Draft Environmental Assessment
Section 340 Marsh Fork
Wastewater Collection System
Raleigh County, West Virginia

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

July 2012

DRAFT FINDING OF NO SIGNIFICANT IMPACT
SECTION 340 MARSH FORK
WASTEWATER COLLECTION SYSTEM
RALEIGH COUNTY, WEST VIRGINIA

1. Members of my staff have conducted an Environmental Assessment (EA), in the overall public interest, concerning the implementation of the Marsh Fork Wastewater Collection System Section 340 Project. The purpose of this project is to replace an inadequate wastewater treatment plant to service areas that are not currently served by the Crab Orchard-MacArthur Public Service District (PSD). This action will improve water quality and the health and safety of the community for years to come. The proposed project is authorized under Section 340 of the Water Resources Development Act (WRDA) of 1999 (PL 106-53).

2. The possible consequences of the project have been studied for environmental, cultural and social well-being impacts. Another factor bearing on the investigation was the capacity of the action to meet the needs of the public for whom it was proposed.

3. The Proposed Action Alternative (PAA) and the No Action Alternative (NAA) were the only alternatives carried forward for detailed evaluation. The PAA includes upgrading the existing wastewater treatment plant, installing approximately 98,000 linear feet of six-inch through 12-inch gravity sewer lines, installing approximately 20,000 linear feet of 1.5-inch through six-inch force main sewer lines and installing 16 pump stations (eight standard pump stations and eight grinder pump stations) and appurtenances. The PAA is the most cost effective and is both environmentally and socially acceptable. The NAA would not be in the public's best interest and would have continued negative impact on the natural resources of the area.

4. An evaluation of the PAA and the NAA produced the following pertinent conclusions:

a. Environmental Considerations. The Huntington District (District) has taken reasonable measures to assemble and present the known or foreseeable environmental impacts of the project in the EA. All adverse effects of the project implementation are considered insignificant and should last only a few months longer than the construction period.

b. Social Well-Being Considerations. The proposed project will ensure safe conveyance and treatment of wastewater for Marsh Fork and its residential area. No significant economic or social well-being impacts that are both adverse and/or unavoidable are foreseen as a result of the proposed action. The project will not have any impact on sites of known significant archeological or historic importance. Hazardous, Toxic, and Radioactive Waste (HTRW) are not present within the construction limits of the PAA.

c. Coordination with Resource Agencies. Pursuant to the Fish and Wildlife Coordination Act (FWCA) of 1958, coordination with the U.S. Fish and Wildlife Service (USFWS), Natural Resource Conservation Service (NRCS), the West Virginia State Historic Preservation Office (SHPO), and the West Virginia Department of Fish and Wildlife has been maintained throughout the study. Appropriate measures and best management practices will be

identified and incorporated into the PAA. Also, in accordance with the Endangered Species Act, as amended, the recommended plan should not impact listed species.

d. Other Pertinent Compliance. No prime or unique farmland under the Farmland Protection Policy Act (FPPA) will be involved. The PAA is also in compliance with the National Historic Preservation Act (NHPA Section 106, 36 CFR 800), Executive Order (EO) 11988 (Floodplain Management), and EO 11990 (Protection of Wetlands). The District has determined under Section 7 of Endangered Species Act that the project is not likely to adversely affect the Virginia spiraea. A NPDES (National Pollutant Discharge Elimination System) construction storm water permit will be obtained prior to any construction activity.

e. Other Public Interest Considerations. The PSD has organized numerous public meetings to determine the public viewpoint on the project. Meetings have been held at a variety of public venues including Liberty High School, Raleigh County Commission and the PSD office. There has been no significant opposition to the PAA. Comments received during the public review period are included in this EA.

f. Section 176(c) Clean Air Act. The PAA has been analyzed for conformity and applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act (CAA). The PAA will not exceed *de minimis* levels or direct emissions of a criteria pollutant or its precursors and is exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the District's continuing program responsibility and generally cannot be practicably controlled by the District. For these reasons a conformity determination is not required for the action.

5. I find the Marsh Fork Section 340 Wastewater Collection System has been planned in accordance with current authorization as described in the EA. The PAA is consistent with national policy, statutes and administrative directives. This determination is based on thorough analysis and evaluation of the PAA and alternative courses of action. In conclusion, I find the proposed Marsh Fork Section 340 Wastewater Collection System will have No Significant Adverse Impact on the quality of the human environment.

