

RAINWATER HARVESTING SCM DESIGN CHECKLIST

**Stormwater Management Division
c/o Development Services Department**

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Raleigh, NC 27601
Telephone (919) 996-3773

I. PROJECT INFORMATION

Project Name: _____ Phase: _____
 Project Address: _____ Disturbed Area (sf): _____
 PIN: _____ Case #: _____ Submittal Date: _____
 Previous Permit numbers (if applicable): _____
 Zoning District: _____
 Legal Name of Owner: _____
 Owner Contact: _____ Phone: _____
 Owner Address: _____
 Design Contact Person: _____ Phone: _____
 Design Contact Email: _____
 The regulatory drainage basin in which the site is located: _____
 The water supply watershed in which the site is located: _____

Function of Facility [check all that apply]:	
<input type="checkbox"/>	Nutrient (Total Nitrogen) Reduction
<input type="checkbox"/>	Green Stormwater Infrastructure
<input type="checkbox"/>	TSS Reduction
<input type="checkbox"/>	Peak Flow Rate Attenuation
<input type="checkbox"/>	<input type="checkbox"/> 1-Year event
<input type="checkbox"/>	<input type="checkbox"/> 10-Year event
<input type="checkbox"/>	<input type="checkbox"/> 100-Year event
<input type="checkbox"/>	<input type="checkbox"/> Other [_____]
<input type="checkbox"/>	<input type="checkbox"/> Other [_____]

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- II. **SUBMITTAL REQUIREMENTS** - See COR Stormwater Management Design Manual Chapter 5 for additional guidance. This completed checklist shall be submitted to the City of Raleigh with any proposed Rainwater Harvesting. All files shall also be submitted electronically via CD or flash drive.

Routed flows and water surface elevations (WSE) at SCM [as applicable]:			
Storm Event	Inflow	Outflow	WSE
1-Year			
10-Year			
100-Year			
____-Year			
Peak flow rates at immediate point of analysis to which the SCM drains:			
Condition	1-year	10-year	____-year
Pre-development			
Post-development			

General Design Criteria	
<input type="checkbox"/>	Sizing: The design volume of the SCM accounts for the runoff at full build-out from all surfaces draining to it (calculations provided in Stormwater Development Analysis).
<input type="checkbox"/>	Design Storm Volume: _____ cf
<input type="checkbox"/>	Dewatering: SCM has a method to draw down any standing water to facilitate maintenance and inspection.
<input type="checkbox"/>	Clean Out After Construction: SCM impacted by sedimentation and erosion control during the construction phase shall be cleaned out and converted to its approved design state.
<input type="checkbox"/>	Maintenance Access: SCM has been provided with adequate access per City standards.
<input type="checkbox"/>	Easements (except for SCMs located on single family residential lots): Includes maintenance access, entire SCM footprint, and an additional 10 ft or more around the SCM.
<input type="checkbox"/>	Single Family Residential Lots: Plats for residential lots that contain an SCM shall include the location of SCM, typical detail of SCM, and note that the SCM on the property is required to meet stormwater regulations and that the property owner may be subject to enforcement actions if the SCM is removed, relocated, or altered without prior approval.
<input type="checkbox"/>	Operation and Maintenance (O&M) Agreement.

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<input type="checkbox"/>	Operation and Maintenance (O&M) Plan.
<input type="checkbox"/>	<i>Operation and Maintenance (O&M) Manual Submittal Checklist.</i>
<input type="checkbox"/>	Erosion Protection: The SCM inlets and outlet have been designed to protect areas downstream of the discharge points from erosion resulting from peak flows for the 10-year storm event.

Specific Rainwater Harvesting Design Criteria	
<input type="checkbox"/>	Rainwater Harvesting Components: The system includes a collection system, pre-treatment device, cistern/storage device, overflow, and distribution system.
<input type="checkbox"/>	Pre-Treatment: A screen filter has been provided prior to entering the cistern/storage device (e.g. first flush diverters, basket screens, settling tanks, etc.)
<input type="checkbox"/>	Fate of Captured Water: Captured stormwater has been designed to be used to meet a water demand and/or discharged via a passive drawdown device to a vegetated infiltration area or another SCM.
<input type="checkbox"/>	Intended Use of Captured Water:
<input type="checkbox"/>	The usage, volume, type, frequency, and seasonality of water demand is established and justified if used to meet a water demand.
<input type="checkbox"/>	Primary SCM Sizing (as applicable): The rainwater harvesting system is considered a primary SCM if the system is sized and water demand, passive discharge, or a combination of the two is provided for 85% of the total annual runoff volume as demonstrated through water balance calculations.
<input type="checkbox"/>	Water Balance: Water balance is calculated using the NCSU Rainwater Harvester model or another continuous-simulation hydrologic model that calculates the water balance on a daily or more frequent time-step using a minimum of five representative years of actual rainfall records. The model accounts for withdrawals from the cistern for use, active or passive drawdown, and additions to the cistern by rainfall, runoff, and a make-up water source if applicable
<input type="checkbox"/>	Drawdown: The detention volume draws down via passive drawdown designed to prevent clogging in 2-5 days.
<input type="checkbox"/>	Drawdown Time: _____ hr
<input type="checkbox"/>	Signage Requirements: All harvested rainwater outlets are labeled as “Non-Potable Water” and passive drawdown devices are marked with identifying signage or labels.
<input type="checkbox"/>	Easements: A 5-foot easement on single-family lots or 10-foot easement on all other development has been provided.
<input type="checkbox"/>	Distribution System: A protocol has been included in the design to test the distribution system for functionality of the rainwater harvesting system as well as any additions to the existing system.

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The SCM Plan Submittal shall also include the following elements:	
<input type="checkbox"/>	A plan view of the SCM, with grading and appropriate critical spot shots, has been provided.
<input type="checkbox"/>	A profile (showing all relevant component elevations and WSEs) through the riser, dam, and outlet structure/outfall has been provided.
<input type="checkbox"/>	Details of other required SCM elements have been provided.
<input type="checkbox"/>	All supporting design calculations (including all applicable site design calculations and drainage area exhibits) have been provided.

III. PROFESSIONAL CERTIFICATION

Name: _____

Contact Email: _____

Contact Phone Number: _____

Professional Seal:

