



west virginia department of environmental protection

Division of Water and Waste Management
601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0495
Fax: (304) 926-0496

Jim Justice, Governor
Austin Caperton, Cabinet Secretary
dep.wv.gov

FINDING OF NO SIGNIFICANT IMPACT
FNSI-WV-318

DATE: December 4, 2017

To All Interested Parties:

In accordance with the State regulations found in Title 47, Series 31, "State Water Pollution Control Revolving Fund," the West Virginia Department of Environmental Protection (WVDEP) has performed an Environmental Review on the proposed project, as described below, and on the attached Environmental Assessment:

Union Public Service District
Rocky Fork Sanitary Sewer Extension and Wastewater Treatment Plant Upgrade Project
SRF No. C-544573

(Official Project Name and Number)

Earl Burks, General Manager
Union Public Service District
P.O. Box 7350
Cross Lanes, WV 25356

(Project Applicant)

Areas of Rocky Fork Road, Amy Road, Fishers Branch Road, Limestone Road, Koontz Drive,
Melton Drive, Crest Drive, Cross Lanes Drive, and 40th Street.
Cross Lanes and Nitro, Kanawha County, WV

(Project Location, City, County, State)

\$ 8,597,000

(Estimated State Revolving Fund Financial Share)

\$ 8,637,000/\$ 8,597,000

(Estimated Total Project Cost/Estimated Eligible Cost)

Promoting a healthy environment.

SRF No. C-544573

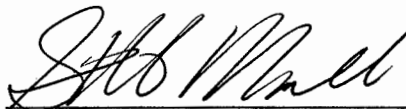
The review process indicated that either significant environmental impacts would not result from the proposed action or significant adverse impacts have been eliminated by making changes in the project. Consequently, a preliminary decision not to prepare an Environmental Impact Statement has been made.

This action is taken on the basis of a careful review of the Environmental Information Document, and other supporting data. These documents are on file in the WVDEP office and are available for public review upon request. Additional copies of the Environmental Assessment will be made available, at cost, upon request.

Comments supporting or disagreeing with this preliminary decision may be submitted for consideration to DEP. After evaluating the comments received, the Agency will make a final decision no sooner than thirty (30) calendar days from the date of this Finding of No Significant Impact. No administrative action will be taken with respect to this proposal during this time frame.

Comments should be submitted to:

Katheryn Emery, P.E.
West Virginia Department of Environmental Protection
Division of Water and Waste Management
State Revolving Fund Program
601 57th Street, SE
Charleston, WV 25304



Scott G. Mandirola, Director
Division of Water and Waste Management

**ENVIRONMENTAL ASSESSMENT
FOR THE
UNION PUBLIC SERVICE DISTRICT
ROCKY FORK SANITARY SEWER EXTENSION AND WASTEWATER
TREATMENT PLANT UPGRADE PROJECT
SRF NO. C-544573**

I. Proposed Project

The Union Public Service District (PSD) owns and operates two wastewater treatment plants (WWTPs) and their associated wastewater collection systems, serving approximately 5,300 residential, commercial, and industrial customers in Kanawha County, West Virginia, as shown on the Project Location Map in Exhibit 1(attached). Union PSD provides sanitary sewer service to customers in and around the areas of Cross Lanes and Nitro, WV. The District provides treatment services at their 40th Street and Rocky Fork WWTPs, which are permitted to treat 1.9 million gallons per day (MGD) and 0.9 MGD, respectively.

The District's Rocky Fork collection system is made up of approximately thirty-two miles of gravity lines ranging from 6 inches to 24 inches in diameter, 3.5 miles of force mains ranging from 4 to 20 inches in diameter, 846 manholes, and ten pump stations. The Rocky Fork WWTP is an extended aeration plant. Treated effluent from the Rocky Fork WWTP is pumped to the combined effluent facility at the 40th Street WWTP, which conveys effluent from both WWTPs to the Kanawha River by way of a 24-inch gravity/pressure effluent line.

