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# Central State Hospital

Petersburg, Virginia

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## Municipal Separate Storm Sewer System Program Plan & Annual Report

For

General Permit No. VAR040006

And

Annual Reporting

July 1, 2017 through June 30, 2018

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 28, 2018

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**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: ANDREW CONTI Title: DIRECTOR Physical Plant

Signature: Andrew Conti Date: 9/27/18

## DEFINITIONS

"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.

"Chesapeake Bay Preservation Act land-disturbing activity" means a land-disturbing activity including clearing, grading, or excavation that results in a land disturbance equal to or greater than 2,500 square feet and less than one acre in all areas of jurisdictions designated as subject to the Chesapeake Bay Preservation Area Designation and Management Regulations (9VAC25-830) adopted pursuant to the Chesapeake Bay Preservation Act.

"Chesapeake Bay Watershed" means all land areas draining to the following Virginia river basins: Potomac River Basin, James River Basin, Rappahannock River Basin, Chesapeake Bay and its small coastal basins, and York River Basin.

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

"DEQ" means the Virginia 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 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 manmade change to the land surface that potentially changes its runoff characteristics including clearing, grading, or excavation, except that the term shall not include the following potential activities:

- Central State Hospital land-disturbing activities that disturb less than 2,500 square feet;
- Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original construction of the project. The paving of an existing road with a compacted or impervious surface and reestablishment of existing associated ditches and shoulders shall be deemed routine maintenance; and

- Land-disturbing activities in response to a public emergency where the related work requires immediate authorization to avoid imminent endangerment to human health or the environment. In such situations, DEQ shall be advised of the disturbance within seven days of commencing the land-disturbing activity.

"Municipal separate storm sewer" or "MS4" means a conveyance or system of conveyances 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 DEQ.

"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 staff employed by Central State Hospital.

"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 DEQ 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**

Central State Hospital's (CSH) MS4 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 Program Plan is intended to be subject to modifications throughout the permit cycle as part of an iterative process that seeks to improve the effectiveness of best management practices (BMPs). To facilitate the iterative process, measure(s) of effectiveness are incorporated into each BMP and annual reporting form in Section 3.0.

### **1.1 Minimum Control Measures**

The General Permit requires the CSH 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 includes BMPs developed to explicitly address the General Permit requirements 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**

CSH is subject to the Special Conditions for the Chesapeake Bay TMDL that requires the development and submission to the Virginia Department of Environmental Quality (DEQ), for its review and acceptance, an approvable TMDL Action Plan. BMPs are provided in this Program Plan for development and

implementation of TMDL Action Plan(s). CSH anticipates notification from DEQ in the case of any new TMDLs being developed that may result in an additional WLA. If a new WLA is assigned, CSH will provide the CSH public opportunity for participation in development of new TMDLs.

### **1.3 Annual Reporting**

CSH will submit an Annual Report to DEQ by October 1<sup>st</sup> of each year with the reporting period spanning from July 1<sup>st</sup> through June 30<sup>th</sup>. This Program Plan includes annual reporting forms in “fillable form” format. The annual completion of these forms provides all of the reporting requirements to satisfy the General Permit and include the:

- Cover sheet updated with the specific reporting year;
- Certification following the Table of Contents;
- “Annual Reporting – General Information Form” on the following page; and
- The annual reporting form following each BMP in Section 3.0 completed annually.

Information compiled for the effectiveness of each BMP in Section 3.0 is utilized to evaluate and, if necessary, modify the corresponding BMP. Any modifications will be reported in the “Annual Reporting – General Information Form”. Modification(s) to the Program made by CSH will be done in accordance with the General Permit requirements described in Section 1.5.

The General Permit requires certification of the annual report and is provided immediately after the Table of Contents of this document. Certification is required by a principle executive officer or a duly authorized representative. The duly authorized representative must have overall responsibility of CSH property operations and written authorization must be provided to DEQ.

1.4 Annual Reporting – General Information Form	
<ul style="list-style-type: none"> <li>The BMPs described in Section 3.0 are the stormwater activities that CSH plans to undertake during the next reporting cycle.</li> <li>CSH relies on DEQ for implementation of the plan approval, construction inspection and enforcement components of MCMs 4 &amp; 5.</li> <li>Completed Annual Reporting Forms for each BMP in Section 3.0 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.</li> <li>See the updated Outfall Inventory in Appendix B for MS4 outfalls and their associated drainage by HUC. During the 2017-2018 reporting year, one (1) additional outfall was discovered during outfall screening, and one (1) outfall was removed as it was determined it did not directly discharge to Waters of the U.S. via concentrated flow. No new regulated outfalls were identified as a result of new development.</li> </ul>	
Did any 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)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If yes, modifications are listed below (provide BMP # in Section 3.0 to reference modification rationale): <u>N/A</u>	
Based on a review of the reporting forms completed for the reporting year within Section 3.0 of this Program Plan, does CSH find itself compliant with the permit conditions (yes/no):	<input type="checkbox"/> Yes, CSH is compliant <input checked="" type="checkbox"/> 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: <u>Training was conducted in July of 2018, outside of the 2017-2018 reporting year. CSH will ensure future trainings are conducted within their respective annual reporting years.</u>	
Was any information collected and analyzed, including monitoring data, if any, during the reporting period, beyond what is reported in this annual report.	<input type="checkbox"/> Yes (see below) <input checked="" type="checkbox"/> No
If yes, list the results: <u>N/A</u>	
List the approval status of any programs pursuant to Section II C (if applicable): <u>N/A, no additional programs pending approval.</u>	
Does CSH'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)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If yes, list the impaired waters and pollutant impairment: <u>N/A</u>	
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 Plan indicate they are appropriate? (yes/no)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Explain why they are effective for the impairments or identify potential modifications if not effective: <u>BMPs address potential pollutants into the system; and therefore, are considered appropriate and effective based on the measure of effectiveness for each BMP provided in Section 3.0.</u>	

## 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 3.0. 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 CSH 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 BMPs 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 CSH’s ability to meet the goals of the strategies and policies being replaced; and
  - Requests or notifications must be made in writing to DEQ and signed by a principle executive officer or a duly authorized representative. The duly authorized representative must have overall responsibility of CSH property operations and written authorization must be provided to DEQ.
  - CSH follows the public involvement requirements identified in the General Permit.

## 2.0 SCHEDULE

As discussed in Section 1.0, each BMP described in Section 3.0 of the Program Plan includes an implementation schedule. Some of the BMPs require program documents or actions to address permit requirements. Table 1 lists some of these documents and actions with dates critical for assuring compliance with the General Permit. The Table is not intended to provide schedules for BMP implementation described for each BMP in Section 3.0; but only to assist with Program Plan implementation.

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

BMP	Necessary Action	Due date
1.1, 1.2	Provide for public participation for education and outreach plan	<b>Complete</b>
1.2	Public Education/Outreach Plan (PEOP)	<b>Complete</b>
1.2, 2.1, 3.5, 4.2	Website postings (see BMPs for details)	Update annually
2.1	Post Annual Report on website	30 days after submittal annually
2.2	Public participation activities	4x annually
3.1	Notification of MS4 Interconnections	<b>Complete</b>
3.1	Storm sewer mapping/information table	<b>Complete</b>
3.3	Develop IDDE Program Procedures	<b>Complete</b>
3.3, 6.1, 6.3a	Written training program (See IDDE and Good Housekeeping/Pollution Prevention Manuals)	<b>Complete</b>
3.4, 6.1	Develop Good Housekeeping/Pollution Prevention Program SOPs	<b>Complete</b>
5.3	Develop Post-construction SWM Inspection/Maintenance SOPs	<b>Complete</b>
6.2	Identify high priority areas	<b>Complete</b>
6.2	Develop Campus-wide SWPPP	<b>Complete</b>
6.3a	Staff training on pollution prevention	Annually (see PEOP)
6.3b	Pesticides/herbicides contract language	<b>Complete</b>
6.5	Develop improved contract language for contractors	<b>Complete</b>
CB-SC.1	Chesapeake Bay TMDL Action Plan	<b>Complete</b>

### 3.0 PROGRAM PLAN BEST MANAGEMENT PRACTICES

This section includes the BMPs that CSH will implement to meet the requirements for each MCM and the applicable Special Conditions described in the General Permit.

