

**Environmental Assessment
Cole Hollow Road Realignment
Town of Blenheim, Schoharie County, New York**

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FEMA

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LIST OF ACRONYMS

amsl	Above Mean Sea Level
ACHP	Advisory Council on Historic Preservation
AD	Area of Disturbance
APE	Area of Potential Effect
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
BFE	Base Flood Elevation
BMP	Best Management Practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act
DRP	Data Recovery Plan
EA	Environmental Assessment

EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
EO	Executive Order
FEA	Final Environmental Assessment
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
NAAQS	National Ambient Air Quality Standards
NASS	National Agricultural Statistics Service
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHP	Natural Heritage Program
NLEB	Northern Long-Eared Bat
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRE	National Register Eligible
NRHP	National Register of Historic Places
NRL	National Register Listed
NRCS	Natural Resources Conservation Service
NYS	New York State
NYSBC	New York State Building Code
NYSDEC	New York State Department of Environmental Conservation
NYSDHSES	New York State Division of Homeland Security and Emergency Services
NYSECL	New York State Environmental Conservation Law
NYSOPRHP	New York State Office of Parks, Recreation, and Historic Preservation
OSHA	Occupational Safety and Health Administration
PAF	Public Archaeology Facility
PM	Particulate Matter
RCRA	Resource Conservation and Recovery Act
SCO	Soil Cleanup Objectives
SF	Square Foot
SEQR	State Environmental Quality Review
SEQRA	State Environmental Quality Review Act
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Office
SPDES	State Pollutant Discharge Elimination System
SVOC	Semi-Volatile Organic Compounds
SWPPP	Stormwater Pollution Prevention Plan
THPO	Tribal Historic Preservation Office
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service

USGS United States Geological Survey
VOC Volatile Organic Compounds

1.0 INTRODUCTION

The Town of Blenheim, herein referred to as the “Subgrantee”, has requested financial assistance from the U.S. Department of Homeland Security-Federal Emergency Management Agency (FEMA) to realign a portion of Cole Hollow Road located in the Town of Blenheim, Schoharie County, New York. The new section of road would replace the portion of road that failed as a result of substantial storm damage experienced during Hurricane Irene. The storm incident period that occurred August 26 to September 5, 2011, was declared a major disaster by President Barack H. Obama on August 31, 2011 and subsequently amended (FEMA 4020-DR-NY). Federal public assistance was made available to affected communities and non-profit organizations in accordance with the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1974, (42 U.S.C. 5172 et seq.), as amended. The New York State Division of Homeland Security and Emergency Services (NYSDHSES) is the Grantee partner for the proposed action. The Public Assistance Subgrant Application reference number is PW #8505.

The proposed Cole Hollow Road Realignment is located in the Town of Blenheim, Schoharie County, New York; approximately 0.6 mile west of the Cole Hollow Road intersection with County Route 31 in the flats of the Schoharie Valley, and approximately 2.2 miles north/northeast, as the crow flies, of the intersection of County Route 31 and NYS Route 30 (*Appendix A*). The Project consists of realigning a portion of Cole Hollow Road from its intersection with Cole Hollow Road Spur (42.5033 -74.4382) to within 500 feet of the terminus of the paved section of the road (42.5024 -74.4420) away from the slope and road failure that resulted from the flooding events caused by the storm. The flooding events eroded the bed and bank of the Cole Hollow Brook at the toe of the slope adjacent to a portion of Cole Hollow Road, which resulted in the failure of the slope and of Cole Hollow Road. The Project would relocate approximately 1,475 feet of road to a location away from the unstable slope to maintain public safety and access to homes, private land, state forest, and the Long Path hiking trail. The realignment of Cole Hollow Road would move the compromised portion of the road approximately 350 feet away from the slope failure to a lightly wooded and open field area (*Appendix A*). The construction of the road would include cut and fill earthwork, placement of subbase and pavement material, and the construction of stormwater measures, including one cross culvert, roadside ditches and one driveway culvert. Land would need to be acquired by the Town to accommodate the relocated portion of the road since the road realignment would be outside of the existing road right-of-way. Upon completion of the road realignment, the Subgrantee would scarify the pavement, spread topsoil and establish turf on the abandoned portion of the road.

FEMA is required as a Federal agency to evaluate the potential environmental impacts of its proposed actions and alternatives to proposed actions, in order to make an informed decision in defining a proposed project for implementation. FEMA must consider and incorporate, to the extent practicable, measures to avoid, minimize, or mitigate adverse impacts to the human environment. This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the President’s Council on Environmental Quality regulations to implement NEPA (40 CFR Parts 1500-1508), and FEMA’s regulations implementing NEPA (44 CFR Part 10). FEMA is required to consider potential environmental impacts before funding or approving actions and projects. This Environmental Assessment (EA) serves as documentation of FEMA’s analysis of the potential environmental impacts of the proposed relocation, including analysis of project alternatives, and identification of impact minimization measures.

The purpose of this EA is to analyze the potential environmental impacts of the proposed realignment of Cole Hollow Road, including analysis of the project alternatives and identification of impact minimization measures. The EA also serves as written communication of the environmental evaluation for public and interested party comment. Public involvement is a component of NEPA to inform an agency's determination of whether to prepare an Environmental Impact Statement (EIS) or issue a Finding of No Significant Impact (FONSI).

2.0 PURPOSE AND NEED

The objective of the Public Assistance Grant Program is to provide assistance to State, Tribal, and local governments and certain types of private nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies. The purpose of this project is to permanently eliminate slope stability issues and re-establish safe access to local homes, private land, state forest, and the Long Path hiking trail, to consider flood damage risk reduction measures for the facility during plan formulation, eliminate the danger of complete road failure, to maintain accessibility for residents located beyond the area of concern, and to assure public safety for motorists and operability for first responders during an emergency event. The need arose due to the flood damage sustained to the existing road as a result of Hurricane Irene.

3.0 BACKGROUND

Cole Hollow Road is a 16-foot wide, low volume Town roadway that provides access for eight homes to and from County Route 31 to the east. Five of those homes are located west of the failure area. Although Cole Hollow Road continues in a westerly direction beyond the five residences, only the first 0.86 miles from County Route 31 is paved and the first 1.8 miles is maintained year-round; the remainder is a seasonal road that is not maintained in the winter time and is only passable with a four wheel drive vehicle in the summer time. The road and slope failure occurred 0.2 mile east of the end of the paved segment of road. Cole Hollow Road connects County Route 31 (Bear Ladder Road) to the east with Duck Pond Road and Rossman Hill Road to the west. Duck Pond Road and Rossman Hill Road are year-round roads. Based on data obtained from the Institute of Transportation Engineers Trip Generation Manual, the five single-family detached housing units located west of the failure area generate an average of approximately 48 vehicular trips per day. In the area of the slope and road failure, the road is located approximately 105 feet above and 210 feet away from Cole Hollow Brook on the outside of a meander. The slope between the road and the creek is heavily wooded. The Subgrantee owns the road and is responsible for and regularly performs all maintenance activities.

4.0 ALTERNATIVES

NEPA requires the analysis of practicable alternatives as part of the environmental review process for the proposed project. Inclusion of a No-Action Alternative in the environmental analysis and documentation is required under NEPA. The No Action Alternative is used to evaluate the effects of not providing federal financial assistance for the project, thus providing a "without project" benchmark against which "action alternatives" may be evaluated.