_____ _____

Date

Robert D. Peterson
Colonel, Corps of Engineers
District Engineer

Quality Control Assurance – Certification of Independent Technical Review
Section 340 Marsh Fork Wastewater Collection System, Raleigh County, West Virginia

All concerns resulting from independent technical review of the Marsh Fork Section 340 Wastewater Collection System Project have been considered. The report and all associated documents required by the National Environmental Policy Act have been fully reviewed.

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DRAFT ENVIRONMENTAL ASSESSMENT
SECTION 340 MARSH FORK
WASTEWATER COLLECTION SYSTEM
RALEIGH COUNTY, WEST VIRGINIA

RESPONSIBLE AGENCY: U.S. Army Corps of Engineers, Huntington District, West Virginia

ABSTRACT: In accordance with the National Environmental Policy Act, the U.S. Army Corps of Engineers (USACE) Huntington District has prepared this Draft Environmental Assessment (EA) to document evaluation of potential environmental impacts of a consolidated sanitary sewer system for several communities located in the Marsh Fork Watershed located in Raleigh County, West Virginia. The Huntington District's review and analyses of economic, human and natural environments, and engineering designs have determined that the Proposed Action Alternative (PAA) would address the purpose and need for the project and would have minimal adverse impact on the human environment.

The PAA is the most economical and environmentally sound alternative that meets the purpose and need of the project. The work effort for the PAA includes the upgrade of the existing Wastewater Treatment Plant, installation of 16 pump stations, and installation of approximately 118,000 linear feet of sewer line. The Draft EA also presents the results of the evaluation of the PAA's potential impacts, positive and negative. Positive impacts are associated with an improved, consolidated sanitary wastewater collection system for the Marsh Fork Watershed. The PAA will enhance the socioeconomic setting, as well as improve the overall water quality of Marsh Fork and consequently, the Coal River, by reducing fecal coliform contamination of the watershed. Adverse impacts include those associated with construction of the project, but are expected to be minor and temporary.

The proposed project is authorized under Section 340 of the Water Resources Development Act (WRDA) of 1996 (PL 102-580).

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SECTION 340 MARSH FORK WASTEWATER COLLECTION SYSTEM RALEIGH 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 Dunn Engineers in conjunction with the U.S. Army Corps of Engineers (USACE).

Summary

The proposed wastewater collection system Project Area is in the Marsh Fork area of Raleigh County, West Virginia. Information gathered for the preparation of the Draft Environmental Assessment (EA) was derived from federal, state, and local agencies and databases. Areas of concern, including aquatic and terrestrial ecosystems, wetlands, socioeconomic conditions, Hazardous, Toxic, and Radioactive Waste (HTRW), and underground storage tanks (USTs), were evaluated for potential adverse impacts. Impacts associated with the Project Area are anticipated to be minimal due to the majority of installation locations within a previously disturbed area. Minimal negative impacts will be realized throughout the Project Area as a result of noise, short term road closure, and aesthetics.

1.0 PROJECT DESCRIPTION

1.1 Project Background

This Draft EA examines the potential environmental impacts of the Marsh Fork Wastewater Collection System as proposed by the Crab Orchard-MacArthur Public Service District (PSD). The purpose of the Draft 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).

