

Stormwater Pollution Prevention Plan (SWPPP)

Armstrong Building

Facilities Maintenance and Operations

Version 1 - Last updated on 2/03/2023

MS4 Permit Number: VAR040136



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SWPPP Preparation Date: April 2018

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CERTIFICATION

I certify that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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.

Authorized By: _____

Signature: _____ Date: _____

1.0 INTRODUCTION

1.1 Purpose

Radford University (RU) is subject to a General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4). RU was issued coverage on May 21, 2014 under General Permit No. VAR040136 with an effective date of July 1, 2013 and an expiration date of June 30, 2018. The permit requires RU to develop, implement, and enforce an MS4 Program designed to reduce the discharge of pollutants to the maximum extent practicable, to protect water quality, to ensure compliance with water quality standards, and to satisfy the appropriate water quality requirements of the Clean Water Act and its attendant regulations.

The MS4 Permit aims at reducing pollutants in stormwater runoff by focusing on six (6) Minimum Control Measures (MCMs) described as follows:

1. Public Education and Outreach on Stormwater Impacts,
2. Public Involvement and Participation,
3. Illicit Discharge Detection and Elimination,
4. Construction Site Stormwater Runoff Control,
5. Post Construction Stormwater Management, and
6. Pollution Prevention/Good Housekeeping.

This SWPPP has been created to satisfy the conditions of MCM #6 which requires RU to identify high-priority facilities that have a high potential to discharge pollutants into stormwater and to develop, implement, and maintain a SWPPP for each of them. Based on inspections performed by the Department of Environmental Quality (DEQ) and activities occurring, the DEQ has identified the Facilities Maintenance and Operations Facility as a high-priority facility requiring a SWPPP.

This document is the Stormwater Pollution Prevention Plan (SWPPP) for Radford University's David E. Armstrong Complex Facilities Maintenance and Operations Facility located at 501 Stockton Street, Radford, Virginia 24142.

1.2 SWPPP Content

This SWPPP includes all the following:

- a) A site description that includes a site map identifying all outfalls, direction of flows, existing source controls, and receiving water bodies;
- b) A discussion and checklist of potential pollutants and pollutant sources;
- c) A discussion of all potential nonstormwater discharges;
- d) Written procedures designed to reduce and prevent pollutant discharge;
- e) A description of the applicable training as required;
- f) Procedures to conduct an annual comprehensive site compliance evaluation;
- g) An inspection and maintenance schedule for site specific source controls;
- h) A SWPPP amendment log;
- i) Inspection and Maintenance Checklists; and
- j) A Staff Training Log.

2.0 STORMWATER POLLUTION PREVENTION TEAM

The pollution prevention team, headed by the team coordinator, will be responsible for developing, implementing, maintaining, revising, and ensuring compliance with the SWPPP. Table 1 provides the facility's pollution prevention team members, their title, and contact information.

Table 1: Stormwater Pollution Prevention Team		
Name	Phone	Title
Wayne Hebb	540-831-7815	SWPPP Team Coordinator Project Manager
Stephanie J. Jennelle	540-831-5411	SWPPP Team Member Interim Vice President for Finance & Administration & CFO
Jorge Coartney	540-831-7802	SWPPP Team Member Associate Vice President of Facilities, Planning and Construction
Rick Farthing	540-831-7817	SWPPP Team Member Director of Facilities, Planning and Construction
Jennifer Hendrix	540-831-6491	SWPPP Team Member Interim Director of Facilities Management
Neal Thompson	540-831-7817	SWPPP Team Member Recycling, Solid Waste Coordinator
Office of Environmental Health and Safety (EHS)	-	SWPPP Team Member(s) Pollution Prevention Committee whose members include representatives of EHS, Housekeeping, Facilities Management, the Art Department, Chemistry Department and Purchasing

The team will meet to evaluate and discuss the status of stormwater control efforts and address any deficiencies or additional requirements in the SWPPP. Specific responsibilities for the team include:

- Provide aide for developing and maintaining the SWPPP;
- Update significant material list;
- Review potential spill sources;
- Update the SWPPP as necessary;
- Review environmental incidents;
- Continue and improve SWPPP training for facility personnel;

- Review new construction and changes in activities and procedures; and
- Evaluate the overall effectiveness of the SWPPP.

The SWPPP Team Coordinator will:

- Perform SWPPP oversight and provide management support to staff;
- Implement and administer the SWPPP with aid of the SWPPP team;
- Oversee maintenance practices identified in the SWPPP;
- Implement and oversee employee training;
- Conduct or provide for inspection and monitoring activities;
- Identify other potential pollutant sources;
- Identify any deficiencies in the SWPPP; and
- Coordinate with the SWPPP Team Members.

The SWPPP Team Coordinator will also be responsible for naming additional SWPPP Team Members and performing or assigning the day-to-day tasks required to implement the SWPPP.

