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PRELIMINARY DRAFT FOR WORK GROUP REVIEW

# **BUILDING CITIES IN THE RAIN**

Watershed Prioritization Guidance for a Stormwater Control Transfer Program Harmonizing the NPDES Municipal Permit, Growth Management Act, and Puget Sound Recovery 6-4-15 **Comment [BH1]:** Please note that this is <u>not</u> <u>yet</u> a product of the Work Group. It is a draft based on the discussions of the Work Group for the group's review before issuance of the document for public comment.

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#### A. Introduction

#### 1. Overview

The complex challenge of meeting growth management, stormwater, and habitat restoration goals involves many disciplines, such as: water resources and fisheries management, stormwater science and engineering, environmental advocacy, architecture, real estate development and finance, land use, transportation, environmental planning, and urban design, among others. In addition to higher land costs, infill and redevelopment can include costs for demolition, brownfield remediation, historic preservation, aging infrastructure repair, stormwater infrastructure, and additional permit fees. These types of costs can ultimately make infill and urban center redevelopment projects more expensive than developing a similar project in a less developed area. As a result, some developers may choose to look outside of urban centers for lower cost strategies or options for their projects. However, there are longer term costs to sprawling development such as traffic congestion, increased impervious surfaces, poor air and water quality, and habitat degradation. Directing redevelopment to urban centers reduces sprawl and protects habitat and air and water quality, while accommodating the growing population in Puget Sound.

#### 2. Purpose of the Guidance

Current regulatory and legal requirements, including stormwater management, provide important environmental protections, but may make development in urban centers more expensive than in less densely developed areas. This guidance aims to identify an approach jurisdictions within the region can use to increase infill development in urban centers while meeting stormwater requirements, Growth Management Act mandates, and goals to help restore priority basins. To accomplish this, the guidance describes a process to help jurisdictions achieve desired development and redevelopment density in designated urban centers while meeting stormwater objectives under the Clean Water Act, providing restoration opportunities for habitat, achieving equity for all communities, creating opportunities for economic development, and meeting other goals of the Growth Management Act.

The guidance provides recommendations for Western Washington State municipal stormwater Permittees with designated Regional Growth Centers<sup>1</sup> under the Puget Sound Regional Council's VISION 2040 on how to designate high priority watersheds for retrofits in high priority water bodies or receiving waters under an alternative stormwater control transfer program<sup>2</sup>. This guidance lays out how a local government can more strategically plan and fund retrofits under an alternative stormwater control transfer program. These recommendations supplement and integrate with guidance from the Washington State Department of Ecology (Ecology), <u>Stormwater Control Transfer Program: Out of the</u> <u>Basin</u>.<sup>3</sup> The prioritization guidance describes where and how a jurisdiction may obtain adequate data and provides a simple two-step process to implement a prioritization effort successfully. A municipality's

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**Comment [BH2]:** This suggested water body language is a bit different than what I believe the group has discussed, but it is referenced in the permit per the definitions in Attachment A. We will discuss the terms we need to use in the guidance on June 8.

<sup>&</sup>lt;sup>1</sup> The Puget Sound Regional Council has designated 28 urban centers in central Puget Sound as Regional Growth Center planned to accommodate housing (53 percent of residential growth) and employment (71 percent of employment growth) by 2040.

<sup>&</sup>lt;sup>2</sup> Per Attachment A, Definitions, note the difference between receiving watersheds and receiving waterbodies or waters.

<sup>&</sup>lt;sup>3</sup> Ecology's draft guidance was issued as a public comment draft on May 14, 2015, with a comment deadline of July 14, 2015. See Section II. Establishing a Watershed Prioritization for Stormater Control Transfer Programs in Washington State, page 9.

prioritization process will be reviewed by Ecology as part of its approval process\_(See Appendix 1, Section 7 in the <u>Phase I and Western Washington Phase II Municipal Stormwater Permits</u>).

3. What is a stormwater control transfer program?

A stormwater control transfer program allows a developer to pay a fee or directly construct a facility in an alternate location in lieu of meeting certain stormwater requirements on site for new development and redevelopment activities. The alternate location will be in a watershed in another part of the jurisdiction where receiving waterbodies<sup>4</sup> are evaluated to have a higher potential for habitat restoration. Such areas are called "receiving watersheds". In this scenario, the original site where redevelopment is proposed to take place is located in what is called a "sending watershed". Sending watersheds are determined to present a lesser immediate potential for environmental lift or restoration.

Per Ecology's guidance, the goal of this innovative stormwater management approach is to direct rehabilitation efforts to watersheds (referred in that guidance as priority watersheds) where they will provide more immediate environmental benefit than would be realized under the normal rate of development or redevelopment in the watershed. At the same time, the approach prevents further degradation in all watersheds – i.e. no development or redevelopment activity will be allowed to create new or additional impacts to any receiving waters. As individual priority watersheds meet rehabilitation goals, remaining watersheds are prioritized for improvement until all of the municipality's watersheds have been rehabilitated to target levels.

4. Why consider a stormwater control transfer program?

The Puget Sound Regional Council Growth Management Policy Board has heard concerns from cities that the high cost of site-by-site stormwater management, in combination with other costs such as demolition, brownfield remediation, historic preservation, and aging infrastructure repairs, may stifle redevelopment of urban centers. If costs are too high developers may look outside compact urban centers for lower cost strategies or options for their projects, or down-size redevelopment projects to avoid triggering thresholds for expensive stormwater requirements to the detriment of desired density. Density goals can be difficult to meet if a significant portion of the land must be used for stormwater control facilities. This issue and the notion of density as a best management practice for managing stormwater has been discussed in several nationally published articles.<sup>5</sup>

A stormwater control transfer program using a prioritized watershed approach is expected to yield cost effective and better environmental outcomes than the default approach under the permit. The mutually beneficial goals of a stormwater control transfer program are to:

• Meet or exceed municipal stormwater permit requirements;

<sup>&</sup>lt;sup>4</sup> Again, it is important to note the difference between a "receiving watershed" and "receiving waterbodies or waters" per the definitions in Attachment A.

<sup>&</sup>lt;sup>3</sup> <u>Dense and Beautiful Stormwater Management</u>, Laurence Aurbach, Ped Shed Blog, 2010; <u>Watersheds, Walkability and</u> <u>Stormwater</u>, Stormwater: The Journal for Surface Water Quality Professionals, 2011; <u>Is Denser Greener</u>? An Evaluation of <u>Higher Density Development as an Urban Stormwater-quality Best Management Practice</u>, John S. Jacob and Ricardo Lopez, Journal of the American Water Resources Association, 2009; <u>Forest Cover, Impervious-Surface Area</u>, and the Mitigation of <u>Stormwater Impacts</u>, Derek Booth, David Hartley and Rhett Jackson, Journal of the American Water Resources Association, 2007; <u>A Browner Shade of Green</u>, Lisa Nisenson, Planetizen, 2007; <u>The High Cost of Free Curb and Gutter</u>, Lisa Nisenson, Planetizen, 2013.