Figure 1 – Location of Raleigh County, West Virginia

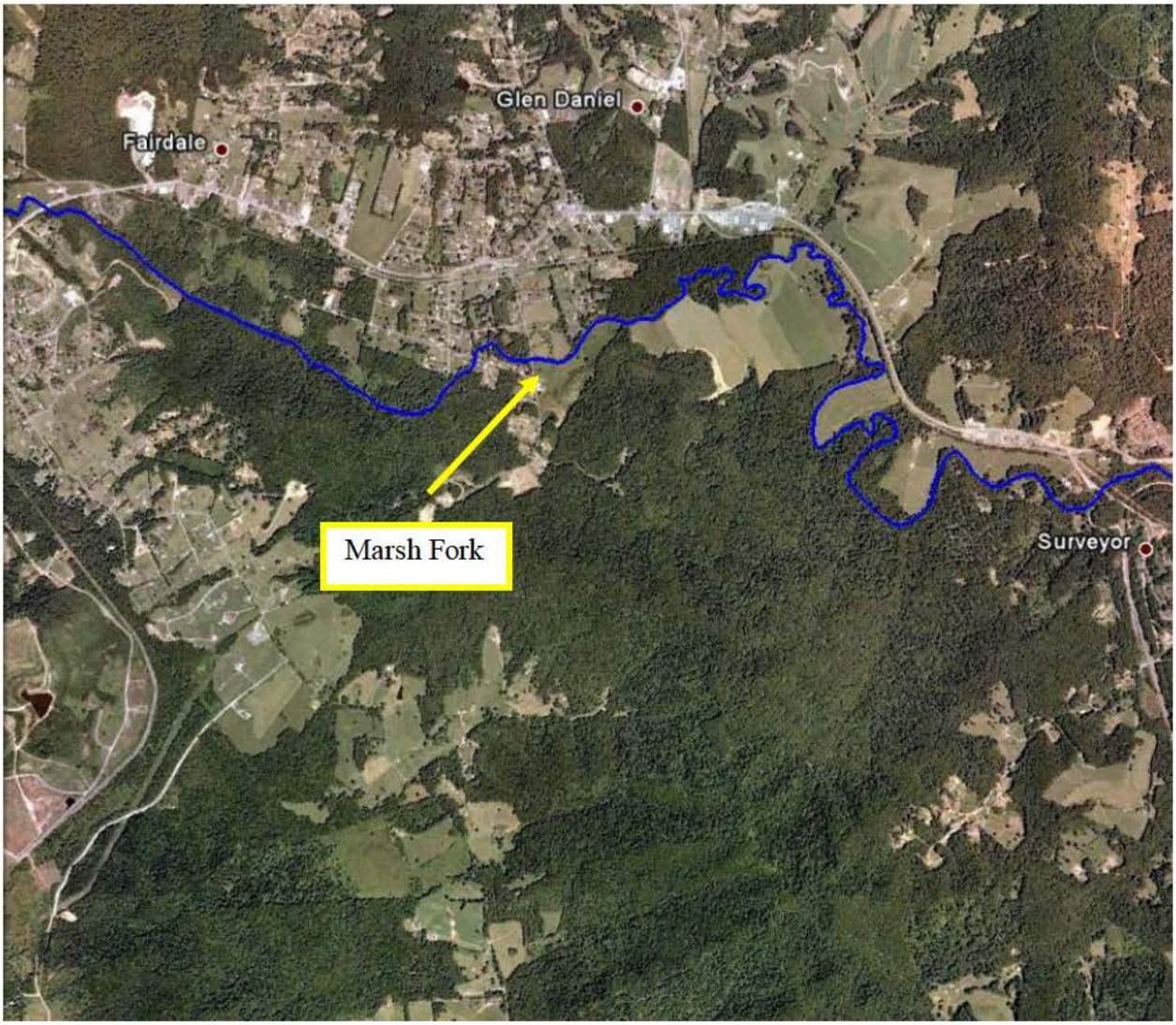

Figure 2 – Locations of Fairdale, Glen Daniel and Surveyor, West Virginia in reference to Marsh Fork

The Project Area is located along State Routes 99 and 3 in Raleigh County, West Virginia (Figure 1). Marsh Fork flows from east to west, with the project located approximately 30 miles from the confluence with the Coal River. The communities most affected by the Marsh Fork tributary are Surveyor, West Virginia and Fairdale, West Virginia (Figure 2). Existing wastewater treatment and discharge consists of package treatment plants, septic tanks and untreated wastewater directly discharging into Marsh Fork. See Appendix A for all maps of the area.

1.2 Purpose, Need and Authorization

The purpose of this project is to provide consolidated sanitary wastewater collection and treatment to residents of the Marsh Fork area, and to significantly reduce or eliminate

contamination of the Marsh Fork Watershed. The need for consolidated sanitary wastewater collection and treatment is primarily a health and safety issue.

The West Virginia Department of Environmental Protection (WVDEP) conducted water quality sampling studies of Marsh Fork and its tributaries in 2001 to determine the level of fecal coliform contamination. The WVDEP sampling showed fecal coliform levels to be 5 to 100 times greater than the allowable standard limit of 200 colonies per milliliter at each sampling station. The presence of such high levels of fecal contamination is a public health hazard to the residents of the project area. The water quality sampling results are incorporated into a map located in Appendix A.

Studies for this project were authorized under Section 340 of the Water Resources Development Act of 1992 (Public Law No. 102-580), which provides authority for the Secretary of the Army to establish a program to provide environmental assistance to non-Federal interests in southern West Virginia. This law provides assistance and construction of water-related environmental infrastructure and resource protection and development projects in southern West Virginia, including projects for wastewater treatment and related facilities; combined sewer overflow, water supply, storage, treatment, and related facilities; mine drainage; environmental restoration; and surface water resource protection and development.

This Draft EA is prepared pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1517), and USACE implementing regulation, ER 200-2-2, 1988.

