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February 3, 2012

Harriet Beale  
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Water Quality Program  
PO Box 47696  
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**SUBJECT: Comments on the Proposed 2012 Western Washington Phase II Municipal Stormwater Permit and its Associated Fact Sheet**

Dear Ms. Beale:

Thank you for the opportunity to submit comments on the proposed 2012 Draft of the Western Washington Phase II Municipal Stormwater Permit.

The jurisdictions covered by this permit are very diverse, including their soils, growth patterns and political nature. Cowlitz County is one of the few jurisdictions that is rural in nature, does not incorporate an Urban Growth Boundary, and has a majority of its urbanized area behind levees within historic floodplains. We believe Cowlitz County is rather unique in its approach and ability to meet the requirements of the Clean Water Act.

Cowlitz County has provided specific comments regarding our concerns to the **Permit** as follows.

**Section S5.A.1, Page 16, Line 34  
SWMP Acronym Definition**

The permit discusses the “Permittee’s SWMP” before the SWMP acronym is defined. “At a minimum the Permittee’s SWMP shall be implemented...”

SWMP was previously defined in the first paragraph of S5.A. The definition has been stricken out to remove the redundancy with the SWMP definition located in the *Definitions and Acronyms* section of the permit. The *Definitions and Acronyms* section of the permit defines ‘Stormwater Management Program (SWMP)’, on page 80, but does not define SWMP.

We recommend defining the acronym SWMP within the permit utilizing the language “At a minimum the Permittee’s [Stormwater Management Program](#) (SWMP) shall be implemented...”

**Section S5.B, Page 18, Line 21**  
**Meeting MEP and AKART**

The permit states that it is the applicants' responsibility to make sure they meet maximum extent practicable (MEP) and all known, available, and reasonable methods of prevention, control and treatment (AKART). "The SWMP shall be designed to reduce the discharge of pollutants from regulated small MS4s to the maximum extent practicable (MEP), meet state AKART requirements, and protect water quality."

The permit issued to the phase II permittees is a prescriptive permit with detailed requirements for the SWMP. It should not be the responsibility of the permittees to meet MEP and AKART requirements. This section allows for third parties to file lawsuits alleging a permittee's SWMP do not meet MEP and AKART requirements, even though they have met all requirements from Ecology and both the permittee and Ecology agree they are in compliance.

We recommend revising this section to state that meeting the SWMP requirements set forth in the permit in accordance with Ecology's approval also means that MEP and AKART are met. "~~The SWMP shall be designed to reduce the discharge of pollutants from regulated small MS4s to the~~in accordance with the permit requirements as identified in section S5. SWMP's that meet the requirements of this permit are considered to have met maximum extent practicable (MEP); ~~and meet~~ state AKART requirements, and protect water quality."

**Section S5.C.1.c, Page 20, Line 15**  
**Short Timeline**

The deadline to use the survey results to direct education and outreach resources is too close to the deadline to begin measuring target audiences. "No later than February 2, 2016, the resulting measurements shall be used to direct education and outreach resources most effectively..."

Our experience in the first permit with surveying our target audiences is that it takes a minimum two months to receive the results. Once the results are received, they have to be interpreted and analyzed to develop guides to direct our education and outreach sources most effectively. Then the information has to be incorporated into the existing plan including adoption by all the relevant parties. For Cowlitz County, this will include two separate school boards, two separate city councils, the County Commissioners and any other organization that is included in Cowlitz County's education and outreach. The required timeline will likely extend past a year and in the case of a school district, wouldn't be implemented until the following September at the earliest.

We recommend extending the date for using the resulting measurements to July 2, 2016. "No later than ~~February~~July 2, 2016, the resulting measurements shall be used to direct education and outreach resources most effectively..."

**Section S5. C.5.a, Page 35, Line 29**  
**Congested Timeline**

The deadline proposed to update maintenance standards does not fit well with other timelines throughout the permit. The permit states, "No later than December 31, 2015, each Permittee shall update maintenance standards as necessary to meet the requirements of this section."

