CITY OF OLYMPIA COMMENTS REGARDING PHASE II GENERAL PERMIT - June 17, 2011

Western Washington Phase II Municipal Stormwater General Permit

Preliminary Draft Language

	Document					Comment Type			
Comment Number	Draft Language	Appendix I	**Page**	**Comment**	**Reviewer**	General	LID	Watershed Planning	Monitoring
				General					
1		X	6	"UGA" should be added to the definitions	Eric Christensen	X			
2		X	3	In the definition of Effective Impervious Surface, clarification of what "all stormwater" means in the statement "if continuous runoff modeling indicates that all stormwater is infiltrated" is needed.	Eric Christensen	X			
				LID					
3		X	14	In 4.1, shouldn't converted pervious surface also be minimized? It seems a feasibility criteria should also be provided in Section 8 to for minimize native vegetation loss.	Eric Christensen		X		
4		X	24	In the statement "Bioretention BMPs should comprise at least 7.5% of the area of residential developments and 4% of the area of commercial developments", is the percentage based on lot size or area disturbed? What is the basis for the bioretention coverage areas? Does the percentage include only platted lots or also right-of-way? 7.5% of a residential site is significant.	Eric Christensen		X		
5		X	24	In the statement "Bioretention BMPs should comprise at least 7.5% of the area of residential developments and 4% of the area of commercial developments", there is no explanation of why the coverage is greater for residential project rather than commercial projects where water quality would be expected to be worse.	Eric Christensen		X		
6		X	24	Current models suggest the LID performance standard may not be feasible without LID techniques. For projects located in high groundwater areas or wellhead protection areas where bioretention and permeable pavements are infeasible, the performance standard likely cannot be achieved. It seems that the current flow control standards (matching 50% of the 2-year peak flow through the full 50-year peak flow) should therefore also be included in the "Mandatory List".	Eric Christensen		X		
7		X	23	In the table under Project Type and Location, it would be much less confusing if the category of "New development or redevelopment inside the UGA regardless of parcel size" were added.	Eric Christensen		X		
8		X	22	In response to Ecology note: Permeable pavements should be optional for projects required to only meet Minimum Requirements #1 through #5.	Eric Christensen		X		
9		X	22, 23	For development of less than 5,000 SF of hard surface, standardized and simple tests for determining infiltration rates (rather than those outlined in the soil suitability criteria) needs to be established (particularly for residential lots).	Eric Christensen		X		
10		X	23	In response to Ecology note: For projects resulting in less than 10,000 square feet of new or replaced impervious surface, Ecology should allow local governments to accept LID performance standard compliance as an option to the specific BMPs.	Eric Christensen		X		
11		X	22, 23, 24	Roof downspout, dispersion and soil quality are all acceptable BMPs. These LIDs techniques are already a requirement within the City of Olympia.	Eric Christensen		X		
12		X	23, 24	Bioretention facilities and permeable pavements have significantly higher maintenance costs than conventional stormwater management facilities. In Olympia, property owners are expected to maintain landscaping along street frontages. As has been demonstrated in Seattle, private maintenance of bioretention facilities within the right-of-way is haphazard.	Eric Christensen		x		
13		X	22, 23, 24	It seems infiltration below pavement (mandatory list) with proper engineering should also be an acceptable BMP for development of less than 10,000 square feet.	Eric Christensen		X		
14		X	22, 23, 24	Permeable pavements are rapidly improving, but long term durability with under pavement infiltration has not been proven regionally in till soils and high groundwater. If permeable pavements are to be mandated, standard specifications for porous asphalt and permeable concrete (mixes, aggregates, etc.) need to be established.	Eric Christensen		X		
15		X	24	The stormwater benefits (water quality and flow control) of green roofs is only marginal, particularly when weighed against the cost. Green roofs should be eliminated from the mandatory list. Roof downspout control BMPs should be sufficient.	Eric Christensen		X		
16		X	35	Consideration should be given to an infeasibility criteria for bioretention facilitie with underdrains that discharge directly to marine waters with deficient dissolved oxygen based on effluent nitrogen concentrations. (Refer to Davis etal 2007 and Hunt etal 2006)	Eric Christensen		X		

