

# **Local Program Report to the SCC**

## **November 16, 2017**

### **A. City of Winston-Salem/Forsyth County**

On July 25, 2017 personnel from NCDEQ, Land Quality Section, conducted a review of the City of Winston-Salem/Forsyth County's Local Program. Five staff members contribute five full time equivalents to the erosion control program. Per your totals, in the last fiscal year, you had conducted a total 102 plan reviews, all of which have been approved. The City/County has 886 current projects, 718 of which are single family dwelling sites. The City has also conducted total 5,646 inspections (2,263 of which were for the grading permit sites and 3,383 for the single-family dwelling sites). In this same time frame 73 Notices of Violations and 10 civil penalties have been issued. The City requires an erosion control plan to be submitted and a grading permit to be obtained when the total footprint of disturbance is greater than 20,000 square feet for Single-Family Dwelling construction sites or 10,000 square feet for any other purposes. If a Single-Family Dwelling construction does not exceed 20,000 square feet, then the building contractor is required to sign a Single-Family Dwelling Erosion Control Affidavit. The affidavit requires the installation of silt fence on all low sides of the disturbed area and a gravel construction entrance. During our review of the program, we inspected five sites and reviewed five plans that had already been approved.

The following is a summary of the projects that were inspected:

#### **1. YMCA Jerry Long Improvement**

This project consisted of 7.38 acres, and was being constructed for a commercial development. The file for this project included a FRO, calculations, inspections, NPDES construction stormwater permit, stormwater management permit and letter of approvals. The erosion and sediment control plan was approved on February 13, 2017. The approved plan for this site was found to be adequate. The site was active during the visit. The site was inspected six different times. The site was last inspected on July 18, 2017, and was in compliance. During our inspection, the site was in compliance. One recommendation was made in the field: 1) Provide adequate ground cover on all the all bare and inactive areas.

#### **2. Peace Heaven Village**

This project consisted of 7.38 acres, and was being constructed for a commercial development. The file for this project included a FRO, calculations, inspections, NPDES construction stormwater permit, stormwater management permit and letter of approvals. The erosion and sediment control plan was approved on February 13, 2017. The approved plan for this site was found to be adequate. The site was active during the visit. The site was inspected six different times. The site was last inspected on July 18, 2017, and was in compliance. During our inspection, the site

was in compliance. One recommendation was made in the field: 1) Provide adequate ground cover on all the all bare and inactive areas.

### **3. Chandler Point**

This project consisted of 29.44 acres, and was being constructed for a residential development. The file for this project included a FRO, calculations, inspections, and letter of approvals. The erosion and sediment control plan was approved March 31, 2017. The approved plan for this site was found to be adequate. The site was active during the visit. The site was inspected four different times. The site was last inspected on June 9, 2017, and was in compliance. During our inspection, the site was found to be out of compliance. Violations included failure to follow approved plan, failure to take all reasonable measures, failure to maintain erosion control measures and failure to provide adequate ground cover. Some of the issues we noticed during our inspections are: 1) Ingress/egress to/from the site at locations without a construction entrance. 2) There was a construction entrance installed on the other side which was not shown in the approved plan, and the construction entrance was all filled with mud. 3) Most of the areas had adequate ground cover, but there were some areas with inadequate ground cover. 4) There was no positive drainage on some of the diversion ditches. 5) There was some sediment at the south end of the Aurora Glen pavement. A few recommendations were made in the field: 1) Provide a new construction entrance as per shown in the plan. 2) Repair and maintain the existing construction entrance. 3) Provide adequate ground cover on all bare and inactive areas. 4) Remove sediment tracked onto the pavements. 5) Make sure positive drainage is provided on all the diversion channels.

### **4. Modern Nissan**

This This project consisted of 5.78 acres, and was being constructed for a commercial development. The file for this project included a FRO, calculations, inspections, and letter of approvals. The erosion and sediment control plan was approved on May 9, 2017. The approved plan for this site was found to be adequate. The site was active during the visit. The construction has just begun; hence no inspections were done for this site. During our inspection, the site was found to be out of compliance. A construction entrance and skimmer basin were not installed. Violations included failure to follow the approved plan and failure to take all reasonable measures. A few recommendations were made in the field. 1) Install construction entrance and skimmer basin as per the approved plan. 2) Stabilize the basin after installing it.

