KitsapCounty
Community Development

# Site Development Stormwater Worksheet

### Applicant Authorization and Acknowledgment

The undersigned hereby certify that all information submitted with this application is complete and correct. If information is found to be incorrect or missing the document will be returned for revision by Kitsap County DCD.

Applicant Signature:_____ Date:_____

## 1. Project Impacts

| Description/Surface Type | Area (square feet) |
|---|---|
| **Total Parcel Area** (From Kitsap County Parcel Search)<br>*Total Size of the Parcel* | |
| **Total Area of Land Disturbing Activity**<br>*Any Areas with changes in existing soil cover (both vegetative and non-vegetative) and/or existing soil topography. See KCC 12.08.265* | |
| **Onsite Hard Surfaces**<br>*Hard surface areas to be created with the project* | |
| • Total Roof Area to be constructed or replaced (roof area, **not** the foundation area of the structure) | |
| • Driveways and parking areas (gravel, paved, or permeable pavement) | |
| • Other (patio, walkways, sidewalks, storage areas etc.) | |
| **Onsite Hard Surface Total:** | |
| **Offsite Hard Surface Area**<br>*Access roads, easement roads, driveway aprons, and other hard surfaces created outside the building parcel as a result of this project* | |
| **Offsite Hard Surface Total:** | |
| **Total Hard Surface Area**<br>*Combined onsite and offsite hard surface totals from above* | |

**Vehicle, Building, and Equipment Washing**

Specific rules apply to washing vehicles, equipment, and buildings on non-residential sites. Will vehicle, equipment, or building washing be done on-site?

☐ Yes ☐ No ☐ This is a residential project

If yes, BMPs outlined in the County's Vehicle, Equipment, and Building Washing Brochure must be implemented. You are legally responsible for correcting deficiencies in accordance with Kitsap County Code (KCC) 12.20.030 and to eliminate illicit discharges per KCC 12.30.020.

**Site Development Activity (SDAP) Number**

If applicable, provide your approved SDAP #: _____

## 2. Critical Areas

Use the PREP - Permit Review Efficiency Plan map to find your designation.

☐ **Green**
Green parcels should not require additional reports or engineering.

☐ **Yellow**
Yellow parcels have a critical area buffer or critical area on the property. Additional reports, or a waiver may be required.

☐ **Red**
Red parcels have one or more critical areas on the property. Waivers may be applied for however additional reports will likely need to be included with your submission.

## 3. Project Type

**Check one of the following:**

☐ 5. The project is within an urban area (from line 3)
**AND** the total hard surface is 5,000 square feet or more.

☐ 6. The project is within an urban area (from line 3)
**AND** will convert 2.5 acres (108,900 square feet) to more of native vegetation to pasture.

☐ 7. The project is within an urban area (from line 3)
**AND** will convert 3/4 acre (32,670 square feet) or more to lawn, garden, or other landscaping.

☐ 8. The project is **not** within an urban area (from line 4)
**AND** the parcel size is under 4.6 acres (200,000 sf)
**AND** the Total Hard Surface Area is 10,000 square feet or more.

☐ 9. The project is **not** within an urban area (from line 4)
**AND** the parcel size is 4.6 acres or more (200,000 square feet)
**AND** the Total Hard Surface Area is more than 5% of the total parcel area.

☐ 10. The project will result in the grading or movement of 5,000 cubic yards (135,000 cubic feet) or more of earth.

