Pierce County

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October 3, 2014
WP60684

Municipal Permit Comments
Washington State Department of Ecology
PO Box 47600
Olympia, WA 98504-7600

Re: Pierce County Comments on NPDES Phase I and State Waste Discharge General Permit for Municipal Stormwater and Western Washington Stormwater Manual

This letter conveys Pierce County's comments, suggestions, and concerns on the proposed permit modifications to the general permit for medium and large jurisdictions in Western Washington and on the revisions of the state's stormwater manual. Additional specific detailed comments are in the attached spreadsheet and letters.

Puget Sound Regional Stormwater Monitoring Program

The jurisdictions that have elected, under the permit, to self-conduct status and trends monitoring as part of the Puget Sound Regional Monitoring Program have made recommendations to ensure the single, comprehensive Regional Monitoring Program is successful. A letter to that effect is attached and is incorporated into this letter by reference.

If Ecology does not make the requested changes, Pierce County has grave concerns that its and other municipal stormwater entities in Puget Sound to establish one regional stormwater monitoring program may go for naught. The self-directed Option 1 program is creating differing start dates, parameters, and methodologies. Rather than a single quality assurance project plan for status and trends monitoring, they are developing four. These steps are incremental paths to separate and distinct, rather that coordinated and consolidated monitoring and will ensure that the same data are not collected or comparable.

Pierce County supports the change proposed in the permit modification to start monitoring on the water year, which is the industry standard for sampling. However, the Option 1 program is delaying its start. Pierce County is willing to delay its start, as well, to be consistent with the Option 1 program.

The Permit lists a discrete set of parameters to be sampled for the Option 2 program. The Option 1 program has elected to vary from that list. Pierce County is willing to vary likewise to do the same parameters of Option 1 program.

The laboratory methods required of Option 2 provides only one single laboratory, meaning existing contracts with other laboratories can't be used. Pierce County is willing to add new labs, but believes flexibility in lab selection is important.

Being responsive to these requests would ensure the success of the Puget Sound Regional Monitoring Program by ensuring compatibility and usefulness of stormwater monitoring between Option 1 and Option 2 participants.

As a result, Pierce County requests the following language or alternative language that meets the same objectives be added to the Permit: ***"All sampling parameters, frequencies, and schedules shall be the same as those used by Option 1 status and trends monitoring."***

Watershed-scale Modeling

Footnote 3 on page 20-22 asserts status of proposed and approved watersheds submitted under paragraph (i). ***This note should also state that Department of Ecology has approved Pierce County's scope of work and schedule.***

The proposed language requires only "Permittees subject to a Washington State municipal stormwater permit" for mandatory participation in the watershed-scale planning process. This limitation excludes other municipal stormwater permit holders that are subject to EPA permitting (e.g., federal facilities and discharges on Tribal Lands) and unpermitted stormwater dischargers, such as drainage districts, which Ecology has not issued permits to. This is a major limitation in the ability of County permittees' ability to meet the objectives of the permit requirement for use attainability. ***Pierce County urges Ecology to seek delegation for federal facilities and Tribal Lands permitting and to complete permitting of unpermitted discharges to fill these gaps and to cost share for the watershed scale planning as Phase II Permittees are in this modification.***

Subparagraph (iv) proposes to extend the due date of the watershed-scale plan from October 1, 2016 to September 1, 2017. Pierce County has developed, and Department of Ecology has approved, our watershed-scale schedule that contains the October 1, 2016 date of the original permit. In a June 5, 2014, email to Pierce County (attached), Department of Ecology asserts that altering interim schedule milestones that have the potential to affect the project end date could be a significant change to the approved scope and would require written approval from Ecology. When informed by Ecology that it was considering extending the deadline for the watershed-scale plan, Ecology explained its reasoning as the additional time would be used in clarifying and potentially altering the plan requirement and to be used to collect additional field data. Both of these reasons would necessitate a change in the approved scope of work and add more time and cost to the project.

For these reasons, Pierce County does not support the extension of this due date without the following explicit qualifying language being added to the permit: ***"Changes of schedules contained in Ecology-approved scopes of work and schedules as of October 1, 2014, shall not be considered permit violations provided the plan is submitted by September 1, 2017. Permittees are not required to conduct additional sampling or modeling that is not contained in an approved scope of work."***

Stormwater Manual

In the revised permit language Ecology changed the reference from the "2012 Stormwater Management Manual for Western Washington" to "Stormwater Management Manual for Western Washington" with a revised definition of: "SWMMWW" and "Stormwater Management Manual for Western Washington" means the Stormwater Management Manual for Western Washington as amended in 2014." How can Ecology require adherence to a Manual that has not been adopted and was sent out in draft after the date we were required to submit a Stormwater Manual that is equivalent? Also, Ecology has missed its own deadlines for providing comments on Pierce County's stormwater manual that was submitted on time. Pierce County views this as a deliberate attempt of Ecology to impose additional requirements on the County outside of the Permit Modification and public involvement process because their own Manual will not be finalized until the end of 2014, well after the formal public comment period. ***Pierce County requests Ecology to base its manual equivalency determination upon the SWMMWW that was available to Pierce County at the time it developed and submitted its manual to Ecology.***

In addition, maintenance "recommendations" and frequencies in the SWMMWW are inconsistent with maintenance and inspection frequencies contained within the Permit. ***Pierce County requests Ecology change the maintenance and inspection frequencies in the Manual to be the same as those in the permit.***

New Definitions

Pierce County opposes the inclusion of new and conflicting definitions in the Permit which will alter and expand the regulatory reach of this permit. New definitions proposed in the permit modification create a substantial and growing deviation from the foundation of the permit as an NPDES permit by altering basic terms found in the federal Clean Water Act and its implementing regulations. These terms sway from basic and nationally used definitions of outfall, waters of the United States and even the core definition of what constitutes a Municipal Separate Storm Sewer System (MS4). Some of the proposed definitions even go beyond the State Water Pollution Control Act's protection of ground water to capture regulatory compliance of discharge to soils irrespective of the depth or presence of ground water. Taken and applied literally, the definitions could have unintended consequences of driving physical alterations of MS4s towards underground injection control wells to avoid excessive and unnecessary liability and regulation. At a minimum, the new definitions create confusion as to components of MS4 and points of compliance.