In reviewing the deadlines in a timeline format (see attachment A), 2015 is a congested year. There appears to be an opportunity to move updating maintenance standards to 2016 to better balance workloads and deadlines.

Similarly, the BMPs required in any stormwater ordinance a jurisdiction passes, will be included in the maintenance standards being updated by that jurisdiction. Placing the same deadline on both the ordinance adoption and the maintenance standards could waste time when staff writes maintenance standards for BMPs that are removed from the ordinance during the public comment period.

We recommend moving the due date for maintenance standards to December 31, 2016. “No later than December 31, ~~2015~~2016, each Permittee shall update maintenance standards as necessary to meet the requirements of this section.”

### **Section S5.C.5.a, Page 35, Line 31**

#### **Unclear Section Reference**

The word ‘section’ in this paragraph is unclear as to what it is referencing. The end of the paragraph reads “...each permittee shall update maintenance standards as necessary to meet the requirements of this section.”

It appears that the term ‘section’ in this paragraph refers to S5.C.5 but it could be interpreted to refer to S5.C.5.a. The specific section to which this wording is referring should replace the non-specific ‘section’, to remove ambiguity.

We recommend defining the section in this paragraph. An example utilizing Cowlitz County’s interpretation of the section, would have this referenced as “...each permittee shall update maintenance standards as necessary to meet the requirements of ~~this~~ section S5.C.5.”

### **Definitions and Acronyms, Page 77, Line 36**

#### **Outfall Definition**

The definition of outfall has been altered to include ground water and open conveyances connecting two MS4s.

“**Outfall** means point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to surface or ground waters of the State. Outfall does not include pipes, tunnels, or other conveyances which connect segments of the same stream or other surface water and are used to convey primarily surface waters.”

The federal definition of outfall, from 40 CFR 122.26.b.9 is:

“*Outfall* means a *point source* as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.”

The federal definition of point source from 40 CFR 122.2 is:

*“Point source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff. (See §122.3).”*

These two federal definitions are important since this permit is required thru 40 CFR 122. The federal definitions should be adhered to as much as possible. These definitions do not include ground waters. To avoid interpretation conflicts, the definition of ‘outfall’ should not include ground water.

The second concern with the definition that is being proposed for ‘outfall’ is that the existing definition mimics the federal definition by including the statement “does not include open conveyances connecting two municipal separate storm sewer systems”. Removing this exclusion from the proposed definition while it is still located in the federal definition infers that open conveyances connecting two MS4s are now, in fact, outfalls in the State of Washington. This concern is magnified as it is being removed from the existing definition, signaling to the courts that this particular exclusion was purposefully considered separate from the other exclusions and is not valid anymore.

The definition of ‘point source’ incorporated into the proposed definition of ‘outfall’ raises another concern. The definition of ‘point source’ in 40 CFR 122.2 includes ditch, channel, tunnel, and conduit. It appears that this definition could be interpreted to be that the 70 miles of roadside conveyance ditches in Cowlitz County are now considered to be outfalls to ground waters of the State. Ecology currently regulates discharges to ground waters through the underground injection control (UIC) program. Overlapping the programs could place a large burden on jurisdictions and/or development that may not be able to be met. Portions of the UIC regulations would be broken if standards in the proposed permit are followed. Legal challenges from third party lawsuits can litigate permittees into a no win situation. An example is the permitting a bioretention facility with an under-drain and within one foot of the seasonal high water table. If the jurisdiction allows this, they are breaking UIC rules; if they don’t allow it (basing their denial on not enough separation from groundwater in accordance with UIC) they are in violation of the permit.

We recommend changing the proposed definition of ‘outfall’ to the federal definition found in 40 CFR 122.26.b.9. Remove the definition that ‘discharges to ground waters of the state are considered an outfall’. Existing UIC regulations will regulate discharges to ground waters.

### **Definitions and Acronyms, Page 78, Line 1 Permittee Undefined**

The definition of ‘Permittee’ is defined as “Permittee unless otherwise noted, the term “Permittee” includes Co-permittee, New Permittee, Secondary Permittee, and New Secondary Permittee.” The definition does not include a definition for ‘Permittee.’

