# Town of Christiansburg

# Municipal Separate Storm Sewer System

# Program Plan & Annual Report

For

General Permit No. VAR040025

And

Annual Reporting through

July 1, 2014 through June 30, 2015

This plan and annual report is submitted in accordance with 9VAC25-890-30 and 9VAC25-890-40 as part of registration statement for permit coverage to discharge stormwater to surface waters of the Commonwealth of Virginia consistent with the VAR04 General Permit, effective July 1, 2013.

Submitted: September 30, 2015

**TABLE OF CONTENTS**

**CERTIFICATION**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Wayne O. Nelson Title: Director of Engineering

Signature: Wayne O. Nelson Date: 10/1/15

## DEFINITIONS

**Definitions provided herein do not supersede those within the Town of Christiansburg's Town Code, but are solely intended to supplement interpretation of the Town's MS4 Program Plan and Annual Report.**

"Best management practice" or "BMP" means schedules of activities, prohibitions of practices, including both structural and nonstructural practices, maintenance procedures, and other management practices to prevent or reduce the pollution of surface waters and groundwater systems from the impacts of land-disturbing activities.

"Construction activity" means any clearing, grading or excavation associated with large construction activity or associated with small construction activity.

"Department" means the Department of Environmental Quality.

"Discharge," when used without qualification, means the discharge of a pollutant.

"Drainage area" means a land area, water area, or both from which runoff flows to a common point.

"Hydrologic Unit Code" or "HUC" means a watershed unit established in the most recent version of Virginia's 6th Order National Watershed Boundary Dataset.

"Illicit discharge" means any discharge to a municipal separate storm sewer that is not composed entirely of stormwater, except discharges resulting from firefighting activities, and discharges identified by and the following, unless identified by the MS4 operator as significant contributors of pollutants: water line flushing, landscape irrigation, diverted stream flows, rising groundwaters, uncontaminated groundwater infiltration, uncontaminated pumped groundwater, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water.

"Impervious cover" means a surface composed of material that significantly impedes or prevents natural infiltration of water into soil.

"Land disturbance" or "land-disturbing activity" means a man-made change to the land surface that potentially changes its runoff characteristics including clearing, grading, or excavation except that the term shall not include those exemptions specified in Section 30-133(B) of the Town of Christiansburg's Stormwater Management Ordinance.

"Municipal separate storm sewer" or "MS4" means a conveyance or system of conveyances otherwise known as a municipal separate storm sewer system, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains

"MS4 Program Plan" means the completed registration statement and all approved additions, changes and modifications detailing the comprehensive program implemented by the operator under this state permit to reduce the pollutants in the stormwater discharged from its municipal separate storm sewer system (MS4) that has been submitted and accepted by the department.

"Outfall" means, when used in reference to municipal separate storm sewers, a point source at the point where a municipal separate storm sewer discharges to surface waters and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other surface waters and are used to convey surface waters.

“Public” means, for the purpose of this Program Plan, the general population who work and/or live within the Town’s limits

"State waters" means all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands.

"Stormwater" means precipitation that is discharged across the land surface or through conveyances to one or more waterways and that may include stormwater runoff, snow melt runoff, and surface runoff and drainage.

"Stormwater management plan" means a document(s) containing material for describing methods for complying with the requirements of the Virginia Stormwater Management Program

"Total maximum daily load" or "TMDL" means the sum of the individual wasteload allocations for point sources, load allocations (LAs) for nonpoint sources, natural background loading and a margin of safety. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. The TMDL process provides for point versus nonpoint source trade-offs.

"Virginia Stormwater Management Handbook" means a collection of pertinent information that provides general guidance for compliance with the Act and associated regulations and is developed by the department with advice from a stakeholder advisory committee.

"Wasteload allocation" or "wasteload" or "WLA" means the portion of receiving surface water's loading or assimilative capacity allocated to one of its existing or future point sources of pollution. WLAs are a type of water quality-based effluent limitation.

"Watershed" means a defined land area drained by a river or stream, karst system, or system of connecting rivers or streams such that all surface water within the area flows through a single outlet.

## 1.0 PROGRAM PLAN STRUCTURE

The Town of Christiansburg's Program Plan is structured to serve as a stand-alone document that, when implemented, meets the requirements of the VAR04 *General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4s)*, referred to in the remainder of this Plan as the General Permit. The Plan is intended to be subject to modifications as part of an iterative process that seeks to improve the effectiveness of best management practices (BMPs) and therefore may change from time to time. Modifications will occur per Section 1.5 of this Plan. The Program's effectiveness will be measured with "Measure(s) of effectiveness" that are incorporated into each BMP's annual reporting form in Section 3.

### 1.1 Minimum Control Measures

The General Permit requires the Town's Program Plan to include BMPs to address the requirements of six minimum control measures (MCMs) described in Section II of the General Permit. The MCMs are summarized as:

- MCM 1: Public Education and Outreach on Stormwater Impacts
- MCM 2: Public Involvement and Participation
- MCM 3: Illicit Discharge Detection and Elimination
- MCM 4: Construction Site Stormwater Runoff Control
- MCM 5: Post-construction Stormwater Management
- MCM 6: Pollution Prevention/Good Housekeeping for Operations

Section 3.0 of this Program Plan provides BMPs developed to explicitly address each General Permit requirement for each MCM. The title of each BMP is followed with a reference to the corresponding permit section. Each BMP included in the Program Plan includes the following information:

- A description of the BMP.
- A list of the necessary documentation to implement the BMP. This information is considered part of the Program and is readily available and updated, as necessary, and developed consistent with the BMP's implementation schedule.
- The identification of the individual(s) responsible for implementation of the BMP.
- The objective of the BMP and the result expected from implementation of the BMP.
- An implementation schedule consistent with the General Permit.
- A description of the method(s) to be used to assess the effectiveness of the BMP.

### 1.2 Special Conditions for TMDLs

The Town of Christiansburg is subject to Special Conditions for the following approved TMDLs where a waste load allocation (WLA) has been assigned to the Town:

- Crab Creek Watershed for E. Coli, approved December 2, 2004
- Crab Creek Watershed for Sediment, approved December 2, 2004

- Upper Roanoke River Watershed for Sediment, September 7, 2006
- Upper Roanoke River Watershed for E. Coli, approved June 27, 2007
- Roanoke (Staunton) River Watershed for PCB, approved December 9, 2010

The Special Conditions require the Town to update its Program Plan to incorporate implementation of TMDL Action Plans that identify best management practices and milestones to be implemented during the remaining term of this permit which concludes July 1, 2018. BMPs are provided in Section 3.2 for development of Action Plans for the TMDLs listed above. Additional BMPs will be added for implementation of the Action Plans, once they are developed, in accordance with the schedules prescribed in each BMP in Section 3.2.

### 1.3 Annual Reporting

The Town of Christiansburg will submit an Annual Report to the Department of Environmental Quality (DEQ) by October 1st of each year with the reporting period spanning from July 1st through June 30th. This Program Plan includes annual reporting forms in "fillable form" format. The completion of these forms provides all of the reporting requirements to satisfy the General Permit and are incorporated into the:

- Cover sheet, which will be updated with the specific reporting year;
- Certification that follows the table of contents and will be signed each year by the appropriate signatory. Certification is required by a principle executive officer or a duly authorized representative. The duly authorized representative must have overall responsibility of the Town operations and written authorization must be provided to the Department. ;
- "Annual Reporting – General Information Form" on the following page, completed annually;
- The "Annual Reporting Form" following each BMP in Section 3, completed annually; and
- The Measure(s) of Effectiveness Form following each BMP in Section 3.

Information compiled for effectiveness for each BMP in Section 3.0 will be utilized to evaluate and, if necessary, modify the respective BMP. Any modifications will be reported in the "Annual Reporting – General Information Form." Modifications to the Program made by the Town will be done in accordance with the General Permit requirements described in Section 1.4.

| 1.4 Annual Reporting – General Information Form | |
|---|---|
| ➢ The BMPs described in Section 3 of this Program Plan/Annual Report are the stormwater activities that the Town of Christiansburg plans to undertake during the remainder of the permit cycle.<br>➢ The Town does not rely on another entity to implement portions of their MS4 Program Plan<br>➢ Completed Annual Reporting Forms for each BMP in Section 3 provide an assessment of the appropriateness of each BMP, progress towards achieving each measurable goal, and results of collected information analyzed for appropriate assessments and effectiveness of the BMP.<br>➢ See the updated Outfall Inventory in Appendix B for new MS4 outfalls that came online during the reporting year. Note that associated drainage areas will be provided per the schedule in BMP 3.1. | |
| ➢ Did modifications to the responsible individual of any program role or responsibility or specific BMP included in the Program occur during the reporting year? (yes/no) | ☐ Yes<br>☒ No |
| If yes, list modifications (provide BMP # to reference modification rationale): N/A, the responsible individual did not change since the previous annual report. | |
| ➢ Based on a review of the reporting forms completed for the reporting year within Section 3 of this Program Plan, does the Town finds itself compliant with the permit conditions (yes/no): | ☒ Yes, the Town is compliant<br>☐ No (see below) |
| If no, listed below are additional BMPs and/or changes made to BMPs or measurable goals for any of the MCMs, including steps to address any deficiencies (Refer to Section 1.5):<br>N/A, the Town finds itself compliant. | |
| ➢ Does the Town's MS4 directly discharge to waters that are identified as impaired in the 2010 § 305(b)/303(d) Water Quality Assessment Integrated Report? (yes/no) | ☒ Yes<br>☐ No |
| If yes, list the impaired waters and pollutant impairment: Slate Branch and Crab Creek (Also see BMP 3.1 Annual Reporting Form) | |
| ➢ Based on the water quality issues identified in BMP 1.2 and impairments identified above, does a review of the effectiveness of the BMPs listed in the program indicate they are appropriate? (yes/no) | ☒ Yes<br>☐ No |
| Explain why they are effective for the water quality issues identified in BMP 1.2 and listed impairments or identify potential modifications if not effective: BMPs are effective, including BMP 1.2. since they incorporate education and practices to address the pollutants of concern for the impairments (i.e. sediment and bacteria). | |

## 1.5 Program Modifications

Modifications to the MS4 Program may occur throughout the life of this Program Plan as part of an iterative process to reduce the pollutant loadings and to protect water quality. Modifications will most often be made when a BMP is deemed ineffective, based on reporting for the "Measure of Effectiveness Forms" for each BMP in Section 3. When a BMP is determined ineffective, updates and modifications to the MS4 Program must be made in accordance with the following procedures:

- Adding (but not eliminating or replacing) BMPs may be made by the Town at any time. Additions shall be reported as part of the annual report in the "Annual Reporting – General Information Form" in Section 1.4.
- Updates and modifications to specific standards and specifications, schedules, operating procedures, manuals, checklists, and other documents routinely evaluated and modified are permitted provided that the updates and modifications are done in a manner that:
    - Is consistent with the conditions of the General Permit;
    - Follow any public notice and participation requirements established in the General Permit; and
    - Are documented in the annual report in the "Annual Reporting – General Information Form" in Section 1.4.
- Replacing, or eliminating without replacement, any ineffective or infeasible strategies, policies, and BMPs with alternate strategies, policies, and BMPs may be requested at any time. Such requests must include the following:
    - An analysis of how or why the BMPs, strategies, or policies are ineffective or infeasible, including cost prohibitive;
    - Expectations on the effectiveness of the replacement BMPs, strategies, or policies;
    - An analysis of how the replacement BMPs are expected to achieve the goals of the BMP's to be replaced;
    - A schedule for implementing the replacement BMPs, strategies, and policies;
    - An analysis of how the replacement strategies and policies are expected to improve the Town's ability to meet the goals of the strategies and policies being replaced; and
    - Requests or notifications made in writing to the Department and signed by a principle executive officer or a duly authorized representative; and
    - The Town follows the public involvement requirements identified in the General Permit.

## 2.0 SCHEDULE

As discussed in Section 1, each BMP described in Section 3 of the Program Plan includes an implementation schedule. Some of the BMPs require supplemental actions to be taken to assist in the development or implementation of the BMP. Table 1 lists some of these actions with a summary of dates critical for assuring compliance with the permit. The Table is not intended to provide schedules for Program BMP implementation; but only to assist with Program Plan implementation.

*Table 1. Summary of critical items and deadlines for program implementation.*

| BMP | Necessary Action | Due date |
|---|---|---|
| 2.2 | Public participation activities | 4x annually |
| 2.1 | Post Annual Report on website | 30 days after submittal annually |
| 6.3a | Staff training on pollution prevention | Annually |
| 1.1, 1.2 | Provide for public participation for education and outreach plan | June 20, 2016 |
| 1.2 | Public Education/Outreach Plan | **Complete** |
| 3.1 | Notification of MS4 Interconnections | As necessary |
| 3.3 | Develop IDDE Program Manual | **Complete** |
| 6.3a | Written Training Program (see BMP 6.3a) | **Complete** |
| 6.2 | Identify high priority areas (see BMP 6.2) | **Complete** |
| 5.3 | Post-construction SWM Inspection/Maintenance Program Manual | **Complete** |
| 3.4, 6.1 | Good Housekeeping/Pollution Prevention Program Manual | **Complete** |
| 1.2, 3.4, 4.2 | Website postings (see BMPs for details) | **Complete** |
| 6.3b, 6.5 | Good housekeeping contract language for municipal contractors | |
| SC.1 & 2 | Crab Creek E. Coli and Sediment TMDL | |
| SC.4 & 5 | Upper Roanoke River E.coli & Sediment TMDL | |
| 3.3 | Methodology for prioritizing outfalls | July 1, 2016 |
| SC.3 | Roanoke (Staunton) River PCBs Action Plan | |
| 3.1 | Storm sewer mapping/information table | |
| 5.2 | Update BMP database attributes | |
| 6.2 | High-priority facility SWPPP implementation | July 1, 2017 |

## 3.0 PROGRAM PLAN BEST MANAGEMENT PRACTICES

Section 3 includes the BMPs that the Town will implement to meet the requirements for each MCM and the applicable Special Conditions described in the General Permit.

### 3.1 Minimum Control Measure BMPs

| **BMP 1.1 Public Participation for Public Education and Outreach Plan (Section II B.1.c.4)** |
|---|
| **Description:** The current Public Education and Outreach Plan (PEOP) was limited to comment from City staff and information from other MS4 public surveys. The Town will provide for participation from the Christiansburg public with a survey distributed to households. The survey will be developed to assess the Town's knowledge regarding stormwater issues with the intent of assisting with the selection, or confirmation, of high priority water quality issues in the PEOP. Opportunity to provide written comment will be provided with the survey.<br><br>**Necessary documentation for implementation:** (1) Public Survey; (2) Public Survey results<br><br>**Responsible individuals for implementation:** Town Engineer<br><br>**Objectives and expected results in meeting measurable goals:** The objective is to include the public in the selection of water quality issues identified in the Town's PEOP.<br><br>**Implementation schedule**: The public survey will be distributed in the Spring of 2016.<br><br>**Method to determine effectiveness:** Effectiveness will be measured by the number of individuals responding to the survey and the incorporation of survey results into the PEOP. |

| **BMP 1.1 Annual Reporting Form**<br>(Completed once during the development of the Public Education and Outreach Plan) | |
|---|---|
| Dates that survey was distributed: | N/A - see BMP Schedule |
| Number of survey responses: | N/A - see BMP schedule |
| Description of how survey results and responses were incorporated into the Program: Description will be provided once results from the survey have been obtained and incorporated into the plan. | |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

**BMP 1.2 Develop Public Education and Outreach Program (Section II B.1.c.1-6)**

**Description:** Identify three (3) high priority water quality issues contributed to by the discharge of stormwater. For each issue identified, provide

- Rationale for the selection of each issue;
- An identification and estimate of population size of the target audience who is most likely to have significant impacts on the water quality issue; and
- A relevant message and educational and outreach materials to convey the message for distribution to the target audience.

