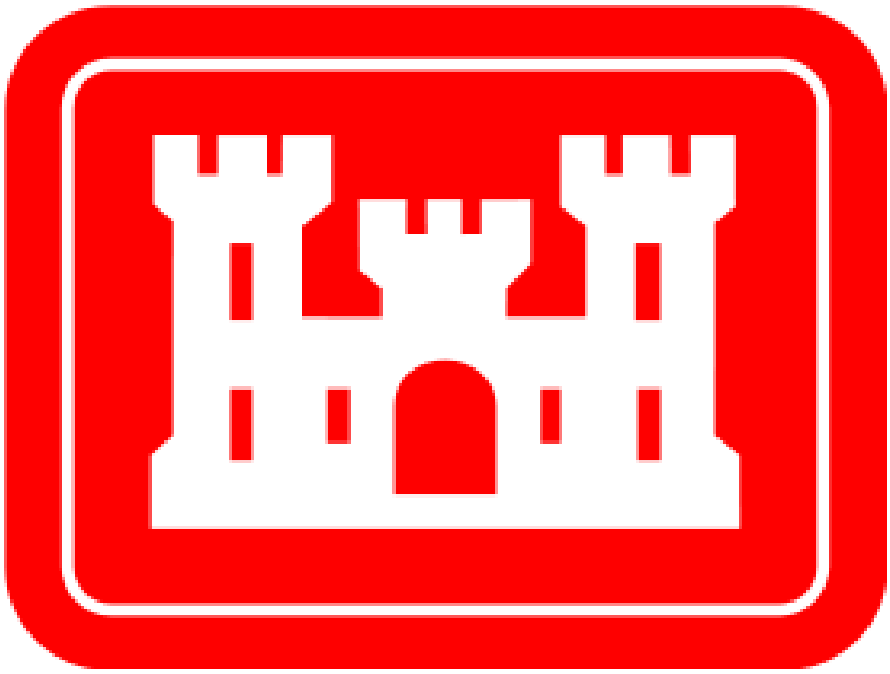
Draft Environmental Assessment
Section 571 West Union
Wastewater System Improvements Project
Doddridge County, West Virginia



U.S. Army Corps of Engineers
Huntington District
Huntington, West Virginia
September 2024

Draft Environmental Assessment
Section 571 West Union
Wastewater System Improvements Project
Doddridge County, West Virginia
Executive Summary

The Town of West Union (West Union) is proposing to design and construct a wastewater system improvements project. The existing aeration plant frequently exceeds capacity during high precipitation events. In addition, the North Central Regional Jail (Regional Jail) has requested a significant increase in water demand. The project is necessary to address the Town of West Union's needs to increase their daily treatment capacity.

The proposed project consists of design and construction of a new 750,000 gallons per day (GPD) Sequential Batch Reactor (SBR) wastewater treatment plant (WWTP), and demolition of the existing 200,000 GPD WWTP. The new WWTP would include a new influent pump station, headworks building for screening and grit removal, SBR basins and SBR Process equipment, digester basin, blowers, sludge holding tanks, sludge press building, sludge storage building, UV disinfection, and all related appurtenances. The project would also include the installation of a new 6-inch diameter high density polyethylene (HDPE) force main from the Regional Jail to the West Union collection system with the collection point near Doe Run (CR-50/30). Approximately 22,500 feet of 6-inch diameter HDPE force main would be installed including necessary components (cleanouts, air releases, etc.) to convey the additional wastewater flows. The project would be developed within a 9.39-acre limit of disturbance (LOD).

The proposed project is a partnership agreement between West Union and the U.S. Army Corps of Engineers (USACE) established under the authority of Section 571 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 West Virginia. This law provides design and construction assistance for water-related environmental infrastructure projects to Non-Federal interests in West Virginia. Funding, as established under Section 571, shall be shared 75% Federal and 25% Non-Federal (State and Local).

This Environmental Assessment (EA) is prepared pursuant to the National Environmental Policy Act, Council on Environmental Quality Regulations (40 CFR 1500-1508) and the USACE Implementing regulation, ER-200-2-2.

SECTION 571 WEST UNION
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
DODDRIDGE COUNTY, WEST VIRGINIA
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The brief and concise nature of this document is consistent with the 40 CFR requirements of the National Environmental Policy Act (NEPA) to reduce paperwork and delay by eliminating duplication with existing environmental documentation, incorporating pertinent material by reference, and by emphasizing interagency cooperation. The majority of data collection and analysis in this document was performed by Civil and Environmental Consults (CEC), Inc in conjunction with the USACE.

1.0 PROJECT DESCRIPTION

1.1 Project Background

West Union owns and operates a sewer treatment and collection system serving residents of West Union, located in Doddridge County, West Virginia. West Union provides sewer service to a total of 504 customers, including 477 residential customers, 26 commercial customers, and one (1) public authority customer. The largest user in the water system is the Regional Jail whose current water demands and subsequent sewer flows average 100,000 to 130,000 GPD.

This EA examines the potential environmental impacts of the proposed improvements to the WWTP as proposed by West Union. The purpose of the EA is to analyze the potential environmental impacts of the proposed project and to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI), but it is anticipated that an EIS would not be required. An EIS is typically conducted where significant human or natural resources exist, and the implementation of a proposed project may have significant effects to those resources. An EA typically involves projects where no significant resources occur, or the project is expected to have less than significant impacts to the human and natural environment. In both EISs and EAs, additional project actions can be implemented to help avoid, minimize, or mitigate for potential project impacts.

1.2 Purpose, Need, and Authorization

In the past year, the Regional Jail reached out to West Union requesting an additional 80,000 GPD of water. This requested increase in water demand would also increase the sewage flows received at West Union's WWTP. With the current wastewater treatment system unable to handle the increased flow and reaching the end of its useful life, West Union cannot adequately treat this additional sewage volume without making improvements to the existing system. Therefore, West Union is proposing a WWTP and system improvements project.

The existing WWTP has been in service since 1998 and no upgrades or improvements have been completed at the facility. Currently, the plant discharges to the Middle Island Creek and it barely meets the current discharge requirements outlined in their West Virginia Department of Environmental Protection (WVDEP) National Pollutant Discharge Elimination System (NPDES) Permit. The WWTP is undersized to handle the expected growth of its customers and the expansion of the Regional Jail. Through normal wear and tear, along with an expected increase in flow and permitting limits, it is expected that the existing WWTP would no longer be able to keep up with demand. The force main line and pump station that is servicing the Regional Jail is undersized and would not be able to handle the increased sewage flow in the future. Therefore, the force main and pump station would also need to be upsized.

The proposed project is a partnership agreement between West Union and the USACE, established under the authority of Section 571 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 West Virginia. This law provides design and construction assistance for water-related environmental infrastructure projects to Non-Federal interests in West Virginia. Funding, as established under Section 571, shall be shared 75% Federal and 25% Non-Federal (State and Local).