The terms Co-permittee, New Permittee, Secondary Permittee, and New Secondary Permittee are all defined in the *Definitions and Acronyms* section as well as in section S1.D.1. The definition of ‘Permittee’ should be internally consistent with the definitions of other related terms.

We recommend adding the definition of ‘Permittee’ into the wording. “Permittee is a city, town, or county owning or operating a regulated small MS4 applying and receiving a permit as a single entity. Unless otherwise noted, the term “Permittee” includes Co-permittee, New Permittee, Secondary Permittee, and New Secondary Permittee.”

### **Definitions and Acronyms, Page 80, Line 3** **SMMWW Undefined**

SMMWW is used as an acronym for the Stormwater Management Manual of Western Washington (2012) in Appendix 1 of the permit but the acronym is not within the definition for the manual that reads “**Stormwater Management Manual for Western Washington** means...”

We recommend adding SMMWW to the definition for Stormwater Management Manual for Western Washington. “**Stormwater Management Manual for Western Washington (SMMWW)** means...”

### **Appendix 1, Section 2, Page 2 of 40, Line 26** **Inconsistent Reference to Stormwater Manual**

The reference for SMMWW changes from the permit to Appendix 1 and even within Appendix 1 itself. “*2012 Stormwater Management Manual for Western Washington*” vs. “Stormwater Management Manual for Western Washington (2012)” vs. “SMMWW”.

Consistency in how each manual is being referenced is important, where, as here, multiple manuals being referenced and required by the permit. The permit itself needs to be consistent in how it references the Stormwater Management Manual for Western Washington (2012). Another inconsistency related to this term is the use of *italics*. It is unclear when and why italics are used or not used in reference to the Stormwater Management Manual for Western Washington.

Since the title of the manual is ‘Stormwater Management Manual for Western Washington’ and the definition within the Definitions and Acronyms section of the permit is based on this title, we recommend utilizing ‘Stormwater Management Manual for Western Washington (2012)’. If SMMWW is proposed to be used, use that designation through the permit and Appendix 1.

### **Appendix 1, Section 2, Page 2 of 40, Line 38** **Unclear Definition of Converted Pervious Surface**

The definition of ‘Converted Pervious Surface’ is limited to sites with native vegetation that are being converted to Lawn or Pasture. “**Converted Pervious Surface** – The surfaces on a project site where native vegetation is converted to lawn or landscaped areas or where native vegetation is converted to pasture.”

The Fact Sheet discusses deleting the word “native” from the land conversion threshold. It appears the wording ‘native’ was removed from Figure 3.2, but should also be applied to the

definition of Converted Pervious Surface. We agree that the existing vegetation to be required should be native so as to trigger stormwater requirements. But merely removing the word native appears to open the issue up to possible negative impacts on developers. The economy in Cowlitz County is slowing and large estates that were previously professionally landscaped and maintained are being returned into pasture for livestock grazing.

We also foresee as the requirements for Low Impact Development (LID) are implemented and full dispersion is the first BMP to be utilized, road projects, as well as developments, will start to convert areas that were previously encumbered with land cover of lower permeability (landscaping being the most prevalent) to land cover with higher permeability (pasture or dispersion acceptable landcover). The term vegetation to pasture would create extraneous submittal requirements and expensive work that does not provide any benefit except that it is being required by the permit and Figure 3.2.

We recommend that the word 'native' be removed from the definition and that vegetation be more clearly defined. "***Converted Pervious Surface*** – The surfaces on a project site where ~~native~~ vegetation is converted to lawn or landscaped areas or where ~~native~~ vegetation is converted to pasture. When referencing Converted Pervious Surface, vegetation refers to pervious surfaces that have a higher permeability than the pervious surface being converted to."

#### **Appendix 1, Section 2, Page 6 of 40, Lines 9 & 18 Unclear "manual" Reference**

The definitions for "Source Control BMP" and "Threshold Discharge Area" reference "this manual." It is unclear what manual is being referenced or if the term 'manual' should be 'permit' in this context.

