



DEPARTMENT OF PLANNING & ZONING
COMPREHENSIVE PLANNING | LAND PRESERVATION | FOREST CONSERVATION | GIS

July 16, 2021

Case #: WS-21-001

Application for Text Amendment
Washington County Water and Sewerage Plan

Staff Report and Analysis

Introduction

In accordance with Maryland law, each County is required to prepare, adopt and maintain a Water and Sewerage Plan to demonstrate that safe and adequate facilities can and will be provided to support growth and development. Washington County, in cooperation with all other utility providers last adopted a Water and Sewerage Plan in 2011 that forecasted short and long term water and wastewater facility needs over a 10 year period. On occasion, amendments to the document may be necessary to update information regarding new water/sewerage facilities, changes in the type, size or capacity of existing facilities, changes in the priority classification for service, or changes to the boundaries of existing service areas. In this specific case the applicant, the Town of Hancock, is requesting to amend sections of the Plan to reflect plans being made by the Town to expand their wastewater treatment plant.

Background

Currently, the Town owns and operates a 12.8-acre aerated lagoon system for their wastewater treatment. The lagoon system treats the wastewater and discharges effluent into the Tonoloway Creek east of the Town. The maximum design capacity of the current system can treat up to 380,000 gallons per day (gpd). Currently, the average daily flow through the treatment facility is about 300,000 gpd. The Town is seeking to replace the existing facility to meet State and Federal water quality standards and to expand the capacity of the treatment facility to 530,000 gpd.

Analysis

As the State continues to implement stricter standards of water quality, the current lagoon system operated by the Town has failed to meet both nitrogen and ammonia limits in the treated effluent. These failures have resulted in multiple violations, fines, and an existing consent order from the Maryland Department of the Environment. Multiple studies have been completed by the Town to determine the appropriate alternative for long term wastewater management. The most recent engineering report completed by the Town consultant RK&K has concluded that the recommended alternative is to replace the existing lagoon system with an Enhanced Nutrient Removal (ENR)

treatment facility. This upgrade has already been anticipated in the current Water and Sewer Plan and included in a list of sewerage development priorities (Table 11).

The purpose of this amendment request is to include a proposed expansion of the Town wastewater treatment facility. The Town is seeking to expand its treatment capacity from 380,000 gpd to 530,000 gpd. The primary reason for this expansion is to accommodate development within newly annexed areas north of the existing Town limits. Recently the Town annexed several hundred acres of land along Warfordsburg Road. Included in the annexations was the Lanco-Pennland Quality Milk Producers (Lanco) cheese processing facility. According to Preliminary Engineering Report for the wastewater treatment facility, Lanco currently discharges wastewater from their manufacturing facility via surface water discharge and land application. With the expansion of the Town wastewater treatment facility, the Town intends to extend sewer service to Lanco. Accepting and treating the Lanco effluent as part of the proposed new ENR facility will improve overall stream quality.


In accordance with Appendix B of the County Water and Sewerage Plan, amendments to the Plan require certain points of data to be included in the application that justify the proposed changes. A copy of the required data along with the Town of Hancock responses are attached to this report as Applicant Exhibit A.

Staff Recommendation

Staff recommends approval of this amendment by the Town based on the following findings:

1. The requested amendment is consistent with the goals and policies of the adopted Comprehensive Plan for Town of Hancock.
2. The proposal to upgrade and expand the wastewater treatment facility is based upon a documented public health issue and does not seek to exploit the opportunity for development outside of the anticipated growth scenarios.
3. The requested amendment is consistent with the goals and policies of the adopted Water and Sewerage Plan for the County.

Respectfully Submitted,


Jill Baker, AICP
Director

WS-21-001 Town of Hancock, Maryland

Response to Appendix B Questions

(Applicant Exhibit A)

1. Proposed type, capacity, size and location of facilities (new or proposed for use) and map.

Below are relevant sections describing the project from the Preliminary Engineering Report.

