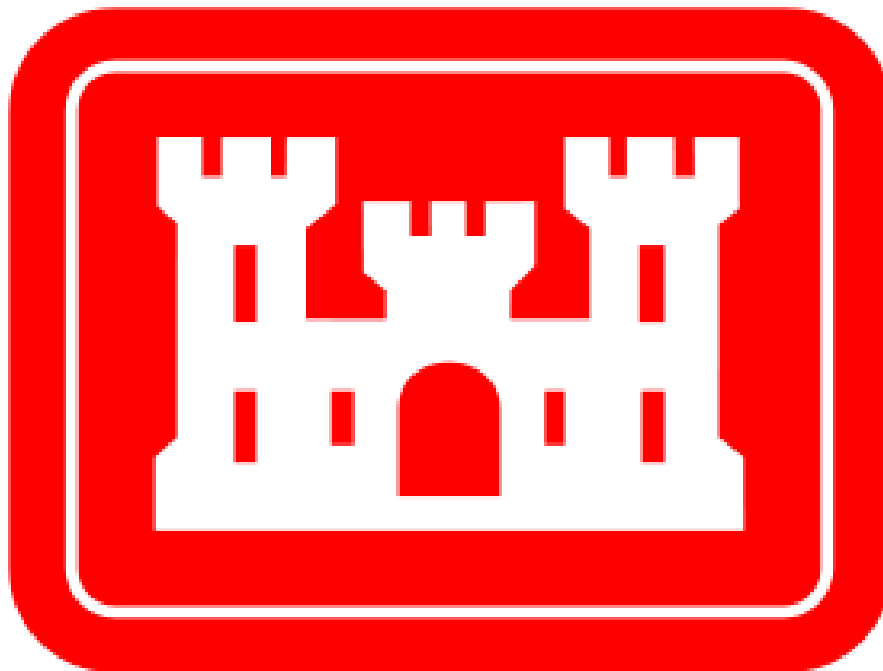


Draft Environmental Assessment
Section 340 Richwood
Wastewater Treatment Plant Replacement Project
Nicholas County, West Virginia



U.S. Army Corps of Engineers
Huntington District
Huntington, West Virginia
May 2026
EAXX-202-00-H1P-1734077459



Draft Environmental Assessment
Section 340 Richwood
Wastewater Treatment Plant Replacement Project
Nicholas County, West Virginia
Executive Summary

The City of Richwood (City) is proposing to decommission the existing Wastewater Treatment Plant (WWTP) and design and construct a new WWTP. The City's wastewater collection system was constructed in the 1960s before any major flooding events had been documented in the area. While the collection system's durability is a concern, the existing WWTP is the larger issue presently due to its location being within the identified floodway. The current WWTP is located in the floodplain (Zone AE) and the designated floodway of the Cherry River. Therefore, the WWTP is subject to severe flooding and subsequent damage. The WWTP has previously lost treatment capacity due to flooding, resulting in the discharge of untreated raw sewage into the Cherry River. The City's WWTP currently serves 793 customers.

The proposed project would decommission the existing WWTP, construct the proposed WWTP out the floodplain encroachment area, add a new effluent line from the new proposed WWTP to the existing outfall, and horizontal directional drill (HDD) under the Cherry River to connect to the existing lift station. In addition, the Green Street lift station is proposed to be upgraded with the new connection to the WWTP by increasing the size of the forcemain from 8 inches to 14 inches.

The proposed project is a partnership agreement between the City and the U.S. Army Corps of Engineers (USACE) established under the authority of Section 340 of the Water Resources and Development Act (WRDA) of 1992 (Public Law 102-580), as amended, which provides authority for the USACE to establish a program to provide environmental assistance to Non-Federal entities in southern West Virginia. This law provides design and construction assistance for water-related environmental infrastructure projects to Non-Federal interests in southern West Virginia. Funding, as established under Section 340, shall be shared 75% Federal and 25% Non-Federal (State and Local).

This Environmental Assessment (EA) was prepared pursuant to the National Environmental Policy Act (NEPA; 42 United States Code [USC] § 4321 et seq.), Department of Defense NEPA Implementing Procedures dated 30 June 2025, and the Fiscal Responsibility Act (42 USC § 4331 et seq.).



SECTION 340 RICHWOOD
WASTEWATER TREATMENT PLANT REPLACEMENT PROJECT
NICHOLAS COUNTY, WEST VIRGINIA
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The majority of data collection and analysis in this document was performed by The Thrasher Group with the USACE. In addition, this document is consistent with the Fiscal Responsibility Act (42 USC § 4336a(e)(2)) with the Environmental Assessment not exceeding 75 pages, not including citations or appendices.

1.0 PROJECT DESCRIPTION

1.1 Project Background

The City of Richwood (City) owns and operates a wastewater treatment plant (WWTP) serving approximately 793 customers in Nicholas County, West Virginia. The City's wastewater collection system was constructed in the 1960s before any major flooding events had been documented in the area. The current WWTP is located in the floodplain (Zone AE) and the designated floodway of the Cherry River.

1.2 Purpose, Need, and Authorization

The WWTP is outdated and experiencing discharges into the Cherry River. However, the larger issue is its location being within the identified floodway and breaking the Federal Emergency Management Agency's (FEMA) code requirement. The WWTP is subject to severe flooding and subsequent damage. The WWTP has previously lost treatment capacity due to flooding, resulting in the discharge of untreated raw sewage into the Cherry River. The proposed project would decommission the existing WWTP and construct the proposed WWTP outside the base flood elevation (BFE) on an adjacent property owned by the City. The proposed WWTP would meet the FEMA's code requirement.