3.0 FACILITY INFORMATION

3.1 Facility Location

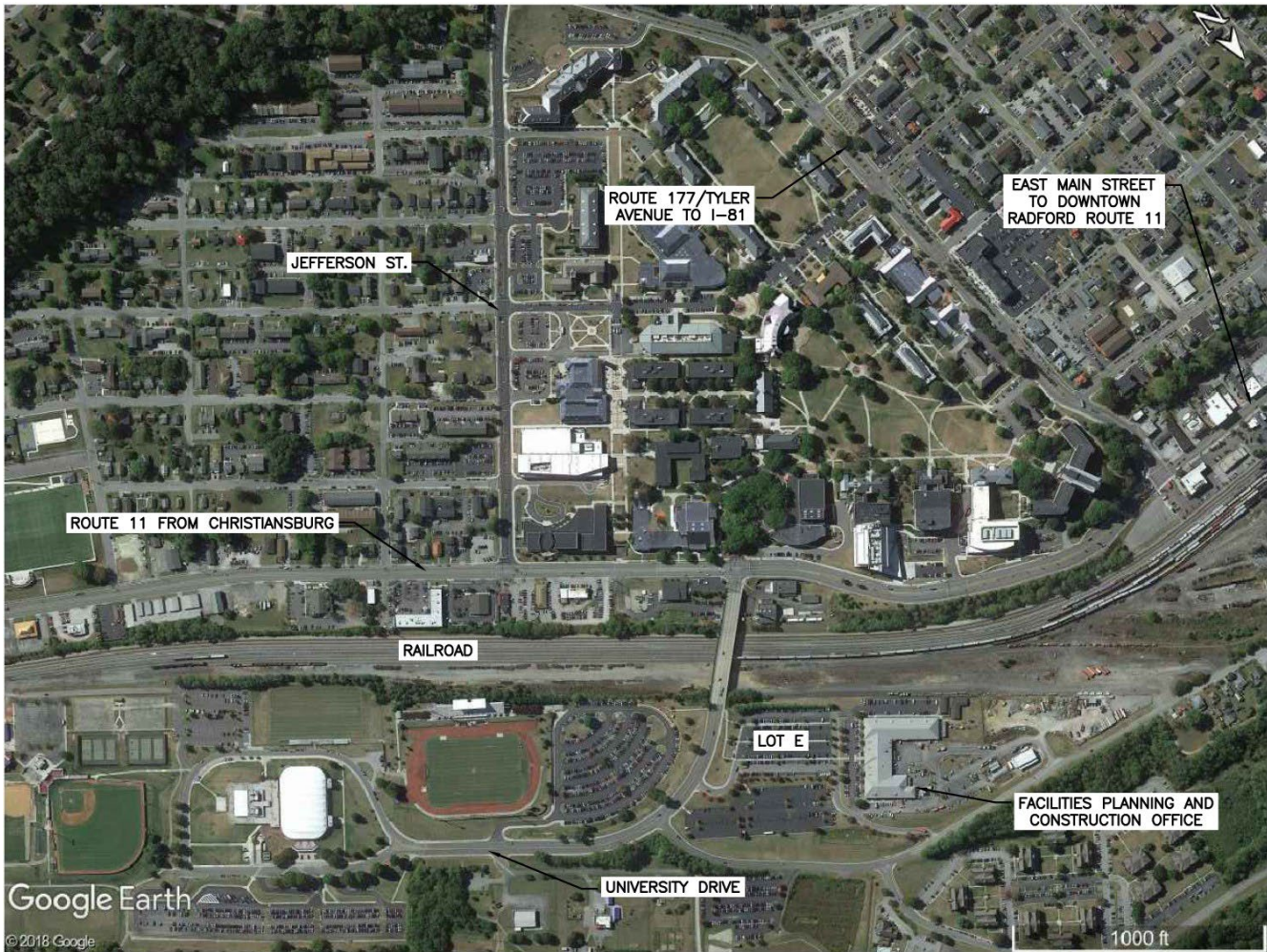
Facility Name:	David E. Armstrong Complex Facilities Maintenance and Operations Facility
Facility Address:	501 Stockton Street, Radford, Virginia 24142
Facility Acreage:	9.0 acres
University's Primary SIC Code:	8221
Watershed this facility drains to?	New River (6 TH Order HUC: NE57)

Direction from Interstate 81:

- 🕒 Take Exit 109 onto Route 177/Tyler Avenue into Radford.
- 🕒 At the third traffic light, turn right onto Jefferson Street.
- 🕒 At the next traffic light, turn left onto East Main Street.
- 🕒 Turn right onto University Drive.
- 🕒 Turn left into the parking lot of the Armstrong Complex, Parking Lot E.
- 🕒 Continue along the drive within parking lot E until you are adjacent to the railroad.
- 🕒 Designated visitor's parking spaces are located along the front of the building.

A Facility Location Map is provided on the following page.

