



Town of Pittsboro, North Carolina

Engineering and Public Utilities Department

Memorandum

To: Mayor Bill Terry and the Town Board of Commissioners

From: Fred Royal, PE, Town Engineer
Randy Heard, WWTP Superintendent

Subject: Wastewater Treatment Plant Major Permit Modification and Preliminary Engineering Report (PER) project award

Date: August 25, 2014

Background and Discussion

As a follow-up from our staff report dated November 25, 2013, there have been and continue to be improved and maintained systems at the existing WWTP. The wastewater plant is currently permitted to collect, treat, and discharge up to 750,000 gallons per day of wastewater. The treatment capability of the plant in terms of hydraulic loading, organic loading, clarification, filtration, and disinfection remains to be comfortably at or above 750,000 gallons per day. However, the plant has experienced significant increases in influent flows over the past eight months, therefore we are delighted to have obtained from NC DENR a permit modification to increase the capacity to 1.249 mgd. The cause of this increase is a combination of additional customer services and inflow, or stormwater making its way into the sanitary system.

We are currently receiving (on average) approximately 532,000 gallons per day and discharging 420,000 gallons per day on average. We have approximately 130,000 gallons per day balance allocation to sell, based on our tributary and paper flow calculations. We are at 55% plant capacity for planning our up-grades, as DENR requires engineering and planning to be performed at 80% and authorization to construct at 90%.

Major Permit Modification approved

On August 1, 2014, DENR issued the Town of Pittsboro a permit modification for our NPDES Permit NC0020354 by increasing the discharge into Robeson Creek from 750,000 gallons per day to 1,249,000 gallons per day on average. Please see the attached letter. This permit provides the Town with the incentive to begin the planning and engineering work to expand the WWTP.

WWTP Preliminary Engineering Report (PER)

In order to move forward with the WWTP planning and engineering, staff has been able to work with a local representative of the American Water Works Association (AWWA) and has subsequently been awarded a no-cost PER for the WWTP expansion. This was a competitive process so we are proud to have received it. Please see the attached Scope of Work. This work will be carried out by senior civil engineering students at NC State University, with mentoring from their professors as well as AWWA representatives and local engineering firms with expertise in this field of study. This is PER will provide the Town with a reliable and professionally peer reviewed PER at the time when one is required. It also relieves the Town from a normally necessary cost burden. This item has been identified in the approved FY 2014-2015 Budget, Capital Improvements Project, with an estimated cost of \$80,000.

Infiltration and Inflow and the NCDENR Clean Water Loan approval

Staff continues working to reduce inflow into our sanitary sewer collection system from stormwater runoff and groundwater. The Clean Water Loan will be utilized as soon as all legal steps and documents are finalized with DENR. This loan will be used for flow monitoring, smoke testing, camera work where prudent and physical repairs to all identified elements of the sewer collection system. To-date, the Town has performed limited smoke testing with no-cost assistance from the NC Rural Water Association. The results of this work have identified repair needs to private sewer service clean-outs and a few selected illegal connections. John Poteat and Public Utilities are working to make repairs and prevent future flows from these identified sources.

Recommendations

As reported in the November memo described above, an affordable, phased capacity up-grade is recommended to meet our near term demand projections. However, the demand has increased to the point where we believe we must act now and aggressively begin the expansion process; and on a parallel track, work very hard to identify and reduce inflows into the sewer collection system. We now have a modified permit to up-grade to 1.249 MGD in our existing footprint. With this permit modification, the Town now has the flexibility to make affordable, phased capacity up-grades within the existing plant footprint. Future expansion alternatives to a full capacity of 3.22 MGD will be discussed in the PER.

1. Recommend to approve the project with AWWA and NC State University for the Preliminary Engineering Report (PER) at no cost to the Town. Staff will be involved to manage the work and review the prepared documents. A draft and final document will be presented to the Town.

Upon final approval of the NCDENR Clean Water Loan, staff will provide the Board of Commissioner's with the contract documents for review and approval.



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla, III
Secretary

August 1, 2014

Mr. Bryan Gruesbeck, Town Manager
Town of Pittsboro
PO Box 759
Pittsboro, North Carolina 27312

Subject: Final NPDES Permit Modification
Permit NC0020354
Pittsboro WWTP
Chatham County
Class IV Facility

Dear Mr. Gruesbeck:

Division of Water Resources (Division) personnel have reviewed and approved your application for modification of the subject permit. Accordingly, we are forwarding the attached NPDES permit. This permit is issued pursuant to the requirements of North Carolina General Statute 143-215.1 and the Memorandum of Agreement between North Carolina and the U.S. Environmental Protection Agency dated October 15, 2007 (or as subsequently amended).

The final permit modification contains the following changes from your previous permit:

- The modified permit includes an additional effluent page for Outfall 001 for the expanded flow of 1.249 MGD to Robeson Creek. The flow for outfall 002 was reduced to 1.97 MGD to maintain the total permitted flow at 3.22 MGD.
- The Supplement to Permit cover Sheet was modified to eliminate the detailed description of the proposed 3.22 MGD treatment system since the plant has not been designed yet.
- Condition A. (4) was modified to make a correction in the effective date to meet the Total Nitrogen load delivered to Jordan Lake. The effective date is 1/1/2019.
- A special condition was added to the draft permit to address the Environmental Protection Agency's (EPA's) pending requirement for you to provide electronically-submitted Discharge Monitoring Reports (eDMRs). The Division intends to fully implement the eDMR program as soon as practicable. See Condition A.(10.) in permit. For information on eDMR, registering for eDMR and obtaining an eDMR user account, please visit the following web page: <http://portal.ncdenr.org/web/wq/admin/bog/ipu/edmr>. For information on EPA's proposed NPDES Electronic Reporting Rule, please visit the following web site: <http://www2.epa.gov/compliance/proposed-mpdes-electronic-reporting-rule>.

During the draft permit review period the Division received comments from the US Fish and Wildlife Service and the North Carolina Wildlife Resources Commission. The comments generally supported the modification to increase the flow at Robeson Creek but expressed concerns with impacts to protected species known to be present in the Haw River due to ammonia concentrations in the proposed Haw River

Mr. Bryan Gruesbeck
August 1, 2014

2

discharge. Both agencies reiterated the recommendations provided during the Environmental Impact Statement review which included adopting measures to mitigate secondary and cumulative impacts to the Haw River.

If any parts, measurement frequencies or sampling requirements contained in this permit are unacceptable to you, you have the right to an adjudicatory hearing upon written request within thirty (30) days following receipt of this letter. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings (6714 Mail Service Center, Raleigh, North Carolina 27699-6714). Unless such demand is made, this decision shall be final and binding.

Please note that this permit is not transferable except after notice to the Division. The Division may require modification or revocation and reissuance of the permit. This permit does not affect the legal requirements to obtain other permits which may be required by the Division of Water Resources or permits required by the Division of Land Resources, the Coastal Area Management Act or any other federal or local governmental permits that may be required.

If you have any questions concerning this permit, please contact Teresa Rodriguez at telephone number (919) 807-6387 or at email Teresa.rodriquez@ncdenr.gov.

Sincerely,



for Thomas A. Reeder
Director, Division of Water Resources

cc: NPDES Files
Central Files
EPA Region4 (e-copy)
Raleigh Regional Office / Surface Water Protection Section
Aquatic Toxicology Unit (e-copy)
ESS / Ecosystems Unit (e-copy)