2.0 PROPOSED ACTIONS AND ALTERNATIVES

2.1 Proposed Action Alternative (PAA)

The PAA would be to upgrade the existing wastewater treatment plant, install approximately 98,000 linear feet of 6-inch through 12-inch gravity sewer lines, install approximately 20,000 linear feet of 1.5-inch through 6-inch force main sewer lines and install 16 pump stations (8 standard pump stations and 8 grinder pump stations) and appurtenances. The PAA will eliminate seven package wastewater treatment plants and two sewage lagoons. The PAA would serve approximately 624 new customers.

2.2 No Action Alternative (NAA)

The NAA would be to deny Federal funding for the project through the Section 340 program.

3.0 ENVIRONMENTAL SETTING AND CONSEQUENCES

3.1 Location

The Project Area is located west of Beckley, West Virginia between the communities of Surveyor and Fairdale along State Routes 99 and 3 in Raleigh County. The overall project area

may be classified as rural, which consists of residential, farm and small commercial properties. Terrain in the project area consists of relatively level flood plain adjacent to Marsh Fork with moderate to steep slopes in the surrounding areas. Communities within the Project Area, from east to west, are Surveyor, Glen Daniel, Trap Hill and Fairdale. A railroad owned by CSX Transportation runs the length of the Project Area, roughly paralleling Marsh Fork.

3.2 Terrestrial Habitat

The Project Area is located in the Appalachian Plateau province in Raleigh County, West Virginia. According to the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) soils classified as Dekalb-Gilpin-Ernest and Atkins-Lickdale-Brinkerton exist within the project area. Dekalb-Gilpin-Ernest soils have been classified as moderately deep, well-drained, moderately coarse, medium textured and mostly sloping to very steep soils on dissected uplands and deep, moderately well drained, mostly sloping or steep soils on foot slopes. Atkins-Lickdale-Brinkerton soils have been classified as deep, poorly drained, medium textured, nearly level soils on floodplains and deep, poorly drained and very poorly drained, nearly level to sloping soils on foot slopes. The majority of the Project Area land is residential in nature with some small farms and commercial businesses.

The majority of the construction of the PAA will occur in previously disturbed road right-of-ways. The existing wastewater treatment plant will be upgraded and will not result in new disturbances. The terrestrial portions of the gravity sewer line and force main sewer line installation will be accomplished by means of an open cut trench. All areas where construction is proposed to take place would be backfilled, stabilized, and reseeded with grasses or other native vegetation as soon as possible upon work completion. Only short-term impacts during construction with no long-term adverse impacts are anticipated to occur from the PAA. Considering the project area size, location, and scope, impacts to vegetation and land use would be minor from the PAA. The NAA would have no impact on vegetation or land use.

Fish and Wildlife Coordination Act (FWCA) requires federal agencies to take action to prevent loss or damage to wildlife resources, and provide for the measures taken to mitigate such impacts. Wildlife and wildlife resources are defined by the FWCA to include: birds, fish, mammals and all other classes of wild animals and all types of aquatic and land vegetation upon which wildlife is dependent. The U.S Fish and Wildlife Service (FWS) was contacted to determine if the PAA would impact wildlife resources. The FWS found that the PAA is in accordance with provisions of the FWCA.

Executive Order 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 Map (FIRM) was reviewed by the Raleigh County Flood Plain Coordinator. A portion of the PAA, including the wastewater treatment plant proposed to be upgraded and several pump stations, located in the town of Glen Daniel, will be constructed in the floodplain of Marsh Fork. The Flood Determination by Topographic Methods was used to determine the 25 and 100 year flood elevations for above ground facilities. In accordance with all state and local building codes, all

specific components, such as electrical controls, will be located above the 100-year floodplain. No section of the wastewater collection system included in the floodplain would increase the elevation of the 100-year flood more than one foot at any point; therefore the Raleigh County Flood Plain Coordinator concluded that no impacts to floodplains are anticipated to occur from neither the PAA nor the NAA.

The Farmland Protection Policy Act (FPPA) requires federal agencies to minimize the conversion of prime and unique farmland to non-agricultural uses. The NRCS was contacted to determine if the PAA would impact prime or unique farmland potentially located within the project area. The NRCS determined that the project will impact a minimal acreage of prime and unique farmland. NRCS determined that the impact does not qualify for protection under the FPPA; therefore, neither the PAA nor NAA would result in substantial impacts to prime or unique farmlands.

3.3 Aquatic Habitat

The Federal Water Pollution Control Amendments of 1972 and the Clean Water Act of 1977 collectively set regulatory standards on the discharge of various pollutants into surface water resources. The disposal of untreated or partially treated wastewater into streams and rivers can contribute to poor water quality which can degrade aquatic resources in a variety of ways. For example, untreated or partially treated wastewater can increase the amount of toxic metals and chemicals present in a water body which can deposit in silts and sediments creating a chronic impact that is not easy to clean up or eliminate. Raw or partially treated domestic wastewater can result in high levels of fecal coliform bacteria which can lead to increased biological oxygen demand (BOD) that can rapidly deplete oxygen levels within the water, resulting in poor aquatic diversity; in extreme cases result in the death of fish and other aquatic life. Currently, Marsh Fork is experiencing exceptionally high levels of fecal coliform contamination throughout the watershed.

