



# City of Boiling Spring Lakes

## Stormwater Department

9 East Boiling Spring Road  
Southport, NC 28461

---

### STORMWATER DEPARTMENT REPORT OCTOBER 2025

#### **Background Information:**

The City has created a new stormwater department to implement and mitigate the effects of stormwater flooding in the City limits that has become worse over the last several years due to the increase of building development. The increase in building development impacts the existing roadside drainage ditches/swales, primary drainage ditches and mechanical conveyance systems with additional stormwater from new impervious surfaces. In order to limit flooding due to the increased development, the stormwater department was created to maintain the existing stormwater infrastructure, plan for future impacts from new development, implement strategies to mitigate flooding and provide support to other City Departments with permitting and general master planning. The information below provides a description and photos of work that have been completed since the inception of the department. Currently the team has reshaped and ditched approximately 10,000 lf. of roadside drainage ditches.

In addition to the ditching, a primary 48" HDPE pipe culvert was re-excavated and reset to the proper invert elevations at Golf View Road in the Highlands Development. As you know this was an area that has been impacted by numerous flooding events in the past. As a side note, that area fared very well with this latest storm event that occurred over the weekend. The team also has been proactive with identifying troubled areas where ponding water is occurring. For example, the corner of Liberty Road and Kannapolis Road was not draining properly from this most recent storm. The team conducted a field inspection and identified a crushed and decaying corrugated metal pipe (CMP) that had blocked the drainage ditch. The team removed the pipe and alleviated ponding issues on Kannapolis, Liberty as well as a portion of Goldsboro. The pipe is scheduled to be replaced in the next couple days with a new 18" high-density polyethylene pipe (HDPE). Other duties include on-call services when residents call with issues along property frontage. Our residents are the front line support with helping the department address on-going issues around the City.

The team has also developed a plan to mitigate drainage concerns at a crucial evacuation route along Pine Lake Road and Miller Road. The department is working closely with a resident to obtain a drainage/maintenance agreement to allow the City to remove and replace an existing concrete pipe with a new 24" HDPE pipe. The pipe had been crushed and covered for years restricting flow at that location and backing up during large storm events. The proposed new pipe installation will provide an additional point of discharge for that main intersection and decrease the chances for potential flooding. That project is scheduled to begin within the next couple weeks.

In addition to some of the duties and jobs described above, some other task include removing overgrown vegetation from many of our primary ditches, checking existing storm pumps and preparing areas that are flood prone prior to major storm events.

### **Financial Impact:**

Cost for materials such as equipment, pipe, pipe accessories, rip-rap stone (soil erosion) for replacing, upgrading and providing preventive maintenance for the stormwater conveyance will have a tremendous cost savings in the future to the city's road infrastructure reducing repair cost.

### **Recommendation:**

The Board should consider having an engineering analysis prepared for upgraded major culvert crossings in the City that provide evacuation routes for the residents especially along South Shore. Another recommendation to consider is the hiring of a tree/brush removal contractor to remove trees and vegetative overgrowth from all the "primary" drainage ditches throughout the City limits. This would have a huge impact on the way the stormwater is moved throughout the conveyance system.

### **Attachments:**

The following list below provides a description of the work that has been completed in the last couple months:

Note: The team has reshaped and cleaned approximately 10,000 lf. of drainage ditches to include the following area;

- |   |                                |
|---|--------------------------------|
| 1.) 124 lf. Wilmington Road               | 8.) 114 lf. Fifty Lakes Drive  |
| 2.) 219 lf. Sioux Road                    | 9.) 276 lf. Springfield Road   |
| 3.) 87 lf. Lumberton Road                 | 10.) 109 lf. Windemere Road    |
| 4.) 1,810 lf. Westway Road                | 11.) 114 lf. Fifty Lakes Drive |
| 5.) 761 lf. Springfield and Palmetto Road | 12.) 133 lf. South Shore Drive |
| 6.) 355 lf. W. North Shore Drive          | 13.) 885 lf. Fieldcrest Road   |
| 7.) 403 lf. Burton Road                   |                                |

**Total Ditching for August = 5,390 lf.**

- |                                    |                                |
|------------------------------------|--------------------------------|
| 1.) 403 lf. Burton Road            | 9.) 436 lf. Charlestown        |
| 2.) 184 lf. Virginia Road          | 10.) 205 lf. South Shore Drive |
| 3.) 352 lf. Cougar Dr. & Goldsboro | 11.) 47 lf. North Shore Drive  |
| 4.) 220 lf. Golfview Road          | 12.) 172 lf. Downing Road      |
| 5.) 285 lf. Polaris Road           | 13.) 227 lf. Goldsboro Road    |
| 6.) 651 lf. Miller Road            |                                |
| 7.) 122 lf. Drayton Road           |                                |
| 8.) 220 lf Pine Needles Road       |                                |

**Total Ditching for September = 3,524 lf**  
**Total Ditching for October up to 10-14-2025 = 1,034 lf**

**PHOTOS**



Golf View Pipe Invert Reset



Golf View Pipe Invert Reset





Golf View Pipe Install w/Rip-Rap  
Protection (Upstream)



Ditch Maintenance  
Vegetation cut and groomed



Pipe Culvert Restoration w/Rip-Rap  
Protection (Upstream)



Pipe Culvert Restoration w/Rip-Rap  
Protection (Downstream)





Ditch Cleaned and Shaped  
(typical)



Ditch Cleaned and Shaped  
(typical)



Ditch Maintenance  
(typical)



New Pipe Repair w/Flared End Section  
and Rip-Rap Protection





Spring Lake Pipe Outlet Restoration  
Outlet #1



Spring Lake Pipe Outlet Restoration  
Outlet #2



Recently Cleaned and Reshaped Ditch  
Unobstructed Flow



Cleaned and Reshaped Ditches  
Free Unobstructed Flow