Attached is a Pierce County analysis of the jurisdictional confusion and implementation variability should the new definitions be applied. ***Pierce County requests Department of Ecology remove the proposed definitions from the permit modification.***

Permit Requirement S5.C.5.a.iv Violates Private Property Rights and Won't Protect Water Quality

Pierce County has serious concerns about section S5.C.5.a.iv of the County's NPDES Permit for a number of reasons. This section requires that the County establish the legal right to enter the property of a single family homeowner and perform maintenance inspections of stormwater facilities such as infiltration trenches and rain gardens. We believe that this requirement treads on the individual property rights of landowners and their rights to privacy. We believe this requirement is impractical and unrealistic. What are the chances that a local jurisdiction will ever have the resources to inspect and enforce stormwater facilities on an individual lot basis? Because we see this requirement as impractical and unrealistic we do not believe that it will be effective in protecting/improving water quality. We, therefore, question the value of applying the requirement to a single family residence. The creation of legal documents and the recording thereof will impact the permit process and cause additional costs to applicants for no added water quality benefit.

Thank you for the opportunity to comment on the permit modification and stormwater manual. Please contact me at (253) 798-4672 or at dwrye@co.pierce.wa.us if you have any questions.

Sincerely,

Dan D. Wrye

Dan D. Wrye
Water Quality Manager

DDW:kj

Enclosures:
Pierce County analysis of Ecology-proposed new definitions
June 5, 2014, email from Chris Montague-Breakwell, Department of Ecology
Option 2 Monitoring Participants Letter to Bill Moore, Ecology, August 25, 2014

c: Brian Ziegler, Director, Pierce County PWU
Dennis Hanberg, Director, Pierce County PALS

How New Definitions Proposed in Stormwater Permits Move the Permit Away from the Federal Clean Water Act's NPDES Program and Add Regulatory and Liability Confusion

Analysis of Ecology-proposed new definitions

Pierce County, Washington

The scope of this memorandum is to generate some analysis to further examine the proposed modifications being advanced by the WA State Department of Ecology in the upcoming NPDES Phase I Permit. The following narrative will examine the future language and discuss regulatory concept clarity and program implementation feasibility.

1. **Is 40 CFR 122.2 the correct citation for the federal definition of outfall or is it located in 40 CFR 122.26?**

The federal definition of *outfall* is found in Chapter 40 of the Code of Federal Regulations (CFR) Section (§) 122.26 but Ecology's modified definition also refers to *point source* and relates the term as a functional synonym to *outfall*. Consequently, the State refers back to 40 CFR §122.2 and they have redundantly anchored the definition to the federal code at that place. Conversely, it is interesting to read the following three lines in the definition that represent the technical refinements to the legal meaning of the NPDES terms *addition, conveyance and outfall* based on the court decisions in Catskill Mountains Trout Unlimited v. City of New York (2001), Friends of the Everglades v. South Florida Water Management District (2006) and the City of Los Angeles v. Natural Resource Defense Council (2011). However, this part of the states definition has not been modified from the federal rendition.

2. **How does the Federal and State definition of *discharge point* and *outfall* compare?**

CFR: § 122.26 Storm water discharges: (9) *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 (WOTUS) 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 WOTUS and are used to convey WOTUS.

WA State Department of Ecology NPDES permit modification language is now advancing a definition of *outfall* to mean a *point source* as defined by 40 CFR §122.2. This means that *outfall* is the place where the stormwater *discharge* leaves the NPDES Permittee's Municipal Separate Storm Sewer System (MS4) and enters a *receiving waterbody* or *receiving waters*. *Outfall* also includes the Permittee's MS4 facilities and those BMPs designed to infiltrate stormwater, (however, this excludes other infiltrating Best Management Practices (BMPs) such as permeable pavement and obviously Underground Injection Control wells (UICs)).

The draft NPDES permit language proposes to modify the definition of *discharge point* to mean the location where a stormwater *discharge* leaves the originating Permittee's MS4 to enter another Permittee's MS4 or a private or public stormwater *conveyance*. *Discharge point* also includes the location where a stormwater *discharge* leaves the Permittee's MS4 and *discharge*s to ground. This interpretation means not discharging to an actual groundwater table or aquifer but to a superjacent or intervening body of soil, except where such *discharge* occurs via an *outfall* (i.e. MS4 facilities and BMPs designed to infiltrate stormwater to provide flow attenuation and pollutant treatment). It's worth noting

that *discharge point* now includes the scenario whereby stormwater infiltrates through permeable pavement and the road sub-base into and through the subsoil below.

When speaking with Ecology staff, they explained that the installation of permeable concrete as a Low Impact Development (LID) BMP would create a *discharge point* to the ground (i.e. ground waters of the State) via soil infiltration but it would not qualify as an *outfall* or *point source* to waters of the U.S. because groundwater is not covered by the CWA. Given the modified definitions being advanced in the NPDES Phase I Permit, the State does not interpret this scenario as an *outfall* but as a *discharge point*. It was not completely clear as to why this scenario does not represent an *outfall* to waters of the State? Regardless, the State is ostensibly defining all upland (non-wetland) soils as a surrogate for underground waters of the State with no amount of subsoil vertical separation establishing the nexus test to an actual *receiving water body* (e.g. permanent groundwater table or aquifer). The dry intervening portion of the soil profile provides no explicit or implicit regulatory "buffer or setback" between the infiltrating soil surface and the top of the groundwater table. This is far reaching and somewhat contrary to the definition of *hydroperiod*, which is a critical groundwater qualifying concept underpinning the Clean Water Act's (CWA) Section 404 determination and delineation of wetland WOTUS and the determination and delineation of wetland waters of the State as practiced under the Shoreline Management Act (Revised Code of Washington (RCW) Chapter 90.58) and the Growth Management Act's (RCW Chapter 36.70A) Critical Areas Ordinance program.