The 40th Street collection system contains approximately eighteen miles of gravity lines ranging from 6 to 24 inches in diameter, two miles of force mains ranging from 6 to 20 inches in diameter, 750 manholes, and five pump stations. The 40th Street WWTP is also an extended aeration plant. Treated effluent from the 40th Street WWTP is combined with the effluent from the Rocky Fork WWTP and conveyed to the Kanawha River, as discussed above. The combined effluent gravity/pressure line provides chlorine contact time for proper disinfection. Union PSD transports sludge from the 40th Street WWTP to the Rocky Fork WWTP for processing and disposal.

This project will extend service to 183 total new customers that will be served by the Rocky Fork and 40th Street collection systems. Collected wastewater from 144 new customers located in the Rocky Fork Road, Fishers Branch Road, Amy Road, and Limestone Road areas will be conveyed to the Rocky Fork WWTP by the proposed Rocky Fork Pump Station, which has a designed average daily flow (ADF) of 16,848 gallons per day (GPD), and a new 3-inch force main. Also, a 1,989 GPD ADF duplex grinder station will be installed at Amy Road to convey flow from this area to the Rocky Fork Pump Station. Additionally, the Rocky Fork WWTP's original bar screen, headworks equipment, and clarifier drive chains and equipment will be replaced. A new garage with a lab and office on the second floor will also be constructed at the Rocky Fork WWTP.

This project will also extend service to thirty-nine new customers located along Crest Drive, Melton Avenue, and Cross Lanes Drive in Nitro, WV. Wastewater from these new customers

will be treated at the District's 40th Street WWTP. A 1,638 GPD ADF duplex grinder station will be installed to serve customers along Crest Drive, which will pump collected sewage to the proposed gravity lines on Melton Avenue. The new gravity lines will connect to an existing manhole near the intersection of Cross Lanes Drive and Brookhaven Drive.

Additionally, this project will replace the existing Koontz Drive Pump Station and associated force main, which is a part of the 40th Street collection system. An existing gravity recirculation line conveys excess flow back to the Lower Koontz Pump Station upstream from Koontz Drive Pump Station. The proposed ADF of the pump station is 16,793 GPD. However, the existing recirculation will be removed from service upon completion of the project. Therefore, the proposed pump station will be designed to convey all of the current wet weather flow downstream, resulting in an increase from the existing 100 gallons per minute (GPM) pumps to the proposed 194 GPM pumps. The existing force main will be replaced with a new 6-inch force main beginning at the proposed pump station and ending behind the intersection of Swallow Way and Nesting Way.

The anticipated project costs and proposed funding sources for the project are as follows:

Total Project Cost	\$ 8,637,000.00
Total Construction Cost	\$ 7,152,200.00
SRF Loan Amount (20 years at 2.5% int., 0.5% admin.)	\$ 8,597,000.00
IJDC Soft Cost Grant	\$ 40,000.00
Annual O&M Cost	\$ 1,115,882.00
Average Monthly Rate (3,400 gal/month)	\$ 33.94

II. Purpose and Need

The District's proposed project is made up of sewer service extensions to the Rocky Fork and 40th Street collection systems, upgrades and improvements to the Rocky Fork WWTP, and the replacement of the Koontz Drive Pump Station. The first component seeks to extend sewer service to residents outside or adjacent to their existing service areas. Residents in the Rocky Fork Road, Fishers Branch Road, Limestone Road, and Amy Road areas lie in between Sissonville PSD and Union PSD's existing service areas. These prospective customers will be served by the Rocky Fork WWTP, which is permitted to treat 1.9 MGD, but is only experiencing an ADF of 1.02 MGD. It is anticipated that the additional 144 customers will add 0.027 MGD to the WWTP's ADF. Likewise, residents on Crest Drive, Melton Avenue, and Cross Lanes Drive fall outside Nitro's service area and will be served by the District's 40th Street WWTP. The 40th Street WWTP is permitted to treat up to 0.9 MGD but is only experiencing an ADF of 0.455 MGD. It is anticipated that the additional 39 customers will only add 0.006 MGD to the WWTP's ADF. Due to the available capacities at both WWTPs, a wasteload allocation (WLA) does not appear to be necessary for this project.