This Environmental Assessment (EA) is prepared pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality Regulations (40 CFR 1500-1508) and the USACE Implementing regulation, ER-200-2-2.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action Alternative (PAA)

The PAA would include the installation of a new 6-inch diameter HDPE force main from the Regional Jail to the West Union collection system with the collection point near Doe Run (CR-50/30). Approximately 22,500 feet of 6-inch diameter HDPE force main would be installed, including necessary components (cleanouts, air releases, etc.) to convey the additional wastewater flows. A new pump station would also be required to handle the conveyance of the additional flows. The PAA would also include the replacement of the existing 200,000 GPD WWTP in West Union with a new 750,000 GPD SBR WWTP. The existing WWTP would be demolished. The project would be developed within a 9.39-acre LOD.

2.2 No Action Alternative (NAA)

Under the NAA, the USACE would not provide funding for the project and West Union would not be able to financially support improvements to their wastewater system. West Union would not be able to accept increased flows from the Regional Jail and maintain compliance with the requirements of their NPDES permit. Additionally, the existing facilities would not be upgraded to newer, more efficient technology that would provide quality wastewater treatment to the area into the future. As a result, the WWTP would deteriorate further, and health and safety risks could become a possibility due to unsafe and unreliable infrastructure. However, 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, as defined in 40 CFR part 1508.27. 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.
- Direct – Caused by the action and occur at the same time and place.
- Indirect – Caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable.
- 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 project area is located within West Union in central Doddridge County, West Virginia. The surrounding area consists primarily of rural residential properties with some commercial businesses, schools, and churches. Figure 1 shows the proposed project limits relative to roads and principal surface features. The red polygon indicates the current WWTP footprint. The new WWTP would be within the same footprint.

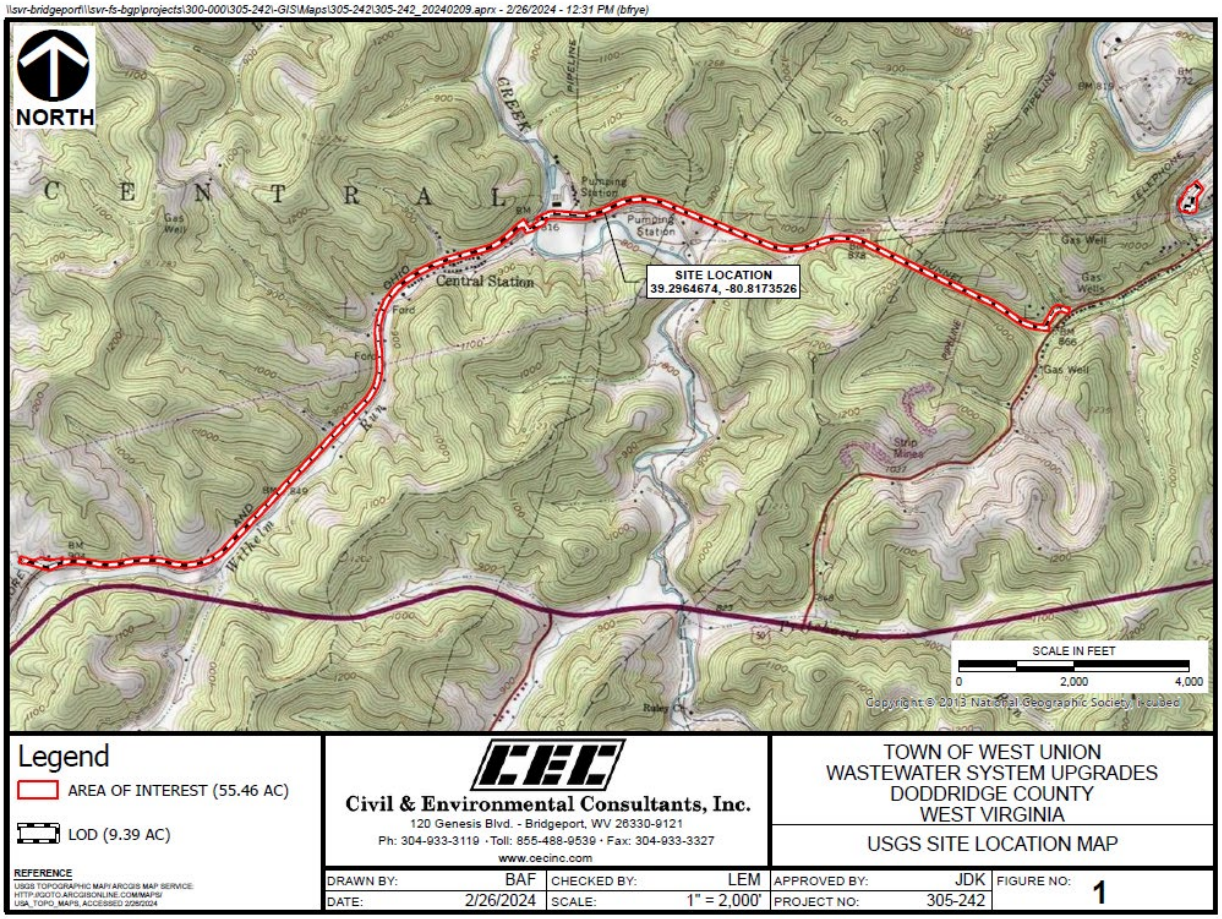


Figure 1: Project Location, USGS 7.5-minute series topographic map (West Union, West Virginia quadrangle)

3.2 Land Use

The project area mainly parallels county roads and is often co-located along a former railroad that has since been converted into a recreational trail (North Bend Rail Trail). According to a review of Federal and state land maps found at the USGS' Protected Areas website, there are no known protected or special land use designations for the area (USGS, 2022).

The PAA would take place within established rights-of-way (ROWs) and the footprint of the existing WWTP and pump station. The force main replacement would occur within West

Union's existing permanent easement along the rail trail. The PAA would have direct, short-term, minor impacts on land-use during construction and open cut trenching. Following installation of the force main, the land would be returned to pre-project contours, and seeded and mulched, as needed. Further, the improvements to the WWTP and pump station would occur at the existing facilities location and would not impact land use. The PAA would have no impact on protected lands since none are known to exist within the project area.

The NAA would have no known indirect or direct impacts on land use.

3.3 Climate

The climate in Doddridge County is typical of a humid subtropical region in the North Temperate Zone. Seasonal weather patterns consisting of long (May to September), hot and humid summers with frequent showers and mild winters (December to March) with mild to moderate snowfall are typical. July is typically the hottest month of the year with an average high temperature of 83 degrees Fahrenheit. The coldest month is January with an average low temperature of 24 degrees Fahrenheit. Average annual precipitation is 62.6 inches for Doddridge County.