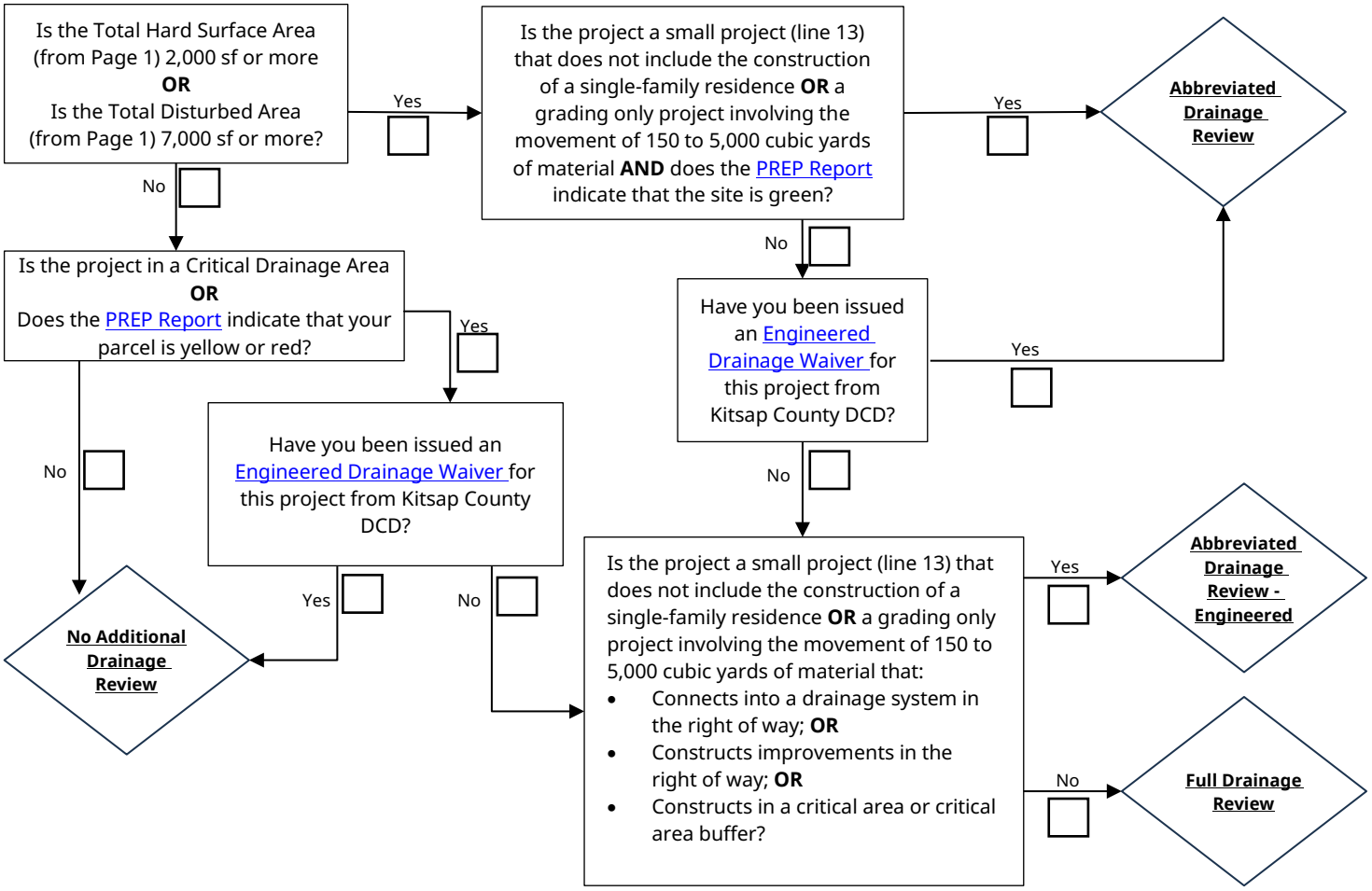
☐ 11. None of the above apply.

**Next, check one of the following:**

☐ 12. Check here if you checked any of lines 5 – 10 above. Your project is classed as a **Large Project**. Minimum Requirements #1-9 apply. A Site Development Activity Permit (SDAP) is required.
Visit the Permit Pathways webpage to apply for an SDAP.

☐ 13. Check here if you checked line 11 above. Your project is classed as a **Small Project.**

## 4. Drainage Review




**No Additional Drainage Review:**

Minimum Requirement #2 applies.

Submit the following:

1. This application form, pages 1-4
2. Site plan with SWPPP elements
3. Geologic Assessment (if applicable)

**Abbreviated Drainage Review:**

Minimum Requirements #1-5 apply.