#### **Appendix 1, Figure 3.2, Page 9 of 40 Broad Definition of "Vegetation"**

The term 'vegetation' is undefined in Figure 3.2 and could have significant impacts that do not provide any benefit for stormwater. Figure 3.2 states "Does the project convert  $\frac{3}{4}$  acres or more of vegetation to lawn or landscaped areas, or convert 2.5 acres or more of vegetation to pasture?"

This issue is the same issue discussed above related to 'Converted Pervious Surface.' Please see previous discussion titles "Unclean Definition of Converted Pervious Surface".

We recommend defining vegetation to more clearly define the intent suggested in the Fact Sheet. "Does the project convert  $\frac{3}{4}$  acres or more of higher permeability vegetation to lawn or landscaped areas, or convert 2.5 acres or more of higher permeability vegetation to pasture?"

#### **Appendix 1, Section 3.2 & 3.3, Page 11 of 40 Low Development Thresholds**

The development thresholds called out in Appendix 1 are too low and will impact every development within Cowlitz County during this economic recession.

Thresholds should not be set to a point that replacing a 20' x 250' driveway (not uncommon in Cowlitz County) triggers all nine of the minimum requirements or that replacing a 40' x 50'

patio or shop (also not uncommon in Cowlitz County) triggers on-site stormwater management or permeable pavement. Cowlitz County currently uses the one acre of land disturbance 'Regulatory Threshold' for development and 7,000 square feet of land disturbance for minimum requirement #2, erosion control. Instituting the thresholds currently proposed in the permit will force homeowners to delay maintenance they would normally complete and places a large burden on jurisdictions to provide staff a variable work load.

Homeowners and jurisdictions that are looking to maintain their existing infrastructure (driveways, walkways, etc.) will be forced to delay their work due to additional costs required by the lower development thresholds. This will create additional pollution through sediment from broken roads and driveways which could have been prevented if they were maintained.

Additional projects means additional permits and review time required of the jurisdiction. Adding staff in the economic downturn will require additional fees to the developer. Jurisdictions budgets are not able to take on the additional financial burden of additional staff without additional income. Development review work is also a fluctuating scale, something smaller jurisdictions have trouble staffing for. The fluctuation can leave a staff member overworked for two months or with nothing to do for two months. Review times can be limited by state law and having the staff to meet those demands can be challenging in the tough economic times that we are in.

It is also unclear why the development thresholds are being proposed to be lowered. Has there been an opportunity to research the existing thresholds and determine if they are working or not? Existing requirements currently require developments to mitigate for more than their direct impact by requiring mitigation to pre-European (or forested) rates. Will lowering the thresholds and requiring onsite-stormwater management lead to any better results?

We recommend maintaining the 'Regulatory Threshold' of one acre of land disturbance in the proposed permit.

#### **Appendix 1, Section 4.2, Page 13 of 40, Line 34 Unclear Disturbance Definition**

The 'General Requirements' do not define what has to be disturbed to trigger a SWPPP. The permit reads "...or which disturb 7,000 sq. ft. or more."

The definition of disturbance could pertain to inside a structure or other disturbance activities that are not land disturbing activities.

We recommend adding a descriptor 'land' into the sentence. "...or which disturb 7,000 sq. ft. or more of land."

#### **Appendix 1, Section 4.2.13, Page 22 of 40, Line 19 Misnamed BMPs**

The title "Protect Low Impact Development BMPs" does not properly reference on-site stormwater management in the permit requirements.

The permit or manual does not contain any references to LID BMPs. LID BMPs are referred to as on-site stormwater management BMPs within the permit. The requirement to reference the BMPs in the Construction Stormwater Pollution Prevention Plan (SWPPP) should reference the appropriate BMPs as called out in both the permit and in the manual.

We recommend changing ‘Low Impact Development’ or ‘LID’ to On-site Stormwater Management. “Protect ~~Low Impact Development~~On-Site Stormwater Management BMPs”

**Appendix 1, Section 4.2.13.d, Page 22 of 40, Line 34**  
**Undefined LID Acronym**

The first time the LID acronym is used, it is not defined. The permit states, “... existing soils under LID facilities that have been excavated...”

