

Floodplain Management (EO 11988) and Protection of Wetlands (EO 11990) Determination

Rome Dam Removal Project
Floodplain Management EO 11988 and Protection of Wetlands Determination EO 11990
*New York Rising Community Reconstruction Program within Community Development Block Grant
Disaster Recovery Program*
June 8, 2018

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.

The Rome Dam Removal Project (project) involves U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant Program – Disaster Recovery (CDBG-DR) funding for the removal of a structurally unsound, high hazard dam from a bedrock gorge on the West Branch of the Ausable River. The analysis that follows focuses on the direct 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. The HUD CDBG-DR funding is administered through the New York State Rising Community Reconstruction (NYRCR) Program which is using bottom-up community participation and State-provided technical expertise to develop resilient and sustainable communities. Thus, alternatives preventing or impeding the development of resilient and sustainable communities are not considered reasonable alternatives.

Description of Proposed Action & Land Use

The Rome Dam, formerly known as the J&J Rogers Pulp Mill Dam (Federal ID# NY00243 and NYS ID# 219-1082), is located on the Ausable River, approximately 1.5 miles upstream/ west of Ausable Forks, in the Town of Jay, Essex County, New York. Based on Essex County Assessment data, the project is located on tax map numbers 7.4-1-3.211 and 7.4-1-3.220. This project is located within the New York State Adirondack Park; a Jurisdictional Determination was issued by the Adirondack Park Agency (APA) on March 20, 2017, indicating permits or variances were not required from the APA regarding the proposed re-establishment of the access road (see APA Jurisdictional Determination J2017-0123 included in the Environmental Assessment [EA] as part of **Attachment 7**). The APA has been involved in reviewing the proposed project and the current design plans reflect comments from the APA which have been incorporated.

The Rome Dam Removal Project is located near Ausable Drive, Town of Jay, Essex County, New York 12941 (project location maps are included in **EA Attachment 1**). The project will involve the removal of the existing concrete dam, the historic dam that is contained within the existing concrete dam, the stone masonry abutments, the upstream timber/ rock cribbing towers, and an ±850 foot (ft) portion of the riverbed sediment that has been deposited upstream of the existing dam in the West Branch Ausable River. The removal of the Rome Dam will eliminate future dam safety concerns and will minimize the exposure of downstream areas to flooding and erosion risks from possible dam failure. The dam removal will minimize the exposure of the West Branch Ausable River channel below the existing dam to a large sedimentation event that could destabilize the bed and banks and lead to damages along Church Lane and Ausable Forks. Upon completion of the dam removal, bedrock cascades are anticipated to exist near the dam’s current location and in the current impoundment area, creating waterfalls that will enhance the

visual appearance of the area. The full dam removal will also reduce ice formation in the winter due to the bedrock cascades and the natural flow of the waterway.

The project will involve approximately 3.0 acres of ground disturbance (2.6 acres of river channel below Ordinary High Water Mark [OHWM], 0.2 acres of NYSDEC regulated streambank, and 0.2 acres of upland) associated with the dam removal, river restoration and the creation of the construction staging zone and access roads. The construction activities for the project includes clearing vegetation for site access and the project staging area; constructing temporary access roads to the dam and upstream impoundment from the roadway; incrementally removing sediment and timber cribbing located upstream of the existing dam; removing the existing concrete spillway, stone masonry abutments, and outlet works; and removing concrete and masonry debris located downstream of the dam within scour pool. Indirect disturbance will take place in the upper impoundment due to anticipated sediment transport even though work is not taking place in this location.

Rome Dam is proposed for deconstruction during low water in summer and early autumn in 2018. The project is anticipated to take two to three months, depending on weather and construction equipment allocations (see final design plans in **EA Attachment 2**). The dam will be accessed from bank right (facing downstream) down a steep slope. An existing haul road provides access from Ausable Drive to approximately 100 feet from the dam. A temporary access road will be made from the loop to the corner of the dam to allow equipment access to the site and material hauling away from the site. The site will be controlled by proper signage and safety fencing. Tree removal will take place in three designated areas to allow access and dam removal. Ninety-two (92) trees will be removed: thirty-four (34) of less than 2" in diameter; twenty-four (24) that are 2-3" in diameter, and thirty-four (34) of greater than 3" in diameter. Species include pine, northern white cedar, red oak and hemlock. Existing native vegetation will be preserved and protected, as possible. Any native vegetation or topsoil removed will be stockpiled and reinstalled, as possible. The heavy work will start by building construction access to the dam from the existing haul road. The access road will consist of compacted #3 stone over filter fabric and a compacted subgrade.