The WA State Department of Health and the EPA regulate the design and installation of septic systems to ensure they are located an adequate horizontal distance away from surface waters and a sufficient vertical distance (separation) from ground water. The EPA authorizes the State to determine the *vertical and horizontal setback* requirements for soil absorption fields located near building foundations, property boundaries, groundwater supply wells, and other surface waters. Distances between septic system leach fields and man-made or natural water supplies will vary according to site factors such as the local soil's saturated hydraulic conductivity (percolation rate) , particle size distribution (texture), bulk density (compaction) and depth to seasonal high water table (vertical separation). The point being, there is an apparent inconsistency in the qualifying jurisdictional criteria being separately applied by these three programmatically parallel programs. Moreover, the vertical separation criteria guidelines set for: 1) infiltrating BMPs; 2) septic systems; and 3) UICs are significantly different and don't uniformly represent a consistent application or conceptual understanding of *receiving water, discharge point* or *outfall*. Furthermore, the use of best available science and all known, available and reasonable methods of prevention, control and treatment (AKART) as cited (hyperlinked) by Ecology on their NPDES webpage is not current or consistent with the recommendations set forth in the University of Minnesota's Stormwater Assessment Project's research literature review document, *Contamination of Soil and Groundwater Due to Stormwater Infiltration Practices (2008).*

Subsoil vertical separation is technically defined as the straight up and down measurement of unsaturated soil, sand or soil like media between the bottom of any facility and the highest subsurface elevation of seasonal high water table or subsurface limiting condition (i.e. bedrock or perching aquatard). For an infiltrating BMP, septic system and UIC to properly treat influent water, an appropriately sized vadose zone or vertical layer of unsaturated aerobic subsoil must be present below the facility. Subsoil vertical separation is accommodated to assure that bacteria, microbes, heavy metals, toxics and nutrients and most other pollutants (e.g. not salts) are adequately removed through an appropriate contact time with the subsoil before the infiltrating effluent or leachate can make contact with the permanent groundwater table. The maximum subsurface elevation of the seasonal high water table is commonly identified by the presence of a specific set of redoximorphic features in the subsoil profile. These visible soil signatures are relied on to delineate the basement of the unsaturated vadose

zone and ceiling of the seasonal high water table. The treatment and water quality assumptions associated with vertical separation are decidedly presumptive. The subsoil's pollution abatement abilities and services (via predation, die off, biodegradation, adsorption, volatilization, conversion etc.) have simply not been repeatedly and reliably demonstrated through currently available peer reviewed research. There are currently no vertical separation criteria for establishing whether stormwater that is routed and conveyed to infiltrate into and through the subsoil is actually discharging to waters of the State (i.e. groundwater table or aquifer) "and" actually meeting the water quality standards at the *point of discharge.*

So, even if groundwater is rigorously established as being a hundred feet below the ground surface (bgs), the stormwater being discharged to the soil surface in that location is still considered the same as it were being discharged directly to the groundwater table (the actual waters of the State). The WA State guidelines for establishing the appropriate vertical separation are adequately described in the UIC program guidance document but that guidance does not cross over to apply to the water quality and NPDES permit programs even though a minimal amount of vertical separation is required for infiltrating BMP siting and design in the SWMMWW.

Outside of the State of Washington's NPDES permit program is the State's Underground Injection Control (UIC) Program for Managing Stormwater. One question to arise when considering the UIC program requirements is whether WA State's guidance for subsoil vertical separation for UIC Wells (i.e. EPA Class V injection wells) results in a suitable Long Term Acceptance Rate for pollution abatement (LTAR = g/day/ft2). Nowhere in the UIC guidance document or the Stormwater Management Manual for Western Washington (SWMMWW) is there clear direction for how subsoil will effectively treat specific stormwater pollutants. The NPDES program does not include groundwater in its definition of *receiving water* or Waters of the United States. However, because the WA State definition of waters of the State includes groundwater there is a formal disconnection from the NPDES permit program when the State (or jurisdiction) manages stormwater routing and treatment through the UIC program.

Curiously, any MS4 circuit that can be routed and connected to an endpoint UIC well facility is effectively removed from the MS4 circuit for NPDES Phase 1 mapping purposes. That being said, County jurisdictions could figuratively set forth a program to install UIC's in an effort to intentionally disconnect significant areas of their MS4 from being part of their circuit mapping responsibilities. Accordingly, the counties could effectively reduce their NPDES permit liabilities (including reducing the consequences of a TMDL informed set of permit requirements) by disconnecting and lowering the number and size of their MS4 circuits through a deliberate use of the UIC program over time. (...and regardless of whether this concept is appropriate or not, it's obviously easier to consider the plausibility of this kind of tactic in Eastern WA than Western WA)

The concept of *incidental infiltration* has been left officially undefined and that is somewhat disconcerting given that it is now viewed as a critical NPDES permit term. Incidental infiltration is inferred to mean scenarios such as stormwater detention facilities that inadvertently leak and roadside conveyance ditches that inadvertently leak and oddly enough, it also includes constructed swales that are intentionally designed to infiltrate (leak). This inconsistency creates confusion that Ecology acknowledges needs reconciliation. And with no explicitly prescribed or mandated stormwater maintenance requirements, this type of incidental *illicit stormwater discharge* will rely wholly on self reporting. Practically speaking, monitoring for and detecting these rather insidious permit liabilities as they occur will be difficult given the less than conspicuous nature of observing sub-surface conditions. The practical applicability of this concept seems rather ill conceived regarding program compliance and permit enforcement. Actually, this term reminds us of the old *incidental fallback* definition associated

with the Tulloch Rule in Section 404, which consequently was invalidated in 1998 by the US District of Columbia Court of Appeals.

3. **How does *receiving waterbody* or *receiving water* compare with the definition of *WOTUS* and *waters of the WA state*?**

Waters of the United States refers to the definition in 40 CFR 122.2, which means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(b) All interstate waters, including interstate "wetlands;"
(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
(1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;
(2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
(3) Which are used or could be used for industrial purposes by industries in interstate commerce;
(d) All impoundments of waters otherwise defined as WOTUS under this definition;
(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;
(f) The territorial sea; and
(g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not WOTUS. This exclusion applies only to manmade bodies of water which neither were originally created in WOTUS (such as disposal area in wetlands) nor resulted from the impoundment of WOTUS. WOTUS do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

The Revised Code of Washington Chapter 90.48: defines waters of the State to include those waters as defined as waters of the United States in 40 CFR Subpart 122.2 and located within the geographic boundaries of the State of Washington. Additionally, waters of the State is defined in RCW Chapter 90.48 to include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters and all other surface waters and water courses located within the jurisdiction of the State of Washington.

Waters of the United States and *receiving water body* are treated as one in the same in the NPDES Program. However, even though it's the same term, the determination and delineation of WOTUS jurisdiction has been applied differently across the country by USACE districts and EPA regions responsible for administering Section 404 of the CWA. The USACE northwestern division and EPA Region X have made Section 404 WOTUS determinations in the past that included various man-made ditches that had negligible Ordinary High Water Marks and were not "relatively permanent in their flow". The point being, that *WOTUS* and *receiving water body* are interpreted and applied differently by different CWA programs; just like vertical separation and the presence of groundwater are used differently by separate but related CWA programs.