LID is used as an acronym throughout Appendix 1. This is the first time LID is used outside of the Section 2, Definitions, and does not have a descriptor. The definition of LID uses the term Low Impact Development although it lists the acronym behind it.

We recommend adding the term Low Impact Development before LID in this paragraph. “... existing soils under Low Impact Development (LID) facilities that have been excavated...”

**Appendix 1, Section 4.5, Page 24 of 40, Lines 15 and 18**  
**LID Performance Standard is Non-Existent**

The third paragraph refers to an LID Performance Standard in two locations: “...may choose to demonstrate compliance with the LID Performance Standard in lieu...” and “They can choose to use Bioretention options as described in the *Stormwater Management Manual for Western Washington* (2012) to achieve the LID Performance Standard.”

Appendix 1 discusses a Low Impact Development Performance Standard. The requirement of Low Impact Development (LID) is a highly contentious topic and the Clean Water Act allows anybody to file a claim against a jurisdiction that they interpret does not follow the letter of the law. Internal consistency within the permit is critical to avoid any unnecessary claims. In no other place, within the permit, is the acronym for LID used when referring to the performance standard. In the table below, where an acronym might be deemed acceptable due to space constraints, it is in fact spelled out. When Low Impact Development Performance Standard is defined on page 25, it does not include the acronym within the term ‘Low Impact Development (LID) Performance Standard’.

We recommend fully spelling out ‘LID’ when referring to the performance standard: “...may choose to demonstrate compliance with the ~~LID~~Low Impact Development Performance Standard in lieu...” and “They can choose to use Bioretention options ad described in the *Stormwater Management Manual for Western Washington* (2012) to achieve the ~~LID~~Low Impact Development Performance Standard.”

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**Appendix 1, Section 4.5, Pages 25 of 40, Line 36 & Page 26 of 40, Line 31  
Requirement to Use Permeable Pavement**

Permeable pavement is a BMP that has not been thoroughly investigated and needs further evaluation in the field utilizing the Technology Assessment Protocol – Ecology (TAPE) before becoming a required BMP.

There are multiple concerns with requiring permeable pavement on all projects. The unknown classification of forest roads, the unknown future of how urbanized areas are treated, and the maintenance concerns trees produce are a few of the highest concerns.

It is our understanding that forest roads were recently determined to be outside of the forest practices act by a Ninth Circuit Court decision. We anticipate this court decision will have a significant impact on LID and this permit. Requiring forest roads to be constructed with permeable pavement may not be practical.

EPA has indicated that if a jurisdiction has any piece inside the permit area, then the entire jurisdiction will be required to be regulated under the permit. This requirement is anticipated to have an unanticipated impact on the rural areas of Cowlitz County, especially in regards to permeable pavement. It would be to justify permeable pavement as a viable BMP in rural areas due to the proximity of maintenance equipment/services (long drive for vacuum sweepers, etc) and the nature of development in a rural setting. If permeable pavement is required at this point in time and EPA forces jurisdictions to regulate their entire area in the future, backing the permit requirements up at that time could prove to be very difficult.

The urbanized area of Cowlitz County would be considered rural in nature when compared to other urbanized areas. Tree cover exists over a majority of our paved areas. Leaves and needles falling on hard surfaces would create significant maintenance challenges for permeable pavements. Section 8 does not provide an option to consider tree cover over permeable pavements to be infeasible.

We recommend removing the requirement for permeable pavements at this time. Once the science of and maintenance on the BMP has been adequately tested and proven through the TAPE protocol found in Volume V of the SMMWW, it can be explored as a viable BMP. At this time, requiring permeable pavements could create significant engineering and cost issues.

**Appendix 1, Section 4.5, Pages 25 of 40, Line 38 & Page 26 of 40, Line 33  
Requirements to Use Rain Gardens and Bioretention**

The requirement to include Rain Gardens or Bioretention facilities in the public right-of-way will place a significant burden on Cowlitz County.