The impoundment will be dewatered initially by notching the dam first on river right and then on river left. The first notch will expose built up gravel that can serve as the base of a haul road across the front face of the dam. Dewatering will continue with the goal of moving the flow to river left. Dam removal will take place incrementally to remove consolidated sediment and lower the concrete spillway. The timber crib structures will be removed, as accessible. Channel restoration will take place as sediment is removed. Approximately 37,000 cubic yards (cy) of material, ranging from fines to very large boulders, located behind the dam will be removed due to concerns about downstream habitat impacts and decreased channel stability with excessive downstream sedimentation. Based on sediment sampling and testing, the "sediment located behind the dam appears to be typical of the subsurface material found along the river bottom in the free-flowing channel" (*Narrative for Sediment Disposal* in **EA Attachment 2**). The testing did not identify concentrations exceeding NYSDEC's Technical & Operational Guidance Series (TOGS) 5.1.9 Thresholds for Class A Sediment (**EA Attachment 2**). The materials behind the dam will be removed by excavators with drainage at the dam site performed per standard dewatering practices. The materials will be moved by excavators to tandems and hauled away, with several tandems operating to allow delivery approximately every 30-45 minutes on days when fines are being removed (see *Narrative for Sediment Disposal* for more details in **EA Attachment 2**). An estimated 18,500 cy of sediment/fines that are mostly sands, small gravels, and some silt will be hauled to the Town of Jay Harkness Pit located at 371 Dry Bridge Road in Ausable Forks. Gravel, cobble, and boulders will be hauled to 566 Ausable Drive in Jay for re-use in future river restoration projects by the Ausable River Association. As the concrete and granite dam is deconstructed, approximately 6,500 cy of remnant concrete and large dressed blocks will be stored at Harkness Pit, with the dressed blocks potentially re-used by the Town and fine sediment and crushed concrete used as fill in the Harkness Pit. The Town of Jay has submitted a

NYSDEC mining permit modification application for the Harkness Pit (see **EA Attachment 11**). The dam will be completely removed to underlying bedrock. Following removal, the downstream scour hole will be partially cleaned out to re-establish the proposed channel profile. Side slopes where the dam abutments were located will be re-graded as needed, since they are mostly bedrock.

The full dam removal will lower water levels upstream of the dam nearly 20 feet on the West Branch Ausable River. Once deconstruction is completed, the temporary access roads will be restored with native vegetation leaving a narrow footpath down to the former dam site. A small, level existing opening will be maintained and will serve as the terminus of the footpath. The site is frequented by local residents who hike along the bank above the river on informal trails. A 30-foot long railing along the edge of the former outlet works is proposed at this optimal river viewing site. With the steep bedrock walls, the railing is needed for safety as the scenic overlook location is likely to attract visitors to see the restored river in the bedrock gorge. The railing at the end of the footpath is the only proposed extant structure within 100 feet of the new OHWM. The site will remain open to the public after the dam is removed. Development of a sign describing the history of the Rome Dam and its importance to the community is proposed in a parking area along Ausable Drive. Through this project, the history of Rome Dam and the J. & J. Rogers Company has been documented, as requested by the NY State Historic Preservation Office (SHPO), to memorialize the dam and its influence in the area. The sign will be located approximately 150 feet from the OHWM of the West Branch of the Ausable River.

Disturbed locations on the site will be completely restored to original conditions or as indicated on the plans. All disturbed locations will be seeded and mulched with a native mix that meets NYSDEC standards for erosion and sediment control. Project oversight will be performed by the Project Engineer and the County. The Project Engineer will visit the site two to three times a week to assist with design implementation and to track permit compliance. The County representatives will be onsite nearly daily. The Project Engineer will be available by phone and email any time for questions and guidance. A post-construction site walk will take place with all parties to ensure the project is properly completed.

Applicable Regulatory Procedure Per EO 11988 and EO 11990

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

According to 24 CFR §55, the activity planned to remove existing and historic dam structures and restore the associated waterway channels occurs in a community, the Town of Jay, that is in good standing in the regular program of the National Flood Insurance Program (NFIP). This project will remove the Rome Dam and associated structures and restore the West Branch Ausable River. Substantial Improvement/Substantial Damage calculations do not apply to this project. However, this proposed action is considered new construction in floodplain and riverine wetlands, since the proposed action involves dredging, temporary dewatering, channelizing of the streambed, and other waterway work. As such, the full eight-step floodplain determination process in §55.20 is required and the following analysis examines each step in a floodplain management determination process.

Based on online data, including data managed and updated by the U.S. Fish & Wildlife Service (USFWS) and NYSDEC, there will be new construction within federal and state mapped riverine wetlands and 100-year floodplain at the project location. Thus, in accordance with the decision-making process set forth in 24 CFR Part 55, this analysis focuses on both floodplains and wetlands.

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.

