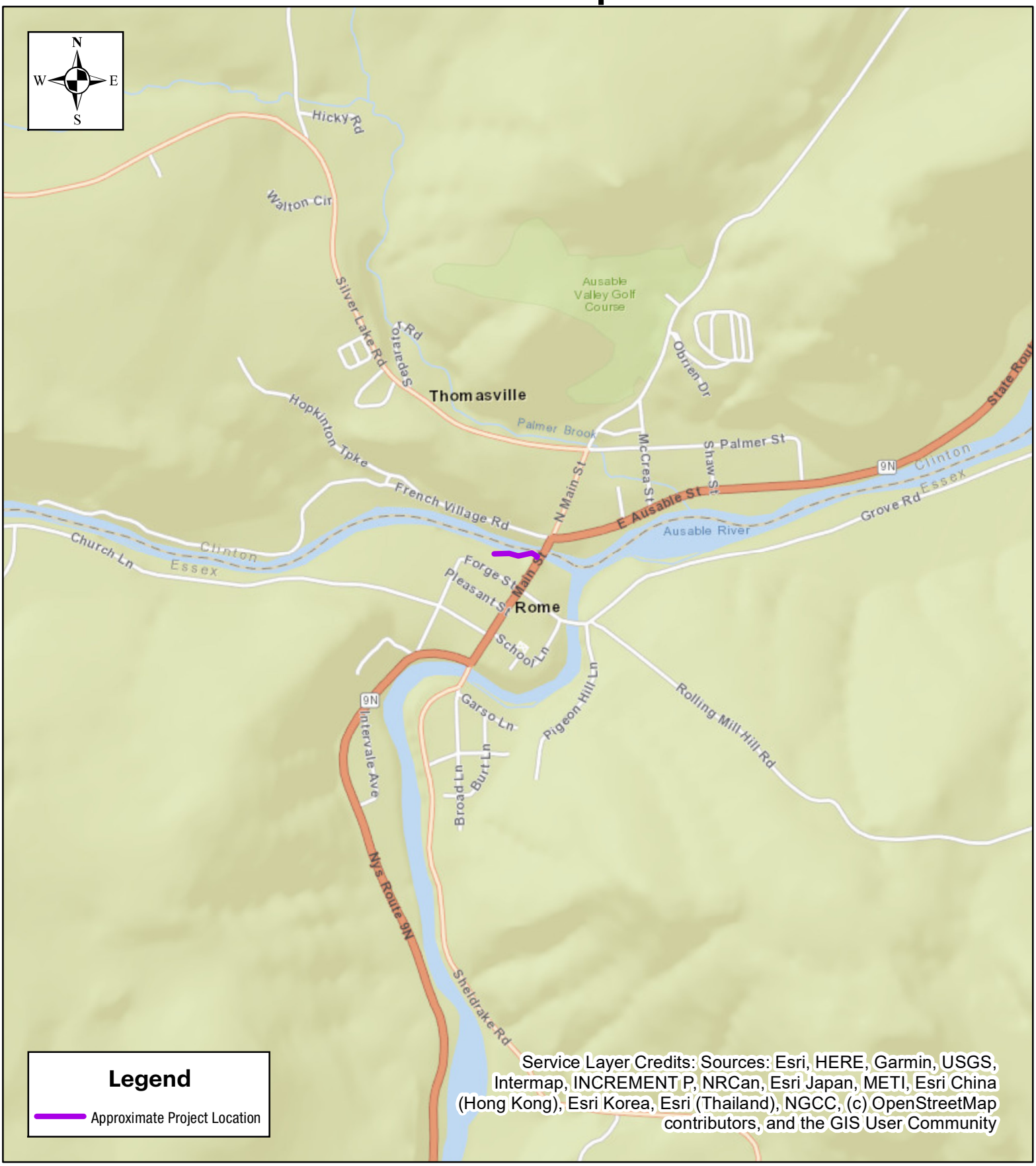
Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
38-40 State Street, 408N
Hampton Plaza
Albany, NY 12207

Attachments:

Appendix A: Project Location Maps (Street Map, Topographic Map, and Aerial Map)
Appendix B: Project Design Plans
Appendix C: USFWS Official Species List
Appendix D: USFWS IPaC Resource List
Appendix E: NYNHP Records Request Response