Figure 1: Insert



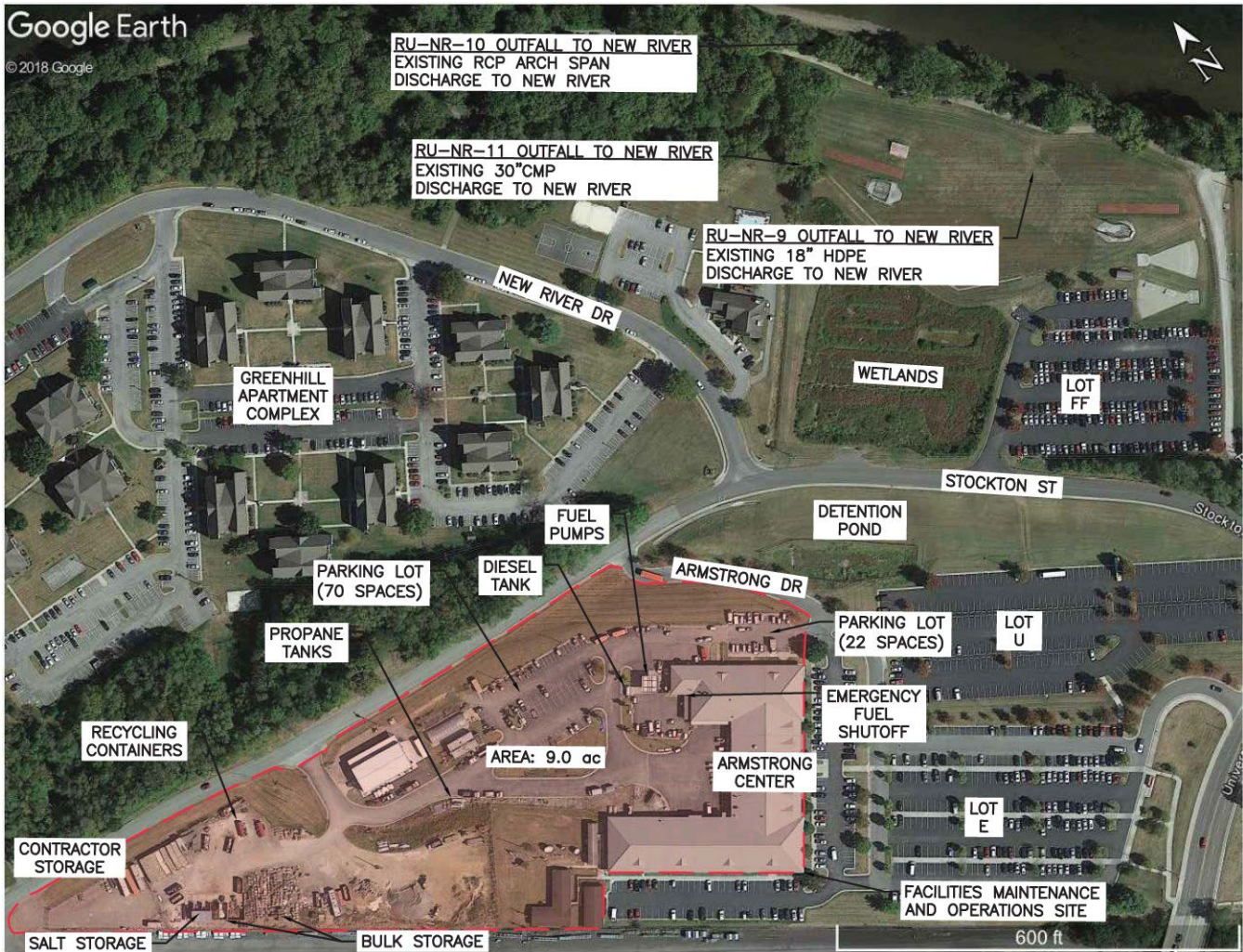
3.2 Facility Description

The total area of the site is approximately 9.0 acres of which approximately 40 percent is impervious surface consisting of buildings, parking lots, access roads, gravel storage yards and concrete pads. There are currently a total of seven (7) structures located within the site. The structures are listed below:

Table 2: Site Structures		
Building Name	Building Footprint (square feet)	Usage
Armstrong Center	50,085	Administration, offices
Facilities Equipment Storage	3,040	Storage
Facilities Greenhouse	1,225	Plant-life, storage
Carpentry Storage Building	1,115	Storage, Wood Working
IT Office	1,055	Office
IT Office	1,950	Office
IT Office	3,320	Office
Total Building Footprint	61,790	

An aerial photograph of the site and vicinity is provided on the following page.

Figure 2: Insert



3.3 Facility Activities

The site contains administrative and shop buildings for the multiple functions performed by Facilities Maintenance and Operations. The primary activities conducted at the site include vehicle storage and maintenance, equipment storage and maintenance, surplus material storage, salt storage, mulch storage, fuel receiving and distribution, washing of miscellaneous equipment, contractor tool storage, solid waste temporary storage, and landscaping equipment storage. The list below includes departments that may have an impact on stormwater pollution potential at the Facilities Maintenance and Operations Facility due to activities performed and materials used during work procedures:

- Surplus Property and Warehouse Services
- Administrative Service
- Building Services
- Housekeeping Services
- Landscape Services

The departments perform the following functions for Radford University:

- Surplus Building Material Storage
- Surplus Equipment Storage
- Fleet Management and Maintenance
- Fleet Storage and Parking
- Equipment Management and Maintenance
- Building Automation
- Carpentry
- Electrical Services
- Heating, Ventilation and Air Conditioning
- Masonry/Plastering
- Painting
- Plumbing
- Locksmithing
- Roofing
- Fire Protection
- Housekeeping

- Trash Collection
- Landscaping
- Snow and Ice Control/Removal

3.4 Facility Stormwater Drainage System

Stormwater management for the Facilities Maintenance and Operations Facility includes curb and gutter(s), catch basins, trench drains, and a storm sewer network. Rainfall landing within the site sheet flows to catch basins located around the facility. The catch basins are located along a network of storm sewer pipes varying in diameter. Rainfall landing on the Armstrong Complex is directed via roof drains to the storm sewer system. Curb and gutter located around the perimeter of the parking areas and along access roads directs the runoff from the asphalt surfaces to the catch basins. Runoff that is captured within the storm sewer system is directed offsite to the Detention Pond (#RU-BMP-AR-1) located to the northeast of the facility. The Detention Pond discharges into another storm sewer system that conveys the flow under Stockton Street and discharges into Wetland Treatment BMP (#RU-BMP-WT-1). The Wetland Treatment BMP outfalls through a pipe to the #RU-NR-11 Outfall which discharges to the New River.

Rainfall that lands in the grass areas along the north side of the site drains offsite to Stockton Street where it is intercepted by curb inlets located along the roadway and conveyed via a storm sewer system and stormwater conveyance channel to the #RU-NR-11 Outfall.

Rainfall that lands within the contractor storage yard on the western side of the site sheet flows offsite to the south into the Norfolk Southern rail yard. The contractor storage yard is a gravel lot where contractors can store their contractor storage bins. The storage bins are completely sealed and contained; therefore, the potential for pollution is minimal.

As indicated in Figure 3, the majority of the stormwater from the David E. Armstrong Facilities Maintenance and Operations area will pass through the Detention Pond (#RU-BMP-AR-1) and the Wetland Treatment BMP (#RU-BMP-WT-1). These BMPs will minimize and/or prevent polluted stormwater from discharging into the New River.