4.1 No Action Alternative

The No Action Alternative would not provide Federal funding to relocate the failed portion of the road to a new location. In that event, the Subgrantee would not construct the road realignment and would keep the

failed portion of the road in service. This would result in a substandard road servicing the homes west of the failure area and create a hazard to the motorists and residents of Cole Hollow Road. Should the slope fail, a large section of road would be lost, which could result in a significant potential for loss of life and expose the Town to significant liability. Even without loss of life, the loss of the road would leave residents west of the failure stranded and without emergency services, which would require emergency actions to restore access. This alternative may jeopardize public health, safety, and well-being and thus it would not address the project's purpose and need.

4.2 Proposed Action Alternative

The Subgrantee proposes to relocate a portion of Cole Hollow Road away from an area of slope failure that in turn caused the road failure. The proposed realignment would require the construction of approximately 1,475 feet of new road which would require the purchase of 2.57 acres of land affecting five separate land parcels for the permanent road right-of-way. In addition, the road realignment would require the Town to obtain an additional 1.12 acres of temporary construction easements. The proposed site for the realignment of the road is located outside the 100-year and the 500-year special flood hazard areas; thus minimizing the potential for future flood damage (*Appendix C*).

The Subgrantee proposes to acquire the 2.57 acres of permanent right-of-way and 1.12 acres of temporary construction easements from the current land owners. The five separate parcels affected by road realignment acquisition are identified on the Town of Blenheim Tax Maps as Section 161, Block 1, Lots 1.1 and 1.2 and Section 149, Block 1, Lots 4.1, 4.2, and 5. All of the lots are subject to an overhead power line easement held by Niagara Mohawk Power Corporation or its successors. None of the permanent right-of-way or temporary construction easement acquisitions would affect existing structures on the properties. The existing right-of-way along the portion of the existing road to be abandoned would be ceded back to the adjacent property owners.

The corridor selected for the realignment of Cole Hollow Road was chosen following field reconnaissance and informal inquiries with land owners with regard to their willingness to sell land to the Town for the road relocation. The proposed project would entail approximately 7,200 cubic yards of cut and fill, 1,450 cubic yards of imported road subbase material, 390 tons of bituminous pavement material, and 250 cubic yards of medium stone ditch protection material. The existing road would remain in use until the construction of the realignment is completed and ready for use. Plan of the proposed realignment showing the realignment corridor existing topography and the realignment proposed grading and centerline profile are provided in *Appendix A*. The existing road alignment would be abandoned, and the right-of-way along the abandoned section of road returned to the adjoining properties. The upper section of abandoned roadway would remain as a driveway for one residence while the lower section of abandoned roadway would be scarified, spread with topsoil and planted with turf].

The proposed project would provide the necessary accessibility for residents located beyond the area of concern, assure public safety for motorists, and needed operability for first responders during emergency events. The re-aligned portion of Cole Hollow Road would generally comply with the Town of Blenheim Local Law #1 of 1988 (Streets or Highway and Building Permits) requirements. However, some minor deviations to the maximum grade and shoulder widths would be necessary due to site constraints (*Appendix B*). This alternative would address the proposed project's purpose and need.

4.3 Alternatives Considered and Dismissed from Further Analysis in this EA

The Subgrantee considered repairing the failing slope between Cole Hollow Brook and the road using soil nailing techniques and reconstructing the failed portion of the road. This alternative would require stabilization of the stream bed to prevent any further erosion of the stream banks, clear cutting the slope between the creek and the road in order to perform the soil nailing work and then covering the slope with shotcrete. This alternative would also require reconstructing the road subgrade, subbase and pavement structure in the failure area. Based on a preliminary engineer's opinion of cost prepared by Lamont Engineers, the construction cost of the slope stabilization would be 33 percent higher than the construction cost of realigning the road away from the failure area. Furthermore, the slope stabilization would not improve the visibility issue that exists in the area of the slope and road failure. The Subgrantee dismissed the slope stabilization alternative due to costs, potential impacts to steep slopes and water ways, and safety concerns.

5.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Potential environmental impacts and proposed mitigation measures associated with the No Action Alternative and the Proposed Action alternatives are presented in the following sections and are summarized in Table 1 Page 5.

5.1 Topography, Soils, and Geology

5.1.1 Existing Conditions

Topography

The proposed project site topography is rolling terrain generally sloping downward in a southerly and easterly direction towards the Cole Hollow Brook, a tributary to the Schoharie Creek, and towards the Schoharie Creek itself. Based on USGS topography maps (*Appendix C*), surface elevations on the site range from approximately 980 feet above mean sea level (amsl) at the eastern end of the road realignment to 1,110 feet amsl at the western end of the realignment. The site existing grades in the area of the proposed realignment range from 15 to 35 percent. The proposed grade for the realignment centerline would range from 1.1 to 14.7 percent (*Appendix A*). Surrounding area topography also slopes downward toward the Cole Hollow Brook and Schoharie Creek with similar grades as the proposed project site except immediately south of the failed section of Cole Hollow Road where grade from the road down towards Cole Hollow Brook are as steep as 2 horizontal to 1 vertical.

Soils

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) operates the Web Soil Survey, which includes the soils of Schoharie County (NRCS, 2013; see NRCS correspondence, *Appendix C*, for copies of site soil maps). The Web Soil Survey maps show soils on the site as being composed of six soil types. The site consists mainly of Mardin channery silt loams, 2 to 8% slopes, 15 to 25% slopes, and 25 to 35% slopes (McB, McD, and McE), respectively. Mardin channery silt loam consists of moderately well drained soils containing channery silt loam derived mainly from acid sedimentary rock. This soil type is typically found on drumlinoid ridges, hills, and till plains.

Table 1. Summary of Potential Environmental Impacts and Mitigation

Resource	Potential Impacts		Agency Coordination/ Permits	Mitigation
	No Action Alternative	Proposed Action Alternative		
Topography, Geology and Soils	No impact.	Moderate impact. Disturbance of soils and grades during construction	NYSDEC SPDES General Permit for Stormwater Discharge from Construction Activity GP-0-15-002	Balance earthwork on site. Implement erosion and sediment control practices.
Land Use and Zoning	No impact.	No impact. Consistent with Town Comprehensive Plan.		Consistent with Town Comprehensive Plan.
Contaminated Materials	No impact	No impact	N/A	Best management practices.
Air Quality	No impact	Short-term impact during construction; no long-term impact	N/A	Best management practices.
Water Resources and Water Quality	No impact.	No significant impact with SWPP implementation and mitigation.	NYSDEC SPDES General Permit for Stormwater Discharge from Construction Activity GP-0-15-002	Compliance with SWPPP and SPDES Permit.
Wetlands	No impact	No significant impact. Less than 0.1 acre of wetland disturbance	USACE Nationwide Permit and NYSDEC Blanket Section 401 Water Quality Certification	Comply with permit conditions.
Floodplains	No impact	No impact.	N/A	N/A
Vegetation	No impact	No significant impact. Reduction of 1.57 acres of trees	N/A	Native plant species are recommended for site landscape plantings.
Wildlife and Fisheries Habitat	No impact	No impact	N/A	N/A
Threatened and Endangered Species	No impact	No impact; with conditions. Not removing mature trees that could be habitat for Northern Long-eared Bats	USFWS, NYSDEC NHP	-Avoid cutting or destroying trees during the pup season for the Northern Long-Eared Bat (June 1 – July 31). -Any bat colonies of any species that are observed during clearing for road construction shall be immediately reported to FEMA and USFWS.
Cultural Resources	No impact	No impact.	SHPO, Federally-recognized Indian Nations	N/A
Visual Resources	No impact	Minor impact with road realignment	N/A	N/A
Socioeconomic Resources	Negative impact; existing road is a public safety hazard	Positive impact with road realignment	N/A	N/A
Environmental Justice	No impact	No impact	N/A	N/A
Noise	No impact	Short-term impact during construction; no long-term impact	N/A	N/A
Traffic	No impact	Short-term impact during construction; no long-term impact	N/A	Compliance with local ordinances related to operation on the construction site
Infrastructure	No impact	Positive impact with road realignment	N/A	N/A
Public Health and Safety	Negative impact; existing road is a public safety hazard	Positive impact with road realignment; eliminate public safety hazard	N/A	N/A
Climate Change	No impact	No impact	N/A	N/A
Cumulative Impacts	No cumulative impacts	No cumulative impacts	N/A	N/A

