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OPERATIONS & MAINTENANCE PLAN FOR MUNICIPAL-OWNED STORMWATER FACILITIES

Evans City Borough
204 B South Jackson Street
Evans City, Pennsylvania 16033



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SECTION 1 - GOALS

Evans City Borough is committed to operating and maintaining a highly functional stormwater management system to control runoff, mitigate flooding, and prevent pollutants from entering downstream waterways to the greatest extent possible. This Operations & Maintenance Plan aims to guide the proper operation, maintenance, and inspection procedures to ensure the Borough's stormwater facilities function efficiently and accessibly. To achieve the best outcomes, any other entity conducting related work in the Borough must also adhere to the procedures listed in this plan. A review and update of this plan shall occur routinely and as necessary.

SECTION 2 – CONTACT INFORMATION

Evans City Borough Office: 724-538-8320

Evans City Borough Public Works: 724-538-8320 ext. 2

Evans City Water & Sewer Authority: 724-432-3428

Evans City/Seven Fields Regional Police Department: 724-538-8055

Evans City Area Volunteer Fire Department: 724-538-8114

EMERGENCY: 911

SECTION 3 – POLLUTION PREVENTION

Pollution prevention in stormwater facilities is essential to protect water quality, increase water availability, and reduce flooding risks. The following guidelines and procedures will enhance pollution prevention through routine housekeeping, minimized storage of hazardous materials on-site and appropriate storage in designated areas, set responses to chemical spills, leaks, and contamination, and proper erosion and sedimentation control measures. To enforce these guidelines, pertinent borough staff should receive properly documented training covering all materials and chemicals affecting municipal operations and efficiency.

SECTION 3.1 – GENERAL PREVENTION

- 1) When cleaning, verify the removal of dirt and debris from sources that tie into the stormwater system (streams/storm drains). Consider eliminating maintenance-area floor drains where possible to maintain clear and dry surfaces.
- 2) Regularly perform and document the results of routine borough vehicle and equipment checks to lower the risk of machine malfunction that may cause fluid spills or runoff pollution.

SECTION 3.2 – MATERIAL STORAGE & PROCEDURES

- 1) Locate storage areas near the site, away from vehicular and pedestrian traffic, and away from drains and waterways. Minimize on-site storage of hazardous materials.

- 2) Storage areas should be well-ventilated and preferably indoors, especially during the wet season. Store any drums at a slight angle to reduce water pooling on lids, or preferably, utilize domed covers.
- 3) Borough staff should utilize Safety Data Sheets (SDS) for all stored materials. Keep and maintain materials in original containers and follow the manufacturer's instructions. Do not store chemicals, drums, or bagged materials directly on the ground but in a secondary containment.
 - Examples of secondary containment include but are not limited to:
 - Drip pans/buckets
 - Liquid tight storage cabinets
 - Liners
 - Pallets
 - Tanks
- 4) Separate all storage containers such that there is sufficient distance in between to allow for emergency access and effective spill cleanup. Keep fully stocked supplies of appropriate spill cleanup material kits nearby and accessible.
 - Essentials for spill kits include but are not limited to:
 - Nylon bags
 - Disposable bags
 - Oil-absorbent socks
 - Absorbent pads
 - Splash-resistant goggles
 - Nitrile gloves
- 5) Regular inspections of storage areas should be completed and documented.

SECTION 3.3 – RESPONSE TO SPILLS

- 1) Contain the spill using dry absorbent materials. Protect any outlets/drains with dry, porous materials to prevent contamination. Locate the source of the spill and monitor the contaminated area.
- 2) All liquids and contaminated materials should be safely collected, labeled, and placed into drums to be disposed of correctly as hazardous waste unless assessed otherwise.
- 3) Record and document details of the spill, including its location, type, cause, and action taken. Include photographic documentation when possible. Notify the appropriate DEP office if the spill quantity exceeds 1 gallon.

SECTION 3.4 – E&S CONTROLS FOR EXCAVATIONS

- 1) Aim to schedule work during low-flow seasons. Obtain data through field surveying and existing vegetation, predominantly preserving trees when feasible. Ensure there is access to the site and a location to clean mud off tires before vehicles enter any existing road.
- 2) Divert surface waters away from disturbed areas, divert base flows for minor streams past the work area, and divert major streams where possible. Make sure to stabilize and complete bypasses before diverting flow and to stabilize the channel's disturbed area before restoring the base flow.
- 3) Unless tree removal is required, perform channel excavations from the top of the bank. Temporary crossings may be used to complete excavations. Once crossings are removed, channel entrances must be stabilized and restored.
- 4) Place all excavated material acting as backfill in a temporary stockpile with a sediment barrier installed between the said pile and the stream channel. Sediment removal treatment is necessary for the water pumped from the excavation before discharge. Take unusable material to a disposal site.
- 5) Provide temporary stabilization during delays and work pauses. Until stabilization materials are available, protect unstable areas.
- 6) Ensure there is a geotextile protection lining for the temporary bypass channel and that it maintains all other necessary regulations. Use a cofferdam to impound water for the pump intake and meet regulations.