**Necessary documentation for implementation:** (1) Survey results from BMP 1.1; (2) Written PEOP describing the rationale of the selection of each water quality issue, identification of target audience and estimated population, and relevant message; (3) Materials described in the Public Education and Outreach Plan such as pamphlets and training materials.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** Objectives are to convey relevant information to target audiences regarding water quality issues. The expected result is that the target audiences will have an increased knowledge of the water quality issues over time.

**Implementation schedule**: Outreach will be conducted a minimum of once a year to at least 20% of each target audience for each water quality issue identified in the PEOP. A public survey will be distributed in the Spring of 2016 and again in 2018 with questions to gauge the public's knowledge on stormwater issues.

**Method to determine effectiveness:** Results from the two public surveys will be assessed to determine the effectiveness of the message delivered for each water quality issue. The first survey will occur near the start of implementation of the PEOP and the second in the final year of the permit cycle. Effectiveness will be measured by using a scoring system to compare results of the two surveys to determine if public knowledge regarding each water quality issue has increased.

| **BMP 1.2 Annual Reporting Form** | | | | |
|---|---|---|---|---|
| Has a written Public Education and Outreach Plan been developed? | | | | ☒ Yes<br>☐ No |
| If no, explain, is yes, summarize below: N/A - Plan completed and provided with this report | | | | |
| Water quality Issue # | List of educational and outreach activities identified in Public Education and Outreach Plan Update | Target Audience | # people reached for reporting year | % of target audience to be reached in reporting year |
| 1 | Fats Oils and Greases (FOG) Flyer information mailer | ±9,400 households | ±9,400 households | ±100 |
| 2 | Maintain Town Stormwater Webpage | ±9,400 households | ±9,400 households | ±100 |
| 3 | Storm Drain Labeling | ±9,400 households | ±9,400 householdsold | ±100 |
| Water quality Issue # | List of educational and outreach activities that will be conducted during the ***next*** reporting year | Target Audience | # people to be reached for reporting year | Minimum % of target audience to be reached |
| 1 | Public education on stormwater impacts | ±9,400 households | > 1,880 households | 20 |
| 2 | Education on special water quality concerns (E.coli) | ±9,400 households | > 1,880 households | 20 |
| 3 | Staff Education on special water quality concerns (E.coli) | ±92 Staff | > 18 staff | 20 |

Necessary documents for implementation are not provided in the annual report, but will be retained for a minimum of 3 years and are available upon request.

| **Measure of Effectiveness Form** | |
|---|---|
| Average "knowledge" score from previous survey: | TBD - see BMP Schedule |
| Average "knowledge" score from latest survey: | TBD - see BMP Schedule |
| Has the "knowledge" score gone up over the permit cycle? | ☐ Yes (BMP effective)<br>☐ No (See below)<br>☒ N/A |
| If no, discuss potential ineffectiveness of the BMP (outreach materials, training approach, etc.). TBD - see BMP Schedule | |
| If no, Suggest BMP modifications to the Program Plan with rationale to increase effectiveness: TBD - see BMP Schedule | |

| **BMP 2.1 Public Involvement through web posting of MS4 Program information (Section II B.2.a.1-2)** |
|---|
| **Description:** The following documentation will be maintained on the Town's stormwater website:<br>• The latest version of this MS4 Program Plan<br>• The latest MS4 Annual Reports.<br><br>Public education and outreach materials developed for BMP 1.2 will include links to the Program Plan and Annual Reports.<br><br>**Necessary documentation for implementation:** (1) Town of Christiansburg MS4 Program Plan; (2) Town of Christiansburg MS4 Annual Reports; (3) Web address of posted materials; (4) Educational and outreach material from BMP 1.2<br><br>**Responsible individual for implementation:** Town Engineer<br><br>**Objectives and expected results in meeting measurable goals:** Objectives are to provide an opportunity to the public to review the Town's MS4 Program documentation. Expected results are an increase in public knowledge of the effects of stormwater runoff on water quality and BMPs implemented by the Town to improve water quality from stormwater runoff.<br><br>**Implementation schedule**: The Town's Program Plan and Annual Report are included in this single document. This document will be posted on the web page within 30 days of submittal to DEQ, or by November 1st of each year.<br><br>**Method to determine effectiveness:** Same as BMP 1.2. |

| **BMP 2.1 Annual Reporting Form** |
|---|
| Web link to the Town's Program Plan/Annual Report is provided below: |
| http://www.christiansburg.org/index.aspx?NID=481 |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

**BMP 2.2 Public participation (Section II B.1.b)**

**Description:** The Town of Christiansburg will participate, through promotion, sponsorship, or other involvement, in a minimum of four local activities annually.

**Necessary documentation for implementation:** (1) A list of public participation opportunities; (2) Documentation of participation for each activity.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to increase public participation to reduce stormwater pollutant loads; improve water quality; and support local restoration and clean-up projects, programs, groups, meetings, or other opportunities for public involvement. Measurable goals include a measure or estimation of the number of people that participate in each local activity.

**Implementation schedule**: Public participation will be conducted a minimum of four times a year.

**Method to determine effectiveness:** Effectiveness will be determined by successful public turn-out or exposure to each event. Selection of specific events may be modified from year to year based on opportunity, the potential impact of the audience that can be reached, and anticipated public turn-out.

| BMP 2.2 Annual Reporting Form | | | |
|---|---|---|---|
| Local activity | Type of participation (e.g. promotion, sponsorship, other) | Estimated # of people reached | Summary of documentation* that demonstrates participation |
| Kiwanis Wilderness Trail Festival | Booth promotion with exhibit to demonstrate all aspects of engineering department services, including stormwater related work | 7,500 | 7,500 attendance figure estimate from festival organizer, assume |
| NRV Home Builder's Association Home Expostion | Booth promotion with exhibit to demonstrate all aspects of engineering department services, including stormwater related work | 1,812 | 2,000 attendance figure reported by Expo Organizer |
| Fats Oils and Greases (FOG) Flyer information mailer | Informational Flyer containing FOG education and FOG reduction strategies, mailed to households | 9,400 | US Postal Service billing for 14,000 mailers sent |
| Storm Drain Marker Installation | Install Markers on 100 Inlets | Variable | See measure of effectiveness |

* Documentation is attached in Appendix A

| Measure of Effectiveness Form | |
|---|---|
| Local Activity (same as above) | Rationalization of effectiveness or ineffectiveness |
| Wilderness Trail | Effective - Assume 7,500 attendees included mainly residents that viewed booth information and/or spoke with staff |
| NRV Home Builder's Association | Effective - Attendees engaged staff and supplied information on problem areas around the locality. |
| FOG Flyer information | Effective - reaches all househalods served by Town water system annually, provided tips for reducing FOG |
| Storm Drain Marker Installation | Effective since individuals near a storm drain were educated as to where runoff is discharged |
| For an ineffective activity identified above, describe modifications to be made for next reporting year (e.g. different activity or different approach): N/A - Activities effective based on number of people directly or indirectly reached. | |

**BMP 3.1 Storm Sewer Map and Outfall Information Table (Section II B.3.a.1-5)**

**Description:** The Town of Christiansburg will maintain an accurate storm sewer system map and update the associated information table per Section II.B.3.a (1-5) of the General Permit. The map, at a minimum, will:

- Continue to Include the mapped location of all MS4 outfalls with a unique identifier that corresponds to the information table;
- Continue to include the name and location of all waters receiving discharges from Town's MS4 outfalls and the associated sixth order hydrologic unit code (HUC) from Virginia's 6th Order National Watershed Boundary Dataset; and
- Continue to be updated in the case of installation of new outfalls.

The information table, at a minimum, will:

- Continue to include a unique identifier for each outfall;
- Be updated to estimate acreage served by each outfall;
- Be updated to include the name of the receiving surface water and indication as to whether the receiving water is listed as impaired on the Virginia 2010 303(d)/305(b) list; and
- Be updated to name any applicable TMDL or TMDLs into which the outfall discharges.

The information table will be updated as new outfalls come on-line. The Town will notify downstream MS4s where applicable and in writing of any new or newly discovered interconnections that occur with new development. Interconnections include VDOT and Montgomery County.

**Necessary documentation for implementation:** (1) Storm sewer system map; (2) Outfall information table; (3) Written notification of new physical interconnections to the downstream MS4, where applicable.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to maintain an up-to-date map of the storm sewer outfalls that provides a tool for the Town's Illicit Discharge Detection and Elimination Program (see BMP 3.3). Expected results are that the mapping and the information table serves as a useful tool for tracking potential illicit discharges.

**Implementation schedule**: The storm sewer mapping and information table will be updated in accordance with the current general permit and as described above by June 30, 2017.

**Method to determine effectiveness:** Effectiveness will be determined based on its use as a tool for identifying illicit discharges.

| BMP 3.1 Annual Reporting Form | |
|---|---|
| **Storm Sewer System Information Table is available in Appendix B** | |
| Has the Information Table been updated per the current General Permit and as described in this BMP? (yes/no) | ☐ Yes<br>☒ No |
| If no, explain: See BMP schedule, will be completed consistent with the permit and BMP schedule. | |
| Notifications to interconnected MS4s | |
| ➢ During the reporting year, were any new outfalls installed or identified that physically interconnect to another MS4? (yes/no) | ☐ Yes<br>☒ No |
| If yes, has the interconnected MS4 received written notification from the Town regarding the interconnection? (yes/no or not applicable) | ☐ Yes<br>☐ No<br>☒ N/A |
| If yes, list the notified MS4 written notifications by providing the MS4 entity notified, date of notification, and location information of the interconnection): N/A - No new interconnections. | |
| If an interconnected MS4 was not notified of a new interconnection, please explain why and indicate when the notification will be provided: N/A - No new interconnections. | |

| Estimated drainage acreage to each HUC and impaired water | | |
|---|---|---|
| RU07 = 1020 acres<br>(Wilson Creek) | NE59 = 1525 acres<br>(Stroubles Creek) | RU05 = 63 acres<br>(Brake Branch) |
| NE58 = 5343 acres<br>(Crab Creek) | RU04 = 989 acres<br>(Elliott Creek) | NE56 = 0.40 acres<br>(Mill Creek) |

Necessary documents for implementation, including the outfall mapping, are not provided in the annual report, but will be retained for a minimum of 3 years and are available upon request.

| Measure of Effectiveness Form |
|---|
| If any potential illicit discharges were identified or reported (refer to reporting for BMP 3.2 and 3.3), was outfall mapping used to address the issue: N/A - Mapping was not necessary to identify the source of an illicit discharge during the reporting year. However, the BMP is expected to be effective in the case an illicit discharge source is unknown and must be tracked. |

**BMP 3.2 Prohibit non-stormwater discharges (Section II B.3.b)**

**Description:** The Town of Christiansburg prohibits non-stormwater discharges, including illegal dumping, into the storm sewer system through Chapter 16, Article IV of the Town Code (Illicit Discharges). Article IV prohibits illicit connections and discharges to the storm sewer system and establishes legal authority to inspect, conduct surveillance, and monitor to ensure compliance. The Article also gives the Town the authority to initiate enforcement actions and establishes enforcement penalties and for violations.

**Necessary documentation for implementation:** (1) Chapter 16, Article IV of the Town Code; (2) A list of any instances of violation and summary of actions taken by the Town; (3) Completed IDDE Tracking Forms, as provided in Appendix D of the Town's IDDE Program Manual.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to effectively prohibit non-stormwater discharge to the extent allowable under federal, state, or local law, regulation, or ordinance. Expected result is the appropriate use of enforcement actions to eliminate an illicit discharge, when necessary.

**Implementation schedule**: Implementation of Chapter 16, Article IV of the Town Code will continue with implementation consistent with the methods described in BMP 3.3.

**Method to determine effectiveness:** Effectiveness will be determined based on the elimination of reported or observed non-stormwater discharges. Effectiveness will also be based on implementation of the inspections, surveillance, monitoring, and enforcement procedures in response to reports.

| **BMP 3.2 Annual Reporting Form** |
|---|
| **Reported or observed non-stormwater discharges are provided in Appendix C.**<br>Information in Appendix C includes a memo for each reported or observed discharge, including:<br>• Date of violation the potential illicit non-stormwater discharge<br>• Location of the potential illicit non-stormwater discharge<br>• Description of the potential illicit non-stormwater discharge<br>• Necessary corrective or disciplinary action taken<br><br>* Note that subsequent reporting will utilize the IDDE Tracking Form in Appendix D of the Town's IDDE Program Manual instead of the memo format provided in Appendix C of this annual report. |

Necessary documents for implementation are not provided in the annual report, but will be retained for a minimum of 3 years and are available upon request.

| **Measure of Effectiveness Form** | |
|---|---|
| Number of potential illicit non-stormwater discharges reported or observed, as described in Appendix C: | 3 |
| Number of potential illicit non-stormwater discharges resolved, as described in Appendix C: | 3 |
| ➢ Is the number in the two boxes above is the same? (yes/no) | ☒ Yes (BMP effective)<br>☐ No (See below) |
| If no, based on information provided for non-resolved potential illicit non-stormwater discharges, describe any necessary modifications to the BMP to improve effectiveness in resolving potential illicit non-stormwater discharges: N/A - all reported potential illicit discharges resolved. | |

**BMP 3.3 Develop Illicit Discharge Detection and Elimination Procedures (Section II B.3.c, e)**

**Description:** The Town of Christiansburg will develop and implement an Illicit Discharge Detection and Elimination (IDDE) Program Manual that includes written procedures to detect, identify, and address non-stormwater discharges, including illegal dumping, to the small MS4. Procedures will include written dry weather field screening methodologies that incorporate field monitoring that provide:

- A schedule of field screening activities to ensure at least 50 outfalls are screened annually with outfalls selected for screening based on a prioritization based on land use, age of infrastructure, historical issues, or other appropriate characterization;
- Methodologies to collect information such as time since the last rain, the quantity of the last rain, site descriptions (e.g., conveyance type and dominant watershed land uses), estimated discharge, and visual observations (e.g., order, color, clarity, floatables, deposits or stains, vegetation condition, structural condition, and biology;
- A time frame upon which to conduct an investigation to identify and locate the source of any observed continuous or intermittent non-stormwater discharge prioritized based on potential hazard to human health;
- Methodologies to determine the source of all illicit discharges;
- Mechanisms to eliminate identified sources of illicit discharges including a description of the policies and procedures for when and how to use legal authorities;
- Methods for conducting a follow-up investigation in order to verify that the discharge has been eliminated; and
- A mechanism to track all investigations to document, at a minimum, the date(s) that the illicit discharge was observed and reported; the results of the investigation; any follow-up of the investigation; resolution of the investigation; and the date that the investigation was closed.

**Necessary documentation for implementation:** (1) Illicit Discharge Detection and Elimination (IDDE) Manual; (2) Outfall information table; (3) Completed outfall screening field forms, (4) Completed IDDE Tracking Forms, as provided in Appendix D of the Town's IDDE Program Manual.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to establish effective methods and procedures for detecting, identifying, and addressing non-stormwater discharges, including illegal dumping, into the storm sewer. Expected results are effective identification and response to illicit discharges identified during screening activities and those reported by the public.

**Implementation schedule**: The Town will screen at least 50 outfalls each year. Starting July 1, 2015, methods in the Town's IDDE Program Manual will be used to identify and follow-up from screening results, as necessary per the Town's IDDE Manual. Methodology for prioritizing outfalls will be developed and implemented by July 1, 2016.