While the Kanawha County Health Department (KCHD) has not completed a survey of the individual systems in the project area, a list of 166 permitted septic tanks and two home aeration units (HAU) was provided. This project will extend sewer service into areas draining to Fisher Branch and Rocky Fork streams, both of which were included on the 2014 303(d) List for fecal

coliform. Total Mass Daily Loadings (TMDLs) for fecal coliform were developed for both streams in 2012. In the absence of documentation of failing septic tanks or a completed survey from the KCHD, it can be reasonably assumed that the sewer facilities provided by the District will be operated and maintained more reliably than an average residential system.

The second component of the project includes several upgrades and improvements to the Rocky Fork WWTP. First, the WWTP's original headworks equipment is failing to properly screen and remove grit from influent flows. With its useful life nearing its end, this equipment allows solids and floatables to pass through to the contact-stabilization chambers. Second, the clarifiers' original drive chains are a recurring maintenance issue, with the chain links frequently requiring replacement and the tensioners at full load. Also, the existing office building and garage do not have the required space to house all the District's maintenance equipment or provide an office and lab of sufficient size to operate and adequately maintain the WWTP. Some equipment must be stored outside or at the 40th Street WWTP, with employees commuting back and forth between facilities to accomplish daily tasks. Due to the poor condition of the headworks and clarification equipment and the space and size constraints listed above, the project will install a packaged headworks system, replace the clarification equipment, and build a new three-bay garage with an office and lab on its second floor.

The project's third component includes replacing the existing Koontz Drive Pump Station, which was built in the mid-1970s and later rehabilitated in the 1990s. The pump station is in poor condition and shows signs of corrosion from hydrogen sulfide. The existing force main is exposed at various locations and lies adjacent to an unnamed tributary (UNT) of the Pocatatico River. The force main is in poor condition and has become a recurring maintenance issue, with crews having to repair line breaks in recent years. Additionally, the collection system upstream of the station has expanded since its installation, and the wet well cannot handle the increased flows. The existing wet well also does not have sufficient storage volume, which causes higher run-times. Because the existing pump station cannot pump all the flow experienced during wet weather, the recirculation line conveys excess flow back to the Lower Koontz Pump Station. The project proposes to replace the Koontz Drive Pump Station and the force main, while removing the recirculation line from service. The new pump station will be large enough to efficiently handle the existing flows, and the force main will be replaced.

This project will allow the District to continue to comply with NPDES Permit No. WV0037486, issued on May 16, 2012. The NPDES permit renewal is being processed, with the public comment period ending on October 14, 2017. The proposed project will require a minor modification of the District's existing permit due to the proposed pump stations.

III. Future Environment without the Project

Without this project, the prospective customers in the Nitro and Cross Lanes areas will continue utilizing their individual sewer systems or straight pipes. Over time, these systems may fall into disrepair, may not be properly maintained, or may suffer from inadequate treatment or leach fields. The water quality of Rocky Fork and Fisher Branch streams will diminish, which could lead the KCHD to require these residents to either install new systems or prevent home sales in the future. Additionally, the District's Koontz Drive Pump Station and force main would likely

continue to be a maintenance issue, with the possibility of future line breaks or failures resulting in sewer getting into the UNT of the Pocatamico River that lies adjacent to the force main. Finally, the aging headworks and clarification equipment at Rocky Fork WWTP will continue to ineffectively remove grit and solids from the influent stream and be a recurring maintenance issue for the District. Eventual failure would result in unplanned, emergency replacements, with the District struggling to meet the effluent limits in their NPDES permit while the equipment is out of operation.