Based on data managed by the USFWS and NYSDEC, the proposed action is located in a state waterway and federally mapped riverine wetland, as shown in **Appendix 1**. According to the NYSDEC Environmental Resource Mapper, the proposed action is located within a Regulation 830-254, Standard C(T), Classified C river located upstream of the dam and Regulation 830-255, Standard C, Classified C river located downstream of the dam. According to the USFWS National Wetlands Inventory maps, the proposed action is located within a R3UBH classified Riverine Wetland. The proposed action is considered new construction in wetlands as the proposed action involves dredging, temporary dewatering, channelizing of the streambed, and other waterway work associated with dam removal. The proposed action might require an individual Section 404 permit under the Clean Water Act (see §55.20(a)(1) and §55.28(a)). However, project activities could be authorized by U.S. Army Corps of Engineers (USACE) Nationwide Permits (NWP) # 13, 27 and 53, and then an individual Section 404 Permit will not be needed.

Per the FEMA Firmette, the proposed action is located within the 100-year floodplain (Special Flood Hazard Area [SFHA] – Zone A), though it is not located within a FEMA-designated regulatory floodway, as shown in **Appendix 1**. For streams and other watercourses where FEMA has provided Base Flood Elevations (BFEs), but no floodway has been designated, the community must review floodplain development on a case-by-case basis to ensure that increases in water surface elevations do not occur, or identify the need to adopt a floodway if adequate information is available. According to 24 CFR §55, the proposed action 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. Thus, a Town of Jay Floodplain Development Permit will be obtained by the applicant before commencing work.

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

Because the proposed project is located in floodplain and wetlands, 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.

The early notice and corresponding 15-day public comment period started on March 21, 2018 with the "Notice of Early Public Review of a Proposed Activity in Wetlands and 100-Year Floodplain" being published in the Press Republican newspaper, with the 15-day period expiring on April 5, 2018. The notice targeted local residents, including those in the floodplain. The notice was also sent to the following federal and state agencies on March 21, 2018: Federal Emergency Management Agency (FEMA); HUD; USFWS; U.S. Dept. of the Interior; USACE; U.S. Environmental Protection Agency (EPA); NYSDEC; NY SHPO; Office of Parks, Recreation and Historic Preservation; and NYS Division of Homeland Security and Emergency Services. The notice was also sent to the Mohawk Nation, St. Regis Mohawk Tribe, Essex County and the Town of Jay. (See **Appendices 2** and **3** of this EO 11990 Wetlands Protection and EO 11988 Floodplain Management Determination for the letter distributed to these agencies and the associated newspaper publication affidavit).

Step 3. Identify and Evaluate Practicable Alternatives to Locating the Proposed Action in a 100-year Floodplain or Wetland.

The NYRCR Program empowers the State’s most impacted communities with the technical expertise needed to develop thorough and implementable reconstruction plans to build physically, socially, and economically resilient and sustainable communities. According to the Jay/Keene NYRCR Plan, a central focus of the NYRCR planning process was to identify resiliency measures that could help protect civic assets from future flood damages, and Rome Dam was one such asset identified as vulnerable. The Rome Dam was originally utilized as a source of power for the mill, though it has been out of service and

unmaintained since 1973. In the 1980s, several attempts were made to convert Rome Dam into a hydroelectric facility. These attempts failed due to the structural condition of the dam, the repeated historic damage the dam has endured, and the unknown condition of the dam foundation. Rome Dam has been classified as high hazard (class C) structure by the NYSDEC due to the close proximity to the Hamlet of Au Sable Forks and the Au Sable Forks Elementary School. While the dam did not fail during Hurricane Irene or Superstorm Sandy, the storms exacerbated the existing hazardous conditions at the dam by depositing more sediment and debris behind the dam. In the event of a failure, a Class C dam is likely to result in widespread or serious damage to buildings, highways, or other important utilities and substantial environmental damage, such that “the loss of human life or widespread substantial economic loss is likely” (NYCRR Title 6 Part 673.5). Given the history of flooding and erosion at the site, and the proposed work to remove the dam and restore the river channel, potential alternatives must be considered in order to try and mitigate the amount of damage from future flood events.

Six alternatives were reviewed and documented in the *Rome Dam Engineering Study*, dated February 28, 2017 by Milone and MacBroom, Inc. (MMI), and its *Alternatives Analysis Summary Matrix* (**EA Attachment 2**). These alternatives included: full dam removal, three-quarters dam removal, half dam removal, dam repair, dam replacement, and no action, and are discussed in detail below. The six alternatives were evaluated in the Study to identify which one best meets the project’s objectives which include: improve dam safety, reduce flood risk, reduce erosion risk, meet spillway requirements, improve water quality, reduce the Town’s financial exposure, control implementation costs and reduce maintenance costs (**EA Attachment 2**).