**Method to determine effectiveness:** Effectiveness will be determined based on the percentage of the reported and identified non-stormwater discharges that are eliminated.

| **BMP 3.3 Annual Reporting Form** | |
|---|---|
| Outfall Screening Record Summary | |
| Total number of outfalls (refer to BMP 3.1): | 101 |
| Total number of outfalls screened during the reporting year: | 0 |
| Were at least 50 outfalls screened during the reporting year? (yes/no) | ☐ Yes (Objective achieved)<br>☒ No (Objective not achieved) |
| If 50 outfalls were not screened during the reporting year, explain why with a schedule to screen additional outfalls the following reporting year: All 101 known outfalls were screened in the previous permit reporting year, 2013-2014. In the 2014-2015 permit report the prior year's reports were entered into an Access Database for future analysis and prioritization of inspections. In the current 2015-2016 permit year the Town plans to inspect 50 outfalls prioritized by a review of the 2013-2014 inspections. | |
| Were the outfalls screened selected based on prioritization criteria (land use, age of infrastructure, historical issues, etc.)? (yes/no) | ☐ Yes (Objective achieved)<br>☒ No (Objective not achieved) |
| If no, explain why with a schedule for prioritizing outfalls: The entry of the inspection data into an access database will provide for future efficient prioritization of outfall inspections. All outfalls were screened the previous reporting year. | |
| Were follow up investigations performed for all outfalls where screening characterized the outfall as potential, suspected or obviously having an illicit discharge? (yes/no) | ☐ Yes (Objective achieved)<br>☒ No (See below)<br>☐ Partially (See below) |
| If no, explain why with a schedule for investigating outfalls characterized as potential, suspect or obvious for being subject to an illicit discharge: The follow up inspection will be scheduled in the 2015-2016 permit year | |
| **Screening results are summarized in Appendix D.**<br>**Refer to Appendix C for detail of any follow-up actions necessary based on screening results.** | |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

| **Measure of Effectiveness Form** | |
|---|---|
| Number of outfalls characterized as potential, suspect or obvious for an illicit discharge that received a follow up investigations: | 0 |
| Number of investigations that were closed: | 0 |
| Based on the percentage of investigations closed, provide rationale for the effectiveness or ineffectiveness of the BMP. If ineffective, describe modifications to the BMP to improve efficiency: The entry of the inspection data into an access database will provide for future efficient prioritization of outfall inspections | |

**BMP 3.4 Facilitate public reporting of illicit discharges and provide response (Section II B.3.d)**

**Description:** The Town will promote, publicize, and facilitate public reporting of illicit discharges into or from the Town's MS4 with information describing an illicit discharge and contact information on the Town's stormwater website and with inclusion of educational material described in BMP 1.2. The Town will investigate all reports using methods and procedures described in the Town's IDDE Program Manual described in BMP 3.3. Tracking of reports will be recorded in the IDDE Tracking form in Appendix D of the IDDE Program Manual.

**Necessary documentation for implementation:** (1) Web address of posted material; (2) Educational material with illicit discharge reporting information; (3) Completed IDDE Tracking Form for each incident.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to first educate the public to recognize an illicit discharge and provide contact information that allows for the reporting of an observed illicit discharge. The ultimate objective is to investigate and eliminate reported illicit discharges.

**Implementation schedule**: Illicit discharge material and contact information will be placed on the website by July 1, 2015. Response to illicit discharge reports will be on-going, occurring in response to reports per the IDDE Manual.

**Method to determine effectiveness:** Effectiveness will be measured by the percentage of illicit discharge reports that are closed (as will be documented in the IDDE Tracking Forms).

| **BMP 3.4 Annual Reporting Form** |
|---|
| Illicit Discharge Reports |
| **Refer to reporting for BMP 3.2 for follow-up actions necessary based on reported illicit discharges.** |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

| **Measure of Effectiveness Form** | |
|---|---|
| Total # of potential illicit discharges reported by the public for the reporting year: | 3 |
| Total # of potential illicit discharge reported by the public for the reporting year that have been resolved: | 3 |
| Percentage of reported illicit discharge instances that have been resolved: | 100 |
| Were all potential illicit discharge reports resolved? (yes/no) | ☒ Yes (BMP Effective)<br>☐ No (See below) |
| If no, provide explanation of why reports were not resolved and, if necessary, modifications needed for the BMP to improve effectiveness: N/A - All reports were resolved. | |

**BMP 4.1 ESC compliance for land disturbance activities (Section II B.4.a-c3, c5 c6, e1-6)**

**Description:** Regulated land disturbance activity in the Town of Christiansburg is subject to Chapter 16, Article II of the Town Code (Erosion and Sediment Control). Regulated land disturbance activities are those defined in §62.1-44.15:51 of the Code of Virginia that result in the disturbance of 10,000 square feet or greater and those on individual residential lots or sections of residential developments being developed by different property owners and where the total land disturbance of the residential development is 10,000 square feet or greater. The Town utilizes an agreement in lieu of a plan as provided in §62.1-44.15:55 of the Code of Virginia for this category of land disturbances.

Section 16-25 of Article II requires a land disturbance permit from the Town prior to engaging in land disturbance activity that is conditioned on an approved erosion and sediment control plan or an agreement in lieu of a plan in accordance with the Erosion and Sediment Control Law (§62.1-44.15:51 et seq. of the Code of Virginia). Plans shall be compliant with the minimum standards identified in 9VAC25-840-40 of the Erosion and Sediment Control Regulations.

Section 16-27 of Article II provides legal authority for the Town to conduct inspections with an inspector holding an ESC Inspector's Certification from DCR/DEQ. Inspections will be conducted:

- ✓ Upon initial installation of erosion and sediment controls;
- ✓ At least once during every two-week period;
- ✓ Within 48 hours of any runoff-producing storm event; and
- ✓ Upon completion of the project and prior to the release of any applicable performance bonds.

Section 16-24 of Article II also provides legal authority for the Town to require compliance with the approved plan and require changes to an approved plan when an inspection finds that the approved plan is inadequate.

**Necessary documentation for implementation:** (1) Chapter 16, Article II of the Town Code; (2) ESC Plan(s) approved by the Town, including procedures and documents used in plan review (e.g. checklists); (3) Documentation of ESC Inspector Certification; (4) Completed ESC Inspection Forms for each regulated project; (5) Notice to Comply and/or Stop Work Orders documentation and documentation of follow-up actions.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to ensure ESC plans are prepared and approved according to ESC Laws and Regulations, inspections are performed as specified in the regulations, and that correction or enforcement, when appropriate, occurs when inspections find deficiencies. The expected result is that ESC is effective at all regulated land disturbance activities in the Town.

**Implementation schedule**: The implementation of this BMP will be on-going with all regulated land disturbance activities in the Town that disturb greater than 10,000 square feet.

**Method to determine effectiveness:** Effectiveness will be measured by the number of enforcement actions (notice to comply or stop-work order).

| BMP 4.1 Annual Reporting Form | |
|---|---|
| Total sites for reporting year subject to Chapter 16, Article II of the Town Code (Erosion and Sediment Control) and equal to or greater than 10,000 sf, including those issued an agreement in lieu of a plan. | 1,314 (including agreement in lieu of plan) |
| Did the Town implement and enforce Article II of the Town Code (Erosion and Sediment Control), requiring an approved plan or agreement in lieu of plan, where appropriate, prior to commencement of land disturbance for all sites included in the number above? (yes/no) | yes |
| If no, explain: N/A - The Town implements and enforces the ESC Program as a VESCP Authority. | |
| Did the Town inspect land-disturbing activities for compliance with an approved erosion and sediment control plan or agreement in lieu of a plan in accordance with the ESC Laws and Regulations minimum standards? (yes/no) | yes |
| If no, explain specific instances per project: N/A - The Town implements and enforces the ESC Program as a VESCP Authority. | |
| If yes, summarize enforcement actions taken: During the reporting year: 1 notice to comply was issued, 1 stop work order and 1 Notice of Corrective Action required. | |
| If yes, were the Town's Inspector's DEQ Certified ESC Inspectors? (yes/no) | yes |

Necessary documents for implementation are not provided in the annual report, but will be retained for a minimum of 3 year and are available upon request.

| Measure of Effectiveness Form | |
|---|---|
| For the sites subject to Chapter 16, Article II of the Town Code (Erosion and Sediment Control), do the number of enforcement actions (notice to comply or stop work orders) seem excessive? | ☒ No (BMP effective)<br>☐ Yes (See below)<br>☐ N/A (No activities) |
| Discuss the nature of excessive enforcement action issues. Provide rationale that determines if the BMP is effective or ineffective. If ineffective, what modifications could improve effectiveness?<br>The Town's ESC Program is implemented and enforced and effective at minimizing sediment transport from construction sites. | |

**BMP 4.2 Receive and respond to complaints regarding land disturbing activity (Section II B.4.c4)**

**Description:** The Town will promote to the public through the stormwater webpage information on land disturbance erosion and sediment controls and provide a contact number for reporting complaints regarding regulated land disturbing activities. The Town will initiate investigation of all reports within 72-hours and address the issue with the construction site operator by requiring maintenance to ESC controls, or plan modifications, as necessary, in accordance with BMP 4.1.

**Necessary documentation for implementation:** (1) Web address of posted material; (2) Land disturbance complaint/report tracking record with date, description, and resolution for each complaint (the Town will utilize the IDDE Tracking Form in Appendix D of the Town's IDDE Program Manual for documentation) .

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to educate the public to understand the purpose of ESC controls on a land disturbance activity, recognize the off-site impacts resulting from potential failure of ESC controls, and provide contact information that allows for the reporting of an off-site impact and ultimately the resolution of a reported issue.

**Implementation schedule**: Information regarding ESC controls for land disturbance activities and for reporting complaints will be placed on the website by June 1, 2016.

**Method to determine effectiveness:** Effectiveness will be measured by the percentage of resolved complaints that are reported by the public.

| **BMP 4.2 Annual Reporting Form** | | | |
|---|---|---|---|
| The total number of complaints from the public related to land disturbance activity during the reporting year: | | | 0 |
| Complaint # | Date of complaint | Description of complaint | Resolution of the investigation |
| N/A - no complaints | N/A | N/A | N/A |
| N/A - no complaints | N/A | N/A | N/A |
| N/A - no complaints | N/A | N/A | N/A |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

| **Measure of Effectiveness Form** | |
|---|---|
| Were all complaints resolved? | ☐ Yes (BMP effective)<br>☐ No (See below)<br>☒ N/A (no complaints) |
| Describe the reason for any unresolved complaint and any necessary program modifications to ensure complaints are resolved in the future. If no modifications are needed, provide rationale: N/A - no complaints | |

**BMP 4.3 Ensure land disturbance activities secure VSMP General Permit (Section II B.4.c.7, d)**

**Description:** Regulated land disturbance activities are subject to Chapter 16, Article III of the Town Code (Stormwater Management Ordinance). Chapter 16 of the Town Code requires evidence that the General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR 10 General Permit) is obtained prior to the issuance of a land disturbance permit. The VAR10 General Permit and Section 16-54 of Article III requires a Pollution Prevention Plan for regulated land disturbances equal to or greater than an acre. Through the development and implementation of the Pollution Prevention Plan, appropriate controls to prevent non-stormwater discharges such as wastewater, concrete washout, fuels and oils, and other illicit discharges will be implemented. ESC inspections described in BMP 4.1 will include inspection components that ensure implementation of Pollution Prevention Plans.

**Necessary documentation for implementation:** (1) Chapter 16, Article III of the Town Code; (2) Project-specific Pollution Prevention Plan (maintained within SWPPPS on construction sites by the site operator); (3) Record of evidence of General Permit coverage for regulated construction activity.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objectives are: (1) To provide a mechanism for assuring that VSMP General Permit coverage is obtained for all land disturbances exceeding 1-acre. The expected result is that coverage is obtained for all applicable land disturbances prior to commencement of the activity; (2) Ensure development and implementation of Pollution Prevention Plans through the contractor's requirement to develop and implement the SWPPP per the VAR10.

**Implementation schedule**: The Town will continue verifying regulated land disturbances greater than or equal to 1-acre will obtain a VAR10 General Permit prior to commencement of land disturbance activity.

**Method to determine effectiveness:** Effectiveness will be determined based on: (1) all regulated land disturbance activity operating under VSMP General Permit coverage and a SWPPP, (2) the number of violations related to pollution prevention from construction activity as identified in the reporting for BMP 3.2, 3.3, 3.4, and 4.2.

| BMP 4.3 Annual Reporting Form | |
|---|---|
| The total number of regulated land disturbance activities during the reporting year requiring a VAR10 General permit (greater than or equal to 1-acre). | 27 |
| Did the Town ensure each regulated land disturbance activity secured coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR 10 General Permit)? (yes/no) | yes |
| If no for any of the activities, explain: N/A - The Town verifies regulated activities have VAR10 coverage. | |
| Did the Town verify that project-specific SWPPPs were developed and maintained on-site for each activity? (yes/no) | yes |
| If no, for any activity, explain: N/A - The Town verifies SWPPPs on-site at the preconstruction meeting and during inspections. | |
| Did any illicit discharge reports stem from any of the regulated activities? (also see reporting for BMPs 3.2, 3.3, 3.4, and 4.2) (yes/no) | yes |
| If yes, for any activity, explain: 1 illicit discharge - The Town notified the VAR10 Operator of the duty to notify DEQ and the Operator did so. E SC adjustments were made to bring the project back in compliance. | |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

| Measure of Effectiveness Form | |
|---|---|
| Do all regulated activities have VAR10 permit coverage and SWPPP? | ☒ Yes (BMP effective)<br>☐ No (See below)<br>☐ N/A (No activities) |
| Were any instances of an illicit discharges from any regulated activity resolved? (also see reporting for BMPs 3.2, 3.3, 3.4, and 4.2) | ☒ Yes (BMP effective)<br>☐ No (See below)<br>☐ N/A (No incidents) |
| If no was answered for either effectiveness question, explain any necessary BMP modifications to improve implementation of the goals of the BMP? N/A - BMP Effective | |

**BMP 5.1 Compliance to post-construction stormwater management regulation (Section II B.5.a, b. d.1,2)**

**Description:** New development and development on prior developed lands in the Town of Christiansburg is subject to Chapter 16, Article III of the Town Code (Stormwater Management Ordinance) that ensure post-construction stormwater management (SWM) for all regulated land disturbance activities over 10,000 square feet through plan approval by the Town. Approval from the Town will ensure the SWM Plan has been prepared per the VSMP Regulations that, in part, require that stormwater runoff controls:

- are designed and installed in accordance with the appropriate water quality and water quantity design criteria as required in Part II (9VAC25-870-40 et seq.) of 9VAC25-870; and
- Have an inspection and maintenance plan recorded at the local courthouse.

The Town will retain a copy of each SWM facility inspection and maintenance plan from the approved stormwater management plan for proposed stormwater management facilities to be used with the implementation of BMP 5.3. A stormwater facility maintenance agreement will be required to be recorded prior to plan approval.

**Necessary documentation for implementation:** (1) Town approved SWM Plans and Calculations (maintained on active construction sites); (2) Material used for plan review (e.g. checklists, BMP Clearinghouse Standards and Specifications); (3) SWM Facility Inspection and Maintenance Plans for approved projects with SWM facilities; (4) Proof of recordation of inspection and maintenance agreements.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to ensure regulated projects are in compliance with the VSMP Stormwater Management Regulations. The expected goal is that all regulated projects have Town approved SWM Plans with recorded SWM facility inspection and maintenance plans.

**Implementation schedule**: The implementation of this BMP began July 1, 2014 with the adoption of Chapter 16, Article III of the Town Code.