The site also contains small areas of Chippewa and Norwich stony silt loams, 0 to 3% slopes (ChA) and Lordstown, Oquaga, and Nassau soils, 35 to 70% slopes (LrF). Chippewa and Norwich stony silt loam consists of poorly drained soils containing a very thin top layer of slightly decomposed plant material, a middle layer of flaggy silt loam, and a bottom layer of very channery silt loam dominated by siltstone, sandstone, and shale fragments. Chippewa and Norwich stony silt loam is typically found in depressions and at the toe or base of slopes. Lordstown, Oquaga, and Nassau soil consists of well-drained soil containing channery silt loam and channery loam derived from sandstone and siltstone. Lordstown, Oquaga, and Nassau soil is typically found on hills, ridges, and benches.

The Farmland Protection Policy Act (FPPA) requires Federal agencies to minimize the extent to which Federal programs contribute to the unnecessary conversion of farmland to nonagricultural use and to assess potential conversion of farmland to developed property. The ChA and McB soils are categorized as Farmland of Statewide Importance. The LrF, McD, and McE soils are not recognized as prime farmland soils. The ChA and McB soil areas in the project area are 0.5 and 1.2 acres, respectively.

Geology

Executive Order (EO) 12699 requires federal agencies assisting in the financing, through federal grants or loans, or guaranteeing the financing, through loan or mortgage insurance programs, of newly constructed buildings to initiate measures to assure appropriate consideration of seismic safety (WBDG, 1990). The United States Geological Survey Percent Peak Ground Acceleration Seismic Hazard Maps (USGS, 2008) adopted by the New York State Building Code (NYSBC) indicate that the Proposed Site is located within a moderate seismic hazard area, as is most of New York State.

Bedrock in the area of the site ranges from 30 inches (LrF soils) to greater than 60 inches (all other soils) below grade according to the above-referenced Soil Survey.

5.1.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would have no impacts to topography, geology, or soils.

Proposed Action Alternative

The Proposed Action Alternative would have permanent moderate impacts to the physical features of the project site including cut and fill of the surficial soils to achieve the desired lines and grades for the proposed road realignment (*see Appendix A*). However, no bedrock disturbance is anticipated. The project would require the preparation of a Stormwater Pollution Prevention Plan (SWPPP) developed in accordance with the “New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity” General Permit Number GP-0-15-002, effective January 29, 2015 through January 28, 2020. The SWPPP and accompanying plans identify and detail stormwater management, pollution prevention, and erosion and sediment control measures necessary during and following completion of construction.

Grading for the proposed realignment of Cole Hollow Road would not encroach into the ChA soil area; and while the proposed realignment would bisect the McB soil area, it would do so in the location of an existing driveway and an abandoned road which are not suited for agricultural use. According to the NRCS letter dated April 9, 2014, completion of the Farmland Conversion Impact Rating form AD-1006

was not required for this project (*Appendix C*) because of minimal impacts (0.7 acres) to statewide significant farm soils.

5.2 Land Use and Zoning

5.2.1 Existing Conditions

The Town of Blenheim does not have zoning regulations, site plan or subdivision review and does not have a planning board. The Town of Blenheim Comprehensive Plan, adopted in 2014, included Transportation and Streetscape as items of concern within the Town: “it is thus important that all components of the transportation system be considered in relation to one another to ensure a safe and efficient transportation system.” The proposed site of the road relocation is vacant land. The east portion of the property is covered in tall grasses and shrubs and partially composed of an old corn field. The west side of the property is mostly wooded with some lawn areas along the southeast border. Surrounding properties are primarily [vacant woodland and large lot single-family residential]. The proposed relocation site is not located within the Special Flood Hazard Area (SFHA)/100-year floodplain and 500-year floodplain (Town of Blenheim Floodplain Overview, February 2011). A vacant mobile home used for storage is stored north of a driveway on the proposed site.

5.2.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would not impact land use or local zoning. This alternative would not be consistent with the Town Comprehensive Plan, since the town is in need of a safe and efficient transportation system.

Proposed Action Alternative

The Proposed Action Alternative would not impact land use and zoning. The proposed road relocation project would be consistent with the Town Comprehensive Plan, since one of the objectives is the need to maintain a safe and efficient transportation system.

5.3 Contaminated Materials

5.3.1 Existing Conditions

A Phase I Environmental Site Assessment was conducted by Evergreen Testing & Environmental Services for the proposed project site in conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Standard Practice E 1527-13.

Evergreen’s Phase I Environmental Site Assessment report (see Appendix D) concluded that there is waste material located on an adjacent property up gradient of the proposed site. The contents and origin of the dumped waste is unknown and could possibly consist of petroleum or chemical compounds or containers. It is also unknown when the material may have been dumped. Any petroleum or chemical present could impact the subject property by migrating down slope toward the subject property. Evergreen was unable to contact the property owner. As such, Evergreen concluded that a Phase II Environmental Site Investigation would be warranted.

The Town of Blenheim’s engineer, Lamont Engineers, conducted a visual inspection of the dumped waste on July 13, 2015, and determined that it is unlikely that there are petroleum or chemical compounds present, and, therefore, a Phase II Environmental Site Investigation was not conducted.

5.3.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would not impact or be impacted by contaminated materials. No evidence of significant contamination to site soils, or surface/groundwater from hazardous materials has been identified. The proposed use at this site would not adversely impact the risk to the human environment from contaminated materials

Proposed Action Alternative

The Proposed Action Alternative would not impact or be impacted by contaminated materials. The proposed use at this site would not adversely impact the risk to the human environment from contaminated materials. However, if hidden and/or unknown hazardous materials were discovered during excavation and/or construction activities, additional testing and/or remediation may be necessary. Best management practices (BMP) would be implemented in the event that petroleum or other hazardous material leaks occur during construction and demolition phases. These practices include requiring all contractors to keep materials on hand to control and contain a petroleum spill. All spills are required to be reported to the NYSDEC. Contractors are responsible for ensuring responsible action on the part of construction personnel.