17		X	35	It is assumed that the infeasibility criteria for roof downspout controls outlined in the BMPs (specifically soil and setback requirements) apply to the LID requirements.	Eric Christensen		X		
18		X	35	Ecology should establish minimum setback requirements for bioretention BMPs from structures. At a minimum, these should be similar to the downspout control BMPs. Relying on local setback requirements could have adverse results.	Eric Christensen		X		
19		X	36	In response to Ecology note: Ecology has requested input regarding a minimal initial hydraulic conductivity. The design infiltration rate rather than the hydraulic conductivity is a better parameter for evaluating bioretention infeasibility. The Low Impact	Eric Christensen		X		
20		X	36	In response to Ecology note: Ecology has requested input regarding a basis for an infeasibility decisions concerning particular road categories. Initially, permeable pavements should only be mandated for public and private walks, driveways, patios, plazas, sports/play courts, and parking lots. Use of permeable pavements within public right-of-ways should be limited to sidewalks, parking lanes, bike lanes and alleys. Use of infiltration beneath impervious pavements would be acceptable within public right-of-ways.	Eric Christensen		X		
21		X	37	In response to Ecology note: Ecology has requested input regarding minimal saturated hydraulic conductivity values below which permeable pavements would be considered infeasible. Again, the design infiltration rate rather than the hydraulic conductivity may be a better parameter for evaluating permeable pavement infeasibility. Because of varying regional precipitation, perhaps a better measure would be to require a maximum underpavement reservoir depth of 2 feet, with additional treatment and flow control to be achieved by conventional means.	Eric Christensen		X		
22		X	38	In response to Ecology note: Ecology has requested input concerning types of competing needs that can be considered as defensible reasons to forego use of on-site management BMPs. It seems there should be an exemption for high-density downtown developments.	Eric Christensen		X		
23	X			It would help if the LID requirements were be phased (large developments first, followed by smaller thresholds) to allow designers, contractors and vendors to come up to speed.	Eric Christensen		X		
24		X	22,24	Doesn't appear to be a definition of "single family residential projects". Is this term meant to include townhomes?	Laura Keehan		X		
25		X	24	Bioretention sizing refers to "residential developments" and "commercial developments", under which category does multifamily fall?	Laura Keehan		X		
26		X	22,23,24	What is the basis for this requirement when a thorough evaluation and published results of test cases for permeable/porous pavements is not complete/compiled?	Randy Wesselman		X		
27		X	22,23,24	Completion of a cost/benefit analysis needs to be completed to understand the cost implications of using permeable pavements.	Randy Wesselman		X		
28		X	22,23,24	In response "Maintenance: 1. Paving" - Permeable asphalt pavement streets will not work for the City's Least Cost Strategy (LCS) for paving. The LCS allows for the repair of pavements when they are in relatively good condition, instead of waiting until the pavement has large cracks and potholes. A pavement condition with a fair or better rating represents the least cost rehabilitation opportunity. Pavements with a poor rating indicate the likelihood of the need for costly structural repair. Permeable asphalt pavement would most likely be allowed to deteriorate to a point requiring the complete removal of the existing pavement and new permeable pavement installed. The rock gallery below the pavement will also need to be evaluated to insure it is not plugged. The use of permeable pavement will eliminate the use of use chip seal or asphalt overlays for pavement rehabilitation/preservation on streets with permeable pavement. These types of pavement preservation treatments are not permeable. The inability to use these pavement preservation treatments will have a significant negative budgetary impact. Fewer lane miles of pavements could be repaired each year due to the need for more expensive pavement removal and replacement. The overall pavement system rating would decline unless additional revenue sources are secured to offset the increased pavement rehabilitation costs.	Randy Wesselman		X		
29		X	22,23,24	In response to "Maintenance: 2. Utility installation" - It is likely the installation of utilities in new streets will require a higher level of oversight/installation standard and have potential cost implications due to the way fill is placed around utilities such as sewer and water. The installation of utilities in a new street after it is constructed will be more difficult and costly due to the restoration required after the installation. Trenches may have a tendency to slough-in and require a wider trench width and restoration. It is unlikely that porous pavement will be readily available for the trench patch. Crews repairing a utility will likely experience these same issues.	Randy Wesselman		X		
30		X	22,23,24	In response to "Street Construction: 1. Cost" - Cost of construction will potentially increase. Will the cost of permeable pavement and under street rock gallery be of equal or less cost than purchasing property and constructing a storm water pond? Are there substantial benefits for using permeable pavement instead of storm water ponds?	Randy Wesselman		X		
31		X	22,23,24	In response to "Street Construction: 2. Strength" - The design standards for streets using permeable pavement will need to be developed to insure the structural integrity of the new street section. The cost implications are unknown at this time.	Randy Wesselman		X		