During a sidebar conversation with Ecology staff at the NPDES Permit Modification Workshop and Hearings in Vancouver, waters of the State was literally articulated to mean all waters associated with the hydrologic cycle. It is not circumscribed to the historic and more pragmatic definition of *receiving waters*. Practically speaking, *receiving waters* are those discernible hydrogeomorphic features that are part of the hydrologic cycle and are physically part of the terra firma landscape. This almost ethereal concept of waters of the State apparently extends from the WA state water rights definitions, (i.e. water right and use allocation accounting). However, if truly applied, this definition would create significant confusion on the point and method for determining water quality compliance or how an *addition of a pollutant* to a *receiving water* can be traced and accounted for. It is my opinion that Ecology staff should be little more disciplined when articulating this type of guidance. Ecology staff should practice more restraint and not depart from the written language that legally defines waters of the State because it can have confusing implications regarding NPDES program applicability and compliance.

During the same conversation with Ecology staff, Pierce County offered the following scenario to help clarify the interpretation of *outfall* and *discharge point* and the boundary between the *MS4* and *waters of the State*. For example, a road was positioned to travel across a hill and dale topography of moderate relief, the road then descended gently down the draw on either side of the hill crest to cross a perennial tributary creek before slowly ascending up the other side to a similar type of hill crest. The adjacent roadside stormwater conveyance ditch was excavated in native soil and was grass-lined. The ditch was engineered to receive stormwater sheetflow off the road prism and convey it down to *discharge* at an *outfall* into the creek next to where the road would cross the creek via a bridge. Along the crest of the hill, the invert elevation of the grass-lined ditch also inadvertently intercepted the seasonal high water table during the winter and early spring so that the ditch flowed with surface water for some significant period of time (30 or more consecutive days). The seasonal flow in the ditch was more than the stormwater flow that would be present during and immediately after most precipitation events. Staff said that the flowing ditch was waters of the State but the conveyance infrastructure was part of the MS4 and the *outfall* would be located where the ditch terminated and *discharged* into the creek channel. I asked why and staff said this was a man-made engineered infrastructure designed to convey stormwater and the physical location where the ditch *discharged* into the creek was the *outfall* of the MS4. This is the practical answer that makes the most sense, but the trouble is that as you examine the literal language of waters of the State and the new definitions offered in the NPDES Phase I Permit, their practical interpretation and application become less than conspicuous or self evident; in some cases.

To credit the State of Washington, there are important distinctions included to qualify the official definition of the term wetland found in both WAC Chapter 173-201A-020 and RCW Chapter 36.70A.03. The definitions of the term *wetland* in Washington State means: "Those areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands." Water bodies not included in the definition of wetlands as well as those mentioned in the definition are still waters of the State. It is the important distinctions in the State's definition as underlined above that sensibly resolve any potential for confusion with where the point of MS4 water quality compliance is in the scenario previously described.

Never-the-less, the question next becomes, is that scenario similarly interpreted by the United States Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA) regarding the delineation of *waters of the US* and the limits of the MS4 under the new Section 404 rulemaking? The federal definition of a wetland is not found in the language of the Clean Water Act but in the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual. The term wetland in this program means: Those areas that are saturated or inundated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. The lack of distinction for exempting the incidental MS4 related and unintentionally human created wetlands is very noticeable.

The newly proposed definition of *tributary* is defined to include only those surface waters whose volume, duration and frequency of flow is sufficient to create certain well-known and easy to observe hydrologic characteristics that typically take years to form, such as the formation of a clear channel with bed and banks and an ordinary high water mark. Ditches that do not have the features of a *tributary* are not protected under the CWA and the proposed rule argues for a reduced jurisdiction over many of the ditches that were historically interpreted to be covered by the CWA in the past. For example, the rule would exclude ditches constructed on dry land and that flow less than year round. This would exclude many roadside ditches and most irrigation ditches from CWA protection. Simply said, if a ditch is not constructed through a wetland or a stream, and if it doesn't flow year round, the USACE and EPA state that it would not be included under the jurisdiction of the CWA. However, the agencies conversely suggest that if a roadside ditch were inadvertently constructed though a wetland and it seasonally flowed for little more than five percent of the growing season due to the Seasonal High Water Table being persistently within one foot of the soil surface; then it would most probably meet the definition of wetland because it would almost certainly meet the wetland criteria for soil, vegetation and hydrology. So, if this ditch flowed for as little as 10 to 15 consecutive days in western WA and it was directly connected, flowed and *discharged* via an *outfall* to navigable water, then it will be treated as a WOTUS.

The following scenario was also clarified by Ecology staff at the NPDES Phase I Permit Modification Workshop and Hearings meeting held in Vancouver, WA. For example, a road prism or sloping road surface that does not direct sheet flow to be captured by a stormwater conveyance infrastructure but directs the stormwater sheet flow off the road surface to spread onto the adjacent soil surface is not part of the MS4 and therefore not regulated under NPDES Phase I Permit (it is not clear at present as to whether it would be alternatively captured under the WA State Waste Discharge Permit). Ecology staff stated that this scenario represented a *discharge point* because the spreading of sheet flow was interpreted to be dispersed. Given that clarification, that figurative section of road would be excluded from the MS4 circuit mapping requirements of the NPDES Phase 1 permit. This explanation is somewhat confusing, why would this scenario be considered substantively different than the scenario presented by permeable pavement? It may be because of subsoil vertical separation and the somewhat confined hydraulic forcing (hydraulic head) created by vertically infiltrating stormwater though a structurally defined flow path such as permeable concrete? Apparently, the basis for its not qualifying is because the stormwater sheet flow is not being injected into the subsoil but spread and dispersed on top of the soil surface with negligible hydraulic head (vertical forcing) pushing it down through the subsoil column. It is unclear why this scenario would not be considered a *discharge point* and Ecology staff could not tell Pierce County the "why" behind this logic.