#### 3.1 Minimum Control Measures

BMP 1.1 Public Participation for Public Education and Outreach Plan Development (Section II B.1.c.4)	
<p><b>Description:</b> Provide for public participation during public education and outreach program development through a survey distributed to the CSH public. The survey will be developed to assess CSH’s public knowledge regarding stormwater with the intent of assisting with the selection of high priority water quality issues. Opportunity to provide written comment will also be available with the survey.</p>	
<p><b>Necessary documentation for implementation:</b> (1) Survey and survey results.</p>	
<p><b>Responsible individual for implementation:</b> CSH Director of Physical Plant Services</p>	
<p><b>Objectives and expected results in meeting measurable goals:</b> The objective is to include the public in the selection of water quality issues selected for the Public Education and Outreach Plan (incorporated by reference).</p>	
<p><b>Implementation schedule:</b> An opportunity for public participation was provided via a survey distributed to the CSH staff. Survey results were incorporated into the Public Education and Outreach Plan (described in BMP 1.2). A public survey will be distributed again in the Spring of 2018 and the Public Education and Outreach Plan (incorporated by reference) revised as necessary.</p>	
<p><b>Method to determine effectiveness:</b> Effectiveness will be measured by the number of individuals responding to the survey and the incorporation of survey results into the Public Education and Outreach Plan. See measure of effectiveness section under BMP 1.2.</p>	

BMP 1.1 Annual Reporting Form (Completed once during the development of the Public Education and Outreach Plan)	
Dates that survey was distributed:	8/12/2016- 8/25/2016
Number of surveys completed:	76
<p>Description of how survey results and responses were incorporated into the Program: <u>Survey responses were used to gauge the CSH staff’s knowledge of stormwater impacts. Results were used to identify and provide rationale for three water quality issues, as described in BMP 1.2, for the program to focus its public education and outreach efforts.</u></p>	

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 plan (incorporated by reference) 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 written plan.

**Responsible individual for implementation:** CSH Director of Physical Plant Services

**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 written plan. A public survey to measure knowledge on the identified issues was conducted in the Fall of 2016 and will be distributed again in the Spring of 2018 to measure effectiveness.

**Method to determine effectiveness:** A public survey will be distributed via email to assess the effectiveness of the message delivered for each water quality issue, as noted in the implementation schedule. The survey will be distributed once every two years, as determined appropriate for CSH. Effectiveness will be measured by using a scoring system to compare results of the latest survey to the previous survey to determine if public knowledge regarding each water quality issue has increased.

<b>BMP 1.2 Annual Reporting Form</b>			
Has a written Public Education and Outreach Plan been developed (incorporated by reference)?			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If no, explain. If yes, summarize below: <u>N/A</u>			
Water quality issue #	List of educational and outreach activities identified in Public Education and Outreach Plan	# people reached	% of target audience reached
1	Public Education on Stormwater Issues (Educational Stormwater Brochure)	500	50%
2	Education on Special Water Quality Concerns for Chesapeake Bay TMDL (Good Housekeeping/Pollution Prevention Annual Training)	15*	100%
3	Good Housekeeping and Pollution Prevention Practices on the CSH Property (Good Housekeeping/Pollution Prevention Annual Training)	15*	100%
Water quality issue #	List of educational and outreach activities that will be conducted during the <i>next</i> reporting year	Minimum # people to be reached	Minimum % of target audience to be reached
1	Public Education on Stormwater Issues (Educational Stormwater Brochure)	±200	At least 20%
2	Education on Special Water Quality Concerns for Chesapeake Bay TMDL (Good Housekeeping/Pollution Prevention Annual Training)	±20	100%
3	Good Housekeeping and Pollution Prevention Practices on the CSH Property (Good Housekeeping/Pollution Prevention Annual Training)	±20	100%

\*Note: CSH did not include housekeeping staff in training for the 2017-2018 reporting year. Housekeeping staff are contracted separately, and all housekeeping activities are conducted indoors.

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.

<b>Measure of Effectiveness</b>	
Average “knowledge” score from 2015-2016 year survey:	36%
Average “knowledge” score from 2017-2018 year survey:	56%
Has the “knowledge” score gone up over the permit cycle?	<input checked="" type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below) <input type="checkbox"/> N/A (See below)
If no, discuss potential ineffectiveness of the BMP (outreach materials, staff retention time, etc.). <u>N/A</u>	
If no, Suggest BMP modifications to the Program Plan with rationale to increase effectiveness: <u>N/A</u>	

**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 CSH stormwater website:

- The latest version of this MS4 Program Plan; and
- Each of the annual reports developed within the permit cycle.

Public education and outreach materials developed for BMP 1.2 will include links to the Program Plan and Annual Reports.

**Necessary documentation for implementation:** (1) CSH MS4 Program Plan; (2) CSH MS4 Annual Reports; (3) Web address of posted materials; (4) Educational and outreach materials from BMP 1.2.

**Responsible individual for implementation:** CSH Director of Physical Plant Services

**Objectives and expected results in meeting measurable goals:** Objectives are to provide opportunity for the public to review CSH MS4 Program documentation. Expected results are an increase in public knowledge of the BMPs implemented by CSH to improve water quality from stormwater runoff.

**Implementation schedule:** The Program Plan will be posted on the CSH website 30 days after approval from DEQ. Within 30 days of any modification(s) to the Program Plan, the latest version will be posted. Annual reports will be posted on the web page within 30 days of submittal to DEQ, or by November 1<sup>st</sup> of each year.

**Method to determine effectiveness:** See method to determine effectiveness for BMP 1.2.

**BMP 2.1 Annual Reporting Form**

Web links to posted program material are provided below\*

Program Plan Link:	<a href="http://www.csh.dbhds.virginia.gov/StormwaterManPlan.html">http://www.csh.dbhds.virginia.gov/StormwaterManPlan.html</a>
Annual Report Link:	<a href="http://www.csh.dbhds.virginia.gov/StormwaterManPlan.html">http://www.csh.dbhds.virginia.gov/StormwaterManPlan.html</a>

\*Note: CSH has encountered difficulties in updating program material on the CSH stormwater website. However, contact information is provided on the website; therefore, the program materials are available upon request.

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.2.b.)**

**Description:** CSH 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.

**Responsible individual for implementation:** CSH Director of Physical Plant Services

**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 will 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 to each event. Selection of specific events may be modified from year to year based on public turn-out.

<b>BMP 2.2 Annual Reporting Form</b>			
Local activity	Type of CSH MS4 Program participation (e.g., promotion, sponsorship, other)	# people reached	Summary of documentation* that demonstrates participation
The Safety Net Newsletter, December 2017 - monthly newsletter distributed via email and posted in restrooms, containing information on good housekeeping and pollution prevention on trash & dumpsters.	Promotion	~1,000	Newsletter attached
The Safety Net Newsletter, February 2018 - monthly newsletter containing information on the Chesapeake Bay, the MS4 Program, and reporting of spills.	Promotion	~1,000	Newsletter attached
Trash pick-up performed by CSH staff as part of preventative maintenance.	Participation	2-3	Trash pick-up work order attached
Distribution of MS4 Stormwater Brochure quarterly to each building and monthly during new employee orientation.	Promotion	~500	Brochure attached

\*Documentation is attached in Appendix A

<b>Measure of Effectiveness</b>	
Local Activity (same as above)	Rationalization of effectiveness or ineffectiveness
The Safety Net Newsletter, December 2017 - monthly newsletter distributed via email and posted in restrooms, containing information on good housekeeping and pollution prevention on trash & dumpsters.	Effective due to the number of people reached.
The Safety Net Newsletter, February 2018 - monthly newsletter containing information on the Chesapeake Bay, the MS4 Program, and reporting of spills.	Effective due to the number of people reached.
Trash pick-up performed by CSH staff as part of preventative maintenance.	Effective because trash was picked-up; and therefore, did not pollute surface waters.
Distribution of MS4 Stormwater Brochure quarterly to each building and monthly during new employee orientation.	Effective due to the number of people reached.
For an ineffective activity identified above, describe modifications to be made for the next reporting year (e.g., different activity or different approach): During the DEQ audit, a strategy was discussed for options for other public participation activities that can be implemented in the future.	

