Pollution Control Hearings Board
Shorelines Hearings Board
Forest Practices Appeals Board
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Environmental and Land Use Hearings Board

Telephone: (360) 459-6327
FAX: (360) 438-7699
Email: eho@eho.wa.gov
Website:www.eho.wa.gov

STATE OF WASHINGTON
ENVIRONMENTAL HEARINGS OFFICE
Mailing Address: PO Box 40903, Olympia, WA 98504-0903
Physical Address: 4224 - 6th Ave. SE, Bldg. 2, RoweSix, Lacey, WA 98504-0903

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AUG 0 8 2008
ATTORNEY GENERAL'S OFFICE
Ecology Division

August 7, 2008

TO ALL PARTIES IN PHASE I APPEALS:

RE: APPEALS OF PHASE I MUNICIPAL STORMWATER PERMIT
PCHB Nos. 07-021, 026, 027, 028, 029, 030 & 037

Counsel:

Please find enclosed the Findings, Conclusions and Order of the Pollution Control Hearings Board, and Concurrence and Dissent.

This is a FINAL ORDER for purposes of appeal to Superior Court within 30 days, pursuant to WAC 371-08-555, 560, and RCW 34.05.542.

The following notice is given per RCW 34.05.461(3): Any party may file a petition for reconsideration within 10 days and serve it on the other parties. For purposes of this deadline, the date of filing means the date a petition for reconsideration is actually received by the Board.

Sincerely yours,

Kay M. Brown, Administrative Appeals Judge,
Presiding

KMB/dj/Phase I
Enc.
Cc: Bill Moore, Ecology
Kathleen Emmett, Ecology

CERTIFICATION

On this day, I forwarded a true and accurate copy of the documents to which this certificate is affixed via United States Postal Service postage prepaid to the attorneys of record herein.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

DATED August 7 2008, at Lacey, WA.

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Ecology Division

POLLUTION CONTROL HEARINGS BOARD
STATE OF WASHINGTON

PUGET SOUNDKEEPER ALLIANCE; PEOPLE FOR PUGET SOUND; PIERCE COUNTY PUBLIC WORKS AND UTILITIES DEPARTMENT; CITY OF TACOMA; PORT OF SEATTLE; SNOHOMISH COUNTY; CLARK COUNTY; PACIFICORP; and PUGET SOUND ENERGY,

Appellants,

v.

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY,

Respondent,

CITY OF SEATTLE; KING COUNTY; PORT OF TACOMA; PACIFICORP; PUGET SOUND ENERGY; STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION,

Intervenors.

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER

PHASE I

PCHB NOS. 07-021, 07-026, 07-027
07-028, 07-029, 0-030,
07-037

These consolidated appeals involve the regulation of stormwater discharges from municipal storm sewer systems under a National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit (State Waste Permit). In these appeals, multiple parties challenge the validity of the Department of Ecology's (Ecology) 2007 Phase I Municipal Stormwater General Permit (Phase I Permit). This permit was issued pursuant to the

Federal Water Pollution Control Act, commonly known as the "Clean Water Act" (CWA), 33 U.S.C. § 1251 *et seq.* and the state Water Pollution Control Act, (WPCA), Chapter 90.48 RCW.

The Pollution Control Hearings Board (Board) held a multiple day hearing between April 29, 2008 and May 8, 2008. Attorneys Todd True and Jan Hasselman represented Appellants Puget Soundkeeper Alliance and People for Puget Sound (PSA). Attorney Tad H. Shimazu represented Appellant Pierce County. Assistant City Attorney Doug Mosich represented Appellant City of Tacoma. Attorneys Susan Ridgley and Tanya Barnett represented Appellant Port of Seattle. Catherine A. Drews and Elizabeth E. Anderson, Deputy Prosecuting Attorneys, represented Appellant Snohomish County. E. Bronson Potter, Senior Deputy Prosecuting Attorney and Rodney Swanson, Clark County Department of Public Works represented Appellant Clark County. Attorneys Loren R. Dunn and Blake Mark-Dias represented Appellants Pacificorp and Puget Sound Energy (Utilities). Ronald L. Lavigne, Senior Counsel, and Thomas J. Young, Assistant Attorney General represented Respondent Ecology. Assistant City Attorney Theresa R. Wagner represented Intervenor City of Seattle. Senior Deputy Prosecuting Attorney Joseph B. Rochelle and Deputy Prosecutor Verna P. Bromley represented Intervenor King County. Attorney Carolyn Lake represented Intervenor Port of Tacoma. Stephen Klasinski, Assistant Attorney General represented Intervenor Washington State Department of Transportation (WSDOT).

Chair, Kathleen D. Mix, William H. Lynch, and Andrea McNamara Doyle comprised the Board. Administrative Appeals Judge Kay M. Brown, presided for the Board. Randi Hamilton

and Kim L. Otis of Gene Barker and Associates of Olympia, Washington provided court reporting services.

PROCEDURAL BACKGROUND

On January 17, 2007, Ecology issued the Phase I Permit for discharges from large and medium municipal separate storm sewer systems (called MS4s). The Phase I Permit went into effect on February 16, 2007.

PSA, Pierce County, City of Tacoma, Port of Seattle, Snohomish County, Clark County, and the Utilities appealed the Phase I Permit.[1] The Board conducted pre-hearing conferences, and entered pre-hearing orders for the Phase I Appeal. The parties raised multiple issues. The Board addressed many of these issues in a separate summary judgment order[2] and has resolved others through orders on summary judgment and after a hearing on the merits related to the Permit's Special Condition S4.[3] The parties also withdrew some of the issues. This decision resolves the remaining issues, which include the following:[4]

C. Special Condition 8 re: Monitoring (challenged only by Clark and Pierce County)[5]

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[1] City of Pacific (PCHB No. 07-031), Whatcom County (PCHB No. 07-032), and Sammamish Plateau Water & Sewer District (PCHB No. 07-024) filed additional appeals, but they are not part of this consolidated action.

[2] See Order on Dispositive Motions (Phase I Municipal Stormwater Permit), issued on April 7, 2008.

[3] See Order on Dispositive Motions: Condition S4, issued on April 2, 2008 and Findings of Fact, Conclusions of Law and Order, Condition S4, issued on August 7, 2008.

[4] The numbering of these issues was retained from the numbering system used in the Third Pre-Hearing Order issued on December 11, 2007.

[5] All of the permittee appellants initially raised issues related to the S8 monitoring provisions. These issues were resolved through an agreement between Ecology and all of the permittee appellants except Clark and Pierce County. *See* Ex. Ecy 11 (Phase I). The agreement also resolves issues raised by Snohomish County related to Special Condition S7.

1. Whether the requirements imposed in Special Condition S8 are lawful, practicable, reasonable, and/or designed to achieve the goals of the statutory municipal stormwater permit program?

3. Whether the monitoring requirements imposed in Special Condition S8 are overly broad, overly prescriptive, and cost-ineffective so that requiring implementation of such requirements as written is unlawful, impracticable, and/or unreasonable?

E. Issues Specific to the Ports of Seattle and Tacoma

5. Whether the requirement in Special Condition S6.E.7 to prepare and implement SWPPP(s) for "all Port-owned lands," regardless of their capacity to generate pollutants or other site-specific characteristics, is unlawful, unreasonable, unjust, or invalid?

F. Joint Environmental Legal Issues

1. Low-Impact Development:

   a. Does the permit fail to require maximum on site dispersion and infiltration of stormwater, through the use of "low impact development" techniques, basin planning, and other appropriate technologies, and if so, does that failure unlawfully cause or contribute to violations of water quality standards?
   b. Does the permit fail to require maximum onsite dispersion and infiltration of stormwater, through the use of "low impact development" techniques, basin planning, and other appropriate technologies, and if so, does that failure unlawfully allow permittees to discharge pollutants that have not been treated with all known available and reasonable methods of treatment ("AKART"), and/or fail to reduce the discharge of pollutants to the maximum extent practicable ("MEP")?

2. Existing Development:

   a. Does the absence of any standard and/or technology requirements for reducing stormwater discharges from existing development and existing stormwater systems unlawfully cause or contribute to violations of water quality standards?

b. Does the absence of any standard and/or technology requirements for reducing stormwater discharges from existing development and existing stormwater systems unlawfully allow permittees to discharge pollutants that have not been treated with AKART, and/or fail to reduce the discharge of pollutants to MEP?

3. Monitoring: Is the monitoring required under Permit Condition S.8 unlawful because it is inadequate to determine whether: (i) the permittee is in compliance with water quality standards; (ii) discharges are causing or contributing to violations of water quality standards; or (iii) discharges are being treated with AKART and/or MEP?[6]

4. Water Quality Standards Violations:

   a. Does the Phase I permit fail to ensure that discharges will not cause or contribute to violations of water quality standards?[7]

5. Compliance:

   a. Does the permit unlawfully provide for compliance with permit terms on a schedule that is indefinite and unenforceable, not as expeditious as possible, and/or in excess of statutory deadlines?
   b. Does the permit unlawfully allow a permittee to create and implement permit requirements without Ecology's oversight or involvement?

Based on pre-filed testimony, multiple days of sworn testimony of witnesses, extensive exhibits submitted into the record, and argument from counsel representing the numerous parties that participated in these consolidated appeals, and having fully considered the record, the Board enters the following decision:

[6] PSA is not challenging the monitoring provisions of the permit. This issue is brought by the Utilities only.
[7] This issue also includes the issue originally stated as S4.6: Does the prohibition on violations of water quality standards contained in Permit Condition S4 unlawfully or unreasonably conflict with the other provisions of the permit?

SUMMARY OF THE DECISION

The Board concludes that the monitoring program established in Special Condition S8 and required of all permittees is a valid exercise of Ecology's technical expertise and discretion. (Issues C.1 and 3, and F.5). The Board upholds the permit term requiring that Stormwater Pollution Prevention Plans (SWPPPs) be prepared on all port-owned lands, but directs that Ecology modify the condition to exempt environmental mitigation sites owned by the Port of Tacoma from the SWPPP preparation requirement. (Issue E.5). The Board concludes that the Phase I Permit fails to require that the municipalities control stormwater discharges to the maximum extent practicable, and does not require application of all known, available, and reasonable methods to prevent and control pollution, because it fails to require more extensive use of low impact development (LID) techniques. (Issue F.1.b). To remedy this problem, the Board directs Ecology to make specific changes to some provisions in the permit, and also remands the permit with direction to Ecology to require the permittees to develop methods for use of low impact development at parcel and subdivision levels in their jurisdictions. The Board concludes that permittees must provide information in their annual report to Ecology on the extent to which basin planning is being undertaken or should be considered in their jurisdiction in order to assist with future phases of the permit. The areas identified should be relatively undeveloped where new development is occurring, and from which discharges may impact aquatic resources. The Board concludes that the structural stormwater control program provisions of the permit, as drafted, constitute impermissible self regulation. (Issues F.2 and F.5.b). To remedy this deficiency, the Board directs modification of the permit to require

permittees to describe the prioritization of their selected structural control projects. The Board affirms the source control program requirements without change. Finally, the Board concludes that PSA and the Utilities failed to prove that any of the conditions of the permit violate the timing requirements of 33 U.S.C. § 1342 (p)(4)(A) (Issue F.5.a).

FINDINGS OF FACT

A. History of Phase I Permit

1.

Ecology developed the current Phase I Permit through an eight year long process. The 2007 Phase I Permit replaced the first municipal stormwater NPDES and State Waste Permits, which were issued in 1995 and expired in July of 2000. *Testimony of Wessel, Moore, Exs. Muni 0002, p. 17, 0006, 0007, 0008, 0009.*

2.

On January 19, 1999, Ecology filed a Notice of Intent to reissue the 1995 permits. *Ex. Muni 0002, p. 6.* Ecology formed an advisory committee, which included representatives from cities, counties, state and federal agencies, environmental groups, and the public, to assist with development of the revised permit. This committee met several times during 1999 and 2000. *Testimony of Wessel, Moore, Exs. Muni 0002, p. 6-7.* The 1995 Phase I Permit closely followed the EPA Phase I Regulations, which allowed the permittees to propose what was contained within their own stormwater programs. Ecology was dissatisfied with this approach and decided that more detailed requirements were needed for the 2007 Phase I Permit. *Testimony of Moore.*

3.

Completion of the new permit was delayed at several junctures as a result of a number of intervening events and shifting priorities, including the federal listing of Puget Sound Chinook Salmon in 1999, the adoption of EPA's Phase II rules, and Ecology's decision to revise the state's Stormwater Management Manuals and develop the first Phase II municipal stormwater permits in tandem with the Phase I permit update. *Testimony of Wessel, Moore, Exs. ECY 6 (Phase I), Muni 0002, p. 7.*

4.

In response to legislative interest in the new federal requirements for municipal stormwater permits, Ecology convened two advisory groups during the summer of 2003: one for Eastern Washington and one for Western Washington. Each advisory group submitted a report of its findings to Ecology in early December, 2003. Ecology developed its own recommendations and published these, together with the recommendations from both advisory groups, in a report to the Legislature dated January, 2004. *Testimony of Moore, Exs. ECY 6 (Phase I), Muni 0002, p. 7.*

5.