5.4 Air Quality

The Clean Air Act (CAA) of 1963 (amended 1970, 1977, and 1990) requires each state to attain and maintain specified air quality standards. National Ambient Air Quality Standards (NAAQS) have been promulgated by the Federal government and by NYS for carbon monoxide (CO), nitrogen dioxide (NO₂), total suspended particulate (TSP), sulfur dioxide (SO₂) and lead (pb). NYS standards are generally the same as the Federal standards for these pollutants. Primary air quality standards are set to protect human health and secondary standards are set to protect human welfare. The U.S. Environmental Protection Agency (EPA) implements 2008 ozone standards as required by the CAA and meets the standards to provide public and environmental health benefits.

5.4.1 Existing Conditions

The proposed project area, as depicted on EPA Environmental Justice (EJ) View Tool, is in the non-attainment area for 8-Hour Ozone, but is not in the non-attainment for lead and Particulate Matter (PM) 2.5.

5.4.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would not impact air quality.

Proposed Action Alternative

The Proposed Action Alternative would have a temporary impact to air quality during construction activities; no long-term impacts are expected. Construction activities on the project site may have a potential impact on the local air quality through the generation of fugitive dust or airborne dust. Fugitive dust is generated during ground breaking and excavation activities. Emissions from diesel construction vehicles are also a potential source of air pollution. The use of BMPs would help minimize dust and vehicle emissions. It is FEMA's finding that the construction emissions would be below de minimis levels for ozone and other criteria pollutants.

5.5 Water Resources and Water Quality

Congress enacted the Federal Water Pollution Control Act in 1948 which was reorganized and expanded in 1972 and became known as the Clean Water Act (CWA) in 1977, as amended. The CWA regulates discharge of pollutants into water with sections falling under the jurisdiction of the U.S Army Corps of Engineers (USACE) and the EPA. Section 404 of the CWA establishes the USACE permit requirements for discharging dredged or fill materials into Waters of the United States and traditional navigable waterways. The USACE regulates activities within navigable waters, as authorized under the 1899 Rivers and Harbors Act. Under National Pollutant Discharge Elimination System (NPDES), the EPA regulates both point and non-point pollutant sources, including stormwater. Activities that disturb one (1) acre of ground or more are required to apply for a State Pollutant Discharge Elimination System (SPDES) permit administered in New York State through the Department of Environmental Conservation (NYSDEC).

5.5.1 Existing Conditions

The proposed project site is located within the Schoharie Creek watershed. The closest mapped water body to the proposed site is Cole Hollow Brook, NYSDEC Stream H-240-82-99. As it is currently aligned, Cole Hollow Road is approximately ___ feet from the brook at its closest point. Cole Hollow Brook flows to the east and is a tributary of the Schoharie Creek, which flows in a northerly direction. Groundwater flow is expected to be toward Cole Hollow Brook and east toward Schoharie Creek. Cole Hollow Brook, near the proposed site, is a Class C(TS) stream. Class C(TS) indicates best usage for fishing and suitable for trout spawning (NYSDEC-Mapper, 2013). The existing facility is located approximately 4,750 feet from Schoharie Creek.

5.5.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would not impact water resources and water quality.

Proposed Action Alternative

The Proposed Action Alternative would not impact Cole Hollow Brook or Schoharie Creek surface water quality. The proposed realignment would relocate the portion of road away from the stream, making the western end of the realignment the closet point to the stream at approximately 310 feet. Cole Hollow Brook is not located within the project area of disturbance; therefore, no separate Article 15 Protection of Waters Permit will be required for the proposed roadway realignment. Stormwater would be controlled to prevent pollutants from entering water sources. No impacts to Cole Hollow Brook or Schoharie Creek bed and banks would be involved. A Storm Water Pollution Prevention Plan (SWPPP) would be required and must be approved prior to construction, in accordance with the NYS SPDES General Permit Stormwater Discharges from Construction Activities (GP-0-15-002). No impact to groundwater quality is expected, and excavations are not expected to reach high water table depths. The project design would implement stormwater management practices with runoff reduction capacity that would achieve 100% runoff reduction of the 90% rainfall event. Potential storm water quality impacts and soil erosion and sedimentation would be mitigated both during and after construction.

5.6 Wetlands

EO 11990 “Wetlands Protection” requires that Federal agencies take actions to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the beneficial effects of

wetlands. Compliance with this EO is insured through the process of identifying whether the action would be located within or would potentially affect Federally-regulated wetlands (United States Fish and Wildlife Service, 2013). Federal regulation of wetlands is under the jurisdiction of the USACE. Federal actions within wetlands require the Federal agency to conduct an Eight-Step Review Process. This process, like NEPA, requires the evaluation of alternatives prior to funding the action. FEMA's regulations for conducting the Eight-Step Review process are contained in 44 CFR Part 9. The wetland definition at 44 CFR 9.4 is broader than the three-parameter USACE approach to wetland delineation. Only one of the three parameters (wetland soils, wetland plants or wetland hydrology) is required for an area to be defined as a wetland per FEMA's regulation consistent with the United States Fish and Wildlife Service (USFWS) Cowardin Classification System. Federal regulation of wetlands under Section 404 of the CWA is in the permit jurisdiction of USACE. EPA also has a policy and guidance role for wetland protection under Section 404. NYSDEC also regulates and protects freshwater wetlands as defined by NYS' Environmental Conservation Law (NYSECL) Article 24.

5.6.1 Existing Conditions

Based on a wetlands review of the proposed project site for the presence of NYS regulated freshwater wetlands conducted at the NYSDEC's "Environmental Resource Mapper" website, no state regulated wetlands are within the AD. The U.S. Fish and Wildlife Services' (USFWS) National Wetland Inventory (NWI) website does not identify any wetlands within the AD (*Appendix C*).

According to a Delineation of Waters of the United States Including Fresh Water Wetlands, prepared by North Country Ecological Services, Inc. on December 20, 2012, a field investigation indicated the presence of a small wetland on the site in a natural depression adjacent to the intersection of Cole Hollow Road and Spur Road (*Appendix F*). The identified wetland area has a total acreage of 0.60± acres with Palustrine scrub-shrub and emergent vegetative cover.

5.6.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would not impact wetlands.

Proposed Action Alternative

The Proposed Action Alternative would not have a significant impact to wetlands. Based on the currently proposed layout, the proposed project is expected to impact less than 0.1 acre of wetland, which would likely require pre-construction notification to obtain permit authorization from the USACE. Wetland mitigation may not be needed if wetland impacts are determined to be less than 0.1 acre; however, if wetland impacts are greater than 0.1 acre, compensatory mitigation may be required. *Appendix F*. The Eight-Step Review Process for this project can be found in *Appendix E*.

5.7 Floodplains

EO 11988 "Floodplain Management" requires that Federal agencies avoid funding activities that directly or indirectly support occupancy, modification, or development of the 100-year floodplain whenever there are practicable alternatives. FEMA uses Flood Insurance Rate Maps (FIRM) to identify floodplains and flood risks for the NFIP. Federal actions within the 100-year floodplain, or 500-year floodplain for critical actions, require the Federal agency to conduct an Eight-Step Review process. This process, like NEPA, requires the evaluation of alternatives prior to funding the action. FEMA's regulations for

conducting the Eight-Step Review process are contained in 44 CFR Part 9.5. The Eight-Step Review Process conducted for this project can be found in *Appendix E*.

5.7.1 Existing Conditions

There are no floodplains located at either the original or the proposed site of Cole Hollow Road. The project area is on a FIRM unprinted panel (Community Panel Number 36095C0290E), which means that there are no 100-year or 500-year floodplains within the mapped area.