32		X	22,23,24	In response to "Street Construction: 3. Turning at Intersections" - The City's experience with permeable pavement in parking lanes indicates that turning tires cause the pavement surface to ravel. The City is concerned that permeable asphalt pavements in intersections would prematurely deteriorate and create long-term maintenance problems. Permeable pavement in intersections may not be advisable.	Randy Wesselman		X		
33		X	22,23,24	In response to "Sidewalks" - The City supports the use of permeable concrete for City constructed sidewalks where conditions are suitable for using this type of concrete.	Randy Wesselman		X		
				Watershed Planning					
34	X		8,9	The explanatory notes indicate the planned land use action impacts would be cumulative. However, the permit language does not make this clear.	Eric Christensen			X	
35	X		9	Despite the footnote, the definition of a watershed is not clear. Does a watershed stop at a jurisdictional boundary or is in multi-jurisdictional? Would a 2 square mile basin tributary to a larger basin be a watershed? Where are the boundaries of a marine watershed?	Eric Christensen			X	
36	X		9	"Measurable targets established to protect the water quality and aquatic habitat of the watershed" is ambiguous. Verification of compliance with water quality standards is manageable, but reduction of chemical loading likely is not. Years of local ambient monitoring data indicate concentrations are not consistent and only real-time monitoring would provide an accurate picture of water quality direct indicators.	Eric Christensen			X	
37	X		9	As the explanatory notes indicate, water quality modeling tools are are not widely used. It is difficult to comment on analysis requirements when the methodologies are not established and those that are suggested are unproven. Evidence of calibration and verification of the USEPA's SUSTAIN model should be provided before it is suggested as an analysis tool.	Eric Christensen			X	
38	X		9	After a city reaches a cumulative expansion of 81 acres, then at what point is the next analysis triggered? We would suggest adding a provision that specifies a time frame, such as over a five year period.	Todd Stamm			X	
39	X		9	Can there be an exemption for annexations where city zoning mirrors county zoning and there is effectively no change in zoning only in jurisdiction?	Todd Stamm			X	
40	X		9	g.ii.d requires a statement of "social, environmental, and economic benefits". We are unclear about what the expectation for social benefits would be. Environmental benefits are already covered in the SEPA process. Consider removing.	Todd Stamm			X	
41	X		8,9	The new requirements for watershed planning may create a barrier to annexation and UGA growth and have the unintended consequence of promoting growth outside the UGA and incorporated areas.	Laura Keehan			X	
42	X		9	The permit language in 4.g.i is difficult to interpret without footnote 4. Perhaps a definition of "Planned Land Use Action" should be included for clarity.	Laura Keehan			X	
43	X		9,10	4.g.iii.b- for how long would we be expected to track progress toward meeting measurable targets?	Laura Keehan			X	
44	X		8	Regarding watershed scale stormwater planning and impacts to hydrology and water quality. Specific criteria for impacts would need to be defined. There are standards for water quality standards to measure against but limited guidance for hydrology (flow). Baseline values will need to be collected.	Michelle Stevie			X	
45	X		9	For g. ii (a), baselines need to be collected before predictive modeling could occur.	Michelle Stevie			X	
46	X		9	For g. ii. C: measurable targets, who would establish measurable targets? Does aquatic habitat include both fresh and marine waters?	Michelle Stevie			X	
				Monitoring					
47	X		15	The Cities of Lacey, Olympia and Tumwater have an interlocal monitoring agreement with Thurston County to perfom monitoring of the majority of regional streams. With the exception of total nitrogen, all water quality index parameters are already being monitored. With the addition of total nitrogen analyses and sediment sampling, the established regional monitoring program would be equivalent to, but more extensive than the proposed RSMP at a comparable cost. The preference would therefore be to make the status and trends (rather than effectiveness) monitoring portion of the RSMP optional.	Eric Christensen				X
48	X		12	If the RSMP is adopted, will Ecology take on the responsibilities outlined in S3.B.2?	Eric Christensen				X
49	X		11,12	If a regional monitoring program is required by the permit, language in S3 should be modified to relieve permittees of the responsibility for permit compliance if another entity fails to implement those permit conditions.	Laura Keehan				X
50	X		12	Regional Stormwater Monitoring Program. When would the RSMP be developed between the City and EYC? In regards to payments, how would the money be spent, what are the deliverables? It may be advantagous to opt out, depending on deliverables and cost. Who is developing and has an effectiveness monitoring component been developed?	Michelle Stevie				X