The modified NPDES Permit language proposes to define *receiving waterbody* or *receiving waters* to mean naturally and/or reconstructed naturally occurring surface water bodies, such as creeks, streams, rivers, lakes, wetlands, estuaries, and marine waters, to which a *discharge* occurs via an *outfall* or via

sheet and/or dispersed flow. *Receiving waters* also include groundwater to which a *discharge* occurs via MS4 facilities and those specific BMPs designed to infiltrate stormwater. So, WA State defines *receiving waters* to mean hydologically and geomorphologically discernible surface water body features as defined in the CFR but adds the less discernible hydrologic feature of groundwater too. The point of interest being that the State is protecting groundwater by functionally defining all upland, (non-wetland) soils as a de facto buffering surrogate for waters of the State with no amount of vertically separating dry subsoil required to establish a physical or hydrologic nexus test for determining whether an actual *discharge* to an actual *groundwater-receiving water body* is actually occurring.

While the proposed federal rulemaking for refining the definition of WOTUS continues to affirm that groundwater is not jurisdictional, it should be noted that the program historically considers shallow (< 12 inches bgs) inundation and subsurface flows when determining if a *water body* is a wetland waters of the United States. The same criteria is applied in the evaluation of whether the said feature is adjacent enough (biologically, physically and chemically connected) to a navigable WOTUS to come under CWA jurisdiction. Consequently, some industry discussion has arisen suggesting this is just a more clever way of making groundwater jurisdictional. And admittedly, shallow subsurface inundation and flow have been historically employed in the Section 404 program to establish a wetlands existence and whether said wetland has a *significant nexus* or connection to WOTUS. The use of groundwater as a federally qualifying jurisdictional criterion is now formally proposed under the new Section 404 *adjacency* line of evidence test for determining whether a wetland is *neighboring* to a WOTUS. However, groundwater in and of itself is explicitly stated not be not jurisdictional as a WOTUS and the federal rulemaking proposal continues to specifically affirm the exclusion of groundwater from the authority of the Clean Water Act.

It is interesting to note that the Shoreline Management Act Chapter (RCW 90.58) and the Growth Management Act's (RCW 36.70A) Critical Areas Ordinance definitions also clearly define how groundwater establishes a *hydroperiod* that officially qualifies a wetland as a distinct and discernible waters of the State. As it presently exists, the *hydroperiod* definition in these separate but parallel programs is inconsistent with the interpretations being advanced for establishing when a stormwater *discharge* occurs or where *outfalls* occur to ground waters of the State. The approach currently being established for determining the legal standing and regulatory protection of a *receiving waterbody's* water quality are not the same between different (but related) state and federal regulatory programs.

4. **What does adding a new definition of *conveyance system* add or detract from the definition of *MS4*?**

CFR: § 122.26 Storm water discharges mean:
(8) *Municipal separate storm sewer* means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to WOTUS;
(ii) Designed or used for collecting or conveying storm water;
(iii) Which is not a combined sewer; and
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

The WA State Department of Ecology has proposed to modify the NPDES Permit Language to say a *Conveyance system* means that portion of the municipal separate storm sewer system designed or used for conveying stormwater.

The state definition, if read literally, can be thought to represent one of the practical challenges to developing effective stormwater policy and consistent programmatic guidance. Jurisdictional road and highway systems are the primary method of public transportation and whether officially or not, they are generally included as part of the public works department's NPDES suite of responsibilities. Most roads surfaces are engineered and designed to incidentally collect and convey (via sheet flow) storm generated precipitation to a "physically adjoined and connected" stormwater conveyance system. Much (but not all) of the County's road surfaces are intentionally engineered, designed and used to collect and convey polluted storm generated wash-off and runoff during wet weather events and route it to adjacent stormwater drainage, conveyance and treatment infrastructure.

Road surfaces carry both land-adjacent and road-related vehicular pollutants including finely pulverized sediment, heavy metals from tires, brakes, and engine wear, and hydrocarbons from gas, oil and lubricating fluids. The MS4 definition does not officially include the road prism surface regardless of whether it actually behaves as a stormwater collection system. This interpretation can make the delineation of the separating boundary of the road surface from the MS4 curb and gutter or AC dike conveyance system difficult to distinguish, map and therefore, manage. Never-the-less, legally speaking, (and not practically speaking) the MS4 purview is strictly defined in WA State as including only the stormwater conveyance, drainage and treatment systems. This language and thinking makes road vacuuming an interesting NPDES BMP stormwater treatment activity because it really isn't a source control BMP practice and it occurs officially outside of the MS4 assets and infrastructure.

June 5, 2014, Email from Chris Montague-Breakwell

From: Montague-Breakwell, Chris (ECY) [mailto:chris.montague-breakwell@ecy.wa.gov]
Sent: Thursday, June 05, 2014 4:00 PM
To: Dan Wrye; John Collins; Tom Kantz
Cc: Cornett, Deborah (ECY); Cox, Lisa (ECY); McCrea, Rachel (ECY)
Subject:

Hi Dan and Pierce County Watershed Planning Team,

Recently, the Department of Ecology (Ecology) staff discussed concerns raised by permittees about enforcing elements of the Watershed Planning Scope of Work (SOW), and about the possibility that missing deadlines by a few days or other minor changes could be interpreted as a permit violation. Ecology understands these concerns, and proposes the following clarifications to our approach to SOW changes.

First, Ecology's final review and approval of a permittee's SOW will be flexible. Specifically, Ecology's approval letter will note that deviations from interim schedule milestones, minor alterations to the proposed monitoring regime, and other insignificant or non-substantive adjustments will be essentially pre-approved; they will not require authorization from Ecology to implement, nor will they be construed as permit violations.

Second, permittees can prevent violations of the permit caused by substantial deviations from the approved SOW by seeking prior approval from Ecology. In order to make a significant or substantive change to the SOW, a written request must be submitted to Ecology for approval. Significant changes to the SOW include but are not limited to:

- Significantly changing monitoring sites,
- Significantly changing sampling procedures or amount of field data collection,
- Switching modeling software,
- Changing the calibration procedure or basis for acceptance,
- Changing assumptions for estimating future pollutant concentrations or loads, and
- Altering interim schedule milestones that have the potential to affect the project end date.

If and when Ecology authorizes a request, it will constitute an update to the SOW, and the change may be implemented.

Finally, each permittee should write their SOW in such a way as to allow flexibility for minor or non-substantive alterations. While Ecology does expect sufficient specificity in the SOW to determine that all of the necessary elements of the planning process will be completed on time and be of sufficient quality, the SOW should not be written so that routine adjustments would require a notification to Ecology. For example, while Ecology expects to approve monitoring site locations in the SOW, monitoring locations should not be so precisely located that an adjustment of a few hundred feet which does not affect use of the data would require authorization from Ecology.

