

## **Initial Literature Review to Determine Feasibility of Launching Two Urban BMP Expert Panels**

### **Task Background:**

On November 10, 2014, the Water Quality Goal Implementation Team (WQGIT) approved the priority list of urban expert panels which had been previously developed by the Urban Stormwater Work Group (USWG) in October. Two of the priority urban BMPs being considered for potential expert panels are the (a) impact of MS4 public outreach programs on changing individual nutrient behaviors and (b) the potential sediment and nutrient reductions associated with outfall stabilization projects.

Several work group members questioned whether there was enough scientific literature available on these practices to justify an expert panel, and the workgroup recommended that an initial literature search be performed to determine whether there was enough monitoring data to warrant launching a full-blown expert panel for either or both practices. The USWG further recommend that these threshold reviews be conducted in the first quarter of 2015, so that a decision to launch expert panels for these new practices can be made in time for the mid-point assessment.

### **Task Description**

The goal of these tasks is to perform an "threshold" literature review to determine if there is sufficient scientific data and monitoring results available to justify launching an urban BMP expert panel to define a unique sediment and nutrient removal for the practice in question.

#### *Task 1. Evaluate Feasibility of An Expert Panel on MS4 Outreach as An Urban BMP*

Under the terms of their MS4 permit, many Bay communities are required to provide stormwater education and public involvement programs to the general public for the purpose of reducing stormwater pollution. The purpose of this task is to determine if there is any actual monitoring data that shows these programs actually reduce nutrient and or sediment loads, that could lead to a verifiable credits. In general, these outreach programs target specific residential behaviors that could prevent potential stormwater pollution (picking up dog waste, car washing, septic system cleanouts, marina pumpouts, fertilization, etc. *Note to all: We need to decide which 5 or 6 behaviors should be the focus of the literature review*

Under this task, the contractor shall conduct a national literature review on up to 6 specific polluting behaviors that are targeted in MS4 stormwater outreach programs to determine their effectiveness in changing those behaviors to produce measure changes in urban nutrient and/or sediment inputs and loads. Each potential study should be classified as analyzing either:

1. changing preferences, attitudes or awareness about the target behaviors

2. changing rates of the actual target behaviors
3. changing in actual concentration or loads in urban stormwater

*Task 2: Evaluate Feasibility of an Expert Panel on Outfall Stabilization as an Urban BMP*

Under this task, the contractor shall conduct a limited literature search to determine whether there is sufficient monitoring data to justify a potential expert panel on outfall stabilizations practices.

For the purposes of this task, outfall stabilization is defined as a practice used to prevent or minimize future erosion of sediments and associated nutrients below a storm drain outfall. The practice uses a combination of engineering and native plantings to stabilize the channel or ditch and keep stream velocities below erosional thresholds during larger storm events. The USWG will provide the contractor with up to three Bay communities that can provide example projects where outfall stabilization practice has been effectively applied.

It is anticipated that the contractor will not find a great deal of primary literature available to define sediment and nutrient removal rates for the outfall stabilization practice. In this event, the contractor will be asked to determine whether the practice can be interpreted in the context of existing approved expert panel reports, included, but not limited to, (a) the prevented sediment protocols referenced in the stream restoration and shoreline management panel reports (b) the classification of dry and wet channel regenerative conveyance systems described in the stream restoration and retrofit panel reports (c) or as a category of new retrofits, per the stormwater retrofit panel report

**Deliverable Product:** The products of each task will include a draft and final literature spreadsheet, an electronic file of papers and reports discovered, and a short technical memo that summarizes the literature and makes a recommendation whether it is sufficient to launch an expert panel. The draft memo will be distributed for review to the Urban Stormwater Workgroup, and a final memo produced that reflects their comments.

**Key Dates**

- Conduct Task 1 Literature Search: March 2014
- Conduct Task 2 Literature Search: April, 2014
- Submit Final Literature Spreadsheet and Electronic File of Papers/Both Tasks : May 2014
- Submit Task 1 Technical Recommendations Memo : June, 2014
- Submit Task 2 Technical Recommendations Memo: July, 2014
- Participate in USWG Meeting to Present Results of Task 1/2: August 2014.