### **5. Dollar general**

This project consisted of 1.29 acres and was being constructed for a commercial development. The file for this project included a FRO, calculations, inspections, and letter of approvals. The erosion and sediment control plan was approved on March 15, 2017. The approved plan for this site was found to be adequate. The site was active during the visit. The site was inspected four different times. The site

was last inspected on July 11, 2017 and was in compliance. During our inspection, the site was found to be out of compliance. Violations included failure to follow approved plan, failure to take all reasonable measures and failure to maintain erosion control measures. Some of the issues we noticed during our inspections are: 1) There was an accumulation of sediment along the silt fence. 2) An inlet protection was not installed per the approved plan. 3) Silt fence was damaged on some sections. A few recommendations were made in the field: 1) Remove accumulated sediment along the silt fence. 2) Repair and maintain the silt fence where necessary. 2) Replace new stone on silt fence outlets. 3) Remove sediment from the street outside the disturbance limit. 4) Install inlet protection as per the approved plan

**Conclusion:**

The City of Winston-Salem/ Forsyth County is inspecting the sites on a frequent basis which is appreciated. The Winston-Salem/ Forsyth County should implement the following recommendations to improve the program:

- 1) Continue requiring that adequate ground cover is provided within the time limits of the local ordinance and approved plan.
- 2) In the field, a focus should be placed on stabilizing sediment basin slopes and their associated diversions to prevent internal erosion.

Staff recommends continued delegation of the program.

## **B. Guilford County**

On July 27, 2017 personnel from NCDEQ, Land Quality Section, conducted a review of the Guilford County's Local Program. Two staff contribute two full time equivalents to the erosion control program. On April 28, 2017, one of the field inspector resigned. The field inspector position was filled on June 26, 2017. The County is in a process of hiring one additional site inspector for the program. The county required sediment and erosion control plans for the sites that have an area of one acre or more. The county has the provision that they can require sediment and erosion control plans if the disturbance is in critical areas. Per your totals, you had conducted a total 65 plan reviews, 36 of which have been approved with 29 being disapproved in the last 12 months. The county has 106 current projects. The county conducted 530 inspections during this time frame. In this same time frame three Notice of Violations and zero civil penalties have been issued. All the three Notices of Violations were issued for the sites with an area less than one acre. During our review of the program, we inspected 4 sites and reviewed 4 plans that had already been approved.

The following is a summary of the projects that were inspected:

### **1. Rymack Storage**

This project consisted of 2.54 acres and was being constructed for a commercial development. The file for this project included. The erosion and sediment control plan was approved on March 24, 2017. The approved plan for this site was found to be adequate. The site was active during the visit. The site was inspected just once on July 19, 2017, and was in compliance. During our inspection, the site was found to be out of compliance. Violations included failure to follow approved plan, failure to provide adequate ground cover, failure to take all reasonable measures, and failure to maintain measures Some of the issues we noticed during our inspections are: 1) Swale and sediment traps that were shown on approved plan were not constructed. 2) Construction entrance needed some maintenance. 3) Skimmer basin was filled with sediment. Baffles in the skimmer basin were not installed as per the approved plan. 4) Silt Fences were removed while grading. 5) Some of the areas outside the disturbance limit were disturbed. 6) A stockpile was brought outside the disturbance limit. 7) There were some inactive areas with inadequate ground cover. A few recommendations were made in the field: 1) Clean and repair the construction entrance. 2) Provide adequate ground cover on all the slopes of skimmer basin, side slope of diversion channels and on all bare and inactive areas. 3) Submit a revised plan to show all the disturbed areas, with additional sediment control measures to prevent sediment loss. 4) Remove accumulated sediment from the skimmer basin. 5) Re-baffles as per the approved plan. 6) Re-install removed silt fence.

### **2. Rodders and Jetts**

This project consisted of 2 acres, and was being constructed for a commercial development. The file for this project included a FRO, plan, deed, calculations, approval letter and inspections. The erosion and sediment control plan was

approved on March 21, 2017. The approved plan for this site was found to be adequate. The site was active during the visit. The site was inspected just once on July 11, 2017, and was in compliance. During our inspection, the site was in compliance. Most of the areas were well stabilized.