The PAA includes approximately 25 stream crossings along Marsh Fork and its tributaries. All stream crossings will be constructed using methods approved by the USACE, West Virginia Department of Natural Resources (WVDNR) and WVDEP. A Public Lands Corporation Stream Activity Permit has been obtained from WVDNR, and construction activity associated with the stream crossings will fall under a Nationwide Permit #12 Utility Line Activities. Positive long-term impacts would occur with the elimination of partially treated and untreated wastewater to the streams. Elimination of partially treated and untreated wastewater impacting ground water from septic systems would provide cumulative water quality improvements to area streams. . Potential localized and short-term impacts to water quality could occur with construction of the PAA. However, with the implementation of Best Management Practices (BMPs), such as erosion control, directional boring techniques and timely reseeding of disturbed area, impacts would be minimal and temporary. The NAA would allow for continued releases of untreated and improperly treated effluent from failing individual septic systems negatively impacting water quality in the Project Area.
Section 404 of the Clean Water Act (CWA) regulates discharges into special aquatic sites including wetlands, and Executive Order 11990 requires federal agencies to take action to

minimize the destruction, loss, or degradation of wetlands, and to preserve, enhance the natural and beneficial values of wetlands in carrying out their respective responsibilities. The National Wetlands Inventory (NWI) Maps were reviewed for the Project Area and site assessments and reconnaissance were conducted by Dunn Engineers, Inc to determine the validity of the NWI Maps. During the site assessments it was noted that several of the NWI listed wetlands were actually sewage lagoons and one wetland area, a Palustrine Forested Broad-Leaved Deciduous Seasonally Flooded (PF01C), along WV Route 3 was incorrectly labeled as a wetland. The site reconnaissance determined that no wetlands will be impacted by the construction of the PAA; therefore no impacts to wetlands are anticipated to occur from the PAA or NAA.

No designated State Wild or Scenic Rivers are present within the Project Area. Since no State Wild or Scenic Rivers are located within the Project Area, no impacts to these resources are anticipated from the PAA or NAA.

3.4 Hazardous, Toxic, and Radioactive Waste (HTRW)

A Phase I HTRW Environmental Site Assessment was conducted in November of 2010 by Dunn Engineers, Inc for Marsh Fork Wastewater Collection System, to identify environmental conditions and to identify the potential presence of HTRW contamination located in the project's construction work limits. This investigation included a Federal and state environmental database search, site reconnaissance, review of historical aerial and topographic mapping and interviews. The investigation was performed in accordance with ASTM E-1527-05 and 1528-06 Standards, USACE HTRW policies and Corps of Engineers Huntington District ISO 9001 requirements. This assessment has identified two potential areas of HTRW concern:

1. Water, gas and electric lines exist in the project area. Caution must be exercised during construction to prevent breakage and contact with these utilities.
2. Shallow groundwater may be encountered that could contain fecal coliform bacteria and various associated pathogens.

A NPDES (National Pollutant Discharge Elimination System) construction storm water permit will be obtained from the WVDEP prior to any construction activity. Contents of the storm water permit include a sediment and erosion control plan, along with associated details regarding the plan.

The NAA would not result in ground disturbing activities, and would not disturb areas of HTRW contamination.

3.5 Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects Federal undertakings will have on districts, sites, buildings, structures, or objects listed in or eligible for inclusion in the National Register of Historic Places. A Phase I Literature Review and Reconnaissance Survey for the Proposed Marsh Fork Sewer Line Extension; Crab Orchard-MacArthur PSD, near the Town of Glen Daniel, Raleigh County, West

Virginia was conducted in November 2010 by Archaeological Consultants of the Midwest, Inc. One site, 46Rg303, was documented during the field investigation as a low-density lithic scatter, but it does not meet the minimum criteria for inclusion on the National Register of Historic Places (NRHP). The literature review indicated that no section of the project area had been previously surveyed, no sites have been documented in the project area, no NRHP properties are located in the project area or in close proximity to the project area, and no cemeteries will be impacted by the proposed project. The PAA is not anticipated to affect religious sites or ceremonial rites of Native Americans, any property listed or eligible for listing on the NRHP, any property listed as a National Historic Landmark, or any archeological resource. The West Virginia State Historic Preservation Officer (SHPO) was contacted regarding this determination and concurred that there are 'No Historic Properties Present' within the Project Area; therefore no impacts to cultural resources are anticipated to occur from the PAA. The SHPO issued a concurrence letter dated December 9, 2010, which can be found in Appendix B.