- Improve habitat for salmonids or shellfish, or address other environmental priorities of a local jurisdiction sooner than following the existing default stormwater management approach; and
- Facilitate development in urban growth centers designated to receive projected population growth.

One example of this approach is the City of Redmond 's Watershed Management Plan. The Plan provides the basis for a stormwater control transfer program that allows the City to invest stormwater controls first in high priority watersheds with the most restoration potential for high quality salmon habitat. The City will not allow further impacts to streams with significant degradation, with the long term goal of rehabilitation of all water bodies within the City. This includes in-stream projects, buffer projects, and programmatic efforts to reduce development impacts.

The City of Redmond chose to develop a Watershed Management Plan to restore Redmond's surface waters and provide a coordinated framework for addressing regulatory drivers (Endangered Species listings and Clean Water Act violations), while supporting future development.

Redmond is taking a watershed-based approach to surface water management to be more strategic with resources, projects, and programs. When applied city-wide, this approach is expected to produce more immediate and measurable positive results relative to the current approach that relies on uncoordinated regulatory drivers to achieve incremental, site-by-site improvements in stormwater management as land is developed or redeveloped over an extended period. Redmond is implementing this approach to achieve the goal of rehabilitating all the City's surface waters over the next 50 to 100 years.<sup>6</sup>

5. Background of the Building Cities in the Rain project

The Puget Sound Regional Council's Growth Management Policy Board at its May, June and July 2013 meetings heard presentations<sup>7</sup> and discussed the challenges and high cost of meeting state stormwater requirements on a site-by-site basis while accommodating growth in high-density urban centers pursuant to the Washington State Growth Management Act . The Puget Sound Partnership South Central Action Area Local Integrating Organization (LIO) also expressed an interest in working on this issue under an adopted sub-strategy of the Puget Sound Action Agenda<sup>8</sup>.

As a result of the Growth Management Policy Board's discussion and the South Central LIO's interest in sustainable stormwater management, the LIO requested technical assistance from the Washington State Department of Commerce (Commerce) to further understand and develop recommendations to address the issue. Commerce secured funding through a National Estuary Program Watershed Protection and Restoration grant to convene counties, cities and tribes to identify land use barriers to implementing the Puget Sound Action Agenda, and policies and regulations to address those barriers, entitled *Regional Alliances*. With this funding, Commerce has researched the issue, provided technical assistance, and convened a work group of interested stakeholders for the *Building Cities in the Rain* project.

a. Background Report on Existing Information

<sup>&</sup>lt;sup>6</sup> <u>City of Redmond Watershed Management Plan</u>, Executive Summary, page xiii.

<sup>&</sup>lt;sup>7</sup> The presentations are posted on the PSRC Growth Management Policy Board's meetings web site.

<sup>&</sup>lt;sup>8</sup> Puget Sound Action Agenda Strategy A 4.2, as amended in the 2014/2015 Action Agenda.

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Commerce staff reviewed the Growth Management Policy Board stormwater discussions and met with builders, planners, stormwater managers, and others to gain a better understanding of the issue. The product of this analysis is a background report<sup>9</sup> that identifies key concerns and challenges. The report emphasizes the benefits to water resources of redevelopment and implementing the Puget Sound Regional Council's VISION 2040 Regional Growth Strategy. The Regional Growth Strategy includes policies to minimize new impervious surface and reduces pollution through decreased vehicle miles travelled and redevelopment of existing pollution generating impervious surfaces to non-pollution generating impervious surfaces (for example, replacing a parking lot with a mixed use build and plaza).

b. Building Cities in the Rain Work Group

The Building Cities in the Rain Work Group grew out of a subcommittee of the South Central LIO. It includes representatives from Western Washington Phase I and II county and city permittees; the Washington State Departments of Ecology, Fish and Wildlife, Commerce, and the Puget Sound Partnership; the U.S. Environmental Protection Agency; Puget Sound Regional Council; the South Central LIO; Water Resource Inventory Area (WRIA) 8, and the environmental community<sup>10</sup>. The group agreed that a stormwater control transfer program could be an important tool to both address the issue of managing stormwater in urban growth centers and to restore healthy habitat in urbanized priority watersheds. They met over a period of 12 months in 2014 and 2015 to develop this guidance for designating high priority watersheds to receive stormwater controls from designated Regional Growth Centers in the central Puget Sound region.

B. Phasing of Prioritization Guidance - Initial Focus on Regional Growth Centers

The work group agreed to take a stepwise, systematic approach to this new program. Therefore, the first iteration of the guidance will focus on Regional Growth Centers<sup>11</sup> under the Puget Sound Regional Council's VISION 2040 as initial sending areas to encourage growth in those areas. Following successes in these initial sending areas, the group can then consider whether and how a broader application makes sense.

<u>Regional Growth Centers<sup>12</sup></u> are the hallmark of VISION 2040 and its Regional Growth Strategy. VISION 2040 is a regional strategy for accommodating the 1.5 million people expected to live in the region by 2040. In addition to a Regional Growth Strategy, it consists of an environmental framework and multi-county planning policies adopted pursuant to the Washington State Growth Management Act<sup>13</sup> to guide local comprehensive land use plans and development regulations. Designated Regional Growth Centers

<sup>&</sup>lt;sup>9</sup> The Background Report is posted on the Building Cities in the Rain project web site.

<sup>&</sup>lt;sup>10</sup> See Attachment B for the list of Work Group participants.

<sup>&</sup>lt;sup>11</sup> Regional Growth Center are the assumed sending areas for purposes of this guidance, but receiving areas can also be located in Regional Growth Center. While designation of Regional Growth Center may have taken the environment into account, stormwater issues were not necessarily considered and, in fact, parts of some Regional Growth Center may be prioritized for retrofit. Further, not all Regional Growth Center can be designated as sending areas. For example, areas within cities designated by Ecology as highly urbanized areas would not have a reason to adopt a stormwater control transfer program for flow control as these areas need only match preproject conditions under flow control requirements. See Ecology's <u>Flow Control Guidance for Highly Urbanized</u> <u>Areas</u>. It is also the case that some Regional Growth Center may be designated as higher priority through the process described in this guidance.

process described in this guidance. <sup>12</sup> See Attachment C for a map of the Regional Growth Center and 40/20 Basins Near Flow Control Exempt Waters. <sup>13</sup> RCW 36.70A.210 (7).

have been identified for housing and employment growth, as well as for regional funding to support that growth. Regional manufacturing/industrial centers are locations for increased employment. Regional centers are expected to have subarea plans that meet planning expectations outlined in the Puget Sound Regional Council's <u>Regional Centers Plan Checklist</u>.