5.7.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would have no impact on floodplains.

Proposed Action Alternative

The Proposed Action Alternative would have no impact on floodplains.

5.8 Vegetation

5.8.1 Existing Conditions

Onsite wooded areas are Beech-Maple mesic forest, as defined by Ecological Communities of New York State (Draft) (Edinger, 2002). The rest of the site consists of successional old field, unpaved road and mowed lawn with trees (Edinger), and palustrine scrub-shrub and palustrine emergent wetland as defined by Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, 1979). The following dominant species of trees are in the forested areas: sugar maple (*Acer saccharum*), American beech (*Fagus grandifolia*), northern red oak (*Quercus rubra*), black cherry (*Prunus serotina*), white ash (*Fraxinus Americana*) and quaking aspen (*Populus tremuloides*). According to USDA/NRCS Official Soil Series Descriptions, within the soil mapping units found onsite (Mardin Channery Silt Loam and Lordstown, Oquaga and Nassau Soils), dominant woodlot and forest species are sugar maple, American beech, white ash, black cherry, hemlock, red oak, white oak and white pine. No threatened or endangered species of vegetation were identified on the proposed site. A portion of Schoharie County called the Livingstonville EAB Quarantine Zone is currently identified as a quarantine zone for the invasive insect Emerald Ash Borer (EAB). However, the project site is located outside of the quarantine zone. Quarantine zone maps will be revised each winter by NYSDEC and NYSDAM.

5.8.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would not impact vegetation.

Proposed Action Alternative

The Proposed Action Alternative would not have a significant impact on vegetation. The site contains a mixture of trees, shrub vegetation, grassy areas, and some herbaceous vegetation most of which would be removed or impacted during construction activities. Approximately 2.6 to 3.7 acres of ground disturbance would be expected during construction, and of this, approximately 1.6 acres is currently wooded. Approximately 1.57 acres of trees would need to be removed in order to accommodate grading. The Subgrantee proposes to use native species to stabilize the site in order to be consistent with the goals of the U.S. Green Building Council, in accordance with EO13112 Invasive Species and in support of sustainable site development. Invasive insects can devastate the forests of the northeast and it is recommended that communities in the northeast treat or handle wood materials in place to minimize the

spread of these non-native insects. Specific recommended measures would include be chipping woody tree and shrub material to be removed for the proposed project location on site to chips of less than one inch in two dimensions or not transporting whole limbs, trunks or branches outside the community in order to comply with EO 13112 Invasive Species, Federal regulations at 7 CFR Parts 301.53-1 through 301.53-9 and state regulations at 1 NYCRR Part 141.

5.9 Wildlife and Fisheries Habitat

5.9.1 Existing Conditions

Field reconnaissance survey identified a variety of wildlife species on the proposed site. The species observed are extremely common and included white-tailed deer, wild turkey, coyote, and various woodland and early successional field associated songbirds. No endangered, threatened or rare species of flora or fauna were observed during site assessments. In addition, Federal agencies must evaluate potential impacts to migratory bird habitat per the Migratory Bird Treaty Act. There is no sensitive migratory bird habitat at the proposed project site.

5.9.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would not impact wildlife and fisheries habitat.

Proposed Action Alternative

The Proposed Action Alternative would not have a significant negative impact on wildlife, birds (including sensitive migratory bird habitat) or fisheries habitat.

5.10 Threatened and Endangered Species and Critical Habitat

The Endangered Species Act (ESA) of 1973 provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. The lead Federal agencies for implementing ESA are USFWS and National Oceanic and Atmospheric Administration-National Marine Fisheries Service (NMFS). The law requires Federal agencies to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species. The law also prohibits any action that causes a “taking” of any listed species of endangered fish or wildlife.

5.10.1 Existing Conditions

Threatened and endangered species and critical habitat within the project site were reviewed through analysis of existing data sources, on-site field observations, and correspondence received from the New York Natural Heritage Program (NHP). According to correspondence from the NYSDEC NHP dated October 30, 2012 (*Appendix C*), the NYSDEC has no records of rare or state listed animals or plants, or significant natural communities on or in the immediate vicinity of the project site. FEMA determined that the Northern Long-eared Bat (*Myotis septentrionalis*), which is listed as a threatened species, has the potential to occur in the proposed project area. The bald eagle (*Haliaeetus leucocephalus*) is a delisted species identified in Schoharie County, yet it continues to receive protection under the Bald and Golden Eagle Protection Act amendment of 1972 (16 USC Part 668), the Migratory Bird Treaty Act of 1918, and the Migratory Bird Treaty Reform Act of 1998, which were enacted to prohibit the taking or attempt to take migratory game birds for the protection of the species.

5.10.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would not affect endangered, threatened, or rare species or any critical habitat.

Proposed Action Alternative

According to information provided by the New York Heritage Program, there are no known maternity roost trees or hibernacula within ¼ mile of the proposed site (the nearest hibernaculum is approximately 7 miles to the south of the site), but the site does serve as *potential* summer habitat for the Northern Long-Eared Bat species. Based upon the review of Federal and state sources, USFWS has concurred with FEMA's determination in correspondence dated July 2, 2015 (*Appendix C*), that the proposed action may affect, but is not likely to adversely affect, the Northern Long-Eared Bat (NLEB), with the following conditions:

- 1) Avoid cutting or destroying trees during the pup season for the Northern Long-Eared Bat (June 1 – July 31).
- 2) Any bat colonies of any species that are observed during clearing for road construction shall be immediately reported to FEMA and USFWS.

5.11 Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA), as amended, and implemented by 36 CFR Part 800 requires Federal agencies to consider the effects of their actions on historic properties and provide the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on Federal projects that would have an effect on historic properties. These actions must take place prior to the expenditure of Federal funds. Historic properties include districts, buildings, structures, objects, landscapes, archaeological sites and traditional cultural properties that are listed in or eligible for listing in the National Register of Historic Places (NRHP).

5.11.1 Existing Conditions

The Area of Potential Affects (APE) for the proposed project includes a 3.7-acre area for the proposed construction of the road realignment. There are no buildings within the APE that are listed in or eligible for listing in the NRHP; although a small historic period cemetery (Keyser family) is located near the damaged section of Cole Hollow Road, outside of the APE. The files of the State Historic Preservation Office (SHPO) and NYS Museum (NYSM) indicate that the closest reported archeological site (the prehistoric Hilltop Site, NYSM 300) may have components adjacent to the APE. The majority of sites identified in Blenheim are prehistoric deposits found near Schoharie Creek. The proximity of these sites and a fresh water resource (Cole Brook) suggests the APE has a high sensitivity for the presence of prehistoric sites. A Phase 1 Cultural Resources Survey completed in January, 2013 by Columbia Heritage, Ltd. for the APE of the proposed action alternative did not reveal the presence of any prehistoric or historic sites. Cultural Resources Investigations and consultations can be found in *Appendix G*.

5.11.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would not impact cultural resources.