Ecology filed a notice of intent to issue the Phase I and Phase II Permits in June of 2004. The agency released the first preliminary draft of the Phase I Permit for public comment in May, 2005, and the first formal draft in February, 2006. *Exs. PSA 018, Muni-0100.* Ecology received and reviewed thousands of pages of public comment, and responded to those comments in a 205 page document when it released the revised, final permit in January, 2007. *Exs. Muni 002, p. 7-*

8, ECY 3 (Phase I). Ecology issued the Phase I permit, in its current form, on January 17, 2007. It became effective on February 16, 2007, and expires on February 15, 2012. *Ex. Muni 001, Testimony of Moore.*

B. Overview of the permit

6.

The Phase I Permit regulates discharges from municipal separate storm sewer systems (MS4s) owned or operated by the following large and medium municipalities statewide: City of Seattle, City of Tacoma, Clark County, King County,[8] Pierce County and Snohomish County.[9] It also allows coverage of "secondary permittees," including the Ports of Seattle and Tacoma, for discharges from other publicly owned or operated municipal separate sewer systems located within the primary permittee cities and counties. Secondary permittees as a group are subject to somewhat different terms under the permit than primary permittees, and the permit also has specific terms applicable only to the Ports of Seattle and Tacoma and not other secondary permittees. The Phase I permit does not cover direct discharges into waters of the state from privately owned stormwater systems, nor does it cover the storm sewers owned and operated by the Washington State Department of Transportation (WSDOT).[10] Unlike traditional NPDES permits, the Phase I permit is a "programmatic permit," meaning it requires the municipal

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[8] King County Department of Metropolitan Services (METRO) is covered as a "co-permittee" with the City of Seattle for discharges from outfalls King County owns or operates in the City of Seattle. *Special Condition S1.C., Exs. Muni 0001, p. 1, Muni 0002, p. 21.*

[9] An MS4 consists of all of the conveyances, or systems of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs gutters, ditches manmade channels or storm drains) designed or used for collecting or conveying stormwater. By definition, these systems cannot be combined with sanitary sewer systems. *Exs. Muni 0001, p. 61, 63, Muni 0002, p. 22-24.*

[10] The Phase I permit does not cover the storm sewers owned and operated by the Washington State Department of Transportation (WSDOT). WSDOT's system is covered under an individual permit. *Ex. Muni 0002, p. 19, 21.*

permittees to implement area-wide stormwater management programs rather than establishing benchmarks or other numeric or narrative effluent limits for stormwater discharges from individual outfalls. *Testimony of Moore, Exs. Muni 0001, p. 1, 2, 60-65, Muni 0002, p 20-24.*

7.

The heart of the Phase I Permit requires that permittees implement a Stormwater Management Program (SWMP). Special Condition S5 contains the SWMP requirements for the primary permittees, and Special Condition S6 sets out the SWMP requirements for secondary and co-permittees. The required elements of the SWMP track closely with EPA's Part II Application rules but contain much more detailed minimum performance standards for the municipalities' programs. This approach avoids the need for separate review and approval by Ecology of each SWMP prior to coverage under the Phase I Permit. Instead, a permittee is required to submit the SWMP with the permittee's first year annual report. S5.A. *Testimony of Moore, Wessel; Exs. Muni 0001, p. 6-25; Muni 0002, p. 18, 28-42.*

8.

Ecology views these SWMP requirements, in the aggregate, to represent the MEP standard; that is, permittees who implement all of the program requirements in combination with one another are considered by Ecology to be reducing the discharge of pollutants to the maximum extent practicable, even though it may be possible for a permittee to do more in a specific program element or at a specific outfall if the individual requirements were evaluated in isolation from the rest of the program requirements. *Testimony of Moore.*

9.

Under Special Condition S5 the SWMP must include ten component parts, which are mandatory to the extent allowable under state and federal law. These program components address the following topics, and the minimum requirements for each are set out in S5.C. 1 through 10 of the Phase I Permit: (1) Legal authority; (2) System mapping and documentation; (3) Coordination; (4) Public involvement; (5) Controlling runoff from new development, redevelopment, and construction; (6) Structural stormwater controls (retrofits); (7) Source control for existing development; (8) Illicit connections, illicit discharge detection and elimination; (9) Operations and maintenance; and (10) Education and outreach. *Muni 0001, p. 6-25.*

10.

More specifically, S5.C.1 requires the permittee to demonstrate by the effective date of the Phase I Permit that it has the legal authority to control discharges to and from its MS4s. S5.C.2 requires the permittee to map, by specific dates, prescribed parts of its MS4. S5.C.3 requires the permittee to establish coordination mechanisms to remove barriers to stormwater management created by the need to coordinate efforts both internally within one governmental entity, and externally with jurisdictions that share drainage basins. S5.C.4 requires the permittee to provide ongoing opportunities for public involvement in its stormwater management program. S5.C.5 requires the permittee to develop a program to prevent and control impacts of runoff from new development, redevelopment, and construction activities. S5.C.6 requires the permittee to

include a program to construct structural stormwater controls to prevent or reduce impacts from discharges from its MS4s. This element is applicable to existing development, as well as new development, and addresses impacts that are not already adequately controlled by other required actions under the SWMP. S5.C.7 requires the permittee to include a source control program for existing development that reduces pollutants in runoff from these areas. S5.C.8 requires the permittee to have an ongoing program to detect, remove and prevent illicit connections and illicit discharges, including spills, into its MS4s.[11] S5.C.9 requires the inclusion of a program to regulate maintenance activities and to conduct maintenance activities by the permittee that prevent or reduce stormwater impacts. S5.C.10 requires that the permittee's SWMP include an education program with the goal of reducing or eliminating behaviors and practices that cause or contribute to adverse stormwater impacts. The performance measures associated with S5.C.2 through 10 must be completed within specific time periods. *Testimony of Moore, Wessel, Exs. Muni 0001, p. 6-25, Muni 0002, p. 28-42.*

11.

Special Condition S6 (S6), which is similar but not identical to S5, establishes the components required for SWMPs from secondary permittees. Parts of this condition apply to all secondary permittees (S6.A, B and C), all secondary permittees other than the Ports of Seattle

[11] An illicit connection is any man-made conveyance that is connected to a MS4 without a permit, excluding roof drains and other similar type connections. An illicit discharge is any discharge to a MS4 that is not composed entirely of stormwater except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities. *Ex. Muni 0001, p. 61.*

and Tacoma (S6.D), and just the Ports of Seattle and Tacoma (S6.E). *Testimony of Moore, Exs. Muni 0001, p. 25-39, Muni 0002, p. 42-47.*

12.

Special Condition S8 (S8) addresses monitoring. It requires the primary permittees and the Ports to develop and implement long-term monitoring programs for the purpose of meeting two of the four monitoring objectives identified in the first round of the Phase I municipal stormwater permits issued in 1995: (1) estimating pollutant concentrations and loads from representative areas or basins; and (2) evaluating the effectiveness of selected Best Management Practices (BMP). The permit does not require monitoring to identify specific sources of pollutants or the degree to which stormwater discharges are impacting selected receiving waters and sediments. *Testimony of Moore, O'Brien, Exs. Muni 0001 p. 40-49; Muni 0002, p. 49-50.*

C. Monitoring provisions in S8

13.

Special Condition S8.C.1 specifies that the primary permittees' and the Ports' monitoring programs must contain three components: 1) stormwater outfall monitoring, which is intended to characterize stormwater runoff quantity and quality at a limited number of locations 2) Targeted stormwater management program effectiveness monitoring, which is intended to improve stormwater management efforts by evaluating at least two stormwater management practices that significantly affect the success of, or confidence in, stormwater controls, and 3) BMP evaluation monitoring, which is intended to evaluate the effectiveness and operation and maintenance requirements of stormwater treatment and hydrologic management BMPs. S8.D, E, and F set out

the requirements for each of the three components. *Testimony of Moore, O'Brien, Exs. Muni 0001, p. 40-49; Muni 0002, p. 49-56.* A Quality Assurance Project Plan (QAPP) must be prepared for each of the components of the monitoring program in accordance with Ecology guidelines and submitted to Ecology for review. Ecology must review and approve the QAPPs for stormwater monitoring conducted under S8.D and F prior to monitoring. *Ex. Muni 0001, p. 40-41.*

14.

The first component of the Special Condition S8 monitoring involves outfall monitoring for the purpose of developing local knowledge of pollutant loads and average event mean concentrations from representative areas drained by MS4s. Developing a baseline of local data is important because some variations are emerging between stormwater characterization data from the Pacific Northwest and other areas around the county and world, with examples of both higher and lower concentration levels present regionally, differing from national averages. To accomplish this objective, the Permit requires permittees to select three sites that represent different land uses and then to monitor a certain percentage of storm events per year for a wide range of constituents and parameters. The permit requires storm events to be sampled using flow-weighted composite storm sampling. S8.D.2.b. The seasonal first-flush must be tested for toxicity. S8.D.2.d. Grab samples from each storm must be taken and tested for total petroleum hydrocarbon and fecal coliform bacteria, and one to three sediment samples must be collected each year at each site and analyzed for a variety of parameters. S8.D.2.e, f. *Testimony of O'Brien, Moore, Ex. Muni 0001, p. 41-45.*

15.

The number of samples is intended to establish a sufficient database from which to discern annual and seasonal loading trends over a long time period. Performing a toxicity test on the "seasonal first-flush storm" provides an annual worst case scenario. Ecology believes this data is necessary to evaluate whether stormwater management programs are making progress towards the goal of reducing pollutants discharged and protecting water quality. The data would also be useful when establishing Water Clean-up Plans (TMDLs) for water bodies not currently achieving water quality standards, and in other efforts to identify sources of toxicant loading to Puget Sound. *Testimony of O'Brien, Ex. Muni 0002, p. 49-53.*

16.

The second component of the S8 required monitoring, described in detail in S8.E, is the targeted stormwater management program effectiveness monitoring. In this section, each permittee must conduct monitoring designed to determine the effectiveness of (1) a targeted action (or narrow suite of actions) from their SWMP, and (2) achieving a targeted environmental outcome. The monitoring must, at a minimum, include stormwater, sediment or receiving water monitoring of physical, chemical and/or biological characteristics, and may also include other kinds of data collection and analysis. Ecology anticipates that the targeted environmental outcomes permittees will chose to evaluate will be measured in the receiving water and, therefore, may involve receiving water monitoring. *Testimony of O'Brien, Moore, Exs. Muni 0001, p. 45-46; Muni 0002, p. 53-54.*

17.

The third component of the S8 monitoring provisions is BMP effectiveness monitoring, the requirements of which are set out in S8.F. The purpose of this third component of the S8 monitoring is to develop local performance data on the effectiveness of specific treatment BMPs in reducing pollutant discharges and the effectiveness of various low impact development (LID) practices in reducing the quantity of runoff. This section requires the primary permittees and Ports to select and monitor two treatment BMPs in use at a minimum of two sites in their jurisdiction. S8.F.2. The permittees are also required to monitor the effectiveness of one flow reduction strategy[12] that is in use or planned for installation in their jurisdiction. S8.F.7. Though many of these treatment BMPs have been in common use for many years, and the 2005 Stormwater Management Manual for Western Washington relies on them as presumptively effective, Ecology has only incomplete information about their actual pollutant removal capabilities. *Testimony of O'Brien, Exs. Muni 0001, p. 46-47; Muni 0002, p. 54-56.*

18.

In the absence of local data, Ecology had relied on an existing national stormwater treatment BMP database, [13]as its primary source of BMPs for the 2005 Stormwater Management Manual for Western Washington (The Manual) *Testimony of O'Brien, Tobiason, Exs. PI 0059, 0060, 0064 and 0065.* The national database is of limited utility, however, in evaluating the

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[12] A flow reduction strategy is an approach that reduces the volume of runoff coming off a landscape. Ecology witness Ed O'Brien indicated in his testimony that this referred to the use of low impact development techniques.

[13] The purpose of the database, called the International Stormwater Treatment Database, is to facilitate understanding about how particular BMPs perform database and contains studies from both inside and outside the United States. *Testimony of O'Brien.*

effectiveness of BMPs because the performance of treatment BMPs varies greatly depending on specific design criteria, loading criteria, different rainfall patterns, and the types and sizes of solids to which a site gets exposed. These factors vary widely across the country, and therefore BMP performance data from one area is not always useful for another area. This has been a specific concern for Washington because, until recently, there has been little Washington data in the database. In some instances, this national database lacks also data quality, and relies on an insufficient number of samples at a particular site or from a particular BMP to be statistically useful. So, while there exists national data that allows Ecology to make some general assumptions about how well BMPs perform, Ecology still lacks site-specific, region-specific data to verify that the BMPs perform the way Ecology anticipates they will perform. As a result, Ecology required permittees to evaluate BMP effectiveness in an effort to learn and apply the information in future settings and permit iterations. *Testimony of O'Brien, Tobiason, Kibbey, Exs. PI 0059, 0060, 0064, 0065, Muni 0002, p.* 54-56.