In most Regional Growth Centers, reaching population and employment targets will require substantial infill development. In addition to encouraging efficient use of urban land through infill, VISION 2040 encourages maintaining hydrological functions, and where feasible, restoring them to a more natural state.

The focus of this guidance is on jurisdictions where most of the Regional Growth Centers are located. However, other cities and counties are not precluded from using this guidance to consider a stormwater control transfer program. Furthermore, a group of multiple jurisdictions could also enter into an interlocal agreement to transfer stormwater controls across jurisdictional boundaries<sup>14</sup>.

- C. Multiple Community and Regulatory Benefits
- 1. Clean Water Act, including the stormwater permit requirements

Water pollution and altered hydrology caused by development degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Separate storm sewer systems are a type of point source that include discrete conveyances such as pipes or man-made ditches designed or used to convey or collect stormwater. When owned operated by a public entity (e.g., city, county, state), such storm systems (also called MS4s) may be regulated as point sources under an NPDES permit. Similarly, some industrial, municipal, and other facilities obtain NPDES permits if their discharges go directly to surface waters. In most cases, the NPDES permit program is administered by authorized states, including Washington State. Since its introduction in 1972, the NPDES permit program is responsible for significant improvements to our Nation's water quality.<sup>15</sup>

a. NPDES Municipal Permits

The applicable regulations for this guidance are found in the Clean Water Act <u>NPDES municipal permits</u> issued by the Washington State Department of Ecology for MS4s. Permits have been phased in over time following EPA regulations. "Phase I" permits are issued to Clark, King, Pierce, and Snohomish Counties and the cities of Seattle and Tacoma. Eighty two cities and five counties fall under the Western Washington "Phase II" permit<sup>16</sup>.

Both permits require counties and cities to adopt regulations requiring best management practices (BMPs) for new development and redevelopment projects that meet certain project size and type thresholds. The BMPs are designed to: 1) protect water quality by providing runoff treatment, and 2)

<sup>&</sup>lt;sup>14</sup> There may be some challenges to establishing an inter-jurisdictional program with the sending jurisdiction's ability to account for transfers, and the ability to ensure control and maintenance of a stormwater facility that it does not own and is outside its jurisdictional boundaries.

<sup>&</sup>lt;sup>15</sup> EPA NPDES web site.

<sup>&</sup>lt;sup>16</sup> See Attachment D for a list of the Western Washington Phase I and II cities and counties.

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provide flow controls that reduce stormwater peak flow rates and volumes to prevent channel erosion in rivers and streams.

Minimum Reguirement #7, Flow Control<sup>17</sup> (MR #7 Flow Control) requires that qualifying projects control flow durations (for the range of pre-developed discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow) to match those conditions produced by the pre-developed land cover condition (generally, forested) rather than by the immediate pre-project land cover condition.

Minimum Requirement #6, Runoff Treatment (MR #6) requires that various types of runoff treatment be provided to address the post-project condition for certain hard and pervious surfaces<sup>18</sup>. Minimum Requirement #5, On-Site Stormwater Management (MR #5, often referred to as the Low Impact Development requirement) requires projects to infiltrate, disperse, and retain stormwater runoff at a project site<sup>19</sup>. Both permits also allow permittees to use basin or watershed planning to tailor MRs #5, 6, or 7 subject to certain conditions<sup>20</sup>.

#### b. Basin/Watershed Management Plan

A permittee may establish a stormwater control transfer program designed to achieve the maximum environmental benefit from stormwater control retrofits under a basin or watershed management plan approved by Ecology under Appendix 1, Section 7 of the MS4 permit. Doing so allows a permittee to invest in stormwater controls first in priority watersheds with high environmental restoration potential without degrading lower priority watersheds, while still meeting permit requirements.

#### 2. Puget Sound Action Agenda

The Puget Sound Action Agenda is a regional road map that lays out the work needed to achieve an ambitious goal: restoring the health of Puget Sound by 2020. The <u>2014/2015 Action Agenda</u> identifies key ongoing programs, local priorities for different areas of the Sound and approximately 300 specific actions that must be implemented over the next two years to stay on track toward recovery targets. The Action Agenda calls for concentrated growth in urban growth areas and improved stormwater controls to implement two of the Action Agenda's three strategic initiatives: (1) Prevent pollution from urban stormwater runoff; and (2) Protect and restore salmon habitat.<sup>21</sup>

- The plan must be formally adopted by all jurisdictions with responsibilities under the plan; and
- All ordinances or regulations called for by the plan must be in effect; and
- The basin plan must be reviewed and approved by Ecology.

<sup>21</sup> Several strategies in the Action Agenda speak directly to compact communities, clean water and habitat restoration, for example:

- A1. Focus Land Development Away from Ecologically Important and Sensitive Areas
- A2. Protect and Restore Upland, Freshwater, and Riparian Ecosystems

<sup>&</sup>lt;sup>17</sup> Municipal Permits for Western Washington, Appendix 1, Section 4.7, Minimum Reguirement #7, Flow Control.

<sup>&</sup>lt;sup>18</sup> Municipal Permits for Western Washington, Appendix 1, Section 4.6, Minimum Reguirement #6, Runoff Treatment.

<sup>&</sup>lt;sup>19</sup> Municipal Permits for Western Washington, Appendix 1, Section 4.5, Minimum Reguirement #5, On-site Stormwater Management.

<sup>&</sup>lt;sup>20</sup> Municipal Permits for Western Washington, Appendix 1, Section 7, Basin/Watershed Planning: In order for a basin plan to serve as a means of modifying the minumum requirements the following conditions must be met:

The third Action Agenda strategic initiative is to restore and re-open shellfish beds. Shellfish harvesting is a major Puget Sound industry, and a tribal treaty right. Both are threatened by pollution that has closed more than 7,000 acres of Puget Sound beaches. Shellfish health begins on land, through reduction of pollution from rural and agricultural lands and maintenance and repair of failing septic tanks. A stormwater control transfer program could be used to improve the health of shellfish beds through restoration of receiving watersheds that drain to marine waters.

#### 3. Puget Sound Salmon Recovery Plan

The <u>Puget Sound Salmon Recovery Plan</u> is a regional shared strategy developed in response to listings of Puget Sound Chinook salmon and Summer chum salmon in Hood Canal under the federal Endangered Species Act (ESA). The recovery plan is mandated by the ESA listing and developed to meet the needs of fish and people. A fundamental assumption of this shared strategy approach is that local watershed efforts are the engine that will lead the region to recovery of salmon. Restoration and protection actions will take place largely at the watershed level. To that end, recovery plans have been developed by local watershed groups for each of the Water Resource Inventory Areas (WRIAs) in Puget Sound. Those plans are comprised of detailed strategies and actions designed to address the limiting factors that have caused the species to be threatened with extinction under the ESA.