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

**Description:** CSH will maintain an accurate storm sewer system map and information table. The map, at a minimum, will:

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

The information table, at a minimum, will include for each outfall the:

- Unique identifier;
- Estimated acreage served;
- 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
- Name of any applicable TMDL or TMDLs.

The information table will be updated as new outfalls come on-line. CSH will notify VDOT, where applicable, in writing, of any known physical connection to their MS4 regulated area or new interconnections that occur with new development.

**Necessary documentation for implementation:** (1) Storm sewer system map; (2) Outfall information table; (3) List of construction/development activity on CSH property; (4) Written notification of physical interconnections to the downstream MS4.

**Responsible individual for implementation:** CSH Director of Physical Plant Services

**Objectives and expected results in meeting measurable goals:** The objective is to maintain an up-to-date map of the storm sewer that provides a tool for IDDE procedures (see BMP 3.3). Expected results are that the mapping and the information table serves as a useful tool for tracking illicit discharges.

**Implementation schedule:** The storm sewer mapping and information table has been completed with the CSH IDDE Program Manual. Subsequently, the map and information table will be updated annually at the end of each reporting year. Notifications of interconnections were completed in the Fall of 2016.

**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

See Appendix B for outfall inventory.

If interconnected MS4s, have the downstream MS4s been notified of the outfall?  Yes  No  
If no, please explain why: N/A

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**

If any potential illicit discharges were identified or reported (refer to reporting for BMPs 3.2, 3.3, and 3.5), was outfall mapping used to address the issue: N/A

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

**Description:** CSH will prohibit non-stormwater discharges into the storm sewer system through language provided within the Stormwater/Pollution Prevention Policy for employees, which provides methods and procedures for reporting as well as corrective and disciplinary actions. Staff will be made aware of the methods and procedures for reporting and corrective and disciplinary action as part of the Public Education and Outreach Program (incorporated by reference) described in BMP 1.2.

For effective prohibition of non-stormwater discharges from contractors operating on CSH property, refer to BMP 6.5.

**Necessary documentation for implementation:** (1) Stormwater/Pollution Prevention Policy for employees; (2) A list of any instances of violation and summary of actions taken by CSH.

**Responsible individual for implementation:** CSH Director of Physical Plant Services

**Objectives and expected results in meeting measurable goals:** The objective is to effectively prohibit non-stormwater discharges to the extent allowable under federal, state, or local law, regulation, or ordinance. Expected result is an effective deterrent for staff from willingly introducing non-stormwater discharges to the MS4.

**Implementation schedule:** The Stormwater/Pollution Prevention Policy has been developed and will be included in the orientation for all new employees. The Public Education and Outreach Program will be implemented with the schedule described in BMP 1.2.

**Method to determine effectiveness:** Effectiveness will be determined based on the elimination or reduction in the number of reported or observed non-stormwater discharges committed by members of staff. Effectiveness will also be based on implementation of methods and procedures in response to reports that are outlined in the Stormwater/Pollution Prevention Policy for employees.

BMP 3.2 Annual Reporting Form				
Non-stormwater discharge violations committed by staff (see BMP 3.5 for other IDDE reporting)				
Total number of potential violations for reporting year:				0
Violation #	Date of violation	Location of violation	Description of violation	Corrective or Disciplinary Action taken
N/A	N/A	N/A	N/A	N/A

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	
Non-stormwater discharge violations committed by staff (see BMP 3.5 for other IDDE reporting)	
Total number of violations for reporting year 1:	0
Total number of violations for reporting year 2:	0
Total number of violations for reporting year 3:	0
Total number of violations for reporting year 4:	0
Total number of violations for reporting year 5:	0
Have the # of violations trended downward year to year or stayed at zero?	<input checked="" type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below)
If no, discuss potential cause of observed trend and determination if the BMP is ineffective. If deemed ineffective, suggest BMP modifications with rationale: <u>N/A, number of violations has remained at zero; therefore, BMP is effective.</u>	
Were methods and procedures in the Stormwater/Pollution Prevention Policy for employees used where violations were determined to have occurred?	<input type="checkbox"/> Yes <input type="checkbox"/> No (See below) <input checked="" type="checkbox"/> N/A (No violations)
If no, explain why and if modifications are necessary to the BMP to improve effectiveness: <u>N/A</u>	

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

**Description:** CSH will develop and implement an Illicit Discharge Detection and Elimination (IDDE) Program Manual (incorporated by reference) 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 include field observations and field screening monitoring and that provide:

- A schedule of field screening activities to ensure all outfalls are screened annually;
- 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 discharges prioritized based on potential hazard to human health;
- Methodologies to determine the source of all illicit discharges shall be conducted with the required minimum investigations and timeframes per CSH's General Permit;
- 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 (incorporated by reference); (2) Outfall information table; (3) Outfall screening schedule and field forms.

**Responsible individual for implementation:** CSH Director of Physical Plant Services

**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 response to reports of illicit discharge and detection of non-stormwater discharges during outfall screenings.

**Implementation schedule:** Annual outfall screening, as described in CSH's IDDE Program Manual that includes the schedules, mechanisms, and procedures described in this BMP and the General Permit.

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

<b>BMP 3.3 Annual Reporting Form</b>	
Outfall Screening Record	
Total # of outfalls (refer to BMP 3.1):	27*
Total # of outfalls screened during the reporting year:	27
If 100% of outfalls were not screened during the reporting year, explain why: <u>N/A, all outfalls were screened during the reporting year.</u>	
See Appendix B for outfall inventory and required reporting information.	

\*Note: During the 2017-2018 reporting year, one (1) additional outfall was discovered during outfall screening, and one (1) outfall was removed as it was determined it did not directly discharge to Waters of the U.S. via concentrated flow. No new regulated outfalls were identified as a result of new development.

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

<b>Measure of Effectiveness</b>
Percentage of identified non-stormwater discharges during screening that are eliminated: <u>N/A</u>
Please provide rationale that describes if the percentage listed indicates the BMP is effective. If not, describe modifications to increase effectiveness: <u>No non-stormwater discharges were identified during outfall screening.</u>

### **BMP 3.4 Eliminate or minimize discharge of hazardous substances or oil (Section II B.3.e)**

**Description:** CSH will eliminate or minimize the potential for hazardous substance or oil in stormwater runoff through:

- The implementation of the methods, inspection schedules, and procedures in the CSH Good Housekeeping/Pollution Prevention Program Manual described in BMP 6.1; and
- The expected measurable goals of the training component provided in BMP 6.3a for spill response, good housekeeping and pollution prevention for maintenance workers, and reporting illicit discharges.

**Necessary documentation for implementation:** (1) Good Housekeeping/Pollution Prevention Program Manual (incorporated by reference); (2) Training documentation.

**Responsible individual for implementation:** CSH Director of Physical Plant Services

**Objectives and expected results in meeting measurable goals:** The objective of the Good Housekeeping/Pollution Prevention Program Manual (incorporated by reference) and associated training is to provide reference procedures, schedules, resource material and education to staff that result in daily operations that eliminate or prevent potential introduction of hazardous substances and oil to stormwater runoff. The expected result is the elimination of hazardous substances and oil spills and exposure.

**Implementation schedule:** The CSH Good Housekeeping/Pollution Prevention Program Manual (incorporated by reference) and incorporated training program are complete. Training will be performed annually, per the Public Education & Outreach Plan.

**Method to determine effectiveness:** Effectiveness will be determined by the number of hazardous substances or oils related illicit discharges reported or identified in the reporting forms for BMPs 3.2, 3.3, and 3.5, respectively, that are found to originate from staff activities.

**BMP 3.4 Annual Reporting Form**

No additional reporting necessary.