No impacts to cultural resources or historic properties are anticipated to occur from the NAA.

3.6 Threatened and Endangered Species

The Endangered Species Act of 1973 requires Federal agencies to consider the effects of actions on Federally listed endangered, threatened, and/or candidate species. The FWS and the WVDNR were contacted regarding rare, threatened and endangered species. Both agencies noted that the Federally listed threatened plant species, Virginia spiraea (*Spiraea virginiana*), is known to occur in the Project Area. A botanical survey was conducted by Appalachian Ecology per a request by FWS in June 2009 to determine if the Virginia spiraea would be impacted by construction activity. The Virginia spiraea was found at fourteen locations throughout the Project Area. The initial project plans were revised by the FWS to avoid any area where the Virginia spiraea is known to occur. The revised construction plans show all locations of the Virginia spiraea and will be utilized during construction of the project. The PSD accepted all FWS revisions to the construction plans in order to avoid any impacts to the Virginia spiraea. The FWS and WVDNR determined that construction of the project with the revised plans is not likely to adversely affect any Federally listed endangered or threatened species.

No impacts to threatened or endangered species are anticipated to occur from the NAA.

3.7 Air Quality

The Clean Air Act (CAA) allows the U.S. Environmental Protection Agency (USEPA) to set air quality standards for pollutants considered harmful to public health and welfare. The National Ambient Air Quality Standards (NAAQS) set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. These standards have been established for six criteria pollutants including Carbon monoxide (CO), Lead (Pb), Nitrogen dioxide (NO_2), Ozone (O_3), Particulate matter (PM10 and PM2.5), and Sulfur dioxide (SO_2), and each state is required to develop implementation plans for each pollutant. Areas are generally in “attainment” of the standards for the pollutants listed above or in “nonattainment”. Nonattainment areas are required by the CAA to comply with the NAAQS standards through the

evaluation and development of a maintenance plan. The USEPA makes a conformity determination to assure that the actions within the maintenance plan conform to the respective state's implementation plan for each nonattainment pollutant.

According to WVDEP Office of Air Quality, Raleigh County is classified as in "attainment" for NAAQS pollutants. The operation of the PAA would not result in significant impacts to air quality; however, construction of the PAA would have the potential to cause localized and temporary, nuisance air quality impacts. Potential sources of these impacts include emissions from heavy equipment operation which include diesel fuel fumes and exhaust. The PAA would not require around the clock construction; therefore, equipment downtime would allow for dispersion of the nuisance fumes generated during operation. The proposed action is therefore exempt from making a conformity determination, since estimated emissions from construction equipment would be far below the *de minimis* standards of 100 tons/year, which are the minimum threshold for which a conformity determination must be performed.

The NAA would not generate construction related air emissions; however, the NAA could result in the continuation of localized foul odors originating from partially treated or untreated wastewater discharges into surface water conveyances including roadside ditches, secondary streams, and Marsh Fork.

3.8 Noise

3.8.1 Background

Noise is measured as Day Night average noise levels (DNL) in "A-weighted" decibels that the human ear is most sensitive to (dBA). There is no Federal standard for allowable noise levels; however, the USACE and other Federal agencies have provided guidance for evaluating noise level impacts.

The USACE Safety and Health Requirements Manual (September 2008) provides criteria for permissible noise exposure levels, as well as thresholds for the consideration of hearing protection and/or the implementation of sound reduction controls. Table 1 presents the minimum duration and noise level thresholds outlined in the USACE Safety and Health Requirements Manual.

Table 1
Permissible Non-Department of Defense Noise Exposures

Duration/day (hours)	Noise level (dBA)
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105

Source: USACE Safety and Health Requirements Manual, 2008

The Department of Housing and Urban Development (HUD) Guidelines denote DNLs below 65 dBA as normally acceptable levels of exterior noise in residential areas. Several other agencies, including the Federal Energy Regulatory Commission, use a DNL criterion of 55 dBA as the threshold for defining noise impacts in sparse suburban and rural residential areas (Schomer et al 2001). According to Dr. Paul Schomer in his 2001 Whitepaper, "while there are numerous thresholds for acceptable noise in residential areas, research suggests that 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." Down and Stock (1978) conducted a study to determine the human reaction to progressive sound increases. The results of the study indicate that increases in ambient noise levels below 5 dB go unnoticed while every 5 dB increase above that level becomes increasing noticeable and increases over 20 dB are intolerable (Table 2).