SECTION 4 – INSPECTION, OPERATION, & MAINTENANCE

The following tables were created based on information listed in the Pennsylvania BMP Manual, Erosion and Sedimentation Control Manual, and the Pennsylvania Department of Environmental Protection MS4 Quick Resource Guide (see references section). They list general inspections and maintenance needed to uphold the quality of borough stormwater facilities and erosion and sedimentation controls.

SECTION 4.1 – INSPECTION & MAINTENANCE SCHEDULES – STORMWATER FACILITIES

BMP	Inspection Frequency	Inspection Needed	Maintenance Needed
Catch Basin (Inlet) BMP 6.4.2	At least two times per year and after each runoff event	• Accumulation of sediment • Damage to inlet structures • Damage to outlet control structures • Alignment with road surface	• Clean out catch basin and remove any debris that could cause damage or a decrease in efficiency to the system. • Replace structure if irreversible damage is found.

		• Surcharging • Leakage/seepage of stormwater	
Vegetated Swale BMP 6.4.8	Annually and within 48 hours after each major runoff event (>1in rainfall)	• Erosion problems, damage to vegetation, and sediment and debris accumulation; correct as needed • Vegetation on side slopes for erosion and formation of rills or gullies; correct as needed • Pools of standing water; dewater, and discharge to an approve location and restore to design grade • Litter; remove prior to mowing • Uniformity in cross section and shape, correct as needed • Erosion or blockage of swale inlet, correct as needed	• Plant alternative grass species in the event of unsuccessful establishment. • Reseed bare areas; install appropriate erosion control measures when native soil is exposed, or erosion channels are forming. • Rototill and replant swale if draw down time is more than 48 hours. • Inspect and correct check dams when signs of altered water flow (channelization, obstructions, erosion, etc.) are identified. • Water during dry periods, fertilize, and apply pesticide only when absolutely necessary.
Infiltration Basin BMP 6.4.2	After each runoff event and fully drained within 72 hours	• Accumulation of sediment • Damage to outlet control structures • Erosion control measures • Signs of water contamination/spills, and berm slope stability	• Clean out basin and remove any debris that could cause damage or a decrease in efficiency to the system. Restore original cross section and infiltration rate. Properly dispose of sediment. • Mow only as appropriate for vegetative cover species.

			• Revegetate bare spots as soon as possible. • Avoid excessive compaction by mowers.
Detention Basin BMP 6.6.3	Weekly and after each runoff event, maintenance on a quarterly basis and after every storm greater than 1 inch	• Clogging and excessive debris; remove as needed. • Sediment accumulation; remove as needed. • Erosion; correct as needed. • Growth of exotic/invasive species; remove as needed.	• A basin maintenance plan shall be developed that includes inspection and maintenance requirements. • Sediment shall be removed when accumulations reach 1/3 the height of the outlet. • Mowing and trimming of vegetative areas should be performed as necessary to sustain the system. Remove all detritus.
Storm Manhole	At least two times per year and after each runoff event	• Accumulation of sediment • Damage to inlet structures • Damage to outlet control structures • Alignment with road surface • Leakage/seepage of stormwater	• Clean out manhole and remove any debris that could cause damage or a decrease in efficiency to the system. • Replace structure if irreversible damage is found.
Storm Lines	At least two times per year and after each runoff event	• Leakage/seepage of stormwater • Damage to pipes	• Clean out pipe and remove any debris that could cause damage or a decrease in efficiency to the system. • Replace pipe if irreversible damage is found.
Headwalls	Annually and after each runoff event	• Structural integrity/cracking	• Clean out pipe and area around headwall. Remove any debris that could cause

