Stand-alone Stormwater Retrofit Considerations for Scoping

Needs statement: Provide stormwater treatment for existing impervious surfaces where surfaces do not have treatment or where treatment and flow control are not to current standards within the boundaries of the identified project area.

Why is stormwater retrofit important: WSDOT's stormwater retrofit program aims to improve the quality of stormwater runoff from state highways and improve the water quality of receiving waters. This is consistent with Goal 3 of Results WSDOT, Environmental Stewardship, to improve environmental conditions; leave it better than before. Additionally, WSDOT's National Pollutant Elimination System (NPDES) Municipal Stormwater Permit requires WSDOT to implement a stormwater retrofit program.

Applicable design guidance: Comply with design criteria in Chapter 5 of WSDOT's Highway Runoff Manual if feasible[1]. If not feasible, a design that represents an improvement in stormwater management will be utilized. See below flow chart on evaluating feasibility in regard to full vs. partial standards.

Only stormwater retrofits prescribed by a TMDL (and listed in Appendix 3 of WSDOT's Permit) will be required to be built to full standards. If it is infeasible to build to full standards, ESO will work with Department of Ecology's TMDL Lead and Municipal Stormwater Permit Coordinator to determine an appropriate resolution.

If site conditions allow for natural dispersion, right-of-way adjustments will be necessary to develop a conservation easement for the natural dispersion area. A memo must be created to summarize the impervious area treated and the dimensions of the natural dispersion area.

If BMPs will be constructed, a Type A Hydraulics report must be developed, to include the pavement area treated and the design specifications of the BMPs.

Refine project boundaries based on infeasibility, if necessary: Highway segments deemed infeasible for retrofit must be documented (milepost to milepost) and reported to ESO with a brief description of reasons for infeasibility. These highway segments will be added to a list of needs that will be addressed after high and medium priorities have been addressed statewide.

Pre-site visit scoping work: (Refer to "Pre-Site Visit Checklist" tab in the Stormwater Retrofit Site-Visit Checklist)

- Access the stormwater retrofit prioritization information to determine the priority of segments within the project.
- Check if the proposed limits for the project overlap an Improvement project in the Project Delivery Plan. Make adjustments to the stand-alone project based on the stormwater retrofit that is required in the Improvement project.
- Review existing as-builts and ROW maps to better understand the current drainage and existing ROW area for potential BMP locations.

[1] Feasible means there are no physical site limitations such as geographic or geologic constraints, steep slopes, soil instability, proximity to water bodies, presence of significant cultural resources, or shallow water tables (or other applicable factors contained in the Retrofit Cost-Effectiveness and Feasibility (RCEF) document).

- Access the Highway Activities Tracking System (HATS) to determine if existing runoff treatment or flow control BMPs already treat pavement in each proposed project area.
- Access WSDOT and County/city GIS layers to define existing conditions (e.g., floodplain maps, BMP/conveyance system mapping, WSDOT vs. City ownership of the stormwater system per RCW 47.24).
    - Provide feedback to ESO if a project, or specific segments within a project, will be removed from the scoping list due to City ownership of the stormwater system per RCW 47.24 (i.e., non-limited access city streets that form parts of state highways within the limits of incorporated cities and towns).