The proposed project is a partnership agreement between the City and the USACE, established under the authority of Section 340 of the Water Resources and Development Act (WRDA) of 1992 (Public Law 102-580), as amended, which provides authority for the USACE to establish a program to provide environmental assistance to Non-Federal entities in southern West Virginia. This law provides design and construction assistance for water-related environmental infrastructure projects to Non-Federal interests in southern West Virginia. Funding, as established under Section 340, shall be shared 75% Federal and 25% Non-Federal (State and Local).

This EA was prepared pursuant to the NEPA (42 USC § 4321 et seq.), Department of Defense NEPA Implementing Procedures dated 30 June 2025, and the Fiscal Responsibility Act (42 USC § 4331 et seq.)

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action Alternative (PAA)

The PAA would include the construction of a new WWTP to meet code requirements and FEMA recommendations. The current WWTP is outdated, resulting in excess discharge of raw sewage into Cherry River and disruptions in service for the users of the facilities. Therefore, actions are needed to meet the purpose and needs of the project. The PAA includes decommissioning the existing WWTP, building the proposed WWTP outside the BFE, adding a new effluent line from



the new proposed WWTP to the existing outfall, and HDD under the Cherry River to connect to the existing Green Street lift station. The Green Street lift station is proposed to be upgraded with the new connection to the WWTP by increasing the size of the forcemain from 8 inches to 14 inches. This will reduce the headloss significantly; therefore, allowing the Green Street lift station to operate more efficiently and maximizing the amount of flow to the WWTP and reducing the occurrence of Combined Sewer Overflows (CSO) discharges. The PAA will construct the proposed WWTP of similar size and shape as the existing WWTP. The proposed WWTP will be constructed in forested and previously disturbed areas near the existing WWTP.

2.2 No Action Alternative (NAA)

Under the NAA, the USACE would not provide funding for the project and City would not replace the WWTP. The status of the area would remain the same and the WWTP would continue to be flooded during flooding events. Raw sewage would continue to be discharged into the Cherry River and customers would temporarily lose sanitary sewer service during the flooding occurrences and cleanup/repair actions. The NAA produces a potential health hazard and negatively affects the community's desire for a centralized, reliable sanitary sewer collection service. In addition, the current WWTP violates code requirements and FEMA recommendations; therefore, the potential for continued violations and/or closure of the facility would pose a great risk to the health and safety of its users. Nonetheless, the NAA is still included in the alternatives analysis to establish a baseline condition for existing human and natural environmental conditions, to allow comparison between future without and with project actions, and to determine potential environmental effects of proposed with project alternatives.

3.0 ENVIRONMENTAL SETTING AND CONSEQUENCES

This section discusses the existing conditions by resource category and any potential environmental impacts associated with the NAA, as well as with implementation of the PAA.

The USACE took context and intensity into consideration in determining potential impact significance. The intensity of a potential impact is the impact's severity and includes consideration of beneficial and adverse effects, the level of controversy associated with a project's impacts on human health, whether the action establishes a precedent for future actions with significant effects, the level of uncertainty about project impacts and whether the action threatens to violate federal, state, or local laws established for the protection of the human and natural environment. The severity of an environmental impact is characterized as none/negligible, minor, moderate, or significant, and may be adverse or beneficial. The impact may also be short-term or long-term in nature.

- None/negligible – No measurable impacts are expected to occur.
- Minor – A measurable effect to a resource. A slight impact that may not be readily obvious and is within accepted levels for permitting, continued resource sustainability, or human use. Impacts should be avoided and minimized if possible but should not result in a mitigation requirement.



- Moderate – A measurable effect to a resource. An intermediate impact that may or may not be readily obvious but is within accepted levels for permitting, continued resource sustainability, or human use. Impacts may or may not result in the need for mitigation.
- Significant – A measurable effect to a resource. A major impact that is readily obvious and is not within accepted levels for permitting, continued resource sustainability, or human use. Impacts likely result in the need for mitigation.
- Adverse – A measurable and negative effect to a resource. May be minor to major, resulting in reduced conditions, sustainability, or viability of the resource.
- Beneficial – A measurable and positive effect to a resource. May be minor to major, resulting in improved conditions, sustainability, or viability of the resource.
- Short-Term – Temporary in nature and does not result in a permanent long-term beneficial or adverse effect to a resource. For example, temporary construction-related effects (such as, an increase in dust, noise, traffic congestion) that no longer occur once construction is complete. May be minor, significant, adverse, or beneficial in nature.
- Long-Term – Permanent (or for most of the project life) beneficial or adverse effects to a resource. For example, permanent conversion of a wetland to a parking lot. May be minor, significant, adverse, or beneficial in nature.

The USACE used quantitative and qualitative analyses, as appropriate, to determine the level of potential impact from proposed alternatives. Based on the results of the analyses, this EA identifies whether a particular potential impact would be adverse or beneficial, and to what extent.

3.1 Project Location

The Proposed Action area is located within the City of Richwood in Nicholas County, West Virginia. The surrounding area is residential and forested land. Figure 1 shows the Proposed Action area limits relative to roads and principal surface features. The existing WWTP along Staff Drive is to be decommissioned and the proposed WWTP is to be constructed upgradient from the existing WWTP. See Figure 2 for an aerial site location map and Appendix A for more mapping.