Salmon recovery plans do not address the stormwater impacts from development that degrade salmon habitat in urbanized areas. A stormwater control transfer program can facilitate salmon recovery by targeting watersheds with the most potential for restoration, and building stormwater retrofits in those watersheds that leverage habitat restoration projects, making it possible for salmonids to survive in urbanized water bodies.

#### 4. Growth Management Act – Helping Communities Plan Strategically for their Future

Since the Washington State Growth Management Act<sup>22</sup> was passed by the Legislature in 1990, Washington counties and cities have utilized the Growth Management Act's planning framework to adopt comprehensive plans and development regulations to guide where urban growth areas should be and to provide these urban areas with adequate and affordable urban services. Enabled by the Growth Management Act, counties and cities are better equipped to: protect critical areas and conserve resource lands; provide for rural living – open space – and recreational areas; enhance transportation systems to reduce congestion and create healthy alternative modes of travel; and revitalize downtowns with attractive compact development. The Growth Management Act continues to empower communities to manage their growth in a manner which makes sense for each community.

The Growth Management Act requires the fully planning counties and the cities<sup>23</sup> within them to meet all of the requirements under the Act. Fully planning counties must, in consultation with cities, adopt countywide planning policies that govern the county and city comprehensive land use plans and development regulations. In central Puget Sound, PSRC is also required to adopt multi-countywide

<sup>23</sup> 29 counties and the cities within them are required or opted into the requirements to fully plan under the Growth Management Act.

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**Comment [BH3]:** Need some help with this section.

A4. Encourage Compact Regional Growth Patterns and Create Dense, Attractive, and Mixed-Use and Transit-Oriented Communities

<sup>&</sup>lt;sup>22</sup> Chapter 36.70A RCW and related statutes.

planning policies that govern countywide planning policies for the four counties (King, Pierce, Kitsap and Snohomish)<sup>24</sup>. VISION 2040 contains the multi-county planning policies adopted by PSRC in compliance with the Growth Management Act. A stormwater control transfer program that facilitates development in REGIONAL GROWTH CENTERs implements a number of the multi-countywide planning policies in VISION 2040<sup>25</sup>.

#### a. Creating Compact Communities in Regional Growth Centers

The cost of infrastructure, including stormwater, is a challenge to realizing the Growth Management Act's vision of vibrant, compact communities that allow cities and counties to accommodate growth. Meeting flow control requirements, in particular, can consume valuable land on smaller urban lots, creating challenges to meeting density and intensity goals for employment and population growth. Jurisdictions that can provide incentives for developers in urban centers tend to be more successful in developing attractive compact downtowns and neighborhoods. A stormwater control transfer program provides options and more certainty to developers to meet stormwater requirements in REGIONAL GROWTH CENTERs and encourage the growth that is planned.

b. Capital Facilities and Utilities Plans

Land use planning under the Growth Management Act requires, where applicable, the review of drainage, flooding, and stormwater runoff and provide guidance for corrective actions to mitigate or cleanse discharges that pollute waters of the state, including Puget Sound or waters entering Puget Sound<sup>26</sup>. The Act further requires cities and counties to adopt a six to twenty year plan of capital projects with estimated costs and proposed methods of financing<sup>27</sup> as part of their comprehensive land use plan. The plan must also include a utilities element with the general location, proposed location, and capacity of all existing and proposed utilities<sup>28</sup>.

Public stormwater management facilities are identified in the capital facilities plan. The capital facilities plan and utilities element must be consistent with planned uses in the land use element of the comprehensive plan<sup>29</sup>. A watershed management plan can identify priority watersheds where public regional stormwater facilities can be planned to address stormwater requirements in Regional Growth Centers.

<sup>&</sup>lt;sup>24</sup> RCW 36.70A.210(7).

<sup>&</sup>lt;sup>25</sup> MPP-En-3: Maintain and, where possible, improve air and water quality, soils, and natural systems to ensure the health and well-being of people, animals, and plants. Reduce the impacts of transportation on air and water quality, and climate change.

MPP-En-5: Locate development in a manner that minimizes impacts to natural features. Promote the use of innovative environmentally sensitive development practices, including design, materials, construction, and on-going maintenance.

MPP-En-13: Maintain natural hydrological functions within the region's ecosystems and watersheds and, where feasible, restore them to a more natural state.

MPP-En-14: Restore — where appropriate and possible — the region's freshwater and marine shorelines, watersheds, and estuaries to a natural condition for ecological function and value.

<sup>&</sup>lt;sup>26</sup> RCW 36.70A.070(1).

<sup>&</sup>lt;sup>27</sup> RCW 36.70A.070(3).

<sup>&</sup>lt;sup>28</sup> RCW 36.70A.070(4).

<sup>&</sup>lt;sup>29</sup> RCW 36.70A.070.

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#### c. Transportation demand Management and Infrastructure under VISION 2040

By the year 2040, the region is expected to grow by roughly 1.5 million people and support more than 1.2 million new jobs. All of these new people and new jobs are expected to boost demand for travel within and through the region by about 40%. Regional growth and regional manufacturing centers, with their concentration of people or jobs, form the backbone of the transportation network for the four-county region. Facilitating growth in designated regional centers reduces the demand for single vehicle trips and parking infrastructure, both of which can have significant stormwater impacts. A stormwater control transfer program can encourage growth in those centers where public transit and services exist or are planned by allowing transfers of stormwater requirements off site and out of the basin.

#### c. Economic Development and Revitalization

Vibrant downtowns and other urban centers are an essential element for any region-wide economic development strategy because they are traditionally the hubs of economic activity in any community. Key to the success of these centers is economic development that will provide local jobs with access to housing, shopping, recreation, transit and services. Market-based incentive programs such as a stormwater transfer control program can encourage economic development in these urban centers planned for housing and employment growth.

#### d. Subarea Plans and Environmental Review

Most of the currently designated Regional Growth Centers have subarea plans adopted by the city. A subarea plan is a more detailed version of the comprehensive land use plan for a specific area, such as a downtown or neighborhood. PSRC now requires an adopted subarea plan or "center plan" for designation of new REGIONAL GROWTH CENTERs. The center plan must include a commitment to compact, pedestrian, and transit-oriented development. The plan should include or reference policies and programs for innovative stormwater management.<sup>30</sup>

"Up front" environmental review of subarea plans under the State Environmental Policy Act (SEPA), or predefined mitigation of development, can be used to further streamline permitting and provide incentives for developers in an REGIONAL GROWTH CENTER. The review would include and address any impacts through predefined mitigation for impacts to the natural or built environment that will be generated by allowed development. The predefined mitigation measures could include offsite transfers of stormwater controls. Mitigation measures would be predefined in the SEPA document for the subarea plan – e.g. integrated plan/SEPA document, plan-level "non project" SEPA document, planned action environmental impact statement (EIS)<sup>31</sup>, or a subarea plan and EIS for transportation-oriented development<sup>32</sup>. Predefined mitigation measures provide more certainty for the developer, and under a planned action can eliminate SEPA appeals at the project level.

