COPY

South Granville Water and Sewer Authority

January 17, 2013

Mr. George Vital
Area Director
USDA-Rural Development
253 S. Beckford Drive, Suite A
Henderson, NC 27536

RE: COMMENTS OFFERED BY THE SOUTH GRANVILLE WATER AND SEWER AUTHORITY ON THE NEPA ENVIRONMENTAL ASSESSMENT FOR WASTEWATER COLLECTION AND TREATMENT SYSTEM IMPROVEMENTS, City of Creedmoor, Granville County, North Carolina, December 2012, prepared for the US Department of Agriculture, Rural Development

The South Granville Water and Sewer Authority (SGWASA) disagrees with the conclusions illustrated and discussed in the "NEPA ENVIRONMENTAL ASSESSMENT FOR WASTEWATER COLLECTION AND TREATMENT SYSTEM IMPROVEMENTS, City of Creedmoor, Granville County, North Carolina, December 2012, prepared for the US Department of Agriculture, Rural Development" (hereafter referred to as EA). The core of the reasons given in the EA for not discharging the City's full anticipated flow to the SGWASA Collection and Treatment System are 1) SGWASA does not have the capacity and 2) SGWASA cannot "guarantee" the City the volume needed for its future growth. It is the intent of the following comments to disprove these assertions as well as some of the comments made within the EA.

SGWASA'S TREATMENT CAPACITY

In several places within the EA it is stated that SGWASA will not have the capacity to treat the City of Creedmoor's (hereafter referred to as the City) anticipated 20 year growth. This is detailed in Section 2.5 starting on page 9. This conclusion is based on old accepted "Limits of Technology" which use 3.0 mg/l as the Total Nitrogen (TN) effluent concentration and 0.2 mg/l effluent Concentration for Total Phosphorus (TP). This is

415 Central Avenue, Suite B, Butner 27509
(919) 575-3367 FAX (919) 575-4547
www.sgwasa.org

illustrated in the calculation presented in Section 2.5. These limits are no longer the lower sustainable limits for conventional treatment system. The new limits that are sustainable are 2.0 mg/l TN and 0.1 mg/l TP.

To illustrate this, the following information is provided from active operating wastewater treatment plants within the State of North Carolina:

City of Cary South Wastewater Plant 2010 annual TN Average – 1.95 mg/l*
City of Cary South Wastewater Plant 2011 annual TN Average – 1.96 mg/l*
Johnston County Wastewater Plant 2010 annual TN Average - 1.55 mg/l*
Johnston County Wastewater Plant 2011 annual TN Average - 1.83 mg/l*

**Information provided from the Neuse river Compliance Association annual reports*

None of these plant use membrane technology. They have conventional BNR processes as is proposed for the SGWASA Wastewater Treatment Plant Improvements.

Total Phosphorus removal to a 0.10 mg/l level requires chemical addition. No plant has pushed for their annual average to be at or below 0.10 due to the cost of adding the chemicals when the regulatory limit is still at 2.0 mg/l. With this being stated several plants including SGWASA have already maintained levels at or below 0.10 mg/l.

Without any improvements SGWASA has maintained a TP annual average of 0.61 so far in 2012 with several samples being 0.10 or less. The planned improvements will allow this number to be lowered to below 0.10 and maintained at that level. The City of Cary's South Plant has a TN limit of 2.0 mg/l per quarter. They do not routinely use chemical TP removal in the plant, they use chemical feeds for odor control within their collection system which assists in TP removal and they have an annual average of 0.2 for 2011. The Plant experienced 18 out of 52 samples at or below 0.10 in 2011. This is without routinely adding any chemicals within the plant to remove phosphorus. So 0.10 mg/l TN effluent concentrations are achievable and maintainable.

{Data gathered from SGWASA monthly discharge monitoring reports as submitted to NC-DWQ and directly from the City of Cary.}

With this new definition of the limits of technology and looking at the requirements of the Falls Lake Nutrient strategy. The following max flow limits are calculated:

Since Stage II is the most limiting, Stage II flow calculations:

TN annual discharge poundage of 18,838/(2.0 mg/l X 8.34 X 365 days) = 3.094 million gallons per day (MGD)
TP annual discharge poundage of 1,050/(0.10 X 8.34 X 365) = 3.45 million gallons per day (MGD)

At the end of 2012, SGWASA's annual average daily flow was 1.963 million gallons per day. The City's 2012 metered discharge was approximately 291,413 gallons per day. This leaves approximately 858,587 gallons per day of the proposed 1.15 million gallons per day. If you add this 858,587 gpd to SGWASA's 1.963 MGD this equals approximately 2.82 MGD. Still within the 3.094 MGD.

It would seem that SGWASA would give most of its capacity to one local government, but based on SGWASA's flow data these limits of technology will not be reached for many years. (SEE ATTACHMENT A) Using the last 15 years of flow data (which includes the decade of 2000 to 2010 during which the City shows an increase in growth) SGWASA actually experienced a -1.8 % growth in flow (average of -0.124% per year)! This is due to several things such as Inflow and infiltration investigations as well as industrial closures. When the last 7 years are reviewed (since 2005, SGWASA's incorporation) the system has experienced a +0.20 % per year growth. It should be noted that since 1986 the City has discharged its wastewater to the now SGWASA system, so these numbers reflect the growth experienced by the City.

If this +0.20 percent growth is projected out, SGWASA will not receive 3.094 MGD until well past 2060. (SEE ATTACHMENT A).