The density around the roadways within an urbanized area and the linear nature of public right-of-way limits the choices we have from the mandatory list of BMPs to use for ‘Other Hard Surfaces’. The discussion below of ‘Permeable Pavement Required Below a Collector’ plus the low average infiltration rate in Cowlitz County limits our choices even further to bioretention. Including bioretention in the public right-of-way adds a substantial burden on jurisdictions. Maintenance of bioretention facilities is very labor intensive. Herbicides and mowing machines normally used to maintain roadside vegetation in Cowlitz County cannot be used due to the infiltration and specialty plants required in a rain garden or bioretention facility. The plantings

must be weeded and mulched by hand. As the number of rain garden and bioretention facilities increases, the burden on the taxpayer will increase to pay for the maintenance necessary to meet permit requirements.

We recommend removing public roadways from the “Other Hard Surfaces” lists in the Mandatory lists. The linear nature and the burden on the jurisdictions does not equate to an equal burden that is being placed on parking lots and driveways. Removing public roadways from the mandatory lists does not limit a jurisdiction from using these methods but it would not require them at this point in time.

#### **Appendix 1, Section 6, Page 35 of 40, Lines 24-26 Clarification of Intent**

The wording in the second bullet does not clearly communicate the intent. “How the application of the minimum requirement(s) restricts the proposed use of the site compared to the restrictions that existed prior to the adoption of the minimum requirements; and”.

The last part of the sentence “...prior to the adoption of the minimum requirements” does not clearly address how far back the applicant should look to start their comparison. An example would be a project that is requesting a variance to the Flow Control Standard in accordance with Section 3 in Appendix 1 of the proposed permit. Prior to the adoption of Cowlitz County’s stormwater ordinance, no flow control was required. Cowlitz County’s current flow control standard is applicable at one acre. The new standard will be instituted at 5,000 square feet. If the applicant is requesting a variance from the 5,000 square feet threshold, should they compare the impact to the current stormwater ordinance or prior to adopting the minimum requirements at all?

We recommend the following: “How the application of the minimum requirement(s) restricts the proposed use of the site compared to the restrictions that existed prior to ~~the adoption of the minimum requirements~~instituting the requirements of this permit; and”.

#### **Appendix 1, Section 8.I.B, Page 38 of 40, Lines 23-24 Permeable Pavement Required Below a Collector**

The requirement that all roads that are smaller than a collector be of permeable pavement does not appear to take into consideration the impacts this mandate will have on permittees. Impacts such the financial impact, the large mileage impact, and the impact of unproven or unknown long term maintenance approaches are uncertainties and unknowns that do not appear to have been taken into account when requiring permeable pavement.

The urban nature of roads smaller than a collector (roads classified as arterials and collectors are considered infeasible on page 38 in section 8 of Appendix 1) suggests that full dispersion will not be feasible, leaving permeable pavement as the next BMP in line to be required by both mandatory lists. The Fact Sheet discusses the issue regarding the high cost of construction, shown below, but says that as they become common the cost will decrease.

“Pervious asphalt and concrete currently cost more than the standard impervious versions. But as pervious pavements become common in construction (as these stormwater requirements will demand), the cost difference will shrink as many

suppliers have batches in frequent production and contractors gain experience in placement.”

This discussion does not take into account the additional cost of maintenance. Cowlitz County has multiple concerns regarding maintenance of permeable pavements, including but not limited to: Cowlitz County’s rural nature; our frequent geologic landslides; and long term roadway maintenance.

The urbanized area of Cowlitz County would likely be considered ‘rural’ in nature when compared to other urbanized areas. Tree cover abuts a large amount of the roadways in Cowlitz County, and foliage, leaves and needles that constantly fall onto those roadways would create a significant maintenance challenge for permeable pavements. Section 8 does not provide an option to factor in tree cover over permeable pavements for purposes of feasibility of these regulations.

Cowlitz County lands are comprised of glacial outwash soils over hardpan soils or rock. This results in frequent landslides. These slides are often onto roadways that, as currently constructed, allow us to clean and sweep the road before stabilizing the bank. By contrast, landslides onto permeable pavement would require complete reconstruction of the pavement similar to major maintenance discussed below.

Cowlitz County currently maintains over 52 miles of roadway within the urbanized area that are not classified either as an arterial or a collector. Converting these roadways to pervious pavement as they need to be upgraded and/or maintained will place a disproportionate and financially unstopable burden on Cowlitz County.

