	3.3 Rainwater Harvesting	Sheet #	Yes/No	Comments
Siting				
1	Are all underground utilities and other obstructions identified and not in conflict with the cistern and pipe locations? [3.3.1 Rainwater Harvesting Feasibility Criteria- Available Space, page 53]			
2	Is the invert of the cistern inflow pipe at least as high or higher than the invert of the outlet pipe? [3.3.1 Rainwater Harvesting Feasibility Criteria- Site Topography, page 53]			
3	If the rainwater harvesting tank is subject to flooding or partially below the groundwater table, is the tank secured with fasteners or weighed down to keep from floating? The combined weight of the tank and the hold down ballast must meet or exceed the buoyancy force of the tank. [3.3.1 Rainwater Harvesting Feasibility Criteria- Water Table, page 53]			
4	Is the cistern watertight to prevent water damage when placed near building foundations? [3.3.1 Rainwater Harvesting Feasibility Criteria- Setbacks from Buildings, page 54]			
5	Is the cistern overflow device designed to avoid causing ponding or soil saturation within 10-feet of building foundations? [3.3.1 Rainwater Harvesting Feasibility Criteria- Setbacks from Buildings, page 54]			
6	Is the cistern subject to vehicle loads? Is the design rated for this loading? [3.3.1 Rainwater Harvesting Feasibility Criteria- Vehicle Loading, page 55]			
Water Use Code Compliance				
7	If municipal backup water supply is used, does the rainwater harvesting system have a backflow preventer or air gaps to keep harvested water separate from the main water supply? [3.3.1 Rainwater Harvesting Feasibility Criteria- Plumbing Code, page 52]			
8	Do systems calling for the indoor use of harvested rainwater have a MEP engineer seal? [3.3.1 Rainwater Harvesting Feasibility Criteria- Mechanical, Electrical, Plumbing, page 53]			
9	Has the designer reviewed the requirements in Appendix N Rainwater Harvesting Treatment and Management Requirements and provided a Design Report? This report outlines design assumptions and water quality end use standards. [3.3.1 Rainwater Harvesting Feasibility Criteria- Water Use, page 53]			
10	Does the Design Report contain all the sections as listed in Appendix N Rainwater Harvesting Treatment and Management Requirements ? [Appendix N Rainwater Harvesting Treatment and Management Requirements- N.9 Design Report, page N-9]			

Rainwater Harvesting Storage Calculator				
11	Has the applicant provided documentation of each proposed non-potable use demand and certification from the appropriate professional? ☐ Landscape irrigation - Certified Landscape Expert (Green Area Ratio Guidebook, page 19) ☐ Exterior washing (e.g. car washes, building facades, sidewalks, street sweepers, and fire trucks)- professional MEP engineer ☐ Flushing of toilets and urinals - professional MEP engineer ☐ Fire suppression (i.e. sprinkler systems) - professional MEP engineer ☐ Supply for cooling towers, evaporative coolers, fluid coolers, and chillers - professional MEP engineer ☐ Supplemental water for closed loop systems and steam boilers - professional MEP engineer ☐ Replenishment of water features and water fountains - professional MEP engineer ☐ Laundry - professional MEP engineer [3.3 Rainwater Harvesting- Definition, page 51]			
12	Is the rainwater harvesting system sized using the Rainwater Harvesting Storage Volume Calculator? [3.3.4 Rainwater Harvesting Design Criteria- Sizing of Rainwater Harvesting Systems, page 64]			
13	If the applicant increased the filter efficiency in the Rainwater Harvesting Storage Volume Calculator, have they provided the filter specifications verifying the efficiency rate? [3.3.3 Rainwater Harvesting Pretreatment Criteria, page 55]			
14	Confirm any upstream BMP volumes are correctly input into the calculator. [3.3.4 Rainwater Harvesting Design Criteria- Water Contribution, page 65]			
15	Does the cistern have a low water cutoff to provide backup water supply? Has the volume of water below the low flow cutoff been identified and was this volume subtracted from the overall cistern storage volume? [3.3.4 Rainwater Harvesting Design Criteria- Completing the Sizing Design of the Cistern, page 68]			
16	The Calculator does not allow for a specific cistern size input. To determine a specific cistern size, has the applicant interpolated between two cistern sizes provided in the Results tab of the spreadsheet? [3.3.4 Rainwater Harvesting Design Criteria- Completing the Sizing Design of the Cistern, page 68]			
17	The Rainwater Harvesting Storage Volume Calculator does not allow for detention volume. Confirm any detention volume is added to the cistern volume calculated by the spreadsheet.			

