

Building Cities in the Rain  
Working Group  
October 21, 2015  
Meeting Summary

Participants:

Heather Trim and Cailin McKenzie, Futurewise; Dan Gariepy, Abbey Stockwell, and Anne Dettelbach, Ecology; Erika Harris, Puget Sound Regional Council; Kerry Ritland, City of Issaquah; John Palmer, EPA; Jeff Burkey, King County DNR; Dana deLeon and Lorna Mauren, City of Tacoma; and Heather Ballash and Anne Fritzel, Washington State Department of Commerce.

**1. Broadening the scope to all prioritization: Is the October 14<sup>th</sup> draft headed in the right direction?**

The guidance should be useful for more than transfer programs. A broader application is very valuable, and should be appreciated by the South Central LIO. There are still many references to a stormwater control transfer program that need to be deleted - perhaps pull back on this a little so that the prioritization can be more broadly applied. Have we explored a variety of applications? There are some listed on page 9.

The original problem of GMA versus NPDES is buried in the document. Add an executive summary at the beginning of the guidance that opens with the problem statement regarding GMA versus NPDES. Then it needs a statement to address the marriage of NPDES and GMA in urban areas that need to be redeveloped. Talk about how prioritization can have multiple purposes of targeted stormwater retrofits and restoring habitat for salmon. Then move into the why/what/how addresses regulatory requirements.

*Who is the Audience for this guidance?* Generally the audience is a technical audience (local planning, stormwater, or public works staff), but include a less technical executive summary for a broader audience with a "passionate why statement" as a way to sell this to elected officials, environmental lawyers, etc. (Lorna to provide some draft language). Also consider developing a 2-4 page fact sheet as a way to reach elected officials.

Add a catch phrase to the executive summary, something like: *"Targeted watershed recovery and urban redevelopment and revitalization go hand in hand."*

May also say up front that doing this work could yield state funding as result of doing "thoughtful work" to prioritize local projects within local plans. In the executive summary, and in the introduction.

*FOUR STEPS:* Make sure beginning of the doc says four steps as the end table does.

Correct information about redevelopment - at 1.6 % per year it would be 62 years to redevelopment.

Page 2 Top – funding – shorten this: wording such as “protect and restore high priority watersheds – including beneficial uses such as salmon recovery and shellfish .”

Page 2 – second paragraph – move this to later (as it is a little early). After it is moved, beef it up as to the growth management requirements for stormwater.

There were concerns about the guidance’s focus on small streams, should also consider nearshore, marine areas for focus and restoration. Proposed data shared with the group on Habitat that they agreed should be included.[ See data table addition attached to this summary.]

## **2. Considering Climate Change in the Guidance**

King County is using new emissions scenarios from IPCC and looking at precipitation patterns that may influence wastewater emissions (how to meet CSOs ). They have been studying how changes in climate and rainfall will affect design requirements for stormwater facilities (current standards and for LID). They are looking at ten models that most accurately model past weather, and selecting those that produce the most and least rain fall as brackets. Also may look at rivers and levees, related to seasonal rainfall patterns. Would develop guidance manual to include in 2019 King County stormwater manual update.

It was noted that climate change is not accounted for in the current municipal stormwater permt.

Climate section on page 13 of the draft guidance could include other ways to think about stormwater impacts such as modelling high intensity weather events and how to address this in facilities. However there is no consensus in the stormwater community on how to address climate change for stormwater, and there are not models. Facilities are currently designed for historic patterns, with no “safety margin” typically used, but there is a 20% suggested standard. Project engineers may use 5-10% margin on site. Currently wastewater facility grants require some modelling for look for potential expansion of floodplains, to keep facilities out of the future potential flood plain.

**For the guidance:** If you have implemented a lot of retrofits, then those controls can help counter the effects of rain fall. Use “mitigation” or “adapting” at the end of the climate change discussion section. The issue for some jurisdictions is how to drain off the water from big storm events. Although, for some smaller more chronic storms may be a bigger problem. Flow control does not address flooding. How to address the emergency overflow events, and how they overwhelm existing infrastructure, and planning for emergency discharge routes to safe areas as the pipes just can’t take intense weather! Consider option for sensitivity index for watersheds for intense rain/flooding. No data sources yet exist.

Consider referencing Ecology's web page on climate changes and a source of examples that will tend to stay updated over time. Jurisdictions with Climate Resiliency plans include Tacoma, Shoreline, Snohomish – UW. Olympia (Sea level rise). . . OSU Prism group.

### **3. Environmental Justice and Social Equity:**

There are new federal and state initiatives – offer the criteria the EPA's Environmental Justice Screening Tool as a tie-breaker in decision making. Stormwater controls could reduce flooding in an environmental justice neighborhood. Add language to the second paragraph to be more clear about the connection between stormwater control transfer programs and urban development such as "In addition, because a stormwater transfer programs free up more land for development, it holds the potential to allow more development, and potential inclusion of additional housing, such as affordable housing."

Page 18 –Step 3 – "such as" using the EPA tool.

The Work Group is okay with Environmental Justice and Social Equity as a title, and as step 3 for a tiebreaker between equal priority watersheds in the guidance.

