

BIORETENTION MEDIA STUDY PHASE 2 PARTNER MEETING

AGENDA: JULY 25, 2019

Location: Herrera Seattle (2200 6th Ave, Suite 1100) Mt Baker and Mt Rainier Conference Rooms

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|-------------|--|
| 10:00-10:15 | Introductions <ul style="list-style-type: none">• Partner introductions• Review Meeting agenda and objectives |
| 10:15-10:30 | Confirm media selection |
| 10:30-11:30 | Select metrics for media components <ul style="list-style-type: none">• Review primary characteristics of media components• Select metrics for component specifications• Identify numeric ranges for metrics |
| 11:30-11:45 | Break |
| 11:45-12:45 | Select metrics for media blend <ul style="list-style-type: none">• Review primary treatment processes of media blends• Select metrics for media specifications• Identify numeric ranges for metrics |
| 12:45-1:00 | Wrap-up <ul style="list-style-type: none">• Next steps |

MEETING MINUTES

Date: 7-25-19 **Location:** Herrera Seattle (Mt Baker and Mt Rainier rooms)

Project Number: 16-06230-000

Attendees:

Curtis Hinman	Shanti Colwell	Joy Michaud
Chris May	Chris Webb	Jess Brown
Doug Howie	John Lenth	
Doug Hutchinson	Jenee Colton	
Dylan Ahearn	Mark Maurer	

Meeting Objective:

Third Advisory Committee meeting for BSM Phase 2 Study to confirm selected media and outline metrics and numeric ranges for the media specification.

Discussion:

1. Confirm selection of media
 - a. Group agrees on selection of Treatment #4.
 - b. The group briefly discussed and agreed that using the primary media to meet enhanced treatment and adding the polishing layer for phosphorus capture would keep application costs reasonable and provide flexibility to select media for specific goals.
 - c. John Lenth outlined a matrix for selecting media components (primary and polishing layer and compost mulch) by treatment objective.
 - d. Doug Howie.
 - o Include the 60/40 media in the matrix.
 - o Wait to draft matrix until after completing the specification for the new media.
 - o Concern that the new media has not gone through the same TAPE testing as other treatment systems.
 - o Ecology will likely produce an interim memo for the new media before adopting in the next manual.
2. Curtis briefly reviewed media component characteristics and their purpose in the media blends.
3. Media component metrics
 - a. Curtis provided a draft table with potential metrics for each component
 - b. Numeric ranges for selected metrics can vary by component.

- c. Sand
 - Include gradation and broaden from existing 60/40 sand gradation.
 - Include SPLP. Use TP and ortho-P in the SPLP extraction, but different numeric ranges for sand and organic components.
 - Look at WSDOT and Seattle gradations for existing specifications that could work.
- d. Coir
 - Use electrical conductivity (EC).
 - Mark M points out that EC is a metric for protecting plant health.
 - Include cation exchange capacity (CEC).
 - Include organic matter (OM). Group suggests OM content metric for coir because this test is used on compost in 60/40 blend; however, the high-performance blend includes biochar as well. Accordingly, testing OM content on each component would double cost.
 - Perhaps use water holding capacity (WHC). Curtis to check method with lab.
 - Texture of coir may be challenging to describe. Curtis to investigate with vendors.
 - Perhaps use dissolve organic carbon (DOC). Curtis to investigate method.
 - Use SPLP. Numeric range should be different from sand.
- e. High carbon wood ash (biochar)
 - Include CEC.
 - Include organic matter (OM). Group suggests OM content metric for ash because this test is used on compost in 60/40 blend; however, the high-performance blend includes coir as well. Accordingly, testing OM content on each component would double cost.
 - Perhaps use WHC. Curtis to check method with lab.
 - Particle size distribution (PSD) of biochar may be challenging to describe. Curtis to investigate with vendor.
 - Perhaps use DOC. Curtis to investigate method.
 - Use SPLP. Numeric range should be different from sand.
- f. Iron aggregate
 - Use gradation.
 - Use iron content.
 - Perhaps anion exchange capacity (AEC).
 - Use SPLP.
- g. Activated alumina
 - Use gradation.
 - Perhaps use alumina content. Curtis to investigate with manufacturer.
 - Perhaps use CEC and AEC.
 - Use SPLP.
- h. The group agreed that additional field testing should be conducted to confirm performance and refine specification metrics and numeric ranges during the interim period between initial Ecology memo introducing new spec and adoption into SWMMWW.
- i. We will need to develop guidelines for pilot testing if not strictly following TAPE guidelines.

Action Items:

Action	Due Date	Assigned To
Check on contact with WSDOT for existing sand gradations that may work and spec development in general		Mark Maurer
Check with labs for DOC, WHC and other methods		Curtis
Investigate coir texture metric		Curtis
Investigate biochar gradation		Curtis
Draft table with components, metrics and numeric ranges		Curtis