Appendix A

Street Map



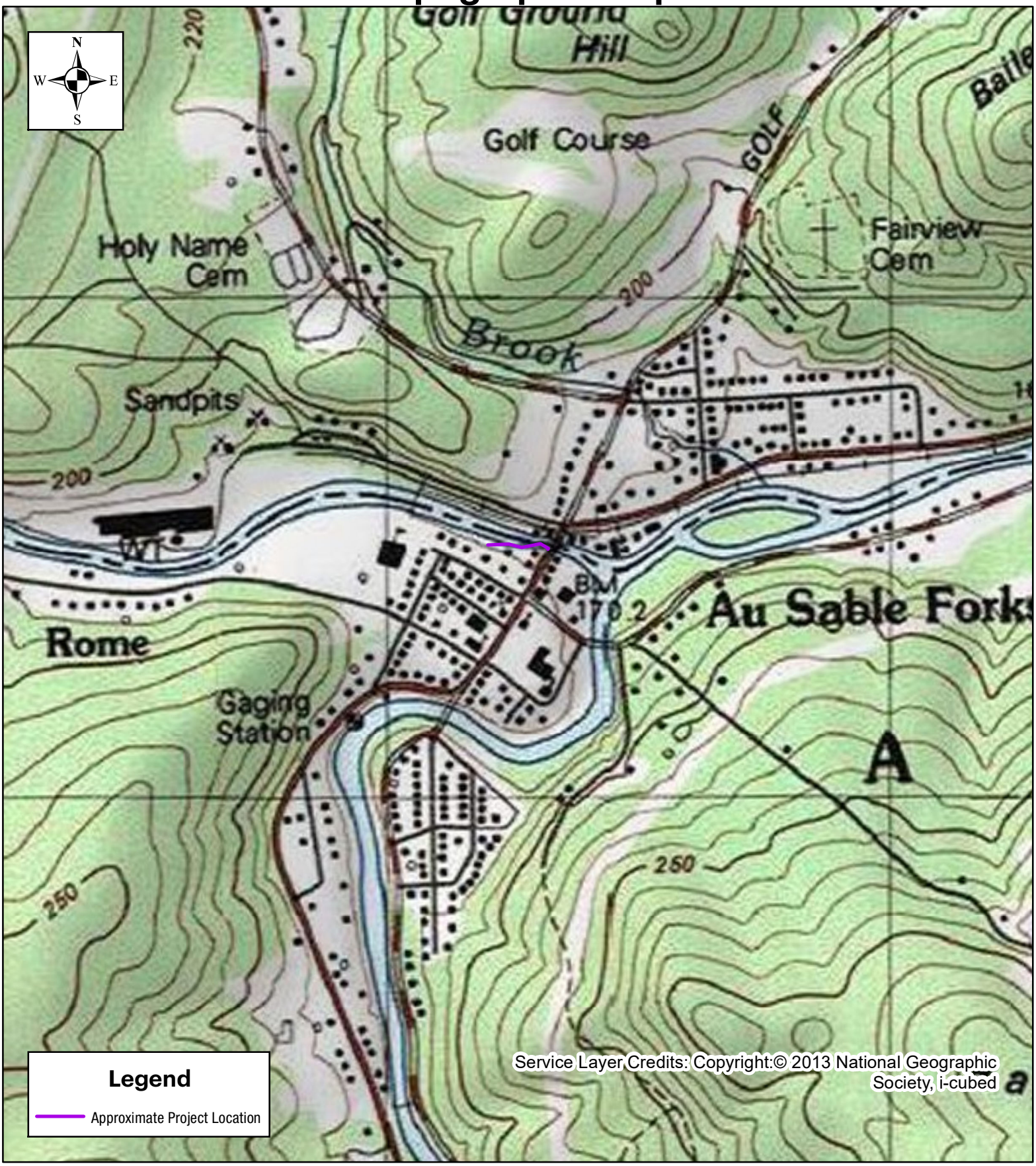
Tectonic

1:14,000

0 800 1,600 3,200 Feet

Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

Topographic Map



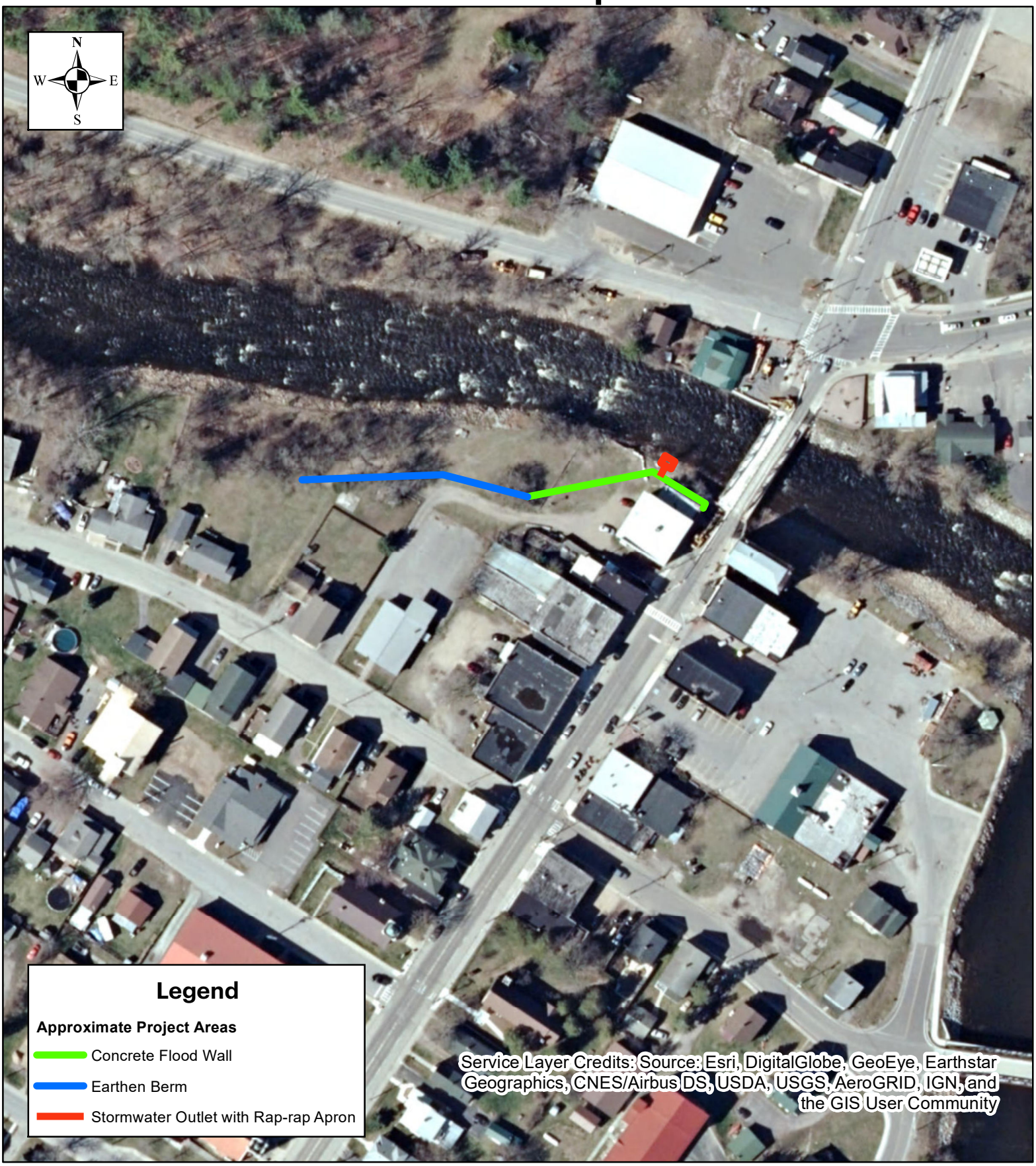
Tectonic

1:10,000

0 550 1,100 2,200 Feet

Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

Aerial Map



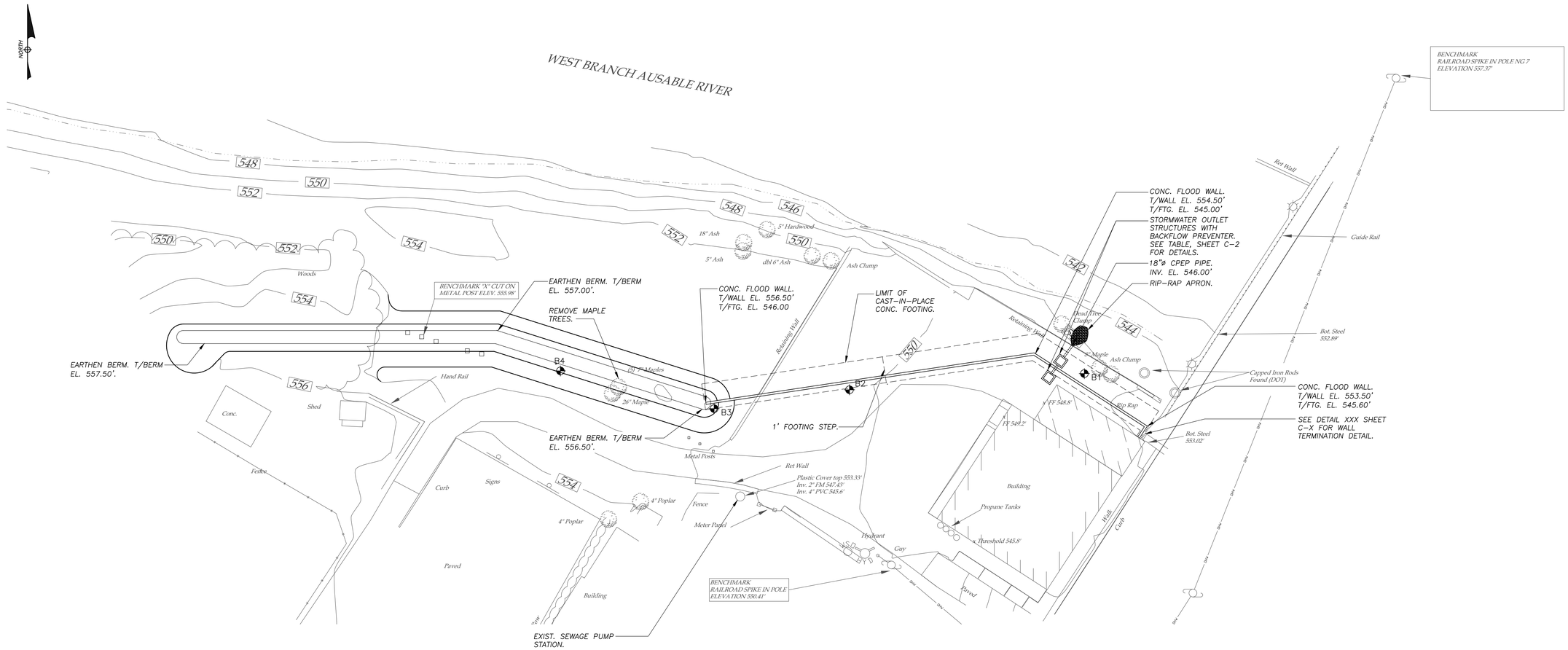
Tectonic

1:1,500

0 85 170 340 Feet

Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

Appendix B



GENERAL NOTES

1. STREAM PROTECTION: DURING THE COURSE OF CONSTRUCTION, THE WORK SHALL BE CONDUCTED IN A MANNER AS TO PREVENT OR REDUCE TO A MINIMUM ANY DAMAGE TO THE STREAM FROM POLLUTION BY DEBRIS, SEDIMENT OR OTHER FOREIGN MATERIAL, OR FROM MANIPULATION OF EQUIPMENT AND/OR MATERIALS IN OR NEAR THE STREAM.

2. WATER WHICH HAS BEEN USED FOR WASH PURPOSES OR OTHER SIMILAR OPERATIONS WHICH CAUSE THIS WATER TO BECOME POLLUTED WITH SAND, SILT, CEMENT, OIL, OR OTHER IMPURITIES, SHALL NOT BE RETURNED DIRECTLY TO THE STREAM. IF WATER IS USED FROM THE STREAM, AN INTAKE OR TEMPORARY DAM SHALL BE CONSTRUCTED TO PROTECT AND MAINTAIN WATER RIGHTS AND TO PROTECT FISH LIFE DOWNSTREAM.

3. THE CONSTRUCTION DOCUMENTS HAVE BEEN PREPARED BASED ON FIELD INSPECTIONS AND OTHER AVAILABLE INFORMATION. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS TO THE CONSTRUCTION DETAILS AND WORK QUANTITIES.

4. UNDERGROUND PIPELINE AND UTILITY LOCATIONS, IF INDICATED, ARE BASED ON VISUAL EVIDENCE ABOVE EXISTING GRADE AND ARE APPROXIMATE ONLY. THE LOCATIONS OF ALL UTILITIES SHALL BE DETERMINED PRIOR TO COMMENCING CONSTRUCTION AND PROTECTED OR REROUTED AS REQUIRED TO PREVENT DAMAGE OR INTERRUPTION OF UTILITY SERVICE.

5. SUBMITTALS: THE CONTRACTOR SHALL SUBMIT MIN. (5) COPIES OF SHOP DRAWINGS AND SUBMITTALS FOR THE FOLLOWING ITEMS FOR REVIEW BY ESSEX COUNTY AND THE ENGINEER. IN LIEU OF (5) HARD COPIES, (1) COPY OF SHOP DRAWINGS AND SUBMITTALS MAY BE TRANSMITTED ELECTRONICALLY. NO FABRICATION OF THESE ITEMS SHALL BE PERMITTED UNTIL THE SUBMITTALS HAVE BEEN REVIEWED AND ACCEPTED.

   A. CONCRETE MIX DESIGNS
   B. CONCRETE REINFORCING STEEL SHOP DRAWINGS
   C. SILT FENCE
   D. ADHESIVE GROUT
   E. JOINT SEALANTS AND CAULKING
   F. BACKFILL, EMBANKMENT, AND SUBBASE MATERIAL
   G. SEALANTS AND PENETRATING SEALER
   H. GEOTEXTILE FABRICS
   I. EXCAVATION SHORING PLAN

7. THE WORK SHALL CONFORM WITH THE REQUIREMENTS OF NYSDOT SPEC SECTION 107-05 – "SAFETY AND HEALTH REQUIREMENTS" AT ALL TIMES.

EROSION CONTROL NOTES

1. ALL SILT FENCES AND SILT SOCKS SHALL BE IN PLACE AT LOCATIONS INDICATED IN ACCORDANCE WITH THE DETAILS BEFORE COMMENCEMENT OF ANY DISTURBANCE OF EXISTING GROUND SURFACE.

2. ALL EXPOSED CUT AND FILL EARTHWORK SURFACES SHALL BE COVERED WITH MIN. 3" OF TOPSOIL AND TURFED IN ACCORDANCE WITH NYSDOT SPEC. SECTION 713, UNLESS NOTED TO BE COVERED BY PAVEMENT OR STRUCTURES.

3. ALL AREAS UNWORKED FOR MORE THAN 14 DAYS MUST BE SEEDED WITH ANNUAL RYE GRASS AND PROTECTED WITH STRAW MULCH.

4. AFTER EVERY STORM EVENT IN EXCESS OF 1/2" RAINFALL, INSPECT ALL SILT FENCES. REMOVE ACCUMULATED MATERIAL, FILL ERODED AREAS AND RESET SILT FENCES AND SILT SOCKS.