With this information being provided, it was stated in the EA on page 14 that a request was made of SGWASA for additional allocation and the response was that there "may be limited capacity available, but SGWASA has not offered wastewater discharge allocation to the City of Creedmoor that can meet the City's 1.15 MGD projected Wastewater treatment and disposal needs." This statement seems inaccurate since SGWASA actually agreed to negotiate additional allocations as requested by the City. (SEE ATTACHEMENT B) The City's request was made in a range with a proposed high range and a proposed low range. The chart provided in the EA was prepared by SGWASA as a talking document that used the average of the High and Low ranges provided by the City. When discussing a legal agreement, it is simpler to have one end point rather than two. As a point of record, SGWASA has never received any documentation that this approach to the allocation discussion was unacceptable to the City.

SGWASA'S GUARENTEE OF CAPACITY TO THE CITY

In the same paragraph mentioned above on page 14, it is mentioned that the chart as part of Appendix 3 is footnoted and the foot note "... all offers made by SGWASA to the City of Creedmoor for additional wastewater flow would not be guaranteed and would be reduced if SGWASA is placed under a moratorium as a result of not meeting the effluent limits."

The Foot note fully reads:

"THE FALLS LAKE NUTRIENT STRATEGY CALLS FOR A PLAN TO MEET STAGE II LIMITS IN 2027. STAGE II LIMITS ARE MANDITORY BY 2036. IF ANY RULING OF A STATE OR FEDERAL AGENCY (EXISTING OR FUTURE), REQUIRES THAT THE SGWASA WATER OR WASTEWATER SYSTEM BE PLACED UNDER A MORITORIUM, THEN ALL FACILITIES (INCLUDING THE CITY OF CREEDMOOR) SHALL ADHERE TO THE MORITORIUM AT THE SPECIFIED DATE AND TIME. (SGWASA WILL NOT CHARGE THE COC FOR ANY UN-USED ALLOCATION (RTS FEES) AND THE COC CANNOT CONTINUE TO ALLOCATED THAT UN-USED ALLOCATION UNTIL SUCH TIME AS THE MORITORIUM IS LIFTED.)"

This footnote is a statement of Federal Law as well as notifying the City that SGWASA would honor that such a reopening of the limits would not be the City's fault and therefore SGWASA would not require them to pay for allocation they would not be allowed to use.

In the SGWASA NPDES Permit there is Standard Language. This language will be placed into the City's proposed Tar River NPDES permit if issued. It states:

"13. Permit Modification, Revocation and reissuance, or termination

The issuance of this permit does not prohibit the permit issuing authority from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by the laws, rules, and regulations contained in Title 40 Code of federal regulations, Parts 122 and 123; Title 15A of the North Carolina Administrative code, Subchapter 02H .0100; and North Carolina general Statute 143.215.1 et.al."

In essence, the US EPA is pushing for nutrient reform in all regions of the United States. NCDWQ cannot guarantee the City the limits will not be lowered over the next 20 years in the Tar Basin. The permit cycle is 5 years and this language is placed into the permits to allow them to be reopened within that 5 year window if need be. SGWASA has given the City the best guarantee allowed by Federal and State law.

COST COMPARISION

SGWASA has entered into a design to have the state of the art conventional treatment online by January 2016. The City performed some draft cost analysis and shared some of it with SGWASA. This cost analysis included the rates provided to the City by SGWASA which included the proposed costs of the SGWASA WWTP Improvements. These original cost projections were going to be used by the City to determine the best option for their future. When the option of discharging to SGWASA was reviewed by the SGWASA staff, a disconnect between the billable volume and the volume sent to SGWASA was noticed and the City was notified. When the volume (cost) to SGWASA was adjusted to allow for the City to send and pay SGWASA for treating 10% Inflow and infiltration the following comparisons were noted:

Year	Adjusted Discharge to SGWASA ($/1,000 gals.)	City's cost for Tar River Plant ($/1,000 gals.)
2014	$15.02	$22.63
2015	$14.70	$21.62
2016	$14.90	$21.05
2017	$14.50	$20.50
2018	$21.01	$19.97
2019	$20.32	$19.41
2020	$19.75	$18.93
2021	$19.14	$18.61
2022	$18.65	$18.32
2023	$18.22	$18.04

It should be noted that the costs to SGWASA was the only thing changed in the City's Draft options calculations and this change was done by SGWASA Staff, not the City of Creedmoor. Final corrections

COPY

and final calculations should be requested from the City of Creedmoor. This comparison includes SGWASA's Readiness To Serve (RTS) fee.

If these numbers are not completely erroneous, then the cost to discharge to SGWASA as an outside customer (which is the status that the City has chosen at this time) seems comparable to the cost of building a new treatment plant on the Tar River. It should be noted that SGWASA has approached the City to purchase its system and treat the City residences as direct SGWASA customers; thereby reducing the second overhead of the City managing its own system. This should bring an even more cost effective service to the citizens of the City.

CONCLUSION

In conclusion, based on SGWASA's system-wide growth patterns, SGWASA can serve all the citizens of southern Granville County for at least the next 20 years with the proposed Wastewater Treatment Plant Improvements that have already been approved for funding and construction. This project is projected to cost $29.1 million dollars. This cost is included in the Cost Comparison Section above. To place another burden of $34.3 million dollars (City's EA Alternative Number 1, Table 2.3, page 23) on the City's citizens seems unnecessary at this time when a cost effective and viable alternative is available to all of the citizens in Southern Granville County.

If I can offer any additional information or clarify any statements made here within, please contact me at (919) 575-3367 Ext. 312 or via email at lmize@sgwasa.org .

Respectfully Submitted,

Lindsay L. Mize, P.E.

C: City of Creedmoor
David Emmerling, Executive Director, Pamlico-Tar River Foundation
Derb S, Carter, Jr., Director NC Offices, Southern Environmental Law Center
Alexander Floyd
Chuck Wakild, Director, NC Division of Water Quality
Brian Alligood, Granville County Manager
Kenny Waldroup, Assistant Utility Director, City of Raleigh