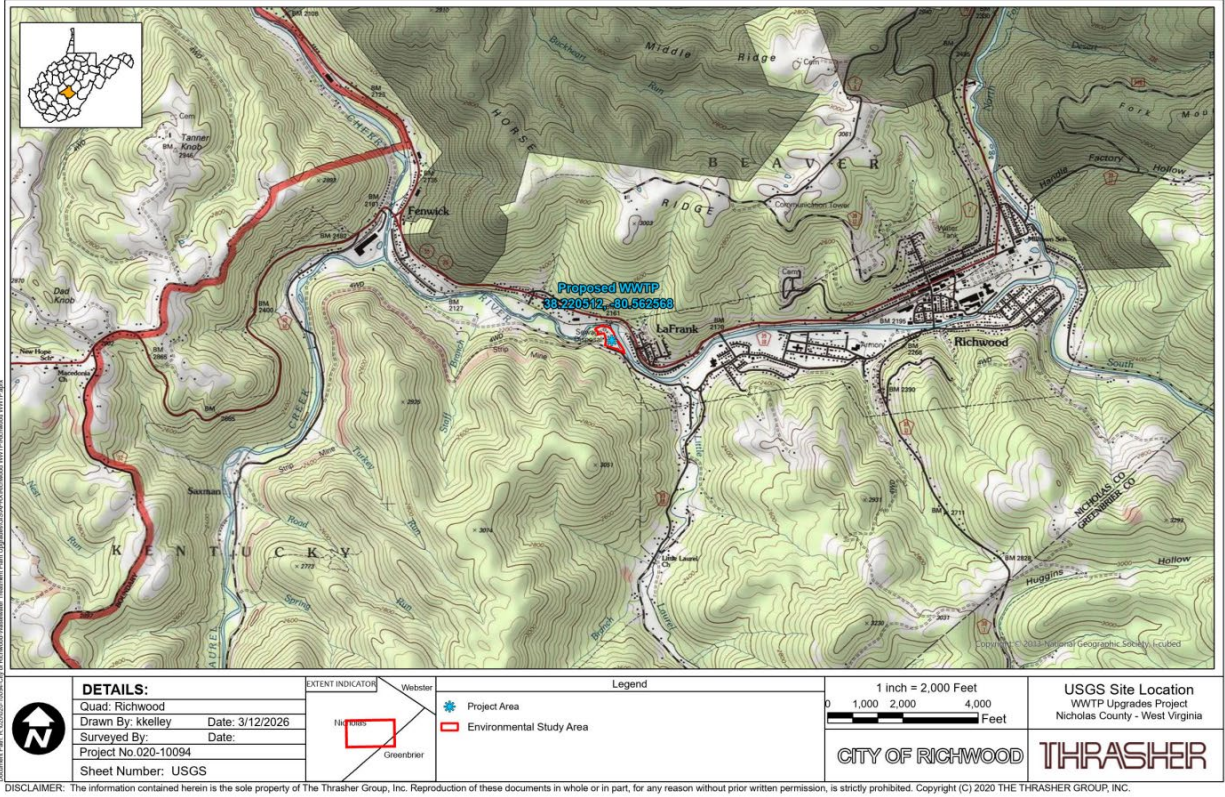


Figure 1: Project Location

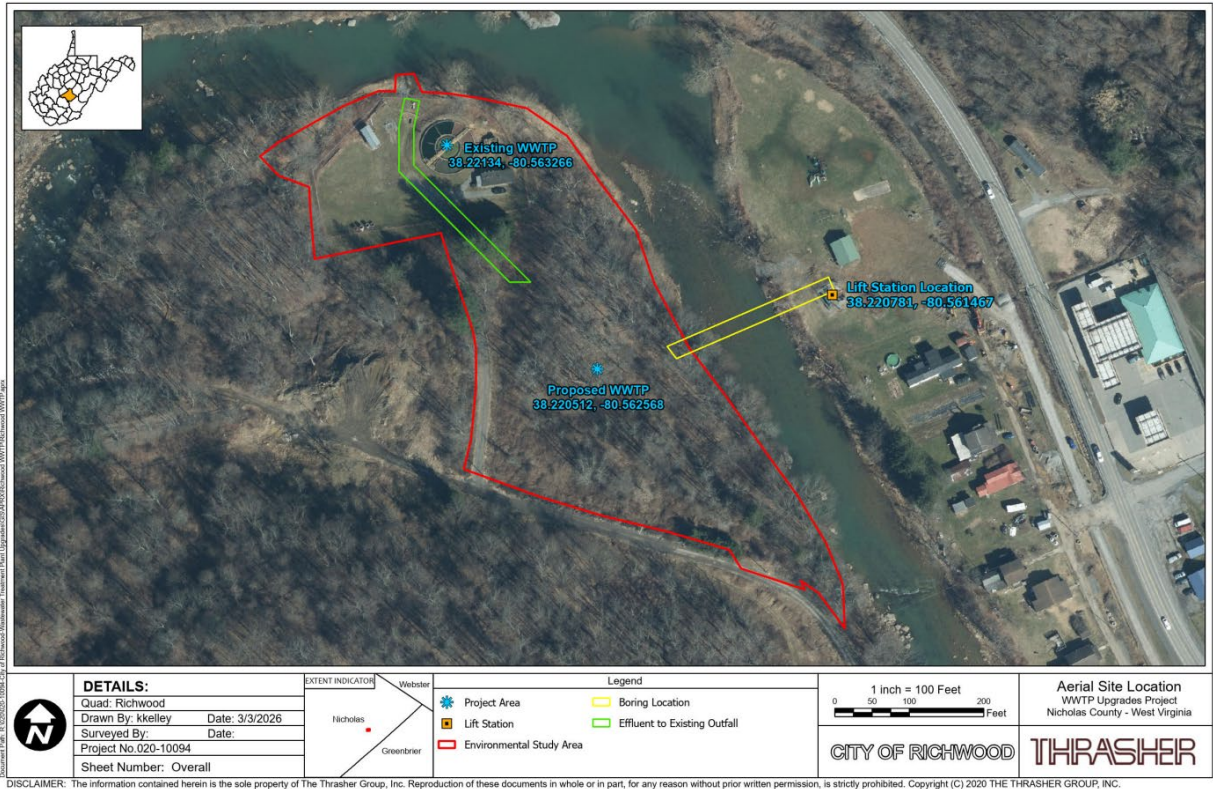


Figure 2: Aerial Site Location Map

3.2 Land Use

Land use within the Proposed Action area includes developed areas (primarily low intensity), deciduous forest, mixed forest, open water, open space, hay/pasture, and commercial and industrial businesses. The proposed WWTP will be installed in forested and previously disturbed areas positioned upgradient from the existing WWTP. Minor and permanent land use changes would result from the installation of the proposed WWTP. Installation of the WWTP would involve tree clearing, excavation, construction of the proposed WWTP, and backfilling of the area. Upon completion, the area around the proposed WWTP would be returned to as close to the original contour, slope, and grade, as feasible. No other land use changes would occur as part of the PAA. See the National Land Cover Dataset (NLCD) Land Cover Map in Appendix A for more information.

