CLARK COUNTY STORMWATER ORDINANCE UPDATE
STAKEHOLDER ADVISORY COMMITTEE
Report

January 2008

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BACKGROUND

The current Clark County Phase 1 NPDES Municipal Stormwater Permit (permit) became effective February 16, 2007. To comply with several Washington State Department of Ecology requirements that must be met by August 2008, Clark County began the process of updating its stormwater ordinance in May 2007. [1]

Clark County established the Stakeholder Advisory Committee (SAC) to provide policy-level review and guidance to staff, the Technical Advisory Committee (TAC), and consultants for potential revisions to the stormwater code. Appendix A consists of a copy of SAC's charter. SAC members were selected for their extensive knowledge of stakeholder issues and to provide broad representation of community interests and access to both formal and informal stakeholder communications networks. Appendix B consists of a list of SAC members.

The 12-member SAC, which met nine times between August 2007 and January 2008, operated by consensus with a professional facilitator but no elected chair or other officers. The meetings were open to the public, announced in advance, and included time for public comment. While the SAC's first meeting was primarily organizational, members provided information about other stakeholders to contact and received a general briefing from staff on the parameters of the committee's work.

SAC meeting notes and activities were summarized on the stormwater ordinance update web page on the county web site.[2]

SAC members gave information about the progress of the update to their stakeholder constituencies and brought back questions and concerns to the SAC and county staff for discussion. Members were invited to join staff at the Clean Water Commission open house, Design Engineering Advisory Board meetings, and BOCC work sessions related to the stormwater ordinance update.

The SAC's recommendations will be part of deciding on alternative local approaches to meeting Ecology's requirements and maintaining the health of the ecosystem. The SAC focused primarily on potential code changes as they would affect agriculture, redevelopment, low impact development, and exemptions for them. The SAC also spent considerable time considering the practical application of the code revisions.

[1] See NPDES Permit, p. 10.

[2] http://www.clark.wa.gov/stormwater

SUMMARY OF FEDERAL, STATE, & LOCAL REGULATION

Most stormwater runoff is collected in municipal separate storm sewers and discharged to surface waters. A permit under the federal Clean Water Act is required. The Environmental Protection Agency (EPA) stormwater regulations establish two phases (Phase I and Phase II) for the municipal stormwater permit program.

In Washington, all ground water is protected equally under RCW 90.48 and Chapter 173-200 WAC Water Quality Standards for Ground Waters of the State of Washington. Ecology has published "Guidance for UIC Wells that Manage Stormwater" to provide technical guidance for stormwater wells regulated under the Underground Injection Control (UIC) program.

In July 1999, the Department of Ecology issued the first Phase 1 NPDES Municipal Stormwater Permit (permit) to Clark County. Ecology issued the current permit in January 2007, and it became effective February 16, 2007. The permit authorizes Clark County to discharge stormwater to waters of the state from its municipal separate storm sewers and includes several requirements that must be met by August 2008.[3] Failure to meet those requirements could entail the revocation of the permit, state enforcement action, or a third-party lawsuit. Any revisions of the ordinance governing stormwater and erosion control on development and building sites would be intended to meet the permit's provisions and benefit public health and safety. Detailed information regarding the NPDES permit can be found at http://www.ecy.wa.gov/programs/wq/stormwater/index.html.

SIGNIFICANT ISSUES & RECOMMENDATIONS

Throughout its meeting schedule, the SAC dealt with overarching policy issues and requirements as the technical staff worked through succeeding iterations of code changes. Therefore, this executive summary reviews SAC discussions and suggested changes as they shifted in successive meetings.

Exceptions & Exemptions

While the current county code exempts the creation of impervious surfaces (buildings and paved surfaces) associated with an agricultural operation from having to conform to the stormwater and erosion control code, Ecology does not. The SAC discussed how agriculture and commercial agriculture are defined (or not defined) by the code and by Ecology, and how agriculture would be affected by proposed changes. The SAC asked for compatibility between Natural Resources Conservation Service (NRCS) and new stormwater requirements for agriculture, and staff commented that the kinds of best management practices (BMPs) required on agricultural property were being examined. The goal is to develop guidelines specific to agricultural sites where work can be done by the farmer without hiring an engineer.

The committee also discussed how the change in the law would affect lots and plats in rural areas. For instance, the current stormwater code would exempt a 5,000-sf single-family home on

[3] See NPDES Permit Appendix 1, p. 12, and Washington State Department of Ecology Stormwater Management Manual for Western Washington, 2005, Volume 1, p. 2-15, referred to hereafter as Ecology manual.

an existing 1-acre lot in a rural area, but Ecology may not. The committee also discussed whether the changes should affect previously permitted lots and plats or only those permitted henceforth. Some SAC members at the committee's September 11 meeting thought the construction of single-family homes on rural lots should be exempted because of the cost of meeting the stormwater code for rural existing lots. Others thought that the exemption should not carry forward in light of new tools such as dispersion and LID techniques that could be used to address stormwater economically. Staff clarified that residential lots are only vested along with a land use proposal if the vesting is noted on the face of the plat, or if there is information on file to show that stormwater was addressed in the overall development. Otherwise, residential lots are subject to the current stormwater code. In any case, vesting is only for 5 years.

Various SAC members indicated that they wanted to see road maintenance activities exempted.

For exemptions and exceptions, the SAC discussed:

- Aligning the agriculture exemption and rural single-family home exemption to Ecology's requirements while providing the tools needed to meet the requirements.
- Adding specific exemptions for road maintenance activities.

Thresholds & Minimum Requirements

County staff and SAC spent considerable time going over the thresholds within the Ecology manual as compared to the current code. Several examples were presented and discussed to illustrate the changes. In addition to project level thresholds, the additional thresholds contained with Minimum Requirements 6, 7, and 8 were discussed and more examples provided to illustrate the changes.

SAC members asked how road frontage and on-site work are considered; staff later responded that if the water comes together within a quarter-mile, then it would be considered together (a single TDA) for purposes of threshold determinations.

The SAC discussed the 40% rule, and whether any basins in Clark County might meet those requirements. Staff later determined that only limited areas draining directly to Vancouver Lake and possibly portions of the Burnt Bridge Creek basin might meet the conditions.

The SAC also discussed the possibility of large portions of the County historically being prairie rather than forest. Please see below for further discussion.

For thresholds, the SAC came to consensus on adopting Ecology's thresholds for the application of MRs 1-10 (see appendix C for a listing of the MRs). The following summarizes the changes from current code:

- Makes all new development subject to MR 2
- Eliminates 2,000 sf for urban threshold and 5,000 sf for rural
- Makes 7,000 sf (rather than 1 acre) of land-disturbing activity without creation or replacement of impervious surface subject to MRs 1-5
- Makes creating 2,000 sf or more of impervious surface subject to MRs 1-5

- Makes creating 5,000 sf or more of impervious surface subject to MRs 1-10
- Makes the conversion of ¾ of an acre or more of native vegetation to lawn or landscaped area, or the conversion of 2.5 acres of native vegetation to pasture subject to MRs 1-10

Redevelopment

The SAC discussed redevelopment thresholds and requirements at length. Although the base thresholds were not disputed, the common concern that all SAC members shared was to ensure that the code is reasonable in the requirements for redevelopment. The SAC members were concerned that the code not prevent redevelopment and thereby preclude gaining even some benefits from partial treatment of existing untreated surfaces.

The SAC and staff also discussed offsite mitigation, the purchase of mitigation credits, and some kind of credit for a situation in which impervious surface is actually reduced.

For redevelopment, the SAC came to consensus on:

- Adopting Ecology's basic thresholds for redevelopment.
- Setting area criteria for road projects.
- Using a percent of value for other projects.

Stop-Loss

The SAC discussed whether a stop-loss provision for redevelopment should be included in the code and what that provision should be. Ecology intended the stop-loss provision to ensure that stormwater costs in regard to replaced impervious surfaces do not preclude redevelopment. King County proposed a criterion where the cost of the flow control facility to mitigate replaced impervious surfaces wound not exceed one-third of the valuation of the improvements.

SAC members discussed potential approaches: a dollar amount, a particular level of improvement, a proportion of the assessed value, or cost per acre. They also discussed providing incentives to redevelop. Members seemed to think one-third of a project budget was excessive, and preferred a blanket reduced standard rather than a waiver. They were more concerned with setting the measurable standard than with a dollar figure.

Staff later asked the SAC to consider a dollar figure that would trigger a different standard. SAC preferred simply setting a different standard for redevelopment regardless of how much money must be spent to meet it.

For stop-loss, the SAC came to consensus on:

- Setting a single standard for replaced impervious surfaces that provides a measurable improvement without regard to cost.

Low Impact Development

The county must allow low impact development (LID) techniques through non-structural preventive actions and source reduction approaches (e.g., pervious pavement). The SAC discussed how to approach LID in the update of the stormwater ordinance. The changes to the code would define LID, which generally involves minimizing how much impervious surface is created by a project

and using measures that minimize the disturbance of soils and vegetation. Common BMPs within LID projects include rain gardens, planters, pervious pavement, dispersion, amending the site soils, and reverse slope sidewalks.

The SAC discussed whether the techniques should be included in an LID manual or in an ordinance, and agreed that a manual would be preferable. It could be the single source for information on LID and could be updated frequently as techniques are updated or developed.

The committee discussed the question of ownership several times—whether facilities should be privately or publicly owned. Much of the discussion focused on maintenance, which in private facilities especially, may not be carried out properly. Some SAC members believe one standard should apply to all, others think that facilities should be public so that maintenance will be done, and still others believe that dues should be charged through CC&Rs for maintenance. The SAC discussed putting fees associated with LIDs into a trust that could be used to maintain the facilities and tailoring the fee to the BMP. Training for installation—and perhaps certification—were also discussed. Homeowner associations could have a self-reporting requirement with installation and maintenance information, as is used by public health for septic and sewer systems.

Later in the process, the SAC came to consensus and recommended that facilities for commercial and industrial properties be privately owned.

The SAC also recommended allowing the use of right-of-way for underground facilities, and that the code should include options in lieu of fencing facilities that are intended to be an amenity to the development.

For LID, the SAC came to consensus on:

- Instituting an LID manual.
- Educating the public about preserving LIDs through outreach efforts.
- Private ownership for facilities on commercial and industrial properties.
- Including options in the code for not fencing facilities intended to be an amenity.
- Adding rain barrels and green roofs to the LID list.

Use of Dedicated & Existing Rights-of-Way

Currently, all storm facilities (both underground and open air), must be located in a separate tract or easement. The current practice is based on real and perceived maintenance costs, access, and legal issues.

County maintenance staff clarified that underground infiltration systems located on tracts are often problematic. Access, power lines, and the proximity of trees and other vegetation make it difficult to access as compared to locating them under the paved road surface. In addition, staff rarely has to excavate these types of systems if they have been designed and constructed properly.

The legal concern stems from a case in which the local agency was held partially responsible for a failed drainage system installed within existing right-of-way. The use of right-of-way that will be dedicated as part of the development was not a legal concern.

For use of right-of-way for underground storm facilities, the SAC came to consensus on:

- Allowing the use of dedicated right-of-way for underground facilities within residential subdivisions.
- Allowing the use of existing right-of-way for linear systems that will not preclude future roadway improvements or other utility improvements such as sanitary sewer and potable water. This use should be restricted to stormwater from existing or proposed public infrastructure.

Flow Control & Forested Condition

The SAC discussed how meeting the new Ecology standards for flow control would increase the size of detention ponds as compared to the current code. The current stormwater code defines the pre-development condition as the ground cover that created the least stormwater runoff in the past 30 years. In the absence of basin studies, the Ecology manual defines the pre-development condition as native vegetation and soils that existed at a site prior to the influence of Euro-American settlement. Ecology assumes forested land cover unless other data can show otherwise.

Ecology does allow for highly urbanized drainage basins and historic prairie. Drainage basins containing more than 40% impervious surfaces in 1985 may use the 1985 ground cover rather than pre-settlement ground cover. Sites where reasonable data support the existence of prairie may use prairie as the pre-development land cover.

Ecology has also moved from a peak flow standard to a continuous model that uses 50 years of rainfall data. Some SAC members expressed concern about Ecology's stormwater modeling software, WWHM. They were concerned that the model is not calibrated for Clark County and that the 50 years of rainfall data were taken from the Portland airport rain gauge rather than sites within the county.

To illustrate the differences, staff provided examples of a residential site designed according to current practice, according to the Ecology manual, and finally by applying newly available LID techniques.

The illustrations showed that the end-of-the-pipe approach to stormwater would result in pond sizes that are two to five times larger under the new standard. The example showed that the continuous modeling tends to double pond sizes. For sites that would currently be controlled to a pre-development condition other than forest, the forested condition requirement can enlarge a pond three to five times as compared to the prior standard. It should be noted that these are generalized numbers and that specific sites will vary. For example, well-drained sites typically utilize underground infiltration systems.

The illustrations also showed that applying LID techniques could reduce the pond to sizes that are typical of what we see today or, in some cases, even smaller, depending on specific site conditions. Some sites may not be able to employ LID.

The SAC agreed that the continuous model (WWHM) is better for stormwater modeling. However, the forested condition seemed to be onerous and there was considerable concern about stalling development and especially redevelopment, where even some improvement is

far better than nothing at all. SAC members expressed concern about causing sprawl and the potential environmental impacts associated with it. The SAC also asked whether urbanized streams should be examined more. Most SAC members had monitoring and funding concerns as well.

SAC members discussed several proposals to provide an alternate standard:

- Perform basin studies
- Allow payment in lieu or "comply or pay-to-play"
- Determine the extent of historic prairie
- Establish tiered standard whereby difficult sites would have a different standard
- Utilize a lower flow control standard that better reflects the largely farmed areas within the urban area

Payment in lieu was discussed several times. Although it is a possible method to address compliance, it does have drawbacks. For a fee to be set, basin studies would need to be completed to identify the required projects that would mitigate the impacts being approved. The county takes on the risk for such a program. If, for some reason, a planned mitigation project cannot be built, the county would be liable to construct a potentially much more expensive mitigation. The SAC agreed that such a program might still have merit if tied to a completed basin study and a plan for funding and building the mitigation projects.

For flow control, the SAC came to consensus on:

- Developing a calibrated model for our area that uses local rainfall data.
- Pursuing basin planning to develop target flow rates appropriate for specific watersheds.
- Allowing facility designs to consider low infiltration rates and not restricting them to a minimum 8 inches per hour.
- Working through the SAC to develop incentives for redevelopment to offset the higher costs to meet the new standard (see below).

In regard to adopting the forested condition, the SAC did not reach consensus. All members did agree that where the forested condition is practical to achieve, it should be the standard. Most members felt it should be the standard in the absence of specific basin studies to demonstrate that a different standard is appropriate. Some members felt that the code needed to address those sites where the forested condition is not practical to achieve (i.e., steep slopes or high groundwater).

Historic Prairie

The SAC discussed the implications of Ecology's assumption that land is forested unless proven otherwise, while it is generally understood that portions of Clark County historically were prairie rather than forest. Staff presented three maps for prairie identification to the SAC.[4] Staff noted that

[4] The maps were independently produced by the University of Washington, the Habitat Institute, and DNR's Natural Heritage Program.

prairie is typically found where it is either too dry or too wet to support trees. Those areas typically correspond to what today would be either well-drained areas (high infiltration rates) or wetlands. In those cases, using historic prairie as the pre-development condition has little impact on the stormwater design.

Some SAC members wanted more clearly defined boundaries or lines. The SAC reached consensus on using the DNR map as an indicator, but staff was asked to do more work to determine how specific site work could support the map.

For historic prairie, the SAC came to consensus on:

- Using the DNR map as an indicator.

Incentives

The SAC brainstormed what the county could do to offset the financial impacts of the new requirements and developed a list of recommended incentives.

- Density bonus
- Density transfer (transfer of credits)
- Payment in lieu
- Use of neighborhood LID design to support road modification or other incentives
- Allow pervious pavement for neighborhood roads within LID projects
- Make sure the code is flexible to allow new technology
- Waive frontage improvement requirements under certain circumstances
- Tax incentive (clean water fee, property tax)
- Capital projects to create shovel-ready sites

Variances

The SAC discussed the variance process. Discussion resulted in consensus that variances need to stay general but that there needs to be an added process for technical variances.