There is insufficient technical information on long term maintenance of permeable pavement or on how to extend the life of its structural integrity. All of the maintenance standards being provided advise to vacuum sweep the pavement and then jet wash it as necessary. These maintenance approaches do not take into account the long term maintenance of the structural integrity of the pavement. Cowlitz County currently has a program to overlay and chip seal its roadways approximately once every seven years. This schedule allows us to prevent replacing the roadways and impacting our stormwater during the construction process. We estimate we would need to complete major maintenance on permeable pavement every 10-15 years at a cost which is approximately twenty-five (25) times the cost of our current maintenance program not including any additional permitting, design or stormwater requirements and regulations that may be in place once the pavement is replaced.

In our opinion, the technology of permeable pavements its associated maintenance is unproven and has not been field tested enough to be required in this permit. There are still too many engineering unknowns and cost variables. We recommend removing permeable pavement from both mandatory lists in section 4.5 of Appendix 1 or making permeable pavement infeasible within the public right-of-way.

Cowlitz County has provided specific comments regarding our concerns in the **Fact Sheet** as follows.

#### **Section 4.0, Page 22**

##### **UIC is a Stormwater Related Permit**

Although Underground Injection Control (UIC) registration is not an NPDES stormwater requirement, it is a closely related program that Ecology also regulates. Any infiltration facility (Onsite Stormwater Management facilities, Bio-infiltration facilities, etc.) that has a pipe in it is considered a UIC. Requirements within this permit can require UIC's and therefore UIC's should be discussed in this section.

We recommend adding a discussion to section 4.0 to clarify the relationship between this permit and the UIC requirements.

#### **Section 6.1, Page 28**

##### **Conflicting Future Coverage Statements**

The Fact Sheet provides conflicting information on the urbanized area being covered by this permit. One sentence states "The urbanized areas in this permit are based on the 2000 population census." The next sentence states "When EPA issues the revised urbanized areas based on the 2010 U.S. Census, Ecology will determine whether additional areas or permittees should be covered."

It is difficult to design a Stormwater Management Program (SWMP), as required in section 5 of the permit, when the area that is being managed is still not completely set. The permit itself does not describe the urbanized area that we are required to manage. The Fact Sheet should provide direction define the urbanized area of the new permit.

We recommend revising the last sentence in the first paragraph on page 28 of the Fact Sheet to read "When EPA issues the revised urbanized areas based on the 2010 U.S. Census, Ecology will determine whether additional ~~areas or~~ permittees should be covered. The 2010 U.S. Census will also determine if additional areas should be covered under the 2018 permit."

#### **Section 6.2, Page 31**

##### **Misleading Sentence**

In the first paragraph, it states "Permittees are not obligated to accept discharges into their MS4, and may choose to refuse them." This statement is confusing.

If the MS4 is part of the historic drainage pattern of the property, then under state law, Cowlitz County is obligated to accept it. If refusing to allow the property to drain into the County's MS4 prevents the property from developing, that may also be construed as an unconstitutional takings of private property, subject to compensation by the county.

We recommend that the sentence be reworded to, "Permittees ~~are not obligated~~ may choose to ~~accept~~ refuse discharges into their MS4, ~~and may choose to refuse them.~~"

## **Section 6.5, Coordinating with updates..., Page 51**

### **List Formatting**

In the fifth paragraph on page 50, it notes, "...five important tools..." On pages 50 and 51, the Fact Sheet lists four tools and has a final paragraph. This last paragraph should be numbered as the fifth tool.

We recommend the third to last paragraph be titled "[5. Western Washington Hydrologic Model \(WWHM\). Department of Ecology \(update expected spring 2012\)](#)"

## **Section 6.12 – Appendices, Mandatory List Options – Permeable Pavements, Page 86**

### **Misnamed BMP**

The term 'pervious' is used when 'permeable' should be used to describe pavements. "But as pervious pavements become common..." and "Pervious pavements can be used almost..."