1. Full Dam Removal

The proposed action is for full removal of the Rome Dam. This action is the preferred alternative because it is the “most cost-effective way to meet the majority of the project objectives and completely eliminate dam safety issues and the Town’s financial exposure” (*Rome Dam Engineering Study in EA Attachment 2*). According to the *Rome Dam Engineering Study*, modeling results show the expected reduction in flood levels upstream of the dam in the bedrock gorge area would drop 29 feet if the full dam is removed compared to approximately 14 feet if half of the dam is removed. Dam removal would reduce flood levels and increase flow velocity. “The increased flood velocity in the gorge will naturalize sediment transport in the channel, which will likely improve downstream channel stability over the long term” (**EA Attachment 2**). “The increased flow velocity following dam removal will also likely reduce winter ice thickness and reduce the chances of ice jamming originating from the area around Rome Dam” (**EA Attachment 2**). There will be a loss of a historic Adirondack industrial dam, however, through this project, the history of Rome Dam and the J. & J. Rogers Company has been documented, as requested by the SHPO, to memorialize the dam and its influence in the area. A sign memorializing the dam will be located approximately 150 feet from the proposed OHWM. The advantages of full dam removal include: reduction in downstream flooding and erosion risks, elimination of all dam safety requirements and concerns; reduction in the Town’s financial liability and obligations; naturalization of sediment transport; improvement of long-term channel stability; protection of downstream habitat and water quality; restoration of the free-flowing nature of the river; creation of a hiking trail along a narrow footpath with an overlook for the public’s enjoyment of this beautiful natural feature which will likely include waterfalls from the remaining bedrock cascades; and reduction of threats to downstream public safety, private property and public infrastructure.

2. Three-quarters Dam Removal

This alternative lowers the majority of the dam to the elevation of the downstream portion of the ogee crest. Dam improvement design plans show that a stone masonry wall existed in the location before the concrete was added; so, this alternative would nearly match the lower downstream wall elevation. This alternative would establish a more uniform river profile, while retaining the last “step” that is believed to exist over a bedrock drop. Downstream risks would decrease due to eliminating almost all of the storage

in the impoundment. The remaining dam in this alternative would be at or very close to the channel bottom and, thus, would not likely trigger state dam safety jurisdiction. Nonetheless, a structure would exist, and a foundation assessment and repairs of the remaining abutments would likely be needed. The remaining portions of the structure may require some maintenance by the Town after the project. Site aesthetics will be more natural except that some of the dam will be visible. The reduction of ice formation and increase ice erosion will likely be similar to full dam removal. (See the *Rome Dam Engineering Study* and its *Alternatives Analysis Summary Matrix* in **EA Attachment 2**).

The three-quarters dam removal alternative is not recommended since there is only a small possible savings compared to the full dam removal and part of the structure would still remain, which would require repairs. This alternative would also require ongoing maintenance costs and the structure may not be insurable by the Town.

3. Half Dam Removal

This alternative consists of lowering the crest of the dam to try and meet the state spillway capacity requirements. In this alternative, the dam and spillway crest would be lowered approximately 13 feet. According to the *Rome Dam Engineering Study*, modeling results show the expected reduction in flood levels upstream of the dam in the bedrock gorge area would drop approximately 14 feet if half of the dam is removed (**EA Attachment 2**). The remaining portions of the dam would need to be repaired to stabilize the structure. This alternative would establish a more uniform river profile, yet an unnatural drop in the channel would remain that will continue to trap sediment upstream of the dam. Although reduced as compared to existing conditions, downstream risks would remain due to the remaining storage in the impoundment. The remaining dam in this alternative would remain under the jurisdiction of the NYSDEC Dam Safety. A foundation assessment and repairs of the remaining abutments would still be required. The remaining portions of the structure would require ongoing maintenance to function safely and properly after the project. Site aesthetics will largely remain similar to the existing conditions, with nearly half of the dam remaining. Ice dynamics are not likely to change under this alternative. (See the *Rome Dam Engineering Study* and its *Alternatives Analysis Summary Matrix* in **EA Attachment 2**).

The half dam removal alternative would result in only small possible savings compared to full removal and a high hazard jurisdictional dam structure would remain, which would be costly to insure and may not even be insurable. Long-term maintenance needs would exist with the remaining dam. Downstream hazards would also remain under this alternative.

4. Dam Repair

This alternative consists of attempting to repair the existing dam. Almost all visible components (e.g., spillway, abutments, and outlet works) would need to be repaired. The full extent of the required repairs is unknown at this time as subsurface exploration and testing of the dam foundation has not taken place. Dam repair might not be allowed since the existing spillway will not meet dam safety requirements of passing the ½ PMF with 1 foot of freeboard, and changing the spillway configuration would lead to a large change at the dam (such as ½ or ¾ removal). The repaired dam would remain under the jurisdiction of the NYSDEC Dam Safety. Also, the dam repair alternative would result in a structure that would require ongoing maintenance, which is not being performed now, to function safely and properly after the project. Site aesthetics would remain as in the existing conditions. This alternative would result in a large implementation cost with a high level of future uncertainty. Downstream flood and erosion risks would remain, as flood patterns and ice dynamics would not change. The historic structure would remain. (See the *Rome Dam Engineering Study* and its *Alternatives Analysis Summary Matrix* in **EA Attachment 2**).

