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west virginia department of environmental protection

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Division of Water and Waste Management  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
Phone: 304-926-0495 / Fax: 304-926-0463

Harold D. Ward, Cabinet Secretary  
dep.wv.gov

**MEMORANDUM**

**To:** Marie Prezioso, Chair  
Funding Committee  
Infrastructure and Jobs Development Council

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

**Date:** November 10, 2022

**Subject:** Berkeley County Public Service Sewer District  
Preliminary Application: IJDC No. 2022S-2190  
The Woods WWTP 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.

Promoting a healthy environment.

- 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:

The proposed project will upgrade The Woods lagoon wastewater treatment system by constructing a Membrane Bioreactor (MBR) WWTP. The Woods Lagoon has been challenged to meet effluent limits for Total Nitrogen, Ammonia-Nitrogen, and Copper. A Consent Decree between BCPSSD, EPA, and the WVDEP was issued on March 15, 2022 to address these issues.

This application should be tabled until the next Funding committee meeting to give the applicant time to address the DEP comments.

Attachments: Technical Comments

**Engineering Fees:**

Estimated construction cost =	\$ 7,393,000.00
Consultant's design fee =	\$ 734,000.00
Consultant's total fee =	\$ 1,648,000.00
Design fee percentage =	9.93 %
Design fee per ASCE curve =	6.5 %
Total fee percentage =	22.29 %
Total fee per ASCE curve =	11 %

**Preliminary Project Ratings:**

Public Health Benefits:	10
Compliance with Standards:	20

**Preliminary Project Ratings:**

1. Public Health Benefits	10
3. Compliance with Standards	20
5. O & M Capabilities	0
6. Readiness to Proceed	0
8. Cost Effectiveness	0
10. Compliance with PSC Orders	0



STATE OF WEST VIRGINIA  
DEPARTMENT OF HEALTH AND HUMAN RESOURCES  
Bureau for Public Health  
Office of Environmental Health Service

Bill J. Crouch  
Cabinet Secretary

Ayne Amjad, MD, MPH  
Commissioner & State Health Officer

**MEMORANDUM**

**TO:** Jason Billups, P.E.  
DEP/Infrastructure Sewer Technical Review Committee

**FROM:** William S. Herold, Jr., P.E., Assistant Manager  
I/CD/Environmental Engineering Division

**DATE:** November 14, 2022

**SUBJECT:** Berkeley County PSSD  
Preliminary Application **Project No.: 2022S-2190**  
Woods II Sewage Lagoon Upgrade  
Berkeley County

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**RECOMMENDATION:**

We have reviewed this preliminary application and recommend it be forwarded to the Funding Committee for review.

**PROJECT SCOPE:**

This preliminary application is upgrade the existing Woods II Sewage Lagoon. The lagoon will be converted to a Membrane Bioreactor, MBR treatment system with major components to consist of an pre-engineered treatment building, equalization tank with pumps, solids dewatering or thickening equipment; a MBR treatment skid with influent screening equipment, anoxic reactor, aerobic reactor, aeration grid & blowers, membrane tank, WAS storage tank & pump, and instrumentation & control panel.

The cost per customer is **\$12,012**. Total estimated project cost is **\$11,411,250** (Private Loan: **\$8,411,250**; and WDA Economic Enhancement Grant Fund: **\$3,000,000**).

**NEED FOR PROJECT:**

The Preliminary Engineering Report indicates the existing Woods II Lagoon routinely fails to meet the NPDES limits for NH<sub>3</sub>-N, copper and TN.

**CONCERNS:**

None.

**PERMITS:**

A permit **will be** required from the WV Bureau for Public Health.



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### MEMORANDUM

**TO:** Kathy Emery, P.E., Director, DWWM

**FROM:** Cali Carter, E.I., DWWM

**DATE:** November 2, 2022

**SUBJECT:** Berkeley County Public Service Sewer District  
Preliminary Application: IJDC No. 2022S-2190  
The Woods WWTP Improvements

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### RECOMMENDATION

The IJDC Application and Preliminary Engineering Report prepared by Geosyntec Consultants, Inc. for the above referenced project has been reviewed and it is recommended to be tabled in order to allow the project's engineer to address the deficiencies/comments listed below.

### PROJECT DESCRIPTION

The Berkeley County Public Service Sewer District (BCPSS) owns and operates the Woods II Lagoon Wastewater Treatment Plant (WWTP) rated for an average daily flow of 950,000 gallons per day (GPD) in Hedgesville, Berkeley County, WV. The Woods Lagoon serves 950 customers.

This project proposes the construction of a new Membrane Bioreactor (MBR) WWTP to replace the existing Woods II Lagoon WWTP.

The proposed total cost for this project is \$11,411,250 and the BCPSSD intends to pursue a \$3,000,000 WDA Economic Enhancement Grant and a \$8,411,250 Private Loan. The current monthly rate for 3,400 gallons is \$56.28 (1.03% MHI).

## **NEED FOR PROJECT**

According to the PER, the Woods Lagoon has been challenged to meet effluent limits for Total Nitrogen, Ammonia-Nitrogen, and copper. A Consent Decree between BCPSSD, EPA, and the WVDEP was issued on March 15, 2022. Additionally, the WWTP has exceeded flow limitation for 36 months out of the last 60.

## **DEFICIENCIES/COMMENTS**

- The PER will need to be developed into a facilities plan that meets CWSRF requirements if CWSRF is used.
- The Applicant will need to file an application for the WDA Economic Enhancement Grant following this submittal.
- The Design Fee and Total Engineering Fee are both above the ASCE curve. Fee Variance requests will be required.
- Alternative Analysis should include cost estimates and O&M for each alternative examined.
- Existing and proposed O&M costs need to be discussed.
- Evaluate consolidation with other BCPSSD systems. What is the nearest system and its distance?
- Total Customers should be provided as # of residential and non-residential customers. Non-residential customers should also be provided as Equivalent Dwelling Units (EDU's).
- Are current operators certified or will be certified at the time of project completion to operate the proposed WWTP? Will additional staff be required?
- A copy of the consent decree discussed in the PER should be included.
- A copy of the current NPDES Permit should be included.
- Population trends should be examined to determine future population and customer projections.
- The newly constructed plant will increase treatment capacity, has a waste load allocation been obtained? What will be the treatment capacity of the new plant?
- List all required permits for the project.
- The PER should include a discussion of environmental impacts associated with the project. This discussion should also include flood elevation and impacts, flood insurance availability, unavoidable adverse impacts and mitigation measures for these impacts.
- A discussion of the PSSD's public participation plan needs to be included in the PER. At least one public meeting will need to be held to inform the public of the project.
- The Preliminary Application does not indicate a rate increase. Will a rate increase be required?
- An Engineering Summary of the Project needs to be included in the PER. This summary should include descriptions, capacities, etc. of all unit processes to be installed.
- Will any acquisitions or ROW's be required for this project?
- It should be noted that project cost estimates, existing debt information, proposed project financing, and user rates were found in the Preliminary Application and were not discussed in the PER.

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