6.0 PROPOSED PROJECT (RECOMMENDED ALTERNATIVE)

The preceding sections described the various proposed alternatives to improve the Town of Hancock's wastewater treatment plant and collection system. The work has been divided into three separate projects. Each project is independent of the others, but when completed will provide the Town with an upgraded system. In the following paragraphs, each recommended project will be summarized.

6.1 PHASE 1 – WWTP AND NAPA PS

Phase 1 includes the Wastewater Treatment Plant upgrades and the NAPA Pump Station Alternative P 1A.

6.1.1 NAPA PUMP STATION REHABILITATION

This Alternative involves rehabilitating the NAPA Pump Station and utilizing it as the influent pump station to the WWTP. The recommended project does not include replacement of the effluent force main at this time. The rehabilitation at the NAPA Pump Station would consist of:

- *Repairing wet well with concrete and lining*
- *Replacing pumps, rails, piping, and all appurtenances*
- *Installing a safety grate on the wet well*
- *Addressing odor issues with chemical dosing*
- *Addressing aesthetic issues with the installation of decorative fencing and trees*
- *Updating the valve vault*
- *Lining the equalization vault*
- *Replacing the hatch and top of the wet well*
- *Modifying electrical and controls*

6.1.2 WASTEWATER TREATMENT PLANT

The selected Alternative for the ENR upgrade and expansion of the Hancock WWTP is the SBR system with sludge dewatering sized for a design capacity of 0.53 mgd and located at a new site uphill of the existing lagoons. This Alternative generally includes:

- *A new screening and grit removal facility housed indoors*
- *Offline flow equalization using the existing lagoon and a new pumping station*
- *New two-basin SBR and post equalization*
- *New continuous backwash denitrification filters*
- *New cascade post aeration*
- *New UV disinfection system*
- *New non-potable water system*
- *Flow metering*
- *New chemical storage and feed systems to include methanol, caustic, alum and sodium hypochlorite*
- *New sludge digestion including dual tanks*
- *New dewatering facilities*
- *New drain pumping station*
- *New plant influent force mains and gravity lines for plant effluent and flow equalization influent*
- *Site improvements*
- *Electrical service upgrade and a new generator*
- *New Control Building*

6.1.3 PHASE 2

Phase 2 includes Pump Station Rehabilitation for the remaining three pump stations, the I&I Study, Collection System Rehabilitation, and the Public Works Facility Building.

6.1.4 PUMP STATION REHABILITATION

The designated alternative for the pump station rehabilitation is Alternative P 2, Alternative P 3, and Alternative P 4. This choice involves rehabilitating the Subway Pump Station, Center Street Pump Station, and Pennsylvania Avenue Pump Station.

The rehabilitation at the Subway Pump Station would consist of:

- *Lining wet well*
- *Replacing pumps, rails, piping, and all appurtenances*
- *Installing a safety grate on the wet well*
- *Addressing odor issues with chemical dosing*
- *Addressing aesthetic issues with the installation of decorative fencing*

The rehabilitation at the Center Street Pump Station would consist of:

- *Lining wet well*
- *Replacing pumps, rails, piping, and all appurtenances*
- *Installing a safety grate on the wet well*
- *Addressing odor issues with chemical dosing*

- *Addressing aesthetic issues with the installation of decorative fencing*

The rehabilitation at the Pennsylvania Avenue Pump Station would consist of:

- *Lining wet well*
- *Replacing pumps, rails, piping, and all appurtenances*
- *Installing a safety grate on the wet well*
- *Addressing odor issues with chemical dosing*
- *Painting the force main and gravity lines in the vault*

6.1.5 INFLOW AND INFILTRATION

The designated alternative for the inflow and infiltration study is Alternative I&I 1. This option involves a comprehensive inflow and infiltration study of the Town's gravity sewer collection system. The inflow and infiltration study would consist of:

- *Flow monitoring multiple points throughout the system to determine areas with higher inflow and infiltration*
- *Detailed manhole inspections of all manholes in the system*
- *Smoke testing of all sewer lines in the system to find breaks in sewer lines, breaks in laterals, connected downspouts, and other sources of I&I*
- *CCTV of areas with suspected I&I*