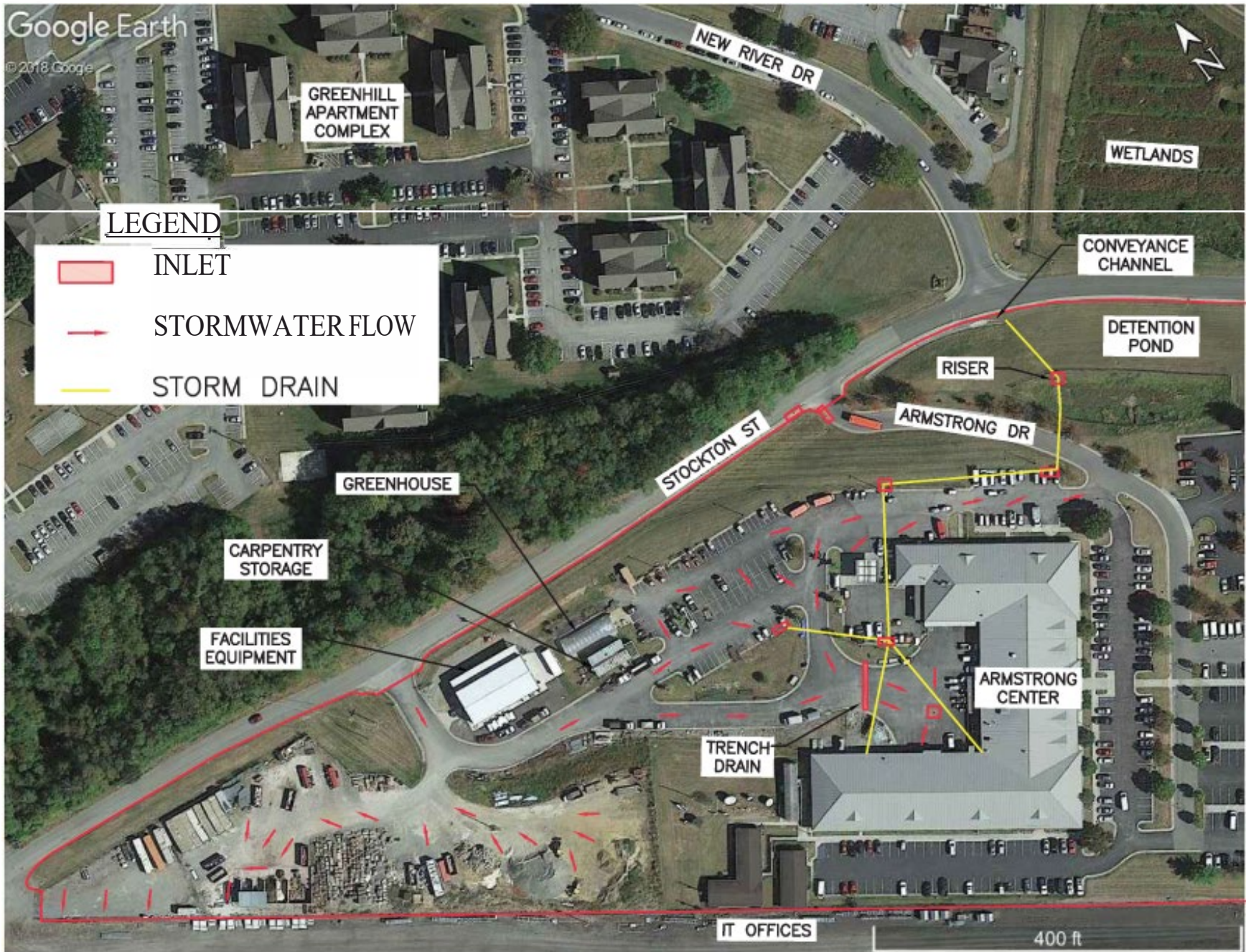


Figure 3: Stormwater Map

3.5 Surrounding Land Use

The site is bounded to the north by Stockton Street and Greenhill Apartment. The curb and gutter along the south side of Stockton Street prevents runoff from the roadway from entering the site. The site is bounded to the east by Radford University Parking Lots E and U. Runoff from parking lots E and U is captured by inlets and a separate storm sewer system that the Facilities Maintenance and Operations Facility and discharged into the Detention Pond (#RU-BMP-AR-1). The site is bound to the south by Norfolk Southern property and topography prevents runoff from the Norfolk Southern property from entering the site.

4.0 IDENTIFICATION OF POTENTIAL STORMWATER CONTAMINANTS

This section identifies significant materials located at the facility that may potentially contaminate stormwater and identifies areas where stormwater contamination may occur. Potential non-stormwater sources are also described.

4.1 Potential Pollutants and Pollutant Sources

Materials used by the facility that have the potential to be pollutants are listed in Table 4. This table includes the material description, the source of the potential pollutant, its location and potential risk.

Material/Pollutant	Pollutant Source	Location of Pollutant	Potential Risk
Fuel	Delivery vehicles	Vehicle fueling pumps	High risk - large quantity, outdoors
Fuel	Delivery, leaking tank	Emergency generators, Stand-alone tank	High risk - large quantity, outdoors
Fuel, oil, grease for equipment	Storage, leaking vehicle, spill	Shops, parking areas	Medium risk - some stored outdoors
Cleaning solvents	Storage, spill	Housekeeping Solvents	Low risk - indoors
Detergents	Storage, spill	Wash area	Medium risk - space close to storm drain
Fertilizers	Storage, spill	Landscape	Medium risk
Pesticides, herbicides	Storage, spill	Landscape	Medium risk
Mortar mix, concrete	Washing tools	Facilities Storage Building	Low risk - indoors
Glue, adhesives	Storage, spill	Carpentry building	Low risk - indoors
Refrigerants	Spill	Cooling Units	Low risk - rarely handled
Wood preservatives	Spill	Carpentry building	Low risk- indoors
De-icing agents	Spill	Stock pile	Medium risk - used and stored outdoors
Recycling products	Seepage from containers	Recycling dumpsters	Medium risk - stored outdoors under cover
Sediment	Stockpiles	Surplus Storage	Medium risk
Salt	Salt pile	Salt Storage Bay	Medium risk – large quantity, outdoors with Canopy
Material/Pollutant	Pollutant Source	Location of Pollutant	Potential Risk

Gypsum board	Construction/Demo	Disposal Container	Medium risk
Wood, metal, plastics	Construction/Demo	Disposal Container	Medium risk
Concrete, brick	Construction/Demo	Disposal Container	Medium risk
Lead materials	Construction/Demo	Disposal Container	Medium risk
Insulating materials	Construction/Demo	Disposal Container	Medium risk
Sawdust	Wood working	Carpentry building	Medium risk
Mixed effluents	Seepage from containers	Trash dumpsters	Medium risk

4.2 Potential Non-Stormwater Discharges

Table 4 identifies all non-stormwater discharges, as authorized in the general permit, that are or could commingle with stormwater discharges from the facility, including any applicable support activity.