Drainage is reviewed as part of the SDAP. A professional engineer **is NOT required**.

Submit the following:

1. This application form, all pages
2. Abbreviated Drainage Review Site Plan Checklist and Site Plan
3. Stormwater Pollution Prevention Plan Drawing Checklist and SWPPP Drawing
4. Geologic Assessment (if applicable)
5. Site Sediment Transport Potential Worksheet
6. Infiltration Test and Subsurface Investigation (if applicable, requires professional)
7. Native Vegetation Retention Area Site Plan (only required when full dispersion is selected on page 10)

**Abbreviated Drainage Review - Engineered:**

Minimum Requirements #1-5 apply.

Drainage is reviewed as part of the SDAP. A professional engineer **IS required**.

Submit the following:

1. This application form, pages 1-4
2. Abbreviated Drainage Review – Engineered Civil Plan Checklist and Civil Plan
3. SWPPP/TESC Plan Checklist for SWPPP/TESC Drawing (Include in Civil Drawings)
4. Drainage Report Checklist and Drainage Report
5. Site Sediment Transport Potential Worksheet
6. Geotechnical Report (if applicable)

**Full Drainage Review:**

Minimum Requirements #1-9 apply.

Drainage is reviewed as part of the SDAP. A professional engineer **IS required**.

Submit the following:

1. This application form, pages 1-4
2. Full Drainage Review Civil Plan Checklist and Civil Plan
3. SWPPP/TESC Plan Checklist for SWPPP/TESC Drawing (Include in Civil Drawings)
4. Drainage Report Checklist and Drainage Report
5. Site Sediment Transport Potential Worksheet
6. Geotechnical Report (if applicable)

## Notice:

The remainder of this Worksheet is **only required for projects that fall under Abbreviated Drainage Review**. If you did not select Abbreviated Drainage Review on page 3, please **STOP HERE**.

## 5. Post Construction Soil Quality and Depth

**You may use the pre-approved soil amendment method OR a custom soil amendment. Check one.**

| | |
|---|---|
| ☐ | **Pre-Approved Soil Amendment** |
| ☐ | **Custom Soil Amendment** |

| **Calculate the Amount of Soil Amendment Needed** | |
|---|---|
| 1. **Total disturbed area (from page 1):** | |
| 2. **Onsite hard surface (from page 1):** | |
| 3. Area of lawn or turf (in square feet): | |
| 4. **Area of Landscaping and Planting Beds (in square feet):** | |
| 5. **Areas exempted from soil amendment requirements** due to existing tree roots, steep slopes, or wetland soils: | |
| 6. **Check:** The total of lines 2 through 5 should equal line 1. | |
| 7. **Area of lawn or turf (line 3 above) multiplied by 0.0054** (conversion factor from 1.75 inches to cubic yards) This number is the amendment quantity needed for your lawn or turf areas. | |
| 8. Area of landscaping and planting beds (line 4 above) multiplied by 0.0093 (conversion factor from 3 inches to cubic yards). This number is the amendment quantity needed for your landscaping/planting bed areas. | |
| 9. **Total Amendment Quantity Needed (total of lines 7 and 8 above):** | |
| **Amended Soil Sources** | |
| 10. What percentage of the total amendment quantity needed is purchased from off site sources? | |
| 11. What percentage of the total amendment quantity needed is stockpiled soil and duff from the site? | |
| 12. What percentage of the total amendment quantity needed is from chipped and stockpiled woody material from the site? | |
| 13. What percentage of the total amendment quantity needed is from imported topsoil? | |
| 14. Check that the totals of lines 10-13 above add up to 100%. | |
| **Calculate the Amount of Mulch Needed** | |
| 15. The required amount of mulch will be the same as the amount of amended soil needed for areas of landscaping and planting beds (from line 5 above). | |
| **Mulch Sources** | |
| 16. What percentage of the total mulch quantity needed is purchased from off-site sources? | |
| 17. What percentage of the total mulch quantity needed is chipped and stockpiled woody materials from the site? | |
| 18. Check that the total of lines 16 and 17 above adds up to 100%. | |

*Note: These quantities are minimums. You may use more amendment if desired for your landscaping needs. These quantities are above and beyond any soil and amendments needed for rain gardens, filter strips, and other required bioretention.*

## 6. Stormwater Pollution Prevention Plan Narrative

What is the total volume of proposed cut in cubic yards?