The PAA would have a minimal impact on climate, and only for a short duration. Minor discharges of carbon-based pollutants would occur during construction activities that could contribute to greenhouse gases, see Section 3.14 for more information on greenhouse gases. However, no significant direct or indirect impact to climate would be anticipated to occur due to the PAA. It should also be noted that weather related to climate change can threaten wastewater treatment, so by improving the infrastructure of the wastewater system, West Union would be enhancing its resilience to climate change. Furthermore, maintaining and providing adequate water supply infrastructure within the constraints imposed by primary project purposes helps reduce stormwater runoff and soil erosion, mitigates air pollution and moderates temperatures. The USACE Strategic Sustainability Performance Plan implements Executive Order (E.O.) 13693, stating:

"As a prominent Federal entity, a key participant in the use and management of many of the Nation's water resources, a critical team member in the design, construction, and management of military and civil infrastructure, and responsible members of the Nation's citizenry, the USACE strives to protect, sustain, and improve the natural and manmade environment of our Nation and is committed to sustainability and compliance with applicable environmental and energy statutes, regulations and Executive Orders."

The USACE has also prepared an Adaptation Plan in response to previously existing related EOs and Climate Action Plan. The Adaptation Plan includes the following USACE policy statement:

"It is the policy of USACE to integrate climate change preparedness and resilience planning and actions in all activities for the purpose of enhancing the resilience of our built and natural water-resource infrastructure and the effectiveness of our military support mission, and to reduce the potential vulnerabilities of that infrastructure and those missions to the effects of climate change and variability."

The project area is located within the Conaway Run-Middle Island Creek (HUC 050302010406), 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, with the exception of 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.

Only short duration, minor discharges of carbon-based pollutants would occur during construction activities that could contribute to greenhouse gases. The NAA or PAA would not involve any activity that could significantly affect the environment in regard to climate change and the project would not likely be influenced by future changes in climate. Therefore, no significant adverse impacts, neither direct nor indirect, to climate or climate change would occur as a result of the PAA or NAA. However, under the NAA West Union would not be enhancing its resilience to climate change.

3.4 Terrestrial Habitat

The general project setting is in the Appalachian Mixed Mesophytic Region, which consists of temperate broadleaf and mixed forest biomes. The project site is located along gently sloping bottomlands, primarily consisting of the North Bend Rail Trail flanked by second growth hardwood forest. Non-forested areas are dominated by upland grasses and forbs including meadow fescue (*Schedonorus pratensis*), white clover (*Trifolium repens*), and Kentucky bluegrass (*Poa pratensis*). The forest edges near the project area are dominated by hardwoods including red maple (*Acer rubrum*), black cherry (*Prunus serotina*), and tulip tree (*Liriodendron tulipifera*).

Impacts to vegetation would occur during construction of the PAA. Earth moving disturbances would primarily be short-term and limited to existing ROWs; however, some long-term forest impacts (0.35 acre of tree clearing) would be required. No significant loss to terrestrial habitat

would occur because of the PAA. Areas disturbed during construction would be permanently stabilized upon completion of construction. The areas that do not have pavement or stone surfaces would be scarified as a surface roughness best management practice (BMP), and the surface would be re-seeded with a native seed mix, in accordance with the site-specific Erosion and Sediment Control (E&SC) Plan.

As selection of the NAA would entail no changes to the project area, there are no impacts, neither direct nor indirect, to terrestrial habitat anticipated as part of the NAA.

3.5 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 Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) were reviewed for the proposed project (https://www.fema.gov/floodplain-management/flood-zones). The Doddridge County Office of Emergency Management (DC OEM) also maintains floodplain management regulations for activities occurring within a regulated floodplain (DC OEM, 2024). According to a review of the FEMA floodplain maps, portions of the project area are located within a designated flood hazard area, Panel Numbers: 54017C0115C and 54017C0120C (FEMA, 2011). A floodplain map is included in Appendix A.

Portions of the PAA would be located within these designated areas. The force main would transect Zone AE associated with Wilhelm Run and Zone A associated with Arnold Creek, while the WWTP outlet would be located within Zone A associated with Middle Island Creek. The infrastructure for the system located within the FEMA floodplain would be below (force main), or at grade (rip-rap apron for NPDES outlet) and should not result in a rise to the base flood elevation. Nonetheless, a floodplain permit was obtained from the Doddridge County Floodplain Coordinator on 25 March 2024 (Appendix B). Therefore, the PAA meets the intent of E.O. 11988 and no significant long-term direct or indirect impacts to floodplains are anticipated to occur from the PAA.

As no construction-related activities would be implemented, no additional impacts, neither indirect nor direct, to floodplains are anticipated to occur from the NAA.

3.6 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. According to a review of the Natural Resources Conservation Service's (NRCS) Web Soil Survey, there were nine (9) soil mapping units within the 9.39-acre LOD (NRCS, 2024). The Chargrin silt loam (Ch) comprises a small portion of the project area at Arnold Creek, while the Sensabaugh silt loam (Se) comprises a portion of the project area along the Wilheim Run. These soil units are mapped as prime farmland. The Gilpin-Upshur silt loams (GuC and GuD) are situated on side slopes and are listed as farmland of statewide importance. The characteristics of the soils located within the PAA are summarized in Table 1.

Table 1 – Soils Information

Soil Mapping Unit Name	Soil Unit Symbol	Drainage Class	Prime Farmland Designation
Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded	Ch	Well Drained	Prime Farmland
Gilpin-Peabody silt loams, 15 to 35 percent slopes, very stony	GsE	Well Drained	Not Prime Farmland
Gilpin-Peabody silt loams, 35 to 70 percent slopes, very stony	GsF	Well Drained	Not Prime Farmland
Gilpin-Upshur silt loams, 8 to 15 percent slopes	GuC	Well Drained	Farmland of Statewide Importance
Gilpin-Upshur silt loams, 15 to 25 percent slopes	GuD	Well Drained	Farmland of Statewide Importance
Kanawha-Urban land complex	Ku	Well Drained	Not Prime Farmland
Sensabaugh silt loam, 0 to 3 percent slopes, occasionally flooded	Se	Well Drained	Prime Farmland
Sensabaugh-Urban land complex	Su	Well Drained	Not Prime Farmland
Udorthents, smoothed	Ud	N/A	Not Prime Farmland

The PAA would impact soils mapped as farmland of statewide importance and prime farmland. As such, the Farmland Conversion Impact Rating AD-1006 form was completed, which determined that the PAA would have a site assessment score of 32. In accordance with 7 C.F.R. Part 658.4 c 2: "Sites receiving a total score of less than 160 need not be given further consideration for protection". However, a consultation letter was submitted to the NRCS to solicit comments. The NRCS responded in a letter dated 14 February 2024, that the PAA would not impact prime or other important farmland and is therefore, not subject to the FPPA (Appendix B).