Table 4: Potential Non-Stormwater Discharges	
Non-stormwater Discharges	Anticipated?
1. Discharges from firefighting activities	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
2. Fire hydrant flushing	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
3. Water used to wash vehicles or equipment where soaps, solvents, or detergents have not been used and the wash water has been filtered, settled, or similarly treated prior to discharge	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
4. Water used to control dust that has been filtered, settled, or similarly treated prior to discharge	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
5. Potable water sources, including uncontaminated waterline flushing	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
6. Routine external building wash down where soaps, solvents or detergents have not been used and the wash water has been filtered, settled, or similarly treated prior to discharge	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

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Radford University Facilities Maintenance and Operations

Non-stormwater Discharges	Anticipated?
7. Street wash water where spills or leaks of toxic or hazardous materials have not occurred (or where all spilled material has been removed prior to washing); where soaps, solvents, or detergents have not been used and where the wash water has been filtered, settled, or similarly treated prior to discharge	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
8. Uncontaminated air conditioning or compressor condensate	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
9. Uncontaminated ground water or spring water	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
10. Foundation or footing drains where flows are not contaminated with process materials such as solvents	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
11. Uncontaminated excavation dewatering, including dewatering of trenches and excavations that have been filtered, settled, or similarly treated prior to discharge	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
12. Landscape Irrigation	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>

5.0 POLLUTION PREVENTION THROUGH BMPS

Best Management Practices (BMPs) are practices, procedures, policies, prohibitions, schedules of activities, structures, or devices that implemented to prevent or minimize pollutants from coming in contact with precipitation, stormwater runoff, or non-stormwater flows. BMPs are also structures or devices that remove pollutants from stormwater runoff before the runoff enters a stormwater drainage system or surface water.

Source control BMPs includes all types of measures designed to prevent pollution at the source, that is, to keep stormwater from coming into contact with pollutants. Source control BMPs are generally simple, low-maintenance, cost-effective, and broadly applicable. The BMPs may be categorized as non-structural or structural. Good housekeeping is an example of a non-structural source control BMP and a canopy installed over a salt storage pile is an example of a structural source control BMP.

Treatment control BMPs are devices or methods used to treat stormwater runoff to remove pollutants. Treatment control BMPs are not as effective as source control BMPs, typically cost more, do not remove all pollutants from stormwater runoff, and are highly dependent on regular maintenance to be effective. A typical treatment control BMP would be a bioretention basin.

5.1 Source Control BMPs

The following source control BMPs shall be utilized at the Facilities Maintenance and Operations facilities to prevent or minimize pollutants.

5.1.1 *Preventative Maintenance*

Preventative maintenance BMPs relate to maintaining building, roof systems, pipe systems, vehicles and equipment in good working order.

Poorly maintained vehicles and equipment may result in failure or improper function which could result in the discharge of pollutants. Therefore, to reduce the probability of a failure, vehicles and equipment should have a preventative maintenance schedule for inspection, repair, replacement of fluids, seals, hoses, filters, gauges, piping, etc.

Hardscaped and landscaped surfaces should be maintained and not be allowed to degrade to the point where the surfacing erodes and contributes pollutants to stormwater runoff.

Buildings and canopy roofs should be maintained and leaky roofs, broken doors, broken piping or any other defects that may result in pollution should be repaired promptly.

Stormwater management facilities such as catch basins, storm sewers, trench drains, and structural BMPs (e.g., detention pond, wetland treatment) should be inspected and maintained regularly to ensure proper function and the pollution is prevented and/or minimized.

5.1.2 Proper Waste Handling

Waste handling BMPs relate to properly controlling, collecting, storing, and disposing of wastes that are generated at the facility or temporarily stored at the facility. All facility personnel should be aware that disposal of waste (including wash water) into a storm drain inlet, stormwater conveyance or any surface that allows the transport to a stormwater facility is an illegal discharge.

Waste materials from the offices, shops, and garages shall be disposed of in appropriate trash and recycling containers. Dumpster and recycling containers shall be covered or have watertight seals to prevent leaking.

The following waste handling BMPs shall be utilized at the facility:

- Sweep or vacuum work areas to collect particulates and debris;
- Recycle materials when possible;
- Separate and segregate different types of waste;
- Store waste material indoors, under a canopy or in a container/dumpster to prevent exposure to rainwater;
- Limit waste generation;
- Empty dumpsters to prevent overfilling;
- Prevent wind from transporting waste contained in the dumpsters by properly bagging/covering the waste;
- Store hazardous materials properly and maintain spill containment kits;
- Review Material Safety Data Sheet (MSDS) for each product;

- Provide signage, labels, inventory controls, and secondary containment for all hazardous waste areas or containers; and
- Conduct regular inspections for leaks.

5.1.3 *Proper Material Handling and Storage*

Material handling and storage BMPs relate to controlling the potential for leaks, spills, and losses of materials delivered, used, and stored at a facility. Spills and leaks of materials can accumulate on hardscape surfaces or in soils and be transported in stormwater runoff or in authorized non-stormwater discharges.

