

REQUEST FOR BOARD ACTION

HENDERSON COUNTY CANE CREEK WATER AND SEWER DISTRICT BOARD

MEETING DATE: December 1, 2008

SUBJECT: Engineer Proposal from William G. Lapsley & Associates
FY09 Drainage Basin Study
Cane Creek Water and Sewer District

ATTACHMENTS: Yes
1. Engineer Proposal from William G. Lapsley & Associates

SUMMARY OF REQUEST:

As directed by the Board during the October 15, 2008 meeting, staff has negotiated the attached, proposal with William G. Lapsley & Associates to perform the FY09 Drainage Basin Study. Also during the October 15, 2008 meeting, William G. Lapsley & Associates was selected as the most qualified firm to perform the study. Also note, McGill & Associates will perform the financial analysis portion of the study under a sub-agreement with William G. Lapsley & Associates.

The study will perform the following tasks:

1. Compile and review background information
2. Identify existing and future wastewater service areas
3. Map locations of future sewer lines and estimate future flows
4. Evaluate wastewater treatment alternatives
5. Project cost estimates and financial assessment
6. Preparation of final study & presentations

The proposal to perform the above scope of services is \$50,000. The schedule of the study will allow staff to incorporate proposed improvements and findings into the FY10 budget process. A more detailed schedule is located within the attached scope of services. The funds for the study are allocated in the FY09 Cane Creek Water and Sewer District Enterprise Fund budget.

BOARD ACTION REQUESTED:

The Board is requested to authorize the County Engineer to execute the proposed agreement for \$50,000 with William G. Lapsley to conduct the FY09 Drainage Basin Study.

Suggested Motion:

I move that the Board authorize the County Engineer to execute the proposed agreement for \$50,000 with William G. Lapsley & Associates to conduct the FY09 Drainage Basin Study.



William G. Lapsley & Associates, P.A.
Consulting Civil Engineers and Land Planners

November 6, 2008

William G. Lapsley, P.E.
William R. Buie, P.E.
G. Thomas Jones III, P.E.
Donald L. Hunley, P.E.

Mr. Marcus Jones, P.E.
Director of Engineering
Henderson County
100 North King Street
Hendersonville, NC 28792

RE: Cane Creek Water and Sewer District
FY 09 Drainage Basin Study
WGLA# 08157

Dear Mr. Jones:

William G. Lapsley & Associates is excited to have been selected by the Board of Commissioners as the most qualified firm for the Drainage Basin Study. We look forward to working with you on this project.

Per your letter, we are providing a detailed description of the scope of work, estimate of engineering fees and proposed project schedule. For the detailed description of work, we are referring back to the project approach from our engineering proposal. Our major projects tasks and estimated fees are as follows:

Task	Estimated Fee
Compile and review background information	\$5,000.00
Identify existing and future wastewater service areas	\$8,500.00
Map locations of future sewer lines and estimate future flows	\$17,500.00
Evaluate wastewater treatment alternatives	\$6,000.00
Project cost estimates and financial assessment	\$9,000.00
Preparation of final study & presentations	\$4,000.00
Total Estimated Fees	\$50,000.00

I have included a copy of the project approach from our proposal that provides more detail on the scope of work.

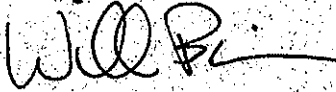
Assuming we are issued a notice to proceed on the project by November 20th, we propose a schedule that would provide preliminary recommendations to the County by early to mid-March with a formal presentation of the study in April. Based on our meeting we have assumed that there will be three meetings held with the Cane Creek Advisory Board. Attached is a revised schedule.

Mr. Marcus Jones
November 6, 2008
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If the project scope, estimated fees and project schedule are acceptable to the County, we will prepare a contract for your review and approval. The contract will incorporate the fee, scope and schedule for the study. The contract would also specify the process for progress billings for work completed on the study.

If you have any questions about this information or would like to discuss the fees or proposed schedule, don't hesitate to contact our office.

Sincerely,
WILLIAM G. LAPSLEY & ASSOCIATES, P.A.

A handwritten signature in black ink, appearing to read "Will Buie", with a horizontal line extending to the right.

William R. Buie, P.E.

**Cane Creek Water & Sewer District
FY 09 Drainage Basin Study**

Proposed Schedule:

Task	Estimated Completion
Compile & Review Background Information	Early December 2008
Identify Existing & Future Wastewater Service Areas	Early December 2008
Initial Meeting with Advisory Committee	Mid-December 2008
Map Locations of Future Sanitary Sewer Lines	Early February 2009
Estimate Wastewater Flows	Late January 2009
Evaluate Wastewater Treatment Alternatives	Early February 2009
Update Meeting with Advisory Committee	Mid-February 2009
Project cost Estimates & Financial Assessment	Late February
Presentation of Initial Finding to Staff & Advisory Committee	Mid-March 2009
Preparation of Final Report	Mid-April 2009
Formal Presentation of Study	Late April 2009

This schedule is based on a notice to proceed being issued by November 20, 2008. Actual dates for completion of tasks and meetings will be coordinated with County Staff.