The impacts to soil would be minimized through the installation of E&SC measures and limiting disturbed areas and earthmoving activities to the proposed 9.39-acre LOD. Prior to ground disturbing activities, perimeter E&SC measures would be installed in accordance with a Stormwater Pollution Prevention Plan (SWPPP), E&SC Plan, and Stormwater Construction Permit.

The NAA would have no known direct or indirect impacts on soils.

3.7 Aquatic Habitat/Water Quality

The proposed project area is located within the Conaway Run-Middle Island Creek (HUC 050302010406). CEC conducted a stream and wetland delineation within a 55.46-acre Area of Interest (AOI) to identify streams and wetlands on 18 and 19 October 2023, and 8 February 2024. The 55.46-acre AOI encompassed the 9.39-acre LOD. CEC identified 49 streams and one

(1) palustrine emergent (PEM) wetland within the AOI. Waters onsite flow to Middle Island Creek, which flows into the Ohio River, a traditionally navigable water.

According to the U.S. Environmental Protection Agency's (USEPA) *Total Maximum Daily Loads for Selected Streams in the Middle Ohio River South and Middle Ohio River North Watersheds, West Virginia*, Middle Island Creek is on the Clean Water Act 303(d) list of impaired streams for iron, fecal coliform, and biological impairments. Arnold Creek is on the Clean Water Act 303(d) list of impaired streams for iron and fecal coliform.

The PAA would result in direct, minor, short-term, temporary impacts to approximately 856 feet of eight (8) streams at 13 crossing locations (see Table 2). The proposed impacts would be the result of open cut trenching (12 streams) to install sewer piping at least three (3) feet beneath the streambed, and the installation of E&SC measures. One (1) stream, Arnold Creek, would be crossed via a horizontal directional drill (HDD). At each of the other 12 stream crossings, substrate in the channel would be removed and stockpiled separately from other excavated material. This native material would be reused in restoration of the stream channel, which would be anticipated to be completed within 72 hours, or as soon as practicable after completion of the crossing.

The stream crossings would fall under the Nationwide Permit (NWP) 58 for Utility Line Activities for Water and Other Substances. Proposed work associated with the stream crossings would meet all conditions of the NWP 58. On 6 March 2024 the WVDNR issued a Right of Entry for the stream crossings. The WVDEP determined that an individual Water Quality Certification (WQC) would not be required for the proposed project, and only a Pre-Construction Notification (PCN) would need to be submitted to their office per Standard Condition 1 of the NWPs. The non-Federal Sponsor submitted a PCN for the project to the USACE Regulatory Branch and WVDEP. On 28 February 2024, the WVDEP verified that they had received the PCN, and the non-Federal Sponsor had fulfilled their requirement of Standard Condition 1. Additionally on 19 April 2024, the USACE Regulatory Branch verified that the proposed project met the criteria for an NWP 58, and that the project would not involve activities subject to the requirements of Section 10 of the Rivers and Harbors Act. Conditions of the NWP 58 are included in Appendix B. Table 2 provides a summary of the anticipated aquatic impacts associated with the PAA.

Table 2 – Aquatics Impact Summary*

Single and Complete Crossing/ Project	Waterbody ID	Classification	OHWM		Impact Duration	Impact Type	Impact Amount (feet/acre)	Sheet Number
			Width (feet)	Depth (feet)				
Crossing / Project 1	UNT-47	Intermittent	2.75	0.42	Temporary	Installation of E&SC measures where the stream transects the LOD	97	Attachment B Sheet C542
Crossing / Project 2	Wetland-A	PEM	N/A	N/A	Temporary	Installation of 6-inch HDPE force main pipe and E&SCs	0.003	Attachment B Sheet C500
Crossing / Project 3	UNT-40	Ephemeral	2.25	0.25	Temporary		3	Attachment B Sheet C514
Crossing/ Project 4	UNT-32	Ephemeral	1.25	0.33	Temporary		1	Attachment B Sheet C527
Crossing/ Project 5	UNT-23	Intermittent	2.75	0.50	Temporary	Installation of E&SC measures where the stream runs along the edge of the LOD	175	Attachment B Sheet C531
Crossing/ Project 6	UNT-2	Intermittent	2	0.33	Temporary	Installation of 6-inch HDPE force main pipe and E&SCs	70	Attachment B Sheet C537
Crossing/ Project 7	UNT-2	Intermittent	2	0.33	Temporary		125	
Crossing/ Project 8	UNT-7	Ephemeral	1.25	0.33	Temporary		3	
Crossing/ Project 9	UNT-2	Intermittent	2	0.33	Temporary		303	Attachment B Sheet C538
Crossing/ Project 10	UNT-3	Ephemeral	1.25	0.25	Temporary		2	
Crossing/ Project 11	UNT-2	Intermittent	2	0.33	Temporary		15	
Crossing/ Project 12	UNT-1	Perennial	1.75	0.33	Temporary		13	Attachment B Sheet C540
Crossing/ Project 13	UNT-1	Perennial	1.75	0.33	Temporary		49	
Total Temporary Stream Impacts:							**856-feet**	
Total Temporary Wetland Impacts:							**0.003-acre**	

*Several streams are located within the LOD of the PAA that would not be impacted by project development. These streams are currently enclosed via existing culverts and Arnold Creek would be crossed via a horizontal directional drill (HDD). There is another section of streams that are not proposed for impact by project activities but appear to be located within the LOD. However, these stream are located along the natural hillside, and the proposed line would be installed within the existing easement that travels through the Central Station Tunnel #6, well beneath these streams.

The PAA could have direct, short-term, minor effects on the aquatic habitat/water quality during construction, related to sedimentation associated with ground disturbing activities, which would be addressed as part of a Stormwater Construction Permit through the WVDEP. These potential, indirect impacts would be mitigated through the installation of E&SC measures. Proper construction sequencing and implementation of the E&SC plan would ensure that potential offsite sedimentation would be minimized, and associated discharges would first filter through structural controls.

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 and would not be able to handle the expected growth of its customers and the expansion of the Regional Jail. Through normal wear and tear along with an expected increase in flow and permitting limits, it would be expected that the existing WWTP would no longer be able to keep up with demand and cause adverse impacts due to the inability to treat their wastewater discharge into Middle Island Creek, which is within an impaired watershed. The NAA would further contribute to the fecal coliform and biological impairments that are already persistent in the watershed.

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. The National Wetlands Inventory (NWI) map for the West Union, West Virginia quadrangle was reviewed, which showed six (6) NWI wetlands mapped within the project area. One (1) riverine, unknown perennial, unconsolidated bottom, permanently flooded (R5UBH) and five (5) riverine, intermittent, streambed, seasonally flooded (R4SBC) wetlands were mapped in the project area.