Proposed Action Alternative

FEMA consulted with the New York State Office of Parks, Recreation, and Historic Preservation (SHPO) regarding the proposed road realignment. FEMA found and SHPO concurred in a letter dated August 23, 2012 (13PR03581) that the project would result in No Adverse Effects with the condition that a Phase 1 survey be conducted prior to any construction activity. Based on the findings of the Phase 1 Cultural Resources Survey, no further archeological investigation was recommended for the proposed relocation area. SHPO recommended that the planned project would have No Effect on historic properties in a letter dated April 17, 2013 (12PR04595). FEMA also consulted with the St. Regis Mohawk Tribe, provided information regarding identified historic properties in the APE and afforded the Tribe an opportunity to participate in the consultation. The Saint Regis Mohawk Tribe Tribal Historic Preservation Office (THPO) responded that the project was considered of No Effect in regards to cultural properties of concern to their Tribe and requested to be contacted in the event of inadvertent discoveries. Please refer to *Appendix G* for consultation documentation.

5.12 Aesthetics and Visual Resources

5.12.1 Existing Conditions

The proposed site consists of old field and woodland, with a mowed lawn found along Cole Hollow Road. The site consists of portions of five (5) parcels, one of which contains an old mobile home that is stored on the property and is used for storage. There are no other buildings on the site. Site photos can be found attached to the Phase 1 ESA (*Appendix D*) and the Delineation of Waters of the United States (*Appendix F*).

5.12.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would not negatively affect the Town of Blenheim aesthetics and visual resources.

Proposed Action Alternative

Although the proposed road realignment would change the appearance of the site, a minor impact on aesthetic and/or visual resources would be expected since the proposed action would not be out of character with the existing Cole Hollow Road, or with typical rural roads in the area.

5.13 Socioeconomic Resources

5.13.1 Existing Conditions

The U.S. Census Bureau indicates the population within the Town of Blenheim is 377 persons in 2010, an increase of 14 percent since the 2000 population of 330. In comparison, the population within Schoharie County was 32,749 in 2010 and 31,582 in 2000.

In 2010, 100 households in the Town were classified as family households, meaning those living together are related. The remaining 58 households are classified as non-family households or those with individuals who cohabitate but are unrelated, such as roommates. In 2000, family households accounted for 65 percent of all households. The average household size in the Town was 2.39 persons in 2010 and

2.20 in 2000. In 2010, the Town had a total of 361 housing units, of which 56 percent were classified as vacant (49 percent of the total housing units were classified as vacant/seasonal, recreational or occasional use). This compares to 2000, when the Town had a total of 303 housing units, of which 50 percent were classified as vacant (47 percent of the total housing units were classified as vacant/seasonal, recreational or occasional use).

The median household income in the Town was \$50,833 according to the 2010 American Community Survey (ACS) 5-Year Estimates, an increase from \$38,500 in 2000. Comparatively, the median household income in Schoharie County was \$50,864 per the 2010 ACS, an increase from \$36,585 in 2000. In 2010, approximately 18 percent of individuals in the Town were below the poverty level, compared to 8.5 percent in 2000. Of individuals within Schoharie County, 11 percent were below the poverty level in 2010, with very little change in percentages from the 2000 level.

5.13.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative may have adverse impacts to the socioeconomic resources of the Town of Blenheim. The existing damaged road would continue to deteriorate over time and with future flooding events, and the road would continue to pose a public safety hazard and result in costly temporary repairs.

Proposed Action Alternative

The Proposed Action Alternative would have a positive impact on socioeconomic resources of the Town of Blenheim by relocating the damaged portion of Cole Hollow Road to maintain public safety and access to homes, private land, state forest, and the Long Path hiking trail. The proposed road realignment will eliminate the need for costly temporary repairs on the damaged section of road. The construction period would be 4 months and would employ approximately 6 workers (1 foreman, 2 equipment operators, 1 truck driver, and 2 laborers).

5.14 Environmental Justice

EO 12898, entitled “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” guides Federal agencies to “make environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations” (EPA-EO, 2013).

5.14.1 Existing Conditions

According to 2010 census data and the American Community Survey, the population of the Town of Blenheim and Schoharie County is predominantly Caucasian (estimated 97%). About 8.3% of Town of Blenheim residents and 11% of Schoharie County residents live below the poverty level. The project location is not delineated as an Environmental Justice community.

5.14.2 Potential Impacts and Proposed Mitigation

Neither project alternative would have a disproportionately high or adverse impact on human health and human environment of minority or low-income populations.

5.15 Noise

Sound pressure level (SPL) is used to measure the magnitude of sound and is expressed in decibels (dB or dBA), with the threshold of human hearing defined as 0 dBA. The SPL increases logarithmically, so that when the intensity of a sound is increased by a factor of 10, its SPL rises by 10 dB, while a 100-fold increase in the intensity of a sound increases the SPL by 20 dB.

Equivalent noise level (Leq) is the average of sound energy over time, so that one sound occurring for 2 minutes would have the same Leq of a sound twice as loud occurring for 1 minute. The day night noise level (Ldn) is based on the Leq, and is used to measure the average sound impacts for the purpose of guidance for compatible land use. It weights the impact of sound as it is perceived at night against the impact of the same sound heard during the day. This is done by adding 10 dBA to all noise levels measured between 10:00 pm and 7:00 am. For instance, the sound of a car on a rural highway may have an SPL of 50 dBA when measured from the front porch of a house. If the measurement were taken at night, a value of 60 dBA would be recorded and incorporated into the 24-hour Ldn.

Leq and Ldn are useful measures when they are used to determine levels of constant or regular sounds (such as road traffic or noise from a ventilation system). However, neither represents the sound level as it is perceived during a discrete event, such as a fire siren or other impulse noise. They are averages that express the equivalent SPL over a given period of time. Because the decibel scale is logarithmic, louder sounds (higher SPL) are weighted more heavily; however, loud infrequent noises (such as fire sirens) with short durations do not significantly increase Leq or Ldn over the course of a day.

The Noise Control Act of 1972 required the EPA to create a set of noise criteria. In response, the EPA published Information On Levels Of Environmental Noise Requisite To Protect Public Health and Welfare With An Adequate Margin Of Safety in 1974 which explains the impact of noise on humans. The EPA report found that keeping the maximum 24-hour Ldn value below 70 dBA will protect the majority of people from hearing loss. The EPA recommends an outdoor Ldn of 55 dBA. According to published lists of noise sources, sound levels and their effects, sound causes pain starting at approximately 120 to 125 dBA (depending on the individual) and can cause immediate irreparable damage at 140 dBA. OSHA has adopted a standard of 140 dBA for maximum impulse noise exposure.

5.15.1 Existing Conditions

The project site is located in the Town of Blenheim in Schoharie County, in an area of mostly farmland or forested areas with pockets of residential development. The ambient noise level in the vicinity of the proposed project site is typical for a rural area. The Ldn is typically about 45 dBA for rural agricultural areas, and 55 dBA for small-town and suburban residential areas. (References: NYSDEC program policy memorandum “Assessing and Mitigating Noise Impacts,” http://www.dec.ny.gov/docs/permits_ej_operations_pdf/noise2000.pdf and “Environmental Noise: The Invisible Pollutant,” <http://www.nonoise.org/library/envarticle/>).

5.15.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would not impact ambient noise levels.

Proposed Action Alternative

The Proposed Action Alternative would have a temporary impact to ambient noise level during construction; no long-term impacts would be expected. Avoidance of construction related noise impacts can be mitigated by implementing a typical work-day schedule, such as limiting heavy machinery use to between the hours of 7:00 a.m. and 5:00 p.m. Monday through Friday.