## D. Prioritizing Watersheds for Stormwater Control Transfers

1. Policy Framework

<sup>&</sup>lt;sup>30</sup> See PSRC's <u>Regional Center Plans Checklist</u>.

<sup>&</sup>lt;sup>31</sup> RCW 43.21C.031.

<sup>&</sup>lt;sup>32</sup> RCW 43.21C.420.

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Policies in the local comprehensive land use plan are the basis for prioritizing receiving waters under a stormwater control transfer program. They should provide support for improved stormwater management, habitat restoration, and development that supports the Regional Growth Strategy. These policies are the basis for a stormwater control transfer program designed to facilitate growth in urban centers and provide environmental uplift.

#### Some examples of Watershed Policy

The City of Redmond's Comprehensive Plan adopted under the Growth Management Act includes a Natural Environment Element with water quality and basin planning policies that provide the basis for the City's Watershed Management Plan and stormwater control transfer program. They include:

- NE-67 Maintain surface water quality necessary to support native fish and wildlife meeting state and federal standards over the long term. Restore surface waters that have become degraded to provide for fish, wildlife, plants, and environmentally conscious human use of the water body.
- NE-68 Restore, protect, and support the biological health and diversity of Water Resource Inventory Area (WRIA) 8 within the city.
- NE-69 Protect and restore natural systems that underpin watershed health and hydrological integrity.

Kitsap County adopted its "<u>Water as a Resource</u>" policy in June 2009. The County recognized that storm and surface water runoff is the leading transport medium of pollution into Puget Sound and its associated wetlands, creeks, streams and rivers in this policy. The policy applies to all County departments that report to the County Board of Commissioners. It is applied to public works projects and the comprehensive plan and development regulations. This policy is the basis for several basin planning projects, including <u>LID retrofit plans</u>.

Policies for a fee-in-lieu approach to stormwater in the capital facilities element, or for treatment of waters that discharge to Puget Sound in the land use element, of the comprehensive plan could also serve as the basis for a transfer program. Other ideas?

#### 2. Data for Prioritization of Receiving Waters

The data needed for a city or county to prioritize watersheds for stormwater retrofits should generally be available and easily accessible. The Department of Ecology's watershed data from the Puget Sound Characterization Project is a recommended starting point for prioritization unless the local government has developed an equivalent watershed analysis. The local government should then make refinements to the watershed characterization data based on more specific local and regional data. It will be important to use this data to map local environmental assets, delineate areas that drain to each asset, and consider how to prioritize those areas with local knowledge as a starting point.

a. Puget Sound Watershed Characterization

The Department of Ecology's <u>Puget Sound Characterization Project</u> provides a regional-scale tool that highlights the most important areas to protect, and restore, and those most suitable for development. The program, funded by an EPA grant, is a collaborative effort between Ecology, the Puget Sound Partnership, and the state Department of Fish and Wildlife. The Characterization covers the entire Puget Sound drainage area — from the Olympic Mountains on the west to the Cascades on the east, including the San Juan Islands.

The Characterization includes watershed assessments of:

- Water flow (delivery, surface storage, recharge, and discharge)
- Water quality (sediment, nutrients, pathogens, and metals)
- Landscape assessments of fish and wildlife habitat in three environments:
  - Terrestrial
    - Freshwater
    - Marine shorelines

#### **Prioritization Process**

<u>Step 1</u>: Establish prioritization goals. <u>Step 2</u>: Review any regional-scale information as an initial screen. See Puget Sound Characterization Project.

<u>Step 3</u>: Assess local, watershedspecific information. See "Local Prioritization" table as a starting point.

<u>Step 4</u>: Seek input from natural resource agencies. <u>Step 5</u>: Submit watershed prioritization package, including data source list and prioritization goal, along with any correspondence, to Ecology for approval under Appendix 1, Section 7. The assessments prioritize small watersheds, or habitat areas, relative to one another for their protection and restoration value. The Characterization Process analyzes watersheds and sorts them into four different categories – "Protection", "Restoration", "Conservation", and "Development". Generally, watersheds that fall into the "Protection" and "Restoration" categories are expected to rank as higher priority than watersheds in the "Conservation" or "Development" categories.

b. Local Data for Prioritization of Receiving Waters

A jurisdiction will need to further prioritize receiving waters based on local conditions to successfully implement a stormwater control transfer program. This section discusses recommended sources of local data for prioritization. The data sources are separately evaluated for flow control and runoff treatment. Each jurisdiction will need to provide information on the data used and explain the prioritization process to Ecology and the public.

Types of recommended data and their sources are listed in Table

1 below. The data are split between highly useful and useful. Data identified as "highly useful" are important to assess potential environmental lift and suitability for retrofits. Data recommended as useful should be used to further inform prioritization decisions if it is available.

A jurisdiction should review Department of Ecology's watershed characterization data through the lens of the local data. Local data can be put together in a table similar to Table 1 in order to review and refine the watershed characterization data. The local government can then use the following described twostep process to prioritize watersheds. All of the data and prioritization decisions will be informed by local on the ground knowledge of streams and habitat conditions.

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**Comment [BH4]:** We have not yet discussed LID transfers. See the meeting agenda.

#### Table 1: Local Prioritization Data for Flow Control and Runoff Treatment

| Data <mark>Sources</mark>  |                  | ow<br>ntrol |                  | noff<br>itment | Comments/Notes   | Comment [HB5]: May need to reorganize  |  |  |  |  |
|--|------------------|-------------|------------------|----------------|--|--|--|--|--|--|
|  | Highly<br>Useful |             | Highly<br>Useful |                |  | the list of data sources in this table to make it<br>track with the two-step process in the next<br>section. |  |  |  |  |
| 1. Existing/Current Land Cover - Percentage of land in the watershed in each category: forest, pasture, landscaping and effective impervious surface.  |                  |             |                  |                |  |  |  |  |  |  |
| Forest- Aerial photography .Pasture- Aerial photography.Landscape- Developed areas (all areas not pasture or forest) areidentified as effectiveimpervious or landscaped based onliterature values for each land use. This can be done at theparcel level, combining zoning or land use designations intocommercial, industrial, low/medium/high density residential,and roads. Literature values for each land use type can be derivedfrom hydrology literature. | x                |             | x                |                | Landscape is the area in developed watersheds the<br>not effective impervious.<br>Effective impervious surface is the area in develop<br>watersheds that is impervious and directly connect<br>the storm drain system <sup>33</sup> .<br>Land use and land cover data are often available in<br>same data set. | Comment [BH6]: I had a note that we<br>decided not to use <u>effective</u> impervious<br>surface?            |  |  |  |  |
| <ol> <li>Existing/Current Land Use Data – Percentage of land in use for commercial, industrial, roads (include the right-of-way parcel, private,<br/>and public roads), single-family and multi-family residential, and parks and undeveloped land.</li> </ol>   |                  |             |                  |                |  |  |  |  |  |  |
| Land uses are parcel based and calculated by summing different<br>land use types into the categories presented from a maintained<br>city or county Land Use GIS database. Can also use Buildable<br>Lands Analysis <sup>34</sup> . Land use designations and zoning are not<br>always indicative of what is on the ground. Selecting categories<br>to lump land uses into should be based on the literature values   |                  | x           | x                |                | Runoff treatment transfers should go to a like or c<br>land use than the sending/development area <sup>35</sup> .<br>Land use and land cover data are often available is<br>same data set.   | descriptive term than dirtier – "more contaminated"?   |  |  |  |  |