19.

Ecology considered requiring receiving water monitoring in the Phase I Permit, but the municipalities as a group opposed the requirement. The 1995 Phase I Permit identified one monitoring objective as evaluating the degree to which stormwater discharges impact selected receiving waters and sediments, and Ecology concedes this continues to be a valid long-term objective for the municipal stormwater general permits. In the current iteration of the Phase I Permit Ecology decided, however, that receiving water monitoring data would not be the most helpful monitoring data because 1) receiving water monitoring data is more complex data to

obtain, 2) samples can be hard to collect during storms, and 3) it is difficult to tie the receiving water data back to a specific discharger. Ecology agreed with the municipalities that certain receiving waters may receive pollution from multiple upland sources, and monitoring the receiving water would not provide permittees with useful data by which they could develop or tailor their stormwater management programs. Ecology also does not typically require receiving water monitoring under several other general stormwater discharge permits, including the construction and industrial permits, except for certain impaired water bodies where there have been violations of discharge limitations. *Testimony of Moore, O'Brien. Ex. Muni 0002, p. 49.*

20.

The monitoring required by S8 is primarily aimed at developing a uniform baseline of information about the pollutant loading discharging from MS4s, and evaluating the effectiveness of the BMPs that permittees use to control and reduce the pollutants discharging from those systems. Ecology determined this data will be the most useful for establishing what constitutes maximum extent practicable reduction in pollutants from MS4 discharges for future iterations of the municipal stormwater permits. Allowing some municipalities to opt out of these requirements, by substituting different kinds of monitoring, would reduce the robustness of the data set Ecology seeks for establishing this baseline for future permits. *Testimony of Moore, O'Brien.*

21.

Ecology intends to rely on its own monitoring programs, coordinated with and supplemented by other monitoring efforts, to accomplish the receiving water monitoring

objectives identified in the 1995 permit. Ecology received an $800,000 state appropriation to begin work with a collaborative monitoring consortium to identify the elements of a comprehensive receiving water monitoring program, outside of the permit process. Such a monitoring consortium could more fairly distribute the cost of monitoring among all of the entities with an interest in receiving water data and form the basis for effective, region-wide monitoring of receiving water quality in relation to discharge points. Although Ecology is currently organizing the consortium, no water monitoring has been started to date through this program, and inadequate funding currently exists to do so. Outside the consortium, some receiving water monitoring occurs through statewide ambient water quality monitoring and pollutant specific monitoring where a water body is subject to a TMDL. *Testimony of Moore, O'Brien, Wessel.*

D. Pierce and Clark Counties Monitoring Plans

22.

Two primary permittees, Pierce and Clark Counties, already have water quality monitoring programs which differ significantly from the monitoring required in the Phase I Permit. The key difference between both of the counties' programs, and the Phase I Permit monitoring requirements, is that the county programs focus on monitoring in the receiving water environment. However, neither of the County programs monitors the chemical composition or toxicity of stormwater discharges from their MS4, nor relates stormwater management actions to a reduction in the pollutant characteristics of stormwater. *Testimony of Tobiason, O'Brien, Exs. PSA 018, PI 0042.*

23.

Pierce County began working with a consultant in 2004 to develop its monitoring program. The County developed the program based on the proposed monitoring requirements in an early draft of the Phase I permit, which included a receiving water monitoring component, as well as ongoing communications with Ecology personnel. The 2005 draft of the Phase I permit prescribed two of the five monitoring methods that Pierce County incorporated into its monitoring plan. *Ex. PI 0041.* Pierce County published its final program in March, 2007. *Testimony of Tobiason, O'Brien, Ex. PI 0042.*

24.

The overall goal of the Pierce County monitoring program is to implement a comprehensive monitoring program that will provide meaningful data to support the County's efforts to protect receiving waters from stormwater impacts. Although developed primarily in anticipation of the NPDES permit requirements, it also serves other county water quality objectives. In order to accomplish its goal, the program uses a three level receiving water monitoring approach. It includes long term status and trends monitoring, which includes a triad of bioassessments, physical channel characterization, and in-situ bioassays at existing County monitoring sites in selected streams, and may also include flow monitoring where gauges exist. Pierce County includes the sampling of the stream bottom as part of this long-term monitoring in order to determine the presence and health of benthic invertebrates. Monitoring benthic invertebrates provides a good indicator of watershed health because these organisms respond to physical and chemical stresses at the stream bottom. Pierce County applies these monitoring

methods over a five year period to characterize the receiving waters in up to nine watersheds with regards to the receiving waters' physical stability, habitat, biological health, and susceptibility to toxicants in stormwater. This will enable Pierce County to prioritize responses to watersheds that exhibit vulnerability. It also includes targeted development monitoring, which compares upstream and downstream conditions to assess impacts of stormwater discharges on the receiving waters over finite periods before and after specific development. Targeted development monitoring includes continuous turbidity, conductivity and hydraulic stage monitoring and *in-situ* bioassay upstream and downstream of discharges from targeted development, and assessment of physical channel conditions downstream. Some aspects of the County's monitoring program, particularly the real-time data, will also assist the county in detecting spills and illicit discharges. The third level of receiving water monitoring included is a special studies monitoring. This method provides for adaptive management to be employed as needed on a site specific basis to develop cause-effect relationships that lead to focused stormwater management response. As part of this method, chemical analysis may be conducted if other programs indicate a need for such study to determine the cause of a problem discovered through receiving water monitoring. This is the only aspect of the Pierce County Program that provides for the use of chemical analysis. *Testimony of Tobiason, Kibbey, Exs. PI 0042, Ex. PI 0055, PI 0094.*

25.

Clark County, like Pierce County, has its own monitoring plan which is focused on receiving water monitoring. Clark County developed its plan in response to its first

NPDES/State Waste permit which was issued July, 1999 and expired December, 2000.[14] *Muni 0140, Special Condition S5.B.4, p. 7, 8.* Its plan has three elements: a long-term index site project, hydrologic monitoring, and a stormwater needs assessment program. The index site project involves nine stream stations which are influenced by stormwater, and a forested reference site. A suite of stream health characteristics are monitored at each site. Water quality monitoring takes place on a monthly basis. The hydrologic monitoring consists of monitoring stream flow continuously through the use of storm gauges at several locations, including some of the site index locations. The stormwater needs assessment program is a system created to make an assessment of needs for each sub-basin in the county that contains parts of the MS4. Currently, Clark County is in the process of completing reports on 12 urbanizing and rural sub-watersheds. *Testimony of Swanson, Ex. Muni 0140, p. 7-8.*

26.

The monitoring required under the Phase I Permit is fundamentally different than the monitoring contained in the Pierce and Clark County monitoring programs. The Counties' monitoring programs do not routinely look at the chemical content or toxicity of stormwater discharges, nor do they look at the effectiveness of treatment BMPs. *Testimony of O'Brien, Tobiason, Kibbey.*

[14] Clark County was not informed of the need to submit a permit application until January of 1995, because of confusion over whether Clark County met the requirements of the Phase I Permit, i.e. urbanized area with a population greater than 100,000. *Ex. Muni 0141, p. 8.*

27.

Ecology stated that it was extremely important to be able to answer whether our stormwater programs are adequate to protect aquatic resources and uses in its 2004 report to the Legislature. Therefore, Ecology included recommendations that certain types of environmental monitoring be conducted at the local and regional levels, including monitoring of the biological, chemical, and physical health of receiving waters. *Ex. ECY 6 (Phase I), p. 31-32.*

28.

Ecology does not oppose the Counties continuing on with their own monitoring programs in addition to the S8 monitoring. However, it has not allowed Pierce and Clark Counties to substitute their programs for the required S8 monitoring. Ecology witness Edward O'Brien did not rule out the possibility that Ecology could allow Pierce and Clark to substitute their monitoring programs for some parts of the required S8 monitoring. Pierce County witness Heather Kibbey testified that Pierce County could not afford to do both its receiving monitoring program and the required S8 monitoring. *Testimony of O'Brien, Tobiason, Kibbey.*

E. Ports

29.

One of the required elements of the SWMP for all Phase I permittees is the preparation of a stormwater pollution prevention plan (SWPPP). The permit requires all primary permittees to prepare SWPPS for "all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee(s)" that are not already covered by another stormwater discharge permit. S5.C.9.b.xi, p. 23, 24. The primary permittees are allowed 24

months to complete the development of their SWPPPs. The secondary permittees, other than the Ports, are required to prepare SWPPPS for "material storage areas, heavy equipment storage areas, and maintenance areas" not covered by another stormwater discharge permit. S6.D.6.a.vi, p. 32. Their SWPPPs must also be completed within three years from the date of permit coverage. *Testimony of Moore, Ex. Muni 0001, p. 23, 24, 32.* In contrast, the Ports' SWPPP preparation requirement, found in S6.E.7, requires the Ports to prepare SWPPPs "all Port-owned lands" that are not covered by another stormwater discharge permit. The Ports are allowed 24 months to develop and implement their SWPPPs. *Ex. Muni 0001, p. 38.*

30.

The Port of Seattle estimates this requirement will involve the preparation of SWPPPs for approximately 44 properties covering approximately 27 percent of its total Seaport acreage (286 acres).[15] Some of these sites include port-controlled and operated facilities with multiple tenants, such as Shilshole Marina and Fisherman's Terminal, and several others consist of tenant-controlled container areas. *Testimony of Guthrie, Exs. PI 0020, 0022.* The Port of Tacoma has identified several port-owned sites that are not covered by other stormwater discharge permits, some of which include buildings and parking lots leased to other businesses, others of which consist of environmental mitigation sites. *Testimony of Graves, Ex. PI 0039.*

31.

The Phase I fact sheet explains Ecology's general thinking regarding SWPPP preparation

[15] By agreement with Ecology, SWPPPs will not be required on "no discharge" properties, which include Port-owned parks and properties with connections to Metro Stormwater Conveyances.

for the primary permittees. It states:

> Ecology has determined that activities at certain sites owned or operated by permittees are potentially similar to activities at sites regulated under the Industrial Stormwater General Permit. For this reason this provision of the permit calls for developing Stormwater Pollution Prevention Plans (SWPPPs) for these sites.
>
> *Ex. Muni 0002, p. 41.*

32.

In the 2005 draft of the Phase I Permit, Ecology required SWPPP preparation for "all Port-owned lands with potential pollutant-generating sources." *Ex. PSA 018, p. 37.* The final permit eliminated the qualifier because Ecology expected that all port-owned lands would be pollutant-generating sources, although Ecology did not consider wetland mitigation areas owned by the Port of Tacoma when it made this decision. *Testimony of Graves, Moore, Exs. PSA 018, p. 37; PI 0022, 0025-0027.*

33.

The Port of Tacoma owns several environmental mitigation sites (i.e. wetlands). Most of these sites probably discharge directly to surface or ground waters of the state, and not to the MS4. For the ones that do discharge to the MS4, there is only a small potential that the discharges would carry pollutants. Therefore, preparation of SWPPPs on these sites is unlikely to result in any corresponding water-quality benefits. *Testimony of Moore, Graves.*

34.

Ecology also explains in the fact sheet its reasons for providing a slightly different

standard for the Ports regarding SWPPP preparation. It states:

> Ecology has determined that special consideration is needed for the Ports of Seattle and Tacoma, distinguishing them from the broader group of Secondary permittees such as diking and drainage districts and public universities. These ports are both located on urban bays with documented water quality and sediment contamination problems that may be linked to stormwater discharges. The infrastructure in both Seattle and Tacoma is fairly old and the MS4s are heavily interconnected between each port and the respective city. Also, both ports lease properties to tenants, of whom many, but not all, are required to have coverage under the Industrial Stormwater General Permit. For these reasons this permit establishes SWMP components that are specific to these two entities.

Ex. Muni 0002, p. 43.

35.

In general, the permit has more requirements for primary permittees SWMPs than it does for the Ports. *Contrast* S5.C. 1 through 10 (establishing 10 components for primary permittees SWMPs) p. 6-25 with S6.E (establishing 7 components for Ports SWMPs) p. 32-39. The source control program for existing development, which is a component of both primary permittees and the Ports SWMPs, also imposes more requirements on the primary permittees than it does the Ports. *Contrast* S5.C.7, p. 13-15, with S6.E.7, p. 38-39. Further, the scope of the primary permittees source control obligation is much wider than that of the Ports, because the primary permittees are dealing with thousands of different sources, compared to a much more limited number for the Ports. Therefore, the Ports will be preparing a much smaller number of SWPPPs than the primary permittees. While Ecology suggests that the Guidance Manual for Preparation of SWPPPs for Industrial Facilities can be used to assist in preparation of Port SWPPPs, it also encourages the use of generic SWPPP provisions for sites grouped by type of activity, such as

parking lots. *Testimony of Moore, Guthrie, Exs. Muni 0001, p. 6-25, 33-39, Muni 0002, p. 44, PI 0021.*

36.