Table 2
Human Reaction to Increases in Sound Pressure Level

Increase in Sound Pressure (dB)	Human Reaction
Under 5	Unnoticed to tolerable
5 – 10	Intrusive
10 – 15	Very noticeable
15 – 20	Objectionable
Over 20	Very objectionable to intolerable

Source: Down and Stocks, 1978

3.8.2 Analysis

Construction noise would be similar to that of farm equipment and other small machinery used throughout the local area. A large crane, rubber tire back-hoe, excavator, dozer, and dump truck

are the equipment to be used during installation of the PAA, that each emits noise levels around 85 dBA at 45 feet. Construction machinery would be operated for approximately eight hours, generating noise during the daytime (8am-5pm) when many residents are at work. Therefore, a reasonable exposure time of two hours would be expected during times which residents may be home during the day. While the construction noise generated would be considered unacceptable according to HUD standards, these limited exposures and time intervals are still within allowable Corps safety levels (USACE 2003). 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. There could be an increase in noise levels during the construction period of the PAA. However, the impact would be localized, temporary and should not approach nuisance levels. Due to daytime construction and the short and limited duration of elevated noise levels associated with the PAA, impacts from noise should be minor and temporary.

No impacts to noise would are anticipated to occur from the NAA.

3.9 Socioeconomic Conditions

Under Executive Order 12898 "Federal Action to Address Environmental Justice in Minority Populations and Low Income Populations," Federal agencies are directed to identify, address, and avoid disproportionately high and adverse human health or environmental effects on minority and low income populations.

According to the U.S. Census Bureau, the 2009 population estimate for Raleigh County, West Virginia was 79,187. The 2009 census indicates that Raleigh County is 89.5% white and has a median family income of $48,443 compared with $47,601 for the state of West Virginia. Individuals residing in Raleigh County below the poverty level were estimated to be 17.6%, which is the same as the WV statewide average.

Water service provided by the Marsh Fork Wastewater Collection System will be readily available to all of the homes and commercial buildings in the Project Area. Presence of public sewers would increase local property values. The most immediate environmental impact would be an increase in the standard of living for residents in the Project Area. Over time, the positive effects of the project would spread into surrounding communities. No homes or buildings would be impacted by the proposed project. The proposed Marsh Fork Wastewater Collection System would equally serve all residents within the waterwater collection system. Further, project cost via user rates would be spread evenly to all customers of the sewer system. Therefore, the project meets the directive of EO 12898 by avoiding any disproportionately high adverse human health or environmental effects on minority or low income populations.

No impacts to minority and low income populations are anticipated to occur from the NAA.

3.10 Aesthetics

Temporary disturbance of the local aesthetics is anticipated during construction of the PAA; however, after the Marsh Fork Wastewater Collection System is complete, the contractor would be required to backfill, re-grade, and re-vegetate excavated sites to original or equivalent conditions. Under the NAA, the untreated or improperly treated wastewater effluent from defective septic systems would continue to cause eutrophication of the local streams that could result in unsightly algal blooms and consequently fish kills negatively affecting aesthetic resources.

3.11 Transportation and Traffic

Existing traffic patterns in the Project Area consist of residential access to homes and businesses and through traffic associated with State Routes 3 and 99. Coordination with the West Virginia Department of Transportation (WVDOT) will be established prior to and during all construction activities to ensure minimal disruption of existing traffic patterns. All traffic control, flagging, and signage will be in accordance with the Manual on Uniform Traffic Control Devices regulated by the Federal Highway Administration. Impacts anticipated to occur from the PAA would be minimal and temporary.

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

3.12 Health and Safety

The PAA has been designed to eliminate improperly treated wastewater, thereby minimizing ground water and stream pollution within the Marsh Fork Watershed. Discharge of untreated or improperly treated wastewater effluent from defective septic systems into a stream depletes the oxygen in the stream and seriously affects or even eliminates aquatic life in the stream. In addition, untreated wastewater promotes the spread of diseases caused by waterborne bacteria and viruses. The minimization or elimination of these discharges of untreated wastewater is necessary to prevent health and safety problems associated with the area streams.

According to the WV Department of Health and Human Resources (WVDHHR) the presence of fecal coliform in drinking water often indicates recent fecal contamination, meaning that there is a greater risk of disease causing pathogens to be present. The WVDEP conducted water quality sampling in Marsh Fork that showed fecal coliform levels to be 5 to 100 times greater than the allowable standard limit of 200 colonies per milliliter at each sampling station. The presence of such high levels of fecal contamination is a public health hazard to the residents of the project area. Under the NAA, current untreated or improperly treated wastewater and failing septic systems would continue in the Marsh Fork Watershed, causing health and safety concerns.