5.16 Traffic

5.16.1 Existing Condition

The proposed project site is located on Cole Hollow Road which supports vehicle, truck, and agricultural traffic and serves five (5) residences. The road turns into a seasonal road after the last house. Although there are no annual average daily traffic counts available for Cole Hollow Road, the five single-family detached housing units located west of the failure area are estimated to generate an average of approximately 48 vehicular trips per day based on data obtained from the Institute of Transportation Engineers Trip Generation Manual.

5.16.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would not impact traffic volume.

Proposed Action Alternative

The Proposed Action Alternative would have a short-term impact to traffic during construction; no long-term impact would be expected. The presence of construction and delivery vehicles is unavoidable; however, this impact would be temporary, and all site construction activities would comply with Town ordinances that relate to operations on a construction site. Post-construction, the traffic volume would be similar to post-disaster traffic conditions.

5.17 Infrastructure

5.17.1 Existing Conditions

The section of Cole Hollow Road that will be realigned is a 16-foot wide chip-sealed roadway with minimal grass shoulders. Within the project area, the existing roadway is on the side of a steep slope that overlooks Cole Hollow Brook. The roadway was damaged by a failure of the slope between the existing roadway and Cole Hollow Brook caused by flooding. Drainage for the roadway is provided by a road side ditch along the north/west side of Cole Hollow Road. The roadside ditch flows into an 18-inch cross culvert under Cole Hollow Road near the intersection of Cole Hollow Road and Spur Road. An overhead power line is located within the Cole Hollow Road right-of-way east of the project area, but leaves the right-of-way at the intersection of Cole Hollow Road and Spur Road to run cross-country in a westerly direction. Another overhead power line is located within the Cole Hollow Road right-of-way along the upper section of the project area. The overhead power line pole also hosts an overhead telephone line. No other public utilities such as water, sewer or other municipal utilities exist within the Cole Hollow Road right-of-way.

5.17.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would not impact existing infrastructure.

Proposed Action Alternative

The Proposed Action Alternative would have a significant positive impact to the existing infrastructure by realigning a portion of the road to relocate it away from the unstable slope and permanently eliminate slope stability issues and re-establish safe access to local homes, private land, state forest, and the Long Path hiking trail. The new roadway will incorporate drainage facilities, including drainage ditches, culverts and storm water management practices. The proposed action will not alter the existing power and telephone lines, thus no new power or telephone lines will be constructed within the new roadway right-of-way. No other public utilities such as water, sewer or other municipal utilities will be constructed as none currently exist in the area.

5.18 Public Health and Safety

5.18.1 Existing Conditions

The Town of Blenheim's public health and safety was negatively impacted by Hurricane Irene. Cole Hollow Road experienced extensive flood damage that eroded the bed and banks of the Cole Hollow Brook at the toe of the slope adjacent to a portion of Cole Hollow Road, which resulted in the failure of the slope and of Cole Hollow Road.

5.18.2 Potential Impacts and Proposed Mitigation

No Action Alternative

The No Action Alternative would negatively impact public health and safety as Cole Hollow Road by realigning a portion of the road to relocate it away from the unstable slope and permanently eliminate slope stability issues and re-establish safe access to local homes, private land, state forest, and the Long Path hiking trail. The No Action Alternative would not provide Federal funding to relocate the failed portion of the road to a new location. In that event, the Subgrantee would not construct the road realignment and would keep the failed portion of the road in service. This would result in a substandard road servicing the homes west of the failure area and create a hazard to the motorists and residents of Cole Hollow Road. Should the slope fail, a large section of road would be lost, which could result in a significant potential for loss of life and expose the Town to significant liability. Even without loss of life, the loss of the road would leave residents west of the failure stranded and without emergency services, which would require emergency actions to restore access. This alternative may jeopardize public health, safety, and well-being and thus it would not address the project's purpose and need.

Proposed Action Alternative

The Proposed Action Alternative would have a positive impact on the overall community public health and safety. The Project would relocate approximately 1,475 feet of road to a location away from the unstable slope to maintain public safety and access to homes, private land, state forest, and the Long Path hiking trail.

5.19 Climate Change

EO 13514 "Federal Leadership in Environmental, Energy and Economic Performance" sets sustainability goals for Federal agencies and focuses on making improvements in their environmental, energy and economic performance. EO 13653 "Preparing the United States for the Impacts of Climate Change" sets standards to prepare the United States for the impacts on climate change by undertaking actions to enhance climate preparedness and resilience. FEMA is required, under these EOs, to implement climate change adaptability and green infrastructure in FEMA funded projects when feasible.

According to the EPA, climate change “...refers to any significant change in the measures of climate lasting for an extended period of time” (EPA, 2014). This includes major variations in precipitation, sea surface temperatures and levels, atmospheric temperature, wind patterns and other variables resulting over several decades or longer. However, EPA identifies and regulates anthropogenic or human actions that may affect climate change. This is dubbed “abrupt climate change” which occurs over decades and distinguishes it from natural variability that occurs gradually over centuries or millennia. Embodied energy measures sustainability to account for the energy used by structures or to create materials. Another measure of sustainability is life-cycle or cradle-to-grave analysis which accounts for the extraction, manufacture, distribution, use, and disposal of materials. While resources exist to quantify embodied energy and life cycle analysis, the calculations were not prepared by the Subgrantee for the options presented in this EA.

5.19.1 Existing Conditions

Climate change could potentially increase temperatures in the northeast United States; could potentially cause more severe weather incidents to occur; and could potentially cause sea levels to rise.

5.19.2 Potential Impacts and Proposed Mitigation

No Action Alternative/Proposed Action Alternative

Neither Alternative would impact or be impacted by climate change.

5.20 Cumulative Impacts

Cumulative effects are defined by the Council on Environmental Quality (CEQ) as the impact on the environment resulting from the incremental impacts of the evaluated actions when combined with other past, present, and reasonably foreseeable future actions, regardless of the source, such as federal or non-federal. Cumulative impacts can result from individually minor but collectively significant actions taken over time. Table 1 summarized the potential environmental impacts of the No Action and Proposed Action alternatives. None of these alternatives would significantly adversely impact the environment due to the cumulative assessment of potential impacts. There are no known past or reasonably foreseeable future actions in the Project vicinity that would change the cumulative impact determination for the Proposed Action or that would be anticipated to cause a threshold to be exceeded in terms of cumulative impacts on the human environment.

6.0 PERMITS AND PROJECT CONDITIONS

The Subgrantee is responsible to obtain all applicable Federal, state, and local permits for project implementation prior to construction, and to adhere to all permit conditions. The Subgrantee has already completed a New York State Environmental Quality Review Act (SEQRA) documentation process with forms provided in *Appendix H*. Any substantive change to the approved scope of work would require re-evaluation by FEMA for compliance with NEPA and other laws and executive orders. The Subgrantee must also adhere to the following conditions during project implementation. Failure to comply with these conditions may jeopardize federal funds.

1. The Subgrantee shall be responsible to complete the SEQRA process and local land-use reviews in accordance with state and local regulations.

