



west virginia department of environmental protection

Division of Water and Waste Management
601 57th Street, SE
Charleston, WV 25304
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Austin Caperton, Cabinet Secretary
dep.wv.gov

MEMORANDUM

To: Wayne Morgan, P. E.
Executive Secretary
Infrastructure and Jobs Development Council

From: Katheryn Emery, P. E. *KE*
Sewer Technical Review Committee

Date: May 23, 2019

Subject: Huttonsville PSD Preliminary Application: 2019S – 1788
Wastewater Systems Improvements

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1. This committee has reviewed the preliminary application and engineering report submitted for the above referenced project in accordance with Chapter 31, Article 15A. It has been determined that the proposed project is:
 - a. Consistent with the intent of the Infrastructure and Jobs Development Act and is the most cost-effective, environmentally sound alternative for solving the wastewater needs in this area.
 - b. Not consistent with the Act and may not be the most cost effective, environmentally sound alternative for solving the wastewater needs in this area.
 - c. Same as (a) above except that certain issues need to be addressed prior to design and construction as the attached comments indicate.

 2. Our recommendation is that:
 - a. The Funding Committee needs to review the proposed sources of funding to determine the best mix of grant and/or loan funds in accordance with applicable guidelines.
 - b. The Funding Committee should recommend that the Council approve the proposed project and its funding plan.

- c. The Funding Committee does not need to review the funding assumptions on this project because of deficiencies in the engineering report. The proposed project funding should be tabled until technical comments have been resolved.
- d. This project should be referred to the Consolidation Committee.

3. Other remarks:

I recommend this application be tabled for an additional 30 days to allow the applicant time to address the technical deficiencies documented in the attached memo.

Attachments: Technical Comments




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MEMORANDUM

TO: Kathy Emery, P.E., Program Manager, DWWM

FROM: Dan Bailey, E.I., CFM, DWWM 

DATE: May 15, 2019

SUBJECT: Huttonsville PSD, Wastewater System Improvements
Preliminary Application: 2019S-1788

RECOMMENDATION

The IJDC application and preliminary engineering report for the Huttonsville Public Service District, Wastewater System Improvements have been reviewed. It is recommended that this project application be tabled to allow the applicant and consultant time to arrange for concurrence of the scheduled plan to remove the Sanitary Sewer Overflow with the WVDEP Permits section.

PROJECT DESCRIPTION

This preliminary application is to provide system improvements to the existing collection and treatment system for the Huttonsville PSD. The project will consist of increasing the hydraulic capacity of the treatment plant to 1.2 MGD by installing additional piping, valving and flow splitter boxes. The effluent chamber will be elevated to prevent flooding and the effluent pumps modified to compensate. Two hundred sixty (260) "Bio-domes" will be installed along with three aeration blowers to reduce ammonia nitrate in the effluent.

The collection system portion of the project will address the SSO to provide primary treatment with a modified tank and chlorine disinfection. Metering and monitoring devices will be installed at the SSO and all the pump stations as well.

The estimated total project cost is \$4,000,000 (Clean Water State Revolving Fund Loan \$1,500,000 (0.5% for 30 years); State Revolving Fund Debt Forgiveness \$1,500,000; WVIJDC Grant \$1,000,000).

Promoting a healthy environment.

Rates for 3400 gallons – Current: \$55.93; Proposed: \$65.18

NEED FOR PROJECT

The Preliminary Engineering Report indicates the area of Huttonsville in Randolph County serves the communities of Valley Bend, Dailey, and East Dailey as well as the town of Mill Creek. Homes in the area were constructed in the mid to late 1930s along with businesses and infrastructure. Cellars and outbuildings have drains that are connected to the sanitary system along with other potential sources of I&I which cause the system to overflow in high rainfall conditions. Originally the communities had primary treatment facilities that were replaced with pump stations to convey the sewage to the facility at Mill Creek. One station at Valley Bend still maintains a Sanitary Sewer Overflow (SSO) that allows overflows during heavy rainfall events. The PSD is under order from the WVDEP to permanently remove that SSO.

The treatment system regularly exceeds its permit requirements for ammonia nitrate levels as well as exceeding 90% of its daily flow and is subject to consent order to comply with the NPDES permit. The plant is aging, and some portions need replacement and repair in order to extend its life and capacity.

PERMITS

The Huttonsville PSD operates its wastewater collection system under NPDES Permit No. WV0080535, with an expiration date of June 30, 2022. A modification to this permit will be required as a result of this project.

As stated in the Preliminary Engineering Report, the PSD is under a Consent Order to eliminate the SSO by February 2019. To date this was not completed. While this project addresses the SSO and attempts to correct it, the proposed primary treatment at that site would be unacceptable and would not comply with the current permit, nor would a modified permit be approved for this portion of the project. The applicant must coordinate with WVDEP Permits in order to agree on a schedule/method for the SSO removal.

Construction activities with a disturbed area of one (1) acre or greater are required to register for the NPDES Stormwater Construction General Permit No. WV0115924, which became effective on February 9, 2019.

DEFICIENCIES/COMMENTS

1. Should the final approved funding plan utilize SRF funds, our office should be contacted for any additional requirements prior to the submittal of a facility plan.
2. Public meeting and input are necessary to ensure all alternatives have been given proper consideration.
3. Alternatives presentation and analysis is not adequate in this report. While few alternatives were mentioned, an actual analysis was not conducted.
4. An I&I study was mentioned, but not pursued as part of this project. This study is an inherent portion of the problems facing the system and should be conducted prior to producing alternatives and selecting a solution.

5. The "bio-dome" portion of the project appears to adequately address the ammonia nitrate issues the current plant faces. This portion of the project would be technically feasible and should be pursued as an alternative for the WWTP portion of the project.
6. The proposed SSO "treatment" solution is not a viable portion of the project as it does not provide secondary treatment as required by EPA and WVDEP regulations. This proposal would not be approved as part of the current permit, as such it cannot be a feasible alternative for addressing the SSO problem within the system. The applicant should arrange with WVDEP Permits section to come to an agreement on both the schedule and method to remove the SSO as required.

Engineering Design Fee

Estimated construction cost = \$3,063,500

Consultant's design fee = \$162,000

Design fee percentage = 5.3%

Design fee per ASCE curve = 8.5%

Total Engineering = \$517,000

Total fee percentage = 16.9%

Total fee per ASCE curve = 19.8%

Public Health Benefits - 15 points

Compliance with Standards - 20 points