

Continuous Rainwater Harvesting Systems Construction Checklist

This checklist has been developed for BMPs designed in accordance with the Delaware Sediment and Stormwater Program's Post Construction Stormwater BMP Standards and Specifications. Submit interim versions of this construction checklist to the approval agency weekly with the Certified Construction Reviewer report. Submit the final completed checklist with the PCVD.

PROJECT INFORMATION

Project Name/BMP Name: _____

Project Approval Number: _____ NOI number: _____

Location: _____

Contractor: _____

Construction Reviewer: _____

Supervising P.E.: _____

For each checklist item, enter in the blank the date (MM/DD/YY) the item is completed and verified by the construction reviewer. If an item is not applicable, enter "N/A" in the blank for that checklist item.

I. Pre-Construction

A. _____ Continuous rainwater harvesting system field meeting with responsible person and person completing construction checklist.

B. _____ Extents of continuous rainwater harvesting system location staked out.

C. _____ Pipe and appurtenances on-site and dimensions and properties checked and confirmed to be in accordance with the approved plan.

i. _____ Inlet pipe, gutters, downspouts

ii. _____ Discharge pipe

iii. _____ Drain pump or cleanout sump

iv. _____ Overflow pipes

v. _____ Spigots

vi. _____ Distribution line

vii. _____ Other; list: _____

D. _____ Materials on-site and dimensions and properties checked and confirmed to be in accordance with the approved plan. ***Submit materials invoice or delivery tickets to approval agency as part of PCVD for the following items:***

i. _____ Cistern

ii. _____ Pipe screens

iii. _____ Mosquito screens

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iv. _____ Backflow prevention

v. _____ Foundation material

vi. _____ Other; list: _____

II. Excavation and Grading

A. _____ Underground rainwater harvest system excavated/graded to dimensions and at location as per the approved plan.

B. _____ Underground rainwater harvest system excavated to design bottom elevation for cistern placement.

C. _____ Foundation excavated/graded to dimensions and at location as per the approved plan.

D. _____ Foundation excavated to design bottom elevation for cistern placement.

E. _____ Groundwater not encountered during excavation. (Note: If groundwater is unexpectedly encountered during the excavation process, construction of the facility must cease, and the designer notified that a plan modification is necessary if buoyancy calculations have not been done)

III. Structural Components

A. _____ All pipes and spigots labeled as non-potable.

B. _____ Cistern installed per manufacture specifications.

C. _____ Piping to the rainwater harvesting system is in place in accordance with approved plan.

D. _____ Piping from the rainwater harvesting system is in place in accordance with approved plan.

E. _____ Diversion system is installed in accordance with approved plan.

F. _____ Overflow mechanism/pipe installed and directed in accordance with approved plan.

G. _____ Overflow stabilized in accordance with the approved plans.

H. _____ Backflow prevention constructed in accordance with approved plan.

I. _____ Screen installed on overflows to prevent small animal.

J. _____ Mosquito screens are installed on all cistern openings.

K. _____ Foundation for the cistern constructed to dimensions and at location in accordance with approved plan.

L. _____ Cisterns is watertight, and sealed using a water-safe, non-toxic material.

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- M. _____ Pretreatment system provided at all inlets in accordance with approved plan.
- N. _____ All pumps, controls and appurtenances installed in accordance with approved plan.
- O. _____ Distribution lines for the rainwater harvesting system buried beneath frost line.
- P. _____ Above-ground outdoor pipes insulated or heat-wrapped to prevent freezing.
- Q. _____ Photo documentation of construction of structural components taken. **Submit photo documentation to approval agency as part of PCVD.** (Photo #: _____)

IV. Erosion and Sediment Control

- A. _____ Sediment prevented from entering continuous rainwater harvesting system by using diversion and perimeter controls as specified on the approved plan.
- B. _____ Sediment controls removed once drainage area meets final stabilization standard

V. Maintenance Access

- A. _____ Maintenance access to the perimeter of the rainwater harvesting system (including all components of the Rainwater Harvesting System) has minimum width of 15 feet.
- B. _____ Profile grade of maintenance access does not exceed 10H:1V.
- C. _____ Minimum 10H:1V cross slope on maintenance access.
- D. _____ Below ground cistern has a standard size manhole or equivalent opening.

VI. Post Construction Inspection

- A. _____ Collected impervious area matches plans.
- B. _____ Diversion system is installed in accordance with the plan.
- C. _____ Drainage area and overflow area are stabilized.
- D. _____ Landscape / lawn irrigation system and/or secondary stormwater treatment practice(s) is installed as shown on plans.

VII. Post Construction Verification

Owner shall submit post construction verification documents to demonstrate that the continuous rainwater harvesting system practice has been constructed within allowable tolerances in accordance with the Approved Sediment and Stormwater Management Plan and accepted by the approving agency.

- E. _____ Presence of a pretreatment device.
- F. _____ Capacity of the continuous rainwater harvesting system matches the design capacity.

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- G. _____ For ponds, constructed volume of the pond storage confirmed equal to or greater than 90% of the of the design.
- H. _____ When used for irrigation systems, area of coverage is within 90% of that shown on the plan.
- I. _____ All pumps, controls and other appurtenances installed in accordance with the plan.

VIII. BMP Acceptance

- A. _____ Final BMP construction review complete.
- B. _____ All BMP punch list items addressed.
- C. _____ Continuous rainwater harvesting system is online (stabilized drainage area is entering continuous rainwater harvesting system)
- D. _____ As-built survey.
- E. _____ PCVD submitted to approval agency for review and approval. Submit the following pieces of PCVD documentation to the approval agency:
 - Materials invoice or delivery tickets
 - Photo documentation
 - Soil test report
 - Compost lime, fertilizer, and seed tickets
 - As-built survey
 - Final, completed BMP Construction Checklist