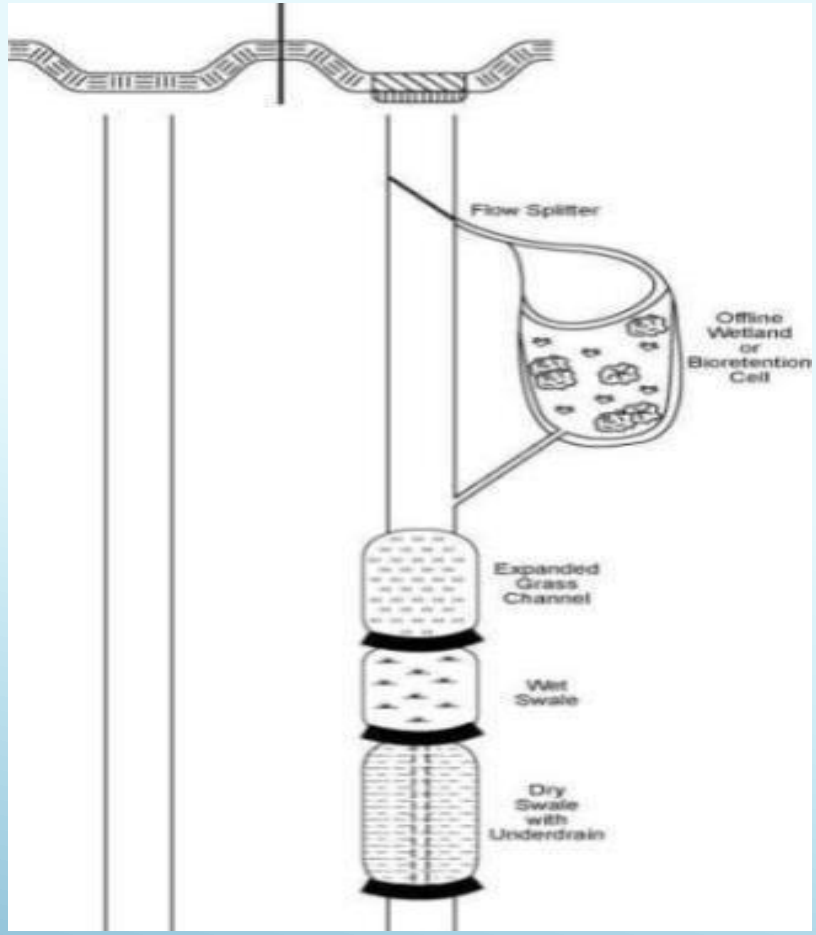
Proposed Strategy for Crediting Enhancement Retrofits for Bioretention Areas, Swales and Roadside Ditches

- 2013 Retrofit Expert Panel
- 2016 PED Research Summary
- 2017 Roadside Ditch Management
- 2018 Biochar Research
- 2018 National Runoff Reduction Review
- 2019 Draft Enhancement Specs Released



Proposed Technical Approach

Proposed enhancement techniques include:

- Biochar amendments
- Water treatment residual amendments
- Iron amendments
- Soil or sand amendments
- Internal water storage devices
- Enhanced conservation landscaping
- Media replacement
- Wood chip bioreactors
- Other techniques, as identified by the advisory group

Proposed Technical Approach (continued)

Likely retrofit applications include:

- Media amendments within existing bioretention areas (post-2010)
- Upgrades of legacy bioretention areas (pre-2010)
- New treatment in existing roadside ditches
- Media amendments within existing grass swales
- Other applications, as defined by the experts

Proposed Technical Approach (continued)

Load Reduction Protocols Should:

- Be generally adapted from the existing runoff adjustor curves
- Establish a pre-retrofit baseline removal rates for older stormwater practices and ditches
- Discount the baseline rate to account for older (and less effective) stormwater treatment design standards, where appropriate.
- Define how the incremental improvement in removal rates is calculated for each enhancement technique (or combination of techniques) employed at an individual retrofit site
- Include other methods or qualifying conditions, as defined by the advisory group.

Credit Synthesis Report

Report will answer 5 key questions:

- Does the enhancement technique produce a measurable and reliable improvement in the baseline nitrogen and/or phosphorus removal rate for the practice?
- If so, can the incremental benefit of the enhancement technique be expressed in the context of the existing runoff adjustor curves that are currently used to define the baseline?
- Do specific engineering criteria exist on how to properly design, construct, maintain and verify the enhancement technique?
- Are the materials needed for the enhancement technique clearly specified and commercially available?
- Is the enhancement technique feasible over the range of soil, groundwater and terrain conditions encountered across the Bay watershed?

USWG Feedback