What is the total volume of fill in cubic yards?

Please note: if this is for a residential Single-Family Residence (SFR), the amount of proposed cut and fill for the foundation may be excluded.

Describe existing topography:

Describe existing vegetation:

Describe any drainage features: (*include seasonally wet areas, streams, steep slopes, etc.*)

Identify any of the following adjacent areas which may be affected by site disturbance:

- ☐ Streams
- ☐ Wetlands
- ☐ Lakes
- ☐ Roads
- ☐ Residential Areas
- ☐ Other

If any areas were selected above, please describe them:

**Required Stormwater Pollution Prevention Plan Elements**

1. **Mark Disturbed Areas:**
   *Identify which of the following will be used to mark the area that will be disturbed by construction activity*

- ☐ BMP C101 – Preserving Native Vegetation
- ☐ BMP C102 – Buffer Zones
- ☐ BMP C103 – High Visibility Plastic or Metal Fence

2. **Establish construction access:**

- ☐ BMP C105 – Stabilized Construction Entrance
- ☐ BMP C106 – Wheel Wash
- ☐ BMP C107 – Construction Road/Parking Area Stabilization
- ☐ Not Applicable

**3. Control Flow Rates:**

*If there is substantial grading and/or the potential for stormwater runoff to flow off site during construction, then one of the two BMPs must be identified and shown on the site plan.*

☐ BMP C240 – Sediment Trap

☐ BMP C241 – Temporary Sediment Pond

☐ Not Applicable – Very little grading and/or site does not experience runoff during storms.

**4. Install Sediment Controls:**

*When there is grading on a site and the site is sloped, there is a potential for sediment to leave the site during storm events. Please identify a BMP below if your site has any slope to it.*

☐ BMP C231 – Brush Barrier

☐ BMP C232 – Gravel Filter Berm

☐ BMP C233 – Silt Fence

☐ BMP C234 – Vegetated Strip

☐ BMP C235 – Straw Wattles

☐ Not Applicable

**5. Stabilize Soils:**

*All exposed soil must be protected from rainfall and wind erosion. From October 1 through April 30, no soil shall remain exposed and unworked for more than 2 days. From May 1 to September 30, no soils shall remain exposed and unworked for more than 7 days*.

☐ BMP C120 – Temporary and Permanent Seeding

☐ BMP C121 – Mulching

☐ BMP C122 – Nets and Blankets

☐ BMP C123 – Plastic Covering

**6. Protect Slopes:**

*If the property has slopes, they must be protected from erosion if work is done on or near them.*

☐ BMP C120 – Temporary and Permanent Seeding

☐ BMP C130 – Surface Roughening

☐ BMP C131 – Gradient Terraces

☐ Not Applicable

**7. Protect Drain Inlets:**

*Storm drains shall be protected from sediment entering them.*

☐ BMP C202 – Channel Lining

☐ Not Applicable

**8. Stabilize Channels and Outlets:**

*If temporary on-site conveyance channels are used, they must be stabilized to protect against erosion.*

☐ BMP C202 – Channel Lining

☐ BMP C209 – Outlet Protection

☐ Not Applicable

9. **Control Pollutants:**

*All pollutants shall be handled and disposed of in a manner that does not cause contamination of stormwater. Please identify any BMPs used for the project.*

☐ BMP C151 – Concrete Handling

☐ BMP C152 – Saw Cutting and Surfacing Pollution Prevention

☐ Above BMPs not expected to be necessary. Regardless, required precautions will be taken to ensure pollutants are handled and disposed of in a safe manner.