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 reported or identified in the reporting forms for BMPs 3.2, 3.3, and 3.5 found to originate from staff activities?	<input type="checkbox"/> Yes (See below)
	<input checked="" type="checkbox"/> 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

### **BMP 3.5 Facilitate public reporting of illicit discharges and provide response (Section II B.3.d)**

**Description:** CSH will promote, publicize, and facilitate public reporting of illicit discharges into or from MS4s with information describing an illicit discharge and contact information on the CSH stormwater website. CSH will investigate all reports using methods and procedures described in the CSH IDDE Manual described in BMP 3.3. Tracking of reports will be recorded in the IDDE Tracking Form in Appendix B of the CSH IDDE Program Manual.

**Necessary documentation for implementation:** (1) Web address of posted material; (2) Completed IDDE Tracking Form for each incident.

**Responsible individual for implementation:** CSH Director of Physical Plant Services

**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 track and eliminate reported illicit discharges.

**Implementation schedule:** Illicit discharge material and contact information were on the website during the reporting year. 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 as a percentage of illicit discharge reports closed (as will be documented in the IDDE Tracking Forms).

BMP 3.5 Annual Reporting Form				
Illicit Discharge Reports				
Total # of illicit discharge reports for the reporting year:				0
Description of reported illicit discharge	Date observed and/or reported	Description of how the investigation was resolved/addressed	Resolution of the investigation	Close date
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	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
Percentage of reported illicit discharge instances that have been closed: <u>N/A</u>
If not all reports have been closed, please provide the reason and any necessary modification to the BMP: <u>N/A</u>

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

**Description:** DBHDS owns and operates all construction activities on the facility. CSH, as a lessee, does not have operational control over the DBHDS construction program and/or DBHDS construction sites. Regulated land disturbance activity on the property is regulated under the Erosion and Sediment Control Regulations of the Code of Virginia, 9VAC25-840. Regulated land disturbance activities are those that disturb 2,500 square feet or greater except for the exceptions listed in the definition for “land disturbance activity” provided in the Definitions section of this document. DBHDS relies on DEQ for plan-approval, inspection and enforcement of these requirements. All DBHDS plans are developed and submitted in accordance with the Bureau of Capital Outlay Management (BCOM) procedures, which include the Construction and Professional Services Manual (CPSM).

**Responsible individual for implementation:** DBHDS to ensure necessary documents are obtained prior to land disturbance (see also BMP 4.3 and BMP 5.1). DEQ for plan review, inspection and enforcement. CSH Director of Physical Plant Services for obtaining annual reporting information.

**Necessary documentation for implementation:** Approved ESC plans for land disturbance 2,500 square feet or greater.

**Objectives and expected results in meeting measurable goals:** The objective is to ensure ESC plans are prepared according to ESC Laws and Regulations, that ESC 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 all regulated land disturbances have an approved ESC plan, the appropriate number of inspections are performed, and a minimization of the number of recurring violations on ESC inspection reports and the number of issued Notices to Comply and Stop Work Orders by DEQ.

**Implementation schedule:** The implementation of this BMP will be on-going with all regulated land disturbance activities on CSH property.

**Method to determine effectiveness:** Effectiveness will be measured by the percentage of regulated land disturbance activities that have an approved ESC Plan, and DEQ for the implementation of the required inspection, enforcement, and plan review.

BMP 4.1 Annual Reporting Form					
Annual Land Disturbance Activity Record					
Total # of regulated land disturbing activities that commenced or occurred during the reporting year:					0
Construction Site Plans			DEQ Inspector		
Regulated land disturbance activity description	Approved plan (yes/no)	Total disturbed acreage	Number of DEQ inspections	# and type of enforcement actions taken	Description of enforcement actions
N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	N/A	N/A	N/A	N/A
N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	N/A	N/A	N/A	N/A
N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	N/A	N/A	N/A	N/A

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	
Did DBHDS or the Contractor obtain DEQ plan-approval for all land disturbance activities 2,500 square feet or greater?	<input type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below) <input checked="" type="checkbox"/> N/A (No activities)
Describe program modifications to ensure approved plans are acquired when required: <u>N/A</u>	
Are violations noted on DEQ inspection forms addressed in a timely manner by the contractor?	<input type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below) <input checked="" type="checkbox"/> N/A (No activities)
Describe program modifications to ensure inspection items are addressed in an acceptable timeframe: <u>N/A</u> .	

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

**Description:** Through the stormwater webpage, CSH will promote to the public information on land disturbance erosion and sediment controls and provide a contact number for reporting complaints regarding regulated land disturbing activities. CSH will provide the appropriate information to DBHDS and DEQ for investigation within 72 hours of the complaint.

**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.

**Responsible individual for implementation:** CSH Director of Physical Plant Services will receive and record the complaint which will be provided to DBHDS and DEQ for enforcement. CSH will coordinate to provide information for MS4 annual reporting purposes.

**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 was placed on the website in September 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 # 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	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	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**

Were all complaints resolved?	<input type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below) <input checked="" type="checkbox"/> 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: <u>N/A</u>	

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

**Description:** DBHDS owns and operates all construction activities on the facility. CSH, as a lessee, does not have operational control over the DBHDS construction program and/or DBHDS construction sites. Land disturbance activities equal to or greater than 1 acre require coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities (9VAC25-880). DBHDS will ensure that all land disturbance activities equal to or greater than 1 acre will obtain approved plans from DEQ (see BMP 4.1) and obtain coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities before starting work at the facility.

The VAR10 General Permit requires a Stormwater Pollution Prevention Plan that specifies appropriate controls to prevent non-stormwater discharges such as wastewater, concrete washout, fuels and oils, and other illicit discharges. DBHDS will ensure that a Pollution Prevention Plan is provided for land disturbance activities equal to or greater than 1 acre. DEQ to provide periodic inspection oversight and enforcement.

**Necessary documentation for implementation:** (1) Construction and Professional Services Manual (CPSM) and/or contract language requiring DEQ-approved plans, a Stormwater Pollution Prevention Plan, and coverage letter for the General VPDES Permit for Discharges of Stormwater from Construction Activities; (2) Applicable construction site documents (i.e., approved plans, permit coverage letter).

**Responsible individual for implementation:** DBHDS to ensure necessary documents prior to land disturbance. DEQ to provide periodic inspection oversight and enforcement. CSH Director of Physical Plant Services to obtain necessary information for annual reporting.

**Objectives and expected results in meeting measurable goals:** Ensure necessary documentation as required by the CPSM is provided.

**Implementation schedule:** All regulated land disturbance activities that disturb greater than 1 acre will continue to obtain a VAR10 General Permit.

**Method to determine effectiveness:** Effectiveness will be determined based on: (1) all regulated land disturbance activities operating under VSMP General Permit coverage and a SWPPP, (2) the number of DEQ violations related to pollution prevention from a construction site identified in the reporting for BMPs 3.2, 3.3, 3.5, 4.1, and 4.2.

<b>BMP 4.3 Annual Reporting Form</b>			
The # of regulated land disturbance activities during the reporting year:			0
1	2	3	4
Regulated land disturbance activity description (should match 4.1 reporting column)	If greater than 1 acre, was VSMP General Permit coverage obtained? (yes/no)	If permit coverage is required, is a site-specific SWPPP available on site for the project? (yes/no)	Any illicit discharge reports from construction activities (see reporting for BMPs 3.2, 3.3, 3.5, 4.1, and 4.2)? (yes/no)
N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

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

<b>Measure of Effectiveness</b>	
If no is answered in columns 2 or 3 above, explain why and actions taken to address the issue. Include rationale that describes if the BMP is ineffective, and if so, modification to the BMP to improve effectiveness: <u>N/A</u>	
Is yes answered in column 4? (yes/no)	<input type="checkbox"/> Yes (See below) <input type="checkbox"/> No (Effective BMP) <input checked="" type="checkbox"/> N/A (No activity)
If yes, describe the instance(s) and provide rationale if BMP modification is necessary, or not necessary, to improve the effectiveness of the BMP? <u>N/A</u>	

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

**Description:** Ensure post-construction stormwater management (SWM) for all regulated land disturbance activities equal to or greater than 2,500 square feet through plan approval by DEQ. Approval from DEQ 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.