		- Seating of headwall - Pipe condition, alignment, blockages	damage or a decrease in efficiency to the system. Replace or repair damaged parts of the system as necessary.
Outfalls	Annually and after each runoff event	- Structural integrity/cracking - Scour - Visible flow - Standing water	Create and implement a schedule to replace or repair damaged parts of the system as necessary.
Curb/Gutter Line	Annually and as needed after each runoff event	- Cracking - Leakage/seepage of stormwater during or after runoff events	Damaged portions shall be replaced or sealed/repared immediately to mitigate flooding.
Level Spreader BMP - Appendix G	Monitor for two years on a quarterly basis and semi-annually thereafter. Also inspect after rainfall events greater than 1 inch	- Accumulation of sediment causing blockage or diversion of flow paths - Malfunction of forebay, channel, level lip, or buffer - Erosion	- Remove any debris that could cause damage or a decrease in efficiency to the system. - Replace or repair damaged parts of the system as necessary.
Floodplain Restoration BMP 6.7.4	Coincide with regulatory requirements established by state and federal regulatory agencies, typically from 1-4 years	85% survival rate of vegetation establishment - Weeds and invasive plants	- Maintenance Plan required. - After the first growing season, weeds may need to be controlled by herbicides, mowing, or weed mats
Landscape Restoration BMP 6.7.2	Annual for Forest Restoration for up to five years	- Physical conditions (growth success, terrain) - Invasive species	Forest restoration: mow annually in order to control invasives. Utilize a combination of a carefully selected herbicide around

	Seasonal for Meadow Management for up to three years		protective tree shelters and selective manual removal if necessary. Meadow Management: Seasonal mowing down to 4-6 inches from 12 inches or burning may be required in coordination with essential reseeding and other important reestablishment aspects. Treat rhizomatous weeds with herbicide by hand during the second year. Remove mowed material from the site.
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SECTION 4.2 – INSPECTION & MAINTENANCE SCHEDULES – EROSION & SEDIMENTATION CONTROLS

Sediment Barrier/Filter	Inspection Frequency	Maintenance Needed
Compost Filter Sock E&S PG 62	Weekly and after each runoff event	Damaged socks must be repaired according to manufacturer's specifications.
Compost Filter Berm E&S PG 67	Weekly and after each runoff event	- Remove sediment when it reaches 1/3 of the aboveground berm height. - Undermined or topped sections should be replaced.
Weighted Sediment Filter Tube E&S PG 69	Weekly and after each runoff event	Log shall be cleaned of sediment deposits when it reaches ½ the height of the tube.

		Damaged tubes need replaced within 24 hours of inspection.
Rock Filter Outlet E&S PG 73	Weekly and after each runoff event	Sediment shall be removed when accumulations reach 1/3 the height of the outlet.
Silt Fence (Filter Fabric Fence) E&S PG 75	Weekly and after each runoff event	- Sediment shall be removed when accumulations reach ½ the aboveground height of the fence. - Undermined or topped sections of the fence need immediately replaced with a rock filter outlet.
Super Silt Fence (Super Filter Fabric Fence) E&S PG 82	Weekly and after each runoff event	Sediment shall be removed when accumulations reach half the aboveground height of the fence.
Sediment Filter Log (Fiber Log) E&S PG 85	Weekly and after each runoff event	- Sediment deposits shall be cleaned from log when it reaches half the height of the log. - Damaged filter logs shall be replaced within 24 hours of inspection.
Wood Chip Filter Berm E&S PG 87	Weekly and after each runoff event	- Sediment shall be removed when accumulations reach half the height of the berm. - Damaged portions shall be replaced immediately.

Straw Bale Barrier E&S PG 89	Weekly and after each runoff event	- Remove sediment when it reaches 1/3 the aboveground height of the barrier. - Damaged bales shall be replaced immediately.
Rock Filter E&S PG 92	Weekly and after each runoff event	Sediment shall be removed when accumulations reach ½ the height of the filter.
Vegetative Filter Strip E&S PG 94	Weekly and after each runoff event	If width of filter strip is reduced by half, suitable alternative BMPs should be installed immediately.
Inlet Filter Bag E&S PG 97	Weekly and after each runoff event	- Bags shall be emptied and rinsed or replaced when half full or when flow capacity has been reduced. - Damaged or clogged bags shall be replaced immediately.
Stone Inlet Protection E&S PG 96	Weekly and after each runoff event	- Sediment shall be removed when it reaches half the height of the stone. - Damaged or clogged inlets shall be replaced immediately.

SECTION 5 – INSPECTION & MAINTENANCE - ROADWAYS

Suggested schedule for pollution prevention and general good housekeeping maintenance needed to maintain the quality of facilities and equipment.

SECTION 5.1 – STATE ROADWAYS

The Borough of Evans City has approximately 2.41 miles of highway that are owned and maintained by the Pennsylvania Department of Transportation (PennDOT). They are as follows:

State Route 68 – East Main Street, West Main Street

State Route 528 – Franklin Street

State Route 3015 – South Washington Street

State Route 3021 – Pioneer Road

- The Evans City Maintenance Department shall visually inspect PennDOT owned routes during everyday travel.
- Any present debris and sediment shall be removed by the Maintenance Department if manageable and reported to PennDOT if warranted.
- If repeated flooding or poor drainage is identified, the issue shall be reported to PennDOT to be reviewed for solutions.