The following material handling and storage BMPs shall be utilized at the facility:

- Obtain only the amount of material needed to complete the job;
- Read and follow manufacturer instructions prior to use;
- Review Material Safety Data Sheet (MSDS) for each product;
- Store materials indoors, under a canopy or in a covered container to prevent exposure to rainwater;
- Store lead-acid batteries indoors and with secondary containment;
- Store drums or other containers away from storm drain inlets;
- Provide signage, labels, and inventory controls for all materials;
- Maintain storage bays for bulk materials;
- Seed surplus topsoil and subsoil stockpiles immediately after stockpiling;
- Store surplus materials in an orderly fashion;
- Locate storage areas away from access roads and parking areas to reduce the potential for accident related leaks or spills;
- Wash vehicles indoors;
- Wash larger vehicles in a grassed area with environmentally friendly biodegradable detergent;
- Store salt, aggregate, mulch and fine material in the material storage bays;
- Cover the salt storage bay with a canopy that fully covers the material stored;
- Follow manufacturer's recommendations for storing, mixing, applying, and handling pesticides, herbicides, and fertilizers; and
- Spill kits, brooms, other absorbent materials and containers shall be located near the fuel dispensing areas and maintained.

5.1.4 Good Housekeeping

Good housekeeping practices include activities that are intended to maintain a clean site and keep equipment in good working order to prevent pollutants from coming into contact with stormwater runoff. Daily cleanup and inspections are the most effective good housekeeping measures.

The following good housekeeping BMPs shall be utilized at the facility:

- All spills shall be immediately cleaned up;
- Spilled oil, grease, or fuel shall be absorbed using kitty litter or other absorbent material, swept and disposed of properly;
- Waste shall be collected and properly disposed of on a regular schedule to prevent stockpiling or over filling the containers;
- Indoor work areas shall be kept neat, uncluttered, and well-ventilated to discourage outdoor work;
- Outdoor work areas shall be swept regularly;
- Outdoor work areas that require cleaning beyond sweeping, all wash water shall be contained, collected, and disposed of properly;
- Outdoor waste containers shall be securely placed to prevent wind blown debris;
- Materials shall be returned to designated storage areas after use;
- Equipment and containers shall be inspected regularly for leaks and repaired immediately if a leak is located;
- Maintain stenciling on storm drain inlets with "No Dumping, Drains to Waterways";
- Clean around and in inlets around the facility to prevent the transport of sediment; and
- Employees shall be regularly trained on proper good housekeeping practices.
- All landscape waste disposal shall be done into a sealed receptacle that will be hauled off site.

5.2 Treatment Control BMPs

The Facilities Maintenance and Operations Facility does not include treatment control BMPs within the site area; however, most of the runoff from the facility drains to the Detention Pond (#RU-BMP-AR-1) located to the northeast of the facility. The Detention Pond discharges into another storm sewer system that conveys the flow under Stockton Street and discharges into the Wetland Treatment BMP (#RU-BMP-WT-1).

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The Detention Pond and Wetland Treatment BMPs treat runoff from multiple areas of the campus including the Facilities Maintenance and Operations Facility. The BMPs are included in the MS4 permit under Minimum Control Measure No. 5. Inspection and maintenance procedures have been developed for each BMP and a BMP Inspection Report is included the MS4 Annual Report. Facilities Maintenance and Operations employees shall be trained to look for common issues for the Detention Pond and Wetland Treatment BMPs and to report those issues to responsible party.

6.0 SPILL PREVENTION AND RESPONSE

Spill response typically involves the remediation of liquids such as hazardous chemicals or petroleum fuels. Spill clean-up is labor-intensive and costly as it involves containing the spill, collecting the spilled material, properly disposing of the spilled material, reporting the spill to regulatory agencies, remediation of area where the spill occurred, and may include monetary fines. Therefore, spill prevention is essential to good spill prevention and response plan.

6.1 Spill Prevention

Spill prevention and control procedures include:

- Placing bollards, berms and containment features around structures or areas where fluids are stored;
- Providing signage and labeling to all liquid storage containers;
- Properly maintaining vehicles and equipment;
- Providing training for proper use of materials and equipment used;
- Conducting outdoor maintenance on level impervious surfaces to allow for easy detention and control;
- Locating liquid storage containers and storage areas away from access roads and parking areas to reduce the potential for accident related leaks or spills;
- Using drip pans for maintenance operation involving fluids; and
- Providing canopies and impervious storage bays for bulk material storage.

Spill prevention and control applies to all materials and not just hazardous substances. Non-hazardous materials such as sand, soil, and mulch can also impact water quality. Proper storage and stabilization of bulk storage piles will prevent erosion of the materials and the potential for a release.

6.2 Spill Response and Countermeasures Procedures

At the Facilities Maintenance and Operations site, most chemicals and fluids are stored indoors. The potential for pollution are minimized in this manner.

Spills may occur at the vehicle fueling pumps at the entrance to the Facilities Maintenance and Operations site. The fuel dispensing pumps and diesel dispensing tank are located under a canopy and self-contained, respectively, which will help to keep spilled fuels from spreading during a rain

event. In the event of a spill, spill kits are located adjacent to the fuel dispensing pumps and an emergency shut-off is located on the face of building near the fuel dispensing pumps.

