



Eisenberg, Olivieri & Associates
Environmental and Public Health Engineering

TECHNICAL MEMORANDUM

TO: SMCWPPP, SCVURPPP and ACCWP Member Agencies

FROM: Peter Schultze-Allen, Senior Scientist, EOA

DATE: March 24, 2014

SUBJECT: Biotreatment Soil Mix Research and Verification Guidance Development

Background

In 2010, a biotreatment/bioretention soil specification was developed by BASMAA for submittal to the San Francisco Bay Regional Water Quality Control Board (Water Board.) On November 28, 2011, the Water Board adopted Attachment L and revised the Municipal Regional Permit (MRP) to incorporate the specification into the permit. All new development projects approved after that date are required to use the soil specification. However, a universal adoption of the new specification continued to be thwarted by a variety of reasons, including a lack of communication between the stakeholders in construction, design, permit review, soil testing and soil production.

Approach

The three countywide stormwater programs requested that EOA prepare a list of soil mix suppliers, gather information on potential changes to the specification for the next MRP cycle, and assist agency staff in determining how to analyze compliance for construction projects. Previous efforts by staff in the Contra Costa Clean Water Program (CCCWP) were used as a starting point for the research into the list of Bay Area soil mix suppliers.

A list of suppliers was developed and representatives from each company were contacted. EOA staff started with the CCCWP list of five companies and eventually added four more companies as they were identified. Staff discussed the specification with the soil mix suppliers, testing lab staff, compost producers, sand producers, consultants, city and county staff, as well as those involved with development of the current and past soil mix specifications over the last 10 years.

Findings

Several interviewees proposed changes to the specification for the next permit cycle, but most agreed that in general the Attachment L specification was a significant improvement over previous iterations and that compliance with it was going relatively smoothly. One issue raised was that the amount of product needed in the Bay Area was growing so rapidly that the industry was having difficulties keeping up with the demand, putting stress on quality control.

Inconsistent usage of terminology in the soil mix marketplace was found to be causing confusion. This reflected a varied level of awareness of the Attachment L specification. Attachment L uses

two terms: Biotreatment Soil Mix and Bioretention Soil Mix. In order not to conflict with a decision by the San Francisco Public Utilities Commission (SFPUC) to use the Bioretention Soil mix term, Biotreatment Soil Mix was chosen as the term for projects needing to comply with the MRP. Then the Soil Mix Suppliers were asked to start using the Biotreatment term and modify their websites accordingly. Suppliers submitted soil samples and lab test results.

Recommendations

After vetting nine suppliers, EOA now has an initial list of six companies that can be amended as others submit verification information. The list is now ready to be posted on the three program websites. A disclaimer is attached to the list to prevent any appearance of a recommendation of particular suppliers by the programs or the appearance of approval of their products. During the research for this project, additional assistance for the municipal agencies was determined to be necessary. To reduce the agency staff time needed to verify the adherence of a given submittal to the Attachment L specification, two documents were drafted with assistance of staff from the City of Fremont and staff from the Stormwater Program of the Alameda County Public Works Department.

The two documents are:

1. “Biotreatment Soil Mix Verification Checklist” (Checklist)
2. “Biotreatment Soil Mix Supplier Certification Statement” (Statement)

The Checklist was developed to supply municipal staff, contractors, designers and others with an easy-to-read summary of the detailed information needed to verify that the biotreatment soil mix being provided by the Soil Mix Supplier meets the soil mix specification in Attachment L. The Checklist can be used in a variety of ways. For private development projects the agency can give the Checklist to the design team or contractor. For public projects the agency staff can give the Checklist directly to the soil mix supplier.

The Statement is a one page document that can be used by jurisdictions that want to require self-certification by the soil mix supplier and/or have worked with suppliers repeatedly. The Statement can also be used by soil mix suppliers with their submittals to their customers. For further guidance on how to use the Checklist, Statement and List see the accompanying memorandum entitled “Guidance on Biotreatment Soil Mix Review and Approval Options.”

Future Issues

In the future, the list and documents will be updated annually and incorporated into revisions to the ACCWP and SMCWPPP C3 Technical Guidance Manuals and the SCVURPPP C.3 Stormwater Handbook.