As the NAA would have no construction activities, it would have no impacts on land use.

3.3 Climate

The climate in Nicholas County is typical of a humid continental climate. Seasonal weather patterns consist of four distinct seasons. Summers are hot and humid, winters are cold and snowy, and spring and fall tend to be milder with some rain showers. July is typically the hottest month of the year with an average high temperature of 81 degrees Fahrenheit. The coldest month



is January with an average low temperature of 21 degrees Fahrenheit. Average annual rainfall and snow is 51 inches and 53 inches, respectively.

The Proposed Action area is located within the Cherry River watershed, which is part of the larger Ohio River Basin (ORB). Although the modeled climatic predictions vary across the ORB and are somewhat uncertain (especially in the latter portion of the 21st century), much of the basin appears likely to experience significantly higher high-flow events and in some cases, lowered low-flow events, interspersed with periods of drought. In the face of changing land use and energy development, and where these projected air temperature and flow changes deviate more than 25% from the current levels, it is likely that fish and mussel populations, wetland complexes, reservoir fisheries, trans-boundary organisms such as migratory fish and water body-dependent birds, and human use and safety will also be noticeably impacted.

Institute for Water Resources (IWR) climate modeling results indicate that climatic conditions in the ORB will remain largely within the mean ranges of precipitation and temperatures, except for a gradual warming that has been experienced between 1952 and 2001. Summer highs and winter lows between 2011 and 2040 are expected to remain generally within what has been observed over that historic period, but extreme fluctuations (record temperatures, rainfall, or drought) are expected to become more likely than before. After 2040, temperatures may rise at one degree per decade through 2099. Likewise, there may be significant changes in precipitation with associated increases or decreases in river flow on an annual mean basis and a seasonal maximum and minimum basis. During 2070-2099, the annual percent change in maximum streamflow increases substantially across PA, WV, OH, IN, and IL. It is anticipated there would be some increases between 2040 and 2070 in precipitation and river flow in the base period during the spring season; however, the fall season will bring significant rainfall and increased river flows by as much as 35% to 50% more during the base period.

Neither the NAA nor PAA would involve any activity that could significantly affect the environment in regard to climate. Therefore, no significant adverse impacts to climate would occur as a result of the PAA or NAA. However, under the NAA the City would not be enhancing its resilience to future change in conditions.

3.4 Terrestrial Habitat

Habitat and vegetation within the Proposed Action area consist of woodlands, regularly maintained lawn areas, permanent surfaces, and previously disturbed areas. The proposed WWTP would be installed primarily within forested and previously disturbed areas. Approximately 4.8 acres would be disturbed for the project and would have an impact to terrestrial habitat. However, the impact would be minor due to the extent of the area. Furthermore, any areas disturbed during construction that are not for permanent structures and the area previously utilized for the decommissioned WWTP would be reseeded with a native seed mix.

Timbering activities would be required for the PAA, with approximately three (3) acres of trees removed. The tree clearing would occur between November 15 and March 31. Trees observed



within and near the Proposed Action area are primarily hardwood species such as oak and maple. See the Forested Area Map, included in Appendix A.

As selection of the NAA would entail no changes to the Proposed Action area, there are no impacts to terrestrial habitat anticipated as part of the NAA.

3.5 Prime and Unique Farmland

The Farmland Protection Policy Act (FPPA) is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. The FPPA includes prime farmland, unique farmland, and land of statewide or local importance. Two (2) soil units that comprise 5.4% of the Proposed Action area are classified as Prime Farmland according to the Natural Resource Conservation Service (NRCS) Web Soil Survey Report. The proposed WWTP would be installed in areas with soils designated as prime farmland; however, the soil within that area has been previously disturbed and the proposed WWTP location was previously forested before the area was partially cleared. Therefore, the area is not currently utilized as agricultural land but is routinely maintained as a lawn area and development area. On 17 December 2024, NRCS responded that the PAA is exempt from the FPPA.

No impacts to prime farmland, or farmland of statewide, or local importance would occur as a part of the NAA.

3.6 Floodplains

E.O. 11988 requires Federal agencies to consider the potential effects of their proposed actions to floodplains. In order to determine the PAA's potential floodplain impact, the FEMA Flood Insurance Rate Maps (FIRM) were reviewed for the PAA (<https://www.fema.gov/floodplain-management/flood-zones>). Panel (FIRMs 54067C0452D) of the Proposed Action area and the WV Flood Tool indicated that the existing WWTP is located within the 100-year floodplain and floodway of the Cherry River. The proposed WWTP would not be located within the 100-year floodplain. The current WWTP would be decommissioned, and the area restored to its original contour, slope, and grade. See 100-Year Floodplain Map in Appendix A.

Coordination with the Nicholas County floodplain manager is ongoing. A floodplain permit will be needed for work on the existing WWTP and will be obtained prior to decommissioning the existing WWTP. The construction of the new WWTP would not need a floodplain permit. The PAA meets the intent of E.O. 11988 and no significant long-term impacts to floodplains are anticipated to occur from the PAA.

As no construction-related activities would be implemented, no additional impacts to floodplains are anticipated to occur from the NAA.

