

## Long-Term Maintenance of SCMs (Post Construction) 4.2.5.SWMP.2.

Adoption Date	July 1 <sup>st</sup> , 2008
Last Revision Date	September 16 <sup>th</sup> , 2022

City code requires the long-term maintenance of all stormwater control measures, whether public or private. The city of Murfreesboro further ensures functionality of SCMs through education, inspections, and enforcement.

### Legal Authority

Engineer certification that stormwater system is complete and functional.	City Code 27 ½ - 11(A)
Requirement for maintenance and repair plans	City Code 27 ½ - 7 (D)(4)
Requirement for maintenance agreements	City Code 27 ½ -6 (a-f)
Authority to access and inspect SCMs	City Code 27 ½ - 11 (D)
Enforcement and ability to assess charges for maintenance performed by the City	City Code 27 ½ - 11 (E)

### SCM long-term maintenance and education program

#### 1. Prior to construction of SCMs

- a. Stormwater control measure maintenance plan and agreement must be submitted and reviewed (MWRD) before scheduling of pre-construction meeting (Planning).
- b. Contractor given reminder flier that punch list corrections must be resolved, and engineer certification received before issuance or certificate of occupancy or signing of plat (Planning, MWRD).

#### 2. Upon completion of project with SCMs

- a. If engineer certification is received and final inspection passed, SCM site moved to post construction phase.
- b. Engineer certification and all construction phase materials stored in MWRD ST project files.

#### 3. Post Construction Inspections

- a. By property owner:
  1. Frequency prescribed in maintenance plan.
  2. Performed by owner or contracted inspection/landscape company.
- b. By City (MWRD):
  1. Once per 5 years.
  2. Higher frequency in defined hot spots where maintenance is difficult.
  3. Inspection forms:

- Paper (attached).
- GIS/mobile app (screenshot attached).
- 4. Inspection results shared with owners/HOA's, and repair timeline given.
- 5. Non-compliance
  - Follow ERP.
  - Commission Street Department to make repairs.
  - Charge responsible party for repairs according to costs given maintenance plans.

#### **4. Using post construction SCM inspections**

- a. To locate hot spots for maintenance (karst, persistent hydrology, wetland conditions, poor maintenance of bioretention areas in rears of properties, etc.)
- b. Provide information to planning.
- c. Provide maintenance tips for education materials and training.
- d. For revising maintenance plan templates.

#### **5. Education on long-term maintenance of SCMs**

- Education to HOA's (on-site meetings, mailers, emails).
- Maintenance reminder mailers to owners and operators of SCMs.
- Maintenance seminars for landscapers.
- Design seminars and workshops for engineers.
- Pre-construction meeting fliers.

#### **6. Mapping SCMs**

- a. Sites with SCMs mapped as singles site and subtyped by construction phase (planning, construction, and post construction).
- b. All individual SCMs mapped within site.
- c. Assortment of mapping products available for public and internal use.



# Stormwater Control Measures Inspection

Water and Sewer Dept.  
220 NW Broad Street  
(615) 848-3200

Initial  Routine  Follow-up  Complaint

Weather: dry  wet  rain  runoff

Engineering / Codes Dept.  
City Hall, Second Floor  
(615) 893-6441 / -3750

Facility Name: \_\_\_\_\_ File No: \_\_\_\_\_

Location: \_\_\_\_\_ Mail Address: \_\_\_\_\_

Contact (file): \_\_\_\_\_ Update (field): \_\_\_\_\_

Phone no. \_\_\_\_\_ E-mail address: \_\_\_\_\_

### Records

- Yes  No Maintenance plan is present on site.
- Yes  No Logbook present showing inspections & repairs.
- Yes  No  Unkn. Facility employs a maintenance contractor.

### Controls observed (quantity)

- |  |  |
|--|--|
| <input type="checkbox"/> ( ) Bioretention        | <input type="checkbox"/> ( ) Bioretention w/underdrain |
| <input type="checkbox"/> ( ) Channel, grass      | <input type="checkbox"/> ( ) Cistern                   |
| <input type="checkbox"/> ( ) Filter strip        | <input type="checkbox"/> ( ) Green roof                |
| <input type="checkbox"/> ( ) Infiltration trench | <input type="checkbox"/> ( ) Inlet filter              |
| <input type="checkbox"/> ( ) Paver blocks        | <input type="checkbox"/> ( ) Pervious concrete         |
| <input type="checkbox"/> ( ) Rain garden         | <input type="checkbox"/> ( ) Sand filter               |
| <input type="checkbox"/> ( ) Swale               | <input type="checkbox"/> ( ) Wetland                   |
| <input type="checkbox"/> ( ) Manufactured        | <input type="checkbox"/> ( ) WQPA                      |
| <input type="checkbox"/> box                     | <input type="checkbox"/> swirl                         |
| <input type="checkbox"/> filter media            | <input type="checkbox"/> unkn./other                   |
- ( ) Other \_\_\_\_\_
- |  |   |
|--|---|
| <input type="checkbox"/> ( ) Pond, dry               | <input type="checkbox"/> ( ) Pond, wet              |
| <input type="checkbox"/> ( ) Pond, ext. detention    | <input type="checkbox"/> ( ) Detention, underground |
| <input type="checkbox"/> micropool                   | <input type="checkbox"/> ( ) weir                   |
| <input type="checkbox"/> ( ) orifice diam. _____ in. |   |
- BMP/s cannot be located.

