

# City of Valley Center

## Stormwater Facility Inspection & Maintenance Guidance

### Enhanced Swales

Regular inspection and maintenance is critical to the effective operation of this stormwater management facility so that it can function as designed. In the City of Valley Center, local regulations require that property owners maintain all stormwater facilities on their properties to ensure they are fully functioning to treat and control stormwater runoff, and to document facility inspections and maintenance activities. This documentation must be kept by the property owner and must be made available to Stormwater Management staff upon their request.

This page provides guidance on inspection and maintenance activities that must be performed for enhanced swales. Some facilities may have more, or less, frequent maintenance needs, depending upon a variety of factors including the occurrence of large storm events, overly wet or dry (i.e., drought) regional hydrologic conditions, and any changes in the land (e.g., development, landscaping, etc.) that drains to the facility.

Inspection Activities	Suggested Schedule
<ul style="list-style-type: none"> <li>Inspect after seeding and after first major storm for any damage to vegetation, side slopes and bottom.</li> </ul>	Post construction
<ul style="list-style-type: none"> <li>Inspect for signs of erosion, unhealthy or damaged vegetation, denuded areas, channelization of flow, debris and litter, and areas of sediment accumulation. Perform inspections at the beginning and end of the wet season. Additional inspections after periods of heavy rainfall are desirable.</li> </ul>	Semi-annually
<ul style="list-style-type: none"> <li>Inspect level spreader for clogging (if applicable), grass along side slopes for erosion and formation of rills or gullies, and sand/soil bed for erosion problems. Inspect gravel diaphragm for clogging.</li> <li>Inspect sediment forebays and/or pretreatment areas for debris and sediment accumulation.</li> </ul>	Annually
Maintenance Activities	Suggested Schedule
<ul style="list-style-type: none"> <li>Mow grass to maintain a height of 3–4 inches, for safety, aesthetic, or other purposes, if needed. Litter should always be removed prior to mowing. Grass clippings, if captured, should not be dumped in the swale.</li> <li>Irrigate swale during dry season (April through October) or when necessary to maintain the vegetation.</li> <li>Repair damaged areas (e.g., erosion rills or gullies) and re-establish vegetation where needed. Remove invasive species manually. The use of fertilizers, herbicides and pesticides should occur only when absolutely necessary, and then in minimal amounts.</li> </ul>	As needed (frequent, seasonally)
<ul style="list-style-type: none"> <li>Remove litter, branches, rocks blockages, and other debris and dispose of properly.</li> <li>Clear accumulated debris and sediment from the inlet flow spreader (if applicable) and gravel diaphragm.</li> </ul>	Semi-annually
<ul style="list-style-type: none"> <li>Inspect gravel diaphragm for clogging and correct the problem.</li> <li>Plant an alternative grass species if the original grass cover has not been successfully established. Reseed and apply mulch to damaged areas.</li> </ul>	Annually (if needed)
<ul style="list-style-type: none"> <li>Remove all accumulated sediment that may obstruct flow through the swale. Sediment accumulating near culverts and in channels should be removed when it builds up to 3 in. at any spot, or covers vegetation, or once it has accumulated to 10% of the original design volume. Replace the grass areas damaged in the process.</li> <li>Remove all accumulated sediment in the sediment forebay and pretreatment areas.</li> <li>Repair areas of erosion around swale and underdrain outlets. Reestablish soil stabilization measures (e.g., rip-rap stone, turf grasses) as needed.</li> <li>Roto-till or cultivate the surface of the sand/soil bed of dry swales if the swale does not draw down within 48 hours. Re-establish swale vegetation after roto-till activities.</li> </ul>	As needed (infrequent)

The inspection checklist that is presented on the next page is provided to guide and document inspection and maintenance activities. Please use this checklist or other form(s) of maintenance documentation when and where deemed necessary in order to ensure the long-term proper operation of the stormwater management facility.

For more information on the maintenance of your stormwater facility, please contact:  
**City of Valley Center Stormwater Management, 545 W. Clay Valley Center KS. 67147, (316) 755-7320**

# City of Valley Center Enhanced Swale Inspection Checklist

Project Name: \_\_\_\_\_ Project #: \_\_\_\_\_

BMP Name/ID (as shown on the O&M Plan): \_\_\_\_\_

Refer to the Operations & Maintenance Plan for this property to get the information requested in this box. The Operations and Maintenance Plan for this property is recorded with the Sedgwick County Register of Deeds.

Property Owner Name: \_\_\_\_\_

Property Address: \_\_\_\_\_

Owner Phone #: \_\_\_\_\_ Owner Email Address: \_\_\_\_\_

Owner Change since last inspection? Y      N

Inspection Date/Time: \_\_\_\_\_

Weather and Site Conditions (last rainfall date, dry/wet soil, etc.): \_\_\_\_\_

Inspection Items	Condition*	Comments/Corrective Action
*Note - Condition should be marked as Satisfactory (S) or Unsatisfactory (U). An explanation of corrective actions must be provided for all items marked as Unsatisfactory. The completion date of any corrective actions taken must also be documented.		
<b>Inspect the enhanced swale.</b>		
1. Does the vegetation appear to be healthy and adequately covering the embankment to prevent erosion? <b>Yes = Satisfactory</b>		
2. Are there signs that soil is eroding (washing away) on the bottom or side slopes? <b>Yes = Unsatisfactory</b>		
3. Are there signs of animal burrows in embankment? <b>Yes = Unsatisfactory</b>		
4. Does the bottom of the swale appear to be clear of debris and functional? <b>Yes = Satisfactory</b>		
5. Are the check dams in place (if applicable)? <b>Yes = Satisfactory</b>		
6. Is there evidence of sediment accumulation on the bottom of the channel? <b>Yes = Unsatisfactory</b>		

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Inspection Items	Condition*	Comments/Corrective Action
7. Are there an obstructions or blockages other than the check dams? <b>Yes = Unsatisfactory</b>		
8. Does the gravel diaphragm appear to be clogged? <b>Yes = Unsatisfactory</b>		
9. Is there undesirable vegetation or vegetation overgrowth? <b>Yes = Unsatisfactory</b>		
10. Is the swale visibly polluted (e.g., trash, signs of oil, foul odor, etc.)? <b>Yes = Unsatisfactory</b>		
11. Other (describe)?		
<b>Inspect the inlet and outlet structures and channels – these are the locations/structures where water enters and exits the pond.</b>		
12. Are the inlets and outlets and channels clear of debris and functional? <b>Yes = Satisfactory</b>		
13. Has sediment accumulated at any of the inlet and outlet structures? <b>Yes = Unsatisfactory</b>		
14. Are there signs of erosion (washing away of soil)? <b>Yes = Unsatisfactory</b>		
15. Other (describe)?		
<b>Inspect the sediment pre-treatment area (usually a forebay) – the location and type of the pre-treatment area should be indicated on the O&amp;M Plan.</b>		
16. Has sediment accumulated in the pre-treatment area? Note – sediment accumulation would indicate that the pre-treatment area is not working as intended and must be cleaned. <b>Yes = Unsatisfactory</b>		
<b>Identify any potential hazards to humans or the environment.</b>		
17. Have there been complaints from residents? <b>Yes = Unsatisfactory</b>		
18. Are there any other public hazards that should be noted? <b>Yes = Unsatisfactory</b>		

## City of Valley Center Enhanced Swale Inspection Checklist

By signing my name below, I certify that the information submitted in this document (and all attachments) is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are penalties for knowingly submitting false information, including the possibility of regulatory violations and associated fines.

Inspected by (Name): \_\_\_\_\_

Inspected by (Signature): \_\_\_\_\_