The Port of Seattle expects its tenant businesses to be involved in the preparation of the required SWPPPs because they have the most familiarity with the pollution-generating activities and source control opportunities at the individual sites, but the port, in its role as property manager, will work cooperatively with tenants through its routine compliance assessment process. For example, it has already provided its tenants with templates for preparing the SWPPPs. This process will involve some cost and effort on the part of the tenants, but can also serve as an opportunity for educating and training tenants in issues related to stormwater management. *Testimony of Guthrie.* The Port of Tacoma intends to prepare the SWPPPS for its existing tenant facilities which will require the port to become better informed about the details of its tenant operations and pollutant-generating activities. For new facilities, the Port of Tacoma intends to direct tenants to prepare the SWPPPs. *Testimony of Graves.*

F. Low Impact Development (LID)

37.

The major contention of PSAs' challenge to the Phase I permit is that traditional structural engineered stormwater management practices are inadequate to address the municipal stormwater problem and that the Permit should have also required greater use of Low Impact Development (LID) practices on a broader and more comprehensive scale.

38.

In the Phase I Permit, Ecology chose to regulate stormwater discharges from new development and redevelopment primarily through the imposition of a flow control standard. S5.C.5.b.i. *Ex. Muni 0001, p. 9, Testimony of O'Brien.* The flow control standard generally requires new and redeveloped sites that discharge to surface waters to control the rate at which stormwater is released from their sites so that the discharges do not cause accelerated stream channel erosion. The flow control standard is not a LID concept, because, in contrast to LID techniques, it is based on the premise that there will be discharges of stormwater from particular sites, and it attempts to control the duration and frequency of high stormwater runoff flows. Conventional stormwater management criteria frequently incorporate a post development peak discharge rate for a 2- and 10-year storm event based upon possible property damage due to flooding and stream bank erosion. These are becoming more recognized as insufficient because they do not address the loss of storage volume to provide for groundwater recharge, they do not adequately protect downstream channels from accelerated erosion, and the inspection and maintenance costs are an increasing burden for local governments. The goal of LID, on the other hand, is to minimize or prevent entirely the discharge of stormwater from the site. While utilization of LID techniques may be useful (or even in some cases necessary) to meet the flow control standard on a particular site, the flow control standard does not require the use of LID techniques. *Testimony of O'Brien, Booth, Exs. ECY 4 (Phase I) p. 2-30 through 2-35, Ex. PSA-053, p. 7.*

39.

In order to meet the Permit's flow control standard(s), facilities must be engineered so that discharges are not predicted to exceed the predevelopment flow "durations" for a range of storm events. The Stormwater Management Manual gives detailed design specifications for sizing and constructing detention/retention facilities to meet the flow control standard. The Manual itself recognizes the shortcomings of the use of engineered stormwater conveyance, treatment and detention systems to control stormwater. It states, at page 1-25:

> [These techniques] can reduce the impacts of development to water quality and hydrology. But they cannot replicate the natural hydrologic functions of the natural watershed that existed before development, nor can they remove sufficient pollutants to replicate the water quality of pre-development conditions.

The primary focus of detention standards is on mitigating the worst impacts of large storm events. These standards have little or no effect on small storm events, which can also cause damaging increase in flows. Stated another way, the flow control standard addresses large stormwater flow rates only, which occur only a small percentage of time (1%), and provides only residual control to runoff the remainder of the time. *Testimony of O'Brien, Booth, Ex. ECY 4 (Phase I), p. 1-25, 2-30 through 2-35.*

40.

Another limitation of the flow control standard comes from a significant exception to the requirement to achieve pre-developed discharge rates for basins that have had at least 40 percent total impervious area since 1985. Phase I permit, Appendix 1, p. 25-27, and Manual, Section 2.5.7 Minimum Requirement # 7, pp. 2-33. For sites in these basins, the pre-developed condition

to be matched is the existing land cover. Most areas located within the Seattle city limits, many areas within the City of Tacoma, and some areas in Bellevue and Everett would qualify for this exception. *Testimony of O'Brien, Booth, Exs. ECY 4 (Phase I), p. 2-33, Muni 0001, Appendix 1, p. 25-27.*

41.

The Phase I Permit defines LID as follows:

> stormwater management and land development strategy applied at the parcel and subdivision scale that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic pre-development hydrologic functions.

Ex. Muni 0001, p. 62. Ecology adopted this definition from the Puget Sound Action Team's Low Impact Development Manual (PSAT Manual), which is a technical manual published in 2005 to "provide stormwater managers and site designers with a common understanding of LID goals, objectives, specifications for individual practices, and flow reduction credits that are applicable to the Puget Sound region." *Ex. PSA 050, p.2.*[16] Other definitions of LID offered in testimony at the hearing differ from this definition primarily in the scale of application of LID. Thomas Holz offers an almost identical definition to the one quoted above, but includes application at the watershed scale in addition to the parcel or subdivision scale. *Testimony of Holz, Ex. PSA 050, p.11.*

[16] The advisory committee for the development of the PSAT Manual included Edward O'Brien, Tom Holz, and Derek Booth. These three experts also testified at the Phase I hearing, *Testimony of Moore, Ex. PSA 050, Acknowledgements page and p. 2.*

42.

While specific definitions of LID may vary, the concept of LID is well-established, and the basic BMPs that constitute LID are well-defined. LID techniques emphasize protection of the natural vegetated state, relying on the natural properties of soil and vegetation to remove pollutants. LID techniques seek to mimic natural hydraulic conditions, reducing pollutants that go into stormwater in the first instance, by reducing the amount of stormwater that reaches surface waters. *Testimony of Horner, Booth, Holz.*

43.

LID techniques store, infiltrate and evaporate stormwater where it falls rather than collect and convey it to surface waters off site, and can be implemented at an individual development site level, as well as part of a broader strategy employed at a basin or watershed level. Site-level LID BMPs include, but are not limited to, maintenance of natural vegetation on site; reduction of impervious surfaces; protection of natural drainage patterns, use of minimal excavation foundations such as pin foundation for structures; use of vegetated swales to capture and retain runoff; use of green roofs, and storage and reuse of runoff. At a watershed or landscape scale, LID strategies can include basin planning, watershed-wide limits on imperviousness, and protection of sensitive areas like riparian zones, wetland and steep slopes. *Testimony of Holz, Booth, Ex. PSA 050.*

44.

Although many LID techniques are not new ideas (i.e. grass roofs, rain gardens), LID as a formal stormwater management concept was developed in the late 1980's. *Testimony of Booth,*

Holz. Prince George's County, Maryland, a pioneer in the area of LID in the United States, began working on bioretention or rain gardens during the 1980's, and published a comprehensive LID technical manual and an accompanying volume providing detailed hydrologic analysis and computational procedures in 1999. *Exs. PSA 052 and 053.* Two federal agencies, the U.S. Department of Defense and Department of Housing and Urban Development, adopted LID Manuals in 2003 and 2004. *Exs. PSA 054 and 055.* The Puget Sound Action Team and the Washington State University Pierce County Extension published The PSAT Manual, a 247 page, comprehensive, technical guidance manual for the use of LID in the Puget Sound Area, in January of 2005 with funding provided by the Ecology. *Ex. PSA 050.* The PSAT Manual was intended to provide a menu of treatment options and direction for site design techniques, but it does not attempt to identify a performance standard for any of the included LID strategies. *Testimony of O'Brien.*

45.

The Environmental Protection Agency (EPA) has not required the use of LID in its stormwater rules or EPA permits, but it is increasingly supporting and encouraging the use of LID approaches in municipal stormwater programs on its website and thorough numerous publications. *See for example, Ex. PSA 057(EPA National Pollutant Discharge Elimination System (NPDES), Post-Construction Stormwater Management in New Development and Redevelopment)(posted on EPA's website); PSA Ex. 058, (EPA National Pollutant Discharge Elimination System (NPDES), Low Impact Development (LID) and Other Green Design Strategies)(posted on EPA's website); PSA 056 (EPA Fact Sheet for Stormwater Phase II Final*

Rule, Post-Construction Runoff Control Minimum Control Measure (Jan. 2000, rev'd 2005); Ex. PSA 066 (EPA Low Impact Development (LID), A Literature Review (Oct. 2000); Ex. PSA 059 (EPA 833-F-04-033, Resource List for Stormwater Management Programs (May 2004); Ex. PSA 060 (EPA National Management Measures to Control Nonpoint source Pollution for Urban Areas (Excerpts: Cover, Table of Content, Chapters 1-4, 10); Ex. PSA 061 (Memorandum from Benjamin Grumbles (Assistant Administrator, EPA) to EPA Regional Administrators Re: Using Green Infrastructure to Protect Water Quality in Stormwater, CSO, Nonpoint Source and Other Water Programs (Mar. 5, 2007); Testimony of Holz.

46.

Ecology's 2005 Stormwater Management Manual addresses the use of LID techniques in several ways, as part of the manual's Minimum Technical Requirements and Site Planning (Volume I), its Hydrologic Analysis and Flow Control Design/BMPs (Volume III), and its Runoff Treatment BMPs (Volume V). *Ex. ECY 4.*[17] One of the most significant changes during the 2005 update to the Manual included the addition of a "credit" system for projects that use LID techniques. *Ex. PSA 064.*

[17] The Manual is not a regulation but rather a guidance document that presents a presumptive approach to meeting requirements established through other means, such as permits. Washington is somewhat unique in its reliance on the Stormwater Management Manual for directing how stormwater management is to be conducted. *Testimony of Moore. Testimony of O'Brien.* The Manual represents Ecology's generalized determination of what constitutes AKART for stormwater management, without regard to how much horizontal development should be allowed (*i.e.*, whether a particular parcel, subdivision, or watershed should be developed or a particular project should be undertaken). The manual is also considered by the Department of Community, Trade, and Economic Development, the agency charged with state oversight of the implementation of the GMA, to constitute the best available science for use by local governments planning under the GMA. *Testimony of O'Brien.*

47.

Volume I covers several key elements of developing a stormwater site plan, including identifying the minimum requirements for stormwater management at all new development and redevelopment projects. Minimum Requirement #5, which directs on-site stormwater management for the purpose of using inexpensive practices on individual properties to reduce the amount of disruption of the natural hydrological characteristics of the site, requires the use of certain LID BMPs such as roof downspout control and dispersion and soil quality BMPs. This minimum requirement applies to single-family home sites and larger properties. *Testimony of O'Brien, Ex. ECY 4 (Phase 1), Vol I, at 2-26; Ex. Muni 0001, Appendix I at p.10 and 19.* The Phase I permit requires that permittees' local ordinances must meet Minimum Requirement #5, including requiring specified LID BMPs to reduce the hydrologic disruption of developed sites. *Testimony of O'Brien, Ex. Muni 0001, Condition S5.C.5 (at p. 9) and Appendix 1(at p.19).*

48.

Stormwater site planning requirements, also contained in Volume I, direct that site layouts minimize land disturbance and maximize on-site filtration by considering a number of LID strategies and techniques such as preserving areas with natural vegetation (especially forested areas) as much as possible, minimizing impervious areas, and maintaining and utilizing natural drainage patterns. *Testimony of O'Brien, Ex. ECY 4 (Phase I), Vol I, at 3-2.*

49.

Volume III of the Manual focuses primarily on BMPs to address the volume and timing of stormwater flows from developed sites, for the purpose of providing guidance on the

estimation and control of stormwater runoff quantity. Appendix III-C of this volume is Ecology's guidance explaining how Low Impact Development techniques can be represented in approved runoff models so that their benefits in reducing surface runoff can be estimated and credited in the flow duration model. It identifies seven categories of LID techniques, including permeable pavements, vegetated roofs, rainwater harvesting, reverse slope sidewalks, minimal excavation foundations, and rain gardens, and lists the basic design criteria Ecology considers necessary in order to justify use of the suggested runoff credit. *Testimony of O'Brien, Ex. ECY 4 (Phase I), Vol III, at Appendix III-C.*

50.

Finally, Volume V of the Manual identifies and discusses BMPs designed to treat runoff to remove sediment and other pollutants at developed sites, for the purpose of providing guidance on the selection, design and maintenance of permanent runoff treatment facilities. LID techniques are included in both the basic and advanced treatment options available to developers, and the method for determining the treatment credits for each technique is explained. Chapter 5 of this volume is devoted to the methods for analysis and design of on-site LID BMPs that serve to both control runoff flow rates as well as provide runoff treatment and, since 2005, has directed readers to use the PSAT Manual for various LID BMPs. *Testimony of O'Brien, Ex. ECY 4, Vol V.*

51.

Ecology wrote the first draft of the current Phase I Permit in 1999. At that time, LID was recognized as a stormwater management strategy, but there was not the same body of work

available on its use as there is today. Although much of the work and literature cited above post-dated the initial draft of the current Phase I Permit, Ecology recognized that a large body of work existed on LID as it finalized the Phase I permit. Despite the existence of many LID source or reference materials, Ecology believed that it could not at that time define minimum LID requirements, and was unable to define a regulatory performance standard to hold municipalities to, should LID requirements be imposed by the permit. The agency also recognized that local governments had adopted other land use and development standards that were obstacles to the implementation of LID on a broader scale. Some local governments also have limited experience with LID techniques and are reluctant to approve them. *Testimony of O'Brien.*

52.

