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When reviewing plan submittals from developers there are a few topics that meet a lot of resistance that I believe require more guidance and stress throughout the manual. For what it's worth, I think the manual is clear enough however, developers still challenge the review comments regardless:
1. PGPS: many developers refused to classify their pervious surfacing as pollution generating and will not provide substantive evidence that land management will provide a "non-pollution generating" pervious surface.
2. Guidance for small detention systems (aka "0.5-inch orifice guidance"): developers seem to struggle showing that they are following this guidance and occasionally are resistant to meet the 3-foot live storage requirement. The claim is that they are unable to meet the stream duration standard with 3-feet of live storage. In one case the developer provided models with 6-foot detention tanks (5.5 feet live storage) and orifices under 0.5 inches, meeting the standard, but design plans with 0.5-inch orifices. To my understanding, this would result in an unacceptable flow rate release and demonstrates a lack of understanding the requirement/guidance. For presentation, I typically request that three models are provided: 1. auto size that shows orifice is less than 0.5 inches 2. upsize orifice to 0.5 inches (remove and or adjust upper orifices) 3. reduce facility size until the 100-year WSEL ~= 3 feet. Further description might be required and a comment on how the information should be presented could be helpful to designers.
3. Design of flow control system overflow risers: design submittals rarely include discussion / information pertaining to the design of the overflow riser. To my understanding they must be designed assuming the control orifices are clogged. This can be done with the WSDOT nomograph or a model with the orifices removed. Further stress on this design element may be required
The following are general comments I have pertaining to the guidance provided in the SWMMWW:
4. Permeable pavements are commonly skirted around by designers without geotechnical reports, especially on smaller projects where the MR 5 BMP could create a benefit to its basin. Typically, jurisdictions do not want to maintain smaller sections of permeable pavements (generally sidewalks) but there are no provisions to make this argument. Ecology should make it clearer that a geotech report is/is not required (or if the NRCS soils report may be used for MR 5 BMPs), if permeable pavements may be disregarded due to maintenance concerns, or if permeable pavements may be disregarded where it would result in a small section of dis-similar pavements (maintenance efforts and aesthetics). As it currently stands, some projects are specifically scoped around avoiding flow control and runoff treatment thresholds and weak/unsupported arguments against the feasibility of permeable pavements. This begs the question, "why do we have MR #5 if the unintended goal is to avoid these BMPs to the maximum extent feasible?".
5. Projects that result in PGIS / new impervious surfaces just under thresholds should be recorded and tracked by the authority having jurisdiction and regionally treated or planned to be treated VIA retrofit projects (perhaps it is, however, I am unaware of any such concept). While I am sure it is a relatively small proportion of the overall discharge of untreated (FC/WQ) water I believe that it is also not insubstantial when considered cumulatively. See the scoping comment in Item #4: The unintended goal of some projects is to avoid triggers and BMPs. This could be considered as knowingly creating illicit discharges. It would then be the responsibility of the AHJ to track and treat cumulative effects throughout that jurisdiction. I am unsure of the method/mechanism to enforce such a requirement but believe that it is worth considering.
6. Wetlands protection: confusion comes up regarding the "direct or indirect" discharge to a wetland language. Designers use quantifiable measures such as the 1/4-mile TDA distance or "up to one

mile" offsite analysis distance to Identify wetlands that fall under MR 8's requirements. To my understanding and based on conversations with ecology, this is not typically the case as wetlands further downstream may require protection. For example, a project discharges to a critical wetland 1.5 miles downstream but is contained within a manmade conveyance system for that 1.5-mile distance. I am not aware of an explicit requirement to identify the receiving water so there could be circumstances where "maintaining the natural drainage pattern" is presumed if a project connects to an existing stormwater network. This theoretical project would have performed a downstream analysis of "up to one mile" and have never identified the receiving water as a critical wetland. Some basin reports throughout the greater Seattle area (King to Snohomish County) allude to degrading wetland conditions/habitats, flooding, and increased pollutants. Further care and investigation may be required to truly protect these waters. The other comments above are related to wetlands protection: If PGPS is not properly identified and its treatment enforced, there will be increased pollutant loading on natural systems. If permeable pavements are not installed where they are technically feasible, we will not benefit from the cumulative effect of such BMPs required under MR 5. If cumulative impacts from projects under the current thresholds are not tracked and mitigated, there could be minor localized impacts throughout jurisdictions (some studies suggest that minor concentrations of certain pollutants result in relatively large impacts) and minor impacts to the greater basin. If receiving waters and wetlands are not properly identified, they cannot be protected.