**Method to determine effectiveness:** Effectiveness will be measured by: (1) all regulated land disturbance activities having a Town approved SWM Plan; and (2) all stormwater management facilities with recorded inspection and maintenance plans and/or agreements, where applicable.

| BMP 5.1 Annual Reporting Form | |
|---|---|
| Total sites for reporting year subject to Chapter 16, Article III of the Town Code (Stormwater Management Ordinance) and equal to or greater than 10,000 sf, including those issued an agreement in lieu of a plan. | 32 |
| Does each activity have an approved SWM plan per the BMP? (yes/no) | yes |
| If no, explain specific instances per project: N/A - The Town implements and enforces the SWM Program as a VSMP Authority. | |
| Does the Town have written internal policies and procedures to implement and enforce Chapter 16, Article III of the Town Code (Stormwater Management Ordinance)? (yes/no) | yes |
| If no, explain: N/A - The Town implements and enforces the SWM Program as a VSMP Authority. | |
| Was a BMP inspection and maintenance plan recorded at the local courthouse for each project that included a SWM BMP? (yes/no) | yes |
| If no, explain specific instances per project: N/A - The Town implements and enforces the SWM Program as a VSMP Authority. | |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

| Measure of Effectiveness Form | |
|---|---|
| Do all sites subject to the Stormwater Management Ordinance have an approved plan? | ☒ Yes (BMP effective)<br>☐ No (See below) |
| Do all sites subject to the Stormwater Management Ordinance have a recorded inspection and maintenance agreement? | ☒ Yes (BMP effective)<br>☐ No (See below) |
| If no was answered for either effectiveness question, explain any necessary BMP modifications to improve implementation of the goals of the BMP? N/A - BMP effective. | |

**BMP 5.2 Stormwater management facility tracking and reporting (Section II B.5.e)**

**Description:** The Town will maintain an updated electronic database in Excel format of all known stormwater management (SWM) facilities that discharge into the MS4. The database will include:

- The unique SWM facility ID #;
- The stormwater management facility type;
- A general description of the facility's location, including the address or latitude and longitude;
- The acres treated by the facility, including total acres, as well as the breakdown of pervious and impervious acres;
- The date the facility was brought online (MMYYYY);
- The sixth order hydrologic unit code (HUC) in which the stormwater management facility is located;
- The name of any impaired water segments within each HUC listed on the 2010 § 305(b)/303(d) Water Quality Assessment Integrate Report to which the stormwater management facility discharges;
- Whether the stormwater management facility is operator-owned or privately-owned;
- The date of the last inspection.

Upon acceptance of a newly constructed stormwater management facility, the facility will be included within the database.

**Necessary documentation for implementation:** (1) Updated SWM Tracking and Reporting Excel database; (2) Completed inspection checklist forms (see BMP 5.3)

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to maintain an updated record of all of the SWM facilities. The expected result is that the list will be utilized to assist with implementation of BMP 5.3 and will be maintained as new SWM facilities come online.

**Implementation schedule**: The maintenance of a BMP database will be on-going. Additional information required by the current MS4 General Permit, such as the impervious/pervious breakout of the drainage area to each BMP, will be completed by July 1, 2016.

**Method to determine effectiveness:** Effectiveness will be measured by the completeness of the annually reported database.

| **BMP 5.2 Annual Reporting Form** | |
|---|---|
| ➢ The Stormwater Management Facility database is provided electronically in Excel as an enclosure with this annual report and also provided in Appendix E. | |
| Did any new SWM facilities come online during the reporting year? (yes/no) | ☒ Yes ☐ No |
| If yes, was the electronic database updated? (yes/no) | ☒ Yes ☐ No<br>☐ N/A (No new facilities) |
| If the database was not updated, explain why and describe any necessary modification to ensure the database is update when new facilities come online: N/A - Database updated | |

| **Measure of Effectiveness Form** | |
|---|---|
| Is the database complete to include all of the attributes for each new BMP described in this BMP and as required by the MS4 General Permit? | ☒ Yes (BMP effective)<br>☐ No (See below)<br>☐ N/A (No facilities) |
| Describe the reason for that the database is incomplete and provide rationale that determines whether or not the BMP needs to be modified to ensure completion of the data base: The Database contains all current BMP information for BMPs coming online in the permit year. Data such as drainage area, % impervious, and "impaired waters discharge to" information continues to be updated on BMPs from previous years. The database will be completed per the BMP schedule. | |

**BMP 5.3a Inspection, operation, and maintenance of Town-owned SWM facilities (Section II B.5.c.2, d.3, 5)**

**Description:** The Town will perform long-term inspections and maintenance on all Town-owned stormwater facilities utilizing the inspection and maintenance plans obtained from implementation of BMP 5.1. Where inspection and maintenance plans are not available from approved SWM plans, the Town will utilize BMP-specific inspection and maintenance instruction from the Town's Post-Construction Stormwater Management Program Manual. Inspections will be performed either:

- As dictated on the schedule provided on the inspection and maintenance plans; or
- A minimum of once annually, whichever are the more frequent criteria.

Inspections will be performed using the written procedures in the Town's Post-Construction Stormwater Management Program Manual. BMP-type specific inspection and maintenance checklists provided in the Program Manual lists potential issues and methods to address each issue. Necessary maintenance identified during inspections will be conducted in a timely manner as indicated on the checklist or no later than the next scheduled inspection.

**Necessary documentation for implementation:** (1) BMP Database described in BMP 5.2; (2) BMP-specific Inspection and Maintenance Plan, if available; (3) The Town of Christiansburg Post-Construction Stormwater Management Program Manual; (4) Completed BMP Inspection Forms; (5) Documentation of maintenance performed, where necessary

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to ensure the intended function of all Town-owned SWM facilities is maintained through long-term inspections and maintenance. The expected result is completed inspection forms and timely maintenance, when necessary.

**Implementation schedule**: The implementation of this BMP will be on-going, with the procedures specified in this BMP and the Town's Post-Construction Stormwater Management Program Manual.

**Method to determine effectiveness:** Effectiveness will be measured by: (1) completion of required inspections, as scheduled, and (2) timely maintenance once a maintenance issue is identified during inspections.

| **BMP 5.3 Annual Reporting Form** |
|---|
| Stormwater Management Facility Inspection Record* |
| The following information is provided in the SWM Facility database described in BMP 5.2:<br>• SWM Facility ID<br>• Inspection Schedule (e.g. monthly, quarterly, annually)<br>• Dates of inspection(s) for the reporting year<br>• If inspected, any identified necessary maintenance per inspection form<br>• If maintenance is necessary, type and date the maintenance was performed |

* Provided as electronic database with annual report in Excel format and hard copy as Appendix E. This BMP applies to those identified as "public" in the database.

| **Measure of Effectiveness Form** | |
|---|---|
| ➢ Do dates in the database indicate that inspections were performed for Town-owned (public) BMPs at least once within the reporting year? | ☒ Yes (BMP effective)<br>☐ No (See below) |
| Describe the reason for inspections that were not performed on Town-owned BMPs and provide rationale that determines whether or not the BMP needs to be modified to ensure completion of inspections: N/A - Inspections performed | |
| ➢ Do dates in the database indicate that maintenance was performed, where necessary and in a timely manner? | ☐ Yes (BMP effective)<br>☒ No (See below) |
| Describe the reason maintenance was not performed on Town-owned BMPs in a timely manner (e.g. minor repair needed that does not affect function of the facility) and provide rationale that determines whether or not the BMP needs to be modified to ensure completion of inspections: Routine and non-routine maintenance occurs on Town owned BMPs as needed but the database has not been utilized by Public Works to schedule maintenance. PW will review the database in the future. | |

**BMP 5.3b Inspection, operation, and maintenance of privately-owned SWM facilities (Section II B.5.c.1, d.3, 5)**

**Description:** The Town will ensure long-term operations and maintenance of all privately-owned stormwater facilities utilizing the maintenance agreements and inspection and maintenance plans obtained from implementation of BMP 5.1. Where inspection and maintenance plans are not available from approved SWM plans, the Town will utilize BMP-specific inspection and maintenance instruction from the Town's Post-Construction Stormwater Management Program Manual. Inspections of all privately owner stormwater BMPs will be performed by the Town at least once during every permit cycle (once per 5-years). Inspection for each facility may be satisfied by either:

- A field inspection conducted by the Town using the written procedures and checklists in the Town's Post Construction Stormwater Management Program Manual; or
- Documentation of an inspection conducted by the Owner or designee, provided the inspection was performed by a DEQ Certified SWM Inspector.

Chapter 16, Article III of the Town Code (Stormwater Management Ordinance) requires maintenance, inspection and repair of stormwater management facilities, where necessary.

**Necessary documentation for implementation:** (1) BMP Database described in BMP 5.2; (2) BMP-specific Inspection and Maintenance Plan, if available; (3) The Town of Christiansburg Post-Construction Stormwater Management Program Manual; (4) Documentation of inspections and maintenance performed, where necessary.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to ensure the intended function of all privately-owned SWM facilities is maintained through long-term inspections and maintenance. The expected result is completed inspection forms and timely maintenance, when necessary, in accordance with the schedule described in the description above.

**Implementation schedule**: The implementation of this BMP will be on-going, with the procedures specified in this BMP and the Town's Post-Construction Stormwater Management Program Manual beginning July 1, 2014.

**Method to determine effectiveness:** Effectiveness will be measured by: (1) Completion of required inspections, as scheduled, and (2) timely maintenance once a maintenance issue is identified during inspections.

| **BMP 5.3 Annual Reporting Form** |
|---|
| Stormwater Management Facility Inspection Record* |
| The following information is provided in SWM Facility database described in BMP 5.2:<br>• SWM Facility ID<br>• Inspection Schedule (e.g. monthly, quarterly, annually)<br>• Dates of inspection(s) for the reporting year<br>• If inspected, any identified necessary maintenance per inspection form<br>• If maintenance is necessary, type and date the maintenance was performed |

* Provided as electronic database with annual report in Excel format and hard copy as Appendix E. This BMP applies to those identified as "private" in the database.

| **Measure of Effectiveness Form** | |
|---|---|
| ➢ Do dates in the database indicate that inspections were performed for at least 20% of the privately owned BMPs as necessary for each for the reporting year to achieve the 5-year objective? | ☒ Yes (BMP effective)<br>☐ No (See below) |
| If less than 20% of privately-owned BMPs were inspected during the reporting year, provide a schedule to ensure 100% can be inspected prior to the end of the permit cycle (July 1, 2018): N/A - Inspections performed | |
| ➢ Where inspection resulted in the identification of required maintenance, has the Town notified the entity responsible of the maintenance needs with reference to the Stormwater Management Ordinance and a specified timeframe for completing the maintenance? | ☐ Yes (BMP effective)<br>☒ No (See below) |
| If the entity responsible for maintenance has not been notified, explain: The Town will use the BMP inspection reports to notify private BMP Owners of maintenqnce needs in the 2015-2016 permit year. | |
| Have notified entities performed maintenance within the time period specified by the Town? | ☐ Yes (BMP effective)<br>☐ No (See below)<br>☒ N/A (No instances) |
| If yes to the previous question, was enforcement action taken? | ☐ Yes (BMP effective)<br>☐ No (See below)<br>☒ N/A (No instances) |
| If enforcement action was taken, did it resolve the issue? | ☐ Yes (BMP effective)<br>☐ No (See below)<br>☒ N/A (No instances) |
| If the issue was not resolved from enforcement action, described necessary modifications to the BMP to improve effectiveness: The Town will use the BMP inspection reports to notify private BMP Owners of maintenqnce needs in the 2015-2016 permit year and follow up as needed. | |

**BMP 6.1 Pollution Prevention Procedures for Operations & Maintenance Activities (Section II B.6.a)**

**Description:** The Town will develop and implement comprehensive written procedures for good housekeeping and pollution prevention for daily operations and equipment maintenance as described within the Town's Good Housekeeping and Pollution Prevention Program Manual. At a minimum the Program Manual includes procedures with the following goals:

- Prevent illicit discharge;
- Ensure the proper disposal of waste materials, including landscape waste;
- Prevent discharge of municipal vehicle wash water to the storm sewer without authorization under a separate VPDES permit;
- Prevent the discharge of wastewater to the storm sewer without authorization under a separate VPDES permit;
- Require BMPs to filter water pumped from utility construction and maintenance activities;
- Require BMPs to prevent pollutants in runoff from stored and stockpiled materials (e.g. soil stockpiles and salt storage);
- Prevent pollution discharge from leaking municipal automobiles and equipment;
- Ensure application of materials, such as pesticides, is conducted in accordance with manufacturer's specifications.

Effective implementation will be supported with site-specific Stormwater Pollution Prevention Plans (SWPPPs) for high-priority areas as described in BMP 6.2 and the employee training described in BMP 6.3.

**Necessary documentation for implementation:** (1) The Town of Christiansburg Good Housekeeping/Pollution Prevention Program Manual; (2) Site-specific SWPPPs; (3) Training documentation; (4) Completed SWPPP Site Evaluation forms (see BMP 6.2).

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to minimize or prevent pollutant discharges from Town operations and maintenance activities. The expected result is Town staff's adherence to the Town's Good Housekeeping/Pollution Prevention Manual resulting in minimal or no illicit discharges from municipal facilities and activities.

**Implementation schedule**: The Good Housekeeping/Pollution Prevention Manual is complete. Training will be provided biennially (annually while water quality issue #3 in BMP 1.2 is in place), with the initial training performed by July 1, 2015. Site-specific evaluations will be performed with the schedule described in BMP 6.2.

**Method to determine effectiveness:** Effectiveness will be measured by the results of the annual comprehensive site-specific compliance evaluations for high-priority facilities that will begin in the spring of 2016, as described in BMP 6.2. Measure of effectiveness for this BMP will be based on recurring issues identified during the site-specific evaluations.

| BMP 6.1 Annual Reporting Form | |
|---|---|
| Good Housekeeping/Pollution Prevention Manual | |
| Has a Good Housekeeping/Pollution Prevention Manual been developed? (yes/no) | ☒Yes ☐No |
| *** See BMPs 6.2 and 6.3 for additional reporting. *** | |

| Measure of Effectiveness Form |
|---|
| *** See BMP 6.2 for measure of effectiveness information. *** |

**BMP 6.2 Stormwater Pollution Prevention Plans (Section II B.6.b)**

**Description:** The Town will implement site-specific Stormwater Pollution Prevention Plans (SWPPPs) for Town owned properties that have been identified as "high-priority" facilities according to Section II B.6.b.2 of the General Permit.

For each high-priority facility, a SWPPP will be developed to include:

- Mapping that identifies all outfalls, direction of flows, existing source controls, and receiving water bodies;
- A discussion and checklist of potential pollutants and pollutant sources;
- A discussion of all potential non-stormwater discharges;
- Written procedures, or reference to written procedures, designed to reduce and prevent pollutant discharge;
- A description of the applicable training described in BMP 6.3;
- Procedures to conduct an annual comprehensive site compliance evaluation; and
- An inspection and maintenance schedule for site specific source controls. The date of each inspection and associated findings and follow-up shall be logged in each SWPPP.

The SWPPP will provide instruction for updates, as necessary, to reflect changes on the respective site, modifications to operations and maintenance procedures, or short-comings resulting in a reportable spill, as defined in the Town's Good Housekeeping/Pollution Program Manual. Inspection forms will be completed in accordance with the prescribed schedule within the SWPPP and maintained on file with the on-site SWPPP.

**Necessary documentation for implementation:** (1) The Town's Good Housekeeping/Pollution Prevention Manual; (2) Site-Specific SWPPPs for high-priority facilities; (3) Completed annual comprehensive site compliance evaluation.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective and expected result is to minimize or prevent pollutant discharges from the Town's high-priority facilities through adherence to the site-specific SWPPPs.

**Implementation schedule**: The Town has identified high priority facilities that require SWPPPs. SWPPPs will be completed by July 1, 2015, prior to the General Permit requirement schedule so that the annual comprehensive site compliance evaluation can begin being completed in the spring of each year beginning in 2016.

