

Summary of 8-Step Floodplain and Wetland Analysis for the Gorge Creek Culvert Repair and Stormwater and Drainage Infrastructure Improvements Project

Step 1: Determine if the proposed action is in a 100-year floodplain or results in new construction in wetlands.

As indicated on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community Panel Number 36095C0302E, dated April 2, 2004, approximately 4.9 acres of the Project is located within Special Flood Hazard Area (SFHA) Zone A (areas subject to 100-year floods) and Zone AE (Floodway within the 1 percent annual chance flood), 1.4 acres of which is within the floodway. The floodway includes the channel of the stream plus any adjacent floodplain areas that must be kept free of encroachments so that a one percent annual chance flood (100-year flood) can be accommodated without substantial increases in flood height. A 1.4-acre portion of the Project area parallel to MT Path is in Zone X, within the limits of the 500 year floodplain.

Because the Project is a functionally dependent use (24 CFR Part 55.1) and constitutes a replacement-in-kind of a previously existing structure, this floodplain analysis is provided to identify potential impacts to Gorge Creek and methods to minimize the potential adverse impacts within a floodplain.

Approximately 0.22 acres of the Project site is in riverine wetlands, as identified by the U.S. Fish and Wildlife Service National Wetlands Inventory. No New York State Regulatory Freshwater Wetlands or tidal/coastal wetlands are on or adjacent to the Project site. The Project will adhere to and be in compliance with the guidelines and regulations of Executive Order 11990, in order to minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. The Project would involve an on-site disturbance of a wetland, as defined by 24 CFR §55.2(b)(11). Wetlands are defined as areas that are inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Examples generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds. This definition includes those wetland areas separated from their natural supply of water as a result of activities such as the construction of structural flood protection methods or solid-fill road beds and activities such as mineral extraction and navigation improvements. Gorge Creek, which is conveyed by the existing culvert and would be disturbed by construction of the Project, is covered by this definition of a wetland.

Step 2: Notify the public of the intent to locate the proposed action in a floodplain or wetland.

An early public notice of proposed activity within the 100-year floodplain and wetland was published by the Governor's Office of Storm Recovery on September 16, 2017. The Early Notice requested comments from the public concerning floodplain, wetland, and natural resource impacts of the proposed action. The Early Notice explained that the proposed action would be evaluated for potential direct and indirect impacts associated with floodplain and

wetland development and, where practicable, would be designed or modified to minimize potential adverse impacts to lives, property, and natural values within the floodplain. The Early Notice was published in the *Schenectady Daily Gazette* and posted at <http://www.stormrecovery.ny.gov/environmental-docs>. The required 15-day period was conducted to allow for public comments, and comments were accepted either electronically or via written correspondence. No comments were received.

Step 3: Identify and evaluate practicable alternatives to locating the proposed action in a 100-year floodplain or wetland.

The proposed action entails construction of a box culvert and a sedimentation basin upstream of the box culverts, storm water drainage improvements along Gorge Creek, and expansion of the Gorge Creek floodplain in the Village of Middleburgh, Town of Middleburgh, Schoharie County, New York. The new box culvert would supplement two existing under-sized culverts. The new box culvert would cross under NYS Route 145 to Clauverwie Road, continue under Clauverwie Road for approximately 320 feet, proceed underground on the west side of Clauverwie Road and south of the Middleburgh Junior/Senior High School, and discharge to Gorge Creek approximately 175 feet south of the school. Approximately 140 linear feet of gabion baskets would be installed along the west side of Gorge Creek, between the creek and the school ball fields, to protect the ball fields from increased flow in Gorge Creek during storm events.

Because the Project is a replacement of the existing culvert, the action must take place at Project site. Addressing the inadequacy of the existing culvert inherently requires work within the floodplain and in the adjacent wetlands along the stream corridor. There are no alternatives that do not involve work in this area.

Step 4: Identify and describe the proposed action's direct and indirect effects associated with occupying or modifying the floodplain or wetland.