<sup>&</sup>lt;sup>33</sup> Municipal Stormwater Permits for Western Washington, Appendix 1, Section 2, Definitions related to Minimum Requirements for a complete definition of "effective impervious surface". <sup>34</sup> Buildable Lands Report per RCW 36.70A.215.

<sup>&</sup>lt;sup>35</sup> See draft Ecology guidance on page 5 regarding transfers of basic versus enhanced treatment under Specific Guidelines re: Minimum Requirement 6 Runoff Treatment.

| for effective impervious surface percentages for each land use. |  |  |  |
|---|--|--|--|
| This exercise should be simple once the jurisdiction decides    |  |  |  |
| what to use for categories of existing land use.                |  |  |  |
|   |  |  |  |

# 3. Zoned Land Use/Land Cover – Zoning designations/planned uses for commercial, industrial, single-family and multi-family residential, and parks. City or county comprehensive land use and zoning maps. Zoning, right-of-way, critical areas, stormwater and other regulations related to land cover. Function and structure code combinations can be used for each land use type.

# Residential:

- Single-family can be further differentiated by development density. For example, four categories of single-family based on parcel size.
- Multi-family includes condominiums and apartments. Can include commercial first story with dwelling units above in the commercial area calculation.

Parks and Undeveloped Land – Undeveloped land includes areas that are forest and pasture, as well as other areas that are not developed.

# 4. Physical Parameters

| Watershed area data - total acres of stream area inside and       |   |   |  |
|---|---|---|--|
| outside jurisdictional boundaries. Local governments could be     |   |   |  |
| very accurate with this exercise or simply use topography to      |   |   |  |
| delineate areas that drain to each water body/receiving water. If |   |   |  |
| nothing else, local governments could use catchments              |   |   |  |
| delineated in the Puget Sound Watershed Characterization          |   |   |  |
| Model, which are likely from a larger dataset owned by            |   |   | Includes stormwater conveyance and topographic based     |
| someone at the state level, likely WDNR. Data sources at DNR?     | Х | Х | watershed.   |
| Stream length-total stream miles within jurisdictional            |   |   | If a stream flows into the jurisdiction from a less      |
| boundaries Local governments should create their own stream       |   |   | developed area outside the jurisdiction, then the        |
| data, which likely occurred as part developing the critical areas | Х | Х | jurisdiction may want to prioritize that stream. Context |

Х

Х

| ordinance. Even with inaccuracies local critical area map should<br>be sufficient. Newer LiDAR data to map water bodies is by far<br>the most accurate. |   |   | will be important to understand the habitat well. |
|---|---|---|---|
| Class II (Department of Natural Resources Type F plus S <sup>36</sup> )   |   |   |   |
| stream length inside jurisdictional boundaries. Data sources?   | Х | Х |   |

<sup>&</sup>lt;sup>36</sup> The Washington State Forest Practices Board has adopted an interim water typing system in WAC 222-16-031. Type F streams have fish use as defined in WAC 222-16-031(2) and (3). Type S streams are inventoried shorelines of the state as referenced in WAC 222-16-031(1).

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| 5. Fish Use  |   |  |   |   |
|--|---|--|---|---|
| <ul> <li>Current Chinook, Coho and other salmonid use and potential use data:</li> <li><u>Water Resource Inventory Area (WRIA) Plans</u></li> <li>Watershed Characterization habitat data – <u>Puget Sound</u><br/><u>Characterization Project</u></li> <li><u>SalmonScape</u> web site maintained by WDFW provides a computer mapping system for salmon recovery planners. It has lifestage and barriers information for mainstems and named tributaries. It will need to be verified and refined by</li> </ul> |   |  |   |   |
| <ul> <li>local data and knowledge, especially for smaller or unnamed tributaries.</li> <li><u>Salmonid Stock Inventory</u> (SaSI) web site has reports describing and categorizing the status of 435 salmon and steelhead stocks.</li> <li>County and city-specific data.</li> </ul>   |   |  |   | A local government needs to know that fish are present if<br>they are prioritizing for habitat restoration. Of this suite<br>of data types, Chinook is the best indicator of high flow<br>issues. |
| <ul> <li>County and city-specific data.</li> <li>Location of physical and natural barriers – who maintains this data?</li> <li>Subareas of streams that drain to downstream hatcheries as well as to salmon bearing streams</li> <li>Take advantage of existing prioritization efforts if available, especially those with tribal co-manager involvement<sup>37</sup>.</li> </ul>  | Х |  | × | Potential fish use data is highly useful for salmon recovery.   |

<sup>37</sup> See King County example at <a href="http://www.govlink.org/regional-water-planning/tech-committees/trib-streamflow/TribStrmflwFinalReport10-2006.pdf">http://www.govlink.org/regional-water-planning/tech-committees/trib-streamflow/TribStrmflwFinalReport10-2006.pdf</a>

| 6. Habitat  |   |   |   |   |  |
|---|---|---|---|---|--|
| Naturally occurring large woody debris/100 linear feet -<br>weighted average of large woody debris density over walked<br>channel length. This data can be collected by local government<br>staff walking each creek. |   | x |   |   | Large woody debris is defined as wood at least 10 inches<br>in diameter and 10 feet long, in or over bankfull<br>channel <sup>38</sup> counted by field crews. (Unnecessary for runoff<br>treatment.)  |
| Tree canopy percentage cover in local government regulatory stream buffers – aerial photography.  | x |   | x |   | Tree canopy includes trees with a minimum 10-foot<br>diameter canopy within regulatory buffers for open<br>channel stream reaches within the jurisdictional limits.<br>Tree canopy can be used as a tiebreaker between two<br>otherwise equally ranked watersheds. |
| Percentage of intact 300-foot vegetated stream buffer – aerial  |   |   |   |   |  |
| photography.  |   | Х |   | Х |  |
| Percentage of intact 100-foot vegetated stream buffer – aerial  |   |   |   |   | The extent of intact buffers throughout a stream system<br>correlate well with fish recovery/potential. Higher values<br>equate to more vegetation. All vegetation including<br>landscaped and mowed or plowed land is included –                                  |
| photography.  | х |   | х |   | trees, shrubs, and unmoved grasses.  |