**Method to determine effectiveness:** Effectiveness will be measured by the results of the annual comprehensive high priority facility compliance evaluation, specifically the number of recurring issues identified in the annual comprehensive site compliance evaluations. Effectiveness will also be evaluated based on the number of illicit discharges observed or reported that originate from high-priority facilities.

| BMP 6.2 Annual Reporting Form | |
|---|---|
| Stormwater Pollution Prevention Plan | |
| ➢ Have SWPPPs been completed for each high priority facility identified in the BMP? | ☐Yes ☒No |
| If no, explain: Will be completed per the BMP schedule that is consistent with the MS4 General Permit. | |
| ➢ Did any changes on high priority facilities that could potentially affect stormwater runoff occur during the reporting year (e.g. new outfalls, | ☐Yes ☒No |
| If yes, are the changes reflected in the SWPPP? (yes/no) | ☐Yes ☐No ☒N/A |
| If no, explain why: N/A - Will be completed per the BMP Schedule | |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

| Measure of Effectiveness Form | |
|---|---|
| ➢ Results from Comprehensive High Priority Site Compliance Evaluations | |
| Total number of recurring items originating from site-specific activities identified Spring 2017*: | TBD Per BMP Schedule |
| Total number of recurring items originating from site-specific activities identified Spring 2018: | TBD Per BMP Schedule |
| Total number of recurring items originating from site-specific activities identified Spring 2019: | TBD Per BMP Schedule |
| Has the # of recurring items trended downward or remained at zero from year to year? | ☐ Yes (BMP effective)<br>☒ No (See below) |
| If no, discuss the specific recurring items and describe how the BMP can be modified to improve effectiveness to specifically address recurring items (e.g. improved training, improved inspection form) or describe why modification is not necessary: <u>The measure of effectiveness will be completed per the BMP schedule.</u> | |
| * Note that measure of effectiveness begins in 2017 since recurring items would not be available in 2016 with the first inspection. | |
| ➢ Were any illicit discharges reported or identified in the reporting forms for BMPs 3.2 and 3.3 found to originate from high-priority facilities activities? | ☐ Yes (See below)<br>☒ No (BMP effective) |
| If yes, describe how the BMP can be modified to improve effectiveness to specifically address the cause of the illicit discharge(s) or describe why modification is not necessary: <u>N/A - will be evaluated per the BMP schedule</u> | |

**BMP 6.3a Employee Good Housekeeping/Pollution Prevention Training Plan (Section II B.6.d)**

**Description:** The Town has incorporated a written Training Plan into its Good Housekeeping/Pollution Prevention and IDDE Program Manuals, including a schedule of training events. The Program Manuals will serve as the training material and include Appendices to document training and list relevant staff for the following specific training:

- Annual training to relevant field personnel in the recognition and reporting of illicit discharges. Training will utilize the Town's IDDE Manual described in BMP 3.3.
- Annual training to relevant employees in good housekeeping and pollution prevention practices that are to be employed during road and parking lot maintenance, around maintenance and operations facilities, and in and around recreational facilities. Training will utilize the Town's Good Housekeeping/Pollution Prevention Manual described in BMP 6.1.

The plan will also require the following:

- Training or certification in spill response for emergency response employees.
- Training or certification for applying pesticides and herbicides in accordance with the Virginian Pesticide Control Act (§ 3.1-249.27 et seq. of the Code of Virginia) for employees performing applications.

For certifications as required under the Virginia Erosion & Sediment Control Law, see BMP 4.1.

**Necessary documentation for implementation:** (1) Training documentation or appropriate certifications for employees; (2) The Town's IDDE Manual; (3) The Town's Good Housekeeping/Pollution Prevention Program Manual.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to ensure effective training on the procedures provided in the Good Housekeeping/Pollution Prevention and IDDE Program Manuals and to have them carried out during employee daily operations. The expected result is well trained employees that minimize pollutant discharge through good housekeeping practices and IDDE screening and source identification and elimination.

**Implementation schedule**: The written training plan is complete and incorporated in the Town's Good Housekeeping/Pollution Prevention and IDDE Program Manuals. Training and certification requirements will occur prior to July 1, 2015, with illicit discharge and good housekeeping training occurring once every two years thereafter.

**Method to determine effectiveness:** Effectiveness will be measured by the results of a "Knowledge Check" quiz that will be taken by each employee that takes the training. The "Knowledge Check" quiz in provided in the Appendix of the Program Manuals.

| BMP 6.3a Annual Reporting Form | |
|---|---|
| Training Plan | |
| Has the Town's Written Training Plan been developed? (yes/no) | ☒Yes ☐No |
| Training & Certifications | |
| Has employee training been provided? (yes/no) | ☒Yes ☐No |
| If no, explain: N/A - Training provided | |
| Date of latest training to relevant field personnel in the recognition and reporting of illicit discharges: | 06/30/2015 |
| Number of employees that participated in the latest training in the recognition and reporting of illicit discharges: | 19 |
| Date of last training to relevant employees in good housekeeping and pollution prevention practices: | 06/30/2015 |
| Number of employees that participated in the latest training in good housekeeping and pollution prevention practices: | 19 |
| Do the number of individuals reported above that participated in training represent all employees that conduct daily activities that could potentially affect stormwater runoff? (yes/no) | ☐Yes ☒No |
| If no, explain: In the reporting year the Foreman and crew chiefs attended training to review lessons learned from the May DEQ/EPA forum and discuss upcoming permit year training | |
| Did any employees apply pesticides and herbicides? (yes/no) | ☒Yes ☐No |
| If yes, identify the employee and their certification: PW has indicated that the employees are certified | |
| Provide a summary of the training or certification program provided to emergency response employees that includes training in spill response: The Town Fire Department trains 39 personnel at the Hazmat Operations level and supplements the cost of this same training to selected Public Works personnel. | |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

| Measure of Effectiveness Form | |
|---|---|
| Did scores from the "Knowledge Check" quiz improve from the previous training? (yes/no) | ☐ Yes (BMP effective)<br>☐ No (See below)<br>☒ N/A |
| If no, describe modifications to the BMP to increase effectiveness (e.g. training frequency, training material, etc.): The measure of effectiveness will be completed per the BMP schedule. | |

**BMP 6.3b Contractor Certification for Pollution Prevention (Section II B.6.d.4)**

**Description:** The Town will require, through contract language, the certification for contractors applying pesticides and herbicides in accordance with the Virginian Pesticide Control Act (§ 3.1-249.27 et seq. of the Code of Virginia). Contract language will require contractors provide proof of the appropriate certification prior to contract execution.

**Necessary documentation for implementation:** (1) Contract language; (2) Proof of certifications.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to ensure the proper application of pesticides and herbicides. The expected result is that contractors used by the Town will have appropriate certifications for application of pesticides and herbicides.

**Implementation schedule**: The Town will develop and begin implementation of contract language by July 1, 2016.

**Method to determine effectiveness:** Effectiveness will be measured by evaluation of trends in confirmed reports of illicit discharge related to herbicides and pesticides.

| **BMP 6.3b Annual Reporting** | |
|---|---|
| Pesticides and Herbicides | |
| Number of contracts executed during the reporting year that includes application of pesticides and herbicides? | 0 |
| Was proof of certification provided for each contract that includes the application of pesticides and herbicides? (yes/no) | ☐ Yes ☐ No<br>☒ N/A (no contracts) |
| If no, explain: | N/A - No contracts executed |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

| **Measure of Effectiveness** | |
|---|---|
| Were any illicit discharges related to herbicides and pesticides application by contractors reported or identified in the reporting forms for BMPs 3.2 and 3.3? | ☐ Yes (See below)<br>☒ No (BMP effective) |
| If yes, describe how the BMP can be modified to improve effectiveness to specifically address the cause of the illicit discharge(s) or describe why modification is not necessary: N/A - No information to determine effectiveness since no contracts executed | |

**BMP 6.4 Turf and Landscape Management (Section II B.6.c)**

**Description:** The Town will implement a turf and landscape nutrient management plan (NMPs) that has been developed by a certified turf and landscape nutrient management planner in accordance with §10.1-104.2 of the Code of Virginia on all lands owned or operated by the Town where nutrients are applied to a contiguous area greater than one acre.

In addition, the Town will not apply any deicing agent containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, and sidewalks, or other paved surfaces.

**Necessary documentation for implementation:** (1) Town of Christiansburg Nutrient Management Plan; (2) Completed Fertilizer Application Record; (3) Ingredients of deicers used.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to avoid excessive application of nutrients where applied on Town property subject to the NMP. The expected results are reduction of downstream impacts from nutrient loads through documented implementation of the NMP.

**Implementation schedule**: Applicable lands subject to the NMP, those being a contiguous acre or more, have been identified. Implementation will ensure that 15% of the applicable lands are covered by July 1, 2015, 40% of the applicable lands by July 1, 2016, and 75 % by July 1, 2017 with complete coverage by July 1, 2018.

**Method to determine effectiveness:** Effectiveness will be measured by the implementation of the NMP through completion of the application record and periodic updates to the NMP to make necessary adjustments based on soils conditions.

| **BMP 6.4 Annual Reporting Form** | | |
|---|---|---|
| Nutrient Management Plans | | |
| Were nutrients used during the reporting year? | ☐ Yes<br>☒ No | If no, no further reporting necessary for this BMP |
| Total acreage of lands where nutrient management plans are required: | | N/A, no application |
| Acreage of lands upon which nutrient management plans have been implemented: | | N/A, no application |
| Date of last NMP update: | | N/A, no application |
| Total percentage of land where nutrient management plans are required and being implemented = | | N/A, no application |
| Does the percentage meet the schedule described in the BMP? (yes/no) | | ☐ Yes<br>☐ No<br>☒ N/A (No application) |
| If no, explain and provide a schedule for achieving the require implementation requirement: N/A, no application | | |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

| **Measure of Effectiveness Form** | |
|---|---|
| Was the NMP's fertilizer application record maintained and in adherence to the NMP? (yes/no) | ☐ Yes (BMP effective)<br>☐ No (See below)<br>☒ N/A (No application) |
| If no, describe how the BMP can be modified to improve effectiveness. Provide rationalization for modification or if modification is deemed unnecessary: N/A, no application | |

**BMP 6.5 Contractor Safeguards to Ensure Program Consistent Measures and Procedures (Section II B.6.e)**

**Description:** The Town will enhance existing environmental safeguard contract language to include references to sections within the Town's Good Housekeeping and Pollution Prevention Manual. The contract language will require Town contractors use appropriate control measures and procedures for stormwater discharges, when applicable. Oversight will be provided through bi-weekly inspections using a contractor inspection form provided in the Manual. Contract language will require contractors address items identified during inspections within a time period appropriate to prevent the potential of non-stormwater discharges. The contract language will also allow the Town to stop-work, address the problem, and recoup cost for the remedy from the contractor.

Contract language described in this BMP is not intended for regulated land disturbance activity addressed with BMPs 4.1, 4.2, and 4.3.

**Necessary documentation for implementation:** (1) Town of Christiansburg Good Housekeeping and Pollution Prevention Manual; (2) Completed inspection forms; (3) Contract language.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective and expected result is to minimize or prevent pollutant discharges from contractor activities.

**Implementation schedule**: By July 1, 2016, the Town will have developed and begin execution of contract language to require contractors to use appropriate control measures and procedures for stormwater discharges.

**Method to determine effectiveness:** Effectiveness will be measured by the inspection results specific to work performed by contractors, the responsiveness of contractors to address observed issues, and reported illicit discharges originating from contracted municipal work in the Town.

| **BMP 6.5 Annual Reporting Form** | |
|---|---|
| Contractor Safeguards | |
| Has contract language, as described above, been included in contracts with all contractors where the work performed could require appropriate control measures and procedures for stormwater discharges? This does not include regulated land disturbance activity addressed with BMPs 4.1, 4.2, and 4.3 (yes/no) | ☐ Yes ☒ No |
| If no, explain: The task will be completed per the BMP schedule. | |
| Were bi-weekly inspections performed to ensure oversight? (yes/no) | ☐ Yes<br>☒ No<br>☐ N/A (no contracts) |
| If no, explain: The task will be completed per the BMP schedule. | |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

| **Measure of Effectiveness Form** | |
|---|---|
| Were any illicit discharges related to municipal contracted work (other than regulated land disturbance activity) reported or identified in the reporting forms for BMPs 3.2 and 3.3? | ☐ Yes (See below)<br>☒ No (BMP effective) |
| If yes, describe how the BMP can be modified to improve effectiveness to specifically address the cause of the illicit discharge(s) or describe why modification is not necessary: _____ | |

### 3.2 Special Conditions for Approved TMDL BMPs

**BMP SC.1 Crab Creek *E. Coli* TMDL Action Plan (Section I B)**

**Description:** Christiansburg has been assigned a waste load allocation (WLA) for E. coli in the following TMDLs:

- Crab Creek Watershed TMDL approved on December 2, 2004
- Upper Roanoke River Watershed TMDL approved on June 27, 2007

Christiansburg will develop an action plan to address the WLA that includes:

- A list of legal authorities applicable to reducing E. coli;
- Identification and methods for maintaining a list of practices, methods, and controls implemented to reduce the E. Coli;
- Description of means for incorporation of identified practices, methods, and controls into the public education and outreach and employee training programs;
- Results of an assessment of facilities of concern for significant contribution of E. Coli;
- Develop methodology for assessing effectiveness of the TMDL Action Plan using modeling tools (in-lieu of water quality monitoring), specifically the Excel spreadsheet based Watershed Treatment Model (WTM). Assessment will also incorporate methodology for evaluation of facilities identified to significantly contribute to the POC;
- An annual reporting worksheet consistent with the TMDL Action Plan and the General Permit.

Additional BMPs will be included in this Section of the Program Plan, as necessary, to include implementation of the Action Plan.

**Necessary documentation for implementation:** (1) *E. coli* TMDL Action Plan; (2) Christiansburg Program Plan Updates, as necessary.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to achieve reductions required by the TMDLs for *E. Coli*. The expected result is the development of a TMDL Action Plan.

**Implementation schedule**: The *E. Coli* Action Plan will be developed by July 1, 2015. The schedule developed in the Action Plan will be implemented thereafter.

**Method to determine effectiveness:** Effectiveness will be determined by the implementation of programmatic BMPs.

| **BMP SC.1 Annual Reporting Form** | |
|---|---|
| *E. coli* Action Plan | |
| Has the *E. Coli* Action Plan been developed? | ☐ Yes<br>☐ No |
| If no, please explain and provide expected date of completion: _____ | |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

| **Measure of Effectiveness Form** | |
|---|---|
| Are programmatic BMPs implemented per the Action Plan? | ☐ Yes<br>☐ No |
| If no, explain how the Action Plan can be modified to achieve the required reductions in the required time frames: _____ | |

**BMP SC.2 Crab Creek Sediment TMDL Action Plan (Section I B)**

**Description:** Christiansburg has been assigned a waste load allocation (WLA) for sediment in the following TMDLs:

- Crab Creek Watershed TMDL approved on December 2, 2004.
- Upper Roanoke River Watershed TMDL approved on September 7, 2006.

Christiansburg will develop an action plan to address the WLA that includes:

- A list of legal authorities applicable to reducing sediment;
- Identification and methods for maintaining a list of practices, methods, and controls implemented to reduce the sediment;
- Description of means for incorporation of identified practices, methods, and controls into the public education and outreach and employee training programs;
- Results of an assessment of facilities of concern for significant contribution of sediment;
- Develop methodology for assessing effectiveness of the TMDL Action Plan using modeling tools (in-lieu of water quality monitoring), specifically the Excel spreadsheet based Watershed Treatment Model (WTM). Assessment will also incorporate methodology for evaluation of facilities identified to significantly contribute to the POC;
- An annual reporting worksheet consistent with the TMDL Action Plan and the General Permit.

Additional BMPs will be included in this Section of the Program Plan, as necessary, to include implementation of the Action Plan.

**Necessary documentation for implementation:** (1) Sediment TMDL Action Plan; (2) Christiansburg Program Plan Updates, as necessary.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to achieve reductions required by the TMDs. The expected result is the development of a TMDL Action Plan.

**Implementation schedule**: The Sediment Action Plan will be developed by July 1, 2015. The schedule developed in the Action Plan will be implemented thereafter.

**Method to determine effectiveness:** Effectiveness will be determined by the selection of cost effective BMPs supported by pollutant load reduction quantification to achieve the required pollutant reductions.

| BMP SC.2 Annual Reporting Form | |
|---|---|
| Sediment Action Plan | |
| Has the Christiansburg Sediment Action Plan been developed? | ☒ Yes<br>☐ No |
| If no, please explain and provide expected date of completion: _____ | |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

| Measure of Effectiveness Form | |
|---|---|
| Does load reduction quantification demonstrate the selected means and methods in the completed Action Plan can achieve the required reductions in the required time frames? | ☐ Yes<br>☐ No |
| If no, explain how the Action Plan can be modified to achieve the required reductions in the required time frames: _____ | |

**BMP SC.3 Roanoke (Staunton) River PCBs TMDL Action Plan (Section I B)**

**Description:** Christiansburg has been assigned a waste load allocation (WLA) for PCBs in the Roanoke (Staunton) River Watershed TMDL approved on December 9, 2010. Christiansburg will develop an action plan to address the WLA that includes:

- A list of legal authorities applicable to reducing PCB;
- Identification and methods for maintaining a list of practices, methods, and controls implemented to reduce the PCB;
- Description of means for incorporation of identified practices, methods, and controls into the public education and outreach and employee training programs;
- Results of an assessment of facilities of concern for significant contribution of PCB;
- Develop methodology for assessing effectiveness of the TMDL Action Plan using modeling tools (in-lieu of water quality monitoring), specifically the Excel spreadsheet based Watershed Treatment Model (WTM). Assessment will also incorporate methodology for evaluation of facilities identified to significantly contribute to the POC;
- An annual reporting worksheet consistent with the TMDL Action Plan and the General Permit.