10. **Control De-Watering:**

*If the site is expected to experience ponding and/or foundation is left in a manner that encourages water ponding, then the applicant shall make necessary plans to discharge the water in a manner that ensures it is safely cleaned before being discharged.*

Describe the de-watering plan:

11. **Maintain BMPs:**

*All temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as needed to assure continued performance of their intended function.*

Describe how BMPs will be maintained and repaired:

12. **Manage the Project:**

*Phasing of the project is encouraged to prevent soils from being exposed for extended periods.*

Describe how project construction will be planned to limit impact and soil exposure:

13. **Protect Low Impact Development BMPs:**

*Protect all Bioretention, Rain Garden, and other LID BMPs from sedimentation, through installation and maintenance of erosion and sediment control BMPs on portions of the site that drain into LID areas or facilities. Restore BMP to fully functioning condition if sediment enters LID BMP.*

- Prevent compaction of Bioretention and Rain Garden BMPs by excluding both construction traffic and foot traffic.
- Protect lawn and landscape areas from compaction by construction equipment.
- Control erosion and prevent sediment from entering permeable pavement construction areas.
- Do not allow muddy construction equipment on base material or permeable pavement.
- Pavement fouled with sediment or no longer passing initial infiltration test must be properly cleaned.
- Keep all heavy equipment off existing soils under LID facilities that have been excavated to final grade.
- Coordinate with Utilities and other Contractors to ensure protection of LID facilities during construction.

## Prepare for Inspection

Inspection of your Post Construction Soil Quality and Depth will be one of the last inspections for your project. Plan ahead for that inspection. You should have ready for the inspector:

- Delivery tickets and receipts for any purchased compost, topsoil, or mulch, showing quantities purchased.
- Product lab test results for purchased products.
- If you are using stockpiled material, take photos of the stockpiles so the inspector can see what you used and the quantity of stockpiled material.
- Be prepared to distinguish, for the inspector, products used for any filter strips, rain gardens, or bioretention from those used for Post-Construction Soil Quality and Depth

## 7. Infeasibility Checklist

**Instructions**: Fill out this checklist to determine which stormwater BMP(s) are feasible for roof surfaces and other hard surfaces (driveways, parking areas, patios, paths etc.)

**Section 1: Surfaces**

Does your project include addition or replacement of **Roof**? ☐ Yes ☐ No

Does your project include addition or replacement of **Other Hard Surfaces**? (driveways, parking areas, patios, paths etc.) ☐ Yes ☐ No

**Section 2: Feasibility Criteria**

For each section, place a mark in either the Yes or No column based on the features of your project.

If a **Yes** answer is given, then the BMP **is not feasible** and **is not required.**

If **No** is selected for **all questions** within a BMP section then that BMP **is feasible and must be used.**

Once you have identified the first feasible BMP for each of your hard surface areas you are done with the worksheet.

Note: *Full infiltration BMPs are only applicable to roof surface and permeable pavement. Sheet flow, and concentrated flow dispersion are only applicable to other hard surfaces.*

| **BMP: Full Dispersion**<br>Full dispersion routes stormwater runoff from hard surface and cleared areas to areas of the site that are protected in natural vegetative cover. | **Roof** | | **Other Hard Surfaces** | |
|---|---|---|---|---|
| **Feasibility Criteria** | **YES** | **NO** | **YES** | **NO** |
| Will the project site allow for less than a 100ft flow path through native vegetation? | ☐ | ☐ | ☐ | ☐ |
| Will the native vegetation dispersion area be less than 6.5 times the size of the impervious area draining to it? | ☐ | ☐ | ☐ | ☐ |
| Does a professional geotechnical evaluation recommend against dispersion? | ☐ | ☐ | ☐ | ☐ |
| Does the location of the dispersion path fail to provide positive drainage from the impervious surface? | ☐ | ☐ | ☐ | ☐ |
| Is the only available flow path within 10ft uphill of a septic system or drain field? | ☐ | ☐ | ☐ | ☐ |
| Is the only available flow path within an erosion or landslide hazard area? | ☐ | ☐ | ☐ | ☐ |

