



## SMALL PROJECT DRAINAGE REVIEW HANDOUT

On undeveloped land most rainwater soaks into the ground and flows slowly to nearby lakes and streams through the upper layers of soil. When that same area is cleared or covered with an impervious surface, the rainwater is no longer captured by dense vegetation and forest duff, but flows quickly and in greater quantities across the site and through pipes and channels to streams and lakes. Also, as it flows over developed surfaces (e.g., driveways, roads, lawns, and pastures), various pollutants generated by human uses of the land are picked up and carried downstream. For this reason, any residential development in the City of North Bend that creates between 2,000 - 5,000 square feet of new impervious surface area is required to undergo Small Project Drainage Review. The City has adopted the 2009 King County Surface Water Design Manual (KCSWDM).

Appendix C of the KCSWDM explains the submittal requirements for Small Project Drainage Review, the methods available for flow control, and the erosion and sediment control measures.

Flow control Best Management Practices (BMPs) are required to be constructed with residential building permits. Infiltration and dispersion for the roof area are the preferred methods of flow control, unless soil type or topography precludes its use. If infiltration or dispersion are not feasible or applicable, then other methods include:

- Limited infiltration (see section C.2.3)
- Basic dispersion (see section C.2.4)
- Rain garden (see section C.2.5)
- Permeable pavement (see section C.2.6)
- Rainwater harvesting (see section C.2.7)
- Vegetated roof (see section C.2.8)
- Reduced impervious surface credit (see section C.2.9)
- Native growth retention credit (see section C.2.10)

Each method has associated limitations that may make it inappropriate for certain sites. The applicant is advised to read each method carefully to determine which is most suitable for the site or consider hiring a civil engineering consultant. A combination of methods may be used.

In some cases, the homeowner or contractor may prepare the plans. If the project contains or is adjacent to a wetland, flood, erosion, steep slope hazard area, landslide hazard area or landslide hazard drainage area, then the City will require plans prepared and stamped by a civil engineer licensed in the State of Washington.

To achieve the objective of single-family flow control, a Declaration of Covenant (per section C.5.2) for each flow control BMP (best management practice) identifying maintenance responsibility and granting the City access to inspect the Flow Control BMP shall be reviewed by the City prior to permit issuance and recorded with King County prior to final building inspection. The Declaration of Covenant shall be signed (by the property owner or agent) and notarized.

Erosion and sediment control (ESC) is required for all projects resulting in land disturbing activity. Homeowners and contractors are responsible for implementation and maintenance of erosion control to prevent sediment from leaving the construction site. Erosion and sediment control (ESC) must be used both during and after construction as specified in section C.1.2.4 of the Surface Water Design Manual. All of the following ESC requirements must be evaluated for applicability to the proposed project:

- Mark Clearing Limits/Minimize Clearing
- Minimize Sediment Tracked Offsite
- Control Sediment
- Stabilize Exposed Soils
- Control Runoff
- Control Dewatering
- Control Other Pollutants
- Final Stabilization

The placement and type of proposed ESC measures shall be shown on the ESC plan for the proposed project. The contractor or other persons performing construction activities shall comply with the stormwater pollution prevention measures/BMPs specified for such activities in the King County *Stormwater Pollution Prevention Manual*.

Please see the Small Project Drainage Review Checklist for drainage review submittal requirements.