Additional BMP(s) will be included in this Section of the Program Plan, as necessary, to include implementation of the Action Plan.

**Necessary documentation for implementation:** (1) Roanoke (Staunton) River Watershed TMDL Action Plan; (2) Christiansburg Program Plan Updates, as necessary.

**Responsible individual for implementation:** Town Engineer

**Objectives and expected results in meeting measurable goals:** The objective is to achieve reductions required by the Roanoke (Staunton) River Watershed TMDL for PCB. The expected result is the development of a TMDL Action Plan.

**Implementation schedule**: The Roanoke (Staunton) River Watershed Action Plan will be developed by July 1, 2016. The schedule developed in the Action Plan will be implemented thereafter.

**Method to determine effectiveness:** Effectiveness will be determined by the implementation of programmatic BMPs.

| **BMP SC.3 Annual Reporting Form** | |
|---|---|
| Roanoke (Staunton) River Watershed Action Plan | |
| Has the Christiansburg Roanoke (Staunton) River Watershed Action Plan been developed? | ☐ Yes<br>☒ No |
| If no, please explain and provide expected date of completion: The Plan will be developed per the BMP schedule. | |

Necessary documents for implementation are not provided in the annual report, but will be retained on file for 3 years.

| **Measure of Effectiveness Form** | |
|---|---|
| Are programmatic BMPs implemented per the Action Plan? | ☐ Yes<br>☐ No |
| If no, explain how the Action Plan can be modified to achieve the required reductions in the required time frames: _____ | |

**Appendix A – BMP 2.2 Documentation of Public Participation Activities**

**John W. Burke**

**From:** Carolyn Hall <wildernesstrailfestival@gmail.com>
**Sent:** Wednesday, July 15, 2015 6:56 PM
**To:** John W. Burke
**Subject:** Re: FW: Wilderness Trail Festival

Sounds good.

About 7,500 was the attendance for last year.

Thank you,
*Carolyn K. Hall*
Kiwanis Wilderness Trail Festival
P.O. Box 2125 * Christiansburg, VA 24068
www.wildernesstrailfestival.com * 540/239-7058
Find us on Facebook

On Wed, Jul 15, 2015 at 5:28 PM, John W. Burke <jburke@christiansburg.org> wrote:

Thanks Carolyn, Wayne and I will figure out our plan for the festival.

One important question I have: What was last year's attendance estimate? I need to report that as a part of my outreach.

Thanks,

John

John W. Burke

Environmental Program Manager

Engineering Department

Town of Christiansburg

(540) 382-6120 ext. 1158

**From:** Carolyn Hall [mailto:wildernesstrailfestival@gmail.com]
**Sent:** Wednesday, July 15, 2015 12:10 PM
**To:** John W. Burke
**Subject:** Wilderness Trail Festival

Hi John,

I attached an application that has festival specifics on it- could you also forward to Wayne?  If you do decide to participate please email or mail the app back, disregard the fee.

Thank you,

*Carolyn K. Hall*

Kiwanis Wilderness Trail Festival

P.O. Box 2125 * Christiansburg, VA 24068

www.wildernesstrailfestival.com * 540/239-7058

Find us on Facebook

## John W. Burke

**From:** Stephanie Bell <sbell@gayandneel.com>
**Sent:** Wednesday, September 30, 2015 9:33 AM
**To:** John W. Burke
**Cc:** NRVHBA
**Subject:** Home Show Attendance

Hey John:

After you called this morning I was able to find my spreadsheet for attendance and we had a total of 1,812 attendees for 2015. I hope that is what you are needing for your report.

Thanks
Stephanie


***Stephanie R. Bell***

sbell@gayandneel.com

GAY AND NEEL, INC.
ENGINEERING ◆ LANDSCAPE ARCHITECTURE ◆ SURVEYING
1260 Radford Street • Christiansburg, Virginia 24073
540.381.6011 office • 540.381.2773 fax
www.gayandneel.com • info@gayandneel.com

## Public Works Staff

| | |
|---|---|
| Ricky Bourne | Director of Public Works |
| Jim Lancianese | Field Operations Superintendent |
| Ryan Hendrix | Wastewater Operations Superintendent |
| David Sutphin | Asst. Superintendent, Streets |
| Thomas Sullivan | Asst. Superintendent, Utilities |

**8:00 am to 4:30 pm**

## Engineering Staff

| | |
|---|---|
| Wayne Nelson | Director of Engineering |
| Todd Walters | Asst. Director of Engineering |
| Jessie Nester | Engineering Project Manager |
| John Burke | Environmental Program Manager |

**8:00 am to 5:00 pm**

**For more information or to report spills of any kind, contact:**

| | |
|---|---|
| Public Works | **(540) 382-1151** |
| Engineering | **(540) 382-7238** |
| **AFTER HOURS** | **(540) 382-3131** |


## Town Council

| | |
|---|---|
| Michael Barber | Mayor |
| Samuel Bishop | Councilmember |
| Cord Hall | Councilmember |
| Steve Huppert | Councilmember |
| Henry Showalter | Councilmember |
| Bradford Stipes | Councilmember |
| James Vanhoozier | Councilmember |

## Town Administration

| | |
|---|---|
| Barry Helms | Town Manager |
| Randy Wingfield | Asst. Town Manager |


**Town of Christiansburg**

100 East Main Street
Christiansburg, VA 24073
Phone: 540-382-6128
Fax: 540-382-7338

**www.christiansburg.org**

# Town of Christiansburg

Public Works & Engineering

Public Education and Outreach

Fats, Oils, and Grease (FOG) Program Information

For more information about the Stormwater Program:

www.christiansburg.org/index.aspx?nid=250

**WHAT IS FOG AND WHERE DOES IT GO?** FOG is **F**ats, **O**ils and **G**reases. About 30 percent of what we eat is FOG. Foods high in FOG include meats, sauces, gravies, salad dressings, deep-fried dishes, pastries, cheese, butter, and many others.

FOG is a problem for food service establishments and has caused backups in residential areas as well. FOG can build up and create clogs in your sewer pipes which can result in costly repairs. FOG can also build up in the Town wastewater systems. This build up can create clogs, damage infrastructure, cause overflows, and **HURT THE ENVIRONMENT.**

**IT'S CHEAPER AND EASIER TO KEEP FATS, OILS AND GREASE OUT THAN TO CLEAN UP CLOGGED PIPES, BACKUPS, AND OVERFLOWS**

FOG initially flows with little problem when mixed with hot water, then cools in the sanitary sewer pipes, starts hardening, and sticks to the sewer lines.

When the solids build up over time, lines get blocked and we get nasty sewer spills. These spills can erupt at anytime and anywhere there is a sewer line. **Sewage may overflow out of sewer manholes in the street, in your yard or even back up into your house or business through sewer lines.** If the problem is a grease blockage in your home, you also have the plumber's bill to look forward to. **The only way to prevent this from happening is to keep the fats, oils and greases OUT OF THE SEWER LINES!**

**YOU CAN MAKE A DIFFERENCE!** It is good for you, the community, and good for the environment. Encourage your friends and neighbors to keep fats, oils and greases out of the sewers by following the practices listed. The best way to encourage them is to start using them in your own home.

**THINGS YOU CAN DO TO HELP...**

- Cool down your cooking oil, grease, and fat and pour them into a covered container. These covered containers can be placed in the trash can with your regular garbage. **Do not put oil and grease down the drain.**
- Avoid using the garbage disposal excessively. Do not put food scraps down the drain. Scrape food scraps from dishes into the garbage.
- " Dry-Wipe " grease and oil from dishes and cookware before you wash them, then dispose of wipes with our solid waste.
- Don't use cloth towels or rags to scrape plates or clean greasy oily dishes. When you wash the cloth, the grease will end up in the sewer.
- Prewash dishes and pans with cold water before putting them in the dishwasher. Cover the sink drain with a catch basket and dispose of contents in the garbage. **DO NOT rinse with hot water.** Hot water melts the fats, oils, and grease (FOG) off the dishes and into the sewer pipes. Later, the hot water will cool and the FOG will clog the pipes.
- Small amounts of used cooking oil should be reused as much as possible, then poured into a disposable container.
- Large amounts of used cooking oil should be recycled through a local recycler or rendering company.

Educate your friends and favorite businesses about how to help….**TODAY**!

Wordsprint
design print mail

Christiansburg 540-382-9111
Wytheville 276-228-6608

P.O. Box 544, Wytheville, VA 24382

# INVOICE

| | |
|---|---|
| Invoice # | 153613011 |
| Invoice Date | 06/27/14 |
| Date Shipped | 06/26/14 |
| Ship Via | DELIVER EAST |
| Salesperson | CBURG |
| Terms | NET 20 DAYS |
| P.O. Number | |
| Job Number | 153613 |

TOWN OF CHRISTIANSBURG
ACCOUNTS PAYABLE
100 E MAIN ST
CHRISTIANSBURG, VA 24073-3029

| Quantity | Description | Unit Price | Amount |
|---|---|---|---|
| 14,000.00 | 2013 WATER QUALITY & STORMWATER MAILERS | 0.1804 | 2,526.00 |
| | *Fats, Oils & Grease Mailer* | | |

***Late payments received after the due date may be charged a late fee of 1.5 % per month.***

| | |
|---|---|
| Subtotal | 2,526.00 |
| Sales Tax | 0.00 |
| Total Due | $ 2,526.00 |

WON 4401-5027 1/2
WON 4103-5407 1/2

Customer Code : TOCHR
Invoice Number : 153613011
Invoice Date : 06/27/2014
Invoice Amount : $ 2,526.00