| Full Dispersion Continued | Roof | | Other Hard Surfaces | |
|---|---|---|---|---|
| **Feasibility Criteria** | **YES** | **NO** | **YES** | **NO** |
| Is the only available dispersion flow path in a critical area, steep slope (over 15%), or a setback to a steep slope? | ☐ | ☐ | ☐ | ☐ |
| Is the only available dispersion flow path within 100 feet uphill of a contaminated site or abandoned landfill? | ☐ | ☐ | ☐ | ☐ |
| **Determination: Is Full Dispersion Feasible?** *If full dispersion is feasible, a Native Vegetation Covenant will need to be recorded with the Kitsap County Auditor's Office prior to the project's final inspection.* | ☐ | ☐ | ☐ | ☐ |

| BMP: Downspout Full Infiltration<br>Allowed for roof areas only. A Downspout full infiltration system is a buried trench designed to infiltrate runoff from roof downspout drains.<br>***May require professional to determine. See KCSDM Vol.II.5.3.2** | Roof | |
|---|---|---|
| **Feasibility Criteria** | **YES** | **NO** |
| * Is there less than 1-foot of permeable soil between the bottom of the bioretention area and the seasonal high-water table or impermeable layer?<br>(For drainage areas with less than 5,000 square feet of pollution generating hard surface, less than 10,000 square feet of hard surface, and less than 3/4 acre of pervious surface). | ☐ | ☐ |
| *Has a subsurface investigation determined that there is less than 3-feet of permeable soil between the final grade and the seasonal high-water table or impermeable layer? (For drainage areas over 5,000 square feet of pollution generating hard surface, OR 10,000 square feet of hard surface, OR 3/4 acre of pervious surface). | ☐ | ☐ |
| Does a professional geotechnical evaluation recommend against infiltration for any of the following reasons? If so, select the reason(s) below:<br>☐ Risk to underground utilities, storage tanks, structures, road/parking surfaces or subgrades<br>☐ Lack of a safe overflow pathway<br>☐ Risk to shoreline structures like bulkheads<br>☐ Risk to existing below-grade basements<br>☐ Other reason (describe): | ☐ | ☐ |
| Are there no outwash or loam soils onsite? | ☐ | ☐ |
| Are horizontal setbacks unable to be met? | ☐ | ☐ |
| **Determination: Is Downspout Full Infiltration Feasible?** | ☐ | ☐ |

| **BMP: Rain Garden**<br>A rain garden is a shallow planted depression designed to retain or detain stormwater before it is infiltrated or discharged downstream.<br>***May require professional to determine. See KCSDM Vol.II.5.3.2** | **Roof** | | **Other Hard Surfaces** | |
|---|---|---|---|---|
| **Feasibility Criteria** | **YES** | **NO** | **YES** | **NO** |
| *Is there less than 1-foot of permeable soil between the bottom of the bioretention area and the seasonal high-water table or impermeable layer? (For drainage areas with less than 5,000 square feet of pollution generating hard surface, less than 10,000 square feet of hard surface, and less than 3/4 acre of pervious surface). | ☐ | ☐ | ☐ | ☐ |
| *Is there less than 3-feet of permeable soil between the final grade and the seasonal high-water table or impermeable layer? (for drainage areas over 5,000 square feet of pollution generating hard surface, OR 10,000 square feet of hard surface, OR 3/4 acre of pervious surface). | ☐ | ☐ | ☐ | ☐ |
| Does a professional evaluation recommend against raingardens for any of the following reasons? If yes, select the reason(s) below:<br>☐ Bioretention with an underdrain is likely to direct infiltrated water to a nutrient sensitive waterbody<br>☐ Erosion, slope failure, or flooding concerns<br>☐ Groundwater modeling indicates that bioretention will likely alter the movement of pollutants<br>☐ Other reason (describe): | ☐ | ☐ | ☐ | ☐ |
| Are horizontal setbacks unable to be met? | ☐ | ☐ | ☐ | ☐ |
| Is the site incompatible with the surrounding drainage system as determined by Kitsap County DCD? | ☐ | ☐ | ☐ | ☐ |
| Is the raingarden unable to be located on a slope less than 8%? | ☐ | ☐ | ☐ | ☐ |
| **Determination: Is Rain Garden Feasible?** | ☐ | ☐ | ☐ | ☐ |