### **3. SHILOH**

This project consisted of 30 acres, and was being constructed for a residential development. The file for this project included a FRO, deed, calculations and inspections. The erosion and sediment control plan was approved on March 21, 2017. The approved plan for this site was found to be adequate. The site was active during the visit. The site was inspected just once on July 14, 2017, and was in compliance. During our inspection, the site was found to be out of compliance. Violations included failure to follow approved plan, failure to provide adequate ground cover, failure to take all reasonable measures, and failure to maintain measures. Some of the issues that were noticed during our inspections are: 1) Baffles were not aligned properly on Skimmer Basin #13. 2) One of the outlet pipes was filled with sediment. 3) Some inactive areas did not have adequate ground cover. 4) There was a stockpile outside the disturbance limit. A few recommendations were made in the field: 1) Provide adequate ground cover on all the slopes of skimmer basin, side slope of diversion channels and on all bare and inactive areas. 2) Re-install baffles on Skimmer Basin #13 as per the approved plan. 3) Remove accumulated sediment from the outlet pipe. 4) Provide a wooden or stone pad for skimmers. 5) Provide a revised plan to show the disturbance outside the permitted area.

### **4. Shady Grave Wesleyan Church**

This project consisted of 1.2 acres, and was being constructed for an institutional development. The file for this project included a FRO, deed and calculations. The file did not have an approval letter. The site was not inspected before. The site was active during our visit. During our inspection, the site was found to be out of compliance. Violation included failure to follow approved plan, failure to maintain measures and failure to provide adequate ground cover. Some of the issues that were noticed during our inspections are: 1) There was no silt fence around stockpiles. 2). Some bare and inactive areas did not have ground cover. A few recommendations were made in the field: 1) Provide adequate ground cover on all the slopes of skimmer basin and on all bare and inactive areas. 2) Provide for a designated concrete washout. 3) Provide a wooden or stone pad for skimmer. 4) Provide silt fences around stockpiles.

**Conclusion:**

The County should implement the following recommendations to improve the program:

- 1) Inspect the sites more frequently (at least once a month and more if needed).
- 2) Continue requiring that adequate ground cover be provided within the time limits of the local ordinance and approved plan.
- 3) Continue to check for self-inspection records on site.
- 4) Keep the approval letter in the project file.

Staff recommends continued delegation of the program.

### **C. Town of Southern Pines**

On September 20, 2017 personnel from NCDEQ, Land Quality Section, conducted a review of the Town of Southern Pines' Sedimentation and Erosion Control Program. Four staff contribute two full time equivalents to the program. The Town requires sediment and erosion control plans for the sites that have an area of 30,000 square feet or more. The Town requires a compliance form to be filled and signed by the land disturbing party for the sites that are less than 30,000 square feet. The compliance form indicates the minimum sediment control measures to be installed at the site. Per your totals, you had conducted a total 11 plan reviews, seven of which have been approved with four being disapproved in the last 12 months. The Town has 15 current projects. The Town conducted 373 inspections during this time frame. In this same time frame, one Notice of Violation and zero civil penalties have been issued. During our review of the program, we inspected four sites and reviewed four plans that had already been approved

The following is a summary of the projects that were inspected:

#### **1. Caropines Amenity Center**

This project consisted of 3.42 acres, and was being constructed for a commercial development. The file for this project included a FRO, plan, deed, calculations and inspections. The erosion and sediment control plan was approved on February 23, 2016. The approved plan for this site was found to be adequate. The site was active during the visit. The site was inspected thirty-six different times. The site was last inspected on September 19, 2017 and was not in compliance. Slight off-site sedimentation was observed onto Avenue of Carolinas. During our inspection, the site was also not in compliance. Violations included failure to follow approved plan, failure to take all reasonable measures, and failure to maintain measures. Some of the issues we noticed during our inspections are: 1) Ingress/egress to/from the site at location without a construction entrance. 2) Silt fence on some sections were damaged and filled with sediment. A few recommendations were made in the field: 1) Provide a construction entrance as per shown on the plan and close all other access to the site. 2) Remove all accumulated sediment along the silt fence, and repair and maintain silt fences. 3) Remove sediment tracked onto the Avenue of Carolinas. 4) Check self-inspection forms at the site.