As soon as a spill is discovered, the initial action should be to protect personal safety and prevent the pollutant from entering nearby drainage ditches or stormwater inlets. The person observing the spill should take immediate action to prevent further spillage and to confine the spilled material. The general instructions to contain a spill are:

- Observe all applicable safety considerations.
- If possible to do safely, stop the release. This includes shutting appropriate valves, securing pumps, triggering the emergency shut-off valve, and attempting to plug or cover punctures or gashes in pipes. It may be impossible to stop the spill if the situation creates a high degree of personal danger to the immediate responders.
- Notify a supervisor, Environmental Health and Safety, and the SWPPP Team Coordinator. (See contact information in Table 5 below.)
- Warn other employees and onsite personnel of the spill by voice or using equipment such as two-way radios or telephones, if available.
- Contain the spill. Use the spill kits located at the pumps. For larger spills use absorbent materials such as dirt, sand, or other relatively impervious material to dam up the spill and prevent further flow of the material from the spill area.
- Should spillage reach the drainage ditches or storm water drop inlets, use available means to minimize the amount of substance flowing into the ditch or drain and contain the substance at the discharge point.
- For oil or other floating materials, use hay, straw, or any boom arrangement to confine the spillage.
- For soluble materials, use chemical absorbent, makeshift dams, or other means of confinement to prevent waterway contamination or the spread of further contamination.
- The person discovering the spill should not undertake burning or chemical treatment of the spill.
- Remain at the scene until Environmental Health and Safety respond.

6.3 Emergency Notification

For any petroleum or hazardous chemical discharge, release or spill the discoverer must notify his or her supervisor, Environmental Health and Safety, and the SWPPP Team Coordinator as soon

as possible after completing initial spill-containment actions. Should the discoverer of the discharge, release, or spill be unable to stop and/or contain the spill, he should immediately notify Environmental Health and Safety. After regular business hours, call the University Police Department 24-hour emergency phone number.

Table 5: Internal Emergency Contact List		
Title	Office Phone	24-Hour Emergency Phone
SWPPP Team Coordinator (L. Neal Thompson)	(540) 831-7207	(540) 831-5500
Facilities Management and Operations	(540) 831-7800	
Office of Emergency Preparedness	(540) 831-6693	

Information to provide includes:

- Location of spill;
- Type of material;
- Estimated quantity and extent of spillage; and
- A brief description of measures that have been taken to confine the spilled material and prevent further spillage.

Each discharge, release, or spill, will be documented. Reportable petroleum spills are documented in RU's SPCC Plan. Smaller spills, spills of non-petroleum materials, and illicit discharges are maintained as part of the MS4 Permit and are tracked as part of Minimum Control Measure No. 3 (IDDE). For tracking purposes, staff should be sure to report all spills to the SWPPP Team Coordinator, even if additional response efforts are not needed.

7.0 EMPLOYEE TRAINING

An annual employee training program to educate employees about the requirements of the SWPPP shall be implemented as part of the MS4 Permit. This education program will include background on the components and goals of the SWPPP. For this SWPPP, employees who are required to receive training include all Facilities Maintenance and Operations personnel who operate or utilize the Facilities Operations and Maintenance area. RU employees whose job duties have the potential to impact the environment and operate within the Facilities Maintenance and Operations area shall be identified by the University and shall be required to receive training as well.

Training topics may include the recognition and reporting of illicit discharges, good housekeeping and pollution prevention practices, proper material handling, disposal and control of waste, container filling and transfer, and proper storage, washing, and inspection procedures. Training is not required for those topics that do not apply to the location. Additionally, all employees will be required to participate in refresher training classes. An employee sign-in sheet for the training class can be found in Appendix A of this document. The training program will be reviewed annually by SWPPP Team Coordinator to determine its effectiveness and to make any necessary changes to the program.

Documentation on each training event including the date, the number of employees attending the training, and the objective must be kept for a period of three years after each training event and included in the Annual MS4 Report.

8.0 FACILITY INSPECTIONS AND PREVENTATIVE MAINTENANCE PLAN

8.1 Routine Inspections

Routine facility inspections will be conducted at a frequency determined appropriate for the facility. At a minimum, inspections will be conducted quarterly by staff appointed by the SWPPP Team Coordinator. This frequency will be increased if a need is identified during the inspection process. The Routine Comprehensive Site Compliance Inspection Checklist (Quarterly) can be found in Appendix B.

The purpose of these inspections will be to identify problems early so that the problems can be corrected in a timely fashion. The inspections will include an evaluation of all areas of the facility where pollutant sources are exposed to stormwater and will evaluate the existing stormwater management facilities, vehicle storage areas, material storage areas, and areas where stormwater leaves the site. Facility personnel will be notified of any findings or deficiencies identified during the inspection. A copy of the inspection report shall be maintained in the SWPPP located on-site and a copy shall be included in the Annual MS4 Report which is submitted to the Department of Environmental Quality each year.

8.2 Annual Inspections

An Annual Comprehensive Site Compliance Evaluation, using the Checklist found in Appendix C, will be completed approximately one year following the implementation of this SWPPP and annually thereafter. The annual inspection can be used in place of one of the quarterly inspections. The SWPPP Team Coordinator, SWPPP Team members and Facilities Management and Operations personnel will perform this inspection. The evaluation shall include areas where pollutants could have come into contact with stormwater, areas where leaks or spills occurred from equipment, off site tracking of pollutants where vehicles enter and exit the site, the tracking or blowing of materials, evidence of or the potential for pollutants entering the drainage system, evidence of pollutants discharging to surface waters at facility outfalls, and a review of training, monthly inspections completed, maintenance performed, and effective operation of BMPs. The inspector will determine if the BMPs are being properly maintained and are effective in reducing stormwater contamination. During the evaluation, the outfalls will also be evaluated for the presence of unauthorized stormwater discharges. Any noncompliance issues observed will be

documented in the report. If the facility is found to be compliant, the signed report will state that no issues were found. The annual inspection report shall include:

- Identification of personnel performing the evaluation;
- The date(s) of the evaluation;
- Findings of the evaluation;
- Recommended modifications to the SWPPP;
- A schedule for implementing SWPPP modifications; and
- Any incidents of non-compliance and the corrective actions taken.

A copy of the inspection report shall be maintained in the SWPPP located on-site and a copy shall be included in the Annual MS4 Report which is submitted to the Department of Environmental Quality each year.

8.3 Preventative Maintenance

Site specific source controls are required to be inspected and maintained on a routine basis. In most cases, these processes are managed through Facilities Management and Operations.