3.7 Aquatic Habitat/Water Quality

The Proposed Action area is located within the Cherry River watershed (HUC 050500050404). The Cherry River is not included in the West Virginia Department of Environmental Protection (WVDEP) 303(d) list, but part of the river is listed as impaired due to metals. Implementation of



the PAA is expected to have a positive effect on water quality by stopping the release of raw sewage into the Cherry River during flooding events.

There would be one (1) stream crossing of the Cherry River utilizing HDD. Best management practices (BMPs) would be used during the replacement and stream crossing to prevent sediment and erosion into the Cherry River. BMPs to be used would include, but are not limited to, compost filter sock, silt fence and super silt fence, and rolled erosion control products. A permit from the USACE Regulatory Branch is not anticipated, however, coordination is ongoing and would be completed prior to issuance of a FONSI. As such, a Department of the Army permit pursuant to Section 10 of the Rivers and Harbors Act, Section 404 permit, and associated Section 401 permit under the Clean Water Act would not be required prior to construction. If conditions change and it is determined that waters may be impacted, coordination with the USACE Huntington District Regulatory Branch will be required and all applicable permits shall be obtained. A West Virginia Division of Natural Resources (WVDNR) Stream Activity Permit may be required for the stream crossing. The non-Federal Sponsor shall be responsible for obtaining and following all terms and conditions of the permit.

Prior to construction, an erosion and sediment control plan (ESCP) would be drafted and submitted to the WVDEP as part of the National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit. The treatment capacity of the WWTP is being increased as an element to the City's Long Term Control Plan and a revised Wasteload Allocation has been received from WVDEP. A Major Modification to the City's current NPDES permit would be submitted to WVDEP for approval prior to construction.

Based on the above, implementation of the PAA would not result in significant adverse short- or long-term environmental impacts to aquatic habitat and water quality. The PAA is anticipated to have beneficial impacts to water quality by reducing risk for contamination that could negatively impact water resources.

The NAA would have no known positive impacts on aquatic habitat/water quality. Under the NAA, the existing conditions would remain unchanged. The WWTP would continue to operate as is with an increased risk of contamination of aquatic habitat that may be located downstream due to discharge of raw sewage during flooding events. Therefore, the NAA would adversely impact aquatic habitat and water quality.

3.8 Wetlands

E.O.11990 requires Federal agencies to minimize the destruction, loss, or degradation of wetlands. Sections 404 and 401 of the Federal Clean Water Act provide the statutory authority for work in special aquatic sites. A review of the National Wetlands Inventory (NWI) indicated there are no wetlands within the Proposed Action area, but a river (Cherry River) is shown adjacent to the Proposed Action area. A delineation of the Proposed Action area was completed by The Thrasher Group on 30 August 2024 and 4 October 2025. During the field investigations, The Thrasher Group identified and delineated three (3) wetland features classified as Palustrine Emergent (PEM) Wetlands. These features are listed in the table below.

**Table 1 – Wetland Identification During Delineation**

Wetland ID	Cowardin Classification	Latitude	Longitude	Area (acres)
WL 1	PEM	38.220144	-80.563759	0.216
WL 2	PEM	38.220982	-80.563485	0.0144
WL 3	PEM	38.221079	-80.562673	0.039
Total				0.2694

The wetlands are not expected to be crossed or impacted under the PAA; however, BMPs would be utilized to protect downstream aquatic features. See the Wetland Delineation and Stream Identification Report in Appendix A.

No impacts to wetlands are anticipated as part of the NAA. However, there is potential for increased risk of contamination to wetlands that may be located downstream of the existing wastewater systems due to discharge of raw sewage during flooding events.

3.9 Wild and Scenic Rivers

No designated State Wild or Scenic Rivers are present within the Proposed Action Area. Therefore, no impacts to these resources are anticipated as part of the PAA or NAA.

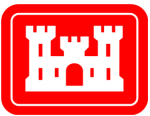
3.10 Hazardous, Toxic, and Radioactive Waste (HTRW)

A Phase I Environmental Site Assessment (ESA) for the Proposed Action area was performed in order to identify environmental conditions and the potential presence of hazardous, toxic, and radioactive waste (HTRW) within the Proposed Action area. The Phase I ESA identified one (1) recognized environmental condition, one (1) *de minimis* condition, two (2) business environmental risks, and one (1) non-ASTM scope finding that exists within the Proposed Action area. No other recognized environmental conditions or risks were identified. There are no anticipated impacts regarding HTRWs as part of the PAA. After review of the Phase I ESA, USACE HTRW staff determined that no further investigation or action is required. Therefore, no impacts to HTRW are anticipated with the PAA. A clearance memorandum was signed by USACE HTRW staff on 3 December 2025 and is included in Appendix B.

The NAA would not result in ground disturbing activities. Therefore, no construction-related HTRW impacts would be associated with the NAA. However, the NAA would result in the continuation of raw sewage discharge into the Cherry River during flooding events.

3.11 Cultural Resources

The National Historic Preservation Act (NHPA), at 54 United States Code (U.S.C.) parts 300101-307108, and the implementing regulations at 36 C.F.R. part 800, require Federal agencies to take into account the effect of their actions on historic properties, while Section 106



of the NHPA (54 U.S.C. part 306108), requires Federal agencies to initiate an evaluation and consultation if the agency determines that its actions are an undertaking.

The Thrasher Group conducted a desktop review of the West Virginia State Historic Preservation Office's (SHPO) map viewer. There were no National Register of Historic Places (NRHP) listed sites or sites eligible for listing on the NRHP in the action area. One (1) cemetery area (46-NI-900) was identified on the WV SHPO Map and is located approximately 0.88 miles northeast of the Proposed Action area. No impacts would occur to the cemetery and no above-ground components associated with the PAA would be visible from the cemetery. Furthermore, no previously identified pre-contact cultural resources are in the vicinity of the Proposed Action area.

