

REQUEST FOR BOARD ACTION

**CANE CREEK WATER AND SEWER DISTRICT
BOARD OF COMMISSIONERS**

MEETING DATE: November 18, 2009

SUBJECT: Replace Snowball Lane with Gravity Sewer
Grant Application for Hazard Mitigation Funds

ATTACHMENTS: Yes

1. Recommendation from William G. Lapsley Associates, P. A.

SUMMARY OF REQUEST:

During the significant rainfall event on May 14, 2009, the District's Snowball Lane Pump Station was flooded and a sanitary sewer overflow of approximately 2,000 gallons occurred. In accordance with the District's responsibilities under our permit with DENR, we investigated possible actions to prevent future overflows. The attached recommendation from William R. Buie, P.E. with William G. Lapsley & Associates, P.A. details the recommendation from staff and Mr. Buie.

To summarize, we recommend replacing the pump station with a gravity line and apply for FEMA Hazard Mitigation Funds to fund the project. The total project cost is estimated to be \$652,040 with the District's local match of 25% being \$163,010. Our recent rate analysis during the basin study clearly indicates this expenditure is viable within the District's Enterprise Fund balance. In addition to the benefit of addressing the overflow problem, the District's operating expenses will be reduced with this project; gravity sewer is much less expensive to maintain than a pump station.

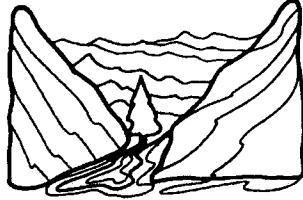
BOARD ACTION REQUESTED:

Approve the County Engineer to execute the grant application for FEMA Hazard Mitigation funds for the replacement of the Snowball Lane Pump Station with a gravity sewer line.

Suggested Motion(s):

I move that the Board approve the County Engineer to execute the grant application for FEMA Hazard Mitigation funds for the replacement of the Snowball Lane Pump Station with a gravity sewer line.

WILLIAM G. LAPSLEY & ASSOCIATES, P.A.
Consulting Engineers & Land Planners



Two Town Square Blvd, Suite 320
Asheville, NC 28803
(828) 687-7177 - Fax (828) 687-7178
www.wgla.com

MEMORANDUM

TO: Mr. Marcus Jones, P.E.; County Engineer – Henderson County

FROM: William R. Buie, P.E.
William G. Lapsley & Associates, P.A.

RE: Snowball Lane Pump Station

DATE: October 27, 2009

As you will recall, the Snowball Lane sewer pump station was flooded during a significant rainfall event on May 14, 2009. The station is located in the Fletcher area. As a result of the flooding, the station and an on-site generator were damaged. Repairs totaled approximately \$25,000. Additionally, a sanitary sewer overflow of approximately 2,000 gallons occurred.

At the request of County Staff, we assisted in a general evaluation of the station in an attempt to determine a solution for this problem. We discovered that the pump station was located in a flood hazard area along Kimsey Creek. When the station was constructed, approximately 20 years ago, this location had not been mapped as a flood hazard area.

We first evaluated the possibility of raising the station in its current location. This alternative was eliminated since raising the station would likely result in additional flooding impacts to adjacent properties. We also considered relocating the station to adjacent property outside of the flood hazard area. This was a viable option, but would require property acquisition from the quarry to the south of the station. There was not a suitable site for the station inside the existing subdivision.

As we studied the option for relocation of the station, we realized it might be possible to eliminate the station completely by installing a gravity sewer line through the quarry property. We met with Gary Oxford who is the general manager of the quarry with Oldcastle Industrial Minerals. He felt that the quarry owners would be willing to consider granting an easement for the installation of the gravity sewer line.