Early drafts of the permit included requirements for basin or watershed planning as a LID technique. Use of a basin planning approach in the permit would, among other things, require municipalities to consider the effects of loss of impervious cover to water quality in larger, watershed, basin, and sub-basin areas (potentially measured in many square miles). The ideal area size for basin planning is two to ten acres. WRIA-scale (Water Resources Inventory Area) planning efforts are too large to address the impervious surface problem. *Testimony of Wessel.* Basin planning can also lead to the development of better site specific strategies, and some Ecology staff advocated for its inclusion into the Permit. *Testimony of O'Brien.*

53.

Ultimately, Ecology drafted a permit that requires municipalities to identify barriers to use of LID, and to take steps to also "allow" LID. Specific requirements for basin planning were

not included in the final permit, although the Endangered Species Act listing of various salmon species, and efforts of the Puget Sound Partnership are reasons to reexamine the need for basin planning as a permit requirement. *Testimony of Wessel, Moore; Ex. PSA 31.* Ecology rejected basin or watershed planning as a permit requirement, in part because the agency could not require a comprehensive planning effort, given that not all jurisdictions within a given watershed or basin were covered by the Phase I permit. Ecology also concluded that imposing both site level LID and basin planning requirements would move the agency too far into the land use regulatory arena, although Ecology witnesses conceded that imposition of more detailed LID requirements and a basin planning process could be harmonized with a parallel Growth Management Act land use process, thereby elevating water quality as a growth management planning priority. *Testimony of Moore, Wessel, O'Brien.*

54.

Ecology stated in its 2004 report to the Legislature that:

> Compact style development, with a smaller footprint, reduced impervious surfaces, natural areas within the urban core, and improved water detention can help local communities meet the Growth Management Act's goals of accommodating growth while protecting the environment.

Ex. ECY 6 (Phase I), p. 31. This same 2004 report to the Legislature highlighted the importance of stormwater basin planning in areas which are relatively undeveloped where new development is occurring. Ecology stated that in these areas:

> site specific controls alone cannot prevent impacts and preserve aquatic resources. Recent research should be used to identify development strategies that may protect the resources. Scientific modeling of the basin can help predict the extent of potential

> impacts and the effectiveness of alternative land development options to help avoid or minimize those impacts.

Id. at 28. Ecology also recommended in its report to the Legislature that state and local governments consider basin planning to address the known shortcomings of the stormwater permits. Ecology stated that:

> Stormwater basin planning is needed to quantify flow-related impacts and sources of pollution to urban water bodies. This information is needed to target resources spent on structural and non-structural controls (such as maintenance and public education) so that goals for urban water bodies can be met. In many basins, this planning can be combined with the planning for new development described earlier.

Id. at 30. Other types of water quality planning are taking place on a WRIA basis. The Board finds that information developed by permittees regarding their use of basin planning, and its possible interface with other planning efforts, would be very valuable to Ecology in its development of the next phase of the Permit.

55.

The Phase I Permit includes several conditions that address LID in various ways, nearly all of which are in the nature of encouraging or promoting rather than requiring LID by municipalities. In contrast to other permit terms, the final permit does not require municipalities to implement ordinances or other measures to use LID as a primary tool to manage stormwater within their jurisdictions. *See* S5.C.5.b.i (allowing local governments to tailor certain requirements applicable to new development through the use of basin plans or other similar water quality and quantity planning efforts); S5.C.5.b.iii (requiring SWMPs to allow non-structural preventative actions and source reduction approaches such as LID techniques);

S5.C.6.a (stating that permittees should consider other means to address impacts from existing development "such as reduction or prevention of hydrologic changes through the use of on-site (infiltration and dispersion) stormwater management BMPs and site design techniques, riparian habitat acquisition, or restoration of forest cover and riparian buffers . . ."); S5.C.10.b.(3) and (4) (requiring the inclusion of LID techniques in education and outreach programs); S8.F.1 and 7 (requiring monitoring of the effectiveness of one flow reduction strategy that is in use or planned for installation in their jurisdiction); and Appendix 1 § 4.5 (imposing, as a minimum requirement, on-site stormwater management where feasible, including use of roof downspout controls and dispersion and soil quality BMPs or their functional equivalent).[18] *Exs. Muni 0001, p. 9, 10, 12, 24, 25, 46, 47, and Appendix 1, p. 19.*

56.

Some commentors on the draft Phase I Permit criticized the lack of more mandatory LID requirements. The National Marine Fisheries Service and the U.S. Fish and Wildlife Service (jointly the Services) offered comments on the Draft Phase I Permit in May, 2006. While they supported many elements of the draft Permit, the Services recommended that the Permit employ methods to help ensure that several LID projects are completed within the permit term and strongly encouraged the use of basin planning to make better linkage with salmonid recovery plans organized at the watershed level. *Ex. PSA 030.* EPA offered its comments on the draft Phase I Permit in October, 2006. *Ex. PSA 067.* While EPA praised many aspects of the permit, it also recommended strengthening the permit by "promot[ing] the implementation of low impact

[18] This same requirement is included in The Manual. *Ex. ECY 0004 (Phase I), Vol. 1, p. 2-26.*

development and non-structural best management practices," and "add[ing] a basin planning program requirement." Similarly, a group of Washington Scientists sent an "open letter" to Ecology on October 26, 2006, in which they criticized the draft Phase I Permit for its continued focus on "end of pipe" management of stormwater, emphasizing the need to preserve existing "least-disturbed" watersheds, to limit forest loss, and to halt runoff from new impervious areas in the Puget Sound Basin. They recommended broad application of LID principles within the context of land use planning and development regulations efforts to prevent runoff to surface water. *Ex. PSA 010.*

57.

Ecology staff who developed the Phase I permit, as well as a number of stormwater experts who testified before the Board, agreed that no one stormwater management technique could solve the problem of polluted runoff from municipal stormwater systems. Even the extensive use of site-level LID is not sufficient, on its own, to fully protect aquatic resources. Rather, a combination of aggressive use of LID techniques, best conventional engineering techniques to manage high flows (such as the flow duration standard), and land use actions to preserve a high percentage of native land cover, are necessary to reduce pollutants in stormwater to the maximum extent, and to preserve water quality. Although the there is considerable dispute about the attainable performance of particular LID strategies and engineering techniques, there is no dispute that *in combination* these approaches offer the best available, known and tested methods to address stormwater runoff. *Testimony of O'Brien, Holtz, Booth.*

58.

There are existing design criteria for many LID techniques, just as there are for traditional BMPs employed to manage stormwater run-off used at the parcel or subdivision scale (for example, pond size or thickness of a liner). These aspects of LID can be employed at a site specific level. However, at this time there are no universal or broadly endorsed performance standards for LID, at either the parcel, subdivision, or watershed scale. Nor were experts before the Board willing to endorse or recommend such standards from among the many potential options identified, although it was undisputed that any permit condition requiring permittees to meet a new stormwater performance standard based on LID would implicate many other local government regulatory schemes, and require modification to local government GMA planning processes and requirements, zoning and development regulations, and building codes. *Testimony of Holz.*

59.

A zero runoff outcome from the use of LID techniques is one such performance standard, but actions to meet that standard would implicate a range of land use planning actions and watershed level assessments. It is possible to create other, more specific performance standards for LID, although the process would involve time and effort. Other jurisdictions are currently using such standards, or have proposed standards for use. For example, jurisdictions can require that LID BMPs be designed in accordance with guidelines in technical manuals, impose specific minimum technical requirements for buildings or roads, require protection of a specific amount of native vegetation at the site or basin level, limit the amount of effective impervious surface,

protect the natural hydrograph through various parameters, require maintenance of a certain percentage of predevelopment evapotranspiration capacity or minimize or eliminate surface runoff, or require that developers prioritize LID BMPs as the first choice before conventional BMPs. The Phase I Municipal Stormwater Permit for San Diego County, which was reissued in January, 2007, requires all new and redevelopment projects to implement LID BMPs where feasible. The Permittees are given the responsibility of defining the applicability and feasibility of LID BMPs, including the minimum standards to ensure maximum implementation. Another example of an NPDES permit from another jurisdiction that incorporates a LID performance criteria is the Ventura County MS4 Permit. This permit, which was in draft form at the time of the hearing, requires that developers prioritize LID BMPs as the first choice before conventional BMPS. *Testimony of Booth, Holz, Horner, Exs. PSA 048, p. 13-18; PSA 069, p. 49; PSA 070, 072, 080, Snohomish County Code 30.63C.*

60.

Requiring municipalities to impose parcel and subdivision-level LID best management practices represents a cost effective, practical advancement in stormwater management. Use of LID techniques at the parcel and subdivision level would not be feasible on every type of site, or under all rainfall conditions present in Western Washington. Use of LID techniques could in some instances allow pollutants to enter groundwater. LID BMPs require maintenance. All of these limitations are also applicable to the more traditional end of pipe BMPs. In fact, site attributes that make implementation of LID techniques difficult also typically make implementation of conventional techniques difficult. In the absence of watershed or basin level

efforts to utilize LID, parcel and subdivision-level use of LID will be less effective in overall stormwater management efforts, but still a substantial advancement. *Testimony of O'Brien, Booth, Holz, Horner, Exs. ECY 3 (Phase I), p. 34-36, PSA 066, p. 2, 3.*

61.

In many cases, implementation of LID techniques on the ground for new or redevelopment, or even retrofitting existing development, is less costly, or no more costly, than conventional engineered BMPS. Structural stormwater controls, such as detention ponds, curbs, gutters and pipes, require significant hardware and capital investment. LID techniques eliminate or reduce the need for these structural controls by reducing the volume of water to be managed. LID techniques may also require less space than these traditional methods. *Testimony of Holz, Booth, Horner, Exs. PSA 047, p. 6-10, PSA 066, p.1, ECY 3 (Phase I), p. 35-36.*

62.

A major cost consideration in utilizing LID techniques at a site level is not the engineering or construction associated with the LID techniques, but rather the costs associated with navigating a system of regulation and development that was not created with LID in mind. To fully incorporate LID principles into this system will require review, consideration, and in some instances modification, of existing zoning and building regulations that create obstacles to the use of LID. Some examples of common local government ordinances that could make it difficult to utilize certain LID techniques include requirements related to road width, curbs and gutters, vegetation clearing, and parking spaces. *Testimony of Holz, Horner.* The cost of implementing LID across a broader land use spectrum, through basin or watershed planning is

more speculative, and the Board was presented with no clear evidence on costs associated with broader scale implementation of LID in this manner. Although such planning is underway in certain areas, a longer public and political process could be expected to accompany such an effort.

63.

The cost of not expanding the application of LID strategies to manage municipal stormwater is very high. The biological health of Puget Sound is declining, and a significant cause of the decline is stormwater run-off. This decline carries with it a variety of environmental, economic, and social costs. *Ex. PSA 087, p. 1.* The Puget Sound Water Quality Plan, which is a plan mandated by the Legislature to be the state's long term strategy for protecting and restoring the Puget Sound, stated as early as 2000 that local governments needed to adopt ordinances that allow and encourage LID practices. *Ex. PSA 078, p. 101.* Many leading scientists concluded, in a paper submitted to the Puget Sound Partnership in July of 2007, that the problem of stormwater must be addressed in the land use context if the health of Puget Sound, the species that inhabit it, and its various important beneficial uses to the region, are to be protected and/or recovered. The group concluded that:

> We have well documented evidence that the impairment associated with stormwater runoff is primarily a **land use problem,** and that we cannot fully mitigate its effects if we approach it only site-by-site. We know that the problems must be addressed at a basin or landscape level-but we continue to manage land use and stormwater primarily on a site-by-site, end of pipe basis. At the same time, we also know that current site-by-site development techniques that result typically in wholesale loss of vegetation, compaction of native soils and connected impervious surfaces, can and should be improved upon significantly if we are to address stormwater problems.

Ex. PSA -012, p. 3 (emphasis in original).

64.

Recently, many local governments have begun incorporating LID techniques into their stormwater manuals, and/or adopting LID stormwater requirements. *Exs. PSA 072 (City of Olympia, Engineering Design and Development Standards, Ch. 9, Green Cove Basin); PSA 073 (Graham Community Plan, A Component of the Pierce County Comprehensive Plan, Excerpts: pp. Cover, Table of Contents, p. 70, 87, 109, 149, 208); PSA 074 (Gig Harbor Peninsula Community Plan, Excerpts: pp. cover, 29, 41, 63, 117, 210); PSA 076 (King County, Washington, Surface Water Design Manual, Jan. 4, 2005, Excerpts: pp. cover, Table of Contents, 5-1 through 5-16); PSA 051 (Pierce County, Stormwater Management and Site Development Manual, Excerpts: Ch. 10, p. 10-1 to 10-82).*

65.

