



# Murfreesboro Stormwater Management Record Sheet

(See back of page for instructions.)

Planning & Engineering  
Dept. (615) 893-6441  
Water and Sewer Dept.  
(615) 848-3200

### Project information

Project Name:		Stream basin:	
Owner:		Contact info.:	
Engineer:		Eng. contact #/e:	
Landscape arch.		Arch. contact#/e:	
Type of project:	<input type="checkbox"/> Resid. s/div <input type="checkbox"/> Comm. s/div <input type="checkbox"/> Site <input type="checkbox"/> Public works		
For site plans platted as part of a subdivision:	Lot was platted w/in last two years: <input type="checkbox"/> Yes <input type="checkbox"/> No		Date: _____
	Name of subdivision:		
Stormwater quantity/quality controls are to be located	<input type="checkbox"/> On site <input type="checkbox"/> Area in common ownership <input type="checkbox"/> Lot or <input type="checkbox"/> Lots in single ownership <input type="checkbox"/> Within public easement <input type="checkbox"/> Public right of way <input type="checkbox"/> Other _____		
Give lot numbers (if applicable); other explanatory notes:			
Area of site (ac):	Site Soils %:	A _____ %    B _____ %    C _____ %    D _____ %	
Pre-exist. impervious area (ac)	WOv reduction methods:	<input type="checkbox"/> _____ acres of natural area will be left untouched.	
Post-dev. impervious area (ac)		<input type="checkbox"/> Vegetated channels are used to provide stormwater treatment.	
Small site SPv (SSSPv) option		<input type="checkbox"/> Runoff from impervious areas is "disconnected" by routing via pervious areas/vegetative filtering.	
Pre-devel. runoff (SCS, 2 yr) (in):		<input type="checkbox"/> Runoff treated by sheet flow runoff through naturally vegetated stream buffer.	
Post-devel. runoff (SCS, 2 yr) (in)	Methods for SSSPv (if appl.)	Total disconnected impervious areas (DIA) _____ (acres) (ft <sup>2</sup> )	

### Runoff calculations and stormwater fee credits

Sub-basin	Area	Impervious Area	WOv	TSS red.	1 yr t <sub>out-in</sub> (hr)	10 yr pre-dev. peak	10 yr post-dev. peak	% fee reduct.	Review & Approved
# 1									
# 2									
# 3									
# 4									
Notes:									Total

Add rows or additional pages as needed.

### Controls/Maintenance Plan and Agreement

Sub-basin	Describe		Reviewed and Approved		
	Quality Control(s)	Maintenance Contractor <sup>2</sup>	Plat notes	Maint. Plan <sup>1</sup>	Agreement <sup>1</sup>
# 1					
# 2					
# 3					
# 4					

Add rows or additional pages as needed.

See table on back to find the timetable for submitting stormwater quality-related information to the City.

<sup>1</sup> Items must be completed prior to recording of final plats for a development project that is proposing shared responsibility for stormwater management controls, and prior to issuance of a building permit in the case of an individual site's plan.

<sup>2</sup> Identifying a maintenance contractor is required for underground treatment devices and certain above-ground controls.

## Murfreesboro Stormwater Management Record Sheet - Instructions

**Purpose:** This data form is intended to serve the designer in addressing (and City staff in recording) stormwater quality-related design and performance data for new and redevelopment projects which are subject to the City's post-construction stormwater runoff regulations. A developer/engineer should initiate the form and submit it before or along with submission of the stormwater management plan/construction plans for subdivision development or site plan for site development. See table below for timetable for submittal of other elements of the stormwater management plans.

**Context:** Murfreesboro's stormwater ordinance requires stormwater quality controls for new development and redevelopment on project sites of one acre or more, or sites that are part of a larger common plan of development of one acre or more, and which involve the construction of 10,000 square feet or more of impervious surface within a two year period. Water quality requirements are an 80% removal of total suspended solids, on an annual basis; management (24 hour release) of the streambank protection volume (SPv); and limiting post-development discharge rates to pre-development rates for the 2 year and 10 year, 24-hour rain events. For more detailed information, see the [City's web site](#).