6.1.6 COLLECTION SYSTEM REHABILITATION

The designated alternative for the collection system rehabilitation is Alternative R 1. This option involves the rehabilitation of the sewer collection system according to recommendations based on the findings of the inflow and infiltration study. This estimate is based on the rehabilitation of 50% of the sewer lines and 50% of the manholes within the system, which is an estimate based on RK&K's experience with previous inflow and infiltration studies and the known condition of the existing system. The recommendations consist of:

- *Lining of manholes and gravity sewer lines*
- *Replacement of manholes and gravity sewer lines*
- *Repair of manhole bench, invert, and wall*
- *Lining of manhole chimneys*
- *Replacement of manhole frame and cover*

6.1.7 PUBLIC WORKS FACILITY BUILDING

The designated alternative for the public works facility building is Alternative PWFB 1. This option involves construction of a new Public Works Facility Building at 259 Pennsylvania Avenue consisting of

modifications to the existing garage and construction of an addition. including:

- *Office space*
- *Garage bays and storage*
- *Aggregate storage*
- *Sand and salt storage*

6.1.8 PHASE 3 – SEWER EXTENSION TO BUSINESS PARK

Phase 3 involves construction of the sewer extension to the business park outlined in Alternative E 1. This option involves:

- *Construction of a pump station*
- *Installation of a force main along the road from the proposed pump station to the existing system*

2. Name and location of development or service area (boundary, drainage area, acreage and map).

Existing service area + annexed areas. See map attached.

3. Number of people (existing in drainage or service area, density of development).

773 EDUs

4. Number of people to be served in drainage or service area by planned staged development.

773 existing EDUs + the Town intends to annex the property North of the current Town limits. This property may include Lanco, a 64-acre industrial park, and a 64-acre housing development. In addition, A truck stop, 100-bed hotel, 60-bed senior care facility, and car wash are anticipated to be built near Main Street in the near future.

5. Design, average and peak flows.

WWTP Design Criteria

	Town (MGD)	Lanco (MGD)	Total Combined (MGD)
Current ADF	0.300	~0.1	NA
Current Sanitary	0.181	NA	NA
Current I&I	0.119	NA	NA
Existing Design ADF	0.380	NA	NA
Expansion Design ADF	0.380	0.150	0.530
Expansion Peak Daily	1.070	0.150	1.340
Expansion Peak Hourly	1.430	0.150	1.698

6. Degree and type of treatment given.

SBR ENR Upgrade to existing lagoon treatment

7. Sludge disposal plans.

Sludge dewatering via screw press and sludge hauled away.

8. Transmission facilities (size of pipe).

Existing 8" gravity lines, 10" force main, 4" force mains.

9. Effluent disposal plans (spray irrigation, discharge to stream, etc.).

Discharge to Tonoloway Creek.

10. Classification of stream receiving discharge.

Category 3 water

11. Operation and maintenance costs.

\$2,400,000 for the 0.530 mgd SBR over 20 years

12. Proposed means of financing improvement.

Funding will come through a combination of Maryland Department of the Environment state grants and federal funding through the US Department of Agriculture Rural Development.

13. Description of ground and surface water resources within the service or development area, including the quantity and quality of these resources.

The Town of Hancock provides its own water service via wells. The proposed project will be outside the limits of the Town's WTP.

Moreover, there are no sole source aquifers in or near the Town of Hancock identified by the Environmental Protection Agency that might be impacted by temporary construction activities.

14. Sources of pollution or contamination of groundwater resources within the development or service area.

N/A

15. Source and amount of water to be withdrawn.

N/A

16. Relationship to Comprehensive Plan.

The Town of Hancock Comprehensive Plan includes an infrastructure element and a growth element. These infrastructure projects are in keeping with these elements of the Town Comprehensive Plan.

17. Relationship to Water and Sewer Plan.

Incorporating annexed areas into the Town's water and sewer.

18. Reason for change.

Incorporating annexed areas into the Town's water and sewer.

19. Alternatives and the rationale used in determining the means of providing water supply.

N/A

20. Rationale for selecting a particular design and alternatives for any proposed treatment facility, pumping station or interceptor.

Most economical solution for meeting treatment requirements.