### **4. Further Refinement of Data Table**

Page 24: Total impervious area (TIA), and how far it is away from a conveyance influences effective impervious area (EIA). As you start to increase density, total effective surface area increases, but difficult to articulate regulatory-wise.

*TIA versus TEA – TIA is sufficient – EIA is preferred.* If you have porous soils, consider TIA, the modelling guidance addresses this somewhat. ECY's guidance defines TIA but does not quantify it. If you are comparing two identical watersheds and one has much higher effective impervious area, this should be considered. THIS IS NOT A MODEL, but a prioritization exercise, so it should be less technical. If users use TIA, there are no unintended consequences related to LID, pervious applications. Heather B will work Ecology (DG) and potentially others to refine the comments section at the top of page 24. Add "proposed language in this section".

*Questions about middle columns in the data table – Do we want to keep them?* Do not remove flow control versus runoff treatment. Different goals may use different information. The group decided to include both goals, with a check mark, and remove "highly useful, useful."

*Consider options to do a fake/example table ?* – based on data columns that we have - and imaginary watershed, the group decided this would be a lot of work, but the guidance should include a hyperlink and/or reference to Redmond's data table.

*Comments and notes section:* Keep them all full sentences. Where there is descriptive text, e.g. BIBI, put this in the comment section, not on the left. Create header for Environmental Justice and Social Equity, step 3 – with an abbreviated version of descriptor from right. Comments on the left should go on the right. Remove some pieces. Heather T provided some written edits.

*For each data source* – make sure there are comparable units. – for example, percentage of land in each zoning designation, or percentage of outdated water infrastructure.

*WEIGHTING of the data:* Offer some examples of agencies that have used weighting, but let users make the choice of whether they want to use weighting for prioritization. I.e., WSDOT uses weighting, but Redmond does not. If a jurisdiction decides to use weighting, it should provide justification for it.

Page 25 – use whatever stream typing information that they have, DNR stream typing or others. Stream typing is not really the point – it is how many crossings of “mapped stream channels”.

Page 23 – WSDOT data – Larry Schaffner would know where to find this separate data source. It is related to WSDOT culvert removal .

## **5. Next Steps for Group**

Look one more time, send any written comments by **October 30<sup>th</sup> to Heather B** – Heather will incorporate what we discussed today, and written comments sent to her, and do one more draft for the group’s review before it is sent out for public comment.

Heather B and Anne to work on readability for the next draft that goes out to the Work Group, but won’t “mess with the nuances”.

### Next meeting

A meeting will be scheduled after the public comments have been received to review the comments and finalize the guidance document.

Data table addition accepted by the Work Group

In-stream Habitat Condition				
<p>All available physical stream assessment data related to salmonid habitat conditions, including, but not limited to: pool/riffle ratio; type of substrate; embeddedness; and Naturally occurring large woody debris/100 linear feet - weighted average of large woody debris density over walked channel length. This data can be collected by local government staff walking each creek. Standard Operating Procedures for collecting this data can be found at: <a href="http://www.ecy.wa.gov/programs/eap/quality.html">http://www.ecy.wa.gov/programs/eap/quality.html</a></p>		X		<p>Large woody debris is defined as wood at least 10 inches in diameter and 10 feet long, in or over bankfull channel<sup>1</sup> counted by field crews. (Unnecessary for runoff treatment.)</p>
<p>All available physical nearshore marine assessment data related to salmonid habitat conditions (refuge, feeding, and migratory) including, but not limited to: elevation; slope; type of substrate (fish mix gravels); embeddedness; armoring – manmade or natural; and Naturally occurring large woody debris/100 linear feet - weighted average of large woody debris density over walked shore length. This data can be collected by local government staff walking the shoreline. Eelgrass mapping: (<a href="https://erma.noaa.gov/northwest/erma.html#/x=-122.93182&amp;y=47.78094&amp;z=8&amp;layers=1+8064+8069+8071+8080+7849+7949+7976+7998+8004+8027+8033+8044+8065+8070+8037+8046+8054+7772">https://erma.noaa.gov/northwest/erma.html#/x=-122.93182&amp;y=47.78094&amp;z=8&amp;layers=1+8064+8069+8071+8080+7849+7949+7976+7998+8004+8027+8033+8044+8065+8070+8037+8046+8054+7772</a>)</p> <p><i>Estuarine Habitat Assessment Protocol</i> (Simenstad <i>et al.</i> 1991)</p>		X		<p>Large woody debris is defined as wood at least 10 inches in diameter and 10 feet long, in or over bankfull channel counted by field crews. (Unnecessary for runoff treatment.)</p>
<p>All available physical river assessment data related to salmonid habitat conditions (refuge, feeding, and migratory), including, but not limited to: pool/riffle ratio; type of substrate (fish mix gravels); embeddedness; and Naturally occurring large woody debris/100 linear feet - weighted average of large woody debris density over walked channel length. This data can be collected by local government staff walking each river. Standard Operating Procedures for collecting this data can be found at: <a href="http://www.ecy.wa.gov/programs/eap/quality.html">http://www.ecy.wa.gov/programs/eap/quality.html</a></p>		X		<p>Large woody debris is defined as wood at least 10 inches in diameter and 10 feet long, in or over bankfull channel counted by field crews. (Unnecessary for runoff treatment.)</p>

<sup>1</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).”