



City of Greensboro North Carolina

FISCAL RESEARCH DIVISION
NC GENERAL ASSEMBLY RM 619
LEGISLATIVE OFFICE BUILDING
RALEIGH, NC 27603-5925

Joint Legislative Committee on Local Government
Committee Chair and Committee Assistant
N.C. General Assembly
16 W Jones Street
Raleigh, NC 27601

Oct. 25/11

Fiscal Research Division
N.C. General Assembly
Suite 619
Legislative Office Building
300 N Salisbury Street
Raleigh, NC 27603-5925

RE: Debt Issuance Reporting
FY 2011 DWSRF Loan Application
City of Greensboro Lake Brandt Raw Water Pumping Station Improvements

Dear Committee Chair, Committee Assistant, and Fiscal Research Division:

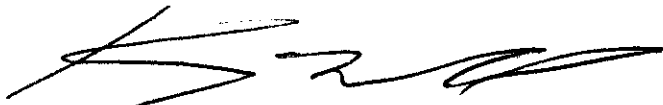
Pursuant to the recent enactment of Session Law 2011-291 (House Bill 595), this serves as notification that the City of Greensboro is seeking funding from the Drinking Water State Revolving Fund for The City of Greensboro Lake Brandt Raw Water Pumping Station in excess of \$1,000,000.

The City of Greensboro Lake Brandt Raw Water Pumping Station serves approximately half of the City's water supply. The pump station was originally built in 1958 and has the capacity to pump over 30 MGD to the City's Mitchell Water Treatment Plant (WTP). Currently, the Lake Brandt Raw Water Pump Station pumps approximately 24 MGD to the Mitchell WTP, which is the plant's maximum capacity. The City has the ability to purchase water from the Cities of Reidsville (2-5 MGD), Winston-Salem (2 MGD), High Point, (2 MGD), and Burlington (2-5 MGD). The City also receives water from Piedmont Triad Regional Water Authority's dam and water treatment recently completed project that provides approximately 6.3 MGD of finished water to the City's system. With these additional raw water supplies to the City's system, the Lake Brandt Raw Water Pump Station can decrease in capacity. The primary goal of this project is to save energy and "right-size" the Lake Brandt Raw Water Pump Station by decreasing the capacity from 30 to 24MGD and replacing the constant speed pumps with variable frequency drives. Additionally, station operators report that pumps 1 and 4 at the Lake Brandt Raw Water Pump Station exhibit cavitation issues, while pumps 2 and 3 function properly (there are 4 pumps total).

Thus, this "Green Projects Reserve" project will "right size" the Lake Brandt Raw Water Pumping Station according to the appropriate hydraulic capacities. Preliminary energy consumption is expected to decrease by 10-15%. It is expected that the existing 4x1,000 hp constant speed pumps will be replaced with 3x600 hp variable frequency drive pumps. Outcomes will eliminate unnecessary pumping and optimize the energy efficiency of the station. Completion of the project will resolve the cavitation issues of pumps 1 and 4 and allow the station to operate more efficiently. Additionally, windows and doors will be replaced with new energy efficient, energy rated windows and doors to decrease heating and cooling costs.

If additional information is needed, contact this office at 336-373-2055 or Kenney.McDowell@greensboro-nc.gov.

Best regards,

A handwritten signature in black ink, appearing to read 'Kenney McDowell', with a stylized, flowing script.

Kenney McDowell, P.E.
Interim Director
City of Greensboro Water Resources Department

cc: Vance Holloman, Secretary
Local Government Commission
N.C. Dept. of State Treasurer
325 N. Salisbury Street
Raleigh, NC 27603-1385

Mr. Doug Newhouse
Loans and Grants Unit
Public Water Supply Section
NCDENR – Div. of Water Resources
(via Email or Fax)



City of Greensboro
North Carolina

Joint Legislative Committee on Local Government
Committee Chair and Committee Assistant
N.C. General Assembly
16 W Jones Street
Raleigh, NC 27601

Fiscal Research Division
N.C. General Assembly
Suite 619
Legislative Office Building
300 N Salisbury Street
Raleigh, NC 27603-5925

RE: Debt Issuance Reporting
FY 2010 DWSRF Loan Application
City of Greensboro Mitchell Water Treatment Plant Clearwell Replacement

Dear Committee Chair, Committee Assistant, and Fiscal Research Division:

Pursuant to the recent enactment of Session Law 2011-291 (House Bill 595), this serves as notification that the City of Greensboro is seeking funding from the Drinking Water State Revolving Fund for City of Greensboro Mitchell Water Treatment Plant Clearwell Replacement in excess of \$1,000,000.

At the City of Greensboro's Mitchell Water Treatment Plant (24 MGD capacity), approximately 25% or 6 MGD of flow is routed through an existing brick and mortar 3 MG clearwell. This clearwell was constructed in the 1940s, and based on geotechnical investigations at the clearwell perimeter, it is estimated that approximately 5-10% of daily flow (300,000 to 600,000 gal) is lost due to exfiltration. Hydraulically, the high service pumps at the WTP pump station cannot pump water below 2/3 full, so only 1 MG of the 3 MG clearwell is in use. This project will replace the existing leaking 3 MG clearwell with a new prestressed concrete 1 MG clearwell. One existing pump that operates inefficiently and cavitates will be replaced, and a new pump added in an unused pump slot. Both two new high services pumps will be energy-efficient VFD pumps.

This project will also decrease the City's reliance on two diesel-fueled pumps that have been a source of noise pollution in the surrounding neighborhoods (the City regularly provides updates to the Civil League in this neighborhood to discuss noise pollution). This "Green Projects Reserve" project will also eliminate 300,000 to 600,000 gpd of water losses due to exfiltration. Due to the 1 MG clearwell's smaller footprint, the project will also decrease the amount of

FISCAL RESEARCH DIVISION
NC GENERAL ASSEMBLY RM 619
LEGISLATIVE OFFICE BUILDING
RALEIGH, NC 27603-5925

Oct 25/11

impervious area at the WTP site by 0.43 acres. Noise pollution at the plant due to the diesel fueled pumps will be mitigated.

If additional information is needed, contact this office at 336-373-2055 or Kenney.McDowell@greensboro-nc.gov.

Best regards,

A handwritten signature in black ink, appearing to read 'Kenney McDowell', with a stylized, flowing script.

Kenney McDowell, P.E.
Interim Director
City of Greensboro Water Resources Department

cc: Vance Holloman, Secretary
Local Government Commission
N.C. Dept. of State Treasurer
325 N. Salisbury Street
Raleigh, NC 27603-1385

Mr. Doug Newhouse
Loans and Grants Unit
Public Water Supply Section
NCDENR – Div. of Water Resources
(via Email or Fax)