The Proposed Activity would result in permanent impacts to 4.94 acres of a 100-year floodplain and 1.45 acres of a 500-year floodplain. Approximately 1.39 acres of the Proposed Activity area within the 100-year floodplain are also within a floodway, which includes the channel of the stream plus any adjacent floodplain areas that must be kept free of encroachments so that a one percent annual chance flood (100-year flood) can be accommodated without substantial increases in flood height. Approximately 3.54 acres of the area for the proposed floodplain expansion area and sedimentation basin are within the 100-year floodplain, and implementing the floodplain expansion and sedimentation basin would result in a beneficial increase for a new total of 4.47 acres. Approximately 0.93 acres of the floodplain expansion area and the sedimentation basin area are within the 500-year floodplain, and with the Proposed Activity, this would be reduced to about 0.64 acres within the 500-year floodplain.

The short-term direct impacts to the 100-year floodplain and wetlands would consist of construction activity disturbance and excavation within the floodplain and wetland in the stream channel.

Long-term direct impacts would include replacement of a deficient culvert, improved flows, reduced risk of flooding, and a beneficial increase of the 100-year floodplain for a new total of 4.47 acres. Approximately 0.93 acres of the floodplain expansion area and the

sedimentation basin area are within the 500-year floodplain, and with the Project, this would be reduced to about 0.64 acres within the 500-year floodplain.

The Proposed Activity would result in temporary impacts to approximately 0.22 acres of National Wetlands Inventory (NWI)-mapped wetlands. The affected wetland areas are classified by the NWI as riverine and lie within the stream channel of Gorge Creek.

There would be long-term direct impacts to the stream channel and wetland in the area of the proposed sedimentation basin. The stream channel would be shifted to the south. Following alteration of the stream channel, it would continue to function as a riverine area. No new impermeable surfaces will result from the Project.

Step 5: Identify methods to minimize the potential adverse impacts within a floodplain or wetland and to restore and preserve their natural and beneficial values.

Precautions would be taken during construction to preclude contamination of the waterway by suspended solids, sediments, or any other environmentally deleterious materials. No discharge of turbid water or sediment would result from the Project. Excavated soil would be suitably retained and covered to avoid turbid runoff. The work area would be isolated from the flowing waterway by sandbags, piping, or pumping. Waters from the isolated work area would be discharged to an upland settling basin, field, or wooded area to provide for filtering of solids and sediments prior to being returned to the waterway. All unused, excavated material and construction debris would be removed to a minimum of 100 feet from the waterway immediately upon completion of construction. The clarity of the water downstream of the work area would be maintained at the same level as the clarity of the water upstream of the work area. The stream would be returned to its existing flow following construction. The temporary disturbance to the stream is not expected to have any significant negative effect on the adjacent riparian buffer wetland area, and the Project would not alter the survival and quality of the wetland.

Step 6: Reevaluate the proposed action to determine if it is still practicable given its floodplain and wetland effects.

The Village of Middleburgh is situated in the central portion of the Town of Middleburgh and lies almost entirely within the floodplain of Schoharie Creek. It is surrounded by steep slopes. The proposed project would replace the current inadequate culvert with a new culvert that would accommodate runoff from a 100-year storm along Gorge Creek. This reduces the risk of flooding and increases the Village's resiliency. The project, as proposed, would reduce potential hazards to human safety, health, and welfare, and is considered practicable.

The no action alternative remains impracticable because there would be no reduction in at-risk of flooding. The Project would not alter the survival and quality of the Gorge Creek wetland.

Step 7: If the only practicable alternative is locating in a floodplain or wetland, publish a final public notice.

It has been determined that there is no practicable alternative to locating the project in the floodplain.

A final public notice will be published in accordance with 24 CFR Part 55 for a minimum 7-day comment period. The final notice will detail the reasons why the project (replacement of structures located in the floodplain) must be located in the floodplain, a list of alternatives

considered, and all mitigation measures taken to minimize adverse impacts and preserve natural and beneficial floodplain values.

All comments received during the comment period will be responded to and fully addressed prior to funds being committed to the proposed project, in compliance with Executive Order 11988 or 24 CFR Part 55.

Step 8: The proposed action can be implemented after steps 1 through 7 have been completed.

Implementation of the proposed action may require additional local and state permits, which could place additional design modifications or mitigation requirements on the project including an application to NYSDEC and the US Army Corps of Engineers for a permit to undertake activities affecting streams, waterways, water bodies, wetlands, coastal areas and sources of water withdrawal. A local floodplain development permit would be obtained prior to construction activities.