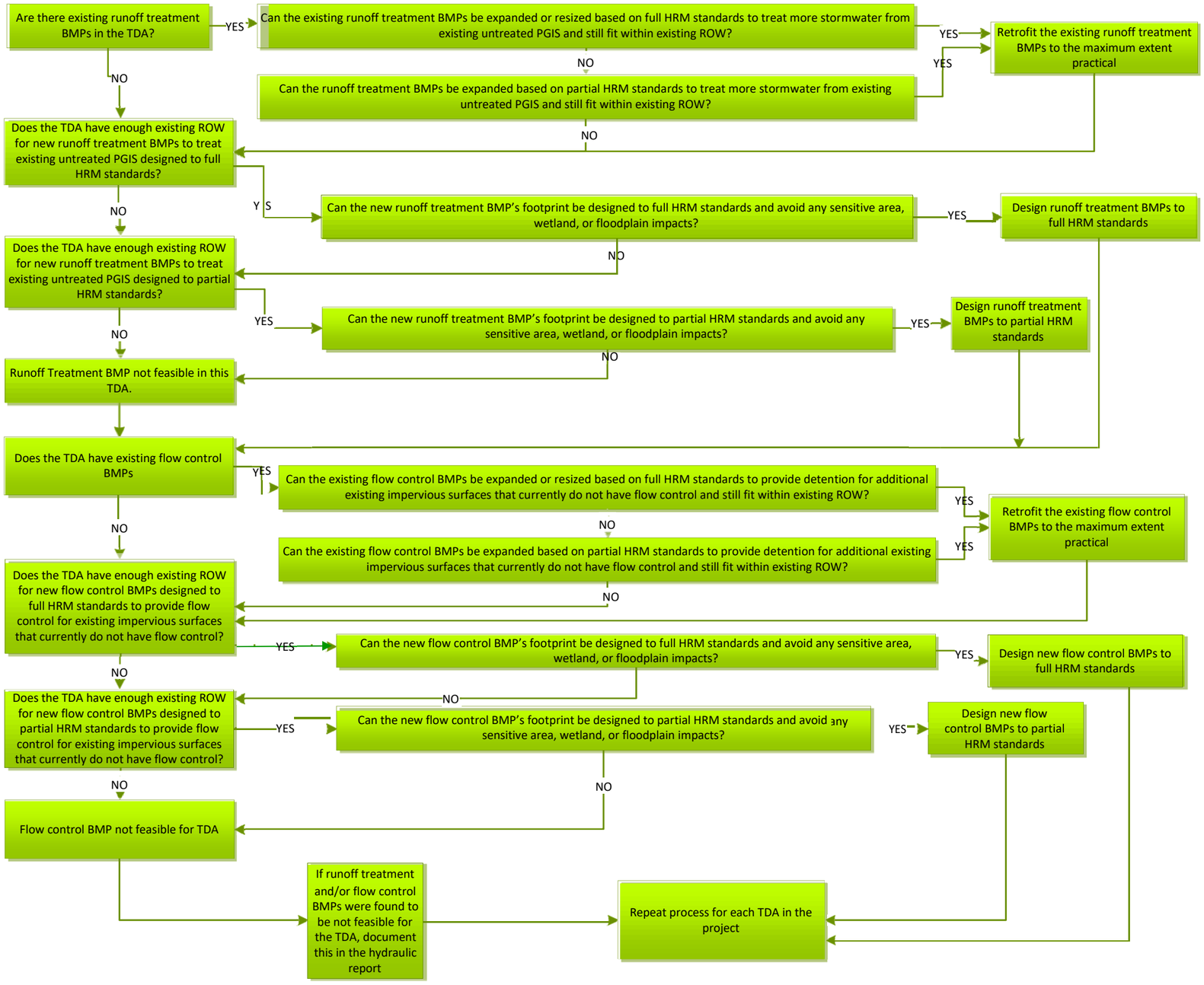
Perform required site visit using the Stormwater Retrofit Site-Visit Checklist: Include Region Hydraulic Engineer, Maintenance, Biology, Environmental, Materials Engineer, and Headquarters Hydraulics. If the retrofit is required by a Total Maximum Daily Load (TMDL), include Environmental Services Office (ESO) in the site visit.

Critical Success Factors

- Scoping and design team members receive appropriate training in stormwater retrofit design principles.
- Final project scopes developed with comprehensive customer and stakeholder input and receive approval before moving forward with design.
- Projects meet critical milestones and budget targets.
- Projects designed and completed to meet the requirements of the HRM to the maximum extent feasible given site constraints as described in the *I-4 Stormwater Retrofit Full Standards vs. Partial Standards* flow chart (below).
- Identify and manage risk to minimize or eliminate negative impacts to the project schedule, cost, or construction quality.
- Project phases (scoping, design and construction) include appropriate documentation and background information to the next phase.
- Future operation and maintenance requirements factored into the designs.
- Safety and traffic impacts to the traveling public minimized.
- Commitments and permit conditions on the stormwater retrofit projects do not set adverse precedent that place a burden on other projects.
- Efficiencies captured, where appropriate, by grouping projects for construction using combined contracting, staging, detours or leveraging other cost saving approaches.

Contact Alex Nguyen (206-440-4537 or nguyeal@wsdot.wa.gov) for more information of if you have questions.

I-4 Stormwater Retrofit Full Standards vs. Partial Standards



Partial HRM Runoff Treatment Standards: Not meeting the runoff treatment targets in HRM Table 3-3 and Table 3-4.
Partial HRM Flow Control Standards: Not meeting the flow control targets in HRM Table 3-6 and Table 3-7. For western Washington, partial flow control standards apply to assuming an "existing land cover" instead of a "historic land cover" predeveloped condition.