#### **2. Tyler's Ridge Apt, Phase 2**

This project consisted of 4.9 acres, and was being constructed for a residential development. The file for this project included a FRO, plan, deed, calculations, approval letter and inspections. The erosion and sediment control plan was approved on September 9, 2016. The approved plan for this site was found to be adequate. The site was active during the visit. The site was inspected seven different times. The site was last inspected on September 12, 2017, and was in compliance. During our inspection, the site was in compliance.

### 3. Zaxby's

This project consisted of 0.98 acre, and was being constructed for a commercial development. The file for this project included a FRO, deed and inspections. The erosion and sediment control plan was approved on June 1, 2017. The approved plan for this site was found to be adequate. The site was active during the visit. The site was inspected six different times. The site was last inspected on September 15, 2017, and was in compliance. During our inspection, the site was in compliance. A few recommendations were made in the field: 1) Provide adequate ground cover on all bare and inactive areas upon completion. 2) Repair and maintain inlet protection

### 4. Pinehurst Toyota

This project consisted of 9.13 acres, and was being constructed for a commercial development. The file for this project included a FRO, deed and calculations. The file did not have an approval letter. The erosion and sediment control plan was approved on July 28, 2017. The approved plan for this site was found to be adequate. The site was active during the visit. The site was inspected six different times. The site was last inspected on September 13, 2017, and was in compliance. The construction has just begun. The site was still in the clearing and grubbing phase. During our inspection, the site was in compliance. A recommendation was made in the field: 1) Provide adequate ground cover on all bare and inactive areas upon completion.

### Conclusion

The Town of Southern Pines is inspecting the sites on a frequent basis which is appreciated. The county should implement the following recommendations to improve the program.

- 1) Continue requiring that adequate ground cover is provided within the time limits.
- 2) Please provide latest NPDES self-inspection form while approving the plan.
- 3) Make sure the site is accessed from the designated construction entrance.

Staff recommends continued delegation of the program.

## **D. Chatham County**

On September 28, 2017 personnel from NCDEQ, DEMLR, conducted a review of the Chatham County's Local Program. Three staff members contribute two and half full-time equivalents to the erosion control program. Per your totals in the 12 months, you had conducted 112 plan reviews, 89 have been approved and 23 have been disapproved. The County has 82 current projects. The County has also conducted total 1,196 inspections. In this same time frame, 39 Notices of Violations and zero civil penalties have been issued. The County requires an erosion control plan to be submitted when the total footprint of disturbance is greater than 20,000 square feet. The county also requires an erosion control plan to be submitted when the total footprint of disturbance is less than 20,000 square feet and if the land disturbance is conducted in or near any surface water. During our review of the program, we inspected four sites and reviewed four plans that had already been approved

The following is a summary of the projects that were inspected:

### **1. Chatham Parkway Extension**

This project consisted of 8.01 acres, and was being constructed for a commercial development. The file for this project included a FRO, calculations, inspections, and letter of approval. The erosion and sediment control plan was approved on September 21, 2016. Scale and vicinity map were not shown on the plan. There were some discrepancies on the plan and details. The site was inspected two different times. The site was last inspected on February 2, 2017, and was in compliance. During our inspection, the site was also in compliance. Perimeter silt fences were installed. Skimmer basins were being installed but not completed. The site was accessed from a dirt path near to the Pittsboro Christian Village. A few recommendations were made in the field: 1) Specify the construction entrance on the plan that will be used to access the site. 2) Complete the installation of skimmer basins and provide adequate ground cover on all bare and inactive areas upon completion.

### **2. Homes by Dickerson Briar Chapel Lots 10**

This project consisted of 1.924 acres, and was being constructed for a residential development. The file for this project included a FRO, plan, inspections, and letter of approvals. The erosion and sediment control plan was approved on April 27, 2017. The approved plan for this site was found to be adequate. The site was active during the visit. The site was inspected eleven different times. The site was last inspected on September 6, 2017, and was in compliance. During our inspection, the site was in compliance. A few recommendations were made in the field: 1) Maintain all construction entrances and silt fence as needed to prevent sediment from leaving sites. 2) Provide adequate ground cover on all bare and inactive areas upon completion