<sup>&</sup>lt;sup>38</sup> "Bankfull width" is defined by the Washington State Department of Natural Resources in WAC 22-16-010 for streams as "the measurement of the lateral extent of the water surface elevation perpendicular to the channel at bankfull depth. In cases where multiple channels exist, bankfull width is the sum of the individual channel widths along the cross-section (see board manual section 2)."

| 7. Water Quality/Habitat  |   |   |   |   |
|---|---|---|---|---|
| Benthic Index of Biotic Integrity (BIBI) <sup>39</sup> , where appropriate, to<br>measure aquatic health. Local government can collect this data<br>relatively inexpensively. | x |   | x | BIBI scores provide a quantitative method for<br>determining and comparing the biological condition of<br>streams using the macro-invertebrate assemblages as<br>indicators. BIBI scores can be shown as the median value<br>of all samples taken from the applicable stream.BIBI data is highly useful for fresh water, but is not<br>available for salt water. As it cannot be collected in all<br>streams, other measures of aquatic health may be<br> |
| 8. Water Quality  |   |   |   |   |
| Ecology listed water quality impairments - State Water Quality<br>Assessment (cat 4a, 4b, 4c, or 5) at <u>Ecology's Water Quality</u><br><u>Assessment and 303(d) List</u> .  | x |   | x | Waterbodies that are identified on the Ecology 303(d)<br>list as a category 5 or category 5B due to impairment<br>from the indicated water quality parameter.   |
| Known water quality concerns based on locally-collected data:<br>High temperature, low dissolved oxygen, and high fecal coliform  |   |   |   | If a local government collects this data, it is good data to have.  |
| bacteria.   |   |   | Х |   |
| Shellfish bed health - shellfish bed closure(s)- <u>Washington State</u><br><u>Department of Health Beach Closures</u>  |   | х | х | Shellfish bed closures by the Washington Department of Health are an indicator of water quality issues.   |

<sup>&</sup>lt;sup>39</sup> Fish Index of Biotic Integrity (F-IBI) is good data where it is available, but it can be hard to interpret as it is stream size dependent.

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| 9. Stormwater Influence   |   |   |  |
|---|---|---|--|
| High vehicle traffic areas – Annual Average Daily Traffic <sup>40</sup> >7,500. |   | x | (Unnecessary for flow control.)  |
| Outdated flow control infrastructure needing retrofit -                         |   |   | This data indicates the environmental lift potential from  |
| percentage of watershed developed before [DATE TO BE                            |   |   | installing stormwater retrofits. While a good indicator,   |
| DETERMINED by the Work Group – 2010?]   |   |   | not all jurisdictions with have this information.  |
|   | Х |   | (Unnecessary for runoff treatment.)  |
| Total acres/percentage of developed watershed not equipped                      |   |   |  |
| with basic runoff treatment. This can be done by plat and based                 |   |   |  |
| on the age of the plat. It is important to remove forest and                    |   |   | The percentage can be calculated using the entire  |
| pasture areas from total watershed area to make sure                            |   |   | watershed minus areas that currently contribute runoff   |
| undeveloped areas are not counted in the areas needing basic                    |   |   | to a basic treatment facility or are currently forest or   |
| treatment.  |   | X | pasture.   |
| Known number of outfalls and ditches, including the location                    |   |   | Mapped outfalls and ditches draining pollution   |
| and severity of fish passage barriers – city or county maps.                    | v | v | generating surfaces for 1,000 linear feet on all stream  |
|   | Х | X | classes within the jurisdiction.   |
|   |   |   | Mapped culvert crossings (street, driveway, or utility) per  |
|   |   |   | 1,000 linear feet on mapped Class II stream channels in  |
|   |   |   | each watershed within the jurisdictional boundaries.<br>Does not include trail bridges, long storm pipes, pipe |
|   |   |   | outfalls, or piped sections of stream headwaters (even if  |
| Known number of culvert crossings/1,000 linear feet – city or                   |   |   | mapped in culvert layer). Multiple parallel culverts are   |
| county maps.  | x | x | counted as one crossing.   |
| Known number of mapped ditch outfalls (or pipes smaller than                    | ^ | ^ | Mapped ditch outfalls.   |
| 12") potentially draining from pollution generating surfaces                    |   |   |  |
| within jurisdictional boundaries – city or county maps.                         | х | x |  |

<sup>&</sup>lt;sup>40</sup> Total volume of vehicle traffic of a highway or road for a year divided by 365 days.

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#### 3 Process for Prioritization of Receiving Watersheds

A two-step process for using local data to prioritize receiving watersheds is recommended. Data from the first step can be used to do an initial review of watersheds. Step 2 data can be used to further refine priority watersheds. Step 1 data is not more important or a higher priority than Step 2. The two-step process is provided as an analytical tool to make the prioritization process simpler.

## Step 1: Fish Use

Review the watersheds for actual or potential fish use with a focus on the biological conditions and potential for environmental lift. Give higher priority to watersheds with low to moderate levels of impairment<sup>41</sup> as assessed with the following data:

- Presence of culverts or other barriers, including natural barriers, to fish passage.
- Percentage of tree canopy/condition of buffer for habitat and shade (This may also be considered at Step 2.)
- Benthic Index of Biotic Integrity (B-IBI) as an indicator of biological conditions.
- Known water quality impairment 303(d) listings and Total Maximum Daily Loads (TMDLs<sup>42</sup>), local knowledge, or low instream flows – that impact fish mortality and use.

## Step 2: Flow control and runoff treatment opportunities

Review the watersheds for opportunities to address flow control issues or provide runoff treatment. Give higher priority to watersheds in which stormwater management improvements are expected to accelerate environmental improvement<sup>43</sup>.

- Physical flow control data:
  - Percentage of impervious area/land cover in the watershed
  - Age and condition of stormwater management infrastructure an assessment of the need for retrofits
  - Ripeness to proceed (local knowledge, aligns with programs such as tree planting, capital improvement plan, etc.)
  - Watershed area data (inside vs. outside jurisdictional boundaries) Give higher priority to watersheds where the municipality can exert greater influence. However, if the municipality coordinates a priority watershed identification and rehabilitation strategy approach with a neighboring municipality, a shared watershed may be scored higher<sup>44</sup>.
- Coordination with state, regional and local plans Give higher priority to watersheds where regional rehabilitation efforts are also focused<sup>45</sup> through:
  - Comprehensive plans and zoning understanding the potential for growth in the watershed is necessary for prioritizing and planning a retrofit appropriate for the watershed's future.
  - o Salmon Recovery Plans (3-year work plans, Water Resource Inventory Area priorities)

<sup>&</sup>lt;sup>41</sup> Ecology Prioritization Principle #1 (page 9 of draft Ecology guidance)

<sup>&</sup>lt;sup>42</sup> TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards.