Implementation of this BMP will be accomplished through the verification of a DEQ approved stormwater management plan.

CSH will extract and retain a copy of SWM facility inspection and maintenance plans from the approved stormwater management plan for proposed stormwater management facilities to be used with the implementation of BMP 5.3.

All DBHDS plans are developed and submitted in accordance with the Bureau of Capital Outlay Management (BCOM) procedures, which include the Construction and Professional Services Manual (CPSM).

**Necessary documentation for implementation:** (1) DEQ approved SWM Plans and Calculations (maintained on active construction sites); (2) SWM Facility Inspection and Maintenance Plan.

**Responsible individual for implementation:** DBHDS to ensure DEQ-approved plan prior to land disturbance. CSH Director of Physical Plant Services to obtain information for annual reporting.

**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 DEQ approved SWM Plans with SWM facility inspection and maintenance plans.

**Implementation schedule:** The implementation of this BMP will be on-going with all regulated land disturbance activities on CSH property.

**Method to determine effectiveness:** Effectiveness will be measured by: (1) all regulated land disturbance activities having a DEQ approved SWM Plan; and (2) all stormwater management facilities having inspection and maintenance plans.

BMP 5.1 Annual Reporting Form			
The # of regulated land disturbance activities during the reporting year:			0
1	2	3	4
Regulated land disturbance activity description (Same as BMP 4.1)	If greater than 2,500 square feet, does it have an approved SWM plan? (yes/no)	If SWM Plan includes a SWM facility, does it have an inspection and maintenance plan? (yes/no/no facility required)	If it has an inspection and maintenance plan, has CSH retained it on file? (yes/no/no facility)
N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No Facility	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No Facility
N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No Facility	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No Facility
N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No Facility	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No Facility

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

Measure of Effectiveness	
Was yes answered for all activities in Column 2 above?	<input type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below) <input checked="" type="checkbox"/> N/A (No activity)
Describe the reason that an activity does not have an approved SWM plan and any necessary program modifications to the BMP to ensure an approved plan is obtained. If no modifications are needed, provide rationale: <u>N/A</u>	
Was yes answered for all activities in Column 3 above?	<input type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below) <input checked="" type="checkbox"/> N/A (No activity)
Describe the reason that an activity does not have an approved inspection and maintenance plan and any necessary program modifications to the BMP to ensure a plan is obtained. If no modifications are needed, provide rationale: <u>N/A</u>	

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

**Description:** CSH 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 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 (MM/YYYY);
- 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 in the 2010 § 305(b)/303(d) Water Quality Assessment Integrated 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 final inspection 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:** CSH Director of Physical Plant Services

**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 implementation of this BMP will be on-going as inspections are performed as specified for each BMP in the BMP database.

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

BMP 5.2 Annual Reporting Form	
Stormwater Management Facility Tracking and Reporting*	
Did any new SWM facilities come on-line during the reporting year? (yes/no)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If yes, was the electronic database updated? (yes/no)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A (No new facilities)
If no, explain why the database was not updated: <u>N/A</u>	

\* Provided as electronic database with annual report in Excel format and hard copy as Appendix C.

Measure of Effectiveness	
Is the database complete to include all of the attributes for each new SWM facility described above in this BMP?	<input type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below) <input checked="" type="checkbox"/> N/A (No new facilities)
If no, describe the reason that the database is incomplete and provide rationale that determines whether or not the BMP needs to be modified to ensure completion of the database: <u>No new SWM facilities came on-line during the reporting year; therefore, the database did not need to be updated. The database is considered complete for all previously existing SWM facilities.</u>	

**BMP 5.3 Inspection, operation, and maintenance verification of SWM facilities  
(Section II B.5.c, d.3,5)**

**Description:** CSH will perform long-term operations and maintenance of all stormwater management facilities on CSH property 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, CSH will utilize BMP-specific inspection and maintenance instructions from the BMP Clearinghouse. 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 BMP inspection and maintenance checklist, corresponding with the type of BMP, as provided in the latest edition of the Virginia Stormwater Management Handbook. The checklists provide lists of potential issues and methods to address the 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 (incorporated by reference); (3) Completed BMP Specific inspection and maintenance checklist from the Virginia Stormwater Management Handbook.

**Responsible individual for implementation:** CSH Director of Physical Plant Services

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

**Implementation schedule:** The implementation of this BMP will be on-going as inspections, operations and maintenance are performed for each facility.

**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:

- SWM Facility ID #
- Inspection Schedule (e.g., monthly, quarterly, annually)
- Date(s) of inspection(s) for the reporting year
- If inspected, any identified necessary maintenance per inspection form
- 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 C.

**Measure of Effectiveness**

Do dates in the database indicate that inspections were performed as required for each BMP for the reporting year?

- Yes (BMP effective)  
 No (See below)

Describe the reason for inspections that were not performed and provide rationale that determines whether or not the BMP needs to be modified to ensure completion of inspections: N/A

Do dates in the database indicate that maintenance was performed, where necessary, in a timely manner?

- Yes (BMP effective)  
 No (See below)  
 N/A (See below)

Describe the reason that maintenance was not performed 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: CSH is currently working to secure contracts to conduct the needed maintenance.

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

**Description:** CSH will develop and implement comprehensive written procedures for good housekeeping and pollution prevention for daily operations and equipment maintenance within the CSH Good Housekeeping/Pollution Prevention Program Manual (incorporated by reference). At a minimum, the written procedures will include procedures that include the following goals:

- Prevent illicit discharges;
- Ensure the proper disposal of waste materials, including landscape wastes;
- Prevent discharge of vehicle wash water to the storm sewer;
- Prevent the discharge of wastewater to the storm sewer;
- Require best management practices to filter water pumped from maintenance activities;
- Require best management practices to prevent pollutants in runoff from stored and stockpiled materials (e.g., soil stockpiles and salt storage);
- Prevent pollutant discharges from leaking automobiles and equipment; and
- Ensure application of materials, such as pesticides, is conducted in accordance with manufacturer's specifications.

Effective implementation will be supported with the employee Good Housekeeping/Pollution Prevention training described in BMP 6.3a.

**Necessary documentation for implementation:** (1) CSH Good Housekeeping/Pollution Prevention Program Manual (incorporated by reference); (2) Training documentation. All documentation is incorporated into the CSH Good Housekeeping/Pollution Prevention Program Manual.

**Responsible individual for implementation:** CSH Director of Physical Plant Services

**Objectives and expected results in meeting measurable goals:** The objective is to minimize or prevent pollutant discharges from operations and maintenance activities. The expected result is staff adherence to the CSH Good Housekeeping/Pollution Prevention Program Manual during daily activities.

**Implementation schedule:** The Good Housekeeping/Pollution Prevention Program Manual (incorporated by reference) is complete and staff training will be provided on an annual basis.

**Method to determine effectiveness:** Measure of effectiveness for this BMP will be the same as described for BMPs 3.4 and 6.2.

<b>BMP 6.1 Annual Reporting Form</b>	
Good Housekeeping/Pollution Prevention Program Manual (incorporated by reference)	
Has a Good Housekeeping/Pollution Prevention Program Manual been developed? (yes/no)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If no, explain why: <u>N/A</u>	

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

<b>Measure of Effectiveness</b>
See measure of effectiveness for BMP 3.4 and BMP 6.2.

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

**Description:** CSH will develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that identifies areas having a potential for the discharge of chemicals and other materials to stormwater. The SWPPP will 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 campus 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 site, modifications to operations and maintenance procedures, or short-comings resulting in a reportable spill. Inspection forms will be completed in accordance with the prescribed schedule within the SWPPP and maintained on file with the CSH Director of Physical Plant Services.

**Necessary documentation for implementation:** (1) CSH Good Housekeeping/Pollution Prevention Program Manual (incorporated by reference); (2) SWPPP (incorporated by reference); (3) Completed annual comprehensive site compliance evaluation.