Cane Creek Water and Sewer District Drainage Study

Project Approach:

For the Cane Creek Water and Sewer District (CCWSD) drainage area study, William G. Lapsley & Associates (WGLA) and McGill Associates will team together to provide the most qualified and experienced staff members for this project. Both firms will bring vast experience and local knowledge in preparation of this study for Henderson County.

Task 1 - Compile and Review Background Information:

During the information gathering stage of this project, the project team would like to meet jointly with the CCWSD and County Staff to discuss the scope of this study in detail. This would be an opportunity for County Staff to share thoughts and ideas about detailed information to be analyzed for the study. This would also be an opportunity for the team members to discuss current public and private projects in the planning stages that should be considered during the study period. The team will also review previous studies in the CCWSD service area and in southern Buncombe County. We believe it will be important to review the existing Hendon & Associates Sewer Masterplan from 1990 to review their methodology and recommendation as well as the direction the County has taken since the completion of that study.

A discussion of the financial impacts of the system improvements or expansion and the customer base will be important part of the study. A review of the current financial information for the District will be important. In 2007, Martin-McGill prepared a financial assessment for the District. The financial data necessary to update the 2007 report would be collected from the District and the County Finance Director. This information would include, as a minimum, the most recent audit, the current budget, changes in the CIP, new agreements, new debt services and any new information pertaining to changes in the operating and maintenance program.

At the conclusion of the meeting, the team members would have a clear understanding of the scope of the study.

Task 2 - Identify Existing and Future Wastewater Service Areas:

With assistance from the CCWSD and the County, WGLA will confirm the boundaries of the existing Cane Creek Water and Sewer District including the Mills River service area. WGLA will also identify future wastewater service areas in Henderson County in the French Broad River Basin. This will be accomplished utilizing the County's GIS information as a base map. Additionally, topographic data from the State of North Carolina will be utilized to help identify drainage basins and potential future service areas.

In addition to identifying the existing and future service areas, WGLA will also gather data about existing and proposed wastewater systems in the study area. This would include existing systems such as Park Ridge Hospital, Etowah Sewer Company, Mountain Valley, Cummings Cove and Riverwind as well as proposed systems such as Seven Falls. WGLA would research the NCDENR Division of Water Quality files to identify all existing sewer systems in the service area and review any projects under consideration or approved by Henderson County that will have a proposed sewer collection and/or treatment system.

Finally, it will be very important to identify the existing and proposed CCWSD sewer lines. The locations of the existing and proposed lines will providing a starting point for mapping of the future interceptors and collection lines.

Task 3 - Map Locations of Future Sanitary Sewer Lines and Estimate Future Flows:

Using the base maps prepared, WGLA will identify the areas in the current Cane Creek Water and Sewer District that do not have sewer service. With the topographic data available, locations for new sewer interceptors as well as collection lines will be identified throughout the Cane Creek service district. WGLA will then study the French Broad River Basin in Henderson County outside of the current CCWSD service area for identification of possible new sewer interceptor lines.

With data from existing sewer lines, WGLA will be able to determine the approximate limits for gravity sewer extensions in the Cane Creek and greater French Broad service areas. Pump stations and force mains will be considered at locations where it is impractical to extend gravity sewer.

Once sewer lines have been mapped at a planning level of detail for the Cane Creek District and the French Broad basin, flow projections can be established. These flow projections will be based on land use and zoning information for the possible ultimate buildout of the area. Further, the flow projections will be evaluated considering flows from the existing sewer systems located in the study area. This data will be gathered from water use records from current CCWSD customers and from NCDENR records for flows at existing NPDES facilities in the study area. Finally with input from the Henderson County Planning staff, proposed future development projects can be considered for the wastewater flow projections.

For projection of wastewater flows from undeveloped areas, the anticipated density of development will be calculated from the County's zoning information. Flows will be initially projected using NCDENR – Division of Water Quality standards. However, we would further consider the projected wastewater flows based on the actual water records for residential usage in the CCWSD.

With flow projections established, interceptor and collection sewer lines will be sized. Since the County wishes to minimize or limit the number of sewer lift stations, flow projections for the interceptor lines will be based on minimum pipe grades.

Finally, with wastewater flow projections and pipe sizes established for the study area, WGLA will provide a basic evaluation of the capacity of the CCWSD existing sewer facilities to determine if upgrades will be necessary.

Task 4 – Evaluate Wastewater Treatment Alternatives

As flows from the CCWSD system increase, the District should identify and evaluate alternatives for discharging future flows for treatment, to insure that both technical issues and financial considerations are anticipated in the proposed study. Discharges to MSD are limited by an existing contract. Amending that agreement to increase flow limits should be weighed against other options to determine the most cost-effective solution(s) and estimate the costs of each viable alternative. The financial consequences of future wastewater disposal solutions must also be a consideration in the Financial Assessment component of this approach (Task 5).

Task 5 - Project Cost Estimates and Financial Assessment

With input from County Staff, the proposed wastewater system improvements will be divided into a phased program based on a logical extension of the sewer collection system. Preliminary cost estimates for construction will be prepared for each project or phase of the extension.

The cost estimates and capital recommendations tasks would be used to construct a new Capital Improvements Plan for the District. The CIP contents would be incorporated into the revised and updated Financial Assessment for the District.