Problems observed	Yes
Drainage bypassing treatment	<input type="checkbox"/>
Significant engineering/design flaw	<input type="checkbox"/>
Unauthorized modifications	<input type="checkbox"/>
Standing water/soggy soil	<input type="checkbox"/>
Inflow erosion/scouring	<input type="checkbox"/>
Outflow erosion/scouring	<input type="checkbox"/>
Erosion threatening structures	<input type="checkbox"/>
Poor vegetation coverage	<input type="checkbox"/>
Excessive tree/brush growth	<input type="checkbox"/>
Clogged or obstructed inlets/outlets	<input type="checkbox"/>
Invasive/nuisance vegetation/weeds	<input type="checkbox"/>
Evidence of contaminants/pollution	<input type="checkbox"/>
Mosquito habitat	<input type="checkbox"/>
Sediment accumulation	<input type="checkbox"/>
Outlet orifice screening needed	<input type="checkbox"/>
BMP access obstructed	<input type="checkbox"/>
Trash/debris accumulation/dumping	<input type="checkbox"/>
Broken components (pipe, box, etc.)	<input type="checkbox"/>
Pond leakage (karst conduit)	<input type="checkbox"/>
Overall grade	<input type="checkbox"/> [A] <input type="checkbox"/> [B] <input type="checkbox"/> [C] <input type="checkbox"/> [D] <input type="checkbox"/> [F]

Maintenance and/or repair is needed on items circled or noted above. Correct circled items by \_\_\_\_ / \_\_\_\_ / \_\_\_\_.

System does not qualify for full stormwater fee credit. [ \_\_\_\_ %] Re-inspection priority:  High  Medium  Low

Inspector (print) \_\_\_\_\_ Initial: \_\_\_\_\_ Tel. no.: \_\_\_\_\_

Rec'd by (print): \_\_\_\_\_ Title/position: \_\_\_\_\_

Signed: \_\_\_\_\_ Date and Time: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ at \_\_\_\_ : \_\_\_\_ am/pm

## Example of SCM Inspection Software



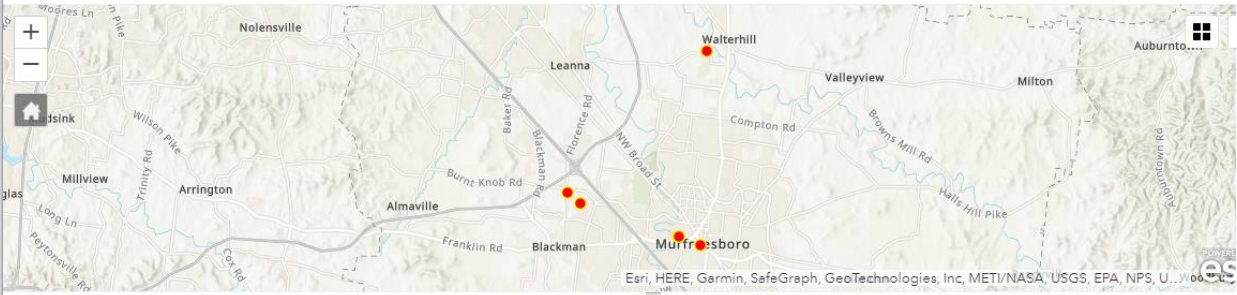
*Example of stormwater, SCM, and SCM indicators features in GIS. SCM sites are color coded by development phase (yellow: planning, red: construction, green: post)*

Stormwater Control Measure Inspection

Overview Analyze Data

6/23/22 - 8/9/22 Filter Report Export Open in Map Viewer Form view

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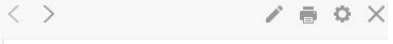


Inspection Type	Weather	Facility Name	File No	Location	Mailing Address	Contact (file)	Phone Number
initial	dry	Wilkerson Downs Townhomes					
initial	dry	Puckett Station 4	12003				
routine	dry	Cannonsburgh					

MWRD use Survey 123 to conduct post construction inspections



Inspection Type	Weather	Facility Name	File No	Location	Ma
initial	dry	Wilkerson Downs Townhomes			
initial	dry	Puckett Station 4	12003		
routine	drv	Cannonsburah			



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Image1



micro\_pool\_image1-2...

Image2



micro\_pool\_image2-2...

Overall Grade