This alternative is not recommended, since there is no current use of the structure, a permit to complete the dam repair and operate the dam might not be obtainable, and repair costs could increase as information is gathered on the dam foundation and conditions.

5. Dam Replacement

This alternative consists of replacing the dam with a new modern structure. Full dam removal would be required before the construction. The new dam would likely have a lower spillway in order to meet dam safety requirements. The dam would remain under the jurisdiction of the NYSDEC Dam Safety. (See the *Rome Dam Engineering Study* and its *Alternatives Analysis Summary Matrix* in **EA Attachment 2**).

The dam replacement alternative would have a large implementation cost and would require ongoing maintenance, which is not being performed now, in order to function safely and properly after the project. Site aesthetics would generally remain similar to the existing conditions, yet the historic structure would be removed and there would be a loss of historic value. The downstream flood and erosion risks would still exist should the dam fail, and flood patterns and ice dynamics would likely remain similar to existing conditions. The spillway would likely need to be lowered to meet dam safety requirements, which would reduce hydroelectric power generating capacity.

6. No Action Alternative

This alternative retains the existing conditions and no changes are made at the dam. This eliminates the proposed project costs and any associated construction impacts. However, according to the *Rome Dam Engineering Study*, “[t]his alternative is not acceptable given the dam safety concerns of a deteriorating structure and confirmed downstream risks.” The dam is in poor condition, and possibly worse condition than currently known, if undermining and visible erosion is also impacting the foundation of the structure. The potential use of the dam for hydroelectric power is unlikely due to its current condition. A complete removal and rebuild are likely needed to fully and confidently improve the structure and meet state dam safety requirements. The existing dam is classified as a high hazard (Class C) dam by the State of New York. In the event of their failure, Class C dams are likely to result in widespread or serious damage to buildings, highways, or important utilities and substantial environmental damage, such that the loss of human life or widespread substantial economic loss is likely (NYCRR Title 6 Part 673.5). The dam is also listed as “unsound,” meaning it has deficiencies of such a nature that the safety of the dam cannot be assured (See *Rome Dam Engineering Study* in **EA Attachment 2**). These deficiencies may include seepage problems, structural stability inadequacies, or seriously inadequate spillway capacity (NYCRR Title 6, Part 673.16). According to the *Rome Dam Engineering Study*, “[t]he dam is currently obsolete and deteriorating” (**EA Attachment 2**). Further, the spillway is undersized with inadequate freeboard. The financial exposure of the Town is high, insuring the structure is expensive and even may not be possible, and downstream risks are confirmed to be high. The risks from dam failure due to no action includes: downstream flood and erosion risks; long-term channel instability which threatens downstream public safety, private property and public infrastructure; and long-lasting adverse impacts to trout habitat and water quality. Additionally, the NYSDEC requires the dam be either fixed or removed. This would leave the surrounding area vulnerable to potential flood damage and loss of life associated with dam failure. The “no action” alternative would provide no protection to the downstream communities and ecosystems from future flood events or potential dam failures, because mitigation in the form of dam removal 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 and dam failures.

Due to the nature of the proposed action associated with the dam removal, prohibition of this work within floodplain is not practicable.

The above identified alternatives will be re-evaluated in response to public comments received.

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, the two definitions commonly used in evaluating actions in 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 proposed action at the project site involves the removal of an existing dam and the restoration of the streambed in the West Branch Ausable River. The *Rome Dam Engineering Study* detailed an assessment and alternatives analysis for Rome Dam (**EA Attachment 2**). This Study indicates that the flood water levels upstream of the dam would be lowered by approximately 29 feet with the full removal of the dam. Additionally, the removal of this high-hazard dam would remove the potential disaster associated with the dam failing in the future due to neglect. Thus, while the proposed action would directly affect the floodplain, it is not anticipated to have an adverse effect on the floodplain for the surrounding communities and ecosystem. Rather, the project is anticipated to have an overall positive effect as the flood water levels would be lowered and the chance of a catastrophic dam failure will have been removed.

Living resources such as flora and fauna

The land use surrounding the Rome Dam is primarily undeveloped, with informal trails leading to an existing landing located off the main road. The West Branch Ausable River is classified as a Recreational River, with the river being a well-known cold-water fishery that supports a healthy trout population and riverine ecosystem. The river has diverse in-stream and riparian habitat structures located upstream of the dam, though those features are lost or buried within the dam impoundment area. The areas downstream of the dam lack the variation of sediment sizes necessary for species diversity and aquatic health. The finer-grained sediment, cobble, and boulders have been locked in the impounded reservoir behind the dam, creating a rocky channel that adversely affects the biodiversity of the ecosystem by reducing the availability of shelter from floods or drought for aquatic species downstream. Areas that are noted to be “sediment starved” often regain lost sediment by eroding deeper into the streambed or eating away at streambanks, leading to channel scouring, down-cutting, and streambank erosion.