5. ENCLOSE ALL STOCKPILES WITH SILT FENCE OR SILT SOCKS.

6. EROSION CONTROL MEASURES SHALL CONFORM WITH THE REQUIREMENTS OF NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

7. THE CONTRACTOR SHALL PROVIDE A DUMPSTER AT THE SITE FOR DISPOSAL OF DEBRIS, GARBAGE AND LITTER.

8. SILT FENCES AND SILT SOCKS SHALL REMAIN IN PLACE UNTIL A STABLE GROWTH OF TURF IS PRESENT AT ALL DISTURBED AREAS.

9. THE CONTRACTOR SHALL PROVIDE AN APPROVED SECONDARY CONTAINMENT SYSTEM AT EACH SITE FOR ALL FUEL AND PETROLEUM PRODUCTS TEMPORARILY STORED ON THE SITE.

EARTHWORK NOTES

1. EXCAVATION SHALL BE TO ELEVATIONS INDICATED WITH A TOLERANCE OF PLUS OR MINUS 1". EXCAVATIONS SHALL BE OF SUFFICIENT SIZE FOR PLACING AND REMOVING FORMS, AS WELL AS INSPECTIONS.

2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL STAKE OUT ALL IMPROVEMENTS AND VERIFY GRADES AND ELEVATIONS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

3. BACKFILL MATERIALS SHALL BE SELECT STRUCTURAL FILL CONFORMING WITH NYSDOT SPEC SECTION 203. ALL BACKFILL SHALL BE PLACED IN MAXIMUM 12" LIFTS AND COMPACTED TO 95% OF THE MAXIMUM DENSITY AS ESTABLISHED THROUGH THE MODIFIED PROCTOR COMPACTION TEST PER ASTM D1557.

4. MATERIAL STOCKPILES, IF REQUIRED, SHALL BE LOCATED WHOLLY WITHIN THE WORK AREA. ADDITIONAL SILT FENCES SHALL BE PROVIDED AT THE BASE OF ALL STOCKPILES AND AS DIRECTED IN THE FIELD BY THE
5. ENGINEER OR THE OWNER.

   ALL TRENCHES AND OTHER EXCAVATED SIDE SLOPES INDICATED ON THE DRAWINGS ARE DIAGRAMMATIC ONLY AND ARE NOT INTENDED TO INDICATE A STABLE EXCAVATION SLOPE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY AND STABILITY OF ALL EXCAVATION SLOPES, SHEETING, SHORING, TRENCH BOXES, AND ANY OTHER MEANS REQUIRED FOR A SAFE WORK ENVIRONMENT AND FOR PROTECTION OF ADJACENT ROADWAYS AND OTHER STRUCTURES. ALL EXCAVATION WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING REGULATORY AGENCIES:

   -SUBPART 23-4, "EXCAVATION OPERATIONS", OF NEW YORK DEPARTMENT OF LABOR INDUSTRIAL CODE RULE 23.

   -SUBPART P, "EXCAVATIONS" OF THE UNITED STATES DEPARTMENT OF LABOR OSHA REGULATIONS FOR CONSTRUCTION.

   -ALL OTHER MUNICIPAL, COUNTY, STATE OR FEDERAL AGENCIES, REGULATIONS OR LAWS PERTAINING TO EXCAVATION SAFETY AS MAY APPLY AT THE WORK SITE.

   THE MORE STRINGENT PROVISION IN EACH OF THE ABOVE CODES SHALL APPLY. THESE PROVISIONS SHALL BE CONSIDERED MINIMUM REQUIREMENTS AND SHALL BE INCREASED IF NECESSARY TO PROVIDE SAFE WORKING CONDITIONS.

6. ALL NEW GRADES SHALL BE BLENDED SMOOTHLY WITH EXISTING GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN NEW GRADING AND EXISTING SURFACES TO REMAIN.

7. GEOTEXTILE FABRIC SHALL COMPLY WITH NYSDOT STANDARD SPEC. SECTION 737-01. ALL FABRIC SHALL APPEAR ON THE NYSDOT LIST OF APPROVED MATERIALS FOR THE USAGE INDICATED.

9. TOPSOIL, SEEDING AND MULCHING SHALL COMPLY WITH NYSDOT STANDARD SPEC. SECTION 713. CONTRACTOR SHALL ONLY USE NATIVE SEED MATERIAL FOR SITE RESTORATION.

10. CONTRACTOR SHALL NOTE THAT AMBIENT AIR TEMPERATURE DURING THE CONSTRUCTION PERIOD FOR THIS PROJECT MAY BE BELOW FREEZING. CONTRACTOR SHALL PROTECT ALL SUBGRADES AND PREVIOUSLY INSTALLED BACKFILL LIFTS FROM FREEZING. COSTS FOR ALL BLANKETS, GROUND HEATERS OR OTHER ACCEPTABLE METHODS AS REQUIRED TO PROTECT IN-PLACE SOILS FROM FREEZING SHALL BE INCLUDED IN HIS BID. THE PLACEMENT OF FILL MATERIALS ON FROZEN SOILS OR USE OF FROZEN BACKFILL MATERIALS IS STRICTLY PROHIBITED.

CONCRETE NOTES

1. CAST-IN-PLACE CONCRETE FOR THE FOR FLOODWALL SHALL CONFORM TO NYSDOT SPEC. SECTION 501, CLASS A.

2. CONCRETE WORK SHALL BE PERFORMED IN STRICT CONFORMANCE WITH THE REQUIREMENTS OF NYSDOT SPEC. SECTION 555, "STRUCTURAL CONCRETE".

3. CONTRACTOR TO NOTE THAT AMBIENT AIR TEMPERATURE DURING THE CONSTRUCTION PERIOD ANTICIPATED FOR CONSTRUCTION OF CONCRETE WORK FOR THIS PROJECT MAY REQUIRE PROVISIONS FOR COLD WEATHER CONCRETING. CONTRACTOR SHALL INCLUDE IN HIS BID ALL LABOR AND MATERIALS NECESSARY FOR SUCH COLD WEATHER CONCRETING PROVISIONS. NO ADDITIONAL PAYMENT FOR COLD WEATHER CONCRETE WORK SHALL BE PERMITTED.

4. ALL REINFORCING STEEL SHALL BE EPOXY COATED IN CONFORMANCE WITH THE REQUIREMENTS OF NYSDOT SPEC SECTION 709-04, UNLESS NOTED OTHERWISE. REINFORCING STEEL SHALL BE PLACED IN CONFORMANCE WITH THE REQUIREMENTS OF NYSDOT SPEC. SECTION 556.

5. THE OWNER SHALL RETAIN A TESTING LABORATORY CERTIFIED BY THE NYS DEPARTMENT OF TRANSPORTATION TO CONDUCT CONCRETE TESTING DURING CONSTRUCTION. REPRESENTATIVES OF THE TESTING LABORATORY SHALL BE PRESENT ON-SITE DURING ALL CONCRETE PLACEMENT OPERATIONS AS SPECIFIED IN NYSDOT SPEC. SECTION 555. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND COORDINATING WITH THE TESTING LABORATORY FOR THE FOLLOWING TESTING SERVICES:

   -SAMPLING FRESH CONCRETE: ASTM C172 EXCEPT AS MODIFIED FOR SLUMP TO COMPLY WITH ASTM C94.

   -SLUMP: ASTM C143, ONE TEST AT THE POINT OF DISCHARGE FOR EACH SET OF COMPRESSIVE TEST SPECIMENS. PERFORM ADDITIONAL TESTS WHEN THE CONSISTENCY OF THE CONCRETE APPEARS TO CHANGE.

   -AIR CONTENT: ASTM C173, VOLUMETRIC METHOD OR ASTM C231, PRESSURE METHOD FOR EACH SET OF COMPRESSIVE TEST SPECIMENS.

   -CONCRETE TEMPERATURE: ASTM C1064 FOR EACH SET OF COMPRESSIVE TEST SPECIMENS. TEST HOURLY WHEN AIR TEMPERATURE FALLS BELOW 40 DEG. F. OR WHEN AIR TEMPERATURE EXCEEDS 80 DEG, F.

   -COMPRESSIVE TEST SPECIMENS: ASTM C31 ONE SET OF 4 STANDARD CYLINDERS FOR EACH COMPRESSIVE STRENGTH TEST. MOLD AND STORE CYLINDERS FOR LABORATORY CURED TEST SPECIMENS.

   -COMPRESSIVE STRENGTH TESTS: ASTM C39, ONE SET FOR EACH DAY'S PLACEMENT EXCEEDING 5 CU. YDS. PLUS ONE ADDITIONAL SET FOR EACH ADDITIONAL 20 CU. YDS. PLACED IN ANY ONE DAY. TEST ONE SAMPLE AT 7 DAYS AND TWO AT 28 DAYS, WITH ONE SAMPLE HELD IN RESERVE FOR LATER TESTING. WHEN FREQUENCY OF TESTING WILL PROVIDE LESS THAN 5 STRENGTH TESTS CONDUCT ADDITIONAL TESTS FROM RANDOMLY SELECTED BATCHES.

   -TEST REPORTS: TEST RESULTS WILL BE REPORTED IN WRITING TO ESSEX CO. DPW AND TO THE ENGINEER WITHIN 24 HOURS OF THE TESTS. REPORTS SHALL CONTAIN THE PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF PLACEMENT, NAME OF THE TESTING SERVICE, CONCRETE TYPE AND CLASS, LOCATION OF THE CONCRETE IN THE STRUCTURE, DESIGN COMPRESSIVE STRENGTH, BATCH PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH AND TYPE OF BREAK FOR BOTH 7 AND 28 DAYS TESTS.