Amount Paid : _____

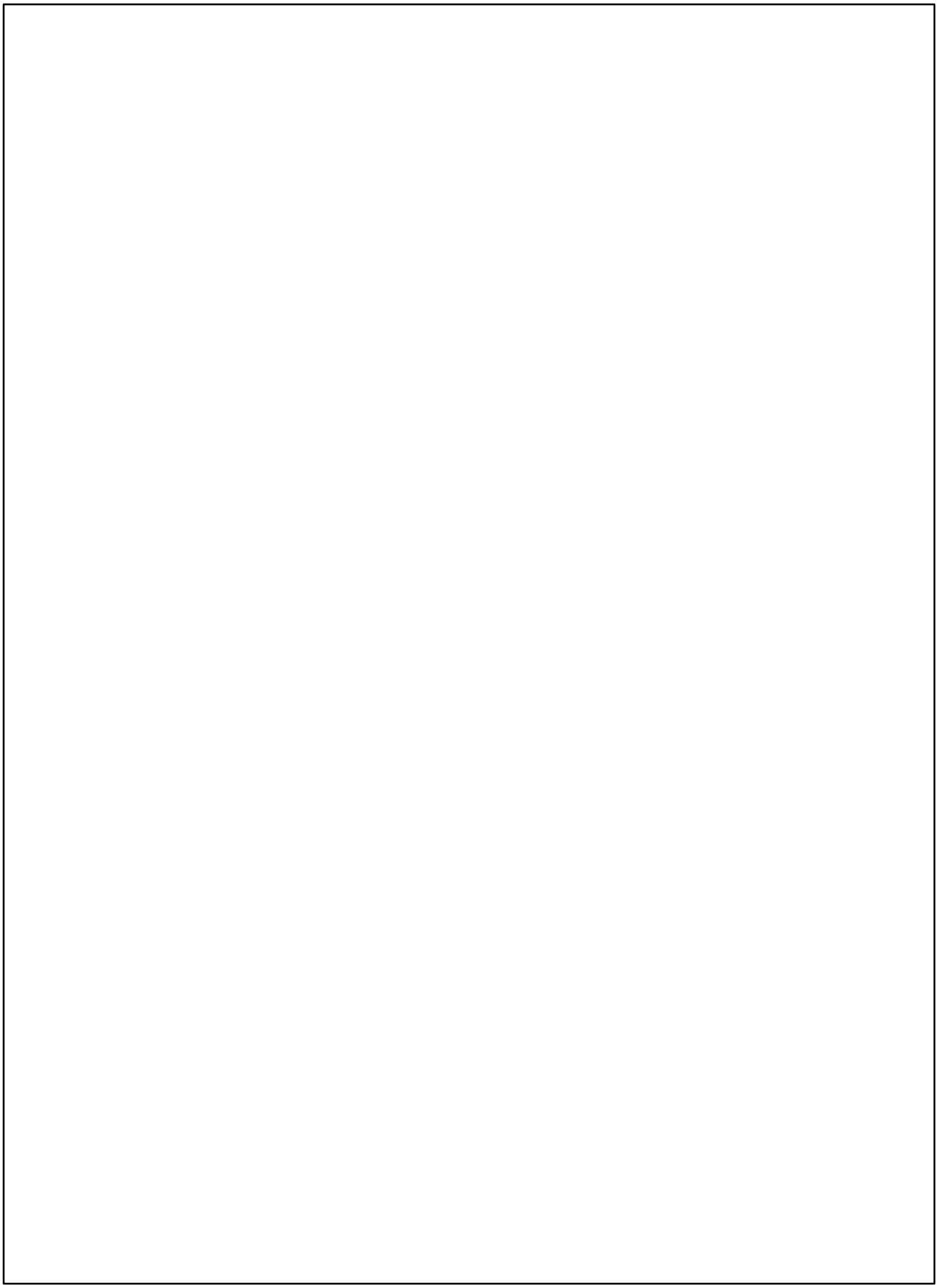
*Remit To:*

WORDSPRINT
190 WEST SPRING STREET
WYTHEVILLE, VA 24382

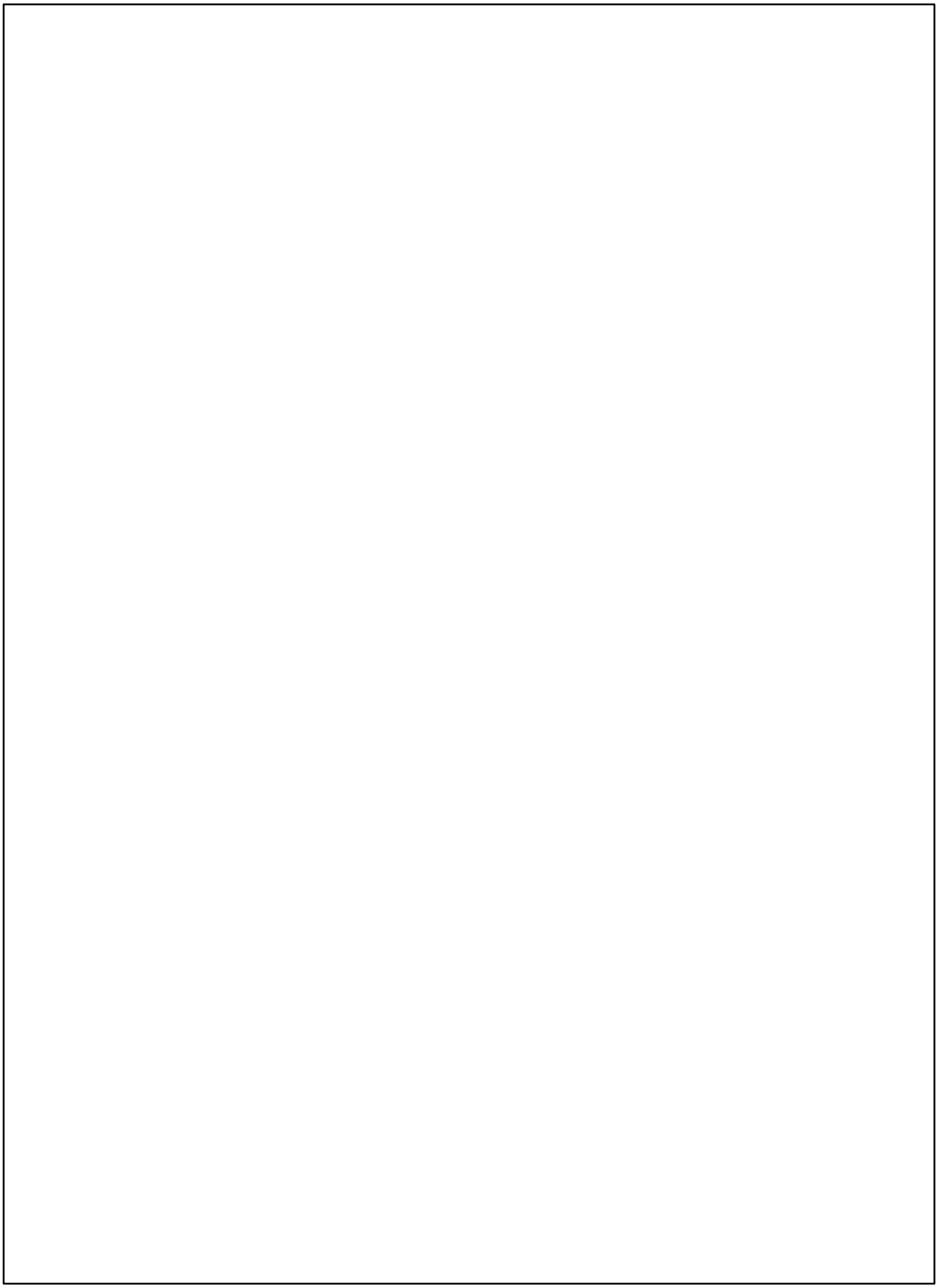
*Remitter:*

TOWN OF CHRISTIANSBURG
ACCOUNTS PAYABLE
100 E MAIN ST
CHRISTIANSBURG, VA 24073-3029

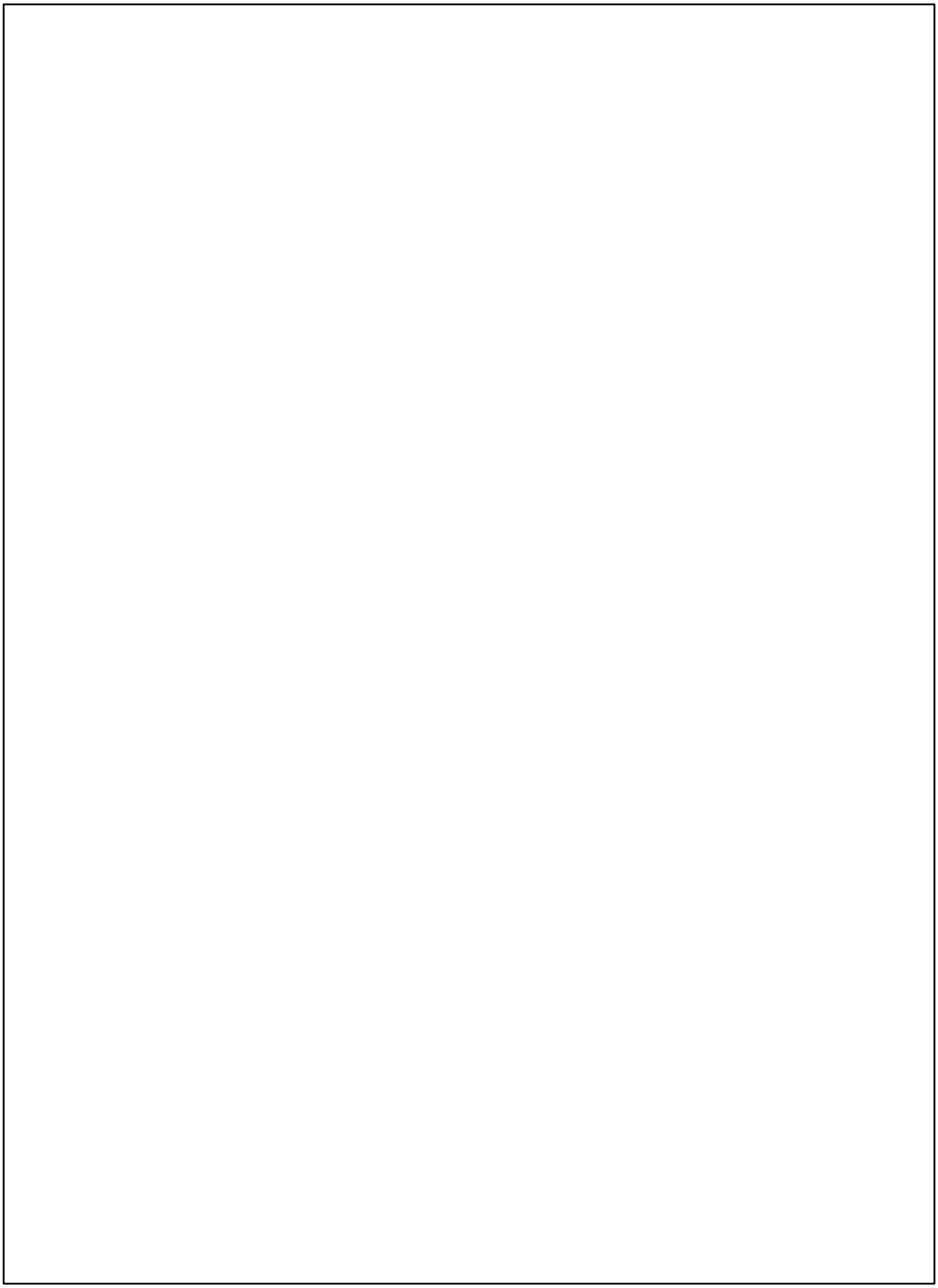
Storm Drain Markers Map 1



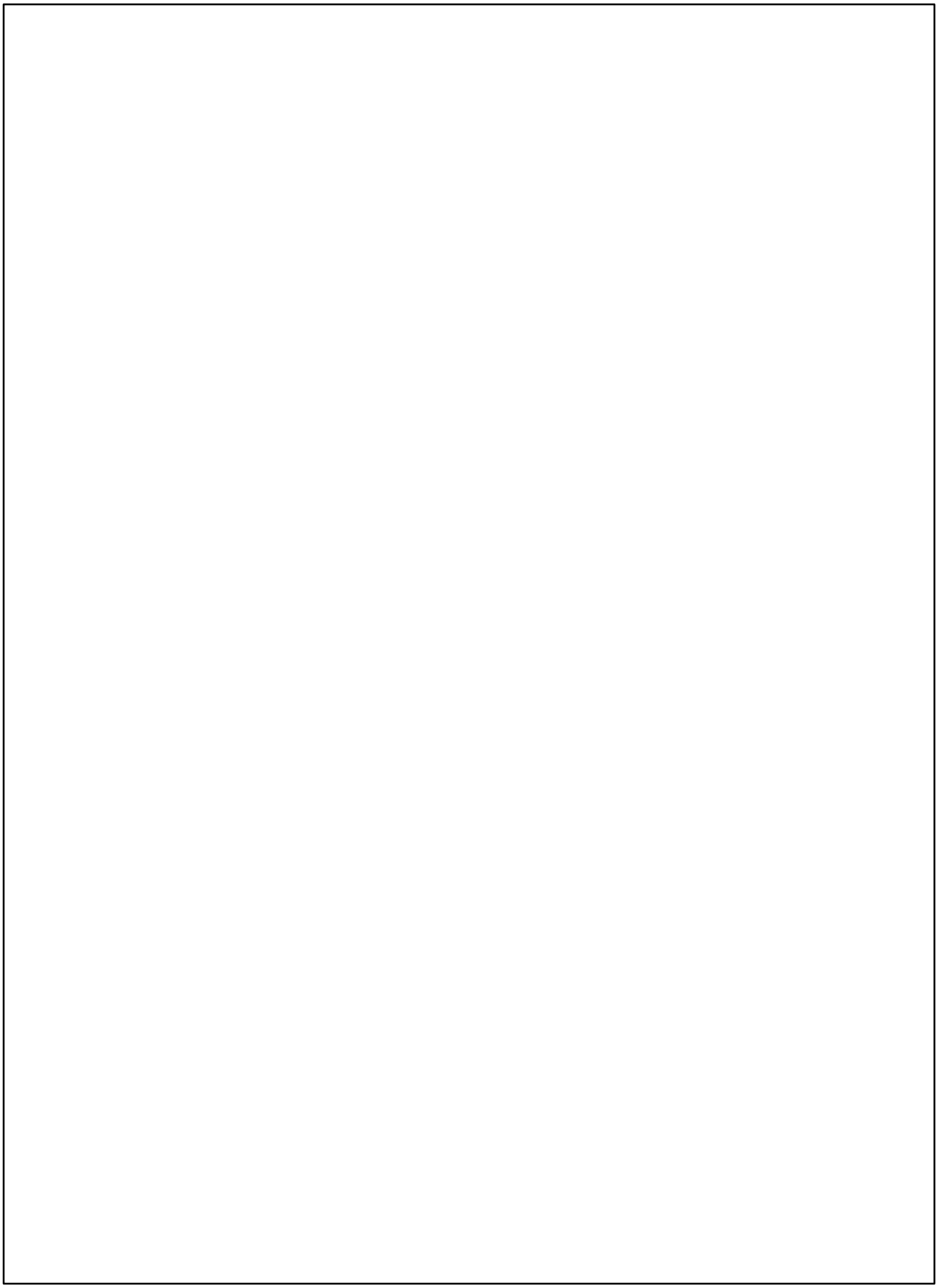
Storm Drain Markers Map 2



# Storm Drain Markers Map 3



# Storm Drain Markers Map 4



SHIP FROM
DAS MANUFACTURING, INC.
2310 WHITFIELD PARK AVE.
800-549-6024

SARASOTA, FL 34243

# PACKING LIST



SHIPPER #
00052409

SHIP TO
**TOWN OF CHRISTIANBURG**
**100 E. MAIN ST.**
**CHRISTIANBURG, VA 24073**
**Attn: JOHN BURKE/ENVIRONMENTAL**

| ORDER DATE | SHIP VIA | |
|---|---|---|
| 12/17/14 | Das- UPS Ground | 242273 |

| QUANTITY ORDERED | QUANTITY SHIPPED | UNIT | ITEM NUMBER | DESCRIPTION |
|---|---|---|---|---|
| 100 | 100 | EA | | NDF-TOWN OF CHRISTIANBURG<br>12/17/14 |
| 4 | 4 | EA | RS222-11 | * CAULK, STANDARD 11 oz TUBE<br>RS222-11 TUBE, STANDARD CAULK |
| 1 | 1 | EA | | CUST PO# VERBAL |

Storm Drain
Markers

All orders are subject to the print industry standard of 10% over or under run, and *are billed accordingly.*

THANK YOU

WE APPRECIATE
YOUR BUSINESS

Pick-Up Customers, please sign here:

X_____

ORIGINAL

| | |
|---|---|
| DATE SHIPPED | 12/19/14 |
| SHIPPED BY | DFR |
| WEIGHT | |
| CARTONS | 1 |
| SKIDS | 0 |

**Appendix B – BMP 3.1 Outfall Inventory**

(Attributes to be completed to address MS4 General Permit per BMP 3.1 schedule)

# 3.1 APPENDIX B Outfall Inventory

| Outfall ID | Impaired ID | Acreage | TMDL |
|---|---|---|---|
| NE58BLA01 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLA02 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLA03 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLA04 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLA05 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLA06 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLA07 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLA08 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLA09 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLA09 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLA13 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLA14 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLA15 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLA16 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLA18 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58BLB01 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC08 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC12 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC19 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC21 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC24 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC32 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC38 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC42 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC45 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC46 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC47 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC48 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC49 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC50 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC52 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC53 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC55 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC57 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |

| Outfall ID | Impaired ID | Acreage | TMDL |
|---|---|---|---|
| NE58CC58 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC59 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC60 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC61 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC66 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC67 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58CC68 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58DH01 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58DH06 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58SH03 | none | | Crab Creek Bacteria and Sediment |
| NE58SH04 | none | | Crab Creek Bacteria and Sediment |
| NE58SH07 | none | | Crab Creek Bacteria and Sediment |
| NE58TBA01 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA02 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA03 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA04 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA06 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA07 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA08 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA09 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA12 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA14 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA15 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA16 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA17 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA18 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA19 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA20 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA21 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA22 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA23 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA24 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA25 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA26 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA28 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA29 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |

| Outfall ID | Impaired ID | Acreage | TMDL |
|---|---|---|---|
| NE58TBA30 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA31 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBA32 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBB01 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBB02 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBB03 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBB04 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBB05 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBB08 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBB09 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBB10 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBB11 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBB12 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBB13 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBB14 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBC01 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBC07 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBC14 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBC15 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58TBC16 | VAW-N18R_CBC04A00 | | Crab Creek Bacteria and Sediment |
| NE58WB07 | VAW-N18R_ZZZ01A00 | | Crab Creek Bacteria and Sediment |
| NE59SBA08 | VAW-N22R_XEH01A08 | | |
| NE59SBA28 | VAW-N22R_XEH01A08 | | |
| NE59SBD09 | none | | |
| NE59SBD12 | none | | |
| RU04FB01 | VAW-L01R_ZZZ01A00 | | Roanoke River Bacteria and Sediment |
| RU04FB02 | VAW-L01R_ZZZ01A00 | | Roanoke River Bacteria and Sediment |
| RU04FB03 | VAW-L01R_ZZZ01A00 | | Roanoke River Bacteria and Sediment |
| RU04FB09 | VAW-L01R_ZZZ01A00 | | Roanoke River Bacteria and Sediment |
| RU04FB10 | VAW-L01R_ZZZ01A00 | | Roanoke River Bacteria and Sediment |
| RU04FB16 | VAW-L01R_ZZZ01A00 | | Roanoke River Bacteria and Sediment |

**Appendix C – BMP 3.2 IDDE Follow-up Information**

IDDE Report 1

| The date or dates that the illicit discharge was observed and reported | The results of the investigation | Any follow-up to the investigation | The resolution of the investigation | The date that the investigation was closed |
|---|---|---|---|---|
| 09/05/2014 | Town engineering staff observed concrete washout discharging to the street and storm drain in front of the County Courthouse, 55 East Main Street. A light rain was producing runoff in the street. | The Town Environmental Program Manager interviewed the parties involved. An approximate 5 gallons of washout occurred based on the interview. A visual inspection of an open channel 110 yards downstream did not show any visual evidence of the washout.<br><br>The two firms employing the persons involved were contacted:<br><br>Conrock<br>Scott Stoots<br>801 Industrial Park Rd.<br>PO Box 520<br>Blacksburg, VA 24060<br><br>JWB Contractors, LLC.<br>4900 Lambert Place Dublin, VA 24084<br><br>Informational references were sent with a request to instruct employees of the prohibitions against illicit discharge as well as appropriate methods for concrete washout. | The firms responded on 10/06/2014 and 04/10/2015 with information on employee training that had occurred as a result of this incident. | 4/10/2015 |