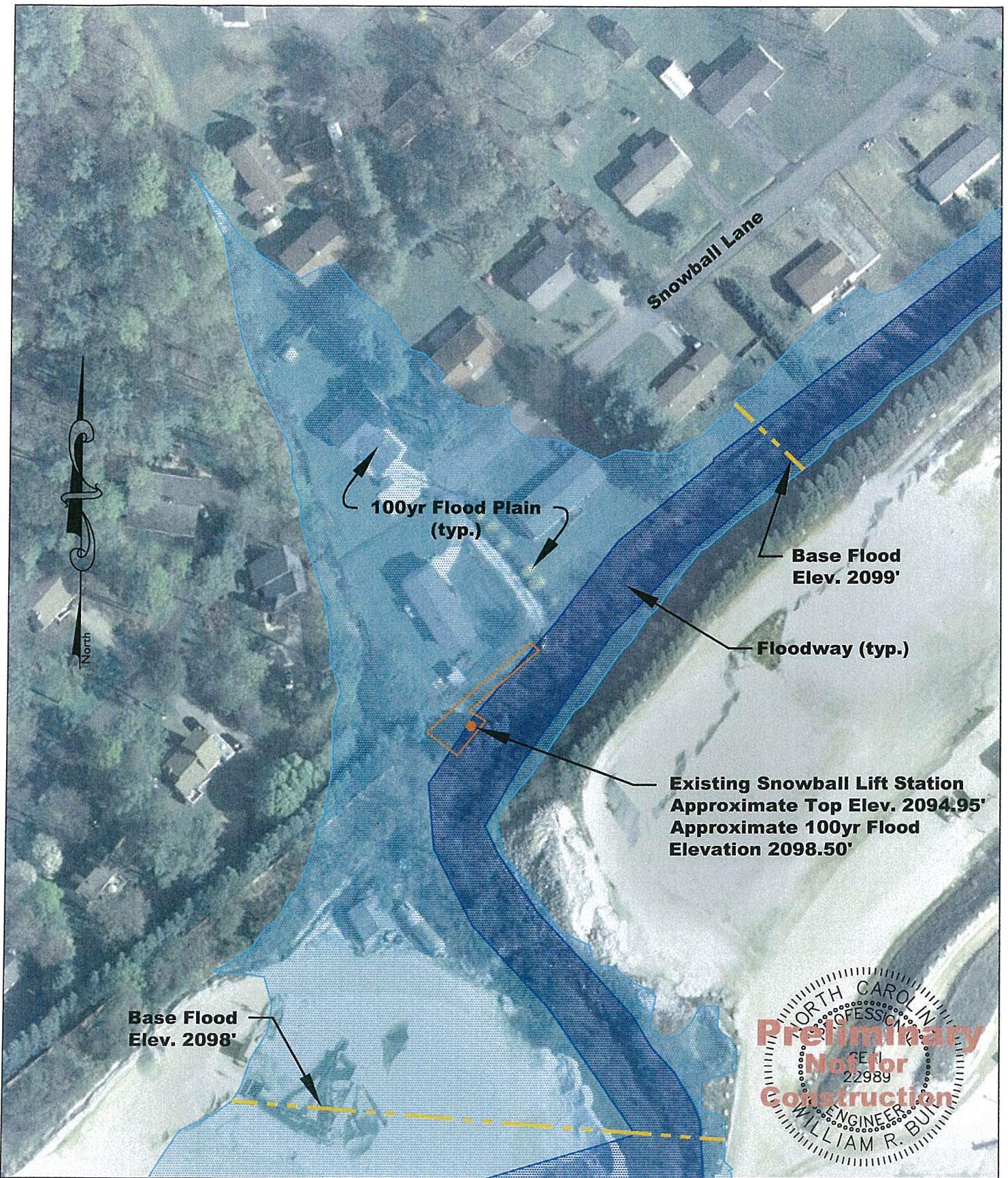
Mr. Marcus Jones, P.E.
October 27, 2009
Page 2

Through various channels we learned of the possibility of securing Hazard Mitigation funds from FEMA for the installation of the gravity line. We have been working with NC Emergency Management of the last couple of months preparing a grant application. The total estimated cost of this project is \$652,040.00. Though the FEMA grant program a local match of 25% or \$163,010.00 is required. To further the grant application process, a letter is required from the County committing to the local match should the project be funded by FEMA.

We recommend that the County provide this commitment letter to FEMA. This is a project that will have to be completed at some point in the near future. It is unlikely that there are other funding sources available that require a lower percentage of local match.

Attached with this memorandum is a location map showing the existing pump station, a proposed layout for the sewer extension and the preliminary project cost estimate. If you have any questions or need additional information, don't hesitate to contact our office.

CC: Mr. Doyle Freeman, Cane Creek Sewer District



WILLIAM G. LAPSLEY & ASSOCIATES, P.A.

CONSULTING ENGINEERS & LAND PLANNERS

NC License No: C-0556

Two Town Square Blvd.