### **3. Pittsboro Roots**

This project consisted of 2.75 acres, and was being constructed for a commercial development. The file for this project included a FRO, calculations, inspections, and letter of approval. The erosion and sediment control plan was approved on September 16, 2016. The approved plan for this site was found to be adequate. The site was active during the visit. The site was inspected five different times. The site was last inspected on May 26, 2017, and was in compliance. During our inspection, the site was found to be out of compliance. Violations included failure to follow approved plan, failure to take all reasonable measures and failure to maintain erosion control measures, and failure to provide adequate ground cover. Some of the issues we noticed are: 1) Baffles, silt fences and liner on the basin outlets were not installed as per the approved plan. 2) There were some erosions on the side wall of the basin. 3) Seedbed was not prepared prior to seeding. 4) Inlet protection was not adequate. A few recommendations were made in the field: 1) Re-install silt fences along the riparian buffer as shown in the approved plan. 2) Install baffles in the skimmer basin. 3) Repair erosion on the side slope of the basin and stabilize it. 4) Prepare seed bed prior to the seeding. Use lime, fertilizers, mulch and tack as mentioned on the approved plan. 5) Install liner below the dissipater at the basin outlet. 6) Repair and maintain all inlet protections.

### **4. Chatham Park Water Improvement**

This project consisted of 5.78 acres, and was being constructed for a commercial development. The file for this project included a FRO, calculations, inspections, and letter of approvals. The erosion and sediment control plan was approved on October 5, 2016. The approved plan for this site was found to be adequate. A NOV was issued for this site on March 9, 2017. The NOV was resolved and documented. The site was active during the visit. During our inspection, the site was in compliance. A few recommendations were made in the field. 1) Access the site only through designated construction entrance. 2) Provide adequate ground cover on side of the basin and all bare and inactive areas.

### **Conclusion:**

The County should implement the following recommendations to improve the program:

- 1) Continue requiring that adequate ground cover be provided within the time limits of the local ordinance and approved plan requiring that adequate ground cover be provided within the time limits.
- 2) In the field, a focus should be placed on stabilizing sediment basin slopes and their associated diversions to prevent internal erosion provide latest NPDES self-inspection form while approving the plan.
- 3) Continue inspecting sites more frequently, at least once a month and more if needed.

- 4) Make sure the approved plan has all engineering information including, vicinity map and scale.
- 5) Make sure the site is accessed from the designated construction entrance

Staff recommends continued delegation of the program.

## **E. Johnston County**

On October 11, 2017 personnel from NCDEQ, DEMLR, conducted a review of Johnston County's Local Program. Two staff contribute two full time equivalents to the erosion control program. The county requires sediment and erosion control plans for sites that have an area of one acre or more. Per your totals in the last 12 months, you had conducted 22 plan reviews, all of which have been approved. The county has 49 current projects. The county conducted 284 site inspections during this time frame. In this time frame three Notices of Violation have been issued. The county holds building permits and plats as tools to bring site back into compliance. During our review of the program, we inspected three sites and reviewed four plans that had already been approved.

The following is a summary of the projects that were inspected:

### **1. Pines at Glen Laurel**

This project consists of 52.2 acres and was being constructed for a commercial and residential development. The file for this project included FRO, plan, calculation, deed, approval letter and inspections. The erosion and sediment control plan was approved on February 13, 2017. The approved plan for this site was not adequate. There were inconsistencies on limit of disturbance on the plan. There were no ditch calculations provided. The dewatering process on conversion of skimmer basin into detention basin was not mentioned anywhere in the construction sequence. The site was inspected seven different times. Based on the inspection on August 30, 2017, the site was not in compliance. No compliance inspection was conducted until October 4, 2017. The site was active during the visit. During our inspection, the site was not in compliance. Off-site sedimentation was observed at three different locations. Violations included failure to follow approved plan, failure to submit revised plan, failure to provide adequate ground cover, failure to take all reasonable measures, failure to maintain measures and unprotected exposed slopes. Some of the issues we noticed during our inspection are: 1) Construction entrance was filled with mud and some off-site sedimentation was observed at East Glen Laurel Road. 2) There was a stockpile at the site which was not shown on the plan and there were no measures to prevent sediment loss from the stockpile. Some off-site sedimentation was observed that occurred from the stockpile. 3) Inlet protection was filled with sediment. 4) There were unprotected steep slopes. 5) Stone check-dams were not installed properly. 6) Silt fences were damaged and sediment was accumulated along the silt fences at numerous locations. 7) Silt fence outlets were filled with sediment at different locations. 8) Baffles in the skimmer basins and some temporary slope drains needed some maintenance. 9) Basin slopes had some erosions. 10) There was no adequate ground cover on basin slopes and other inactive areas. A few recommendations were made in the field: 1) Clean and repair the construction entrance. 2) Provide adequate ground cover on all the slopes of skimmer basins, side slope of diversion channels and on all bare and inactive areas. 3) Submit a revised plan to show all the stockpiles and measures to prevent sediment loss from the pile. 4) Repair and maintain all the measures including silt