SURVEY NOTES

1. ELEVATIONS RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 GEOID12B.

2. TWO FOOT CONTOUR INTERVAL INDICATED.

3. THE LAYOUT OF ALL WORK FOR THE PROJECT SHALL BE COMPLETED BY A LICENSED SURVEYOR RETAINED BY THE CONTRACTOR.

4. TOPOGRAPHIC AND PLANEMETRIC INFORMATION SHOWN HERON WAS COMPILED FROM AN ACTUAL FIELD SURVEY CONDUCTED ON JANUARY 17, 2019.

5. FIELD DATA CAPTURE TOOK PLACE WITH AN ACCUMULATED SNOW COVER OF 6" TO 14". EVERY EFFORT HAS BEEN MADE TO PREPARE A COMPLETE PLOTTING OF THE CONDITIONS.

REVISIONS

REV.	DATE	DESCRIPTION
A	8/22/19	FOR ENVIRONMENTAL REVIEW AND EASEMENT NEGOTIATIONS

PRELIMINARY
NOT FOR
CONSTRUCTION

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

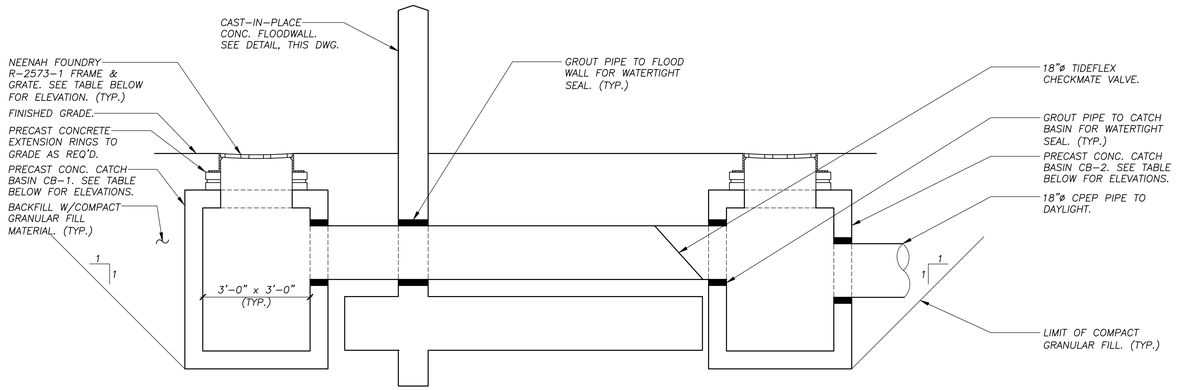
SCHODER RIVERS ASSOCIATES
Consulting Engineers, P.C.
Evergreen Professional Park
453 Dixon Road, Suite 7, Bldg. 3
Queensbury, New York 12804
(518) 761-0417, FAX: (518) 761-0513

SCALE:	AS SHOWN	DRAWN BY:	SRA
DATE:	8/22/19	ENG. BY:	RAL
PROJ. NO:	18-380	CHK'D BY:	ES

CLIENT NAME
ESSEX COUNTY
COMMUNITY RESOURCES

DRAWING TITLE
AUSABLE FORKS FLOOD
WALL PLAN

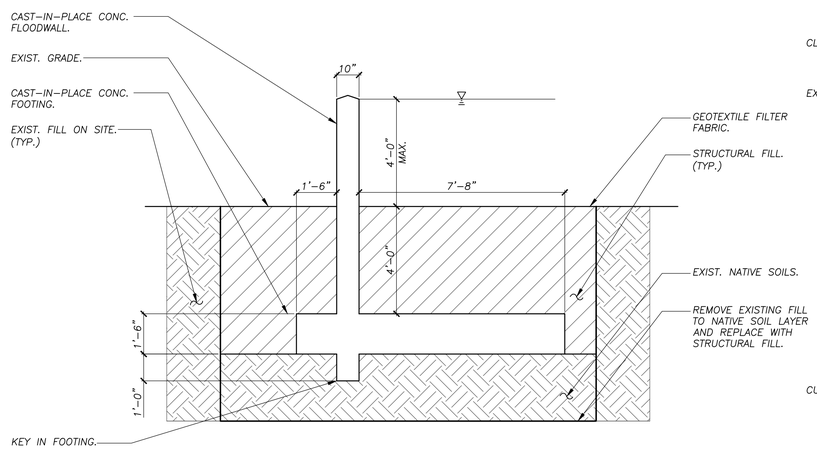
DRAWING NO. C-1
SHT. 1 OF 2
REV. A



CATCH BASIN SCHEDULE			
CATCH BASIN ID#	INLET INVERT EL.	OUTLET INVERT EL.	RIM EL.
CB-1	N/A	545.10'	548.60'
CB-2	544.86'	544.36'	548.60'

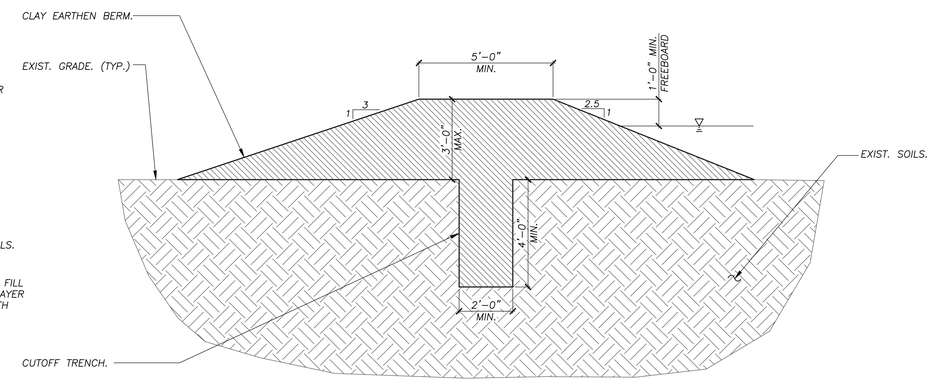
CATCH BASIN DETAIL

1/2"=1'-0"



TYPICAL FLOODWALL SECTION

N.T.S.



TYPICAL EARTHEN BERM SECTION

N.T.S.

REVISIONS		
REV.	DATE	DESCRIPTION
A	8/22/19	FOR ENVIRONMENTAL REVIEW AND EASEMENT NEGOTIATIONS

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(518) 761-0417, FAX: (518) 761-0513

SCALE:	AS SHOWN	DRAWN BY:	SRA
DATE:	8/22/19	ENG. BY:	RAL
PROJ. NO:	18-380	CHK'D BY:	ES

CLIENT NAME
ESSEX COUNTY COMMUNITY RESOURCES

DRAWING TITLE
TYPICAL DETAILS

DRAWING NO. C-2

SHT. 2 OF 2

REV. A

Appendix C

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
http://www.fws.gov/northeast/nyfo/es/section7.htm

In Reply Refer To: February 24, 2020
Consultation Code: 05E1NY00-2020-SLI-1814
Event Code: 05E1NY00-2020-E-05474
Project Name: Au Sable Forks Flood Wall Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: http://www.fws.gov/northeast/nyfo/es/section7.htm

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/

eagle_guidance.html). Additionally, wind energy projects should follow the Services wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

Project Summary

Consultation Code: 05E1NY00-2020-SLI-1814

Event Code: 05E1NY00-2020-E-05474

Project Name: Au Sable Forks Flood Wall Project

Project Type: Federal Grant / Loan Related

Project Description: Installation of a flood wall

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/44.44112631399398N73.67695532775292W

Counties: Clinton, NY | Essex, NY

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Appendix D

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Project information

NAME

Au Sable Forks Flood Wall Project

LOCATION

Clinton and Essex counties, New York

DESCRIPTION

Installation of a flood wall

Local office

New York Ecological Services Field Office

(607) 753-9334
(607) 753-9699

3817 Luker Road
Cortland, NY 13045-9385

http://www.fws.gov/northeast/nyfo/es/section7.htm

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Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species

[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

NOT FOR CONSULTATION

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

NOT FOR CONSULTATION

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be

found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

NOT FOR CONSULTATION

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

NOT FOR CONSULTATION

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

NOT FOR CONSULTATION

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

- R3UBH
- R5UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Appendix E

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

January 13, 2020

Alicia Shultz
Governor's Office of Storm Recovery
38-40 State Street
Albany, NY 12207

Re: Au Sable Forks Flood Wall Project
County: Essex Town/City: Jay

Dear Ms. Shultz:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at the project site.

Within two miles of the project site is a documented winter hibernaculum of **Northern long-eared bat** (*Myotis septentrionalis*, state and federally listed as Threatened). The bats may travel five miles or more from documented locations. The main impact of concern for bats is the removal of potential roost trees. For information about any permit considerations for your project, please contact the Permits staff at the NYSDEC Region 5 Office, Division of Environmental Permits, at dep.r5@dec.ny.gov, 518-623-1286.

Within .5 mile of the project site, along the East Branch Ausable River, is a documented location of **Appalachian tiger beetle** (*Cicindela ancocisconensis*). While not listed as Endangered or Threatened by NYS, this insect is rare in New York and of conservation concern. This species may occur elsewhere along rivers in the area. We recommend that the project be conducted so as to avoid as much as possible detrimental impacts, including run-off and erosion, to the West Branch Ausable River and its shorelines.