A Project review request letter was submitted to the SHPO requesting to be advised of potential impacts to archaeological or architectural resources within the Proposed Action area. On 30 March 2026, SHPO stated that the PAA would affect no architectural properties, and no further consultation is necessary regarding architectural or cemetery resources. SHPO continued to state that the PAA would have no effect on archaeological historic properties and therefore no further consultation is necessary. See SHPO Map in Appendix A and coordination letter in Appendix B.

The Huntington District Archaeologist has reviewed the federal action and agrees with the determination that the action will have no potential to affect. Given that the PAA, as defined, has no potential to cause effect to cultural resources, no Tribal consultation is necessary. Therefore, the Huntington District's obligations under Section 106 of NHPA have been met.

If unanticipated archaeological deposits or human remains are discovered during construction, all work near the location of the discovery shall cease and the Project Manager and Huntington District Archaeologist shall be contacted immediately. The West Virginia State Police, the Nicholas County Coroner, and SHPO must also be notified immediately if human remains are discovered. Unanticipated discoveries of, or impacts to, historic properties shall be dealt with in accordance with 36 CFR 800.13 – Post-review Discoveries .

The NAA would have no known positive or negative impacts on cultural resources.

3.12 Threatened and Endangered Species

According to the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool, the Proposed Action area is within the range of the endangered Indiana bat (*Myotis sodalis*), endangered northern long-eared bat (*Myotis septentrionalis*), proposed endangered tricolored bat (*Perimyotis subflavus*), endangered candy darter (*Etheostoma osburni*), and proposed threatened monarch butterfly (*Danaus plexippus*). The Proposed Action area also overlaps with designated critical habitat for the candy darter.

In a letter dated 9 October 2024 and 17 October 2025, the West Virginia Division of Natural Resources (WVDNR) indicated that the Cherry River is a state-listed Group 1 mussel stream and critical habitat for the candy darter. Group 1 streams are listed by the WVDNR as high-quality streams with habitats conducive to mussels. However, effects on mussel species are not expected



to occur by the PAA as the stream would not be directly impacted and BMPs would be utilized to limit any indirect impacts.

The WVDNR also listed the endangered rusty patched bumblebee (*Bombus affinis*) within the Proposed Action area with a low potential zone. Construction activity would displace some wildlife including potentially the rusty patched bumblebee. Approximately 4.8 acres of land would be disturbed including woodlands, regularly maintained lawn areas, permanent surfaces, and previously disturbed areas. The bumblebee could be found in the area; however, it is considered a low potential zone and the disturbed area does not contain any ideal habitat. Furthermore, the area previously utilized for the decommissioned WWTP would be reseeded with a native seed mix providing potentially new and better habitat for the rusty patched bumblebee.

Approximately three (3) acres of tree clearing may be required for the PAA. Tree clearing would occur between November 15 and March 31, when listed bat species would not be on the landscape. Therefore, the Huntington District has determined the PAA may affect but is not likely to adversely affect the aforementioned bat species.

There would be one (1) stream crossing of the Cherry River utilizing HDD. BMPs would be used during the stream crossing and all construction work to prevent the discharge of sediment and sediment-laden water into downstream aquatic features, including the Cherry River. BMPs to be used during construction would include, but are not limited to, compost filter sock, silt fence and super silt fence, and rolled erosion control products. Therefore, the Huntington District has determined that the PAA may affect but is not likely to adversely affect the candy darter or designated critical habitat.

In addition, the USACE has reviewed the habitat descriptions and stressors provided by the USFWS for the monarch butterfly and has determined that the proposed action is not likely to jeopardize the continued existence of the proposed species. Based on the information provided and the habitat/stressors, the USACE has determined the project will not jeopardize the continued existence of the species; therefore, further consideration and/or conference under Section 7(a)(4) is not warranted at this time.

Coordination with the USFWS West Virginia Field Office is ongoing and will be completed prior to the issuance of a FONSI (Appendix B).

The NAA would have no known positive impacts on threatened or endangered species. Under the NAA, the existing conditions would remain unchanged. The WWTP would continue to operate as is with an increased risk of contamination of aquatic habitat that may be located downstream due to discharge of raw sewage during flooding events. Therefore, the NAA would adversely impact the candy darter and designated critical habitat.

3.13 Invasive Species

E.O. 13112, as amended, requires federal agencies to take steps to prevent the introduction and spread of invasive species, and to support efforts to eradicate and control invasive species that are established. Invasive species can spread easily into native plant communities and displace



native vegetation. The proposed project site does not have an existing inventory of invasive species, and their presence is not well known; however, it is anticipated that invasive species will be abundant due to the disturbed setting that much of the proposed project footprint falls in. Invasive species that could occur within the project area include but are not limited to Japanese stiltgrass (*Microstegium vimineum*) and tree of heaven (*Ailanthus altissima*).

The PAA is anticipated to have no impacts or negligible beneficial impacts on management of invasive species. The project area consists of woodlands, regularly maintained lawn areas, permanent surfaces, and previously disturbed areas. The non-Federal Sponsor would revegetate areas disturbed by construction with native plant species to limit the spread of invasive species and would reseed the area previously utilized for the decommissioned WWTP with a native seed mix, which could provide negligible long term beneficial impacts.

As selection of the NAA would entail no changes to the project area, there are no impacts to invasive species anticipated as part of the NAA.

3.14 Air Quality

According to the United States Environmental Protection Agency (USEPA) EnviroMapper, Nicholas County, WV is in attainment for all criteria air pollutants. In fact, in October 2020, the entire State of West Virginia was designated as meeting all of the U.S. EPA's health-based National Ambient Air Quality Standards (NAAQS) for the first time since 1978, when the initial nonattainment designations were made under the 1970 Clean Air Act. Minor, short-term emissions may occur during construction due to construction equipment and trenching machines used for the installation of the WWTP. Contractors would operate all equipment and machinery in accordance with local, state, and Federal regulations. Water spraying would be utilized during construction to control dust.