fences, inlet protection, silt fence outlets, baffles, temporary slope drains, temporary diversions and skimmer basins. 4) Remove all accumulated sediment along the silt fences. 5) Remove all off-site sedimentation. 6) Re-Install check dams as per the approved plan. 7) Regrade the slopes steeper than 2H: 1V and stabilize them.

## **2 San Marino**

This project consists of 40.03 acres, and was being constructed for a residential development. The file for this project included a FRO, plan, deed, calculations, approval letter and inspections. The erosion and sediment control plan was approved on March 23, 2017. The approved plan for this site was not adequate. The skimmer basin outlet was on the edge of the riparian buffer and a dissipater for the basin outlet was not shown on the plan. The site was active during the visit. The site was inspected six different times. The site was last inspected on September 8, 2017 and was not in compliance. During our inspection, the site was not in compliance. Violations included failure to follow approved plan, failure to provide adequate ground cover, failure to take all reasonable measures and failure to maintain measures. Some of the issues we noticed during our inspections are: 1) Inlet protections were filled with sediment. 2) There was a stockpile within 50 feet from the basin with no measures installed to prevent sediment loss. 3) The skimmer basin outlet pipe was buried somewhere inside the basin slope. 4) There was no adequate ground cover on basin slopes and other inactive areas. 5) No inlet protection was provided on some of the stormwater inlets. A few recommendations were made in the field: 1) Provide inlet protection for all stormwater inlets. 2) Repair and maintain all inlet protections. 3) Provide adequate ground cover on all the slopes of the skimmer basin, side slope of diversion channels and on all bare and inactive areas. 4) Extend the skimmer outlet pipe to the toe of the basin slope. 5) Remove the stockpile at least 50 feet away from the basin and provide appropriate measures to prevent sediment loss.

## **3. Gordon Farms**

This project consisted of 54 acres, and was being constructed for a residential development. The file for this project included a FRO, deed, calculations and approval letter. The erosion and sediment control plan was approved on August 31, 2015. The approved plan for this site was not adequate. There were no inspection reports in the project file. The baffles and skimmer in the skimmer basin were not shown on the plans. Ditch calculations were not provided. Check dams were not shown on outlet ditch. During our inspection, the site was found to be out of compliance. Violations included failure to follow approved plan, failure to provide adequate ground cover, failure to take all reasonable measures, and failure to maintain measures. Some of the issues that we noticed during our visit were: 1) Skimmer was not installed in the basin. 2) Some inactive areas did not have adequate ground cover. 3) Ingress/egress to/from the site at locations without a construction entrance A few recommendations were made in the field: 1) Provide

adequate ground cover on all the slopes of skimmer basin, and on all bare and inactive areas. 2) Summit a revised plan to show baffles and skimmer in the basin if the drainage area one acre or is larger in size. 3) Repair and maintain baffles in the Skimmer. 4) Make sure the site is accessed only through a designated construction entrance.

#### **4. Riverwood Ravens**

This project consisted of 6.42 acres, and was being constructed for a residential development. The file for this project included a FRO, plan, deed and calculations. The erosion and sediment control plan was approved on January 18, 2017. The approved plan for this site was not adequate. One of the diversion channels ends at the middle of the project site. There were three different lines indicating the limits of disturbances. The conversion of the skimmer basin into the detention basin was not mentioned anywhere in the construction sequences. Specification on baffles were not mentioned on the plan. The site was not in compliance on June 28, 2017, and the follow-up inspection was not conducted until September 18, 2017. No time frame was mentioned in the inspection report to address the issue. A NOV was issued for the site on June 2017 and there was no documentation for lifting the NOV. The site was not inspected during the review due to lack of time.

