



**THURSTON COUNTY**  
**WASHINGTON**  
 SINCE 1852

COUNTY COMMISSIONERS

Judy Wilson  
 District One

Diane Oberquell  
 District Two

Kevin J. O'Sullivan  
 District Three

**DEPARTMENT OF WATER AND WASTE MANAGEMENT**

Richard D. Blinn, P.E.  
 Director

**NOTICE OF ADOPTION  
 MEMORANDUM**

**FROM** Richard D. Blinn, P.E. *RS*  
 Thurston County Drainage Manual Administrator

**TO** Interested Parties

**DATE** March 22, 2000

**SUBJECT** Interim Stormwater Design Standards for New Development in  
 Green Cove Creek Basin

**Section 1 SUMMARY**

Effective immediately, interim stormwater standards for new development are imposed for the Green Cove Creek Basin (the Basin). These interim standards will remain in effect until further notice pending conclusion of the City of Olympia's (the City) current consultant work within the Basin. This current work updates the County's comprehensive hydrologic model developed for the Green Cove Creek Comprehensive Drainage Basin Plan, (the Plan) December 1998.

Additionally, the City's work will define appropriate stormwater discharges for new development within the Basin consistent with the recommendations of the Plan. The completion date for this work is expected sometime during the late fall of 2000. Interim stormwater design standards for new development in the Basin are presented below under Section 3.

**Section 2. BACKGROUND**

In December 1998, the Thurston County Board of County Commissioners adopted the Plan. One of the key recommendations of the Plan was to halve current release rates from stormwater detention facilities and double the current runoff storage requirement (Recommendation 8.5). The Thurston County Storm and Surface Water Program (the County) was unable to complete the specific modeling analysis necessary to provide design guidance for new development in the basin implementing Recommendation 8.5. Rather than placing the burden on new development to generate these design tools, the County and the City propose updating the County's hydrologic model and developing the design guidance for new development to meet the requirements of Recommendation 8.5. The City has hired the County's previous engineering consultant to update basin land use coverages and develop sizing guidance for new development in the Basin.



This work will also assist development and jurisdictions better understand the impact to land segments likely to result from implementing Recommendation 8.5.

### Section 3. INTERIM DEVELOPMENT STANDARDS

**Purpose:** The County seeks to limit the potential adverse impact from new development within the Basin. These impacts include increased peak flow and other flow conditions that adversely impact the Creek's sensitive biologic system. To this end, the County is providing interim stormwater design standards for new development within the Basin. These standards will remain in place until such time that the City's consultant completes the modeling and analysis necessary to provide stormwater facility size guidance for new development within the Basin. Upon review of the consultant's final modeling report and recommendations, the interim standards will be reconsidered to ensure consistency with the Plan.

- A. **Interim Standards:** These interim standards are contained within "Interim Stormwater Design Standards for New Development in Green Cove Creek Basin, March 21, 2000," Thurston County Storm and Surface Water Program. These standards establish new site development modeling criteria. This additional guidance does not guarantee that new development can successfully complete the review process prior to the City completing the consultant modeling work. These interim standards are available upon request. Interested parties should contact Mark R. Cook, P.E., Storm and Surface Water Program Manager, at 360-754-4681 or visit 921 Lakeridge Drive SW, Building 4, Room 100, Olympia, WA 98502.
- B. **Authority:** In taking this action, the Thurston County Drainage Manual Administrator is exercising the Administrative Authority of Section 1.2 of the Drainage Design and Erosion Control Manual for Thurston County Washington, 1994 (the Manual). Development proponents are encouraged to review "Interim Site Development Guidelines for New Development in Green Cove Creek Basin" prior to submitting any drainage plan for review. The following list is not intended to be all-inclusive but does provide some direction on key chapters and sections of the Manual affected by the interim guidelines.
- C. **Relationship to Manual Standards:**
  - Section 3.1.1, Section 9 is amended to include input and output files from continuous simulation modeling.
  - Maximum release rates are amended to reflect the pre-developed runoff hydrograph as described by the continuous simulation model.
  - Section 4.1.2 is amended such that sizing is based on the results of the amended modeling requirements.

Section 4.2 is amended to reflect the sizing as defined by the amended modeling requirements.

Section 4.3 is amended to reflect the sizing as defined by the amended modeling requirements.

Section 4.5 is amended to reflect the sizing as defined by the amended modeling requirements.

- Section 5.1 is amended to utilize continuous simulation-modeling and the presumed existing condition is forested.
- Section 5.2 is amended to reflect regional parameters and the period of record for use in continuous simulation modeling provided by the County.

Section 5.3 is amended to reflect regional parameters and the period of record for use in continuous simulation modeling provided by the County.

