



# *City of Boiling Spring Lakes*

9 East Boiling Spring Road  
Southport, NC 28461

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## STAFF REPORT

### **Agenda Date:**

February 4, 2026

### **Title:**

Stormwater Department Status of Work Completed

### **Department:**

Stormwater

### **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 has been completed since the inception of the department. Currently the team has reshaped and ditched a total of **22,149 lf.** of roadside drainage ditches. Last year ditching totals were **19,969 lf. (2025)** and this year ditching totals to date are **2,180 lf (2026)**.

In addition to the ditching and stormwater maintenance, the team has begun a stormwater upgrade to the Miller and Pine Lake Road intersection. Prior to the upgrade, the water would flow southeast along Pine Lake Road and would break north under Pine Lake Road turn back north west and then discharge along Miller Drive Ext. to private property and finally discharging into Pine Lake. Additional flow would also cross under Miller Road south to a culvert crossing under Pine Lake Road just before the E. Boiling Spring Lakes Rd. Intersection and ultimately discharging into Pine Lake. The goal of this improvement is to increase flow at that location minimizing the flooding that has occurred in the past. The upgrade incorporated a direct discharge line starting from an existing 18" dia. pipe under Pine Lake Rd. at Miller Road. The new 24" HDPE pipe system was started approximately 6 ft from the existing 18" pipe and ran 200 ft in a northerly direction along a private residence's property line. The pipe system then turned in a easterly direction to city property that discharges into Pine Lake. It should be noted, this project was possible due to mutual cooperation between the city and a private resident that granted a 10 ft easement along the property line. The pipe system was ended with a flared end section (FES) and armored with rip-rap protection to mitigated erosion downstream due to higher flow velocities from larger storm events.

Phase two of the project is to replace the existing 18” pipe under Pine Lake Road to match the newly installed 24” HDPE. This will allow for greater flow capacity to handle the larger storm events. As we investigate further, pipes that seem problematic will be replaced with new High Density Polyethylene Pipe (HDPE). This material is standard for stormwater systems and has a high corrosion-resistance, durable with a long service life.

In addition to replacing culverts and cleaning drainage ditches, the team is also 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:**

The financial impact to the City will have cost savings overall when stormwater and flooding have less of an impact to City infrastructure and residential properties.

### **Recommendation:**

No additional recommendations are being considered since last month’s report.

### **Attachments:**

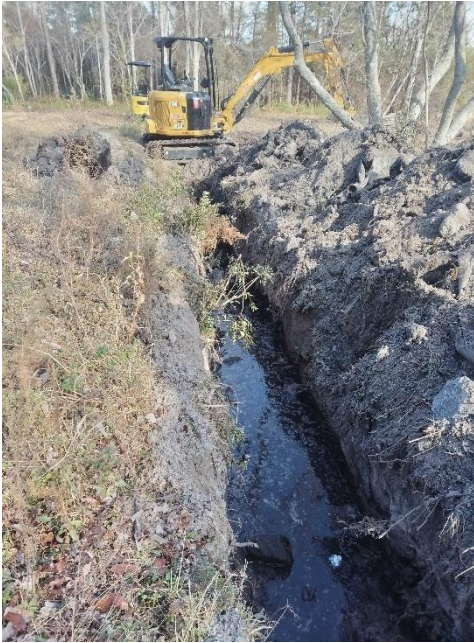
The following list below provides a description of the ditching work that has been completing in the last couple months:

Note: The team has reshaped and cleaned approximately 2,180 lf. of drainage ditches to include the following area;

- |                                |                                |
|--------------------------------|--------------------------------|
| 1.) 20 lf. Edgewood Road       | 8.) 120 lf. Twin Lakes Drive   |
| 2.) 516 lf. Kannapolis         | 9.) 27 lf. Baymeade Road       |
| 3.) 325 lf. Charlestown Rd     | 10.) 240 lf. Millers Road Ext. |
| 4.) 70 lf. Cherry Road         | 11.) 70 lf. Pine Lake Rd.      |
| 5.) 45 lf. Hawthorne Road      |                                |
| 6.) 437 lf. N.Shore Drive      |                                |
| 7.) 310 lf. Forest Lakes Drive |                                |

**Total Ditching for December and January (01-22-2026) = 2,180 lf.**

**PHOTOS**



Millers Ext Pipe Culvert  
Improvement-Trench Excavation



Pipe Culvert Installation



Pipe Culvert 45 degree Bend



Culvert Installation



Pipe Discharge  
w/Flared End Section



Erosion Fabric Placement  
at Pipe Discharge



Erosion Fabric Placement  
at Pipe Discharge



Rip-Rap Apron  
at Pipe Discharge



Rip-Rap Apron  
at Pipe Discharge



Existing 18" Pipe  
Rip-Rap Protection



24" Intake at Pine Lake Rd  
And Miller Road



Ditch Shaping/Cleaning



Ditch Shaping/Cleaning