



Town of Pittsboro, North Carolina

Engineering Department

Memorandum

To: Mayor Bill Terry and the Town Board of Commissioners

From: Fred Royal, PE, Town Engineer 

Subject: NPDES Discharge Major Permit Modification Application

Date: January 13, 2014

Background and Discussion

On June 2, 2011, the State of North Carolina Department of Environment and Natural Resources (NCDENR) issued to the Town of Pittsboro a major modification and renewal for a National Pollutant Discharge Elimination System (NPDES) discharge permit of 3.22 million gallons per day (mgd) of wastewater discharge. The discharge permit is divided into Outfall 001 (Robeson Creek), 0.75 mgd and Outfall 002 (Haw River at Hwy 64), 2.47 mgd. See attached letter to the then Town Manager, Bill Terry. This permit expires on April 30, 2016.

The permit was a result of a great deal of work and expense performed by the Town and included an approved Environmental Impact Statement (EIS), public hearings, cost analysis, etc. The EIS developed five (5) alternatives for wastewater discharge increases. The recommended alternative in the EIS is Alternative 3 (the two outfall approach described above). Alternative 3 was selected for being the..... "most feasible (environmentally, technically and economically) for the Town of Pittsboro".

Alternative 3 recommends a new 3.22 mgd wastewater treatment plant and the decommissioning of the existing 0.75 mgd plant. The estimated cost for this capital project, including a new lift station and force main to the Haw River is in excess of \$50 million. Annual operations and maintenance are not included in this estimate.

Since the time of this permit approval, the Town began to look at alternatives for several reasons. The primary reason was cost. The secondary reason was need. The alternative that began to develop was to find a more affordable approach and one that is based on the actual need for sewer capacity in the nearer term. This approach includes a capacity increase to the existing WWTP and it fully utilizes the 3.22 mgd permit; to transfer up to 0.5 mgd of the 2.47 mgd discharge from the Haw River over to Robeson Creek. This approach would not jeopardize the

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3.22 mgd permit in any way, other than to modify it to better meet the needs and cost implications of the Town. On January 22, 2013, Mr. Gruesbeck and Mayor Voller met with NCDENR staff to discuss possible alternatives to the EIS Alternative 3. On February 20, 2013, NCDENR submitted to Mayor Voller a letter (attached) providing alternatives that were feasible for consideration.

On August 29, 2013, DENR staff visited Town staff to further discuss this issue. The meeting outcome is summarized in the attached e-mail, dated September 4, 2013, from Tom Belnick, Supervisor, NPDES Complex Permitting Unit.

Recommendation

Staff believes that transferring 0.499 mgd of permitted wastewater discharge from the Haw River to Robeson Creek would be prudent to meet near term wastewater needs of the Town in an affordable and more cost-effective manner. The result would be for Outfall 001 to increase to 1.249 mgd and Outfall 002 to decrease to 1.98 mgd. This major modification application and permit, if approved, would preserve the 3.22 mgd allowable discharge for the Town of Pittsboro.

The cost estimates for this alternative would be developed with the assistance of a consulting engineering firm and based on various value-engineering alternatives at the WWTP. This would likely include reviewing various technologies and process improvements at the plant using the existing property (footprint). The time-line required would be based on the actual capacity demands since the total phosphorous (TP) and total nitrogen reduction limits for the Jordan Lake Rules have been extended to 2019. The existing TP requirements will continue to be met.

We recommend that the Town Board of Commissioners approve this approach and submit this application for a major permit modification to NCDENR .

Please let us know if you have questions or concerns.

Cc: Randy Heard, WWTP Superintendent
Mandy Cartrette, Finance Director
Adam Pickett, Water Plant Superintendent
John Poteat, Utilities Director