IV. Evaluation of Alternatives

The District evaluated alternatives for both proposed extensions included in the project. The proposed replacement of the Koontz Drive Pump Station and the upgrades and improvements to the Rocky Fork WWTP were considered to be imperative for the District to continue to meet their NPDES permit. Therefore, those items were included in all of the evaluated alternatives. The following alternatives were evaluated as part of this project:

1. Melton Avenue and Crest Drive Extension to serve thirty-nine prospective customers with treatment at the District's 40th Street WWTP.
 - a. Construction of a conventional gravity collection system, including a duplex grinder station on Crest Drive to overcome the local elevation difference, which will convey flow to an existing manhole along Cross Lanes Drive.
 - b. Construction of a vacuum collection system with all necessary collection lines, holding tanks, and a central vacuum station to allow for wastewater to be conveyed to the District's existing collection system.
 - c. Construction of a low-pressure collection system consisting of individual grinder stations and force main service line for each customer. The service lines would tie-in to a primary force main, which would transmit all of the collected wastewater to the District's existing collection system.

2. Rocky Fork Area Extension to serve 144 prospective customers.
 - a. Construction of a conventional gravity collection system along Rocky Fork Road, Fishers Branch, Amy Road, and Limestone Road, including a duplex grinder station on Amy Road, which will convey collected sewage to the new 70 GPM Rocky Fork Pump Station. A new 3-inch force main will transmit flow from the new pump station to the District's Rocky Fork WWTP.
 - b. Construction of the same conventional gravity collection system and pump station discussed in 2.a., but with the collected flows transmitted to Sissonville PSD's collection system. This alternative would also include any required upgrades to Sissonville PSD's pump station to handle the additional flow.
 - c. Construction of the same conventional gravity collection system discussed above, with a 75,000 GPD package WWTP constructed in place of the Rocky Fork Pump Station. This alternative would also require a WLA on Fisher Branch and/or Rocky Fork, both of which have TMDLs developed for fecal coliform.

After evaluating the alternatives, the District eliminated Alternatives 1.b. and 1.c. due to their concerns over the reliability and increased costs for the operation and maintenance (O&M) of

vacuum and low-pressure systems. Alternative 2.b. was eliminated because it would have required an agreement between Union and Sissonville PSDs for the transportation and treatment of the collected wastewater in the Rocky Fork area. Alternative 2.c. was eliminated due to concerns with the projected increase in O&M costs, land acquisition required for the proposed package WWTP, and the required WLA. Additionally, the District's recent discharge monitoring reports (DMRs) show that there is sufficient capacity at the 40th Street and Rocky Fork WWTPs to serve these customers. Alternatives 1.a. and 2.a. were also the most cost effective alternatives evaluated, with the lowest projected annual O&M and present worth of life cycle costs.

V. Environmental Consequences

The following factors were evaluated with respect to potential environmental impacts. The beneficial impacts of this project should far exceed any detrimental effects. A brief discussion of each factor is presented:

1. **Air Quality:** Possible short-term adverse impact associated with construction activities.
2. **Noise:** Possible short-term impact associated with construction activities.
3. **Endangered or Threatened Species:** No impact. US Fish and Wildlife clearance dated August 28, 2015. WVDNR clearance dated August 6, 2015.
4. **Fish and Wildlife Resources:** No impact. Construction will not adversely affect fish and wildlife resources. US Fish and Wildlife clearance dated August 28, 2015. WVDNR clearance dated August 6, 2015.
5. **Wetlands/Floodplains:** No impacts. Thrasher has performed a wetland delineation in order to obtain a Nationwide Wide Permit (NWP) No. 12. USACE correspondence, dated September 20, 2017, indicated that 0.089 acres of a potential emergent (PEM) wetland were located within the project area. However, the letter states that the project's construction activities are covered by NWP No. 12. Construction activities will be performed to avoid impacting the delineated wetland in the project area. An email from the Kanawha County Floodplain Manager, dated August 29, 2017, states that Kanawha County does not require PSDs to obtain building permits. All facilities will be watertight and accessible during a 25-year flood event, with all controls free from damage during a 100-year flood event.
6. **Surface/Groundwater Resources:** Possible short-term impact associated with construction activities. Any adverse impact should be mitigated by the contractor's compliance with an approved erosion and sediment control plan. Since West Virginia American Water serves most of the homes in the project area, it is not believed that there is a heavy reliance on groundwater resources.
7. **Excessive Energy Consumption:** No impact. The project will not result in excessive energy consumption. The utilization of variable frequency drives (VFDs) on the pumps at the proposed

Koontz Drive Pump Station and the removal of the recirculation line will improve the energy efficiency in the system. VFDs will also be used at the proposed Rocky Fork Pump Station.

