

## Discussion Topics and Key Questions TAC Meeting #3

### HYDROLOGIC PERFORMANCE STANDARD

Please refer to the SVR summary of modeling results.

#### Volume vs Flow

##### KEY QUESTIONS:

1. Do you prefer a volume-based performance standard or a flow duration-based performance standard?

#### Numeric Standards

Volume examples:

- a) Match the volume of runoff produced by the historic condition
- b) Increase the volume of runoff produced by the historic condition by no more than X%

Duration of Flow Rates examples:

- a) Match the historic flow duration curve for all flows
- b) Match the flow duration curve for flows in the range of 10% exceedance to 1% exceedance
- c) In the range of 10% exceedance to 1% exceedance, do not allow durations to increase by more than X% over the historic condition.

##### KEY QUESTIONS:

2. In light of the computer modeling results, what numeric standard do you prefer?
3. Is there a lower limiting site infiltration rate below which achievement of the numeric standard should not apply? For instance, the lower the onsite infiltration rate, the harder it will be to meet a hydrologic performance standard.

#### Redevelopment Projects

Example of a mandated evaluation process: Seattle's Director's Rule 19-2009

Note that adherence to a process does not guarantee a specific hydrologic outcome. It does guarantee that all sites use the same approach and criteria for determining what LID techniques can be done at redevelopment sites.

Example of a variable performance standard:

Runoff from all new impervious and pervious surfaces must meet the same LID standard as new development projects. If the cost of improvements at the site exceeds 50% of the value of the existing site improvements, any replaced impervious and pervious surfaces must also meet the LID standard.

4. **KEY QUESTIONS: Redevelopment Standard:** Given the range in opportunities for improvements in stormwater management at a site depending upon the extent of redevelopment, the existing on-site topography, and the surrounding stormwater infrastructure, do you agree that a mandated evaluation process intended to determine the extent to which LID should/can be used in a project is the reasonable approach? Would you prefer a variable hydrologic performance standard that could be tied to one or more of the factors listed above?
5. What would you prefer within non flow-controlled settings (eg: drainage areas that discharge directly to marine waters)?

## **FEASIBILITY CONSTRAINTS**

The PCHB Ruling requires a permitting process that requires LID for stormwater management “where feasible”. The proposed Permit Framework allows for off-ramps and other avenues of compliance when preferred LID techniques are determined infeasible. The following questions are intended to facilitate discussion on what should or shouldn’t be allowed as a feasibility-based off ramp and what impact that has on additional LID requirements.

### **Engineering Feasibility**

6. Review the text from the “Guidance to Help Local Governments Determine When Low Impact Development Practices Should Not Be Required”, (attached). Do you agree with the criteria presented for which the use of the identified LID technique should not be required?
7. Using the APWA Matrix, Do you agree with the site conditions under which specific LID techniques should not be required? These are areas identified with shades of red.

### **Competing Needs Feasibility**

8. Do you agree that there are times in which competing needs for space (i.e., not related to stormwater) can make an LID technique or principle not feasible? Examples identified in the APWA text include: pedestrian and vehicle mobility, and housing unit demands. Examples identified by the November edition of the proposed Seattle Public Utilities Director’s rule (2009-007) include: historical designation, pedestrian access, usable open space.
9. Should the decision about deferring compliance with stormwater LID requirements due to a competing demand be left to the local government on a case-by-case

basis? Or, should there be an attempt made to develop more defined guidance for instances where deferring to another demand is acceptable?

### **Cost Feasibility**

10. Relative to new development, do you agree/disagree with the APWA paper that cost is only a factor for vegetated roofs and rainwater collection systems? Why or why not?
11. If you agree with the APWA paper, do you have a suggestion for a cost threshold above which vegetated roofs and rain collection systems would be considered infeasible or unreasonable?
12. Relative to redevelopment: Do you agree that cost should routinely be considered in redevelopment projects on the premise that we want to encourage redevelopment in preference to new development, but we still want to achieve some improvement in stormwater management at these sites?
13. Do you have a suggestion for a generic cost threshold for limiting the application of LID at redevelopment sites? e.g., the cost of implementing LID strategies should not exceed 10% of the total redevelopment project cost.
14. Should the decision about deferring compliance with stormwater LID requirements due to a cost feasibility be left to the local government on a case-by-case basis? Or, should there be an attempt made to develop more defined state-wide guidance?

### **General**

15. Should any type of feasibility constraints be considered for new greenfields development? Why or why not?

### **IMPLEMENTATION BARRIERS**

This discussion will outline the range of implementation barriers members have experienced and others that can be anticipated. Refer to the Herrera memo to the APWA Managers Meeting, May 15, 2009.

#### **KEY QUESTIONS:**

16. What are the key barriers to implementing LID, and what are their implications to this permit process?
17. What are recommended approaches to removing those barriers?