As such, CEC conducted a wetland delineation on 18 and 19 October 2023, and 8 February 2024, within a 55.46-acre area that encompassed the PAA. The wetland delineations were based on CEC's professional judgment and interpretation of the technical criteria presented in the 1987 USACE *Wetland Delineation Manual*, and the 2012 USACE *Regional Supplement: Eastern Mountains and Piedmont Region, Version 2.0*.

During the site visit, the NWI wetlands were assessed and delineated by CEC as Arnold Creek and unnamed tributaries (UNT-1, UNT-26, UNT-39, UNT-41, and UNT-44). However, CEC's field reconnaissance identified one (1) palustrine emergent (PEM) wetland.

The PAA would result in minor, short-term, temporary impacts to 0.003-acre of the identified wetland (see Appendix A for figure), which is summarized in Table 2 (Section 3.7). The impacts to wetlands would fall under the NWP 58. The non-Federal Sponsor submitted a PCN for the project to the Corps Regulatory Branch and WVDEP. On 28 February 2024, the WVDEP verified that they had received the PCN, and the non-Federal Sponsor had fulfilled their requirement of Standard Condition 1. On 19 April 2024, the Corps Regulatory Branch verified that the proposed project met the criteria for a NWP 58.

Temporary impacts to wetlands would be minimized through stripping the top 12-inches of soil and stockpiling the material separately from other excavated material. This native material would be reused in restoration of the wetland temporarily impacted by the open cut crossing and restoration is anticipated to be completed within 72 hours, or as soon as practicable after completion of the crossing. Following installation, the trench would be backfilled to approximate pre-project contours and conditions, and seeded and mulched, as needed. No herbicides would be used within wetlands to maintain the ROW.

No impacts, neither indirect nor direct, 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 existing wastewater systems if infrastructure failure occurs in the future.

3.9 Wild and Scenic Rivers

No designated State Wild or Scenic Rivers are present within the Project Area. Therefore, no impacts, neither indirect nor direct, to these resources are anticipated as part of the PAA or NAA.

3.10 Hazardous, Toxic, and Radioactive Waste (HTRW)

The USEPA implements the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA), which are laws to regulate hazardous materials and waste assessment, transportation, and disposal. CEC conducted a desktop review of the 9.39-acre LOD using USEPA's Cleanups in My Community mapping tool. Review of this dataset did not return Hazardous Waste, Brownfields, or Superfund Sites within, or immediately adjacent to the project area (USEPA, 2016b).

In addition, CEC conducted a Phase I Environmental Site Assessment (ESA) which was submitted under separate cover. The purpose of the February 2024 Phase I ESA was to identify recognized environmental conditions within the project area, in accordance with American Society for Testing Materials International *E1527-21 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The assessment revealed no controlled or historical recognized environmental conditions, or significant data gaps in connection with the project area. However, one (1) recognized environmental condition was identified that was associated with staining around the 550-gallon above ground storage tank containing diesel fuel at the West Union WWTP. The staining was likely related to spills since the secondary containment appeared to be functioning.

After review of the February 2024 Phase I ESA, Corps' HTRW staff determined that no further investigation or action is required. Therefore, no impacts, neither indirect nor direct, to HTRW are anticipated with the PAA. A clearance memorandum was signed by Corps' HTRW staff on 21 March 2024 and is included in Appendix B. However, should hazardous materials be encountered or suspected during construction, the WVDEP would be notified immediately, work would cease on the project, and proper disposal would be coordinated with appropriate WVDEP authorities.

The NAA would not result in ground disturbing activities. Therefore, no direct construction related HTRW impacts would be associated with the NAA.

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 Huntington District conducted a desktop review of the West Virginia State Historic Preservation Office's (SHPO) map viewer. No previously documented resources eligible to the NRHP have been documented within or adjacent to the project area. However, the proposed undertaking will directly affect the historic B&O Railway Mainline and the Central Station Tunnel #6. The proposed action will install new sewer line within the railroad right of way and within the floor of the tunnel. The Huntington District considers the B&O Railway Mainline and the Central Station Tunnel #6 (as a contributing element) as eligible to the NRHP under Criterion A. Further research may also find that other Criteria also apply. The rail line and the tunnel are currently preserved as the North Bend Rail Trail. The B&O Mainline retains sufficient integrity to meet the standards put forth by the National Park Service.

An archaeological survey contracted by the Sponsor resulted in the identification of no archaeological resources within the APE. The Huntington District has determined that the potential for archaeological resources within the APE is low and no further work is required.

The Huntington District Archaeologist has reviewed the Undertaking and has determined that the Undertaking will have no adverse effect to historic properties, provided that the surfaces of the rail line and the tunnel are restored to original grade and condition, in accordance with the SHPO's recommendations of 29 April 2024. In accordance with Section 106 of the NHPA of 1966, as amended (36 CFR 800), the Huntington District submitted an effects determination letter of no adverse effect to the SHPO for their review. Coordination with SHPO and Tribal nations is ongoing and will be completed prior to issuance of the FONSI.

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 Doddridge 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.

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 project 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 clubshell mussel (*Pleurobema clava*), threatened longsolid mussel (*Fusconaia subrotunda*), threatened round hickorynut (*Obovaria subrotunda*), proposed endangered salamander mussel (*Simpsonaias ambigua*), endangered snuffbox mussel (*Epioblasma triquetra*) and candidate species the monarch butterfly (*Danaus plexippus*).

In a letter dated 6 August 2024, the West Virginia Division of Natural Resources (WVDNR) indicated the project is located within the buffer of numerous bat captures, several bat caves, and

two (2) sensitive habitats (Appendix B). Based on the IPaC results, the project is either outside critical habitat, or no critical habitat has been designated for these bat species. CEC conducted a desktop analysis for cave and mine portals utilizing the methods described in the *Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines*, dated March 2023. No karst areas, surface mines, or underground mines were located within the 3-mile buffer. However, during CEC's site visit, one (1) potential hibernacula, was identified within the 55.46-acre area of interest. This structure consisted of the Central Station Tunnel #6, along the North Bend Rail Trail.

As such, a Phase I hibernacula survey was completed by CEC on 22 February 2024. During the survey, presence of bat species was visually documented. Approximately 50 hibernating bats throughout the 0.44-mile length of the tunnel were documented, including presence of big brown and tricolored bats; three (3) individual species were unable to be confidently identified. As multiple bats were observed using this structure, the tunnel should meet the requirements to be classified as potential hibernacula for listed bats. As such, a Phase II survey should not be required to document presence/absence.

