

Project Name _____ Date Submitted: _____ Property Address: _____ Development/Property Name: _____ Design Firm: _____ Design Engineer: _____ Telephone: _____ Email: _____ KY PE No.: _____	MSD Reviewer: _____ WM No. _____ _____
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This checklist gives the minimum requirements needed for MSD's review. All items shall be checked as included or marked N/A. The omission of required items is cause for rejection of the submittal without review.

Required Items on GMP Plan Sheet

- | | |
|---|---|
| <input type="checkbox"/> Green BMPs (type, location, limits)
<input type="checkbox"/> Drainage area defined for each GMP
<input type="checkbox"/> Storage volume of each GMP
<input type="checkbox"/> Infiltration rate of GMP
<input type="checkbox"/> Infiltration rate of existing soil
<input type="checkbox"/> Pretreatment for GMPs
<input type="checkbox"/> Existing and proposed easements
<input type="checkbox"/> Plant types (if applicable)
<input type="checkbox"/> Soil composition | <input type="checkbox"/> Edge restraint for pervious pavers (if applicable)
<input type="checkbox"/> Observation sump (if applicable)
<input type="checkbox"/> Proposed contours
<input type="checkbox"/> Drainage arrows
<input type="checkbox"/> Pipe length, size, slope, type, and number
<input type="checkbox"/> Inlet grate and invert elevations
<input type="checkbox"/> Existing & proposed drainage structures
<input type="checkbox"/> Sanitary sewers
<input type="checkbox"/> Other |
|---|---|

Additional Information (If Applicable)

- | | |
|--|---|
| <input type="checkbox"/> Easement Plat
<input type="checkbox"/> Long Term Maintenance Agreement
<input type="checkbox"/> Geotechnical Report | <input type="checkbox"/> GMP water quality calculations
<input type="checkbox"/> Operation and maintenance plan
<input type="checkbox"/> Other: _____ |
|--|---|

**Water Quality Volume/ Attachments—Calculation Sheets
(Indicate Number of Each GMP Included on Plans)**

# <u>Provided WQv</u>	# <u>Provided WQv</u>
<input type="checkbox"/> _____ Bioswales	<input type="checkbox"/> _____ Porous Asphalt
<input type="checkbox"/> _____ Rain Gardens	<input type="checkbox"/> _____ Planters
<input type="checkbox"/> _____ Constructed Wetlands	<input type="checkbox"/> _____ Tree Boxes
<input type="checkbox"/> _____ Green Wet Basins	<input type="checkbox"/> _____ Rainwater Harvesting
<input type="checkbox"/> _____ Green Dry Basins	<input type="checkbox"/> _____ Vegetated Buffers
<input type="checkbox"/> _____ Extensive Green Roofs	<input type="checkbox"/> _____ Vegetated Swales
<input type="checkbox"/> _____ Intensive Green Roofs	<input type="checkbox"/> _____ Underground Storage
<input type="checkbox"/> _____ Blue Roofs	<input type="checkbox"/> _____ Catch Basin Inserts
<input type="checkbox"/> _____ Permeable Pavers	<input type="checkbox"/> _____ Proprietary Water Quality Units
<input type="checkbox"/> _____ Pervious Concrete	<input type="checkbox"/> _____ Infiltration Drains

Required Water Quality Volume: _____ **Total Water Quality Volume Managed:** _____
Total Number of Practices: _____ **Total Water Quality Volume (for Fee-in-Lieu Program):** _____

Note: The Professional Engineer Licensed in Kentucky that stamped the submitted plans must sign the checklist and is responsible for obtaining applicable permits, including, but not limited to, those identified in Section 18.2.

Printed Name

Signature

KY PE No.

Date

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Practice # or location on site: _____		Plan Submitter	MSD Plan Reviewer
1	Practice(s) as labeled on the plans		
2	Impervious drainage area delineated to each GMP		
3	Pervious drainage area delineated to each GMP		
4	Percolation test or infiltration test is provided		
5	Required water quality volume per drainage area		
6	Footprint area at overflow elevation		
7	Footprint area at bottom of excavation		
8	Storage depth below overflow		
9	Side slopes: <3:1 (H:V) for rain gardens, <4:1 (H:V) for wetlands		
10	Longitude slope <15%		
11	Footprint area at top of excavation		
12	Storage zone at least 10-ft from nearest building footer		
13	Storage media specified to have less than 2% fines		
14	Each inlet pipe/channel has erosion protection		
15	Pretreatment provided with appropriate settling velocities and cleanout		
16	Easement or inspection/maintenance access provided		
17	Planting plan included (with phasing/seasonal installation issues)		
18	Forebays (if applicable) ~ 10-15% of WQ _v		
19	# of check dams meet/exceed slope/length requirements		
20	Proper length to width ratio		
21	Inlets and outlets set to limit short circuiting		
22	Underdrain (if in poor soils)		
23	Observation wells provided (if applicable)		
24	Calculation sheet(s) included		