<sup>&</sup>lt;sup>43</sup> Ecology Prioritization Principle #3 (page 9 of draft Ecology guidance)

<sup>&</sup>lt;sup>44</sup> Ecology Prioritization Principle #2 (page 9 of draft Ecology guidance)

<sup>&</sup>lt;sup>45</sup> Ecology Prioritization Principle #4 (page 9 of draft Ecology guidance)

- TMDL plans (active and planned)
- Model Toxics Control Act/Superfund cleanups
- o Regional ecosystem goals, e.g. B-IBI
- o Endangered Species Act listings and critical habitat designations

In all cases, seek input from federal (US Fish and Wildlife, NOAA Fisheries, US Environmental Protection Agency), tribal, and state (Departments of Fish and Wildlife, Ecology and Natural Resources) resource agencies to gain buy-in on the proposed plan. Those agencies may have data pertinent to establishing priorities, and informed opinions about the relative importance of watersheds.

#### 4. Future Contaminants

This guidance should be updated based on the latest version of the municipal permits. If future versions of the permits or TMDL plans address contaminants not currently recognized, then controls that address those contaminants could be considered for transfer under a stormwater control transfer program.

#### 5. Next Steps

The results of the prioritization process can be integrated into a fully developed watershed plan, which includes the basis for the prioritization process, the jurisdiction's methods for applying and tracking transfers, monitoring, and implementation strategies per Ecology's guidance.

Finally, Ecology will need to review the data and the process as part of its approval of the basin/watershed plan under the Phase I or II Municipal Permit for Western Washington, Appendix 1, Section 7.

#### Resources

Biotic criteria associated with land cover studies:

- Horner, R.R., and C.W. May. 1999. Regional study supports natural land cover protection as the leading best management practice for maintaining stream ecological integrity. Proceedings of the Comprehensive Stormwater and Aquatic Ecosystem Conference. Auckland, New Zealand. 12 pp. http://stormwater.cecs.ucf.edu/research/bioassessment/pugetsoundfinalreport.pdf
- Booth, D.B., and L.E. Reinelt. 1993. Consequences of urbanization on aquatic systems measured effects, degradation thresholds, and corrective strategies. Pages 545–550 in U.S. Environmental Protection Agency (ed.). Proceedings Watershed '93: a national conference on watershed management. Alexandria, VA (<u>http://www.sciencetime.org/ConstructedClimates/wp-content/uploads/2013/01/BoothReinelt1993.pdf</u>).

#### ATTACHMENT A

# Definitions

**Receiving waterbody or receiving waters** - Receiving waterbody or receiving waters means naturally and/or reconstructed naturally occurring surface water bodies, such as creeks, streams, rivers, lakes, wetlands, estuaries, and

marine waters, or ground water, to which a MS4 discharges. (See Phase I and Western Washington Phase II Municipal Stormwater Permit Definitions)

**Receiving watershed** – A receiving watershed, or priority watershed, is a watershed that has been identified for receiving rehabilitation efforts under a stormwater control transfer program.

**Sending watershed** – A sending watershed is a watershed that has been identified for sending rehabilitation efforts to a receiving watershed.

#### ATTACHMENT B

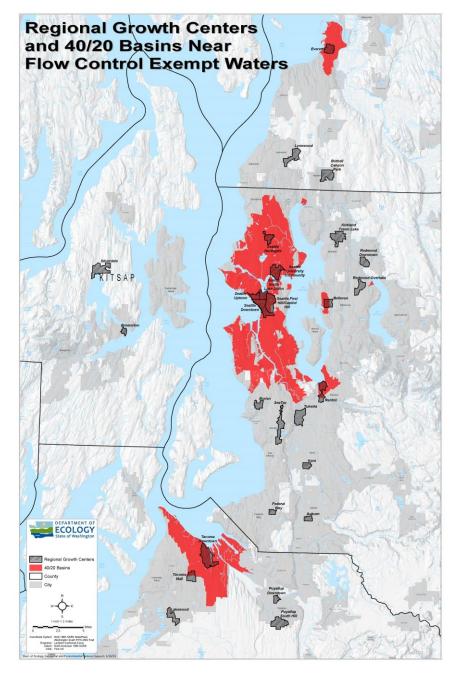
# **Building Cities in the Rain Work Group Participants**

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# ATTACHMENT D

# WHO'S COVERED UNDER THE MUNICIPAL STORMWATER PERMITS?

|                   | Р             | hase I Cities and Cou | inties             |                  |
|-------------------|---------------|-----------------------|--------------------|------------------|
| Seattle           |               |                       |                    | Snohomish County |
| Tacoma            |               |                       |                    | King County      |
|                   |               |                       |                    | Pierce County    |
|                   |               |                       |                    | Clark County     |
|                   | Western Washi | ngton Phase II C      | ities and Counties |                  |
| Aberdeen          | Des Moines    | Lakewood              | Orting             | Cowlitz County   |
| Algona            | DuPont        | Longview              | Pacific            | Kitsap County    |
| Anacortes         | Duvall        | Lynden                | Port Angeles       | Skagit County    |
| Arlington         | Edgewood      | Lynnwood              | Port Orchard       | Thurston County  |
| Auburn            | Edmonds       | Maple Valley          | Poulsbo            | Whatcom County   |
| Bainbridge Island | Enumclaw      | Marysville            | Puyallup           |                  |
| Battleground      | Everett       | Medina                | Redmond            |                  |
| Bellevue          | Federal Way   | Mercer Island         | Renton             |                  |
| Bellingham        | Ferndale      | Mill Creek            | Sammamish          |                  |
| Black Diamond     | Fife          | Milton                | SeaTac             |                  |
| Bonney Lake       | Fircrest      | Monroe                | Sedro-Woolley      |                  |
| Bothell           | Gig Harbor    | Mountlake             | Shoreline          |                  |
| Bremerton         | Granite Falls | Terrace               | Snohomish          |                  |
| Brier             | Issaquah      | Mount Vernon          | Snoqualmie         |                  |
| Buckley           | Kelso         | Mukilteo              | Steilacoom         |                  |
| Burien            | Kenmore       | Newcastle             | Sumner             |                  |
| Burlington        | Kent          | Normandy              | Tukwila            |                  |
| Camas             | Kirkland      | Park                  | Tumwater           |                  |
| Centralia         | Lacey         | Oak Harbor            | University Place   |                  |
| Clyde Hill        | Lake Forest   | Olympia               | Vancouver          |                  |
| Covington         | Park          |                       | Washougal          |                  |
|                   | Lake Stevens  |                       | Woodinville        |                  |

http://www.ecy.wa.gov/programs/wq/stormwater/municipal/MuniStrmWtrPermList.html