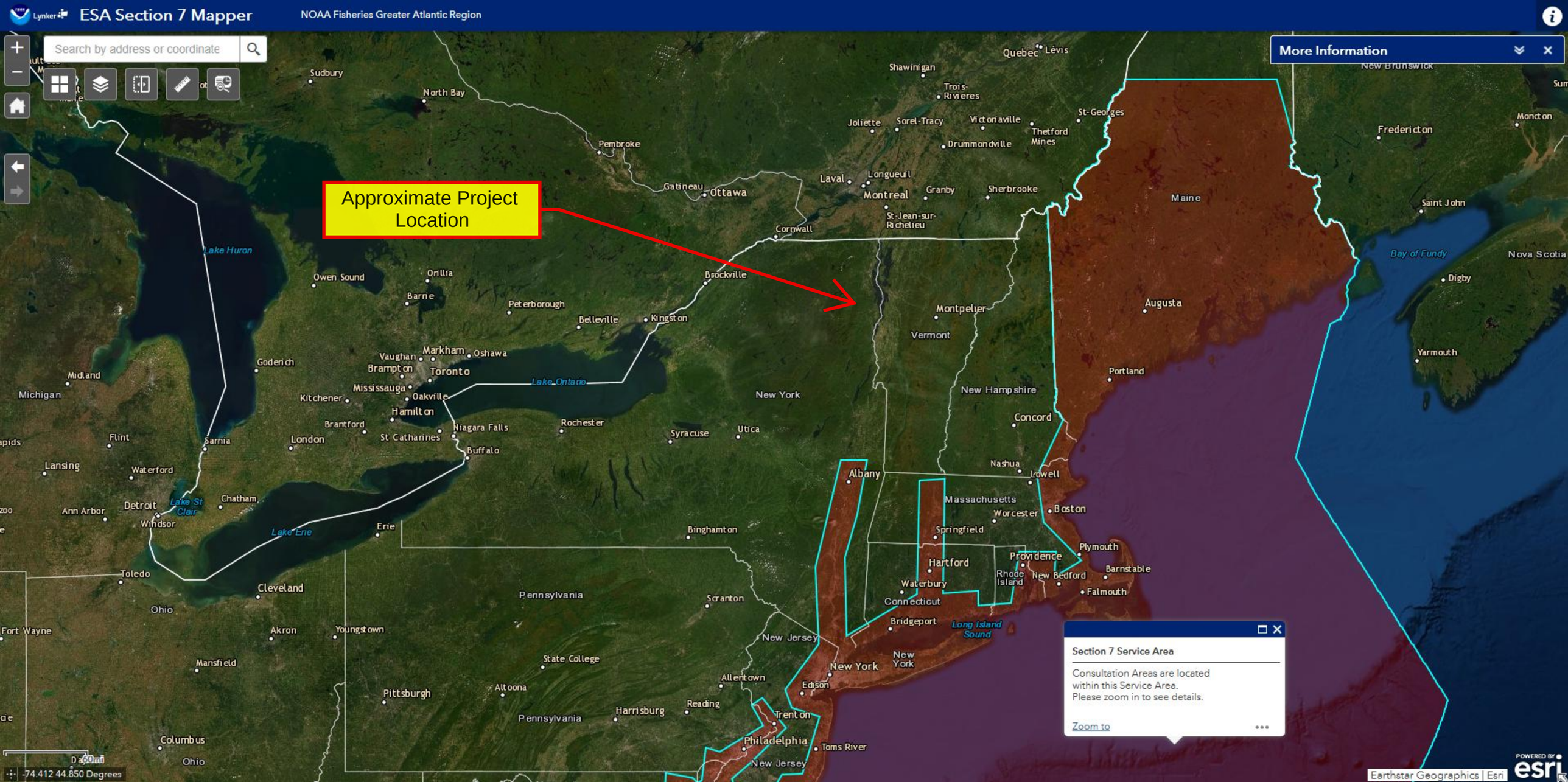
For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

Sincerely,

Nick Conrad

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

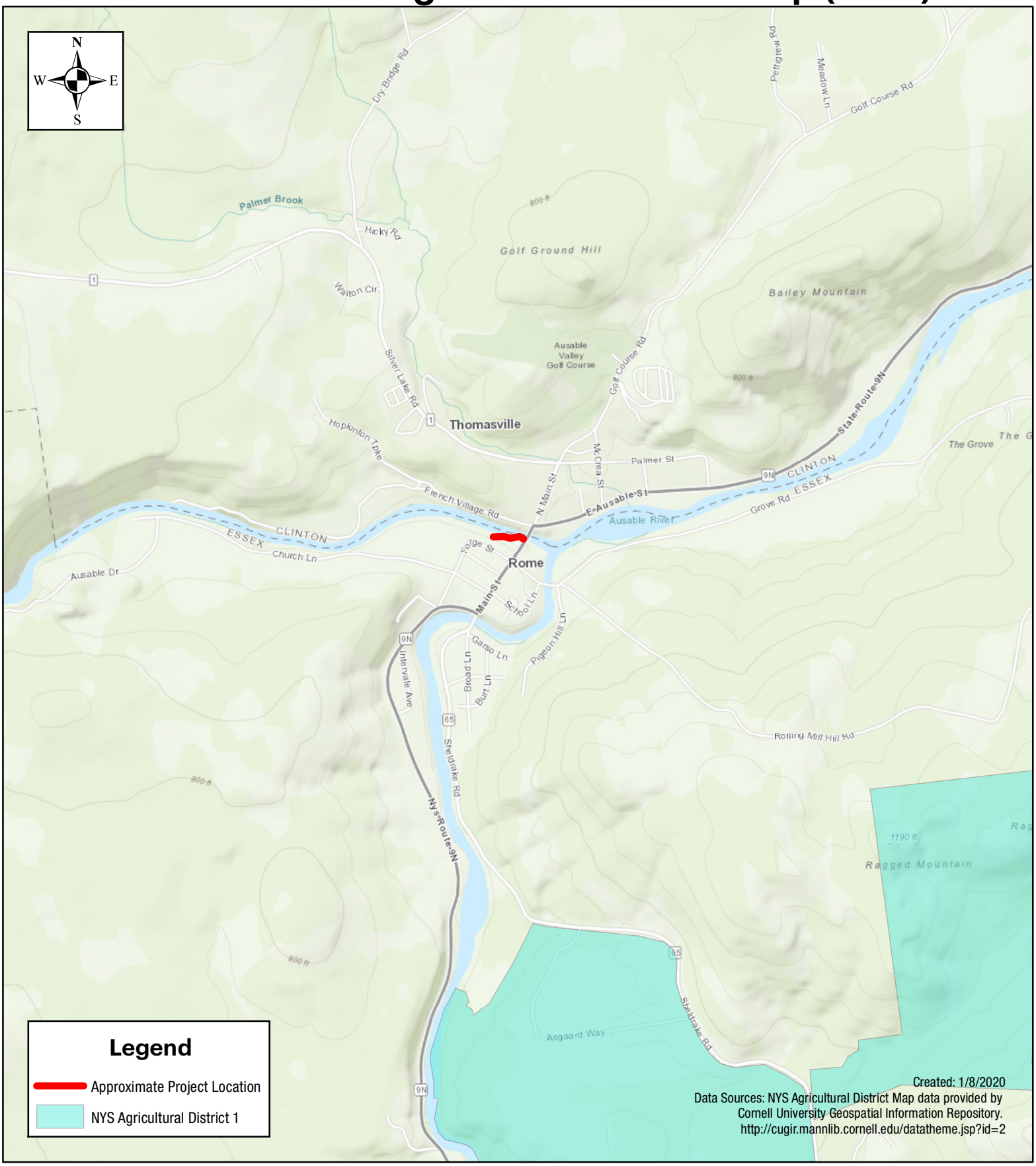

ESA Section 7 Mapper
NOAA Fisheries Greater Atlantic Region
Search by address or coordinate
More Information
Approximate Project Location
Section 7 Service Area
Consultation Areas are located within this Service Area.
Please zoom in to see details.
Zoom to
Quebec
Lévis
Shawinigan
Trois-Rivières
Sudbury
North Bay
Pembroke
Joliette
Sorel-Tracy
Victoriaville
Thetford Mines
St-Georges
Drummondville
Fredericton
Moncton
Gatineau
Ottawa
Laval
Longueuil
Montreal
Granby
Sherbrooke
St-Jean-sur-Richelieu
Cornwall
Maine
Saint John
Bay of Fundy
Nova Scotia
Digby
Lake Huron
Owen Sound
Orillia
Barrie
Brockville
Peterborough
Belleville
Kingston
Montpelier
Vermont
Augusta
Yarmouth
Portland
Goderich
Vaughan
Markham
Oshawa
Brampton
Toronto
Lake Ontario
Midland
Michigan
Mississauga
Oakville
Kitchener
New York
New Hampshire
Concord
Hamilton
Brantford
Rochester
Niagara Falls
St Catharines
Syracuse
Utica
Flint
Sarnia
London
Buffalo
Lansing
Waterford
Albany
Nashua
Lowell
Massachusetts
Worcester
Boston
Detroit
Lake St Clair
Chatham
Ann Arbor
Windsor
Lake Erie
Erie
Binghamton
Springfield
Plymouth
Hartford
Providence
Rhode Island
New Bedford
Barnstable
Falmouth
Toledo
Waterbury
Connecticut
Cleveland
Pennsylvania
Scranton
Ohio
Bridgeport
Long Island Sound
Fort Wayne
Akron
Youngstown
New Jersey
Mansfield
State College
New York
New York
Allentown
Edison
Pittsburgh
Altoona
Reading
Harrisburg
Pennsylvania
Trenton
Columbus
Philadelphia
Toms River
Ohio
New Jersey
-74.412 44.850 Degrees
Earthstar Geographics | Esri
POWERED BY esri

Attachment 10

Agricultural and NRCS Soil Resource Documents

New York State Agricultural District Map
USDA NRCS Soil Resource Report
USDA NRCS Farmland Classification Report

New York State Agricultural District Map (2018)



Tectonic

1:20,000

0 1,125 2,250 4,500 Feet

Au Sable Forks Flood Wall Project
South Bank of West Branch Ausable River
Hamlet of Au Sable Forks
Town of Jay
Essex County, New York