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Practice # or location on site: _____		Plan Submitter	MSD Plan Reviewer
1	Practice(s) as labeled on the plans		
2	Impervious drainage area delineated to each basin		
3	Pervious drainage area delineated to each basin		
4	Percolation test or infiltration test is provided		
5	Required volume		
6	Footprint area at overflow elevation		
7	Footprint area at bottom of excavation		
8	Storage depth below overflow		
9	Porosity of the storage media		
10	Volume below overflow		
11	Footprint area at top of excavation		
12	Storage depth above overflow		
13	Pretreatment provided with appropriate settling velocities and cleanout		
14	Forebay ~ 10 –15% of total WQ_v		
15	Proper length to width ratios		
16	Inlets and outlets set to limit short circuiting		
17	Wet: aquatic shelf > 12" deep (mosquito preventer)		
18	Wet: safety bench included		
19	Planting plan included (with phasing for seasonal installation)		
20	Forebay overflow large enough to limit scour or sediment resuspension		
21	Easement or inspection/maintenance access provided		
22	Calculation sheet(s) included		

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1	Practice(s) as labeled on the plans		
2	Impervious drainage area delineated to each GMP		
3	Pervious drainage area delineated to each GMP		
4	Percolation test or infiltration test is provided		
5	Required water quality volume		
6	Footprint area at overflow elevation		
7	Footprint area at bottom of excavation		
8	Storage depth below overflow		
9	Porosity of the storage media		
10	Volume below overflow		
11	Footprint area at top of excavation		
12	Storage depth above overflow		
13	Aggregate specified to have less than 2% fines; washed; coarse graded		
14	Underdrain needed (soil conditions)—draining elevation set to top of storage zone		
15	Geogrid in areas of regular drive loading		
16	Topping material (paver, block, concrete, asphalt) suitable to loading: driving use/ pedestrian use		
17	Paver top chip stone placed two applications (after settling to fill surface flush)		
18	Adequate side restraints/edge transitions to other materials		
19	Impermeable barrier shown on side walls next to traditional KYTC pavement designs		
20	Filter fabric only on sides		
21	Easement or inspection/maintenance access provided		
22	Calculation sheet(s) included		

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	Practice # or location on site: _____	Plan Submitter	MSD Plan Reviewer
1	Letter indicating that Structural Professional Engineer licensed in Kentucky has evaluated roof and deemed acceptable		
2	Practice(s) as labeled on the plans		
3	Roof area delineated		
4	Water proofing layers included		
5	Required (open media or media trays or blue open trays) volume		
6	Sufficient drains/drain spouts		
7	Storage depth below overflow		
8	Easement or inspection/maintenance access provided		
9	Storage media specified to have less than 2% fines		
10	Calculation sheets included		

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	Practice # or location on site: _____	Plan Submitter	MSD Plan Reviewer
1	Practice(s) as labeled on the plans		
2	Roof drainage area delineated to each storage unit		
3	Required water quality volume < storage volume (event based projection calculations)		
4	Overflow path set		
5	Storage is freeze proof		
6	Storage drawdown projection calculations		
7	Pretreatment screening (simple screen if from roof; W.Q. unit if from surface drainage)		
8	Plumbing set with air gap (if applicable)		
9	Pumping/disinfection unit (if use for internal plumbing)		
10	Underground storage: Multiple sediment removal access points/manholes for sediment removal (especially at pre-treatment inlets and at discharge/outfall)		
11	Easement or inspection/maintenance access provided		
12	Calculation sheet(s) included		

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	Practice # or location on site: _____	Plan Submitter	MSD Plan Reviewer
1	Practice(s) as labeled on the plans		
2	Impervious drainage area delineated to each unit/insert		
3	Pervious drainage area delineated to each unit/insert		
4	Required water quality volume		
5	Manufacturer/sizing data provided		
6	Maintenance hatches or manholes in easement/access points for vector truck		
7	Diversion or pass through capacity stormwater for high flows		
8	Easement or inspection/maintenance access provided		
9	Calculation sheet(s) included		

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	Practice # or location on site: _____	Plan Submitter	MSD Plan Reviewer
1	Underground Injection Control—USEPA permit application included, or approved permit		
2	Practice(s) as labeled on the plans		
3	Impervious drainage area delineated to each drain		
4	Pervious drainage area delineated to each drain		
5	Percolation test or infiltration test is provided		
6	Required water quality volume		
7	Footprint area at overflow elevation		
8	Footprint area at bottom of excavation		
9	Storage depth below overflow/bypass drains at top of storage layer		
10	Underdrain location/layout/sizes		
11	Underdrain overflow is at elevation of top of storage layer		
12	Observation wells provided (if applicable)		
13	Porosity of the storage media		
14	Volume below overflow		
15	Footprint area at top of excavation		
16	Storage depth above overflow		
17	Storage aggregate specified to have less than 2% fines		
18	Pretreatment provided with appropriate settling velocities and cleanout		
19	Overflow of high flow bypass provided		
20	Filter fabric only on sides only		
21	Geogrid (optional per loading design)		
22	Easement or inspection/maintenance access provided		
23	Calculation sheet(s) included		