#### **Conclusion:**

During our review process, we found many deficiencies on plan review and site inspection. The plan review deficiencies included: 1) Plan being approved without adequate information, such as calculations, details, specification etc. 2) Discrepancies on information such as disturbed acres, limit of disturbances. 3) Inadequate designs such as diversion channel ending at the middle of the site, skimmer outlets on the edge of riparian buffers with no dissipater pads etc. It is thought that the plans need more in-depth review. There were no plan disapprovals in 2016 and 2017. The deficiencies in site inspections included: 1) Sites not being inspected on a frequent basis. 2) Follow-up inspections not being conducted for the sites that were not in compliance. 3) Not documenting the inspections, NOVs and lifting of NOVs and 4) Time frames to address the issue not being mentioned on the inspection reports.

Based on the review, staff will recommend the “Sediment and Erosion Control Program” of Johnston county to place in “probationary” status for one year, and the program to be reviewed and the report to be submitted to the commission by the end of 2018.

The County should implement the following recommendations to improve the program:

1. Inspect the sites more frequently (at least once a month and more if needed).
2. Hire more staff if needed. Attend some of the workshops related with sediment and erosion control.
3. Document all the internal inspection reports.
4. Provide a time-frame in the inspection report to address the issue.
5. Conduct a Follow-up inspection after the given time frame if the sites are not in compliance.
6. Continue requiring that adequate ground cover be provided within the time limits of the local ordinance and approved plan.
7. Continue to check for self-inspection records on site.
8. Do not approve the plan until all calculations, details and specifications are submitted.
9. Resolve NOV after it is issued and document it.
10. Make sure there is consistency of information on disturbed acres and limit of disturbances.
11. Immediately issue NOV if there is off-sight sedimentation.
12. Make sure that the conversion of the skimmer basin into the detention basin is mentioned somewhere in the construction sequences.
13. Make sure the site is accessed only through a designated construction entrance.

## **F. Catawba County**

On October 19, 2017 personnel from NCDEQ, DEMLR, conducted a review of the Catawba County's Local Program. Three staff contribute one and a half full-time equivalents to the erosion control program. The county requires sediment and erosion control plans for sites that have a disturbed area of one acre or more. The county requires the building contractor to sign an Erosion Control Affidavit for the sites with disturbed acres less than an acre. The affidavit requires the installation of silt fence on all low sides of the disturbed area and a gravel construction entrance. Per your totals in the last 12 months, you had conducted 38 plan reviews, 28 of which being approved and 7 being disapproved. The county has 33 current projects. The county conducted 638 inspections during this time frame. In this time frame nine Notice of Violations have been issued. During our review of the program, we inspected four sites and reviewed four plans that had already been approved.

The following is a summary of the projects that were inspected:

### **1. Hickory Green Townhomes**

This project consists of 9 acres and was being constructed for a residential development. The file for this project included FRO, plan, calculation, approval letter and inspections. The erosion and sediment control plan was approved on July 31, 2017. The approved plan for this site was adequate. The site was inspected two different times. The site was not in compliance on October 11, 2017, and a NOV was issued on October 13, 2017. The NOV had not been lifted until the date of the review. The site was active during the visit. During our inspection, the site was not in compliance. Off-site sedimentation was observed at numerous locations. Violations included failure to follow approved plan, failure to provide adequate ground cover, failure to take all reasonable measures, failure to maintain measures and unprotected exposed slopes. Some of the issues we noticed during our inspections are: 1) Ingress/egress to/from the site at locations without a construction entrance. 2) There were unprotected exposed slopes and some off-site sedimentation was observed from these slopes. 3) One of the skimmer basins was filled with sediment. 3)The skimmer basin outlet pipe and the outlet protection of the emergency spillway was not extended to the toe of the basin. 4) There was accumulation of sediment along the silt fence. 5) Silt fences were damaged at numerous locations. 6) Temporary slope drains and check dams were not installed as per the approved plan. 7) Silt fences were not installed on all the low sides of the site. 8) Adequate ground cover was not provided to some of the bare and active areas. A few recommendations were made in the field: 1) Remove all off-site sedimentation. 2) Access the site only through a designated construction entrance. 3) Provide adequate ground cover on all the slopes of skimmer basins, side slope of diversion channels and on all bare and inactive areas. 4) Provide appropriate erosion control measure on the exposed slopes to prevent further erosion. 5) Re-install temporary slope drains and check dams as per the approved plan. 6) Provide anchors and outlet protection for the temporary slope drains as per the approved

plan. 7) Remove all accumulated sediment along the silt fence and repair and maintain silt fence. 8) Re-install silt fence. Install-silt fence on all the low areas of the site. 8) Extend skimmer outlet pipe and the outlet for the emergency spillway to the toe of the basin and provide outlet protection.

