

Field Review

Technical Advisory Report

Long-Term Operation & Maintenance

Report Delivered: ☒

Site Name:	Chesapeake Drive - 035	Report Date:	2021-04-26
Location:	Facility 035	Inspection Date:	2024-03-21
Permit Holder:	Chesapeake HOA	Reviewed By:	Jakob Hamlescher
Contact:	Carlin Culbertson	Site NPDES Number:	N/A
Address:	9364 Chesapeake Drive North Royalton, Ohio 44133	Application No:	N/A

Stormwater Control Measure Field Review of Conditions and Compliance Activities performed through a Memorandum of Understanding in accordance with Ohio Revised Code, Chapter 940 and North Royalton Codified Ordinances

Site Condition Summary



View of basin.

Needed Maintenance Activity Details:

Please provide the appropriate contact and email address for future inspection reports to Carla Regener at cregener@cuyahogswcd.org.

As a stormwater control measure (SCM) owner/operator in the Northeast Ohio Regional Sewer District's (NEORS) stormwater service area, you may be eligible for a stormwater fee credit. The credit is a conditional reduction in the NEORS stormwater fee if an account holder takes measures to reduce the stormwater rate or volume and/or protect the water quality of runoff flowing from their property to the regional stormwater system. The credit can be obtained through continued use, operation, and maintenance of approved SCMs. To find out more details about the credit program and to apply for credit you can find details online at: <https://www.neorsd.org/fee-credit/>, or contact Chris Hartman with NEORS at 216-881-6600 X6656.

See needed maintenance activity details below.

Additional Information:

Stormwater control measures (SCMs) are manmade structures that help reduce flooding by holding back and slowly releasing water during rain events. They include man-made retention ponds, dry detention basins, and underground detention devices. Sites with a constructed SCM are responsible for maintaining the structure. A guidance document has been compiled by local stormwater experts to assist private owners with inspection and maintenance and is available online at the following link: https://epa.ohio.gov/static/Portals/35/documents/SCM_OM_Manual_Final_7-30-15.pdf

Emergency Spillway



View of the emergency spillway. Reminder to regularly clean trash and vegetation out.

Needed Maintenance Activity Details:

Remove trash and debris from the emergency spillway.

Additional Information:

Emergency spillways are a safe path for water to flow out of stormwater control measures during floods. The spillway needs to be kept clear of obstruction and debris. Emergency spillways need to be maintained with plant cover or other protective measures (e.g. turf reinforcement matting, rock, cement etc.) to prevent soil loss. Plants should be cut back annually from the emergency spillway to prevent trees and shrubs from blocking flow.

Inflow Structure



View of inflow structure. Regularly check and remove any obstructions and fix any damage.

Needed Maintenance Activity Details:

Remove sediment from inflow structure area on a routine basis to prevent sedimentation of the stormwater control measure.

Monitor for erosion near the inflow structure, repair as needed to prevent sedimentation of the stormwater control measure.

Additional Information:

Inflow structures (pipes, culverts, curb cuts, etc.) direct stormwater runoff into stormwater control measures. These inflow structures can become clogged by overgrown plants, accumulation of sediment, floating trash and debris. A clogged inflow structure can result in erosion and blocked flow. Unclogging the inflow structure is relatively simple. Remove overgrown plants, accumulated sediment, and debris with a shovel, rake, a pole or your hand. Inspect inflow areas regularly as they can become clogged at any time.

Invasive Aquatic Plants



Regularly treat and remove invasive vegetation such as cattails and phragmites. They have mat forming roots that take up required storage volume.

Needed Maintenance Activity Details:

Cut back, remove, or treat narrowleaf cattails to prevent further growth. Use a contractor with a commercial pesticide license with aquatic endorsement for any chemical treatments. Planting turf or native species to compete with the invasive cattails will help stabilize and prevent future cattail establishment. Contact Cuyahoga SWCD for additional details about the proper management of narrowleaf cattail. Stabilize any areas that are disturbed during vegetation management.