**Responsible individual for implementation:** CSH Director of Physical Plant Services

**Objectives and expected results in meeting measurable goals:** The objective and expected result is to minimize or prevent pollutant discharges from CSH facilities through adherence to the SWPPP.

**Implementation schedule:** The SWPPP has been developed and implemented as of March 2017. The annual comprehensive campus compliance evaluation will be completed in the spring of each following year.

**Method to determine effectiveness:** Effectiveness will be measured by: the results of the annual comprehensive campus compliance evaluation; measure of effectiveness for this BMP will be the same as described for BMP 3.4.

<b>BMP 6.2 Annual Reporting Form</b>	
Stormwater Pollution Prevention Plan	
Have SWPPPs been completed for each high priority facility identified in the BMP?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If no, explain: <u>N/A</u>	
Did any changes on high priority facilities that could potentially affect stormwater runoff occur during the reporting year (e.g., new outfalls, facilities)? (yes/no)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If yes, are the changes reflected in the SWPPP? (yes/no)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
If the changes were not reflected, explain why: <u>N/A</u>	

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

<b>Measure of Effectiveness Form</b>	
Results from Comprehensive High Priority Site Compliance Evaluations	
Total number of recurring items originating from site-specific activities identified in year 2 of SWPPP evaluation*:	0
Total number of recurring items originating from site-specific activities identified in year 3 of SWPPP evaluation:	N/A
Total number of recurring items originating from site-specific activities identified in year 4 of SWPPP evaluation:	N/A
Has the # of recurring items trended downward or remained at zero from year to year?	<input checked="" type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below) <input type="checkbox"/> N/A
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>N/A</u>	
* Note that measure of effectiveness begins in year 2 after performing evaluations since recurring items would not be available until the 2 <sup>nd</sup> year.	
Were any illicit discharges reported or identified in the reporting forms for BMPs 3.2, 3.3, and 3.5 found to originate from high-priority facility activities?	<input type="checkbox"/> Yes (See below) <input checked="" type="checkbox"/> No (BMP effective) <input type="checkbox"/> N/A
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</u>	

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

**Description:** CSH Good Housekeeping/Pollution Prevention and IDDE Program Manuals (incorporated by reference) include written training plans, including a schedule of training events. The Program Manuals will serve as the training material and forms will be used 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 IDDE Manual described in BMP 3.3; and
- Annual training to relevant staff in good housekeeping and pollution prevention practices that are to be employed during road and parking lot maintenance and around maintenance and operations facilities. Training will utilize the CSH Good Housekeeping/Pollution Prevention Program Manual described in BMP 6.1.

The plan will also require the following:

- Training or certification in spill response for emergency response employees; and
- Training or certification for applying pesticides and herbicides in accordance with the Virginia Pesticide Control Act (§3.2-3900 et seq. of the Code of Virginia) for employees performing applications.

Training required by the General Permit that is not applicable to CSH includes the following:

- Training to employees in and around recreational facilities; and
- Certifications as required under the Virginia Erosion & Sediment Control Law (See BMPs 4.1 and 4.3).

**Necessary documentation for implementation:** (1) Training documentation or appropriate certifications for employees; (2) CSH IDDE Manual (incorporated by reference); (3) CSH Good Housekeeping/Pollution Prevention Program Manual (incorporated by reference).

**Responsible individual for implementation:** CSH Director of Physical Plant Services

**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 discharges through good housekeeping practices and IDDE screening and source identification and elimination.

**Implementation schedule:** The written training plan is complete and incorporated in the CSH Good Housekeeping/Pollution Prevention and IDDE Program Manuals. Training and certification requirements will occur annually.

**Method to determine effectiveness:** Effectiveness will be measured by the results of a “Knowledge Check” quiz that will be taken by each staff member that participates in the training. The “Knowledge Check” quiz is provided in the Appendix of the Good Housekeeping/Pollution Prevention Program Manual.

BMP 6.3a Annual Reporting Form	
Training Plan	
Has the CSH annual written training plan been developed? (yes/no)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Training & Certifications	
Has employee training been provided per the plan? (yes/no)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If no, explain: <u>Training was conducted in July of 2018, outside of the 2017-2018 reporting year. CSH will ensure future trainings are conducted within their respective annual reporting years.</u>	
Date of latest training to relevant field personnel in the recognition and reporting of illicit discharges:	July 18, 2018
Number of employees that participated in the latest training in the recognition and reporting of illicit discharges:	15
Date of last training to relevant employees in good housekeeping and pollution prevention practices:	July 18, 2018
Number of employees that participated in the latest training in good housekeeping and pollution prevention practices:	15
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)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If no, explain: <u>N/A</u>	
Did any employees apply pesticides and herbicides? (yes/no)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If yes, identify the employee and their certification: <u>Ronald K Thompson (52583-G); James Q Frazier (124121-T)</u>	
Provide a summary of the training or certification program provided to emergency response employees that includes training in spill response: <u>Emergency and spill response is incorporated into the Good Housekeeping/Pollution Prevention Program Manual and annual training.</u>	

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

Measure of Effectiveness	
Did scores from the "Knowledge Check" quiz improve from the previous training? (Yes / No / N/A)	<input type="checkbox"/> Yes (BMP effective) <input checked="" type="checkbox"/> No (See below) <input type="checkbox"/> N/A (See below)
If No or N/A, describe modifications to the BMP to increase effectiveness (e.g., training frequency, training material, etc.): <u>More people were included in the latest training. Training will be continued until the knowledge check quiz scores improve.</u>	

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

**Description:** CSH will require, through contract language, the certification for contractors applying pesticides and herbicides in accordance with the Virginia Pesticide Control Act (§3.2-3900 et seq. of the Code of Virginia). Contract language will require contractors to 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:** CSH Director of Physical Plant Services

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

**Implementation schedule:** CSH has developed contract language and will incorporate into all future contracts.

**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)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A (No contracts)
If no, explain:	<u>N/A</u>

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, 3.3, and 3.5?	<input type="checkbox"/> Yes (See below) <input checked="" type="checkbox"/> 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</u>	

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

**Description:** CSH is regulated under §10.1-104.4 of the Code of Virginia which states that “all state agencies, state colleges and universities, and other state governmental entities that own land upon which fertilizer, manure, sewage sludge or other compounds containing nitrogen or phosphorus are applied to support agricultural, turf, plant growth, or other uses shall develop and implement a nutrient management plan (NMP) for such land.”

In addition, CSH 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:** N/A, CSH does not apply nutrients and therefore is not subject to a nutrient management plan.

**Responsible individual for implementation:** N/A

**Objectives and expected results in meeting measurable goals:** N/A

**Implementation schedule:** N/A

**Method to determine effectiveness:** N/A

**BMP 6.4 Annual Reporting Form**

Nutrient Management Plans		
Were nutrients used during the reporting year?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If no, no further reporting necessary for this BMP
Total acreage of lands where nutrient management plans are required:	N/A	
Acreage of lands upon which nutrient management plans have been implemented:	N/A	
Date of last NMP update:	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**

Was the NMP’s fertilizer application record maintained and in adherence to the NMP? (yes/no)	<input type="checkbox"/> Yes (BMP effective) <input type="checkbox"/> No (See below) <input checked="" type="checkbox"/> N/A
If no, describe how the BMP can be modified to improve effectiveness. Provide rationalization for modification or if modification is deemed unnecessary. <u>N/A, no nutrients were applied during the reporting year.</u>	

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

**Description:** CSH will use contract language that references sections within the CSH Good Housekeeping/Pollution Prevention Program Manual to require CSH contractors to use appropriate control measures and procedures for stormwater discharges, when applicable. Oversight will be provided through periodic inspections using a contractor inspection form provided in the Manual. Contract language will require contractors to address items identified during inspections within a time period appropriate to prevent the potential of non-stormwater discharges. The contract language will also allow CSH 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) CSH Good Housekeeping/Pollution Prevention Program Manual (incorporated by reference); (2) Completed inspection forms; (3) Contract language.

**Responsible individual for implementation:** CSH Director of Physical Plant Services

**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:** CSH has developed contract language to require contractors to use appropriate control measures and procedures for stormwater discharges. All future contracts will utilize the updated language.

