STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243-1102

MEETING MINUTES

PRELIMINARY PROJECT DISCUSSION

PROJECT NAME: Bays Mountain Sewer WWTP

COUNTY: Sullivan

DATE REQUESTED: 9/18/18

DATE HELD: 9/21/18

MEETING LOCATION: Conference call

MEETING TIME: 10:00 a.m.

PERMIT: TN0054941

WPN: 18.0786

PARTICIPANTS/REPRESENTING: (checklist ITEM I.A)

Will Witcher, PE, WWitcher@ldaengineering.com
LDA Engineering

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City of Kingsport

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Wade Murphy, EI, Wade.Murphy@tn.gov
John Newberry, John.Newberry@tn.gov
TDEC Nashville CO

Bryan Carter, Bryan.Carter@tn.gov
Robert Tipton, Robert.Tipton@tn.gov
TDEC EFO-JC

PROJECT BACKGROUND AND PURPOSE: (checklist ITEM B)

The existing on-site wastewater treatment facility for Bays Mountain Park, originally constructed in 1981, consists of a 1,500 gallon septic tank for solids removal, sand and gravel filtration bed for treatment of septic tank effluent, and HTH chlorination tablets for effluent disinfection. The Park facilities and number of visitors have increased over several years, which increased the sanitary sewer loading on the existing system beyond its original design capacity. The existing plant has reached its life expectancy and has had trouble meeting permit limits.

The purpose of this Preliminary Project Discussion is to identify alternatives to the undersized and inadequate treatment options for the park wastewater.

SUMMARY OF PRELIMINARY ENGINEERING REPORT CONSIDERATIONS (checklist ITEMS C, D, E**):**

In accordance with the alternatives analysis in a PER over two years old, LDA Engineering designed a low pressure force main connecting to the City of Kingsport sanitary sewer. The project was bid and came in around $1.2 million. This amount was above the amount the City allocated and additional options were pursued.

The WWTP currently discharges to Dolan Branch, classified as Exceptional Tennessee Waters. Due to anticipated permitting requirements, LDA Engineering determined the best alternative was land application.

The revised PER should include the life cycle cost analysis for both connecting to the Kingsport system and a new WWTP with land application. While not discussed at the meeting, a third option might be to refurbish the wastewater treatment system and split the effluent between discharge to the creek and a disposal field to reduce the total mass loadings to Dolan Branch.

Influent characteristics will need to be addressed in the PER as well as justification for design flow.

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SUMMARY OF RECEIVING WATERS OR SITE SUITABILITY: (checklist ITEM F)

John Newberry volunteered to send a list of soil consultants the City could use to determine if suitable soils were available.

If suitable soils cannot be found and the City chooses to pursue the option of discharging to Dolan Branch, an anti-degradation justification will be required for additional loading above de minimis. Any degradation above de minimis will require a socio-economic justification. A follow up meeting with TDEC is recommended if this option is chosen.

SUMMARY OF ANTICIPATED PERMITTING NEEDS: (checklist ITEM G, I, J, K):

If the City decides to proceed with a new WWTP with land application, they will need to apply for an SOP and once the project is complete, the NPDES permit will be closed. It is understood that the City may want to discuss their solution with the Division again before pursuing a permit modification.

DWR ORGANIZER: AWJ **MINUTES PREPARED BY:** AWJ **DATE MINUTES PREPARED:** 9/24/18

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Courtesy Information
Four-Step Planning Process

1. PRELIMINARY PROJECT DISCUSSION: Minutes provided above. Refer to Wastewater Permit Number WPN18.0786 and Permit number TN0054941 in all correspondence.

2. SITE APPROVAL PHASE: Submit State Operation Permit application if land application is contemplated (see instruction at https://www.tn.gov/environment/permit-permits/water-permits1/water-quality-state-operation-permit.html) including:
    a. A preliminary engineering report (alternatives evaluation in terms of life cycle costs and permit implications) must be submitted before negotiations for the permit can be completed.

    b. Ensure treatment schematic on application matches engineering report and preliminary plans to be submitted in preliminary design phase (WW Design Criteria, Chapter 1, Appendices 1-D-2 and -3)

    c. Ensure scaled map is provided showing soils and drip/irrigation areas superimposed and property boundaries including property to be ceded to utility.

    d. Agreement stipulating transfer of property or permanent easements for utility access for maintenance and operation of collection system, treatment system and disposal areas.

    e. Decentralized Wastewater System Fee (Rule 0400-40-11 - located at the bottom of page 8 and top of page 9).

3. PRELIMINARY DESIGN PHASE: After agreement on draft permit, submit preliminary design submittal consisting of:

    a. Engineering Report (or Basis of Design or Design Memorandum) in accordance with WW Design Criteria Chapter 1 Appendix 1-D-2; Review of the engineering report primarily focuses on due diligence taken in the characterization of the influent and the selection of an appropriate technology to meet the agreed upon discharge requirements given the influent characterization. Life cycle cost estimates should be upgraded; previously considered alternatives should be omitted or will be disregarded at this point. Treatment processes outside the Design Criteria parameters must be justified with preferably actual data on similar installations. Performance should be examined over the realistic range of influent values.

    b. Preliminary Plans in accordance with WW Design Criteria Chapter 1 Appendix 1-D-3. Review of the preliminary plans focuses on the process in accordance with the checklists. Preliminary plans may be attachments or figures in the engineering report.

    c. Engineering Report review fee

4. FINAL DESIGN PHASE: Upon completion successful completion of the public comment period of the permit and approval of the engineering report and the preliminary plans, the final design phase is authorized. The final CD's should consist of:

    a. Final Plans and Specifications in accordance with WW Design Criteria Chapter 1 Appendix 1-D-4. Note that the primary review emphasis is on those aspects not previously evaluated during the PRELIMINARY DESIGN PHASE: Maintainability, sustainability, operability and flexibility (including the visibility of process parameters to support operator optimization), expandability, and safety.

    b. Note procurement documentation in the project manual/specifications is generally reviewed for functionality and does not duplicate review procurement requirements, policies, or ordinances of funding agencies or owning public entities.

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c. Proof of ownership/permanent easements must be provided prior to transmission of wastewater or acceptance of wastewater at a new facility for treatment and disposal.

d. Note Rules authorize and require the Division to specify the format and content of the submittals. Current versions of the Rules and Design Criteria specify paper submittals. The Division is moving towards accepting and prefers digital submissions. Plans should be able to be legible if printed in 11x17 paper format; documents should be word/phrase searchable. PDF versions will be digitally stamped approved on cover sheets and indices and when reproduced will fulfill the requirements for on-site construction monitoring. A paper copy (red-lined plans) of the contract documents should also be on site to record field changes to ensure an accurate record drawing set can be provided.

e. Plan review fee

5. CONSTRUCTION PHASE

a. Notify location environmental field office (EFO) upon:

i. Start of construction

ii. Start up, final inspection, commissioning

b. Submit record or “as-built” drawings”