GHG such as carbon dioxide (CO₂), methane (CH₄), and nitrous oxides (NO_x) are considered pollutants to air quality. The PAA would generate a variety of GHG emissions throughout its life cycle, spanning from construction to O&M of the project. The PAA includes decommissioning the existing WWTP, building the proposed WWTP outside the BFE, and upgrading the existing lift station. It is anticipated that the majority of GHG emissions from the project would be generated during construction activities. Therefore, GHG emissions from the PAA would be minor and temporary in nature. In addition, all equipment would comply with Federal vehicle emission standards.

The PAA is exempt by 40 CFR Part 93.153 from making a conformity determination, as estimated emissions from construction equipment would not be expected to exceed *de minimis* levels, direct emissions of a criteria pollutant, or its precursors. Any impacts would be short-term, localized, and would only occur during construction phase activities. Impacts to air quality as part of the PAA would be temporary and minimal during construction.



No impacts to air quality are anticipated as part of the NAA as no GHG emissions are anticipated as part of the NAA. However, GHG emissions under the NAA could result from future infrastructure failure.

3.15 Noise

Noise associated with the PAA would be limited to that generated during construction. The noise associated with construction would be short in duration and would only occur during daylight hours. Noise is measured as Day Night average noise levels (DNL) in “A-weighted” decibels that the human ear is most sensitive to (dBA). There are no Federal standards for allowable noise levels. According to the Department of Housing and Urban Development Guidelines, DNLs below 65 dBA are normally acceptable levels of exterior noise in residential areas. The Federal Aviation Administration (FAA) denotes a DNL above 65 dBA as the level of significant noise impact. Several other agencies, including the Federal Energy Regulatory Commission, use a DNL criterion of 55 dBA as the threshold for defining noise impacts in suburban and rural residential areas.

According to Dr. Paul Schomer in his 2001 *A White Paper: Assessment of Noise Annoyance*, while there are numerous thresholds for acceptable noise in residential areas, research suggests an area’s current noise environment, which has experienced noise in the past, may reasonably expect to tolerate a level of noise about 5 dBA higher than the general guidelines. The USACE Safety and Health Requirements Manual provides criteria for temporary permissible noise exposure levels (see Table 2 below), for consideration of hearing protection or the need to administer sound reduction controls.

Table 2 – Non-Department of Defense Continuous Noise Exposures

Duration per day (hours)	Permissible Sound-pressure Level (decibels)
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105

This Proposed Action area is located within rural and residential areas of the City of Richwood, Nicholas County, West Virginia and is considered to have small amounts of noise generated by vehicles. According to the Bureau of Transportation Statistics National Transportation’s Noise Map, daily ambient noise levels from traffic are considered low to moderate ranging from 45.0-59.9 decibels per 24 hours and ambient noise levels from aircrafts are considered negligible. The



City of Richwood does not have a local noise ordinance, and there are no regulatory dBA thresholds or noise permits applicable to construction activities.

Construction noise would be similar to that of farm equipment and other small machinery used in the local area. An excavator, dump truck, bull dozer and/or vibratory roller are examples of equipment that is likely to be used during construction. Each emits noise levels around 85 dBA at 45 feet. Construction equipment would be operated during daylight hours; therefore, a reasonable exposure time of two hours would be expected during the time residents may be home during the day. Peak outdoor noise levels ranging from 78-90 dBA would occur during the time in which equipment is directly in front of or in proximity to homes and businesses (within 25-100 feet). A maximum noise exposure of approximately 98 dBA, for one hour could occur if equipment were within 10 feet of homes and business.

The noise projections do not account for screening objects, such as trees, outbuildings or other objects that muffle and reduce the noise being emitted. The outdoor construction noise would be further muffled while residents are inside their homes. While the construction noise generated would be considered unacceptable according to HUD and FAA standards, these limited exposures and time intervals are still within allowable USACE safety levels. Further, they are similar to typical neighborhood noise generated by gas powered lawnmowers in the local area, which could range from 90-95 dBA at three feet and 70-75 dBA at 100 feet. Residents being exposed to these noise levels would occur if and/or when residents are home and outdoors.

Due to daytime construction and the short and limited duration of elevated noise levels associated with the PAA, direct impacts from the noise to local residences would be temporary and minor.

There would be no change in noise and thus no impact under the NAA.

3.16 Socioeconomics

According to the Census Reporter, the population for the City of Richwood, West Virginia is 1,660 and it does not contain a significant minority population. The Census Reporter states that 33.5 percent of the City lives below the poverty line. The Census Reporter indicates that the City is 96 percent white, and the median household income is \$33,614. In addition, 27.7 percent of individuals residing in the City of Richwood, West Virginia are under the age of 18 compared to 19.8 percent statewide.

E.O. 13045, as amended, requires each Federal agency “to identify and assess environmental health risks and safety risks that may disproportionately affect children” and “ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.” This E.O. was prompted by the recognition that children, still undergoing physiological growth and development, are more sensitive to adverse environmental health and safety risks than adults. The potential for impacts on the health and safety of children is greater where projects are located near residential areas.



The PAA would benefit residents and children in the Proposed Action area that rely on the continued operation of the system. The PAA would meet the requirements E.O. 13045 by improving the environment for residents within the Proposed Action area including children.

Under the NAA, the City would not move the WWTP out of the floodway and the WWTP would continue to operate as is with an increased risk of raw sewage discharge during flooding events. The NAA would create unsanitary conditions for residents and children alike.