The IPaC report also determined that there were three (3) migratory birds in addition to bald and golden eagles, within range of the project. Of the three (3) migratory birds, two (2) species had preferred habitat within the project area. The Wood Thrush's (*Hylocichla mustelina*) preferred habitat is mainly deciduous woodlands and will nest in suburban areas where there are enough large trees. The primary probability of presence and breeding season is May to August. Cerulean Warbler's (*Dendroica cerulean*) preferred habitat is mature deciduous forest. The primary probability of presence and breeding season is April to July. However, according to the National Audubon Society (NAS), the project area does not contain important bird areas (IBA). The closest known IBA is the Southern Allegheny Plateau Forest, located to both the north and south of the project area (NAS, No Date).

The PAA would impact approximately 0.35-acre of potential roosting bat habitat in the project area from tree clearing activities. Tree clearing would occur between November 15 and March 31, when listed bat species would not be on the landscape. West Union would also commit to summer construction of the portion of the project that would temporarily impact the tunnel to avoid adverse impacts while the bats are hibernating. Therefore, the Corps' Huntington District has determined the project may affect, but not likely to adversely affect the aforementioned bat species.

The PAA includes 12 stream crossings via open cut trenching to install sewer piping at least three (3) feet beneath the streambed. E&SC measures would be utilized to limit impacts and at each stream crossing, substrate in the channel would be removed and stockpiled separately from other excavated material. This native material would be reused in restoration of the stream channel, which would be anticipated to be completed within 72 hours, or as soon as practicable after completion of the crossing. The stream crossings would fall under the Nationwide Permit (NWP) 58 for Utility Line Activities for Water and Other Substances. Proposed work associated with the stream crossings would meet all conditions of the NWP 58. Therefore, the Corps Huntington District has determined the proposed action may affect, but not likely to adversely affect the aforementioned mussel species.

Short-term impacts due to construction would include the temporary displacement of some wildlife, including the monarch butterfly; however, due to the majority of the project being located within existing easements, the wildlife displacement would be considered negligible. Additionally, following construction, the PAA would be seeded and mulched, as needed, in accordance with an E&SC plan. Therefore, the Corps Huntington District has determined the project may affect, but not likely to adversely affect the monarch butterfly.

On 27 March 2024, the USFWS West Virginia Field Office concurred with the Huntington District's determinations via the USFWS Standard Local Operating Procedures for Endangered Species (SLOPES) Evaluation/Coordination Document (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 undersized WWTP would continue to operate as is and would not be able to handle the expected growth of its customers and the expansion of the Regional Jail. The WWTP would no longer be able to keep up with demand, which could result in the inability to effectively treat wastewater and potential subsequent discharge exceedances into Middle Island Creek, which is known to contain populations of protected mussel species.

3.13 Air Quality

According to the Clean Air Act, 42 U.S.C. 7401 et seq., the USEPA established National Ambient Air Quality Standards to protect the public from air pollution associated with the following criteria pollutants: ozone, sulfur dioxide, carbon monoxide, lead, nitrogen dioxide, and particulate matter. The United States Air Quality Index (AQI) value for the project area was 78, which falls within the 50-100 category of "moderate" and air pollution poses some risk to individuals unusually sensitive to particle pollution (USEPA, 2022). The primary pollutant in the project area currently is fine particulate matter (PM2.5).

The PAA would have minor, short-term impacts to localized air quality from construction activities and would be low in concentration and duration. Construction equipment could emit some carbon monoxide, nitrogen oxide, unburned hydrocarbons, and particulate matter from tailpipe emissions and cause dust during ground disturbance. After construction is complete, the air quality should stabilize and return to preconstruction conditions. Therefore, no long-term or short-term violations of state air quality standards would be expected. The PAA should be exempt through 40 CFR Part 93.153 from making a conformity determination, since estimated emissions from construction equipment would not be expected to exceed de minimis levels. However, a letter was submitted to the WVDEP's Division of Air Quality (DAQ) to address potential impacts.

The DAQ responded in a letter dated 20 February 2024 (Attachment B) that Doddridge County was in an attainment area for criteria pollutants and that preconstruction permits, authorizations, or air quality analyses by DAQ would not likely be required, except to the extent any of the following apply:

- It is necessary to burn land clearing debris to complete the project.

- The project entails the renovation, remodeling, or demolition, either partially or totally, of a structure, building, or installation, irrespective of the presence or absence of asbestos containing materials.

- Backup or emergency electrical generators may be subject to federal and state requirements and require an air permit.

Impacts associated with dust from excavation of soil/aggregates would be minimized by using properly inspected and maintained equipment and utilizing water sprays to reduce dust levels.

No impacts to air quality are anticipated as part of the NAA.

3.14 Greenhouse Gas

On 9 January 2023, the CEQ issued interim guidance to assist agencies in analyzing greenhouse gas (GHG) and climate change effects of their proposed actions under NEPA. This guidance builds upon and updates CEQ's 2016 Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews.

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. There is not currently a threshold established by the State of West Virginia for GHG emissions. In addition, the West Virginia Division of Air Quality (DAQ) does not currently require sources to report their GHG emissions directly to DAQ. The U.S. Environmental Protection Agency's (USEPA) Mandatory Reporting Rule of Greenhouse Gases (MRR-GHG) applies to direct greenhouse gas emitters, fossil fuel suppliers, industrial gas suppliers, and facilities that inject carbon dioxide (CO2) underground for sequestration (containment) or other reasons. In general, the threshold for reporting is 25,000 metric tons or more of CO2 equivalent per year.

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 approximately 22,500 feet of HDPE force main, a new WWTP, a new booster pump station, and demolition of the existing WWTP. It is anticipated that the majority of GHG emissions from the project would be generated during construction activities. Therefore, direct and indirect GHG emissions from the project would be minor and temporary in nature. In addition, all equipment would comply with Federal vehicle emission standards. BMPs such as implementing dust control measures throughout the construction site and minimizing earthmoving operations would be utilized to the extent practicable.

Construction of the PAA would take approximately 493 days, and it is anticipated that an average working day for the project would be eight (8) hours. Equipment that may be required for construction activities include excavators, dozers, trucks, cranes, and other construction equipment. Table 3 below provides the total approximate amount of GHG emissions that are expected to result from construction of the PAA based on the USEPA Motor Vehicle Emission Simulator (MOVES4) tool as well as the total social cost of GHG emissions in 2020 dollars ($)

based on the USACE Net Emissions Analysis Tool (NEAT). It is anticipated that GHG emissions from O&M of the project would be minimal and do not have enough significance to be quantified.