The removal of this dam and the restoration of the natural river channel will allow for a more natural sediment, cobble, and boulder transport; this action would improve the natural habitat both up- and downstream of the dam location, with an increased density and variety of species. It would also allow for migrating aquatic species to easily travel beyond the artificial barrier of the Rome Dam for the first time since it was constructed. The removal of the dam will involve the loss of any slow-moving, lake-like habitat currently existing behind the dam, meaning the species that favor such slow-moving waters would be in the decline in an area that does not have such conditions naturally occurring. However, the potential decline of these species will be outweighed by the restoration of the natural riverine habitats that will allow native aquatic species to flourish. Thus, while the living resources in the project area will be directly impacted by the proposed project activities, it is anticipated there will be an overall positive effect and any negative effects will be primarily temporary.

Impacts to Property & Lives

Rome Dam is a Class C high hazard dam that has been out of service and deteriorating since at least 1973, with multiple flooding events and ice jams that have furthered the damage associated with the inadequate spillway capacity and lack of maintenance. If this dam were to fail, allowing the sudden release of the impounded water and sediment located behind this compromised dam, then extensive environmental and infrastructural damage along with potential loss of life and property could occur. The advantages of full dam removal include: reduction in downstream flooding and erosion risks, elimination of all dam safety requirements and concerns; reduction in the Town's financial liability and obligations; improvement of long-term channel stability; protection of downstream habitat and water quality; and reduction of threats to downstream public safety, private property and public infrastructure.

Cultural resources such as archaeological, historic & recreational aspects

The Rome Dam, formerly known as the J&J Rogers Pulp Mill Dam (Federal ID #NY00243 and state ID # 219-1082), was originally constructed in 1897 to power a nearby pulp mill, though the usage was later expanded to power a paper mill. The *Phase IA Archaeological Survey* (August 26, 2016) indicated the dam was damaged in 1936 after the failure of an upstream dam (**EA Attachment 8**). The dam was rebuilt as a concrete ogee structure, and the reconstruction plans from this time indicate the dam was constructed on granite bedrock. The dam has been out of service and unmaintained since the dam's use for mill power ceased in 1973, though periodic efforts were made in the 1980s to repurpose the dam to generate hydroelectric power for the area.

A review for historic properties on the site revealed the Ausable Forks Hydroelectric Plant (Rome Dam) (NYS OPRHP #031.05.0007) and a No Name Archaeological Pre-Contact site (NYS OPRHP #031.05.00347) on the edge of/within the project site. Through this project, the history of Rome Dam and the J. & J. Rogers Company has been documented, as requested by the NY SHPO, to memorialize the dam and its influence in the area. The sign will be located approximately 150 feet from the OHWM of the West Branch of the Ausable River. It is anticipated the NY SHPO will be involved in the documentation process during the proposed removal. In addition, the full dam removal will enhance recreational use of the river and area since it will restore the free-flowing nature of the river and create a hiking trail along a narrow footpath with an overlook for the public's enjoyment of this beautiful natural feature which will likely include waterfalls from the remaining bedrock cascades.

As part of this review, the NY SHPO and Tribal Historic Preservation Offices (THPO) of all applicable Tribes, Nations, and Communities were consulted regarding any historic or tribal resources in the area that could be affected by the proposed actions. On January 30, 2018, SHPO confirmed that the proposed project will have no effect on historic resources. The Saint Regis Mohawk Tribe THPO responded on December 21, 2017 that the project is considered being of "No Effect" in regards to cultural properties of concern to the Tribe. In addition, the St. Regis Mohawk Tribe "fully supports this project that will restore in part, the natural flow of the Ausable River." The St. Regis Mohawk Tribe requests to be notified upon completion of this project. Additionally, they request to be immediately identified in the event of any inadvertent discoveries of human remains, funerary objects, sacred objects, and objects of cultural patrimony that are made during the scope of this project. No response was received from the Mohawk Nation. The SHPO and THPO consultation documentation is included in **EA Attachment 8**.

Agricultural, aquacultural, & forestry resources

The Rome Dam is located within the Adirondack Park, with undeveloped forests and informal trails leading throughout the area and to the river. The West Branch Ausable River is designated as a New York State Recreational River and a well-known trout fishery, and both the informal trails located within the Adirondack Park and the fishing on the recreational river act as an economic driver for tourism in the area. By removing the dam and returning the West Branch Ausable River to a natural flow, the surrounding areas' scenic and economic value and natural resiliency will flourish. The West Branch Ausable River's restored natural flow will allow for greater population densities of native aquatic organisms for a robust ecosystem. The West Branch Ausable River is noted as being a low-turbidity, cold-water recreational river, with fisheries that support the native trout species and macroinvertebrate species. Thus, the removal of this dam would increase the riverine biodiversity in the area and protect and enhance the economic and scenic value of the West Branch Ausable River for fishing and tourism in the area.