**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 work on CSH property.

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)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If no, explain: <u>N/A</u>	
Were periodic inspections performed to ensure oversight? (yes/no)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A (no contracts)
If no, explain: <u>N/A</u>	

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 contracted work on CSH property (other than regulated land disturbance activity) reported or identified in the reporting forms for BMPs 3.2, 3.3, and 3.5?	<input type="checkbox"/> Yes (See below) <input checked="" type="checkbox"/> 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</u>	

### 3.2 Special Conditions for the Chesapeake Bay TMDL

#### BMP CB-SC.1 Chesapeake Bay TMDL Action Plan (Section I C.2)

**Description:** CSH will develop a phased Chesapeake Bay TMDL Action Plan that incorporates public comment and includes:

- A review of the Program Plan BMPs described in Section 3.1 for consistency with the TMDL and for the purpose of identifying necessary modifications;
- An estimate of the annual POC loads discharged from the existing sources as of June 30, 2009, based on the 2009 progress run;
- An estimate of the total reductions necessary to reduce the annual POC loads from existing sources to the L2 implementation level;
- The means and methods that will be utilized to implement sufficient reductions from existing sources equal to 5.0% of the estimated total reductions necessary;
- Mechanism to address any modification to the TMDL or watershed implementation plan that occurs during the term of this state permit as part of its permit reapplication and not during the term of this state permit;
- An estimate of the expected costs to implement the requirements of this special condition during the state permit cycle;
- An opportunity for receipt and consideration of public comment regarding the draft Chesapeake Bay TMDL Action Plan; and
- A draft second phase Chesapeake Bay TMDL Action Plan designed to reduce the existing pollutant load by an additional 35%.

The TMDL Action Plan development will consider DEQ's Chesapeake Bay TMDL Action Plan Guidance. Additional BMPs will be included in this Section of the Program Plan to include the identified means and methods.

**Necessary documentation for implementation:** (1) Chesapeake Bay TMDL Action Plan; (2) Documentation of public participation; (3) CSH Program Plan updates, as necessary.

**Responsible individual for implementation:** CSH Director of Physical Plant Services

**Objectives and expected results in meeting measurable goals:** The objective is to achieve reductions required by the Chesapeake Bay TMDL for sediment, phosphorus, and nitrogen. The expected result is the development of a TMDL Action Plan.

**Implementation schedule:** The Chesapeake Bay TMDL Action Plan has been developed. The schedule developed in the TMDL Action Plan will be implemented thereafter.

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

BMP CB-SC.1 Annual Reporting Form	
Chesapeake Bay TMDL Action Plan	
Has the CSH Chesapeake Bay TMDL Action Plan been developed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If no, please explain and provide expected date of completion: <u>N/A</u>	
Method to receive and consider public comment, including dates: <u>CSH posted a copy of the TMDL Action Plan on its stormwater website to receive and consider public comments.</u>	
Date of TMDL Action Plan submittal to DEQ: <u>September 30, 2016</u>	
Does model quantification demonstrate the selected means and methods in the completed TMDL Action Plan can achieve the required reductions?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

Implementation	
On an annual basis, CSH will report progress on the implementation of the Chesapeake Bay TMDL Action Plan. CSH plans to employ street sweeping to satisfy the required Pollutants of Concern (POC) reductions. CSH must collect a minimum of 3,737 pounds of material to meet the POC reduction requirements by the end of the permit cycle in 2018.	
Has CSH met the required POC reduction requirements this reporting year?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A (Not required this reporting year)
If no, explain how the TMDL Action Plan can be modified to achieve the required reductions in the required time frames: <u>N/A</u>	

Measure of Effectiveness	
Does model quantification demonstrate the selected means and methods in the completed TMDL Action Plan can achieve the required reductions in the required time frames?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If no, explain how the TMDL Action Plan can be modified to achieve the required reductions in the required time frames: <u>N/A</u>	

**Appendix A – BMPs 1.2 and 2.2 Documentation of Public Education and Outreach Activities**

## Did You Know?

The average annual snowfall for Richmond is about 10 inches. Compare that to almost 110 inches in Syracuse, NY or Erie, PA with 89”.



***Have a Safe & Happy  
Holiday Season!***

*Please Don't Drink and Drive*



Winter driving can present dangerous situations and you should be prepared. Have

your car tuned up, keep your gas tank filled, put in fresh anti-freeze, have tires properly inflated with sufficient tread left, check that windshield wipers are in good condition, and carry the following items in your trunk for emergencies:

- \* Properly inflated spare tire, wheel wrench, and jack
- \* Jumper cables
- \* Shovel, bag of salt, sand, or cat litter (for traction)
- \* A working flashlight and extra batteries
- \* Reflective triangles, brightly-colored cloth, and flares
- \* First aid kit

# Happy Holidays

The Safety Net

December 2017



## Environmental Quality Corner

*Being a good steward of the environment is everyone's job. We can help prevent inadvertent littering by making sure*



*not to overfill dumpsters and to be sure close dumpster lids and doors to keep refuse in the container. This also pre-*



*vent rodents, raccoons, and other animals from getting inside the dumpsters.*

## CSH Holiday Decorating Safety Rules

\* Christmas and New Year's decorations may be put up from Dec. 1–Jan. 5.

\* Do not block exits, entrances with decorations

\* All decorations must be flame retardant

\* No decorations suspended from ceilings

\* No live trees, cut trees, or cut greenery

\* All lights must be UL approved.

\* No burning of candles (including sternos)

\* No portable space heaters, electric skillets, hot plates, toasters, toaster ovens used.

\* Patient ward decorations should be safe for use with that patient population.



# The Safety Net- February 2018

The 2018 Statewide Tornado Drill will take place on Tornado Preparedness Day, **Tuesday, March 20, 2018, at 9:45 a.m.**



## New Roof to be Installed for Building 39

A new roof for Building 39 is scheduled to be installed in the next few months. YAY!



## Did You Know?????



Did you know that we have an EOC team that conducts Environmental Safety Rounds in each of the buildings? This is done to make sure we're providing a safe environment for patients, staff, and guests. We all should be alert every day for anything that needs to be repaired or to report an unsafe condition so it can be corrected ASAP.

## New Environment of Care Topic for New Employees and Annual Test Out

MS4 Program- We've added a new topic to the EOC training material about preventing pollutants from getting into our campus storm water sewer system. We do our part by collecting sand and salt from the roadways, by not using fertilizer and pesticides on the campus grounds, and monitoring for any illicit spills. Remember to report any spills to Physical Plant Services.



# Preventive Maintenance Work Order

Print Date: 9/28/2018

**WO#:** 470858 **WEEKLY TRASH PICK UP PREVENTIVE MAINTENANCE**

**Schedule No:** 1137 **Safety Incident #:**  
**Account:** 726 - SOUTHSIDE FACILITY **Type:** Preventive Maintenance **Date Orig:** 9/27/2018  
**Site:** CENTRAL STATE HOSPITAL **Priority:** 3- PLANNED/PREVENTIVE MAINTENANCE **Time Orig:** 7.09  
**Building:** MAIN GROUNDS **Status:** ACTIVE **Date Avail:** 10/1/2018  
**Location:** COMPLEX **Sub-Status:** ISSUED TO TECHNICIAN **Date Needed:** 10/8/2018  
                   COMPLEX - COMPLEX **Skill:** GROUNDS TECH  
**Req Name:** **Req Phone:** **Req Pager:**  
**Req Remarks:**

### Asset Data

**Asset No:** CAMPUS GROUNDS **Desc:** DBHDS PETERSBURG COMPLEX GROUNDS **Risk:**  
**Manuf:** **Warranty:**  
**Model No:** **Start:**  
**Serial No:** **End:**

### Procedures

**Proc #:** 319 **Desc:** WEEKLY TRASH: WEEKLY TRASH PICK UP PREVENTIVE MAINTENANCE  
**Skill:** GROUNDS TECH **Shut Down Required:** No **Est Time:** 60 **Is Checklist:** False

**Instructions**

WEEKLY TRASH PICK UP ( X )

### Sub Procedure Readings

Proc #	Date Created	Instructions	Type	Choice Label	Reading
319					

**Problem Code:** **Cause Code:** **Total Time:** 0.00000000  
**Action Code:** **Item Code:** **Labor Cost:** \$0.00  
**Material Cost:** \$0.00  
**Total WO Cost:** \$0.00

**Completed By:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Comments:**

## Stormwater Issues?

**Flooding:** Stormwater runoff from intense rainfall can at times exceed the carrying capacity of the stormwater pipe system, creating a backup in the system which can lead to the flooding of roads, yards, and structures.