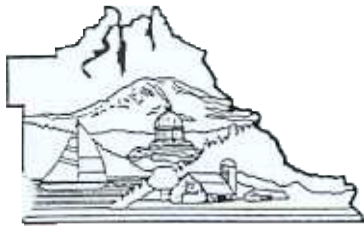
- Section 5.4 is amended to reflect regional parameters and the period of record for use in continuous simulation modeling provided by the County.
- Section 5.5 is amended to reflect regional parameters and the period of record for use in continuous simulation modeling provided by the County.
- Section 5.6 is amended to require that the design engineer specifically calculate the total impervious area for each individual development proposal and that this area be used as input to the continuous simulation model.

Section 8.5.13 is amended to reflect the sizing as defined by the amended modeling requirements.

Unless otherwise amended by "Interim Stormwater Design Standards for New Development in Green Cove Creek Basin, March 22, 2000," Thurston County Storm and Surface Water Program, all other Manual provisions apply. If you have any questions regarding this administrative action, please contact Mark R. Cook, P.E., Storm and Surface Water Program Manager, at 360-754-4681.

cc: Board of County Commissioners  
Linda Hoffman  
URS Greiner Woodward Clyde  
Mark R. Cook

DPA Mark Calkins  
Fred Knotsman  
Gary Cooper  
Brent Payton



**THURSTON COUNTY**  
WASHINGTON  
SINCE 1852

COUNTY COMMISSIONERS

Judy Wilson  
District One


Diane Oberquell  
District Two

Kevin J. O'Sullivan  
District Three

DEPARTMENT OF WATER AND WASTE MANAGEMENT

Richard D. Blinn, P.E.  
Director

## TECHNICAL MEMORANDUM

**FROM:** Mark Cook, P.E.   
**TO:** Richard Blinn, Director  
**DATE:** March 22, 2000  
**SUBJECT:** Interim Stormwater Design Standards for New Development in Green Cove Creek Basin

### 1 Background

In December 1998, the Thurston County Board of County Commissioners adopted the Green Cove Creek Comprehensive Drainage Basin Plan (the Plan). During the five years of basin planning, several key issues were identified as necessary to limit increasing future peak flows to Green Cove Creek (the Creek). Of most significance, is Recommendation 8.5 that seeks to maintain or re-establish a minimum of 60% undisturbed forest canopy for the Basin and increasing current drainage manual standards for release rates and storage.

At the conclusion of the planning process, staff acknowledged that additional modeling analysis is required to provide development with specific guidance to meet the increased drainage manual requirements of Recommendation 8.5. In a complimentary effort, the City of Olympia (the City) recently completed the "City Streams and Wetlands Study." This study validates the environmental value of the Creek's eco-system and provides the focus of the City's desire to provide increased protection to the Creek. In a unanimous action taken February 8, 2000, the City Council:

Imposed interim R4 zoning for Basin properties located within City limits.

- Increased stormwater requirements.

Imposed seasonal clearing and grading restrictions.

- Imposed increased tree retention requirements.



Richard D. Blinn, Director  
March 22, 2000  
Page Two

As the basis for this action, the City is in the process of conducting additional modeling analysis of the Creek. The additional work is expected to take up to one year to complete. The analysis is expected to provide development proponents with specific tools necessary to meet the increased stormwater standards as recommended in the Plan. In recognition of the City's ongoing work program, the County is imposing interim stormwater standards for the Basin. This action is being taken to ensure consistency for new development in the Basin and to minimize potential adverse impacts to the Creek while the City conducts additional modeling analysis for the Creek.

## 2. Interim Standards

The interim standards outlined below are intended to guide new development in the Basin until the City completes additional modeling analysis. The interim standards have one significant component; revised stormwater modeling criteria for new development. This revision alters the manner whereby runoff is predicted, allowable site discharge and associated onsite storage.

- A. Effective immediately, modeling standards for new development within the Basin will change from a single event to a continuous modeling methodology. The approved model for use is the Environmental Protection Agency (EPA) Hydrological Simulation Program FORTRAN (HSPF). Any and all other substitute models must be approved by the County prior to use.
- B. New development within the Basin will assume a forest condition as being the pre-developed condition.
- C. Post development runoff shall match pre-development runoff flow duration and peak for the 1.05 year event to the 10-year event as defined by Thurston County Storm and Surface Water Program, Drainage Design and Erosion Control Manual for Thurston County, 1994 edition.
- D. A deviation from matching the pre-developed runoff flow duration and peak of ten percent (+/-) is allowed from the 10-year event to the 50-year event as defined by Thurston County Storm and Surface Water Program, Drainage Design and Erosion Control Manual for Thurston County, 1994 edition.

Richard D. Blinn, Director  
March 22, 2000  
Page Three

### 3. Target Dates

To assist new development in meeting these interim standards, the following products will be provided on the associated time frame:

- A. Continuous period of record: April 21, 2000.
- B. Regionalized parameters for Hydrological Simulation Program FORTRAN (HSPF):  
April 28, 2000.
- C. Final stormwater design guidance for new development within the Basin:  
February 2001.