Wetland Evaluation

The purpose of wetland evaluation is to consider factors relevant to a proposed action's effect on the survival and quality of any wetlands to be disturbed. These factors should include public health (including water supply and water quality), maintenance of natural systems, cost increases attributed to construction in wetland, and other uses of wetland in the public interest. The project is located within a waterway the NYSDEC has classified as a Recreational River and Regulation 830-254, Standard C(T), Classified C river located upstream of the dam and Regulation 830-255, Standard C, Classified C river located downstream of the dam, and the USFWS has classified as riverine wetlands. The West Branch Ausable River is noted as being a low-turbidity, cold-water recreational river, with fisheries that support the native trout species and macroinvertebrate species.

Public health, safety, and welfare, including water supply, quality, recharge, and discharge; pollution; flood and storm hazards and hazard protection; and sediment and erosion.

According to the *Jay/Keene NYRCR Plan* (March 2014), “[a]t present, the Rome Dam is considered high hazard, presenting a potential threat to life and property if the structure fails.” Also, it noted that “[w]hile the flood risk due to a dam break is unknown, it is assumed that there is some risk to downstream assets in Au Sable Forks and Black Brook. For these and other environmental, social, and economic reasons, the need for an engineering study for Rome Dam was identified to “[p]rotect vulnerable civic assets from flooding using structural and non-structural controls.” The Rome Dam is classified as a high hazard (Class C) dam in unsound condition and inadequate spillway, with noted deficiencies of such a nature that the safety of the dam cannot be assured. The dam is considered obsolete and has been deteriorating due to lack of maintenance since abandonment in 1973. This dam and impounded water was used for power generation associated with historic paper and pulp mills located along the West Branch Ausable River. The impounded waters at the dam are not used as a water source by the local communities, though the river is utilized as a tourist attraction for the well-known fisheries located on this river. The West Branch Ausable River drains a 234-square mile watershed into the dam site, with the dam capable of storing a volume of approximately 91 acre-feet of impounded sediment and water at the top of the dam. Should the dam fail, this impounded sediment and water would travel downstream towards local communities, resulting in serious damage to buildings, highways, and other infrastructure, with substantial environmental damage. The potential loss of life and widespread economic damage is likely without the repair or removal of this dam. The *Jay/Keene NYRCR Plan* noted, “[a]s a high hazard dam, the Town of Jay must take action to reduce the hazard level or remove the dam altogether.” (<https://stormrecovery.ny.gov/regional-communities/town-jay-and-town-keene>)

Full removal of this dam would create a natural and free-flowing waterway while removing the danger of the dam failure. This action would lower the upstream flood water levels for the waterway, as water and sediment would no longer be trapped behind the dam; the areas downstream of the dam would be further

improved by increased sediment transportation past the dam, as the downstream channel currently lacks locations for shelter for aquatic species during drought or flood. This “sediment starved” area would be fed with the finer-grained sediments, cobbles, and boulders that would have been previously trapped behind the dam, leading to a decreased amount of channel down-cutting and streambank erosion.

The West Branch Ausable River water quality in the downstream area would be likely improved in many ways, such as decreased temperature variations and increased sediment and materials transport. As water gets trapped behind the dam, the temperature of this slow-moving water increases above what would otherwise occur naturally, meaning native aquatic species that prefer swifter moving, cold waters would be at a disadvantage over species that prefer slow moving, warmer waters. After dam removal, these potential temperature variations in the impounded waters and the resulting water flow velocity change would be removed, allowing for native aquatic species to flourish.

Maintenance of natural systems, including conservation and long-term productivity of existing flora and fauna; species and habitat diversity and stability; natural hydrologic function; wetland type; fish; wildlife; timber; and food and fiber resources.

A river’s flow regime involves the range in magnitude, regularity, and frequency of water being transported downstream over the course of a set period. A natural river flow regime will fluctuate dynamically over the course of a year, from the high-waters associated with spring rains and ice melt to the low-waters associated with warmer, dry summers. This variability supports a diverse variety of aquatic species which are capable of taking advantage of the river’s variable flow. The presence of Rome Dam cultivates an artificial water flow regime, with high-water flows being impounded behind the dam and slowly released over time rather than allowed to flow naturally, while the low-water flows are impeded by the presence of the dam. This type of artificial flow regime results in a decreased diversity and density of aquatic species. By removing the Rome Dam and restoring the natural channel bed, a naturally dynamic flow regime will be established for the first time since the dam was constructed, allowing for native aquatic species to regain their previous diversity and population density.