8. Sludge Disposal: No impact. Sludge from the 40th Street WWTP will continue to be transported to the Rocky Fork WWTP for processing and disposal.

9. Loss of Prime Agricultural Land: No impact. There is no prime agricultural land within the project area. USDA-NRCS clearance dated July 8, 2016.

10. Visual Effects/Community Amenities: Possible short-term impacts associated with construction activities. Required WVDOH permits will ensure that proper safety measures are maintained within the work zones and any roadway impacted by construction is restored properly.

11. Socio-economic Considerations: The average monthly user charges for 3,400 gallons will increase from \$26.01 to \$33.94. The WVDEP considers this project to be affordable.

12. Historical/Archaeological Sites: No impact. The WV Division of Culture and History (WVDCH) indicated that there were no architectural resources eligible for inclusion in the National Register of Historic Places within the project area in their correspondence from February 22, 2016. WVDCH accepted the results of a Phase I archaeological study in their August 14, 2017 letter. However, WVDCH remained in concurrence with their earlier recommendation that an archaeologist be on-site to monitor construction while crews are working along Limestone Road, due to the possibility that deposits from site 46KA545 may exist in this area.

13. Wild and Scenic Rivers: No impact. No wild and scenic rivers are located in the project area.

14. Other Environmentally Sensitive Areas: No impact.

VI. Public Participation

A public meeting for the proposed project was conducted on June 2, 2017, at the Tyler Mountain Community Center. The meeting was advertised in the *Charleston Gazette-Mail* newspaper. Evidence of opposition to the project was not apparent in the meeting minutes.

VII. Conclusions

Based upon this Environmental Assessment, the Department of Environmental Protection has concluded that this project will not cause any significant environmental impacts. The Thrasher Group has already performed a wetland delineation and corresponded with the USACE regarding NWP No. 12. The delineated wetland will be avoided in the design and construction phases of this project, except where construction is otherwise covered by NWP No. 12. Utilization of proper erosion and sedimentation controls will prevent significant impacts resulting from this

project. Thrasher will be responsible for addressing any further concerns raised from WV Division of Culture & History regarding their recommendation for an archaeologist on-site during construction in the selected areas.