3.13 Cumulative Effects

The USACE must consider the cumulative effects of the proposed project on the environment as stipulated in the National Environmental Policy Act (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 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 1502.22).

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 upgrade of the wastewater collection plant and installation of sanitary sewer collection lines will have temporary and insignificant impacts to the environment. The only resource that would show long term effects would be water quality. The temporal limits for assessment of this impact would initiate in 1972 with the passage of the CWA and end in 2015 or five years after completion of this project.

The geographical extent would be approximately three miles from Surveyor, WV to Fairdale, WV. Past and present impacts on water quality within this area are primarily development driven in the form of construction, roads and effluents from the human community. The same stressors are anticipated to occur in the reasonably foreseeable future. The CWA established regulatory controls over development at both the federal and state levels. These regulatory controls aim to achieve attainment of water quality standards to support different uses of the water. The availability of Federal funds through programs such as the 340 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.

The significance of this action on water quality will be both minimal and positive. Given the current programs that are in place for the foreseeable future, there is expected to be a positive cumulative effect on water quality.

4.0 REQUIRED COORDINATION

4.1 Public Involvement

This Draft EA, along with the Draft Finding of No Significant Impact (FONSI), will be circulated to the local community and local, state and Federal governmental agencies with jurisdiction by law or special expertise for a 30-day review/comment period. A copy will be made available at the local Marsh Fork Branch Library and a notice published in the *Register Herald*, located in Beckley, West Virginia. A mailing list of parties that will receive notice of this Draft EA has been included in Appendix C.

Beginning in 2001, the Crab Orchard-MacArthur PSD has organized numerous public meetings to determine the public viewpoint on the project. Meetings have been held at a variety of public venues including Liberty High School, Raleigh County Commission and the PSD office. The overall public response at the meetings has been positive.

4.2 Required Agency Coordination

Coordination with Federal, state, county, and local agencies has been conducted throughout the preparation of this report. All correspondence letters can be found in Appendix B. The USFWS, WVDNR, County Commission of Raleigh County, NRCS and West Virginia Division of Culture and History (State Historic Preservation Officer) have all been asked to review the project for potential negative resource impacts. This Draft EA will be sent to interested agencies for review and comment.

5.0 CONCLUSION

No significant adverse impacts have been identified with implementation and operation of the proposed Marsh Fork Wastewater Collection System. The majority of the construction would take place on previously disturbed land and the contractor would be required to fill, re-grade, and re-vegetate excavated sites to original or equivalent conditions. Health and safety as well as water quality benefits, would be realized immediately and cumulatively with project implementation.

Short term impacts associated with construction of the Marsh Fork Wastewater Collection System would be localized and minor with the use of BMPs. Some possible temporary negative impacts on the human environment could include noise, short term road closure, and aesthetics. However, these impacts would be temporary and insignificant when compared to the positive permanent impact the project would have on the local community's increased standard of living.

6.0 ACRONYM GLOSSARY

BMP – Best Management Practices

CAA – Clean Air Act

CEQ – Council on Environmental Quality

dB – Decibel

dBA – "A-weighted" decibel

DNL – Day Night average noise Levels

EA – Environmental Assessment

EIS – Environmental Impact Statement

EO – Executive Order

FEMA – Federal Emergency Management Agency

FIRM – Flood Insurance Rate Map

FONSI – Finding Of No Significant Impact

FPPA – Farmland Protection Policy Act

FWCA – Fish and Wildlife Coordination Act

FWS – United States Fish and Wildlife Service

GPD – Gallons per Day

HTRW – Hazardous, Toxic and Radioactive Waste

NAA – No Action Alternative

NAAQS – National Ambient Air Quality Standards

NEPA – National Environmental Policy Act

NPDES - National Pollutant Discharge Elimination System

NHPA – National Historic Preservation Act

NRCS – Natural Resource Conservation Service

NRHP – National Register of Historic Places

NWI – National Wetlands Inventory

PAA – Proposed Action Alternative

PSD – Public Service District

SHPO – State Historic Preservation Office

USACE – United States Army Corps of Engineers

USDA – United States Department of Agriculture

USEPA – United States Environmental Protection Agency

WRDA – Water Resources Development Act

WVDEP – West Virginia Department of Environmental Protection

WVDHHR - WV Department of Health and Human Resources

WVDNR – West Virginia Department of Natural Resources

WVDOT – West Virginia Department of Transportation