Cut back or treat Phragmites to prevent further growth. Use a contractor with a commercial pesticide license with aquatic endorsement for any chemical treatments. Planting turf or native species to compete with the Phragmites will help stabilize and prevent future Phragmites establishment. Contact Cuyahoga SWCD for additional details about the proper management of Phragmites. Stabilize any areas that are disturbed during vegetation management.

Additional Information:

Stormwater control measures can become overgrown with invasive plants without routine maintenance. The plants form a mat that thickens each year, reducing space in the basin for water detention. Narrowleaf cattails (*typha angustifolia*), Common Reed Grass (Phragmites), and Reed Canary Grass (Phalaris) form protective thickets which allow for mosquito breeding. Invasive plants can be controlled using physical or chemical methods. When chemical methods are preferred, please first refer to http://epa.ohio.gov/dsw/permits/GP_Pesticide.aspx. As with all plant management in stormwater control measures, any soil disturbance will need to be stabilized with seeding/uniform plant growth. Depending on the length of time the invasive plants have been growing, dredging of accumulated sediment may also be needed before seeding and stabilization.

Outlet Structure



View inside outlet. Clean out debris.



View of outlet structure.

Needed Maintenance Activity Details:

Monitor and remove accumulated debris from the outlet structure on a regular basis to ensure proper function.

Additional Information:

Outlets provide a path for water from stormwater control measures to the storm sewer or stream. The outlet structure is designed to slow down water and hold it back within the stormwater control measure during rain events. These outlets can become clogged by accumulation of sediment, floating trash and debris. A clogged outlet can result in loss of storage and flooding of unintended areas. Unclogging the outlet is relatively simple. Remove accumulated sediment and debris with a shovel, rake, a pole or your hand. Inspect the outlet regularly, it can become clogged at any time.

Plant Management



Cut back brambles from basin edge.



Cut back woody vegetation in basin.

Needed Maintenance Activity Details:

Stormwater control measures should be mowed at least a few times per year to prevent woody plants (trees and shrubs) from growing.

Additional Information:

Plants help to stabilize soil, prevent erosion, and uptake water and nutrients. However, plants in stormwater control measures requires maintenance. Overgrowth of plants can threaten infrastructure and basin banks, can provide mosquito habitat, and can take up space designated for retention of water. Grass should be mowed at 3-4 inches in height several times a year to prevent the growth of trees and shrubs and to maintain access to infrastructure. Landscape plants in stormwater control measures should be pruned in a manner that allows for line of sight and access to infrastructure for inspection & maintenance. All dead plants should be removed from the stormwater control measure after routine maintenance to prevent clogging of pipes.

Permanent Stabilization



There is a large amount of erosion/slumping in the basin near the swale inlet.



There is sediment deposition from the erosion/slumping.



View of the swale.

Needed Maintenance Activity Details:

Stabilize eroding areas to prevent further erosion and sedimentation of the stormwater control measure.

Additional Information:

Permanent uniform plant cover and other protective measures (e.g. landscape mulching, turf reinforcement matting, rocks, etc.) stabilize soil and prevent soil loss. The land on site should be monitored to ensure there is always at least 70% uniform coverage of soil with plants or protective measures. In places where soil is bare and exposed to accelerated soil loss, steps should be taken to repair and/or re-seed and re-mulch. If plant cover is patchy and in need of repair, identify the cause of failure and take corrective actions (e.g. a soil fertility analysis and apply necessary lime and fertilizer while preparing the seedbed).

Comments:

Well planned, designed and constructed stormwater control measures remove pollutants, protect stream channels, and mitigate floods. To accomplish these goals and keep these features safe, aesthetic, and mosquito free, they must be maintained. Maintenance items listed above are needed to achieve permit compliance.

Please feel free to contact Carla Regener (cregener@cuyahogawcd.org), Natural Resource Program Manager, at the Cuyahoga SWCD if you have any questions.

CC:

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