8.4 Changes to Site Operations

During the routine comprehensive site compliance inspections and annual comprehensive site compliance evaluation the inspectors will also determine if site operations have changed since development of this SWPPP. If operational changes have been made, the SWPPP Team will determine if those changes will impact stormwater quality and develop new BMPs to address the change. All operational changes and new BMPs will require amendments to this SWPPP and the amendments shall be documented in the SWPPP Amendment Log located in Appendix D.

9.0 NOTICE OF PLANNED CHANGES

If the facility expands, experiences any significant production increases or process modifications, or changes any significant material handling or storage practices which could impact stormwater, the SWPPP will be amended appropriately. The amended SWPPP will have a description of the new activities that contribute to the increased pollutant loading and planned source control activities. The SWPPP will also be amended if the state or federal compliance inspection officer determines that it is ineffective in controlling stormwater pollutants discharged to waters.

Notice of the planned changes to the Department of Environmental Quality is only required when any alteration or addition to a building, structure, facility or installation may result in a discharge of pollutants, the nature of the pollutants changes, an increase of pollutants occurs, or the changes may result in a noncompliance.

10.0 RECORD RETENTION REQUIREMENTS

Records described in the SWPPP must be retained on site for three (3) years beyond the date of the report or monitoring record and shall be made available to the state or federal compliance inspection officer upon request. Additionally, employee training records, monitoring reports, and compliance evaluations shall also be maintained.

Appendix A

Employee Training Sign-In Sheet

Appendix B

Routine Comprehensive Site Compliance Evaluation (Quarterly)

RADFORD UNIVERSITY

Routine Comprehensive Site Compliance Evaluation Checklist (Quarterly) (Page 1)

Date of Inspection:	
Area Inspected:	
Inspector's Name and Title:	
Fueling Area	
	Comments
Roof over fueling area	
Spill kit available and maintained	
Fuel shut-off operational	
Secondary Containment	
Instruction Signage	
Emergency Contact Info Sign/Label	
Vehicle and Equipment Maintenance/Storage	
	Comments
Maintenance records maintained	
Hazardous material stored properly	
Liquid waste disposed of properly	
Drip pans utilized and stored properly	
Floor drains discharge to oil/water separator and sanitary sewer system	
Material Safety Data Sheets available	
Materials labeled and stored properly	
Proper disposal of greasy rags, oil/air filters, batteries, and coolants	
Area designated for cleaning activities	
Wash water contained and drains to sanitary sewer system	
Larger vehicles/equipment washed off-site	
Ground free of visual stains from oil or other fluids	
Drip pans used during outdoor maintenance	
Part or wrecked vehicles/equipment drained of fluids	
Vehicles and Equipment inspected for leaks	
Waste Handling and Storage	
	Comments
Evidence of containers leaking	
Dumpsters covered	
Evidence of wind blow debris	
Waste segregated	

Routine Comprehensive Site Compliance Evaluation Checklist (Quarterly)
(Page 2)

Material Storage and Handling		Comments
	Lead acid batteries stored indoors	
	Drums stored indoors	
	Soil stockpiles stabilized and seeded	
	Materials stored in an orderly fashion	
	Salt storage bay covered	
	Drums and contained stored away from inlets	
	Material Safety Data Sheets available	
	Signage and labels provided for materials	
	Storage bays for bulk materials maintained	
	Landscaping chemicals stored indoors	
	Waste properly disposed of	
	Containers inspected for leaks	
	Safeguards installed (i.e. secondary containment)	
	No leaks	
Stormwater Management System		Comments
	No ponding water	
	Inlet free of debris	
	Sediment removed from inlets, piping and curb and gutter	
	Ditch linings stabilized	
	Inlet stenciling intact	
	Off-site Detention Pond maintained	
	Off-site Wetland Treatment BMP maintained	
General Site		Comments
	Hardscape surfacing in good condition	
	Vegetated areas properly maintained and erosion free	
	SWPPP located on-site	
	Signage and labeling in good condition	
	Contractors properly storing materials/tools	

Other Comments:

Appendix C

Annual Comprehensive Site Compliance Evaluation Checklist



Annual Comprehensive Site Compliance Evaluation Checklist (Page 1)

Date of Inspection:		
Area Inspected:	Facilities Maintenance and Operations	
Inspector's Name and Title:		
Facility Drainage Areas	Any Problems or Deficiencies and Comments	Corrective Actions and Dates
1. Parking lot in good condition and vehicle entry area is clean.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
2. Parking area free of signs of spills or leakage from vehicles or equipment.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
3. Site is free of trash or debris, including wooded areas around the site. Dumpsters are properly covered.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
4. Stormwater outfalls free of unauthorized discharges.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
5. Equipment washing, maintenance, and fueling areas are free of spills.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
6. Materials that are potential stormwater contaminants are stored inside or under cover.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
7. Materials are contained properly to prevent tracking and blowing.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	

Annual Comprehensive Site Compliance Evaluation Checklist (Page 2)

Facility Drainage Areas	Any Problems or Deficiencies and Comment	Corrective Actions and Dates
8. No evidence of, or potential for, pollutants entering the drainage system.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
9. No obvious reoccurrence likely from areas where leaks or spills have occurred within the past 3 years.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
10. Non-stormwater discharges (e.g., wash water) properly controlled.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
11. Meadow Creek does not appear impacted by site activities.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
12. Any changes in drainage areas conditions or site operations since the last inspection?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
13. Do BMPs appear effective and adequate?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Offsite Treatment BMPs	Any visible problems	Corrective Actions and Dates
1. Detention Pond	Yes <input type="checkbox"/> No <input type="checkbox"/>	
2. Wetland Treatment	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Describe any incidents of non-compliance not described above and corrective actions taken:		

Signature of Inspector _____ Date: _____

Appendix D

Log of Changes and Updates to SWPPP