	[3.3.4 Rainwater Harvesting Design Criteria- Completing the Sizing Design of the Cistern, page 68]			
18	Is an additional volume above the emergency overflow provided to allow very large storms to pass? Above the overflow water level, is there a freeboard volume that accounts for at least 5 percent of the overall cistern size? These volumes must be included in the overall size of the cistern. [3.3.4 Rainwater Harvesting Design Criteria- Completing the Sizing Design of the Cistern, page 68]			
Cistern Design				
19	Are the pipes connecting downspouts to the cistern at a minimum slope of 1.5% and designed to convey the design storm? [3.3.2 Rainwater Harvesting Conveyance Criteria- Collection and Conveyance, page 55]			
20	Does the pretreatment system meet the following criteria? ☐ Leaf and gutter guards for small systems ☐ Design intensity of 1 inch/hour (for design storm=SWRv) to size pre-cistern conveyance and filter components ☐ Filter efficiency of 90% is used when managing the 2-year and 15-year storms [3.3.3 Rainwater Harvesting Pretreatment Criteria, page 55]			
21	Does the cistern satisfy the following characteristics? ☐ Aboveground cisterns should be ultraviolet and impact resistant ☐ Opaque or otherwise protected from direct sunlight ☐ Sealed using water safe, non-toxic substance ☐ Screened to prevent mosquito breeding (if applicable) ☐ Total cistern volume includes dead storage below the outlet to the distribution system and an air gap at top of the cistern (gravity systems require a minimum 6 inches of dead space) ☐ Drain plug, cleanout sump to allow system to completely drain ☐ Includes additional volume above the emergency overflow to allow very large storms to pass ☐ Freeboard volume to account for at least 5% of the overall cistern size [3.3.4 Rainwater Harvesting Design Criteria, page 58]			
22	Does an underground system have an access opening meeting the following requirements? ☐ Standard size manhole or equivalent opening for cleaning, maintenance, and			

	inspection ☐ Installed in such a way as to prevent surface and groundwater from entering through the top of any fittings and secured and locked to prevent unwanted entry [3.3.4 Rainwater Harvesting Design Criteria- Cisterns, page 58]			
23	Does the cistern contain a drain plug or cleanout sump to allow the system to be completely emptied, as needed? [3.3.4 Rainwater Harvesting Design Criteria- Distribution Systems, page 60]			
24	Are the distribution lines buried below the frost line with shut off valves accessible in the snow? Above ground outdoor pipes must be insulated or heat wrapped to prevent freezing. [3.3.4 Rainwater Harvesting Design Criteria- Distribution Systems, page 60]			
25	Does the system have an overflow pipe? Does the overflow pipe meet the following requirements? ☐ The capacity is greater than or equal to the inflow pipe ☐ Diameter and slope are sufficient to drain the cistern while maintaining adequate freeboard height ☐ Screened to prevent access by birds and mammals ☐ Includes a backflow preventer if connected directly to combined sewer or storm sewer [3.3.2 Rainwater Harvesting Conveyance Criteria- Overflow, page 55]			
26	If the harvested water is used for irrigation, does the design include the following? ☐ Proposed delineation of planting areas to be irrigated ☐ Planting plan ☐ Quantification of expected water demand (assuming default of 1 inch/week over area to be irrigated between May and October) ☐ If the expected water demand exceeds 1 inch/week or 0 inch/week from October through May, a Certified Landscape Expert signature certifying the water demand [3.3.5 Rainwater Harvesting Landscaping Criteria, page 68]			
Construction				
27	Does the plan contain the Rainwater Harvesting Construction and Maintenance Inspection Checklists (Appendix L Construction Inspection Checklists and Appendix M Maintenance Inspection Checklists) or incorporate the checklists by reference? [Appendix L and Appendix M]			
Maintenance				

28	Does the SWMP include a maintenance schedule similar to Table 3.7 Typical Maintenance Tasks for Rainwater Harvesting Systems in the Stormwater Management Guidebook? [3.3.7 Rainwater Harvesting Maintenance Criteria, page 70]			
29	Does the SWMP address cold climate maintenance considerations for rainwater harvesting systems, such as: ☐ Heat tape on piping ☐ Taking rainwater harvesting systems offline for winter to prevent freezing ☐ Disconnecting and draining vulnerable above ground pipe systems ☐ Checking underground and indoor system downspouts and overflow components for ice blockages during snowmelt events [3.3.7 Rainwater Harvesting Maintenance Criteria- Cold Climate Considerations, page 70]			
30	Is the rainwater harvesting system included in the Declaration of Covenant? ☐ Is the location and extent of the rainwater harvesting system a part of Exhibit B Site Plan? ☐ Is the maintenance and monitoring of the rainwater harvesting system a part of Exhibit C Maintenance Plan? [3.3.7 Rainwater Harvesting Maintenance Criteria- Declaration of Covenants, page 71]			