



PUBLIC WORKS DEPARTMENT

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From: Tim LaPorte, P.E., Public Works Director

To: 2002 City of Kent Surface Water Design Manual Users

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RE: Blanket Adjustment 2011-1 for the 2002 City of Kent Surface Water Design Manual

The following changes to the 2002 City of Kent Surface Water Design Manual reflect the necessary modifications to remain consistent with the National Pollutant Discharge Elimination System Phase II permit mandated by the Clean Water Act.

In general, the revisions below relate to the Flow Control Standards in various drainage basins throughout the city. The most significant revision is along drainage basins areas previously exempt from detention under the Green River Management Agreement. These areas are now required to provide level 2 flow control, whereas previously flow control was not required. Other changes include the predeveloped land Cover assumptions as a forested condition. This revision was previously addressed in Blanket Adjustment 2010-1.

Section 1.2.3 page 5.1-27 **Flow control implementation requirements** is revised as follows:

For efficient application of Core Requirement #3, the following steps are recommended:

1. Determine the flow control standard that applies to the drainage basin where your project is located. Generally, the City of Kent has adopted the Level 2 flow control standard as the minimum standard to be applied citywide, but

there are areas within the City with different requirements. They are shown on the Flow Control Applications Map included with this manual and are described as follows:

- Project in the McSorley Creek Watershed shall apply Level 3 flow control.
- Projects that provide for gravity stormwater discharges to the Green River shall follow the criteria specified by the Green River Management Agreement (see item 5 under the ~~Exemptions from Core Requirement #3~~ **Green River Management Agreement and Detention Requirements** section.)
- Projects that provide for stormwater discharges to the S 259th / 3rd Ave S Regional Detention Facility shall be required to provide ½ of the detention **flood storage** volume required by the Green River Management Agreement (see item 7 under the ~~Exemptions from Core Requirement~~ **Area-Specific Regional Facilities #3** section.)
- Projects in the Mill Creek Basin within the Kent Valley (generally below elevation 35' NGVD) and outside of the Green River Natural Resources Area Subbasin (see flow control applications map) shall apply Level 1 flow control. **Predeveloped conditions shall be characterized by the existing conditions of the site as defined in Blanket Adjustment 2010-1.** ~~with a "pasture" assumption for predevelopment pervious areas.~~
- Projects in areas where a Master Drainage Plan has been approved shall follow the provisions of the respective plan (this includes "Kentview" and "The Lakes" areas).

Section 1.2.3 page 5.1-30 and 5.1-31 **Direct Discharge Exemption** is revised as follows:

5. ~~Direct Discharge Exemption~~ Green River Management Agreement and Detention Requirements

In accordance with the **provisions of the Green River Management Agreement**, if the proposed development is located in an area that has a direct, gravity draining outlet to the Green River or is tributary to such a system (other than via the Black River Pumping Station) then stormwater runoff can be released ~~undetained,~~ after all the following conditions are met:

- 1) Flood storage must be provided that is equivalent to the amount of rainfall falling on the entire site for a 100-year, 7-day design storm, corresponding to 9.8 to 10.0 inches depending on the site's location as shown on the 100-year, 7-day Isopluvial Maps, AND
- 2) It must be demonstrated that the downstream conveyance system has the capacity to carry the resultant flows without overflowing, AND
- 3) Appropriate water quality treatment is provided as required **AND**
- 4) Level 2 flow control is provided.**

Additional detention and release rate requirements may be required by the Washington State Department of Fish and Wildlife when a Hydraulic Project

Approval (HPA) is required by the agency, or by the City to mitigate for conveyance problems downstream of the development or for impacts to critical areas.

~~Release rates and/or detention requirements will be imposed by the City **only** when the Applicant's downstream system analysis indicates that the existing stormwater drainage system does not have the necessary capacity to carry the increased flows, **AND** appropriate off-site mitigation is not proposed by the developer.~~

~~The City of Kent does not recognize any other "major receiving waters" within the City that would be candidate for the Direct Discharge Exemption.~~

Standards are currently pending for the Washington Avenue Pump Station (refer to flow control map). Until standards are approved and adopted, the provisions of the Green River Management Agreement as described above shall apply.

For the S 259th/3rd Avenue Regional Detention facility (refer to flow control map) the above conditions shall apply with the exception that only *one-half* of the Green River Management Agreement flood storage volume shall be required.

6. Flow Control Requirements Exemption for Horseshoe Acres and Union Pacific Pump Stations

Developments within the service areas draining to the Horseshoe Acres and Union Pacific Pump Stations along the Green River are ~~not automatically~~ required to provide on-site Level 2 **flow control**, ~~but~~ and are required to provide on-site water quality treatment.

Release rates and/or detention requirements may be imposed by the City when the Applicant's downstream analysis indicates that the existing stormwater conveyance system from the development to the pump station does not have the necessary capacity to carry the increased flows, OR the pump station does not have the capacity to store and/or pump the additional runoff flows without local flooding.

Appropriate off-site mitigation measures to off-set identified conveyance or pumping constraints may be proposed by the Applicant and accepted at the discretion of the Director of Public Works.

7. Area-specific Exemptions for Regional Facilities

Stormwater detention and treatment are not required for any development that discharges to the **Valley Regional Detention/Enhanced Wetland Facility** also known as the **Green River Natural Resource Area (see the flow control applications map for the relevant subbasin boundary)**. The facility has been sized to provide detention and treatment for both existing and future developments.

Stormwater treatment and detention are required for any development that discharges to the **98th Avenue South Regional Treatment/Detention Pond** because this system is designed to handle existing erosion problems and is not

designed to provide adequate detention and treatment according to current standards for existing or future developments.

Stormwater detention and treatment are also required for any development that discharges to the **Meridian Meadows (Springwood) Regional Detention Pond/Wetland Facility** or the **Upper or Lower Mill Creek Regional Detention Facilities**. These facilities were not designed to provide regional detention or treatment according to current standards for existing or future developments.

Master Drainage Plans have been approved for **Kentview** and **The Lakes** development areas (shown on the Flow Control Applications Map). Drainage standards applied within these areas shall be in accordance with the provisions of the respective Master Drainage Plans.

~~Standards are pending For the **S 259th/3rd Avenue Regional Detention facility** (refer to flow control map). Until standards are the approved and adopted provisions of the Green River Management Agreement shall apply with the exception that only *one half* of the Green River Management Agreement flood storage volume shall be required.~~

Section 1.2.3.2 page 5.1-35 **Land Cover Assumptions** is revised to read:

Land cover assumptions for designing flow control facilities are detailed in Chapter 3-Blanket Adjustment 2010-1. For residential development (plats, short plats, and large single-family projects), flow control facilities must be sized for the ultimate potential development of the site; this assumes that all forest and shrub cover (outside of proposed impervious surface areas) will be converted to grass unless protected by an open space tract or covenant.

~~Predeveloped pervious areas should be assumed to be forest or pasture, whichever was predominant in 1978 unless it is less than 1 acre in size OR located within the Lower Mill Creek, Lower Springbrook Creek, Lower Garrison Creek or the Green River Natural Resource Area. The grass assumption for pervious areas should only be made when the predeveloped land cover (current or 1978 as applicable) is greater than 4 dwelling units per gross areas.~~