PennDOT Contact: District 10
Butler County Manager
(724) 284-8800

SECTION 5.2 – LOCAL ROADWAYS

There are approximately 6.45 miles of borough-owned roads in Evans City Borough and routine maintenance is key to keeping the roads safe for travel.

- Street sweeping is to be conducted at least once a year and as needed by either the Evans City Maintenance Department or a contractor. The sweeper operator must be professionally trained.
- Construction debris shall not be washed into the storm system and instead shall be properly disposed of according to its material type.
- Use a mechanical vacuum/sweeper to collect construction debris and dust. Never use water to clean construction debris.
- Recycle waste material when possible.
- Deicing materials (i.e., salt) shall be protected from precipitation to prevent excess from washing into the storm system.

Snowplow operators must be professionally trained. Salt spreaders are to be inspected prior to each use to ensure proper functionality.

SECTION 6 – REFERENCES

SECTION 6.1 – PA DEP E&S MANUAL

Pennsylvania Department of Environmental Protection's Erosion and Sediment Pollution Control Manual.

<http://www.depgreenport.state.pa.us/elibrary/GetFolder?FolderID=4680>

SECTION 6.2 – PA DEP STORMWATER BMP MANUAL

Pennsylvania Department of Environmental Protection's Best Management Practices Manual.

<http://www.depgreenport.state.pa.us/elibrary/GetFolder?FolderID=4673>

SECTION 6.3 – MS4 RESOURCE GUIDE

Pennsylvania Department of Environmental Protection's Quick Resource Guide to the MS4 Program.

<https://files.dep.state.pa.us/environmentaled/Environmental%20Education/EnvEdPortalFiles/MS4%20Resource%20Guide.pdf>

SECTION 7 – FORMS

The provided forms are meant to aid with the process of record keeping. It is essential that records are easily retrievable and well organized. Organized inspection, maintenance, and training records help the borough regularly maintain and efficiently inspect its stormwater facilities based on accurate depictions of liabilities, demonstrations of compliance, and the presence of crucial information.

SECTION 7.1 – MAINTENANCE RECORD – MUNICIPAL EQUIPMENT & VEHICLES

See attached form.

SECTION 7.2 – MAINTENANCE RECORD FOR STORMWATER FACILITIES

See attached form.

SECTION 7.3 – STAFF TRAINING RECORD

See attached form.

SECTION 7.4 – ATTENDANCE SHEET

See attached form.

MAINTENANCE RECORD- MUNICIPAL EQUIPMENT & VEHICLES

EQUIPMENT/VEHICLE NO:	
LOCATION:	
DEPARTMENT:	
REASON FOR EVALUATION: ☐ Routine Maintenance ☐ Discovery or Problem	
DESCRIPTION OF EVALUATION COMPLETED:	
DESCRIPTION OF PROBLEM (IF NEEDED):	
COMMENTS/NOTES:	
EMPLOYEE NAME & SIGNATURE	
DATE COMPLETED:	

MAINTENANCE RECORD- STORMWATER FACILITIES

FACILITY CONTROL NO:	
LOCATION:	
DEPARTMENT:	
REASON FOR EVALUATION: ☐ Routine Maintenance ☐ Discovery or Problem	
DESCRIPTION OF EVALUATION COMPLETED:	
DESCRIPTION OF PROBLEM (IF NEEDED):	
COMMENTS/NOTES:	
EMPLOYEE NAME & SIGNATURE:	
DATE COMPLETED:	

STAFF TRAINING RECORD

DESCRIPTION:	
DATE(S):	
DEPARTMENT:	
TRAINER/MODERATOR:	
TRAINING SOURCE: ☐ In House ☐ Outside Source	
<u>TRAINING DETAILS:</u> TYPE OF TRAINING: ☐ Instructor-led/Staff Speaker ☐ Instructor-led/Guest Speaker ☐ Internet Session/Webinar ☐ Film/Video/Case Study Review ☐ Other: _____ PURPOSE OF TRAINING: ☐ Department Requirement ☐ Government Agency Requirement ☐ Municipality Offered Education ☐ Individual Sought Education ☐ Other: _____	
COMMENTS/NOTES	
ATTENDANCE: Attach with the Attendance Sheet	

ATTENDANCE SHEET

DESCRIPTION:		
DATE COMPLETED:		
TRAINER/MODERATOR:		
EMPLOYEE NAME:		EMPLOYEE SIGNATURE:
ATTENDANCE: Attach with the Staff Training Record sheet.		