Table 3 – Greenhouse Gas Emissions from the PAA

Equipment	Total Hours	Average Horsepower	Average Load Factor	CO2 (g)	CH4 (g)	NOx (g)
Wastewater Treatment Plant						
Dozer	3944	250	0.75	793,870,559	1,642	594,302
Excavator 1	3944	175	0.75	277,847,256	704	402,512
Excavator 2	3224	450	0.75	1,167,860,114	5,660	2,360,507
Off-highway Truck	3224	575	0.75	1,492,562,968	3,641	1,334,480
Telehandler	3944	120	0.85	215,756,712	1,919	896,598
Skid Steer	3944	70	0.75	142,832,879	2,259	1,470,577
Wheel Loader	3944	350	0.85	629,268,819	3,685	3,638,863
Large Vibratory Roller	3944	200	0.85	359,799,852	1,894	587,752
Light Plants	3944	85	0.75	147,959,019	1,126	1,232,592
Crane	2000	275	0.75	218,955,397	1,381	446,461
Demolition Excavator	960	425	0.75	164,215,235	796	331,916
Highway Truck	960	450	0.75	347,819,183	848	310,980
Wastewater Booster Pump Station						
Dozer	1200	250	0.75	120,771,383	250	90,411
Excavator 1	2400	175	0.75	169,075,410	428	244,937
Highway Truck	1200	450	0.75	217,386,990	530	194,363
Telehandler	1200	120	0.85	65,646,058	584	272,799
Skid Steer	1200	70	0.75	43,458,280	687	447,437
Large Vibratory Roller	1200	200	0.85	109,472,571	576	178,829
Crane	240	275	0.75	26,274,648	166	53,575
Demolition Excavator	720	425	0.75	123,161,426	597	248,937
		Total (Metric Tons)		**6,834**	**0.03**	**15**
		Total Social Cost ($)		**$1,501,593**		

No direct GHG emissions are anticipated as part of the NAA. Therefore, the social cost of GHG emissions under the NAA cannot be quantified since there would be no direct GHG emissions.

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 Corps Safety and Health Requirements Manual provides criteria for temporary permissible noise exposure levels (see Table 4 below), for consideration of hearing protection or the need to administer sound reduction controls.

Table 4 – 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 project area is located within rural and residential areas of West Union, Doddridge County, West Virginia and is considered to have small amounts of noise generated by vehicles and aviation. 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.

Construction noise would be similar to that of farm equipment and other small machinery used in the local area. A backhoe, end loader, road grader 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 Corps 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.

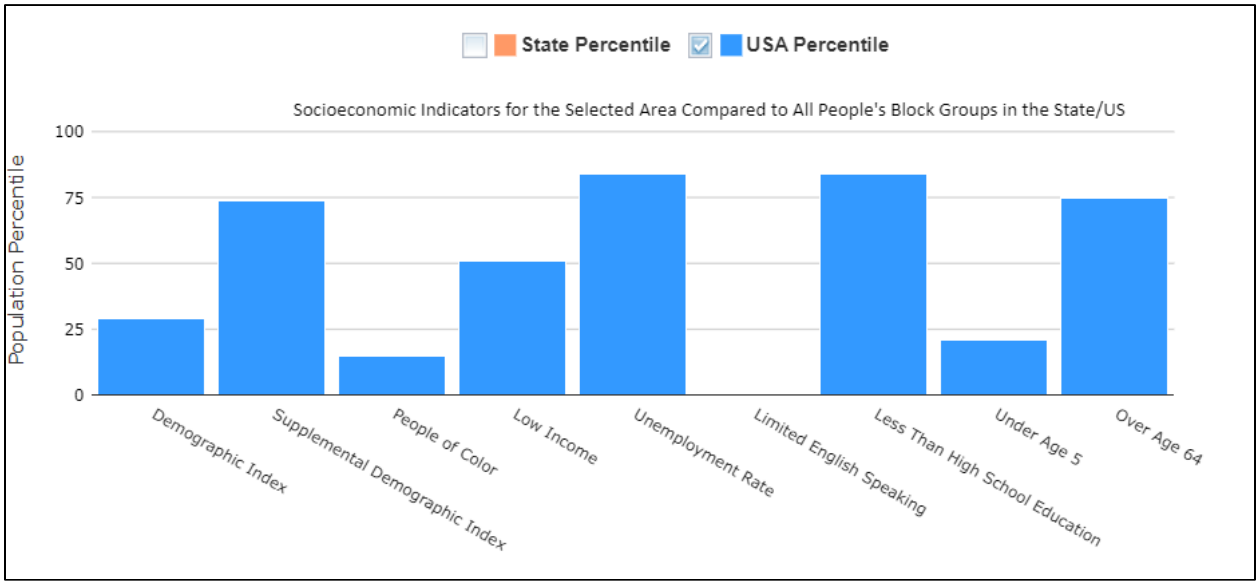
Due to daytime construction and the short and limited duration of elevated noise levels associated with the PAA, direct impacts from the noise to local residences would be temporary and minor.

There would be no change in noise and thus no impact, neither indirect nor direct, under the NAA.

3.16 Environmental Justice and Protection of Children

E.O. 12898, as amended, requires Federal actions to address environmental justice in minority populations and low-income populations. According to the Census Reporter, the population for West Union, West Virginia is 832 and it does not contain a significant minority population. The Census Reporter states that 12 percent of West Union lives below the poverty line (U.S. Census Bureau, 2022). The Census Reporter indicated West Union is 97 percent white and the per capita income was $46,579.

The USEPA EJScreen tool indicated that the project area (Block Group 54017965100) is in the 15th percentile for people of color, 51st percentile for low income, 84th percentile for less than high school education, 21st percentile for under age 5, and 75th percentile for over age 64. In addition, the Climate and Economic Justice Screening Tool (CEJST) indicates that the project area is identified as disadvantaged because it meets more than one (1) burden threshold and the associated socioeconomic threshold. See Appendix A for CEJST mapping.



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 project area that rely on the continued operation of the system. The PAA would provide a system that allows for future growth of the area, while maintaining compliance with their existing NPDES permit. The PAA would meet the requirements of both E.O. 12898 and E.O. 13045 by improving the environment for both low income and children.

Under the NAA, West Union would not be able to accept increased flows from the Regional Jail. Additionally, it would not upgrade the existing facilities to newer, more efficient technology that would provide quality wastewater treatment to the area into the future. The NAA could create unsanitary conditions.

3.17 Aesthetics

The project area mainly consists of a walking trail, and rural/residential areas flanked by second growth deciduous forest. The PAA would result in temporary impacts of the local aesthetics during construction of the WWTP and wastewater collection system. After installation of the force main the project area would be restored to preexisting contours and conditions, while the new WWTP and pump station would be constructed at their existing, disturbed locations.

Neither the PAA nor NAA would significantly impact, directly or indirectly, local aesthetics.