Examples of the approaches already being used by Phase I Permittees to encourage or require the use of LID techniques include reducing charges for surface water rates with the use of an approved LID stormwater and surface water runoff systems (*City of Tacoma, Ex. PSA 085, p. 4);* promoting LID during project scoping meetings with potential developers (*City of Tacoma, Ex. PSA 085, p. 4);* adopting LID Ordinances (*Snohomish County, PSA Ex. 077, p. 8);* incorporating LID Development Design concepts into existing regulations (*Snohomish County, Ex. PSA 077, p. 9*); and providing public outreach and education about LID (*City of Tacoma, Ex. PSA 085, p. 5, Snohomish County, Ex. PSA 077, p. 10-14, City of Seattle, Ex.PSA 079, p. 12, 13*). Other, more stringent examples include requiring project proponents to use LID techniques for all proposed Fully Contained Community developments in rural areas (*Snohomish County, Ex.*

PSA 077, p. 9); requiring LID for any UGA docket expansions proposals within the Little Bear Creek watershed (*Snohomish County, Ex. PSA 077, p. 10*); and requiring LID to be used on a large project in the Mill Creek pocket expansion (*Snohomish County, Ex. PSA 077, p. 9).*

66.

The Board finds that LID methods are at this time a known and available method to address stormwater runoff at the site, parcel, and subdivision level. Numerous reference documents, technical manuals, expert testimony, and Ecology's own Stormwater Management Manual, discussed above, support this finding. The Board also finds that LID methods are technologically and economically feasible and capable of application at the site, parcel, and subdivision level at this time. Because application of these methods at the basin and watershed level involves additional cost and practical considerations, we find Ecology must ready for the eventual use of this known and available method of stormwater treatment for future iterations of the permit, consistent with its obligation to impose increasingly stringent requirements on discharges covered by NPDES permits.

G. Existing development

67.

The Phase I Permit addresses stormwater runoff from existing development through the implementation of structural stormwater controls and source controls. Both of these are required components of Permittees' SWMPs, and the Permit includes minimum requirements for each

which are based on EPA's stormwater rules.[19] *Testimony of Wessel, Ex. Muni 0001, p. 12-15, Ex. Muni 0002, p. 34-36.*

68.

The structural stormwater control program, also referred to as the "retrofit" component, is targeted at discharges not adequately controlled by other aspects of the SWMP. S5.C.6. Through this program, permittees must consider construction of stormwater control projects, as well as other means to address impacts to state waters caused by MS4 discharges. The permit directs that the program "shall consider the construction of projects such as: regional flow control facilities; water quality treatment facilities; facilities to trap and collect contaminated particulates, retrofitting of existing stormwater facilities; and rights-of-way, or other property acquisition to provide additional water quality and flow control benefits." The Permit also provides that permittees "should consider" other means to address impacts, including LID techniques such as "reduction or prevention of hydrologic changes through the use of on-site (infiltration and dispersion) stormwater management BMPs and site design techniques. . ." S5.C.6.a. *Testimony of Wessel, Ex. Muni 0001, p. 12, 13.*

69.

The permit establishes minimum performance measures for the structural stormwater control program, including development of the program within 1 year of the effective date of the

[19] The Fact Sheet's reference to 40 C.F.R. 122.26(b)(2) appears to be a typographical error. Ecology's pre-hearing brief properly cites the applicable federal regulation for these program elements as 40 C.F.R. 122.26(d)(2). A portion of this federal rule, unrelated to municipal stormwater, was recently invalidated in Natural Resources Defense Council v. U.S. E.P.A., 526 F.3d 591 (9th Cir. 2008).

permit, and implementation of the program within 18 months from the effective date of the permit. S5.C.6.b.i. Permittees are required to provide a list of planned individual projects that are scheduled for implementation during the term of the permit. Municipalities are not required to prioritize the planned projects in any manner. Permittees are required to submit a description of their structural stormwater control program to Ecology along with the written documentation of their SWMP, but the permit does not set a minimum level of effort for this requirement or provide for Ecology review and/or approval of the structural stormwater control program. S5.C.6.b.ii. *Testimony of Wessel, Dalton, Ex. Muni 0001, p. 12, 13, Ex. Muni 0002, p. 35.*

70.

The requirements for the Source Control Program for existing development are set out in S5.C.7. Through this program, the permittee must "reduce" pollutants in runoff from areas that discharge to MS4s, through application of operational and structural source control BMPs, and if necessary treatment BMPs to pollution generating sources associated with existing land uses and activities. S5.C.7.a. The program required in this section also must include inspections, application and enforcement of local ordinances at applicable sites, and reduction of pollutants associated with application of pesticides, herbicides and fertilizer discharging to MS4s. S5.C.7.b.ii-iv. While reduction of pollutants is mandated, no objective standard is set for the amount of reduction, although Ecology must review and approve the source control program. S5.C.7.b.i. *Testimony of Wessel, Muni 0001, p. 13-15.* Under this section of the permit, permittees must also implement a progressive enforcement policy to assure compliance with

stormwater requirements within a reasonable time period. S5.C.7.b.iv. *Testimony of Wessel, Ex. Muni 0001, p. 13-15.*

H. Timing of Compliance

71.

PSA challenges the validity of several Phase I Permit provisions on the grounds that they do not require implementation of the permit within three years. PSA provides several examples of permit conditions that allow implementation after three years. Some of these examples include S5.C.2.b.ii (requiring outfalls to be mapped no later than four years from the effective date of the permit); S5.C.8.b.vi (requiring screening for illicit discharges in portion of each jurisdictions to be completed within four years.); and S.5.C.9.b.ii (3) (allowing permittees up to four years after the effective date of the permit to develop a schedule to inspect treatment and flow control facilities). PSA also provides examples of conditions that impose duties that are tied to the expiration of the permit. Some examples of these conditions include Condition S6.A.3 (full development of the co-permittee and secondary permittees' SWMPs no later than 180 days prior to the expiration of the permit); and S6.D.1. a.ii (Secondary permittees shall label all inlets 180 days prior to expiration of the permit). *Ex. Muni 0001, p. 7, 18, 20-21, 25, and 27.*

72.

Any Conclusion of Law deemed to be a Finding of Fact is hereby adopted as such.

CONCLUSIONS OF LAW

1.

The Board has jurisdiction over the parties and the issues in the case pursuant to RCW 43.21B.110(1)(c). The burden of proof is on the appealing party(s) as to each of the legal issues, and the Board considers the matter *de novo,* giving deference to Ecology's expertise in administering water quality laws and on technical judgments, especially where they involve complex scientific issues. *Port of Seattle v. Pollution Control Hearings Board*, 151 Wn.2d 568, 593-594, 90 P.3d 659 (2004). Pursuant to WAC 371-08-540(2), "In those cases where the board determines that the department issued a permit that is invalid in any respect, the board shall order the department to reissue the permit as directed by the board and consistent with all applicable statutes and guidelines of the state and federal governments."

A. Monitoring (Issues C.1, C3, and F.3.)

2.

Two counties, Pierce and Clark, challenge the monitoring requirements imposed by Special Condition S8.[20] They contend that their own monitoring programs, which focus on receiving water monitoring, are more advanced than the monitoring required by S8. While they support Ecology's S8 monitoring approach as a starting point for municipalities that do not already have well developed receiving water monitoring programs, Pierce and Clark Counties

[20] Issues C.1 and C.3.

argue that compliance with the S8 monitoring will hinder their own efforts to protect water quality.

3.

The Utilities also challenge the validity of the S8 monitoring program. They contend that it is deficient because it does not require receiving water or "compliance" monitoring. They argue that receiving water monitoring is necessary to establish whether the permittees have complied with water quality standards and whether they have treated their discharges with AKART or to the maximum extent practicable.[21]

4.

WAC 173-226-090(1) establishes monitoring requirements for general waste discharge permits. The Board has concluded in its past decisions that this regulation provides Ecology with the discretion to impose *reasonable* monitoring requirements. WAC 173-226-090(1); *Puget Soundkeeper Alliance v. Ecology,* PCHB Nos. 05-150, 0151, 06-034, -040 (Jan. 26, 2007) (CL 22). Further, since a decision pertaining to monitoring requirements in a general permit falls within an area of Ecology's technical expertise, and involves complex scientific issues, the agency's decision is entitled to deference. *Port of Seattle* at 593-594. The disagreement between appellants and Ecology reflects different sides of a long-standing debate regarding the relative merits of instream versus outfall monitoring, and the most advantageous sequencing of the two. *Ex. P1 0048.* It is clear there is no one right approach, as the type and timing of monitoring that is best

[21] Issue F.3.

in any given situation depends on the particular purpose, context, and available resources, among other factors.

5.

Neither the Utilities nor the Counties have cited to any law requiring the Phase I Permit to require receiving water monitoring. The federal stormwater rules require only that municipalities propose a monitoring program for the term of the permit, but list few specific requirements. 40 C.F.R. 122.26(d)(2)(iii)(D).[22] The Board concludes that Ecology's decision not to require receiving water monitoring during this permit cycle is lawful and reasonable. Ecology's decision to require monitoring designed to understand the pollutants discharging from MS4s, and to evaluate the effectiveness of the BMP's in use, will provide the most useful data to establish what constitutes maximum extent practicable reduction in pollutants in discharges from MS4s for future permits. Further, as pointed out by Ecology, the counties are not prohibited from conducting receiving water monitoring in addition to the S8 monitoring required under the permit. [23]

6.

In light of the discretion Ecology has in this area, the deference its technical decisions are entitled to, and the fact that the burden of proof rests on the party challenging the permit, neither the Counties nor the Utilities have presented a sufficient case to convince the Board that it should

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[22] A portion of this federal rule, unrelated to municipal stormwater, was recently invalidated in Natural Resources Defense Council v. U.S. E.P.A., 526 F.3d 591 (9th Cir. 2008).

[23] It is also possible that parts of the Pierce and Clark County programs could be used to satisfy the targeted effectiveness component of the S8 monitoring (S8.E). *Ex. Muni 0001, p. 45-46.* The Board encourages Ecology to work with Pierce and Clark Counties to find ways to make parts of their current monitoring programs satisfy some of the requirements under S8.

reverse Ecology's decision to select the S8 monitoring program and require all permittees to participate in it.

B. Ports (Issue E.5)

7.

The Ports contend that it is "unlawful, unreasonable, unjust, or invalid" to require them to prepare SWPPPs on all port owned land not covered by another discharge permit. The Ports argue that the primary permittees have to prepare SWPPPs only on areas on which industrial type activities occur (maintenance areas and material and heavy equipment storage) that are not covered by another discharge permit. The Ports assert that it is unreasonable to require SWPPPs without consideration to how property is used, it is unreasonably burdensome to the Ports because of the cost to prepare SWPPPs, and it is unnecessary because not all port-owned lands have polluting generating characteristics. The evidence presented, however, does not support these arguments.

8.

The evidence presented at the hearing establishes that lands owned by the Ports of Seattle and Tacoma are located close to vulnerable urban waters with documented water quality and sediment contamination problems. Almost all of the port-owned lands that discharge to MS4s have pollutant-generating characteristics. Therefore preparation of SWPPPs for these properties will have environmental benefits. The only exception is those few environmental mitigation sites owned by the Port of Tacoma. Most of these environmental mitigation sites probably do not discharge to the MS4s, and therefore would not require coverage under the Phase I Permit.

For the ones that do, however, there is no environmental benefit gained by requiring the preparation of a SWPPP, and it is appropriate to exempt these sites from preparation of SWPPPs.

9.

The Board concludes that it not an unreasonable burden to require the Ports to prepare a SWPPP for all port-owned lands which discharge to the MS4 and are not already covered by another discharge permit. Based on the permit's inventory of types of sites with potential pollutant generating sources (*Muni 0001, Appendix 8*), it was reasonable for Ecology to conclude that the Ports owned most or all of these type of pollution sources, and that the Ports needed to prepare plans to manage stormwater from such port-owned property. The Ports also have fewer requirements under the Phase I Permits than other primary permittees. They will have fewer SWPPPs to prepare than the primary permittees. For SWPPP preparation, they can use some generic conditions for sites with identical uses, such as commercial buildings or parking lots. This will reduce the amount of time it takes to prepare each SWPPP and the cost of preparation. The ports can also work cooperatively with their tenants who share some responsibility for the proper management of stormwater on port-owned properties, which will have the added environmental benefit of educating site operators about stormwater BMPs.

10.

The Board concludes that Special Condition S6.E.7, which requires the Ports to prepare SWPPPs on all port-owned lands is appropriate and valid. However, the permit should not mandate SWPPP preparation for environmental mitigation sites owned by the Port of Tacoma, as

the Port of Tacoma has shown that such sites are unlikely to generate untreated stormwater pollution.

C. LID (Issue F.1.a & .b)

11.

The LID issues raised in this appeal involve the question of whether the Phase I Permit fails to meet the required treatment standard of reducing pollutants to the "maximum extent practicable"(MEP) and applying "all known, available and reasonable methods of treatment" (AKART), because the permit does not require more extensive use of LID techniques.

12.

The Board has previously ruled in this appeal (on summary judgment in the Special Condition S4 proceeding) the CWA requires that NPDES permits issued for discharges from MS4s must reduce pollution to the maximum extent practicable (the "MEP" standard). The Board also concluded the WPCA contains a similar requirement, in that all wastewater discharge permits must incorporate permit conditions requiring all known, available and reasonable methods of treatment to control the discharge of toxicants and protect water quality (the "AKART" standard). Order on Dispositive Motions: S.4 issued on April 2, 2008.