If you require further clarification about how the terms of the SOW will be enforced, please contact me.

Best Regards,

Chris

Chris Montague-Breakwell
Municipal Stormwater Permit Manager
WA Department of Ecology
Water Quality Program, Southwest Regional Office
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chris.montague-breakwell@ecy.wa.gov
office (360) 407-6364 cell (360) 742-9704

Option 2 Monitoring Participants Letter to Bill Moore, Ecology, August 25, 2014

August 25, 2014

Bill Moore, P.E.
Washington State Department of Ecology
300 Desmond Dr,
PO Box 47696
Olympia, WA, 98504

Dear Mr. Moore,

This letter requests your assistance in helping the Puget Sound Regional Stormwater Monitoring Program achieve its goal of a single, integrated and coordinated program. This letter is written jointly by the three jurisdictions (Redmond, Bellingham, and Pierce County) that chose to conduct Status and Trends monitoring for the Regional Stormwater Monitoring Program (RSMP) as provided in our NPDES stormwater permits. The purpose of this letter is to express our concerns that decisions of the Pooled Resources Oversight Committee (PROC) and the Stormwater Work Group (SWWG) have the potential to create two separate stormwater monitoring programs for Puget Sound. We would also like to discuss some issues with implementing our Quality Assurance Project Plan (QAPP), issued by Ecology.

To avoid failing to achieve a Regional Stormwater Monitoring Program for Puget Sound, we are requesting that Ecology issue an errata to both the phase one and phase two permits that specifies the parameters, protocols, and timing decisions of option 2 of the Regional Stormwater Monitoring Program be identical to those of option 1 of the Regional Stormwater Monitoring Program. We believe these clarifications can be effectuated similar to Ecology's July 2013 errata concerning date changes to the status and trends sampling requirements and the submittal requirements for stormwater manuals. Alternatively, Ecology could elect to include these changes into its current efforts to modify the permits to incorporate the Pollution Control Hearings Board rulings.

With this considered, we would like to make you aware of a few concerns for the process. We have proposed solutions as well. These are enumerated below.

1. Data Use
   When we chose to conduct the RSMP status and trends monitoring we understood that the data we generated would still be part of the RSMP for Puget Sound. The permit gave us information on what would be monitored, timing, and some procedural direction. The permit specified that

we will follow the RSMP QAPP and monitor sites extracted from a list generated for the RSMP effort. We anticipated that the monitoring elements set forth in the permit would be a part of the RSMP and be the same in scope to the work of the pooled resources group. This must be the case in order to achieve the goal of a single Regional Monitoring Program. Unfortunately, this is not the case.

We are concerned that several variances in the parameters being tested and timing of the work have created two monitoring efforts (PROC and Pierce-Bellingham-Redmond) and will result in data that is not comparable. . To have our information go unused due to differences in monitoring parameters and timing would be contrary to goals of a single Regional Program and would be an unnecessary waste of resources. That would not be in the best interest of the overall plan and would be a disservice to our rate payers. Our proposed solution to this issue is:

- *Modify our time schedule to synchronize with the PROC schedule.*
- *Allow us an opportunity to modify our testing parameters to fit more closely with those that the pooled resources group ultimately decides upon. This would reduce the number of parameters that simply become outlier data for the RSMP program.*

2. Contribution to Overall RSMP Study

We are conducting a disproportionate share of the overall monitoring. Pierce, Redmond and Bellingham represent about 12% of the total funding for the S & T effort. The majority of that total is Pierce County, who will be monitoring across a large geographic region. The initial goal of the RSMP was to conduct detailed monitoring at 100 stream sites. While the PROC still intends to sample 100 sites, parameters have been added, deleted, or only designated to certain sites. As a result, only a portion of the data will be comparable to what is being collected by Pierce, Redmond, and Bellingham.

Pierce, Redmond and Bellingham are required to provide detailed monitoring at 28 sites, which is 47% as many sites as the pooled resources group is covering. The issue is not simply the skewed level of effort, but the concern that so much good data will be collected with no confirmed use. More importantly, it is a further indication that the information gained from our monitoring may have limited application in the final region-wide analyses. To reiterate, -we believe that the solution is to align our work to match with the overall effort. If we are sampling for the same parameters, sampling on the same time schedule and, following the same protocols then our data could be assimilated into the overall data set. This should aid the RSMP group in their budget shortfall and again make sure that our efforts are not wasted. We recommend:

- *In the event that some of our sites are deemed ineligible for use in the total project (perhaps too far down the priority list, too small, etc.) we would again request that Ecology remove the prescriptive number of monitoring locations from the permit requirement. This would focus on assuring quality sites that can be used for the overall effort.*

3. Data Collection and Processing

The task of putting this program in place is formidable and the SWWG has worked long and hard to make this happen. Ecology is working through many of these issues and we greatly appreciate

your efforts. However, with respect to the large scope of this task, we would appreciate your consideration of the issues outlined below as well.

Requirement for lab methodologies:
The NPDES permits do not prescribe laboratory methods, so that is being addressed through individual QAPPs. The PROC appears to be leaning toward using the Manchester Environmental Laboratory (MEL) for the majority of their analytical work. The freshwater status and trends QAPP is requiring methodologies that are exclusive to MEL or difficult for other labs to run. We are not required to contract with MEL for the majority of the work, but may in effect be forced to due to QAPP requirements.

- *Allow to use comparable methods for testing as long as the laboratory we use is certified/accredited by Ecology and can meet the QAPP required reporting limits.*

Streams going dry in summer:
The permit requires freshwater stream sampling over a twelve month period. While we are doing our best to determine which streams are perennial, the need to select streams before we can watch them over the dry season has resulted in the inclusion of sites that are far from optimum. Redmond also has a unique situation. Due to its size and level of urbanization, it does not have enough perennial streams to meet their permit requirements. We have not been give clear direction about what will happen in the event a selected stream is not truly perennial and dries up during the next monitoring year. We suggest two remedies:

- *Modify the permit to remove the prescriptive requirement on the number of monitoring sites for those who chose Option 2. The number of monitoring sites may be a number to strive for but allowance should be given to reduce the number based on real limiting factors that cannot be mitigated. We should be concentrating on making sure that we are providing quality monitoring and not simply hitting a numeric target.*

- *Add language to the QAPP that the Permittees will not be penalized if the selected site cannot be monitored due to absence of water or other defensible reasons. If a site goes dry, the site will be dropped from the required list of monitoring sites. Replacing it with another site should not be required; the associated monthly WQI sampling could not be initiated mid-season.*

Thank you for taking the time to consider our information and requests. We remain committed to a single Regional Stormwater Monitoring Program. Our recommendations are intended to ensure that outcome. Please let us know at your earliest convenience how you would like us to proceed from here.