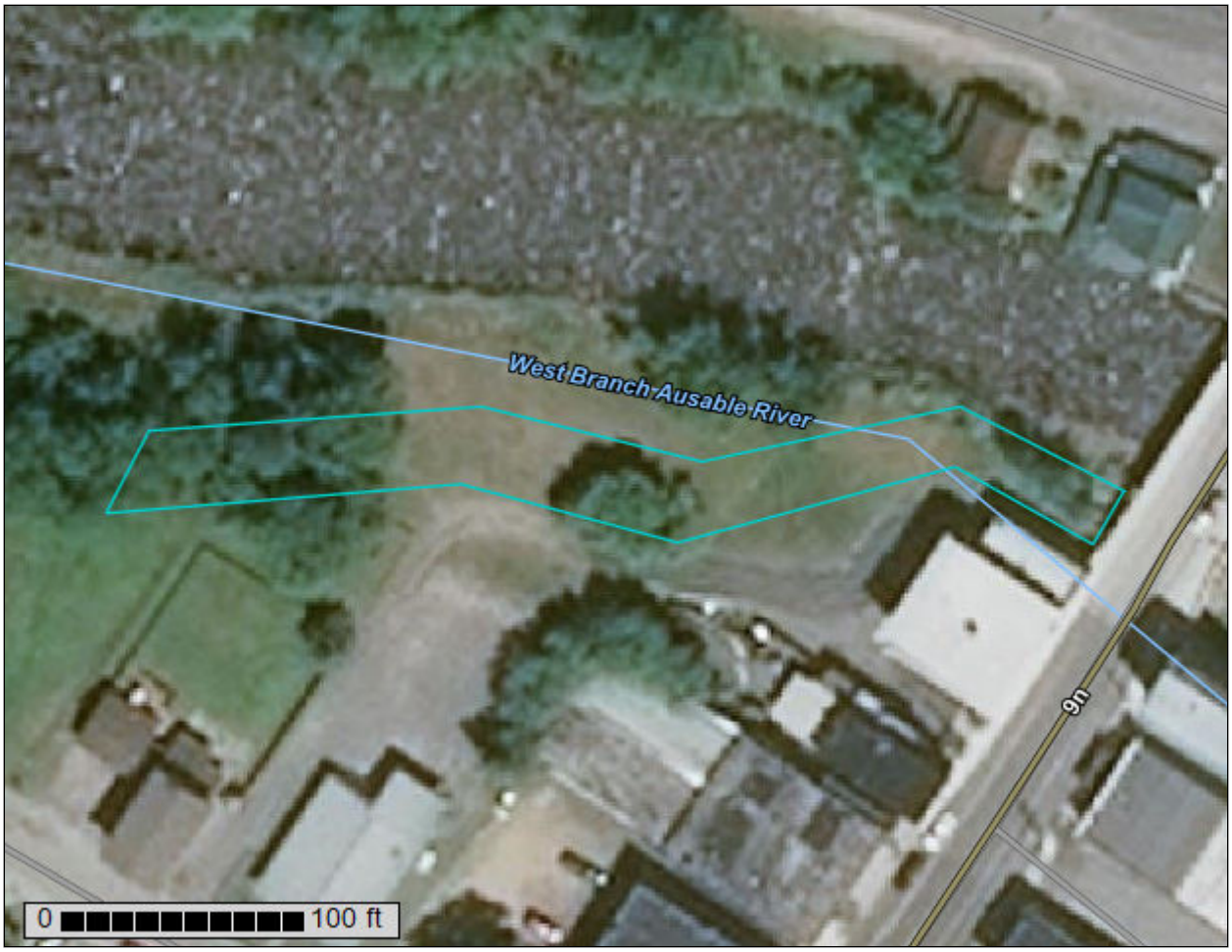
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Essex County, New York



March 9, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

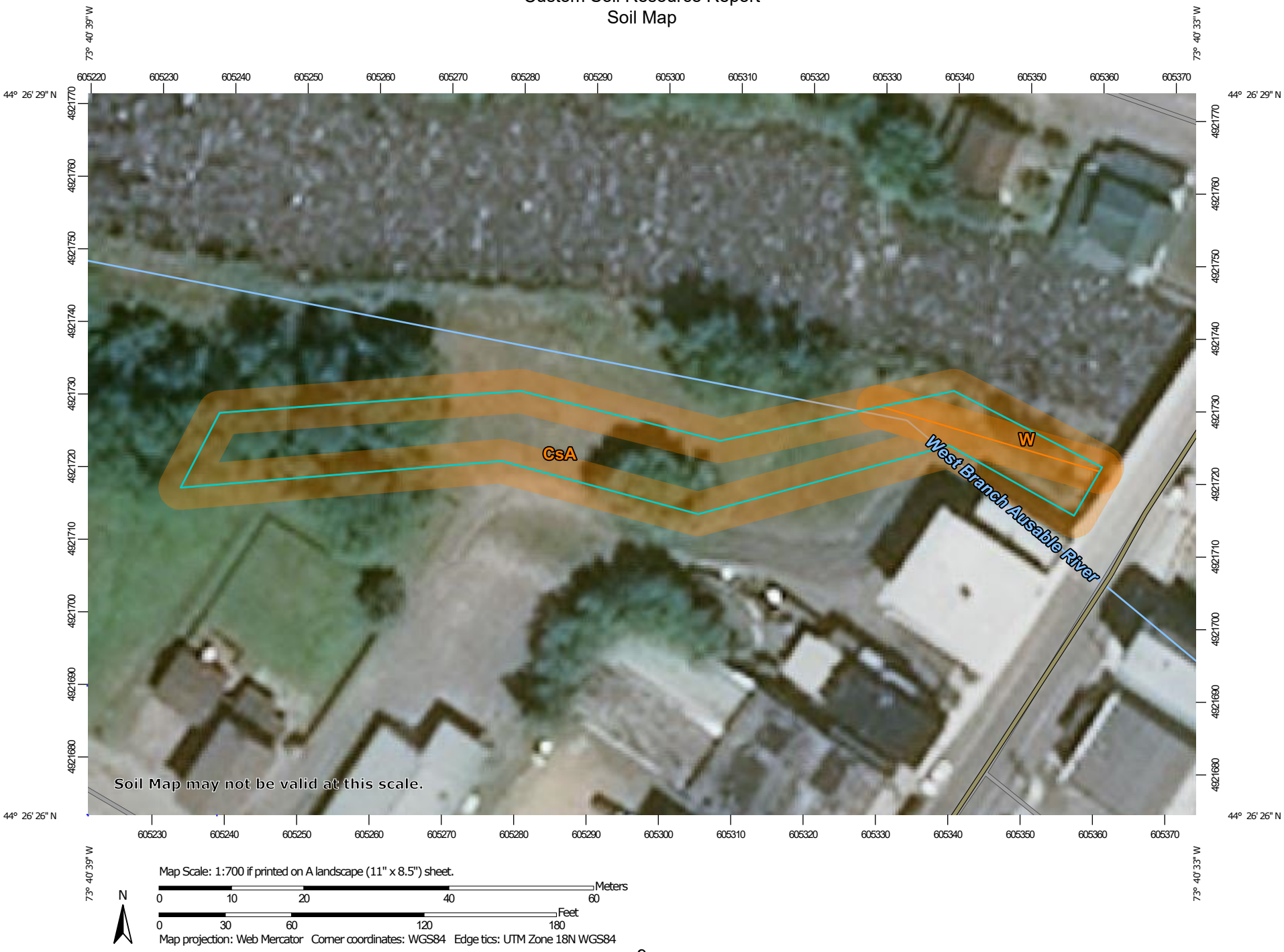
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Essex County, New York
Survey Area Data: Version 19, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 23, 2019—Jul 8, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CsA	Colton very gravelly loamy sand, 0 to 3 percent slopes	0.3	92.5%
W	Water	0.0	7.5%
Totals for Area of Interest		**0.3**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Essex County, New York

CsA—Colton very gravelly loamy sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: bm9f
Elevation: 510 to 3,030 feet
Mean annual precipitation: 34 to 50 inches
Mean annual air temperature: 37 to 45 degrees F
Frost-free period: 100 to 130 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Colton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Colton

Setting

Landform: Outwash plains, kame terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Gravelly outwash derived from gneiss

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
Oe - 1 to 2 inches: moderately decomposed plant material
E - 2 to 3 inches: very gravelly loamy sand
Bhs - 3 to 6 inches: very gravelly loamy sand
Bs - 6 to 13 inches: very gravelly loamy sand
BC - 13 to 21 inches: very gravelly loamy sand
C - 21 to 72 inches: extremely gravelly coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Adams
Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed
Percent of map unit: 3 percent
Hydric soil rating: No