We recommend changing pervious to permeable when describing pavements in general. "But as ~~pervious~~-permeable pavements become common..." and "~~Pervious~~-Permeable pavements can be used almost..."

## **Page 86; Section 6.12 - Appendices; Mandatory List Options – Permeable Pavements**

### **Misinterpretation of Intent**

The last sentence in the Permeable Pavements Section states, "This provision does not mandate that all walkways and driveways must be paved. But wherever they are paved, pervious pavements must be used unless infeasible according to the criteria in Section 8." This statement appears to conflict with Cowlitz Counties interpretation of the permit requirements

Appendix 1 requires any new development that "Results in 2,000 square feet, or greater, or new plus replace hard surface area..." to comply with Minimum Requirements #1 through #5. Minimum Requirement #5 mandates the use of permeable pavements when full dispersion is deemed to be infeasible thru Mandatory lists #1 and #2. The definition of hard surface is "an impervious surface, a permeable pavement or a green roof." The definition of impervious surface is (underlines added for emphasis):

"A non-vegetated surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A non-vegetated surface area which causes water to run off the surface in greater quantities or at an increased flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios...gravel roads... or other surfaces which similarly impede the natural infiltration of stormwater...."

Our interpretation of these permit requirements is that the mandatory lists within section 4.5 of Appendix would mandate that all walkways and driveways be paved unless found infeasible in section 8 of Appendix 1.

Addressing the requirement of mandating all walkway and driveways to be paved creates yet another concern. The requirements would force proposed walkway and driveway surfaces to be

constructed of gravel, which likely add more sediment to stormwater than pavement and would also be considered an impervious area. The impacts to the waters of the state from gravel walks and driveways could be as, if not more, detrimental to the environment than from standard pavement.

We recommend removing the requirement for permeable pavements from the mandatory lists in the permit.

### **Section 6.12 – Appendices, M.R. #6 – Treatment and M.R. #7 – Flow Control, Page 88; Confusing Wording**

The last sentence in the first paragraph of this section states, “The intent is to continue to capture the same size and types of projects as previously.”

We recommend, “The intent is to continue to capture the same size and types of projects as [the previous](#)ly permit captured.”

### **Minor Changes**

In the course of our review of the permit and fact sheet, we noticed the following corrections or additions the appear to be necessary.

- Definition and Acronyms, Line 36, Page 77; circuit appears to be mislocated.
- Appendix 1, Section 4.3, Line 22, Page 23 of 40; extraneous ‘to’.
- Appendix 1, Section 4.5, Line 21, page 25 of 40; missing ‘M’ in SMMWW.
- Appendix 1, Section 4.5, Line 30, Page 25 of 40; handbook is mislabeled.
- Appendix 1, Section 4.6, Line 44, Page 26 of 40; reference removed table.

Cowlitz County’s overall concerns with the on-going trend in rule making on this permit is that it portends a major change in regulations which will be very difficult to reverse or change, and will place a crippling financial burden upon the county and tax burden upon its residents. The recommendations from EPA that remove the urbanized area boundary and requires Cowlitz County to regulate our entire county to these standards in the future raises questions as to how the proposed permit can be practically and financially implemented within our rural areas. It is our interpretation of the Clean Water Act that this permit goes well above and beyond what is required by law. Permit language such as “Permittees shall not repeal existing local requirements to control stormwater that go beyond the requirements of this permit...” (page 17, line 33), will make it difficult to implement regulations that are appropriate for rural areas but less restrictive than the current proposal.

We appreciated the opportunity you provided for jurisdictions to offer comments in an earlier version and want to congratulate Ecology on their efforts to incorporate that extra level of public

involvement with regards to LID and monitoring. Thank you again for the chance to comment on this permit. Please contact Patrick Harbison if you have any questions or concerns regarding our comments or their intent, at [harbisonp@co.cowlitz.wa.us](mailto:harbisonp@co.cowlitz.wa.us) or 360-577-3030 x6536.

Sincerely,



**PATRICK N. HARBISON, P.E.**  
**Engineer III – Stormwater/Development Review**

PNH/ec

cc: Board of County Commissioners  
Kent Cash, Public Works  
Brad Bastin, Public Works