Please feel free to contact Jerallyn Roetemeyer, City of Redmond (425.556.2824), William Reilly, City of Bellingham (360.778.7955), or Carla Vincent, Pierce County at (253.798.2467) if you have any questions.

Respectfully,

Dan D. Wrye
Water Quality Manager
Pierce County Public Works & Utilities

Ted Carlson
Public Works Director
City of Bellingham

Linda E. De Boldt
Public Works Director
City of Redmond

Phase I & WWA Phase II Modification Comments, Pierce County

Permit	Section	Page	Comment
Phase I	S5ci-ii	20-22	Foot note 3 asserts status of proposed and approved watersheds submitted under paragraph (i). This note should also state the status of the approved scopes of work submitted and approved by Ecology under the same section, paragraph (ii) on page 21. Specifically, Pierce County requests the following language be added to the permit: **"On August 4, 2014, Ecology approved the scope of work and schedule required by subparagraph (ii) of this section submitted by Pierce County on its selected Spanaway Creek/Lake Watershed."**
Phase I	S5cii	20	The proposed language requires only "Permittees subject to a Washington State municipal stormwater permit" for mandatory participation in the watershed-scale planning process. This limitation excludes other municipal stormwater permit holders that are subject to EPA permitting (e.g., federal facilities and discharges on Tribal Lands) and unpermitted stormwater discharhers, such as drainage districts, which Ecology has not issued permits to. This is a major limitation in the ability of County permittees' ability to meet the objectives of the permit requirement for use attainability. Pierce County urges Ecology to seek delegation for federal facilities and Tribal Lands permitting and to complete permitting of unpermitted discahares to fill these gaps and to cost share for the watershed scale planning as Phase II Permittees are in this modification.

Phase I	S5civ	24	Subparagraph (iv) proposes to extend the due date of the watershed-scale plan from October 1, 2016 to September 1, 2017. Pierce County has developed, and Department of Ecology, has approved our watershed-scale schedule that contains the October 1, 2016 date of the original permit. In a June 5, 2014, email to Pierce County (attached), Department of Ecology asserts that altering interim schedule milestones that have the potential to affect the project end date could be significant change to the approved scope and would require written approval from Ecology. When informed by Ecology that it was considering extending the deadline for the watershed-scale plan, Ecology explained its reasoning as the additional time would be use in it clarifying and potentially altering the plan requirement and to be used to collect additional field data. Both of these reasons would necessitate a change in the approved scope of work and add more time and cost to the project. For these reasons, Pierce County does not support the extension of this due date without the following explicit qualifying language being added to the permit: ***"Changes of schedules contained in Ecology-approved scopes of work and schedules as of October 1, 2014, shall not be considered permit violations provided the plan is submitted by September 1, 2017. Permittees are not required to conduct additional sampling or modeling that is not contained in an approved scope of work."***
Phase I	S5cv	24-25	This subparagraph is a totally different approach to meeting this requirement than was in the final permit, which itself, deviated signifiantly from the published draft permit. Requiring the resource and financial contributions of Phase II permittees is a major departure from the final permit which required only Phase I Counties to fund this work. Had Pierce County been given the opportunity of have Ecology require other Permit holders to pay a proporationate share of the sampling, modeling, and planning costs, we may have selected a different watershed. Ecology's process and schedules in this permit that required its approval of watershed selection, and scopes of work precluded that possibility.
Phase I	S5cv		

Phase I	S8B1bi	56	Pierce County supports this change to start monitoring on the water year. The jurisdictions that have elected under the permit to self-conduct status and trends monitoring as part of the Puget Sound Regional Monitoring Program have made additional recommendations to ensure the single, comprehensive Regional Monitoring Program is successful. A letter to that effect is attached. In summary, Pierce County requests the following language or alternative language that meets the same objectives be added to the Permit: "**All sampling parameters, frequencies and schedules shall be the same as those used by Option 1 status and trends monitoring.**" This change would ensure the success of the Puget Sound Regional Monitoring Program by ensuring compatibility and usefulness of stormwater monitoring between Option 1 and Option 2 participants.
Phase I	S5.C.2.a.i, S5.C.2.a.v,S6.D.3.c-d,S6.E.3.c.i & S6.E.c.ii	various and in SWMMM also	The proposed language adds a new definition of "discharge points" which is not required by the PCHB ruling and includes "dispersion" which is decidedly not a "point". This addition increases the number and location of mapping, inspection and compliance activities and overall expands the reach of the Permit. Pierce County requests this definition be deleted from the permit.
Phase I	Appendix 1, Sec. 2, Sec. 4.2 #10	various and in SWMMM also	The proposed language changes the definition of "outfall" which is not required by the PCHB, already defined under EPA regulations and increases the likelihood of inconsistent federal and state compliance oversight of NPDES permittees in Washington. It also confuses and penalizes permittees who have already mapped outfalls as required under previous permits. Pierce County requests this definition be deleted from the permit.
Phase I	S5.C.2.a.i, S5.C.2.a.v,S6.D.3.c-d,S6.E.3.c.i & S6.E.c.ii	various and in SWMMM also	The proposed language adds a new definition of "receiving waters" which is not required by the PCHB ruling and adds compliance threads to objects in addition to already adopted Waters of the United States and Waters of the State. This addition expands the reach of the Permit. Pierce County requests this definition be deleted from the permit.