Duxbury
Percent of map unit: 3 percent
Hydric soil rating: No

Monadnock
Percent of map unit: 2 percent
Hydric soil rating: No

Croghan
Percent of map unit: 2 percent
Hydric soil rating: No

W—Water

Map Unit Composition
Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water

Setting
Landform: Lakes

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

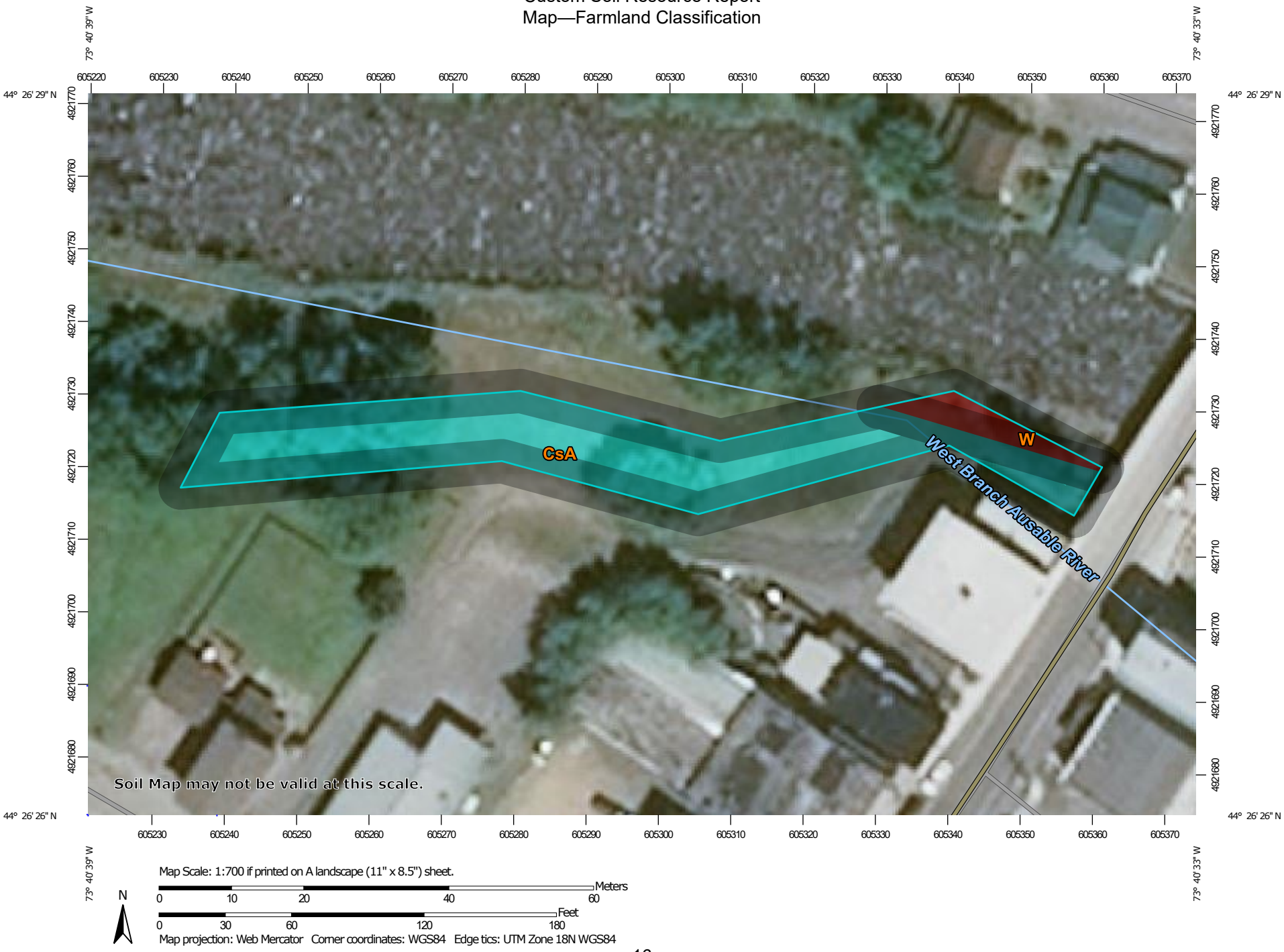
Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Map—Farmland Classification



Map Scale: 1:700 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 30 60 120 180

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Points

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
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- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 19, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 23, 2019—Jul 8, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CsA	Colton very gravelly loamy sand, 0 to 3 percent slopes	Farmland of statewide importance	0.3	92.5%
W	Water	Not prime farmland	0.0	7.5%
Totals for Area of Interest			**0.3**	**100.0%**

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

References

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Attachment 11

Adirondack Park Agency Application for Variance from Shoreline Restrictions. Au Sable Forks Flood Barrier – Town of Jay, NY. Appendix D.

Attachment D

APA Variance – Attachment D

Attachment D: Appendix D & G Variance Description and Justification

Adirondack Park Agency Application for Variance from Shoreline Restrictions
Au Sable Forks Flood Barrier – Town of Jay, NY
Applicant: Archie Depo – Supervisor, Town of Jay
February, 2020(Rev.5/2020)

6. Variance Justification:

Minimization

(a) Describe how the requested variance represents the minimum relief necessary from the shoreline restrictions….

The purpose of this project is to provide protection for up to 7 buildings as well as a wastewater pumping station against storms up to the 25-yr frequency. The project will consist of the construction of 185 linear feet of reinforced concrete barrier along the southern banks of the West Branch upstream of the Main Street Bridge. The barrier will transition into an approximately 205 linear foot earthen berm. The flood barrier will consist of a concrete wall with a maximum height of 5.9 feet, and a berm 3 feet high to provide adequate protection for 25-yr storm flood levels.

Some tree cutting will be required to complete the construction and for site access and staging during construction. There will be removal of no more than 30% of the trees as per Appendix G of the APA Variance application, and removal of no more than 30 percent of the vegetation within 6 feet of the mean high-water mark. There are two trees within the 35' requirement, an 8" Maple, an Ash clump. There is also a dead tree clump near that should be cleaned up. We understand that a permit will be required for vegetative cutting within 100 feet of a designated Wild, Scenic or Recreational River, and we are requesting APA approval of that at this time also.

The project area is defined as the southerly bank immediately west/up-stream, of the new Main Street bridge. The project is located on two parcel(s) owned by Mr. Kevin Douglas and Mr. Matthew Cross whom recently purchased said property from Ms. Rita Robins. The project is funded by a Community Development Block Grant – Disaster Recovery (CDGB-DR) through the U.S. Housing and Urban Development (HUD) and administered through the NYS Governor's Office of Storm Recovery (GOSR) to improve flood resiliency in the Town of Jay. The Town is therefore the project sponsor, while the landowner(s), Mr. Douglas and Mr. Cross are the project applicant/landowner.

The riverbank in this area is low and comprised of potentially erodible and highly erodible soils, and building materials left over from prior activities in the area. Historically, there were other structures located northwest to the two remaining structures. Including an existing, short retaining wall and the old town theater. These buildings no longer exist but the retaining wall and a shallow, 86' section of the concrete stage that used to be a part of the former theater stage remains.

The alignment of the flood barrier approximately follows the current 100-year flood limit. More accurately, the proposed West Branch flood barrier and berm were aligned to be located within the ineffective flow area created by the bridge opening and buildings, to limit the impacts to water surface elevation and velocity.

The subject parcels are currently within the 100-year limit. In recent years flooding has become more frequent and flood levels have been rising. The proposed flood barrier will provide relief to the existing structures, public sanitary sewer and lift station, and private septic systems at this location.

(b) Describe any efforts that were made prior to the current proposal to minimize the request...

This project was first developed and evaluated in the Au Sable Forks Long Term Community Recovery (LTCR) Strategy report published by Erik Sandblom, PC (ESPC), Fitzgerald Environmental Associates, LLC. (FEA), and Community Roots (CR).

Significant storm events in recent years (Tropical Storms Lee and Irene in 2011) have Over-topped the riverbank in this area resulting in the flooding of 6 adjacent buildings and a public sanitary sewer pump station, however these areas flood much more frequently than just these major events. As seen in the attached plans, the 100-year flood plain now covers much of this area. The devastation caused by Lee and Irene triggered State funding and a HUD project, the afore mentioned LTCR strategy and the proposed restoration activities, of which this task is a part.

The only prior efforts included reacting to flood events with sandbags and pumping and withstanding the damage created by the flooding and repairing and cleaning up after the event. The receipt of this funding, which has a time limit, represents an opportunity to develop a permanent solution that did not exist previously.

Methods that have been implemented in the past, such as sandbags and pumping. During the development of this plan flow modeling was performed to determine the river characteristics and it was determined that the flood depth and velocities were too great for natural methods to provide the necessary protection.

The purpose of this project is to implement a permanent flood barrier to protect the structures and properties that are impacted by the flooding. Several different types of barriers were considered, including a planted berm along the entire alignment of the barrier. It was determined that the portion of the barrier that is situated away from the primary channel of the river and that only would experience flood depths of 2-3 feet would be appropriate for a planted berm, and that is what the final design reflects. A planted berm or other non-structural method was determined infeasible for the remaining sections of the barrier due to flood depth and water velocities. In addition, an earthen berm would require a very large footprint that would further constrict the river in this location and exacerbate flooding and cause downstream impacts.

PRELIMINARY DESIGN

The LTCR report recommendations were used as a foundation for our design. Since that report was completed the existing Main Street bridge has been replaced.

With this replacement the location of the abutments changed, and the open channel width increased slightly. This caused the abutment stem to be flush with the foundation of an adjacent building.

Given the changes to the bridge, the flood barrier will need to be located a few feet in front the existing Cross building foundation, giving enough room to build the flood barrier footing. The barrier terminates at the building.

The purchase of and demolition of the building was considered but deemed cost prohibitive and would not resolve the flooding issues and potential of contamination of the river due to the existing sanitary systems in that area.

EXISTING SOILS DATA

Four (4) test borings were drilled by QC/QA laboratories and analyzed by Quality Geo Engineering, P.C. to determine the existing soils qualities and suitability for the proposed project.

Through their analysis it was determined that the site had approximately 4 to 8 feet of fill type soils underlain by indigenous alluvium soils. The fill type soils were described as brown, brown-black sand with varying amounts of intermixed gravel, silt, slag, ash, wood, cinders, concrete, and/or brick. The indigenous soils were generally described as brown to brown-gray sand with varying amounts of intermixed silt and gravel, brown gravel with intermixed sand and trace silt. These soils were also laden with boulders. Groundwater was encountered at 6 feet in test boring B-1 but may vary seasonally and with weather.

The fill type soils were deemed unsuitable for bearing the flood barrier and should be removed to the indigenous soils layer and replaced with structural fill. The indigenous soils have a maximum allowable soil bearing pressure of 4,000 psf and would have less than an inch of settlement.

It was also recommended that the flood barrier have a key to increase the seepage flow line distance and help reduce the possibility that groundwater flow will undermine the structures. Please see Attachment L for copy of the Geotechnical Report.

A test pit was dug to locate and determine the configuration of the adjacent building foundation. The soil was found to be a mixture of granular, black/gray sand, silt, stones, wood, etc. The building foundation was found at a depth of 3 feet and protrudes about 10-inches out from the face of the existing building wall.