**Pollution:** When rain falls, stormwater flows across grass and impervious surfaces such as sidewalks, driveways, parking lots, rooftops, and roads. It mobilizes contaminants such as animal waste, chemicals, pesticides, trash and sediment. These contaminants are then transported downstream to streams, rivers, and ultimately the ocean.

**Water quality:** Stormwater runoff is a leading cause of nutrient contamination, predominately responsible for algae blooms and low oxygen levels, which can result in fish kills and elimination of native vegetation.

**Soil erosion:** Uncontrolled stormwater rapidly increases the amount of water flowing into a stream, which can wash away stream banks and over time, cut streambeds down deeper to bedrock.



## CSH's Stormwater Program

The U.S. Environmental Protection Agency (EPA) and the Virginia Department of Environmental Quality (DEQ) regulate stormwater and require most localities to implement and maintain a comprehensive stormwater management program. Central State Hospital (CSH) has a Municipal Separate Storm Sewer System (MS4) permit, which further obligates the hospital to manage their stormwater runoff and achieve an allocation of pollutant reductions. CSH is required to meet specific pollutant TMDL (total maximum daily load) reductions for nitrogen, phosphorus, and sediment. CSH is working to implement measures that improve water quality in its waterways. Some of these measures include:

- Street sweeping to help prevent debris and sediment from being washed into the storm system and waterways
- Storm drain inspections to screen for illicit discharges
- Employee and public education on pollutants in stormwater runoff to help determine pollutant sources and increase public awareness.

Please visit CSH's stormwater website at <http://www.csh.dbhds.virginia.gov/DEQRports.html> for more detailed information or contact the Director of Physical Plant Services.

# Stormwater Runoff Impacts



For additional information regarding stormwater or to report an illicit discharge, please contact the Director of Physical Plant Services.

## What Is Stormwater Runoff?

Stormwater runoff is precipitation such as rain or snow that does not soak into the ground. Impervious surfaces such as driveways, parking lots, roofs, sidewalks, and roads prevent stormwater runoff from naturally soaking into the ground. Stormwater runoff flows over vegetated areas and impervious surfaces into the storm sewer system and ultimately a natural waterway.



## Why is Stormwater Important?

As stormwater runoff flows over vegetated areas and impervious surfaces, it picks up pollutants such as pesticides, pet waste, oil, and debris along the way. These pollutants are then carried through the storm sewer system and discharged to natural waterways. Urban stormwater runoff is the number one source of surface water pollution in the United States, causing public safety hazards, health risks, and environmental threats.



## What is an Illicit Discharge?

Any substance other than stormwater that enters the storm sewer system or receiving waters is considered an illicit discharge. Many illicit discharge sources originate from maintenance facilities or construction sites, such as vehicle maintenance areas or equipment washout bays. Daily activities at these sites, specific spill incidents, or illegal dumping can result in illicit discharges. Examples of source pollutants include automotive fluids, paints, solvents, pesticides and herbicides, sediment, and trash.

Exceptions are made for non-stormwater discharges that do not significantly contribute pollutants to the storm sewer system, including fire-fighting activities, water line flushing, and landscape or lawn irrigation. These discharges may flow into the storm sewer or waterway without consequence.

Illicit discharges are significant due to the threat stormwater pollution poses to public safety, public health, and the environment. Due to the importance of reducing and preventing stormwater pollution, illicit discharges, potential sources for illicit discharges, and illegal dumping should be reported immediately so that appropriate corrective actions can be taken.

## How Can I Report an Illicit Discharge?

If you see an illicit discharge, a potential source for an illicit discharge, or witness illegal dumping, you should contact the Director of Physical Plant Services.

## How Can I Help Reduce Stormwater Pollution?

- Pick up and properly dispose of pet waste
- Appropriately clean up vehicle fluid leaks and spills
- Properly dispose of hazardous substances such as automotive oil, cooking oil, paint, cleaners, etc.
- Exercise caution when using pesticides, herbicides, and fertilizers
- Report illicit discharges, potential illicit discharge sources, and any illegal dumping



**Appendix B – BMP 3.1 Outfall Inventory**

**2018 Central State Hospital Outfall Reconnaissance Inventory**

Outfall ID	Latitude	Longitude	Area Drainage to Outfall (Acres)	Name of Receiving Water	VA HUC 6	Direct Discharge to Receiving Water Impaired as of 2010? (2010 303(d)/305(b))	Applicable TMDL(s) and Pollutants of Concern	Date of Last Screening	Summary of Screening Results	Details of Any Necessary Follow-up	Date of Follow-up Resolution
CS-01	37.20422851440	-77.45525882630	0.04	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-02	37.20422902210	-77.45518899040	0.09	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-03	37.20450410590	-77.45505030820	1.01	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-04	37.20523656140	-77.45479946280	0.62	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-05	37.20564500890	-77.45485908050	0.95	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-06	37.20644545890	-77.45474529650	1.23	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-07	37.20709279570	-77.45525862900	0.74	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-08	37.20780558930	-77.45578429310	0.30	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-09	37.20818407950	-77.45595802810	1.27	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-10	37.20875828620	-77.45624187010	0.37	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-11	37.20962303230	-77.45719335980	0.89	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-12	37.20992034280	-77.45730017940	0.56	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-13	37.21122599840	-77.45486979680	4.71	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-14	37.21291433430	-77.45137644580	0.25	Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-15	37.21210136790	-77.45180706630	3.98	Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-17	37.21273895540	-77.45200111490	0.19	Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-18	37.21275888940	-77.45196378870	1.46	Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-19	37.21103911290	-77.44779406120	0.42	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-20	37.21076862420	-77.44779066530	1.71	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-21	37.21086219040	-77.44792481890	0.39	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-22	37.20764829780	-77.44560923430	7.23	Unnamed Tributary to Rohoic Creek	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-23	37.20662713050	-77.44750941180	0.17	Unnamed Tributary to Rohoic Creek	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-24	37.20670863520	-77.44780136400	1.30	Unnamed Tributary to Rohoic Creek	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-25	37.20685394480	-77.44805012840	0.96	Unnamed Tributary to Rohoic Creek	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A

CS-26	37.20680185130	-77.44734663520	0.10	Unnamed Tributary to Rohoic Creek	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-27	37.21502994660	-77.45326149280	1.12	Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A
CS-28	37.20489000000	-77.45451600000	0.50	Unnamed Tributary to Cattail Run	JA40	Not Assessed	Chesapeake Bay (TSS, TN, TP)	6/6/2018	No Illicit Discharges Found	N/A	N/A

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

(Electronic Database Provided as Enclosure)

**Appendix C - Central State Hospital Stormwater Management Facility Inventory**

Facility ID	Facility Type	Latitude	Longitude	Total Drainage Area (Acres)	Pervious Area (Acres)	Impervious Area (Acres)	Year Built	HUC6	Receiving Water	2010 303(d)/305(b) Impairment(s)	Operator or Privately Owned?	Maintenance Agreement?	Date of Last Inspection	Inspection Schedule	# of Inspections Completed During Reporting Year	Maintenance Required?	Date Maintenance Performed
CSH-1	Extended Detention Basin	37.20966	-77.447798	3.09	1.66	1.43	6/30/2005	JA40	Unnamed Tributary to Cattail Run	Not Assessed	Operator (Central State Hospital)	N/A (Applies only to Private)	6/6/2018	Annual	1	Yes, invasive plants require removal	Not yet performed*

\*CSH is currently working to secure contracts to conduct the needed maintenance.