WWA Stormwater Manual Modification Comments, Pierce County

Volume	Section	Page	Comment
All	All	All	In the revised permit language Ecology changed the reference from the "2012 Stormwater Management Manual for Western Washington" to "Stormwater Management Manual for Western Washington" with a revised definition of: "SWMMWW" and "Stormwater Management Manual for Western Washington" means the Stormwater Management Manual for Western Washington as amended in 2014". How can Ecology require adherence to a Manual that has not been adopted and was sent out in draft after the date we were required to submit a Stormwater Manual that is equivalent? Also, Ecology has missed its own deadlines for providing comments on Pierce County's stormwater manual that was submitted on time. Pierce County views this a deliberate attempt of Ecology to impose additional requirements on the County outside of the Permit Modification and public involvement process because they state their own Manual will not be finalized until the end of 2014 well after the formal public comment period.
I		Figure 2.5.1	In volume 1, Ecology added Figure 2.5.1 – Flow Chart for Determining LID MR #5 Requirements. The asterick (*) states "Recommended by Ecology for projects triggering MR #1-5." Yet the asterick is referring to the requirement of applying BMP T5.13 Post-Construction Soil Quality and Depth for projects triggering MR #1-9. This is confusing. Is it Ecology's intent that BMP T5.13 is required on all projects triggering MR #1- and #1-9 unless it is infeasible? This needs to be clarified by Ecology.
I		Figure 2.5.1	Iin bold letters in the figure states **"If the project can't meet the LID Performance Standard, it must be redesigned to meet the LID performance standard or an exception / variance must be approved."** Ecology needs to specify who is responsible for granting the exception/variance

II		BMP C151	Concrete Handling, under Conditions of Use, bullet 8, Ecology revised the language from: "Wash out concrete truck chutes, pumps, and internals into formed areas only. Assure that washout of concrete trucks, is performed off-site or in designated concrete washout areas. Do not wash out concrete trucks onto the ground, or into storm drains, open ditches, streets, or streams. Refer to BMP C154 for information on concrete washout areas." To: "Assure that washout of concrete trucks, chutes, pumps, and internals is performed at an approved off-site location or in designated concrete washout areas. Do not wash out concrete trucks onto the ground, or into storm drains, open ditches, streets, or streams. Refer to BMP C154 for information on concrete washout areas." These revisions are too restrictive. It seems odd that it's ok to pour a concrete foundation, slab, etc., yet you are not allowed to clean the washout into a formed area that is ready for concrete.
II		BMP C154	Concrete Washout Area, under Conditions of Use, last bullet states: "Note: If less than 10 concrete trucks or pumpers need to be washed out on-site, the washwater may be disposed of in a formed area awaiting concrete or an upland disposal site where it will not contaminate surface or ground water. The upland disposal site shall be at least 50 feet from sensitive areas such as storm drains, open ditches, or water bodies, including wetlands." Ecology revised the first bullet under "Implementation" from: "Perform washout of concrete trucks off-site or designated concrete washout areas only." To: "Perform washout of concrete trucks at an approved off-site location or in designated concrete washout areas only."These revisions are too restrictive. It seems odd that it's ok to pour a concrete foundation, slab, etc., yet you are not allowed to clean the washout into a formed area that is ready for concrete.
V	Maintenance standards for bioretention and permeable pavement	page 4-0	Inspection and routine maintenance frequencies listed here cannot not supersede or replace the municipal stormwater permit requirements for inspection frequency required of municipal stormwater permittees for "stormwater treatment and flow control BMPs/facilities."

V	Maintenance standards for bioretention and permeable pavement	page 4-0	The inspection frequency for the facility types must not be more more frequent than "Annual" in all cases to be consistent with the permit inspections requirement. "Ab" and "S" frequencies (Ab is during a storm and S is after a 10 year storm) should be avoided as Ab is too difficult to schedule reliably and S is redundant as it is addressed elsewhere in the permit
V	Maintenance standards for bioretention and permeable pavement	page 4-0	Ponding in biorention that produces mosquitoes indicates that permittees cannot use Bti or pesticides. That is too restrictive.
V	Maintenance standards for bioretention and permeable pavement	page 4-0	The procedures include a specific action to "Take actions to eliminate the hazard and stabilize slopes." These 2 defects both under Earthen Side Slopes and Berms could be the same as these 2 sentences in Side Slopes of Ponds. You would go from 110 words to 35 words and two defects to one, keeping it simple. There are many examples that are existing defects in Detention Ponds (1), Infiltration Ponds (2), Typical Biofiltration Swale (8), Wet Biofiltration Swale (9) and Filter Strips (10) where the same language can be used to describe condition and results expected for Biofiltration facilities.
V	Maintenance standards for bioretention and permeable pavement	page 4-0	DOE should come up with a method to test the permeability of the pavement that does not require a $37 purchase of the ASTM C1701 hardcopy of pdf that cannot be shared. http://www.astm.org/Standards/C1701.htm
V	Maintenance standards for bioretention and permeable pavement	page 4-0	Under Porous Asphalt or Pervious Concrete – Surface Clogged – Action Needed it says: "Note: If the annual/biannual routine maintenance standard to clean the pavement surface is conducted using equipment from the list above, corrective maintenance may not be needed. " It does not tell you what to do next. Are you not required to do anything is you use a pure vacuum and it still shows signs that the surface is clogged?

V	Maintenance standards for bioretention and permeable pavement	page 4-0	Under Porous Asphalt or Pervious Concrete – Moss growth inhibits infiltration or poses slip safety hazard – Action Needed it says: "Sidewalks: Use a stiff broom to remove moss in the summer when it is dry". Since this is under procedure are you saying that this is the only remedy we are allowed to use since there is no other options available like pressure washing or vacuum sweeping?
V	Maintenance standards for bioretention and permeable pavement	page 4-0	Under Porous Asphalt or Pervious Concrete – Major Cracks or Trip Hazards and Concrete Spalling and Raveling – Action Needed it says: "Large cracks and settlement may require cutting and replacing the pavement section. Replace in-kind where feasible. Replacing porous asphalt with conventional asphalt is acceptable if it is a small percentage of the total facility area and does not impact the overall facility function. " What is considered feasible? It says to "fills potholes or small cracks with patching mixes". Does that mean you can use regular asphalt with tack and crack seal with tack to fix these defects? Remove Inlets/Outlets/Pipes. You don't talk about pipe or catch basins in ponds. Why in Permeable Pavement?
V	Maintenance standards for bioretention and permeable pavement	page 4-0	
		BMP S431	BMP S431 BMPs for Washing and Steam Cleaning Vehicles/Equipment/Building Structures is in conflict with the referenced guidance manual WQ-95-056 Vehicle and Equipment Washwater Discharges/ Best Management Practices Manual, November 2012. Guidance manual indicates that discharges to ground must be permitted, BMP S431 does not indicate this. The 2012 update of WQ-95-056 has added a lot of confusion to the issue and BMP S431 adds additional confusion.