**Project information:** Stream basin refers to the nearest named stream that receives the majority of stormwater runoff from the project site. Provide phone number or e-mail for the design engineer, and landscape architect if applicable. Description of soils on site, according to NRCS hydrologic soil groups A, B, C and D. The WQv refers to the volume of stormwater runoff that must be treated to the 80% removal standard. WQv is defined as a rainfall of 1.2 inches multiplied by a runoff coefficient Rv and by the area of the drainage basin.  $R_v = 0.05 + 0.009 * I$  where I is the impervious area of the drainage basin. This volume may be reduced in several ways. Find more information in the [City's Stormwater Design Guide](#).

**Small Site SPv Option:** As an alternative to providing 24 hour release of runoff from a one-year storm event, one may incorporate low impact development techniques (e.g. disconnect downspouts, pervious pavement/pavers, recessed landscape islands to capture small storm runoff) on sites with less than two acres of impervious area. See [City's web site](#) for more information. If impervious areas are disconnected, provide a total of the impervious area that is disconnected.

**Runoff calculations:** The values requested are not intended to represent all the figures that are necessary for the engineer to design stormwater quality controls, but rather to provide a synopsis of the hydrologic impact of the development and as an application for the development to receive a stormwater user fee credit. Standard methods to determine runoff volumes and rates are TR-55, TR-20 (or equivalent) or any worksheet or pattern of calculation provided by the City. The column, "1 year  $t_{out-in}$ " refers to the detention time delay in hours between centroid of inflow hydrograph and centroid of outflow hydrograph, related to the City's SPv control requirement. The "10yr pre-dev. peak" and "post-dev. peak" refer to the peak discharge calculated for pre-development and post-development/built-out conditions in a once-in-ten-years probability rainfall event; e.g., the 24 hour, SCS-type event (Murfreesboro: 5.13 inches/24 hr). Use units of cubic feet per second.

**Location of stormwater controls:** Check all that apply. For stormwater quality controls serving or intending to serve multiple lots within a commercial subdivision development ("regional control"), check whether the controls will be located on a common-area lot or individual lot(s). In cases where regional control provides partial stormwater treatment and additional treatment must be provided on individual lots within the development, indicate by also checking "on site."

**Controls/Maintenance Plans and Agreements:** List the methods of stormwater quality management, including SPv and peak flow controls. For certain stormwater controls, the owner must provide the name of a stormwater system service provider/maintenance contractor. You must place a note on the plat which refers to the Maintenance Agreement that is recorded with the property. See [City's web site](#) for more information.

Info./documents	Referenced information/document should be submitted prior to or with:			
	For residential s/division	For commercial subdivision	For site development	For public works
Stormwater mgt. concept plan	Master plan	Master plan	Site plan	Initial plans
S/water quality design and calculations.	Stormwater mgt. plan/construction plans	Stormwater mgt. plan/construction plans	Site plan	Final plan review
S/water Mgt Record Sheet (this form)	Stormwater mgt. plan/construction plans	Stormwater mgt. plan/construction plans	Site plan	Final plan review
Maintenance Agreement	Final plat	Final plat*	Building permit*	Acceptance by City
Maintenance plan	Final plat	Final plat*	Building permit*	Acceptance by City
Construction certification	Certificate of Occupancy	Certificate of Occupancy	Certificate of Occupancy	Project acceptance

\* The City will normally allow quantity & quality controls to be regional, whether placed in a common area or on a single lot but serving multiple lots. If partial treatment is provided regionally, controls will also need to be located at the site level.

Submit this form along with the plans as noted above, and/or directly to the Stormwater Coordinator at Murfreesboro Water and Sewer Department, 220 NW Broad Street, Murfreesboro, TN 37130. Submit the Maintenance Plan and Agreement to the Stormwater Coordinator.