2. Excavated soil and waste materials will be managed and disposed of in accordance with applicable federal, state and local regulations.
3. The Subgrantee shall be responsible to comply with the NYSDEC State Pollutant Discharge Elimination System (SPDES) permit for stormwater discharge from construction activity or other applicable SPDES permit, in accordance with NYSECL. If the NYSDEC General Permit for Stormwater Discharges is determined to cover the proposed action, the Subgrantee shall provide NYSDHSES/FEMA a copy of the Stormwater Pollution Prevention Plan (SWPPP) and a copy of the Notice of Intent Form at grant project close-out or other time identified by NYSDHSES/FEMA per grant administrative documentation guidance requirements. If an individual SPDES permit is determined to be required, the Subgrantee shall provide a copy of the obtained permit, as well as supporting SWPPP to NYSDHSES/FEMA at grant project close-out or other times identified by NYSDHSES/FEMA per grant administrative documentation guidance requirements. For more information regarding SPDES, visit the following website: <http://www.dec.ny.gov/chemical/43133.html>. It is expected that the Subgrantee and its construction contractor(s) will conduct construction utilizing best management practices to limit noise, dust and sedimentation, and erosion during construction.
4. In the event that unmarked graves, burials, human remains or archaeological deposits are uncovered, the Subgrantee and its contractors will immediately halt construction activities in the vicinity of the discovery, secure the site and take reasonable measures to avoid or minimize harm to the finds. The Subgrantee will inform the NYSDHSES, SHPO and FEMA immediately. FEMA would then coordinate with SHPO and notify the St. Regis Mohawk Tribe and consult to evaluate the discovery and determine the appropriate actions moving forward in accordance with Stipulation III.B of the New York State-wide Programmatic Agreement executed on November 24, 2014. The Subgrantee must secure all archaeological findings and shall restrict access to the area. Work in sensitive areas may not resume until consultations are completed or until an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards determines the extent and historical significance of the discovery. Work may not resume at or around the delineated archaeological deposit until the Subgrantee is notified by NYSDHSES.
5. The project area serves as potential summer roosting habitat for the threatened Northern long-eared bat (*Myotis septentrionalis*). Pursuant to section 7(a)(4) of the Endangered Species Act (ESA) and implementing regulations at 50 CFR §402.02 and 50 CFR §402.10, FEMA has determined that the proposed action the proposed action may affect, but is not likely to adversely affect the Northern Long-Eared Bat (NLEB), with the following conditions: 1) Avoid cutting or destroying trees during the pup season for the Northern Long-Eared Bat (June 1 – July 31), and 2) any bat colonies of any species that are observed during clearing for road construction shall be immediately reported to FEMA and USFWS.
6. Occupational Safety and Health Administration (OSHA) standards shall be followed during construction to avoid adverse impacts to worker health and safety.
7. Schoharie County was added to the Emerald Ash Borer (*Agilus planipennis*, or EAB) quarantine county list in December, 2013, but as of May, 2015, EAB quarantine has been restricted to a smaller section of the county that does not include the project site. However, FEMA recommends that any woody tree and shrub material to be removed from the project site be chipped on site to a size of less than one inch in two dimensions, and that trees and branches not be transported whole outside the community. In order to comply with EO 13112 Invasive Species, the Subgrantee is referred to the NYSDEC website (<http://www.dec.ny.gov/animals/47761.html>), Federal regulations at 7 CFR Part 301 (<http://www.gpo.gov/fdsys/granule/CFR-2011-title7-vol5/CFR-2011-title7-vol5-part301>) and

state regulations at 1 NYCRR Part 141 (http://www.agriculture.ny.gov/PI/eab/Part_141.pdf) for guidance and updates to the regulations. Invasive insects can devastate the forests of the northeast and it is recommended that communities in the northeast treat or handle wood materials in place to minimize the spread of these non-native insects. For more information concerning this environmental stewardship recommendation, visit USDA-APHIS, New York State Department of Agriculture and Markets, and other websites concerning EAB:

- www.agriculture.ny.gov/PI/eab.html
 - http://www.aphis.usda.gov/import_export/plants/manuals/domestic/downloads/emerald_ash_borer_manual.pdf
 - <http://www.nyis.info/?action=eab>
8. It is recommended that the Subgrantee restore disturbed construction areas of the site with native seed and/or plant species to minimize soil erosion and sedimentation, as well as enhance environmental habitat quality of project area. It is recommended that disturbed soil areas be planted with native plant material, as soon as practicable after exposure, to avoid or minimize growth of undesired and potentially invasive plant species that can potentially take hold without competition of native plant materials. Local landscape plant nurseries and soil conservation offices can assist with identification of suitable native plants for site location type. The following websites may also be useful to identification of native plant material for the proposed project site:
- <http://plants.usda.gov/java/>
 - www.nrcs.usda.gov/wps/portal/nrcs/main/national/plantsanimals/plants/
 - www.fs.fed.us/wildflowers/nativeplantmaterials/rightmaterials.shtml

7.0 PUBLIC INVOLVEMENT

In accordance with NEPA, a Draft Environmental Assessment (EA) will be released for a 15-day public review and comment period. Availability of the document for comment will be advertised in the *Times Journal* and the *Mountain Eagle*. A hard copy of the EA will be made available for review at the Town of Blenheim Town Hall at 2133 State Route 30, North Blenheim, NY 12131. An electronic copy of the EA will be made available for download from the FEMA website at <http://www.fema.gov/resource-document-library>. The public is invited to submit written comments by mail to FEMA, Office of Environmental Planning & Historic Preservation, Leo O'Brien Federal Building, 11A Clinton Avenue, Suite 742, Albany, New York 12207, or E-mail to: FEMA4020-4031Comment@fema.dhs.gov.

The EA reflects the evaluation and assessment of the federal government, the decision-maker for the federal action. The NEPA evaluation resulted in the identification of no unmitigated significant impacts to the human environment. Obtaining and implementing permit requirements along with appropriate best management practices would avoid or minimize potential adverse effects of the proposed action to below the level of a significant impact. FEMA will be signing a Finding of No Significant Impact for the proposed action.

Copies of the EA will be sent to:

NYSDHSES
1220 Washington Avenue, Suite 101, Building 22
Albany, NY 12226-2251

NYSDEC Region 4
65561 State Highway 10
Suite 1,
Stamford, NY 12167

The following parties received notices of the EA's availability for comment:

Mr. John Bonafide
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Andrew Dangler
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Arnold Printup
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Council of Chiefs
St. Regis Mohawk Tribe
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Akwesasne, NY 13655

8.0 CONCLUSION

FEMA through NEPA, and the Subgrantee through the State Environmental Quality Review Act (SEQRA) process, have found that the Proposed Action to realign a portion of Cole Hollow Road that is adjacent to Cole Hollow Brook, in the Town of Blenheim, Schoharie County, which is the Subgrantee's preferred alternative, is a practicable alternative that would not significantly adversely impact the human environment. During the construction period, short-term impacts to transportation, air quality and noise are anticipated. Short-term impacts would be mitigated utilizing best management practices, such as silt fences, proper equipment maintenance, and appropriate signage. Environmental impacts of construction would also be minimized per adherence to any required Stormwater Pollution Prevention Plan (SWPPP) and compliance with building development requirements. The long-term environmental impacts to soils, topography and vegetation as a result of the new facility construction are outweighed by the positive impacts that the road realignments would have for residents of Cole Hollow Road and the Town of Blenheim as a whole.

9.0 LIST OF PREPARERS

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FEMA Region II, 26 Federal Plaza, New York, New York 10278

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