13.

The MEP standard in the CWA provides:

> Permits for discharges from municipal stormsewers . . . (iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

33 U.S.C. § 1342(p)(3)(B)(iii).

Neither Congress nor the EPA have defined the meaning of MEP in the municipal stormwater context, nor do the parties cite to federal court cases interpreting the MEP standard in the municipal stormwater context.[24] The Board, in a prior decision pertaining to the first round of the municipal stormwater permits, stated:

> The MEP standard is unique under water pollution laws and applicable only to municipal stormwater discharges. MEP reflects the difficulty of addressing stormwater on a system wide basis and the focus of regulating municipal stormwater discharges on prevention and control. This approach by its nature requires extensive planning and *prioritization* to achieve the underlying of goal of meeting water quality standards.

Save Lake Sammamish v. Ecology, PCHB Nos. 95-78 & 121, Order Granting Summary Judgment (Dec. 12, 1995) (emphasis added).

14.

The AKART standard originates in state law, but the Legislature has not explicitly defined the term. Ecology has incorporated the state AKART standard into several of its regulatory programs (*e.g.*, the state surface and ground water quality standards, state waste discharge and NPDES permit programs, sediment management standards, and domestic wastewater facilities regulations), and has defined the AKART standard through rulemaking. In the state's surface water quality standards, "AKART" is defined as "the most current methodology that can be reasonably required for preventing, controlling, or abating the

[24] The term "practicable" as used in a different section of the CWA, 33 USC § 1311(b)(1)(a), has been defined as meaning that technology is required unless the costs are "wholly disproportionate" to pollution reduction benefits. *Rybacheck v. U.S. EPA,* 904 F.2d 1276, 1289 (9th Cir. 1990).

pollutants associated with a discharge." WAC 173-201A-020. The Washington Supreme Court has further clarified that the "reasonableness" prong of AKART involves both technological and economic feasibility. *Puget Soundkeeper Alliance v. Ecology,* 102 Wn. App. 783, 792-793, 9 P.3d 892, 897 (2000).

15.

In evaluating MEP and AKART for the Phase I Permit, we start with the context that this is a "programmatic" permit that regulates the discharge from MS4 systems on a jurisdiction-wide basis, through the municipalities' implementation of their Stormwater Management Programs. In several instances the permit requires that through these Stormwater Management Programs, municipalities enact ordinances or orders, or adopt other enforceable documents, to control pollution in stormwater. *See, e.g.*, Condition S5.C.1. The nature and scope of the LID provisions in the Permit, and what can be required through the permit, must therefore be evaluated within the broader context of the SWMP requirements and the programmatic nature of this permit.

16.

The permit's reliance on a flow control standard as the primary method to control stormwater runoff from MS4s fails to reduce pollutants to the federal MEP standard, and without greater reliance on LID, does not represent AKART under state law. The permit's reliance on terms that simply require "removal of obstacles" and actions to "allow" use of LID is insufficient to meet these same federal and state pollution control standards. The testimony presented by PSA, the Utilities, and Ecology's technical experts leads to the indisputable conclusion that

application of LID techniques, at the parcel and subdivision level, is a currently known and existing methodology that is reasonable both technologically and economically to control discharges entering into MS4s covered by the Phase I Permit. The great weight of testimony before the Board, from various experts and Ecology witnesses, was that in order to reduce pollution in urban stormwater to the maximum extent practicable, and to apply AKART, it is necessary to aggressively employ LID practices *in combination with* conventional stormwater management methods. Thus, we conclude that under state law, the permit must require greater application of LID techniques, where feasible, in combination with the flow control standard, to meet the AKART standard. The permit must also require the application of LID, where feasible, and conventional engineered stormwater management techniques to remove pollutants from stormwater to the maximum extent practicable in order to comply with federal law. Our recognition that use of LID is to be employed where feasible recognizes that, like all stormwater management tools, it too is subject to limitations in its practical application by site or other constraints. *See* Findings of Fact 49-51. We do not change the applicable legal standard by use of this term. Accordingly, the permit must be remanded for modification in light of this conclusion.

17.

Although we conclude that the permit must require municipalities to employ broader use of LID at the parcel and subdivision level, we stop short of concluding that the permit must, at this time, require use of LID at a basin and watershed level. Based on the evidence before the Board, we cannot conclude that the current iteration of the permit must require implementation

of LID on a basin or watershed scale in order to meet federal and state water quality standards. Little evidence was presented as to the elements and cost of basin or watershed planning that would be necessary to implement LID at this level. Ecology testified that the current Phase I and Phase II permits result in a patchwork of regulation of municipal stormwater, and jurisdictions are at greatly varying degrees of readiness to manage stormwater on basin or watershed levels. The Phase II permittees themselves are at greatly varying degrees of readiness and capacity to undertake LID on a basin and watershed level, and would need to work with Phase I and other jurisdictions to do so. Given these several factors, the Board concludes that a permit condition requiring municipalities to implement LID at a basin or watershed level is not, at this time, reasonable or practicable. This is not to say that no steps can or should be taken at this time. Ecology has identified the particular importance of basin planning in areas which are relatively undeveloped where new development is occurring. The Board concludes that city and county permittees should identify such areas where potential basin planning would assist in reducing the harmful impacts of stormwater discharges upon aquatic resources. This will assist Ecology in readying for the next round of permits when such a requirement may be necessary to meet the state AKART standard and, under federal law, to reduce pollutants in municipal stormwater to MEP. As we discuss in further conclusions, we do not find the Growth Management Act to be an impediment to Ecology requiring greater use of LID than represented by the current permit, including at the basin and watershed planning level. Because the CWA and state water quality laws anticipate that there will be increasingly stringent requirements imposed on those that discharge pollutants to the state's waters, including municipalities, efforts to further basin and

watershed planning efforts in order to incorporate the known and available LID techniques should begin in anticipation of the next permit cycle.

18.

No party challenges Ecology's authority to require LID techniques if they are necessary to meet the AKART or MEP standards. The Board affirmed this point in its summary judgment order. Order on Dispositive Motions: (Phase I Municipal Stormwater Permit) (April 8, 2008). The Board further stated:

> As pointed out by PSA, it is impossible to untangle stormwater management from land use. Even the commonly accepted water quality technique of requiring a stormwater retention pond at a site takes up significant area in a development, potentially reducing the number of buildable sites and constituting a land use restriction. The challenge, as recognized by both Ecology and PSA, is to most effectively harmonize Ecology's authority over site design and land use standards under the water pollution laws with other state laws that are specifically aimed at addressing land use on a broader scale.

Id. While Ecology does not dispute that it has the authority to require the use of LID techniques, it was constrained in the full exercise of this authority because of concerns about intruding too far into local government land use planning efforts under the Growth Management Act. Ecology's position is somewhat puzzling, as it has, through various requirements of its Stormwater Management Manual, and the permit itself, already required a number of LID techniques, and has required local government to remove obstacles to use of the same.[25] The

[25] We also note that, in another context, Ecology has recently adopted rules for the implementation of the Shoreline Management Act which outline a comprehensive process for preparing or amending shoreline master programs that requires, among other things, local governments to incorporate the most current, accurate, and complete scientific and technical information available that is applicable to the issues of concern; prepare a characterization of shoreline ecological functions, including hydrologic functions; identify water quality and quantity issues relevant to master

Board concludes that contrary to the concerns raised by Ecology during permit development, that the GMA is not a barrier to greater use of LID but rather complements the efforts of Ecology to move forward with requiring the use of LID techniques under the Phase I Permit.

19.

The Legislature enacted the Growth Management Act (GMA), Ch. 36.70A RCW in 1990 and 1991, largely "in response to public concerns about rapid population growth and increasing development pressures in the state, especially in the Puget Sound region." *Quadrant Corp. v. State Growth Management Hearings Bd.*, 154 Wn.2d 224, 231-232, 110 P.3d 1132, 1136 (2005) (citations deleted). The GMA includes a broad statement of goals to guide local governments in their development and adoption of comprehensive plans including a goal to "Protect the environment and enhance the state's high quality of life, including air and water quality. . ." RCW 36.70A.020(10).

20.

The GMA mandates that local governments adopt comprehensive plans which include, among other elements, a land use element addressing, "drainage, flooding, and stormwater run-off in the area and nearby jurisdictions" and providing "guidance for corrective action to mitigate or cleanse those discharges that pollute waters of the state, including Puget Sound or waters entering Puget Sound." RCW 36.70A.070(1); *Swinomish Indian Tribal Community v. Skagit*

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program provisions; identify important ecological functions that have been degraded through loss of vegetation; and identify measures to ensure that new development meets vegetation conservation objectives. WAC 173-26-201.

Co., 138 Wn. App. 771, 774, 158 P.3d 1179 (2007) (concluding that the GMA mandates that local governments adopt comprehensive plans to protect surface and ground water resources.)

21.

The state WPCA predated the GMA, with the specific purpose of protecting the waters of the state. RCW 90.48.010. The Legislature tasked Ecology with the job of implementing the WPCA. RCW 90.48.030, .035. Clearly, there is an area of interface and overlap between the GMA and the WPCA.

22.

The Washington Courts have stated that statutes are to be read together harmoniously whenever possible. "The construction of two statutes shall be made with the assumption that the Legislature does not intend to create an inconsistency." *Peninsula Neighborhood Ass'n v. Dep't of Transportation*, 142 Wn.2d 328, 342, 12 P.3d 134 (2000). Further, as the Washington Supreme Court recently stated: "We do not favor repeal by implication, and where potentially conflicting acts can be harmonized, we construe each to maintain the integrity of the other". *Anderson v. State, Dept. of Corrections,* 159 Wash.2d 849, 859, 154 P.3d 220, 225 (2007)(citing *Misterek v. Washington Mineral Products, Inc.*, 85 Wn.2d 166, 168, 531 P.2d 805 (1975)). *See also Kariah Enterprises, LLC v. Ecology*, PCHB No. 05-021, Corrected Order Granting Partial Summary Judgment (Jan. 6, 2005).

23.

The Board has addressed the interface between the GMA and the WPCA in the *Kariah* decision, cited above. In that case, the appellant challenged Ecology's denial of a CWA Section

401 Water Quality Certification for a proposed residential development. The Appellant argued that the Legislature, through GMA, had delegated Ecology's authority over wetlands under the WPCA to local governments. The Board rejected this argument, concluding that neither chapter 90.48 RCW nor 36.70A RCW contained any express provisions delegating Ecology's authority over protecting water quality in wetlands to cities and counties. The Board went on to conclude that the WPCA and the GMA should be harmonized, and that:

> The legislative policy articulated in RCW 36.70A.010 indicates the GMA was directed at addressing uncoordinated and unplanned growth, not at shifting the responsibility to regulate wetlands from the state government to local governments.

Kariah, CL 33.

24.

Similarly, in a Shoreline Hearings Board decision addressing the interaction between the Shoreline Management Act (SMA) and the GMA, the Board concluded that Ecology's newly adopted shoreline rules did not improperly usurp the authority of local governments planning under the GMA, despite venturing into land use controls. *Association of Washington Businesses v. Ecology*, SHB No. 00-037, Order granting and denying appeal (2001)(Issue 9).[26]

[26] Although this decision was split on several issues, the holding on the GMA issue was unanimous. We note that even prior to the GMA, the Shoreline Management Act (SMA), Ch. 90.58 RCW, was enacted by initiative of the people in 1971 after recognizing the "ever increasing pressures of additional uses ... being placed on the shorelines necessitate[e] increased coordination in the management and development of the shorelines of the state." RCW 90.58.020. The SMA includes a broad policy to protect the waters of the state and gives preference to uses that protect water quality and the natural environment. *Id.* The SMA establishes a balance of authority between local and state government, where cities and counties have the primary responsibility for initiating the planning required by the Act and administering the regulatory program, and Ecology is tasked with providing assistance to local governments in the development of their shoreline master programs and "insuring compliance with the policy and provisions of [the Act]." RCW 90.58.050.

25.

The Legislature has not expressed any intent, either through the GMA, SMA, or amendments to the WPCA, to redirect Ecology's role in water quality protection to the local governments. The Department of Community, Trade and Economic Development (CTED), the agency charged with implementing and interpreting the GMA, has considered the interaction between the GMA and pre-existing laws not specifically addressed in the GMA. In WAC 365-195-700, CTED's GMA regulations state:

> For local jurisdictions subject to its terms, the Growth Management Act mandates the development of comprehensive plans and development regulations that meet statutory goals and requirements. <u>These plans and regulations will take their place among existing laws relating to resource management, environmental protection, regulation of land use, utilities and public facilities. Many of these existing laws were neither repealed nor amended by the act.</u>
>
> <u>This circumstance places responsibilities both on local growth management planners and on administrators of preexisting programs to work toward producing a single harmonious body of law.</u>
>
> WAC 365-195-700 (emphasis added).[27]

CTED's regulations further explain that:

> Overall, the broad sweep of policy contained in the act implies a requirement that all programs at the state level accommodate the outcomes of the growth management process wherever possible. State agencies are rarely concerned solely with the rote application of fixed standards. The exercise of statutory powers, whether in permit functions, grant funding, property acquisition or otherwise, routinely involves such agencies in discretionary decision-making. The discretion they exercise should now take into account the new reality of legislatively mandated local growth management

[27] Ecology's SMA rules recognize a similar responsibility to harmonize overlapping bodies of law and regulation, which now provide: "It is the responsibility of the local government to assure consistency between the master program and other elements of the comprehensive plan and development regulations." WAC 173-26-191(e).

programs.