| **BMP: Permeable Pavement**<br>Permeable pavement is a specific type of pavement with a high porosity that allows rainwater to pass through it into the ground.<br>***May require professional to determine. See KCSDM Vol.II.5.3.2** | **Other Hard Surfaces** | |
|---|---|---|
| **Feasibility Criteria** | **YES** | **NO** |
| Do subgrade slopes exceed 5%? | ☐ | ☐ |

| Permeable Pavement Continued | Other Hard Surfaces | |
|---|---|---|
| **Feasibility Criteria** | **YES** | **NO** |
| Are there areas with steep slopes? | ☐ | ☐ |
| Is pavement within 100 feet of a drinking water well or spring? | ☐ | ☐ |
| *Does infiltration testing indicate that soils have an infiltration rate less than 0.3 inches per hour? | ☐ | ☐ |
| *Does a professional recommend against it due to erosion, slope failure, or flooding concerns? | ☐ | ☐ |
| Is pavement within 30 feet uphill or 10 feet downhill or a residential septic drain field? | ☐ | ☐ |
| *Would the seasonal high-water table or an impermeable layer create saturated conditions within a 1-foot of the bottom of the base course? | ☐ | ☐ |
| Is pavement within 50 feet of the top of the slope greater than 20%? | ☐ | ☐ |
| Is pavement within 10 feet of surface contaminated soils or 100 feet of deep contaminated soils? | ☐ | ☐ |
| *Does groundwater modeling indicate that infiltration will likely alter the movement of pollutants in groundwater? | ☐ | ☐ |
| Is the pavement in an area likely to have long term sediment deposition after construction? (e.g., construction and landscaping material yards). | ☐ | ☐ |
| Is the pavement downhill of steep, erosion prone slopes that are likely to deposit sediment on the pavement? | ☐ | ☐ |
| Is the surface subject to industrial activity incompatible with permeable surfaces? | ☐ | ☐ |
| Is the site a contaminated or an abandoned landfill? | ☐ | ☐ |
| Would the pavement be within 10 feet of an underground petroleum, chemical, or waste storage tank or underground connecting pipes? | ☐ | ☐ |
| **Determination: Is Permeable Pavement Feasible?** | ☐ | ☐ |

| **BMP: Sheet Flow or Concentrated Flow Dispersion**<br>Sheet flow dispersion is the simplest method of runoff control. This BMP can be used for any impervious or pervious surface that is graded to avoid concentrating flows. | Other Hard Surfaces | |
|---|---|---|
| **Feasibility Criteria** | **YES** | **NO** |
| Is the only available dispersion flow path within 10 feet uphill of a septic system or drain field? | ☐ | ☐ |
| Does a professional geotechnical evaluation recommend against dispersion due to erosion, slope failure, or flooding concerns? | ☐ | ☐ |
| Is the only available dispersion flow path within 10 feet uphill of a septic system or drain field? | ☐ | ☐ |
| Is the only available dispersion flow path within an erosion hazard or a landslide hazard area? | ☐ | ☐ |

| **Sheet Flow or Concentrated Flow Dispersion Continued** | **Other Hard Surfaces** | |
|---|---|---|
| Is the only available flow path within 100 feet uphill of a contaminated site or abandoned landfill? | ☐ | ☐ |
| Are horizontal setbacks unable to be met? | ☐ | ☐ |
| Are dispersion and flow path requirements unable to be met? | ☐ | ☐ |
| For flat to moderately sloped areas, is a minimum 10ft vegetated flow path unable to be met? | ☐ | ☐ |
| For variably sloped areas, is a minimum 25ft flow path unable to be met? | ☐ | ☐ |
| Is the only flow path through a critical area, steep slope, or a setback to a steep slope? | ☐ | ☐ |
| Is positive drainage not possible? | ☐ | ☐ |
| **Is Sheet Flow or Concentrated Flow Dispersion Feasible?** | ☐ | ☐ |