Suite 320

Asheville, NC 28803

(828) 687-7177 Fax (828) 687-7178

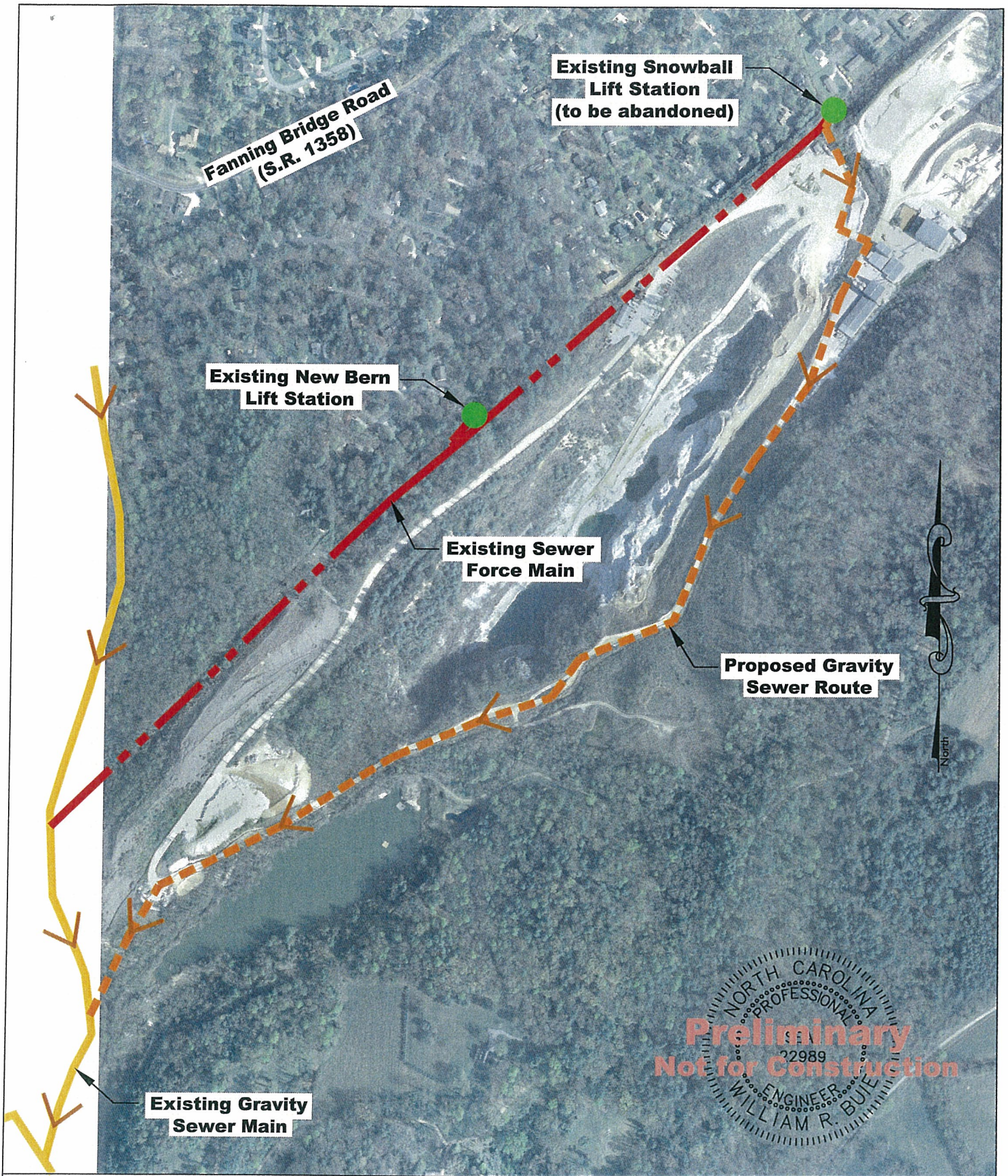
www.wgla.com



Existing Snowball
Lift Station
Henderson County
North Carolina

Existing
Flood Plain Condition

Sheet 2
Scale: 1" = 100'



WILLIAM G. LAPSLEY & ASSOCIATES, P.A.
 CONSULTING ENGINEERS & LAND PLANNERS

 NC License No: C-0556
 Two Town Square Blvd.
 Suite 320
 Asheville, NC 28803
 (828) 687-7177 Fax (828) 687-7178
 www.wgla.com

Existing Snowball
 Lift Station
 Henderson County
 North Carolina

Proposed
 Sewer Route

 Sheet 3
 Scale: 1" = 500'

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

Preliminary Cost Estimate
Cane Creek Water & Sewer District - Henderson County, NC
Snowball Lane Gravity Sewer Extension

Date: 06/11/09

Project #:

Sanitary Sewer Improvements

Clearing and Grubbing	1.50	AC	\$9,500.00	\$14,250.00
10" Gravity Sewer	5,100	LF	\$42.00	\$214,200.00
Stone Bedding	1,800	TN	\$28.00	\$50,400.00
4' Diameter Manholes	19	EA	\$1,900.00	\$36,100.00
Eliminate Sewer Pump Station	1	EA	\$9,000.00	\$9,000.00
Modifications to New Bern Pump Station	1	LS	\$55,000.00	\$55,000.00
Incidental Stone for Haul Road	225	TN	\$22.00	\$4,950.00
Stream Crossings	1	LS	\$7,500.00	\$7,500.00
Erosion Control Measures	1	LS	\$15,000.00	\$15,000.00
Seeding and Mulching	1.00	LS	\$5,000.00	\$5,000.00
			SUBTOTAL	\$411,400.00

TOTAL ESTIMATED CONSTRUCTION COST

\$411,400.00

Contingency (10% budget)				\$41,140.00
Rock Excavation				\$150,000.00
Engineering, Design & Permitting				\$25,000.00
Construction Observation & Administration				\$12,000.00
Surveying and Easement Preparation				\$7,500.00
Legal & Administrative				\$5,000.00

TOTAL ESTIMATED PROJECT COST

\$652,040.00