WAC 365-195-765(4).

26.

The Phase I permittees are all cities and counties required to plan under the GMA. RCW 36.70A.040. Their planning must address protection of surface and ground water. RCW 36.70A.070(1). CTED has identified the Ecology Stormwater Management Manual as best available science in regard to stormwater management under the GMA. Ecology, as a state agency, must also work toward implementation of the GMA. We conclude that there is no conflict between GMA and the WPCA, nor the roles of local governments and Ecology under these statutes. These roles support and complement each other and can be harmonized to allow water quality efforts to be considered and integrated into the growth management process outlined in the GMA.

27.

The Board concludes Ecology may, within the bounds of the GMA, require use of LID as a water quality management tool. The Board further concludes that the Phase I Permit must be modified to require use of LID where feasible, as it is necessary to meet the MEP and AKART standards of federal and state law, respectively. RCW 36.70A.070(1) already provides the mandate for local governments planning under the GMA to address drainage, flooding, and stormwater runoff in order to mitigate or cleanse discharges of water pollution. The Permit, including the Manual, merely sets forth the methods to accomplish this requirement.

D. Existing Development (Issue F.2)

28.

PSA and the Utilities contend that the permit provisions addressing existing development are inadequate to meet the MEP and AKART standards. Their primary complaint is that both the structural and source control provisions applicable to existing development require only that programs "reduce" impacts from discharges (S5.C.6) or that the permittees "reduce" pollutants in runoff (S5.C.7). They contend that these sections do not set any minimum expectation for the level of effort required and allow the permittees to make deminimus reductions in polluting discharges, and thus constitute impermissible self regulation. *PSA v. Ecology*, PCHB Nos. 02-162, -163, and -164, Order Granting Partial Summary Judgment (June 6, 2003)(CL XVI)(citing *Environmental Defense Center v. Environmental Protection Agency*, at U.S. App. 497, at 57-62 (9th Cir., Jan. 14, 2003)).

29.

The Board agrees the structural stormwater control program, as drafted, amounts to impermissible self-regulation. First, the permit fails to require a minimum level of effort for the permittees in the selection and prioritization of structural stormwater projects, and provides no review and approval role for Ecology. Second, the permit fails to comply with the applicable EPA rule and therefore amounts to impermissible self regulation on this basis as well. 40 C.F.R 122.26(d)(2)(iv) requires that "Proposed management programs shall describe priorities for implementing controls." Condition S5.C.6 merely requires the permittees to develop a program within 12 months and provide Ecology a "list of planned individual projects that are scheduled

for implementation" during the term of the permit. S5.C.6.b.i. While initial project selection is presumably subject to the MEP and AKART standard of the permit, Ecology plays no role in ensuring these standards are met, even through simple review of the selected projects. The permit does not contain any requirement that permittees describe their project priorities or require that Ecology review the permittees' structural stormwater control program. Ecology is not expected to approve the municipalities' prioritization of projects in relation to the pollution reduction requirements of the permit. While Ecology testified that the permit "implied" there needs to be a prioritization of planned structural stormwater control projects, and a schedule reviewed by Ecology *(Moore testimony)*, the permit does not expressly state this requirement and the fact sheet explicitly states that "review and approval by Ecology is not a permit requirement." *Ex. Muni 0002, p. 35.* Thus, the structural stormwater control program is left entirely to the discretion of the municipalities, not only with respect to which projects they initially select, but also in the timing and manner in which they implement the selected projects. Prioritization of projects is particularly important given that Conditions S5 and S6 are based upon actions taken by the permittees and not outcomes, and this structural stormwater control provision is to "address impacts that are not adequately controlled by the other required actions of the SWMP." Prioritization helps to ensure that the sites where the permittees choose to "act" are meaningful in providing environmental protection. It can also assist to engage the public as a partner in reducing pollutants in discharges and the overall volume of discharges. A community, for example, could request a permittee to focus a project in an area which discharges near shellfish beds. While the Board recognizes that local funding will influence the selection of planned

projects and that municipalities must therefore retain local control in the selection process, we conclude that the permit must require permittees to describe the prioritization of their selected projects in order to comply with federal rules, demonstrate compliance with the MEP and AKART standards, and facilitate oversight by Ecology to ensure the legal standards of the permit are applied on a programmatic level. *See Save Lake Sammamish v. Ecology*, PCHB Nos. 95-78 & -121, Order Granting Summary Judgment (Dec. 12, 1995).

30.

In contrast to the structural stormwater control program provisions, the source control program for existing development requires a more rigorous program to reduce pollutants in runoff from areas that discharge to MS4s owned or operated by the permittee, and does not suffer from the same flaws as the structural stormwater control program. The permit requires that Ecology must review and approve the source control program. S5.C.7.b.i. Therefore, the Board concludes that the source control program as drafted meets the MEP and AKART standard.

E. Water quality violations (Issues F.1.a., F.2.a,, and F.4)

PSA and PSE argue, through several different issues, that the permit fails to prevent discharges that violate water quality. *See* F.1.a (permit fails to require LID techniques which results in discharges that violate water quality); F.2.a (permit allows discharges from existing development that violate water quality); F.4 (Permit as a whole allows discharges that violate water quality standards; Prohibition on violations of water quality standards contained in Special Condition S4 conflicts with other provisions of the permit). The Board concludes that the

permit, with the amendments directed by the Board to meet AKART and MEP, and with the amendments directed by the Board to the S4.F compliance process,[28] is adequately conditioned to comply with state law.

F. Timelines for Compliance (Issue F.5)

31.

The CWA sets out a number of deadlines related to NPDES permits for industrial and large municipal dischargers, including a deadline for EPA to establish regulations setting forth permit application requirements, a deadline for filing permit applications, and a deadline for EPA's approval or denial of the permits. 33 U.S.C. § 1342 (p)(4)(A). The final sentence in 33 U.S.C. § 1342 (p)(4)(A) states: "Any such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit." PSA contends that the Phase I Permit violates this provision.

32.

The Board has addressed this specific sentence before, in a case involving a challenge to a renewal of the Industrial Stormwater General NPDES Permit. *PSA v. Ecology*, PCHB Nos. 02-162, -163, -164, Order Granting Partial Summary Judgment (June 6, 2003). In that case, involving industrial stormwater discharges, the Board concluded that the reference to "compliance" in the sentence referred to compliance with the permit requirement contained in 33 U.S.C. § 1342 (p)(3)(A)(the provision pertaining to industrial stormwater discharges). *PSA* at CL XXI. Applying that same analysis to this case, involving municipal stormwater discharges,

[28] These modifications are ordered in the Board's Findings, Conclusions and Order on S4, issued on August 7, 2008.

the reference to "compliance" is to 33 U.S.C. § 1342 (p)(3)(B)(the provision establishing the MEP standard for municipal stormwater discharges). Therefore, the question becomes whether the permit allows any actions to occur later than three years after the date of issuance of the permit that are necessary to reduce discharges of pollutants to the maximum extent practicable.

33.

Several of the conditions of the Phase I Permit allow actions required by the permit to occur more than three years after the date of issuance of the permit. PSA and the Utilities contend that this establishes that the permit violates 33 U.S.C. § 1342 (p)(4)(A). However, this fact alone does not establish a violation of 33 U.S.C. § 1342 (p)(4). PSA and the Utilities, as the parties with the burden of proof, must bring forth evidence establishing that earlier compliance with one of the permit provisions currently allowing implementation outside of the three year statutory window is necessary to meet the MEP standard. Ecology has developed a programmatic permit with multiple components to be implemented throughout the permit cycle which, collectively, represent MEP and AKART. To read the statute as suggested by PSA and the Utilities would inappropriately limit Ecology's ability to include within the permit additional conditions or requirements that may not be practicable within three years but which are reasonable within a longer time frame. The Board concludes that PSA and the Utilities have failed to meet their burden on this issue. The record does not contain sufficient evidence on any specific permit condition to convince the Board that the permit violates 33 U.S.C. § 1342 (p)(4)(A).

34.

Any Finding of Fact deemed to be a Conclusion of Law is hereby adopted as such.

Having so found and concluded, the Board enters the following

ORDER

Having concluded that portions of the Phase I Permit are invalid, the Board remands the Phase I Permit to Ecology pursuant to WAC 371-08-540, for modifications consistent with this opinion.

1. Ecology shall modify Special Condition S6.E.7 as follows:

> 7. Source Control in existing Developed Areas
>
> The SWMP shall include the development and implementation of one or more Stormwater Pollution Prevention Plans (SWPPPs). A SWPPP is a documented plan to identify and implement measures to prevent and control the contamination of discharges of stormwater to surface or ground water. SWPPP(s) shall be prepared and implemented for all Port-owned lands, **except environmental mitigation sites owned by the Port of Tacoma,** that are not covered by either a General Permit or an individual NPDES permit issued by Ecology that covers stormwater discharges.
>
> (modified language is in bold and underlined)

2. With respect to the use of LID, in addition to the specific modifications identified in No. 1 above, Ecology shall also modify the permit consistent with this opinion as follows :

a. Modify Permit Condition S5.C.5.b to read as follows:

> iii. The program must ((~~allow~~)) **require** non-structural preventive actions and source reduction approaches ((~~such as~~)), **including** Low Impact Development Techniques (LID), to minimize the creation of impervious surfaces, and measures to minimize the disturbance of soils and vegetation **where feasible**.

b. Require permittees to identify barriers to implementation of LID and, in each annual report, identify actions taken to remove barriers identified.

c. Require permittees to adopt enforceable ordinances that require use of LID techniques where feasible in conjunction with conventional stormwater management methods.

d. Require permittees to address in their annual report to Ecology under the Phase I Permit, information on the extent to which basin planning is being conducted in their jurisdiction, either voluntarily, or pursuant to GMA or any other requirement.

e. Require permittees to identify, prior to the next permit cycle or renewal, areas for potential basin or watershed planning that can incorporate development strategies as a water quality management tool to protect aquatic resources.

3. Ecology shall modify Special Condition S5.C.6.b.ii, related to structural Stormwater control programs minimum performance measures, to require that permittees describe the prioritization of their selected projects as required by federal rules, in order to facilitate oversight by Ecology to ensure that the MEP and AKART standards are met on a programmatic level.

SO ORDERED this 7th day of August, 2008.

POLLUTION CONTROL HEARINGS BOARD

Kathleen D. Mix, Chair

see concurrence/dissent
William H. Lynch, Member

Andrea McNamara Doyle, Member

Kay M. Brown, Presiding
Administrative Appeals Judge

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Ecology Division

POLLUTION CONTROL HEARINGS BOARD
STATE OF WASHINGTON

PUGET SOUNDKEEPER ALLIANCE; PEOPLE FOR PUGET SOUND; PIERCE COUNTY PUBLIC WORKS AND UTILITIES DEPARTMENT; CITY OF TACOMA; PORT OF SEATTLE; SNOHOMISH COUNTY; CLARK COUNTY; PACIFICORP; and PUGET SOUND ENERGY,

Appellants,

v.

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY,

Respondent,

CITY OF SEATTLE; KING COUNTY; PORT OF TACOMA; PACIFICORP; PUGET SOUND ENERGY; STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION,

Intervenors.

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER

PHASE I

PCHB NOS. 07-021, 07-026, 07-027
07-028, 07-029, 0-030,
07-037

CONCURRENCE AND DISSENT

I write separately for the purpose of disagreeing with my colleagues on one portion of the decision. I would allow Pierce County to substitute its monitoring program for the monitoring required under Special Condition S8 (S8). Pierce County provided testimony that it was unable to afford both monitoring programs. Pierce County has established an extensive monitoring program that will allow the County to assess the impacts of stormwater discharges in the

receiving water over an extended period of time. Portions of the monitoring program include continuous monitoring, so that a more accurate assessment can be made of the impact of development on the physical channel conditions and aquatic organisms. Ecology has recognized the importance of this type of monitoring in its 2004 report to the Legislature. Ecology's efforts to collect data regarding the effectiveness of BMPs would not significantly suffer from the absence of BMP effectiveness data from Pierce County. To the contrary, I believe that Pierce County's monitoring program would yield information that would be quite valuable to Ecology and assist in the development of future phases of the permit. The one modification I would require to Pierce County's monitoring regime is for Pierce County to test for the full range of chemical pollutants required of other permittees under S8.

For this reason, I concur with the remainder of the decision but respectively dissent regarding Pierce County's monitoring program.

Dated this 7th day of August 2008.

POLLUTION CONTROL HEARINGS BOARD

William H. Lynch, Member