3.18 Transportation and Traffic

The project area is located primarily within existing ROWs associated with roads and a rail trail. The North Bend Rail Trail is a 72-mile trail that is operated by West Virginia State Parks. The project would also occur within ROWs associated with eight (8) roads. The annual average daily traffic (AADT) for each travel route was obtained by utilizing the West Virginia Department of Transportation's (WVDOT) Geometry and Measures website.

Transportation assets in West Union include Arnolds Creek Road and rural and residential streets. According to the map for the project area, the road segments AADT range from 10 to 750. The AADT for each of the affected roads is summarized in Table 5.

Table 5 – Affected Transportation Assets

Route Number	Common Road Name	AADT
Doddridge County Route 50/39	Trip Hill Drive	50
Doddridge County Route 50/40	State Street	50
Doddridge County Route 11/8	Tunnel Hill Road	10

Route Number	Common Road Name	AADT
Doddridge County Route 1/1	Arnolds Creek Road	750
Doddridge County Route 36/10	Depot Road	10
Doddridge County Route 36/1	Ramsey Ridge Road	10
Doddridge County Route 36	Duckworth Road	200
Doddridge County Route 36/12	Lois Lane Drive	10

The PAA would impact the eight (8) identified roads by varying means including: open cut, bore, or by occupying the ROW. A majority of the construction would take place within the existing permanent easements for the force main. During construction, minor temporary impacts would be anticipated on transportation assets that would be associated with lane closure and delays.

These impacts would be mitigated by performing work in accordance with the West Virginia Division of Highway's (WVDOH) regulations. Traffic control measures, flaggers, and signage would be implemented, as needed. The proposed action would not be anticipated to cause long-term impacts, and traffic patterns would return to normal following project completion. The PAA would be coordinated with the WVDOH for the identified state roads. A Right-of-Entry Permit Application was submitted to the WVDOH on 2 February 2024 to obtain an agreement to conduct work within their ROW. Additionally, construction along the rail trail would occur within West Union's existing permanent easement. Following construction, the transportation and traffic would return to preexisting conditions.

No direct or indirect 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 requested increase in water demand would also increase the sewage flows received at West Union's WWTP. Under the current conditions, West Union would not be able to adequately treat this additional sewage volume.

Under the PAA, a safe and reliable wastewater system would be provided to residents, businesses, and the Regional Jail affected by the aging and undersized infrastructure. The improvements to the wastewater system would address public health and safety concerns and provide a long-term, beneficial impact for the residents and businesses affected by the project.

Under the NAA, the existing conditions would remain unchanged. The WWTP would continue to operate as is and would not be able to handle the expected growth of its customers and the expansion of the Regional Jail. Through normal wear and tear, along with an expected increase in flow and permitting limits, it would be expected that the existing WWTP would no longer be able to keep up with demand and cause damage due to the inability to treat wastewater and discharge into Middle Island Creek.

3.20 Cumulative Effects

The Corps must consider the cumulative effects of the proposed project on the environment as stipulated by NEPA. Cumulative effects are "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions". Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR Part 1508.7 Council on Environmental Quality [CEQ] Regulations).

The cumulative effects analysis is based on the potential effects of the proposed project when added to similar impacts from other projects in the region. An inherent part of the cumulative effects analysis is the uncertainty surrounding actions that have not yet been fully developed. The CEQ regulations provide for the inclusion of uncertainties in the analysis and states that "when an agency is evaluating reasonably foreseeable significant adverse effects on the human environment...and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking" (40 CFR 1502.21).

Temporal and geographical limits for this project must be established in order to frame the analysis. These limits can vary by the resources that are affected. The construction of a water system improvements project would have minimal and insignificant negative impacts on the environment. Long-term, beneficial effects would result from the project and would include improved health and safety living conditions and improved operations of the water system. The temporal limits for assessment of this impact would initiate in 1972 with the passage of the Clean Water Act and end 50 years after completion of this project. The geographical extent would be broadened to consider effects beyond the PAA. The geographical extent considered is the Conaway Run-Middle Island Creek (HUC 050302010406), which is part of the ORB.

In the past, other villages within the ORB have performed upgrades to existing wastewater systems. These past actions had similar temporary impacts but no significant cumulative impact. Impairment of the watersheds are expected to continue but as communities continue to improve existing public wastewater systems, a cleaner, healthier watershed would be possible. Water quality standards and regulations are expected to remain as stringent in the future as today.

Section 3.0 documents the existing environment and potential environmental effects of the PAA and NAA with respect to existing conditions. The effects of the PAA, as discussed beforehand, are localized and minor. Past actions that may have resulted in similar effects may include wastewater or water infrastructure improvement actions. No reasonably foreseeable future actions that would have similar impacts as the proposed action were identified. In scoping cumulative effects issues, no resources were identified as having a potential to be significantly affected. Only minor and temporary impacts to ecological resources would be sustained with the implementation of the PAA. These resources would be reestablished upon completion of construction.

The availability of Federal funds through programs, such as the 571 Program, to assist communities with installation and construction of water-related environmental infrastructure and

resource protection and development projects in West Virginia is an additional benefit to the area. The significance of this action on health, safety, and water quality would be positive. Given that the current program remains in place for the foreseeable future and the overall beneficial effect from implementation of the PAA, there is expected to be a positive, though small, cumulative effect on health and safety based on past, present, and reasonably foreseeable actions.

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 6.

Table 6 – 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 12898 Environmental Justice in Minority Populations and Low-Income Populations	X		
Executive Order 13045 Protection of Children	X		

5.0 REQUIRED COORDINATION

5.1 Agencies Contacted

Direct coordination with NRCS, the Corps' Huntington District HTRW section, USFWS West Virginia Field Office, Doddridge County Office of Emergency Management, WVDEP Division of Water and Waste Management (Section 401), WVDEP DAQ, WVDNR, and WVDOH were completed prior to publication of the EA. Coordination with SHPO and Tribal nations 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 Doddridge Independent Newspaper, advising the public of this document's availability for review and comment. A copy of the EA will also be placed in the Doddridge County Public Library and made available on-line at ***https://www.lrd.usace.army.mil/Mission/Public-Review-Approved-Plan.*** The mailing list for the EA is located in Appendix C.

6.0 CONCLUSION

West Union provides sewer service to a total of 504 customers, including 477 residential customers, 26 commercial customers, and one (1) public authority customer. The largest user in the water system is the Regional Jail whose current water demands and subsequent sewer flows average 100,000 to 130,000 GPD. The Regional Jail reached out to West Union requesting an additional need of 80,000 GPD of water. This increase in water demand would result in an increase in sewage flows to the WWTP. In order to meet the Regional Jails needs and allow for continued growth, a new WWTP would need to be constructed. Additionally, the existing force main line and associated pump station would need to be upsized to convey the increased sewage flows.

The majority of the proposed project would take place within existing easements, ROWs, or previously disturbed land. 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;

[redacted]

8.0 REFERENCES

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