VIII. References

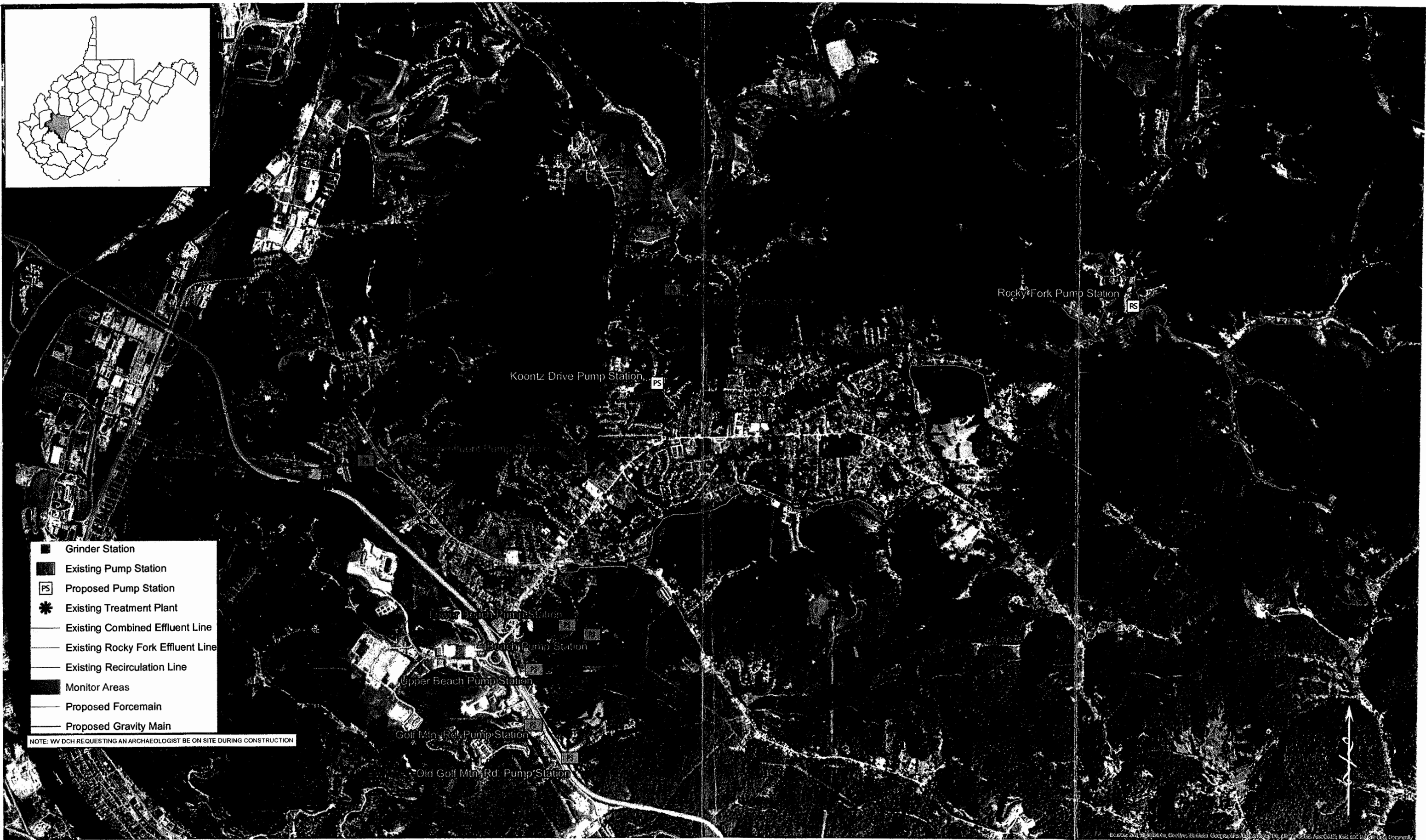
References utilized to complete this Environmental Assessment were:

1. Facilities Plan Checklist
2. Environmental Screening Checklist
3. Union PSD Rocky Fork Sanitary Sewer Extension and Wastewater Treatment Plant Upgrade Project Facilities Plan, prepared by The Thrasher Group, received November 1, 2017
4. SRF Financial Information Worksheets, received November 1, 2017.

Attachments

- Exhibit 1 – Project Location Map
- Exhibit 2 – Proposed Project Area Map

EXHIBIT 2
Proposed Project Area Map



- Grinder Station
- Existing Pump Station
- PS Proposed Pump Station
- * Existing Treatment Plant
- Existing Combined Effluent Line
- Existing Rocky Fork Effluent Line
- Existing Recirculation Line
- Monitor Areas
- Proposed Forcemain
- Proposed Gravity Main

NOTE: WV DCH REQUESTING AN ARCHAEOLOGIST BE ON SITE DURING CONSTRUCTION

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No.	By	Date	Description

Union Public Service District
 Coordinate System: NAD 1983 StatePlane West Virginia South FIPS 4702 Feet
 Datum: North American 1983 Units: Foot US

Scale: 1 inch = 1,400 feet
 Drawn By: ahefner Date: 9/25/2017
 Checked: Date:
 Approved: Date:
 Survey Date:
 Survey By:
 Field Book No.:



Phase No.
Contract No.
Project No.
101-020-1415

Proposed Project Area Map
 Union Public Service District
 Kanawha County - West Virginia

Sheet No.
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