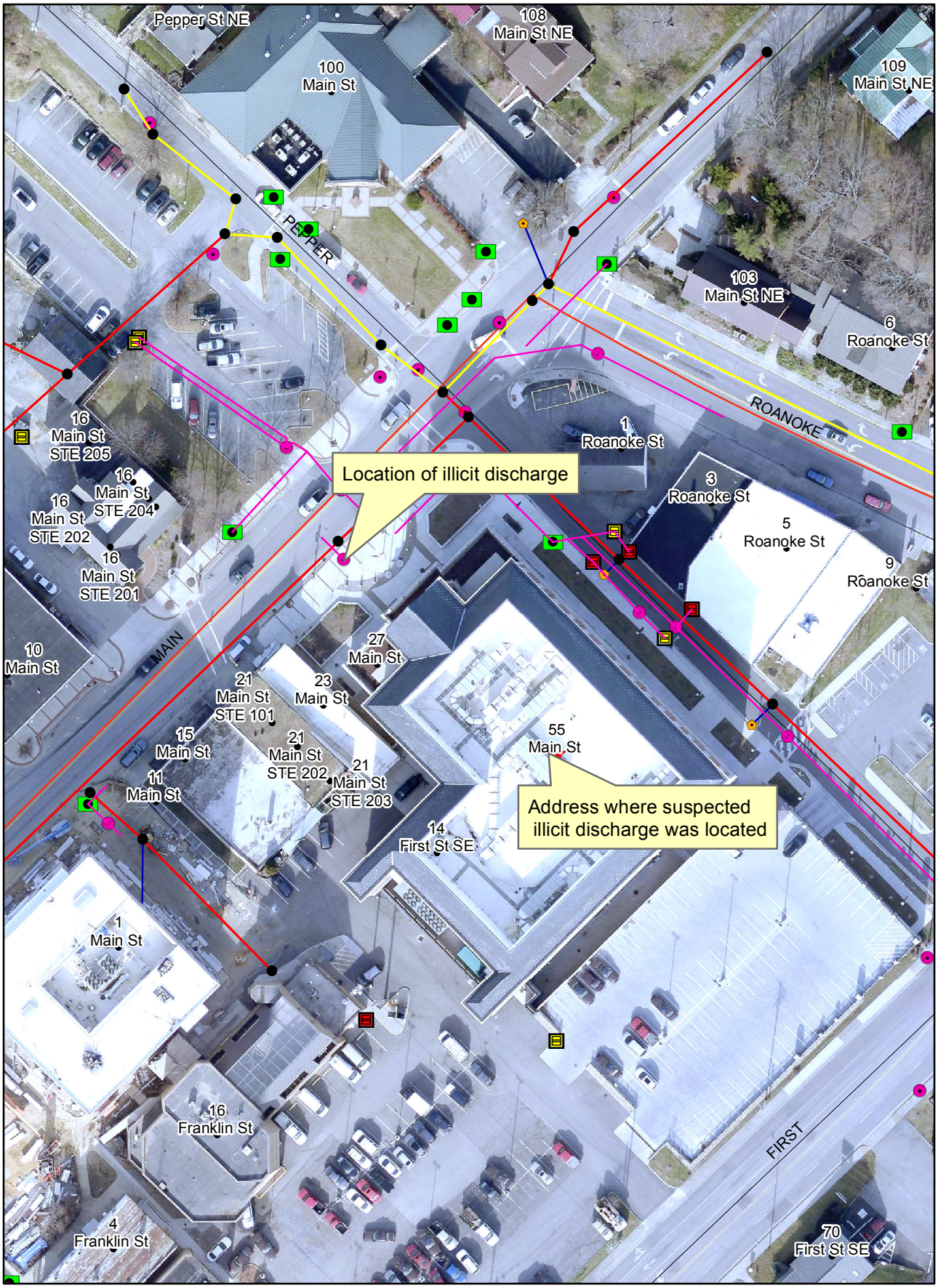
IDDE Report 2

| The date or dates that the illicit discharge was observed and reported | The results of the investigation | Any follow-up to the investigation | The resolution of the investigation | The date that the investigation was closed |
|---|---|---|---|---|
| 3/16/15 | The Town Public Works Superintendent informed the Engineering Department that there appeared to be oil entering the storm drain system in front of Total Car Care, 894 and 940 Radford Street. PW indicated that there was a prior issue with Total Car Care at which time no determination was made as to the source of an observed hydrocarbon spill in the storm drain system. The current observed spill was limited to the Town right of way. No evidence of discharge on the subject property was observed and no discharge inside the storm drain system was observed. | The Town Environmental program Manager interviewed Mr. Derrick Lancaster of Total Car Care. The Owner had no knowledge of the source of the spill. The methods by which disabled vehicles are towed to the site were reviewed. Mr. Lancaster stated that any leaks at accident scenes are reported to DEQ, then leaking tanks are drained and the vehicle leak is wrapped in plastic for transport. | Town Staff reviewed the information and determined that no clear source of the spill could be identified. The PW storm drain crews and VSMP staff will continue to observe the site for further evidence of IDDE. | 04/03/15 |

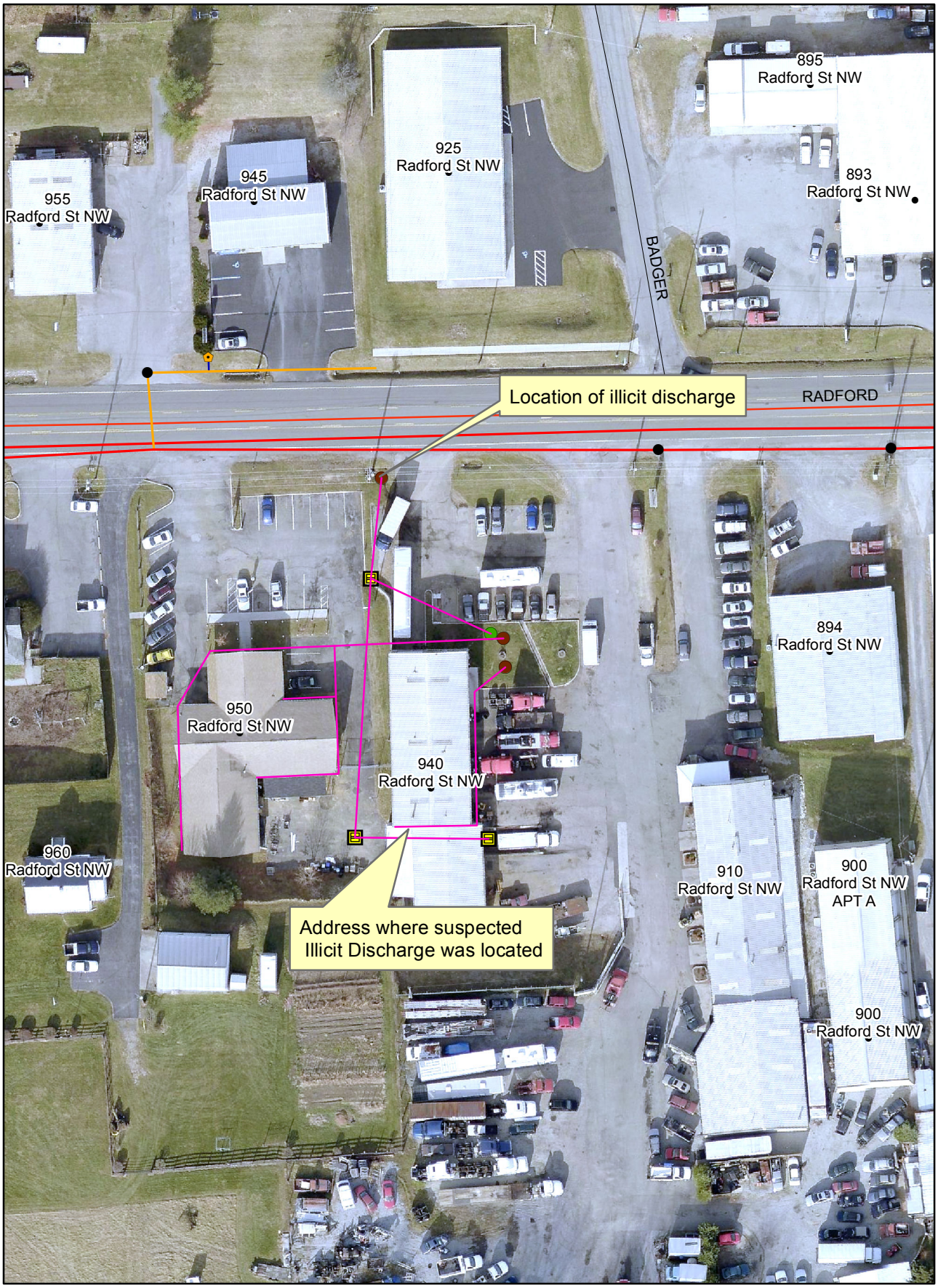
IDDE Report 3

| The date or dates that the illicit discharge was observed and reported | The results of the investigation | Any follow-up to the investigation | The resolution of the investigation | The date that the investigation was closed |
|---|---|---|---|---|
| 4/15/15 | A hydraulic line rupture spilled approximately 3.5 gallons of Mobilfluid 824 hydraulic fluid from a Public Works excavator performing ditch cleanout across from 2480 Glade Drive. Approximately 5.33 CY of soil was collected from the roadside where fluid had discharged and placed in a container for disposal. Sorbent was spread on the asphalt were fluid was discharged. No evidence of discharge to the road ditch was observed. | A material safety data sheet for the fluid was reviewed. Brent Williams at the New River Resource Authority and Alan Cummins at the Montgomery County Solid Waste Authority (MRSWA) were contacted. | A Waste Profile report was sent for review and the MRSWA agreed to accept the soil on 5/21/2015. The material was delivered to the MRSWA.<br><br>The incident will be used in future PW training on IDDE response and documentation. | 5/21/2015 |

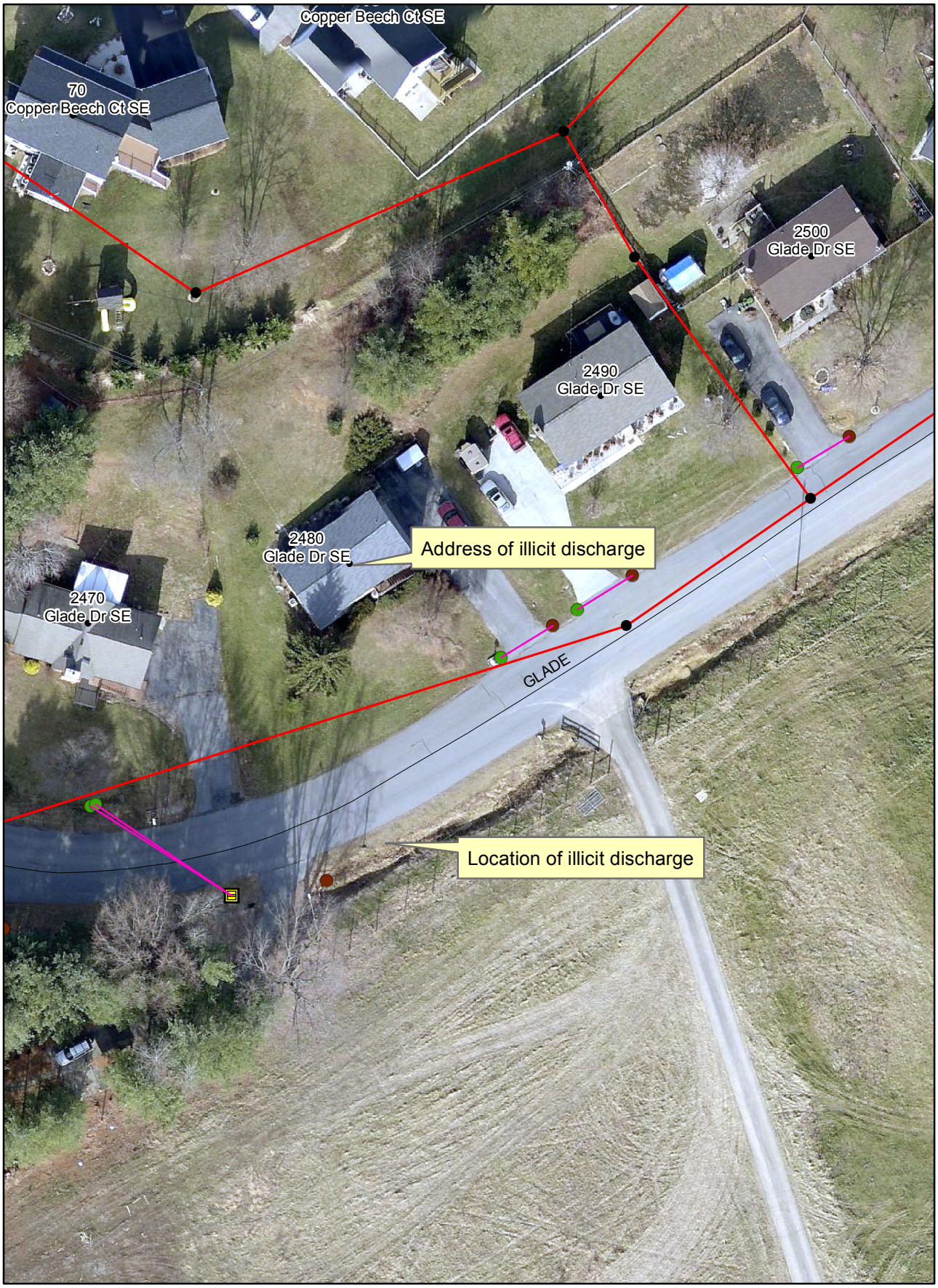
# IDDE Report 1 Map



# IDDE Report 2 Map



# IDDE Report 3 Map



**Appendix D – BMP 3.3 IDDE Screening Summary**

# 3.3 APPDENDIX D IDDE Screening summary

| Outfall ID | Impaired ID | No Indication disc. | Possible Ill. disc. | Almost certian Ill. disc. | Comments |
|---|---|---|---|---|---|
| NE58BLA08 | VAW-N18R_CBC04A00 | ☐ | ☑ | ☐ | end of pipe almost burried |
| NE58CC55 | VAW-N18R_CBC04A00 | ☐ | ☐ | ☑ | |
| NE58CC57 | VAW-N18R_CBC04A00 | ☐ | ☐ | ☑ | |
| NE58CC68 | VAW-N18R_CBC04A00 | ☐ | ☑ | ☐ | |
| NE58TBA12 | VAW-N18R_CBC04A00 | ☐ | ☐ | ☑ | completely stopped up |
| NE58WB07 | VAW-N18R_ZZZ01A00 | ☐ | ☑ | ☐ | standing water |
| NE59SBA08 | VAW-N22R_XEH01A08 | ☐ | ☑ | ☐ | |
| NE59SBD09 | none | ☐ | ☑ | ☐ | water poured at outfall |
| RU04FB01 | VAW-L01R_ZZZ01A00 | ☐ | ☐ | ☑ | |
| RU04FB10 | VAW-L01R_ZZZ01A00 | ☐ | ☐ | ☑ | |

**Appendix E – BMP 5.2 SWM Facility Tracking Database**

(Electronic Database Provided as Enclosure)

**Appendix F – BMP 6.3a Employee Training Record**

(Final reporting for expired training program. Future training reporting will be provided in the BMP 6.3a Annual Reporting Form)

**Weekly Safety Meeting** MS4 TRAINING

**Date:** 6/30/15

**Department:** Public Works

**Instructor:** JOHN BURKE (print)

**Instructor:** (sign)

**Time Spent:** 1hr

**Topic:** EPA/DEQ FORUM, TRAINING

**Key Points:**

REVIEWED LESSONS LEARNED AT THE MAY 2015 EPA/DEQ FORUM
- HOUSEKEEPING DEVELOPMENT, S.O.P., INSPECTION, DOCUMENTATION
- TREATMENT TRAINS
- SPECIFIC PRACTICES AT VDOT & HANOVER FACILITIES
- PW BUY IN, CONTINUED DEVELOPMENT

STORMWATER UTILITY DEVELOPMENT - GATHER BUDGET INFO.

| Print Name | Sign Name |
|---|---|
| CRIS HARDWICK | |
| Sammy Phipps | |
| Steven Dalton | |
| Steven Witt | |
| Josh Shepherd | |
| THOMAS SULLIVAN | |
| Quentin Stacy | |
| Dewayne Gilmore | |
| Nathan Wells | |
| John moore | |
| Matt Gillispie | |
| DARRELL FARMER | |
| KENNY CUSTER | |
| Trey Griffith | |
| JOHN CRUTE | |

| Print Name | Sign Name |
|---|---|
| Jim Lanciano | |
| David Sutphin | |
| Woody Nelson | |
| JOHN BURKE | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |