Department of Ecology—Water Quality Program
Development of Low Impact Development (LID) Standards for the Municipal Stormwater General Permits

Technical Advisory Committee Meeting #4
March 18, 2010, 10:00am–3:00pm
Ecology Headquarters – Lacey Room ROA-36

Please review the attached questions prior to the meeting and be prepared to discuss your responses. The agenda below refers you to a description of the topic and specific questions that correlate to that discussion.

10:00 Introductions and Review of Agenda

10:15 Regulatory Approach

Review of Materials and Discussion of Key Questions 1 through 7. See attached.

12:00 Public Input

12:30 Brief Break to Grab Lunch. - It is recommended that everyone bring a sack lunch.

12:45 Checklist and Feasibility

Discussion of Key Questions 8 through 12. See attached.

1:15 Break

1:30 Basin Planning

Discussion of Key Questions 13 through 15. See attached.

2:30 Public Input

2:45 Prep for first Joint Meeting

3:00 Adjourn

Location: Department of Ecology Headquarters in Lacey
300 Desmond Drive SE
Lacey, WA 98503
http://www.ecy.wa.gov/directory_hq.html

Parking at Ecology: *We apologize that Ecology's parking for visitors is extremely limited. Please plan to carpool to the meeting if possible. When you arrive at Ecology, if there is no visitor parking available, you may park across the field behind Sawyer Hall (about a 5 minute walk to Ecology building – to get there go straight at the top of the drive). Another alternative is to park in the Top Food shopping center lot across Martin Way and walk across to Ecology. Please use the main entrance and sign in at the front desk to be directed to the meeting room: ROA-36. Thank you.*

IAC Meetings		TAC Meetings	
15-Apr-10	Federal Way City Hall chambers	18-Mar-10	Ecology - Lacey

Joint Meetings	
12-May-10	GA Building - Olympia
23-Jun-10	**Tukwila Community Center**

Discussion Topics and Key Questions
TAC Meeting # 4 – 3/18/10

REGULATORY APPROACH

Type of Development	Saturated Hydraulic Conductivity >0.1"/hr	Saturated Hydraulic Conductivity ≤ 0.1"/hr
New Development and Redevelopment[1] – Urban (in UGA or Census Urban Area CUA) Based on size of project site[2]		
Small projects below thresholds for flow control & treatment (>2,000 sq ft impervious surface or >7,000 sq ft land disturbance)	Expand Minimum Requirement #5 for onsite sw mgmt to add techniques via checklist	Expand Minimum Requirement #5 for onsite sw mgmt to add techniques via checklist
Small projects above thresholds for flow control & treatment (≥ 5,000 sq ft impervious surface or ≥ ¾ acre land disturbance)	Checklist	Checklist
Large projects ≥ 5 acres	Performance standard with off-ramps	Checklist
New Development – outside current UGA/ CUA Based on size of site[3]		
Small lots < 5 acres	Checklist	Checklist
Large lots ≥ 5 acres	Performance standard	Performance standard
Redevelopment outside UGA/CUA Based on size of site		

[1] Redevelopment – On a site that is already substantially developed (i.e., has 35% or more of existing impervious surface coverage), the creation or addition of impervious surfaces; the expansion of a building footprint or addition or replacement of a structure; structural development including construction, installation or expansion of a building or other structure; replacement of impervious surface that is not part of a routine maintenance activity, and land disturbing activities.

[2] Project site – That portion of a property, properties, or right-of-way subject to land disturbing activities, new impervious surfaces, or replaced impervious surfaces.

[3] Site – The area within the legal boundaries of a parcel or parcels of land that is (are) subject to new development or redevelopment. For road projects, the length of the project site and the right-of-way boundaries define the site.

Small lots <5 acres	Checklist	Checklist
Large lots >5 acres	Performance standard	Checklist

Discussion Questions

1. What feedback do you have on Ecology's proposal as outlined in the table above? Is it appropriate to treat development outside the UGA different from inside the UGA?

2. Is 5 acres a reasonable threshold between urban projects that could be regulated by a performance standard and urban projects that could use the standardized evaluation/checklist approach?

3. Ecology does not consider a low saturated hydraulic conductivity to be the basis for a reprieve from requirements to use LID techniques. However, low saturated hydraulic conductivity may be a reason for a reprieve from requiring a site to meet a specific performance standard in urban areas. Should Ecology establish a saturated hydraulic conductivity below which only the checklist approach is used?

    a. Is 0.1 inches per hour an appropriate saturated hydraulic conductivity for that distinction?
    b. For implementation, should Ecology establish standardized field procedures for determining and reporting saturated hydraulic conductivities? Note that in the proposal, the regulatory approach (performance standard or a checklist) for a project depends upon its size and the site's saturated hydraulic conductivity. What should be included in those field procedures (e.g., type of acceptable tests, number of tests)?

4. Would it be advisable to have the same regulatory approach for a development type and size (e.g., redevelopment > 5 acres inside UGA) regardless of the site saturated hydraulic conductivity?

5. Performance Standard applicable to projects where saturated hydraulic conductivity is > 0.1 inches per hour: Post- development annual runoff volume must not exceed the historic annual runoff volume, and post-development flow durations must not exceed historic flow durations for flow rates that occur less than 10% of the time.
    a. Is this an appropriate hydrologic performance standard for low impact development?
    b. What alternative performance standards would you like to discuss?

6. Outside UGA's, larger sites should generally have enough room and LID options that they should be able to reach the performance standard of matching historic forested conditions for volume and flow durations up to the 10th percentile. Streams outside of UGA's generally have good to excellent habitat conditions that must be maintained. Therefore, there would be no off-ramps except through the local variance/exception process which should be rarely invoked. Do you agree with this approach outside of UGA's? To prevent expanding the geographic area that would not have to meet a performance standard – i.e., through expansion of Urban Growth Areas - the lands subject to the performance standard will always be subject to that standard regardless of UGA expansion or land subdivision.

7. Retaining a high percentage of native or existing vegetation within the drainage basin of a creek appears to be necessary to prevent degradation of water quality and habitat. Therefore, when setting a performance standard, and when developing a checklist approach, should there be a minimum targets for preservation of existing or native vegetation target(s)? For example:

4 du/acre	**4 – 6 du/acre**	**6 – 8 du/acre**	**Multi-family**	**Commercial**
40% native veg	30% native veg	25% native veg	25% native veg	15% native veg

CHECKLIST AND FEASIBILITY

8. For urban new development, should the checklist for the small projects below the thresholds for treatment & flow control be different than the checklist for the small projects above the thresholds (greater than 5,000 sq. ft. impervious or, ¾ acres land disturbance, but less than 5 acres)?

9. In establishing the checklist approach, should Ecology publish a checklist which:
    a. the local government must adopt or develop an equivalent to;
    b. the local governments are not required to use, but they must adopt a similar site analysis method; or
    c. is put forth only as an example, with local governments given complete discretion regarding what to include in their checklist?

10. What kinds of information should be collected about the checklists to use in improving them over time?

11. Are there final comments on the APWA Matrix?

12. Except in situations that seem to be generally recognized as precluding LID techniques that rely on infiltration, Ecology considers rain gardens, partial dispersion techniques, and pervious pavements to be known, available and reasonable. Do you agree?

BASIN PLANNING

The PCHB said:

"*Ecology has identified the particular importance of basin planning in areas which are relatively undeveloped where new development is occurring. The Board concludes that city and county permittees should identify such areas where potential basin planning would assist in reducing the harmful impacts of stormwater discharges upon aquatic resources. This will assist Ecology in readying for the next round of permits when such requirements may be necessary to meet the state AKART standard, and, under federal law, to reduce pollutants in municipal stormwater to MEP.*"

Discussion Questions

13. What does this mean in terms of where basin planning should be focused? Should the permit require basin planning, and/or other actions, for areas planned for significant increases in urban development and currently have relatively high quality stream resources?

14. Current recommendations of scientists is that to protect high quality water resources, the following are necessary: 1) preserve a significant percentage of a basin in native vegetation 2) minimize effective impervious area, 3) provide high quality riparian zones along creeks and wetlands of all sizes 4) prohibit development on steep or unstable slopes, and 5) provide detention and water quality treatment facilities for any stormwater discharges. Should the permits require local governments with identified high quality water resources to conduct basin planning that develops a strategy to achieve the above qualities, and subsequent implementation of the strategy through land use planning, ordinance and rule updating?

    <u>Example:</u>
    Municipalities whose permit coverage area includes part of a basin which has less than 10% total impervious area must demonstrate how their comprehensive land use plan, site development ordinances and rules (including stormwater-related requirements), and critical areas requirements will protect the beneficial uses of the stream segments within the basin. Municipalities which share subject basins shall demonstrate that their enforceable plans, ordinances, and rules, when considered as a package, achieve the Clean Water Act requirement to preserve, maintain, and restore the beneficial uses of surface waters within those basins.

15. What is an appropriate timeline for conducting this type of analysis?