3.17 Aesthetics

Under the PAA, the WWTP would be an above-ground feature and may represent an aesthetical change. However, the WWTP is situated behind a tree line blocking its view from Main Street. Additionally, the WWTP is located near the existing water treatment plant. The SHPO project review request, in Appendix B, includes their response stating that there would be no visual impacts. There are no anticipated significant aesthetic impacts that would degrade the rural character of Nicholas County as part of the PAA. See Recreational Map in Appendix A.

Neither the PAA nor NAA would significantly impact local aesthetics.

3.18 Transportation and Traffic

Roads within the Proposed Action area include Staff Drive and Green Street. These roads consist of one- and two-lane gravel roads. Traffic along Green Street largely consists of residents' access to homes. Work associated with the PAA would consist of decommissioning the existing WWTP and constructing the proposed WWTP upgradient from the existing WWTP in previously disturbed areas along Staff Drive. Necessary traffic controls would be utilized during construction and contractors would adhere to West Virginia Division of Highways (WVDOH) guidelines. Therefore, any impacts to traffic anticipated to occur as part of the PAA would be minimal and temporary. See the Transportation Map in Appendix A.

No impacts to transportation and traffic are anticipated to occur from the NAA.

3.19 Health and Safety

A well-maintained WWTP and conveyance system reduces the risk of diseases and helps to preserve the health and safety of the environment. The PAA has been designed to eliminate raw sewage being discharged into the Cherry River during flooding events and would also eliminate exceeding discharge limits as the existing WWTP is old and cannot function properly with its current capacity and intake. Therefore, the PAA would minimize public health and safety risks and environmental hazards associated with an old system in the floodplain.

Additionally, residents in the area often must contend with no sanitary sewer service during flooding events. Providing a reliable and centralized sanitary sewer collection service is necessary to address potential health and safety problems. The PAA would provide an overall health benefit to the serviced communities by moving the WWTP out of the floodplain and providing much-needed upgrades to the WWTP. Therefore, the PAA is anticipated to have long-term beneficial impacts on health and safety.



Under the NAA, current sanitary sewer collection use in the area would continue and excessive discharge of raw sewage into the Cherry River would continue, causing health and safety concerns.

4.0 Status of Environmental Compliance

The PAA will be in full compliance with all local, state, and Federal statutes as well as Executive Orders prior to issuance of a FONSI. Compliance is documented below in Table 3.

Table 3 – Environmental Compliance Status

Statute/Executive Order	Full	Partial	N/A
National Environmental Policy Act (considered partial until the FONSI is signed)		X	
Fish and Wildlife Coordination Act		X	
Endangered Species Act		X	
Clean Water Act		X	
Wild and Scenic Rivers Act	X		
Clean Air Act	X		
National Historic Preservation Act		X	
Archeological Resources Protection Act			N/A
Comprehensive, Environmental Response, Compensation and Liability Act	X		
Resource Conservation and Recovery Act	X		
Toxic Substances Control Act	X		
Quiet Communities Act	X		
Farmland Protection Act	X		
Executive Order 11988 Floodplain Management	X		
Executive Order 11990 Protection of Wetlands	X		
Executive Order 13112 Invasive Species	X		
Executive Order 13045 Protection of Children	X		

5.0 REQUIRED COORDINATION

5.1 Agencies Contacted

Direct coordination with NRCS, the USACE Huntington District HTRW section, SHPO, and WVDNR were completed prior to publication of the EA. Coordination with the USFWS West Virginia Field Office, USACE Regulatory Division, and Nicholas County floodplain manager is ongoing. Agency correspondence is included in Appendix B.

5.2 Public Review and Comments

The EA and FONSI will be available for public review and comment for a period of 30 days, as required under NEPA. A Notice of Availability will be published in the local newspaper, The Nicholas Chronicle, advising the public of this document's availability for review and comment. A copy of the EA will also be placed in the Richwood Public Library and made available on-line.



at <https://www.lrd.usace.army.mil/News/Project-Documents-Notices-Public-Review/>. The mailing list for the EA is located in Appendix C.

6.0 CONCLUSION

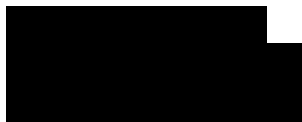
The City of Richwood provides sewer service to a total of 793 customers. The City's wastewater collection system was constructed in the 1960s before any major flooding events had been documented in the area. While the collection system's durability is a concern, the existing WWTP is the larger issue presently due to its location being within the identified floodway. The current WWTP is located in the floodplain (Zone AE) and the designated floodway of the Cherry River. Therefore, the WWTP is subject to severe flooding and subsequent damage. The WWTP has previously lost treatment capacity due to flooding resulting in the discharge of untreated raw sewage into the Cherry River.

The PAA would entail decommissioning the existing WWTP and the construction of a new WWTP out of the floodway of the Cherry River upslope from the current WWTP. Additional benefits of the new facility include efficient treatment of raw sanitary sewage and reducing the risk of treatment outages during high precipitation and flood events. The Green Street lift station is proposed to be upgraded with the new connection to the WWTP by increasing the size of the forcemain from 8 inches to 14 inches. The PAA will construct the proposed WWTP of similar size and shape as the existing WWTP. The proposed WWTP will be constructed in forested and previously disturbed areas near the existing WWTP.

Most of the PAA would take place within in forested and previously disturbed areas near the existing WWTP. Health and safety would be realized immediately with project implementation. Effects associated with construction would be minor and temporary. BMPs would be implemented during construction to minimize impacts to residents and the environment. Therefore, the PAA would not be expected to have significant adverse impacts on the human or natural environment.

7.0 LIST OF INFORMATION PROVIDERS AND PREPARERS

The following agencies were involved in preparation of the EA;



U.S. Army Corps of Engineers Huntington District





8.0 REFERENCES

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