The current variance process does not allow for a simplified process to approve technical variances that are easily reviewed by staff. The SAC recommended that a technical variance be added similar to the road modification process. This technical variance (also referred to as an adjustment or modification) is intended to address proposed alternatives to the specific standards in the code. The SAC refined the following list of potential technical variances:

- Conveyance system analysis and design
- Offsite analysis
- Materials
- Facility side slopes
- Easements
- Percent of facility made up of retaining wall

- Fencing requirements
- Varying from the standard detail
- Using LID BMPs not currently included in the Clark County Low Impact Development Manual

Any feasibility, economic, or other hardship variances will remain as they are today.

For variances, the SAC came to consensus on:

- Providing an administrative level variance.
- Providing a well-defined process.

Recommendation for Future Work

The SAC made the following recommendation for future work efforts to support the stormwater ordinance revisions:

- Basin studies (to demonstrate flow control targets)
- LID education and outreach
- Examination of long-term costs to implement this code
- Examination of the transportation ordinance in relation to LID
- Examination of other codes to determine where changes are needed to facilitate LID
- Development of a stormwater manual to facilitate future updates and simplify the code

Appendix A:
Stakeholder Advisory Committee Charter

Clark County Stormwater Ordinance Update
Stakeholder Advisory Committee Charge
Revised, September 2007

Purpose:

Clark County has established the Stakeholder Advisory Committee (SAC) to provide high-level review and guidance for the update of ordinances governing stormwater management in Clark County. These potential revisions and additions will benefit public health and safety and meet the provisions of the recently issued Department of Ecology (DOE) Phase 1 NPDES Municipal Stormwater Permit. The 12 members of the SAC were selected for their extensive knowledge of stakeholder issues and broad representation of community interests and access to both formal and informal stakeholder communications networks. SAC members will work as a group with Clark County Public Works and Community Development staff and the code update consultant to provide input on specific revisions of the existing stormwater ordinance.

Group Role and Responsibilities:

- Members will serve as high-level advisors to and as a sounding board for county decision-makers and project staff as the project develops.
- Members will be encouraged to interact directly with the community and their stakeholder constituencies, provide information, and bring questions and concerns back to the SAC and county staff for discussion and/or action.
- Members will be invited to join project staff at public meetings, open houses, and other occasions such as BOCC hearings or work sessions related to the stormwater ordinance update.

Basic Operating Procedures:

- The SAC will meet monthly to accomplish agreed-upon goals and objectives.
- The SAC may form subcommittees to work on specific tasks or conduct specific research in addition to scheduled meetings of the group as a whole.
- The project has a relatively compressed timeline and members are expected to attend scheduled meetings. A member may send a non-voting alternate if unable to attend, however, if a member is absent for two consecutive meetings without notification, or for three consecutive meetings with notification, that member may be replaced.
- The SAC will operate by consensus with no elected chair or other officers. A professional facilitator will lead the sessions.
- All SAC deliberations and activities will be summarized on the web page for the stormwater ordinance update on the Clark County web site.
- All meetings will be announced to the public in advance and open to public attendance and participation during a defined public comment agenda time.
- SAC members are free to speak on their own individual behalf to the press or officials in ways that advance and support the group process. Members may not appear to represent the whole group without prior agreement of the group.
- The SAC will dissolve at the end of the project or earlier if the county and members mutually decide its work is complete.

Appendix B:
Stakeholder Advisory Committee Members

Stakeholder Advisory Committee Members:

Bob Blakemore, ASCE Southwest Washington Branch

Dan Bodell, Development Manager, Washington State University

Tim Dean, Watershed Steward

John DiVittorio, Fish First

Eric Golemo, Development Engineering Advisory Board

James Howsley, Miller Nash LLP

Steven B. Madsen, Building Industry Association of Clark County

Don Moe, Clark County Clean Water Commission

Joel Rupley, Coordinator, Clark County Endangered Species Act Program

Doug Stienbarger, Washington State University Extension

Art Stubbs, Neighborhood Associations Council of Clark County

Appendix C:
Minimum Requirements

Minimum Requirements:

MR 1. Preparation of stormwater site plans

MR 2. Construction stormwater pollution prevention(SWPP)

MR 3. Source control of pollution

MR 4. Preservation of natural drainage systems and outfalls

MR 5. On-site stormwater management

MR 6. Runoff treatment

MR 7. Flow control

MR 8. Wetlands protection

MR 9. Basin/watershed planning

MR 10. Operation and maintenance

Optional Guidance

OG 1. Financial liability

OG 2. Off-site analysis and mitigation