## **2. Honda Parking**

This project consists of 4 acres, and was being constructed for a commercial development. The file for this project included a FRO, plan, calculations, approval letter and inspections. The erosion and sediment control plan was approved on September 19, 2016. The approved plan for this site was adequate. The site was inspected four different times. The site was not in compliance on October 11, 2017, and a NOV was issued on October 13, 2017. The NOV had not been lifted until the date of the review. The site was active during the visit. During our inspection, the site was not in compliance. A notice of continuous violation need to be issued for this site. Violations included failure to follow approved plan, failure to submit revised plan, failure to provide adequate ground cover, failure to take all reasonable measures and failure to maintain measures. Some of the issues we noticed during our inspections are: 1) Diversion ditch to the basin was bypassing the baffles. 2) There was erosion on slopes. 3) Adequate ground cover was not provided to slope of the skimmer basin and some of the bare and active areas. A few recommendations were made in the field: 1) Repair and maintain all inlet protections. 2) Provide adequate ground cover on all the slopes of the skimmer basin, side slope of diversion channels and on all bare and inactive areas. 3) Submit the revised plan to show the diversion channel to the basin does not bypass the baffles.

## **3. North Stone Subdivision**

This project consisted of 3 acres, and was being constructed for a residential development. The file for this project included a FRO, plan, inspection and approval letter. The erosion and sediment control plan was approved on July 21, 2015. The approved plan for this site was adequate. The site was inspected nine different times. The site was last inspected on October 13, 2017 and the site was not in compliance. Violations included failure to follow approved plan and failure to take all reasonable measures. Some of the issues we noticed were: 1) Stone used for the construction entrance was not appropriate. 2) Silt fence was not installed on all the low areas. A recommendation was made in the field: 1) Install silt fence on all the low areas of the site.

## **4. Dollar General Hickory**

This project consisted of 2.68 acres, and was being constructed for a commercial development. The file for this project included a FRO, plan, calculations,

inspections and approval letters. The approved plan for this site was not adequate. The location of stockpile was not mentioned on the plan. No description on concrete washout was provided on the plan. The site was inspected three different times. The site was last inspected on October 13, 2017, and was not in compliance. The site was not in compliance during our inspection too. Violations included failure to follow approved plan, failure to take all reasonable measures and failure to maintain measures. Some issues we noticed during the review were: 1) Concrete was being washed in the skimmer basin. 2) Inlet protection was not installed as per the approved plan. 3) Outlet protection was not provided for the slope drain. 4) Silt fence was damaged at some locations. A few recommendations were made in the field: 1) Repair and maintain all inlet protection. 2) Remove concrete washout from with the basin and provide a designated concrete washout area onsite. 3) Repair and maintain the silt fences. 4) Provide outlet protection for the slope drain to the basin.

### **Conclusion:**

The Catawba County is inspecting sites on a frequent basis which is appreciated. The county should implement the following recommendations to improve the program:

1. Inspect the sites more frequently (at least once a month and more if needed).
2. Provide a time-frame in the inspection report to address the issue.
3. Please provide more details on "Corrective Actions Needed" on inspection reports and NOVs. Please specify the measures and corrective actions needed. Example-If the slope drain was not installed properly, specify the location of the slope drain, explain the existing status of the drain and the appropriate corrective actions that need to be taken such as providing anchor, extending the drain to the bottom of the basin and providing outlet protection, etc.
4. Continue requiring that adequate ground cover be provided within the time limits of the local ordinance and approved plan.
5. Violations for exposed slopes and failure to provide permanent ground cover should be marked on inspection reports. Potential NPDES violations for ground cover should also be indicated.
6. Continue to check for self-inspection records on site.
7. Make sure the site is accessed only through a designated construction entrance.
8. Make sure the designated concrete washout location is provided at the site if any concrete works are proposed.
9. Please keep a copy of deed on the project file. If the landowner and the responsible party are not the same, the landowner must provide written consent allowing the responsible party to conduct the proposed activities on the property.

Staff will recommend continued delegation of the program.