| **BMP: Downspout Dispersion System**<br>These systems use splash blocks or gravel filled trenches to spread roof runoff over vegetated areas.<br>***(Allowed only if ALL above roof area BMPs have been proven infeasible)*** | **Roof** | |
|---|---|---|
| **Feasibility Criteria** | **YES** | **NO** |
| Is the flow path unable to be properly vegetated? | ☐ | ☐ |
| Does a professional geotechnical evaluation recommend against dispersion? | ☐ | ☐ |
| Is the only available flow path within 10 feet uphill of a septic system or drain field? | ☐ | ☐ |
| Is the only available flow path within an erosion or landslide hazard area? | ☐ | ☐ |
| Is the only available flow path in a critical area, steep slope, or a setback to a steep slope? | ☐ | ☐ |
| Is the only available flow path within 100 feet uphill of a contaminated site or abandoned landfill? | ☐ | ☐ |
| Is the minimum dispersion trench length unable to be met? (10 feet of trench for every 700 square feet of drainage area). | ☐ | ☐ |
| Is the minimum 25-foot flow path for dispersion trenches unable to be met? | ☐ | ☐ |
| Is a vegetated flow path of 50 feet between the dispersion trench and a slope over 15% unable to be met? | ☐ | ☐ |
| Is the minimum 50-foot flow path for splash blocks unable to be met? | ☐ | ☐ |
| Does the drainage area to any splash block exceed 700 square feet? | ☐ | ☐ |
| **Determination: Is Downspout Dispersion Feasible?** | ☐ | ☐ |

| **BMP: Perforated Stub-Out Connection**<br>A perforated stub-out connection is a length of perforated pipe within a gravel- filled trench placed between roof downspouts and a stub-out to the local drainage system.<br>***May require professional to determine. See KCSDM Vol.II.5.3.2** | **Roof** | | **Other Hard Surfaces** | |
|---|---|---|---|---|
| **Feasibility Criteria** | **YES** | **NO** | **YES** | **NO** |
| Are horizontal setbacks unable to be met? | ☐ | ☐ | ☐ | ☐ |
| *Is there less than 1-foot of permeable soil between the bottom of the perforated<br>pipe and the seasonal high-water table or impermeable layer? | ☐ | ☐ | ☐ | ☐ |
| Is the only location for the perforated pipe under impervious or compacted (e.g.,<br>driveways, parking areas) surfaces? | ☐ | ☐ | ☐ | ☐ |
| Is a minimum of 10 feet of perforated pipe per 5,000 square feet of contributing<br>roof area not possible? | ☐ | ☐ | ☐ | ☐ |
| Is the only location for the perforated pipe on slopes of 20% or greater? | ☐ | ☐ | ☐ | ☐ |
| Does a professional geotechnical evaluation recommend against infiltration for any of the following reasons? If yes, select the reason(s) below:<br>☐ Risk to underground utilities, storage tanks, structures, road/parking surfaces or subgrades<br>☐ The only available area does not allow for a safe overflow pathway<br>☐ The infiltration pathway would intersect a septic drain field or reserve area Risk to shoreline structures like bulkheads<br>☐ Risk to existing below-grade basements<br>☐ Other reason (describe): | ☐ | ☐ | ☐ | ☐ |
| **Determination: Is Perforated Stub-Out Feasible?** | ☐ | ☐ | ☐ | ☐ |

If all of the options above are infeasible to use for the project's **roof areas** then no other Best Management Practice is required to mitigate the stormwater from **roof areas**.

If all of the options above are infeasible to use for the project's **other hard surfaces** then no other Best Management Practice is required to mitigate the stormwater from **other hard surface areas**.