The full removal of the Rome Dam will impact the habitat created by impounded water and sediment behind the dam. When the dam and impounded sediment are removed, this slow-moving water habitat will be replaced with habitat more suited to the natural water flow in cold, riverine waters, with a variety of sediment, cobble, and boulders on the streambed. While this could result in a temporary decline of aquatic species that would inhabit the slower moving habitat behind the dam, the restoration of the natural streambed and flow regime will allow for increased diversification and population densities for the area’s native aquatic species. Thus, while the natural systems in the project area will be directly impacted by the proposed project activities, it is anticipated there will be an overall positive effect, and any negative effects will be temporary. Alternatively, a potential dam failure event due to no action could have long-lasting adverse impacts to trout habitat and water quality.

Cost increases attributed to wetland-required new construction and mitigation measures to minimize harm to wetlands that may result from such use.

The proposed scope of work involves the removal of a historic dam that has been in place since the late 1800s and restoration of the natural streambed. This work will involve dredging the sediment behind the dam down to bedrock and, potentially, temporary dewatering associated with construction activities. Mitigation measures in the form of sediment and erosion control have been put into place to prevent wetlands damage downstream from the work area. The scope of work involves functionally dependent new construction and dredging within riverine wetlands; as such, there are no anticipated cost increases attributed to additional mitigation measures to minimize harm to wetlands as these measures are built into existing plans. The project activities will be completed in conformance with all applicable, local, state and federal permits and their requirements and conditions.

Other uses of wetland in the public interest, including recreational, scientific, and cultural uses.

The removal of this dam offers to the public recreational access to unfettered and natural waterways in the area. According to the Outdoor Industry Association's two page fact sheet New York The Outdoor Recreation Economy, outdoor recreation generates \$338 Billion in consumer spending and 305,000 direct jobs within New York. This is an important sector of the regional and local economy, with the local fisheries and scenic location being an important economic driver for the area. Restoration of this area to natural conditions would further protect the existing fish and wildlife resources, aesthetic quality, and other cultural and archaeologically significant features in the area.

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 proposed action involves the removal of Rome Dam and the sediment trapped behind it. As such, it is a direct policy requirement to specify standards that mitigate future flood risk. The full dam removal will provide flood mitigation and benefits such as a decreased flood water level for the area, healthy sediment and materials transportation for the waterway, improved water quality, and increased diversification and density of species in the area. However, it is still reasonable to promote awareness of future risks of natural hazards, including altered flooding patterns, plus the physical, social and economic impacts that potential flood events could convey.

Step 6. Reevaluate the Alternatives and Proposed Action.

The three-quarters dam removal, half dam removal, dam repair, and dam replacement alternatives would not address the purpose and need of the proposed action. The three-quarters and half dam removal options would require foundation assessment and repairs of the remaining abutments, plus, the remaining portions of the structure would require ongoing maintenance to function safely and properly after the project. Repairing of the existing dam would potentially return the dam to functionality, but it would not necessarily remove the "High hazard" classification from the dam due to design deficiencies. Replacing the dam would correct those deficiencies, but require a full dam removal. All of these options would require regular maintenance and monitoring from the Town, and would not remove the potential for dam failure – merely possibly reduce it. As such, these options were deemed not feasible due to the ongoing costs associated with dam upkeep and desire to remove the danger associated with future flood events and dam failures.

The "no action" alternative would not address the purpose and need of the proposed action. Without the proposed action, the area communities downstream of the dam would be left more susceptible to future floods and dam failures than it would be 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 potential adverse and beneficial impacts on the floodplain, the extent to which it may aggravate current hazards to other floodplains, and the potential to disrupt the natural and beneficial functions and values of floodplains and wetlands.

Implementation of the proposed action will abide by all applicable federal, state and local codes for construction within floodplain and wetlands. Thus, the impact of the proposed action on a floodplain and wetland would be less than the "no action" alternative.

The impacts of these alternatives will be re-evaluated in response to any public comments received.

Step 7. Issue Findings and Public Explanation.

It is the finding of this report that there is no better alternative than to provide funding for the Rome Dam Removal Project. The location within floodplain cannot be avoided due to the project involving a dam structure in a waterway. However, not funding any actions would mean that this dam and affected

communities would continue to be threatened by this high hazard dam or face removing and replacing the dam. A final notice, formally known as “Notice of Policy Determination” was published in accordance with 24 CFR 55, for a minimum 7-day comment period. (See **Appendix 4** of this EO 11990 Wetlands Protection and EO 11988 Floodplain Management Determination for the letter distributed to the associated agencies and the associated newspaper notice affidavit). The comment period started with the combined Final Notice publishing in the Press Republican newspaper on June 9, 2018 and the FONSI-NOIRROF 15-day period expires June 25, 2018. The 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.

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 EO 11988, EO 11990 and 24 CFR Part 55.

Step 8. Continuing Responsibility of Responsible Entity & Recipient.

GOSR, operating under the auspices of the New York State Homes and Community Renewal’s (NYSHCR) Housing Trust Fund Corporation, is the responsible entity. The responsible entity will make available educational materials, when available. It is acknowledged there is a continuing responsibility by the responsible entity to ensure, to the extent feasible and necessary, compliance with Steps 5 through 7.