PROJECT RECCOMENDATIONS

Going forward the town has two potential options to choose from, depending on budget constraints. Option A, build Flood Barrier to provide flood relief or Option B, do nothing.

Option A will provide the most benefit at preventing seasonal flooding for the least amount of cost. This is the only viable solution to maintaining the existing infrastructure.

Potential Impacts

(c)Describe the extent to which the variance, if granted, would create impacts to the natural, scenic, open space, or other resources of the park…..

Consideration of the Flood Barrier would provide a great benefit to the Town and landowners by providing flood resistance for the immediate structures and sanitary sewer pump station. The proposed flood barrier would be constructed using reinforced concrete with a simulated rock surface. The proposal would not be decremental to the existing conditions. The proposed location for the flood barrier will not require significant modification of the topography and will not require removal of vegetation above the limits imposed by the APA.

There are existing walls on both sides of the river at this location now. The existing retaining wall on the south side (subject site) is currently a short wall, ~5.5 feet tall and about 33 feet long, there is a second wall running perpendicular to the river that is about 2 feet tall and 86 feet long, but neither are adequate to protect against current storm events and conditions. The existing wall on the north side is much taller and covered with graffiti. Please see the attached photos of existing conditions present today in Attachment K, the last photo provided shows the extent of flooding in a recent storm event. Impacts to the site will be held to a minimum.

(d)Describe any potential impacts that the variance, if granted, would cause to water quality, including stormwater run-off, erosion, and sedimentation, or any other project components that may impact water quality. Please include any potential benefits to water quality from the proposal:

The proposed project will not degrade the existing conditions of water quality, stormwater run-off and/or erosion and sedimentation. In fact, the proposed flood barrier

will likely improve both water quality and visual appearance. It will also improve quality by preventing floodwater from contacting areas that may contain pollution and prevent overflowing the sanitary sewer pump station and septic tanks.

The proposed West Branch flood wall and berm were aligned to be located within the ineffective flow area created by the bridge opening and buildings, to limit impacts to water surface elevation and velocity.

The HEC-RAS model for this project utilized adjusted USGS Stream Stats estimated flows, please see the HEC-RAS model summary and exhibits in attachment E. The USGS Stream Stats flow estimates for the West Branch were increased by approximately 20% based on a more detailed study of the flow record for the East Branch. In summary, the USGS Gauge near Au Sable Forks (#4275500) was statistically analyzed to determine the various design flow events and compared them to the Stream Stat estimate at the same location as the USGS Gauge. The adjusted Q10 and Q25

flows for the West Branch utilized in the HEC-RAS model were estimated at 8,800 CFS and 10,800 CFS, respectively.

The Q25 HEC-RAS model results were utilized to determine the elevations for the top of the floodwall and berm. The Q10 and Q25 HEC-RAS modeling results showed negligible water surface and velocity increases due to the floodwall project. The Q10 estimated water surface elevation increased by 0.00' to 0.04', and the cross-sectional velocity only increased by 0.05 ft/s just at the bridge opening. The Q25 estimated water surface elevation increased by 0.02' to 0.03' within the project area, and the cross-sectional velocity only increased by 0.02 ft/s approaching the bridge.

The HEC-RAS model shows that the flood barrier will reduce the impacts of flooding at this location and locations downstream by maintaining the flows within the existing river channel thereby eliminating that source of erosion and sedimentation. Also, by maintaining the channel, the improved flow will most likely reduce or eliminate ice-jams at the downstream bridge.

In addition to the erosion and sedimentation improvements the proposed flood barrier will provide, this barrier will also provide protection for the Towns sanitary sewer pump station that floods also, spilling sanitary waste into the Au Sable River.

(e)Describe any other effects, such as grading, stormwater runoff, and visual impacts that the variance, if granted, would have on adjoining and nearby properties…..

The proposed project, flood barrier and berm have been designed with the existing topography in mind, minimizing the impacts to existing grade and surrounding property. The flood barrier follows the 100-year flood boundary(approx.)

The proposed flood barrier will be visible from the river, but with the combination of greenspace and the proposed natural rock texture on the horizontal surface of the barrier, it will fit in with the Hamlet.

The immediately surrounding properties will also benefit from the additional flood protection the barrier will provide. Please see the photos provided in Appendix D.

Variance Site History

(f) Describe how the need for a variance arose. This may involve the characteristics of the variance site and/or changes to the site that have occurred over time:

This area floods regularly. This is an opportunity for the Town of Jay as they have received a grant that has been approved for flood resiliency. Tropical Storms Irene and Sandy are what brought about this opportunity.

Adverse Consequences

(c)Describe and provide supporting documentation of any adverse consequences that would result from denial of the variance, such as loss of property due to erosion and/or potential damage to existing structures from continued erosion…..

Please see the attached photos of the existing site conditions and flooding that occurs at this location during storm events. The existing structures currently flood with significant storm events and the public sanitary sewer pump station is compromised during the flooding events. The existing buildings will continue to flood and will continue to deteriorate as well as the potential of contamination of the river due to the flooding of the sewer.

Attachment 12

SHPO Documentation

SHPO Response

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

December 31, 2019

Kim Croshier
Sr. Environmental Scientist
Tectonic Engineering & Surveying Consultants, PC
70 Pleasant Hill Rd.
Mountainville, NY 10953

Re: CDBG-DR
Au Sable Forks Flood Wall Project
Hamlet of Au Sable Forks, Town of Jay, Essex County, NY
19PR08543

Dear Kim Croshier:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

Based upon this review, it is the opinion of the New York SHPO that no historic properties, including archaeological and/or historic resources, will be affected by this undertaking.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

Attachment 13
Wetland Delineation

Fitzgerald Environmental Associates, LLC.

Applied Watershed Science & Ecology

MEMORANDUM

To: David Mellor, PE, Schoder Rivers Associates, P.C.

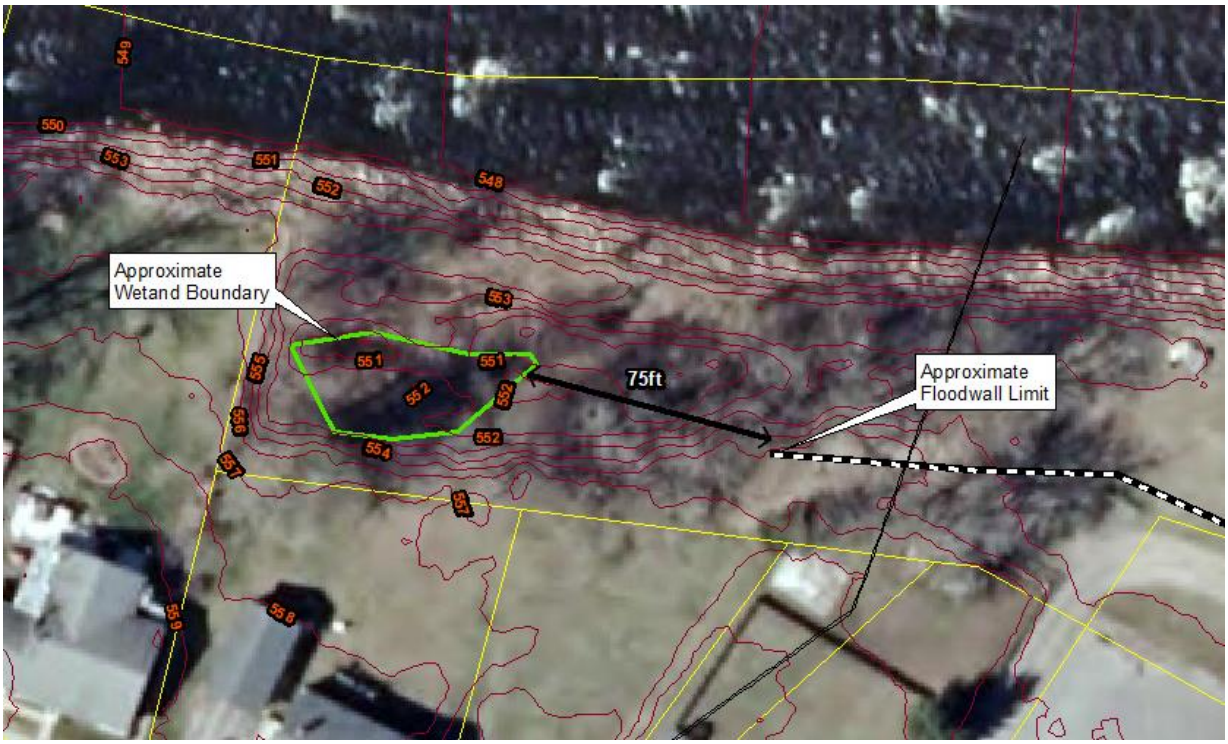
From: Evan P. Fitzgerald, CPESC/CFM

Re: Au Sable Forks Proposed Floodwall – Wetland Delineation

Date: June 11, 2020

On June 4, 2020 I made a site visit to review the presence or absence of jurisdictional wetlands within the vicinity of the proposed floodwall, as depicted on the plan set prepared by your office and dated August 22, 2019. According to the Adirondack Park Agency wetlands mapping, no wetlands are indicated near the proposed floodwall or anywhere on the subject property.

My assessment of presence/absence of wetlands followed U.S. Army Corps of Engineers methodology using the "*Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*." My observations of soils, vegetation, and hydrology included the area of disturbance associated with the proposed floodwall and adjacent low lying areas to rule out potential impacts to jurisdictional wetlands. I did not observe any wetlands within 50 feet of the proposed area of disturbance. Approximately 75 feet to the west of the proposed floodwall I delineated a small wetland isolated from the West Branch Ausable River by a cobble/gravel berm (see figure below). I located the wetland boundary using sub-meter GPS. Based on my assessment I conclude there are no wetlands within the proposed disturbed area, and therefore no potential for undue adverse impacts on jurisdictional wetlands.



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