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DATE: April 09, 2015

TO: RMP Steering Committee

FROM: Philip Trowbridge, RMP Manager
Lester McKee, RMP Senior Scientist

RE: **Request to reprogram \$133,000 of unused 2014 stormwater monitoring funds for other activities that support small tributaries loadings management questions**

Request: The Small Tributary Loading Strategy Team requests that the remaining \$133k funding left over from 2014 POC loadings study be retained for answering stormwater management questions through a combination of five project tasks that link to key management questions. Progress and outcomes from the mix of projects completed will be reported back to the TRC and the SC during regular quarterly updates. Any funds not fully expended by December 31st 2015 would then be rolled back into RMP Undesignated Funds.

Explanation: During calendar years 2012, 2013, and 2014, the RMP allocated approximately \$500,000 per year towards addressing the Small Tributary Loading Strategy (STLS) management questions as outlined in the STLS strategy document and Multi-Year Plan which are consistent with the first Municipal Regional Stormwater Permit (MRP) issued in October 2009:

STLS Q1: Impairment: Which are the “high-leverage” small tributaries that contribute or potentially contribute most to Bay impairment by pollutants of concern?

STLS Q2: Loads: What are the loads or concentrations of pollutants of concern from small tributaries to the Bay?

STLS Q3: Trends: How are loads or concentrations of pollutants of concern from small tributaries changing on a decadal scale?

STLS Q4: Support management actions: What are the projected impacts of management actions on loads or concentrations of pollutants of concern from the high-leverage small tributaries and where should management actions be implemented in the region to have the greatest impact?

Each year, the bulk of the funds were allocated to performing field studies at six fixed loads monitoring stations spread across the Bay Area (Marsh Creek, Richmond Pump Station, San Leandro Creek, Guadalupe River, Sunnyvale East channel, and Pulgas Creek Pump Station). Due to an unprecedented run of dry weather (range 43% to 70% of normal), the programmatic objectives for storm sampling at each site were not met with the exception of the North Richmond Pump Station. As such, a portion of the funding remained each year and was rolled over into the subsequent monitoring year with the intent to complete the project over the following winter. Consistent with previous years, for 2014, a total of \$133k remained unused.

In relation to the evolving management focus towards identifying a greater number of high leverage watersheds and source areas, the 2015 monitoring design is focused on a wet season reconnaissance-level characterization sampling approach (MQ 1). As such, the STLS requested \$511k in 2015 to carry out this new style of sampling as well as continued work on the development of the regional watershed spreadsheet model (RWSM) (MQ2) and to begin development of a framework trends strategy document (MQ3) (Table 1). Due to budget constraints and competition from other important projects, the RMP was only able to allocate \$470k in 2015, leaving a shortfall of \$41,000. At this point the \$41,000 cut has been applied to the reconnaissance stormwater monitoring task.

In addition, funding allocated for the Trends Strategy component is currently not sufficient to complete any analytical work such as using statistical tools like power analysis to explore our ability to observe trends in relation to the available baseline data and management endpoints. At this time, no RMP funding has been allocated to addressing MQ4 which focuses on helping to determine which management actions may be most effective, and where in the landscape would management effort be best placed to have reasonable assurance of real and measurable load reduction outcomes. Although there are parallel efforts by BASMAA agencies on all of these management questions, the need for further RMP support for answering MQ4 was discussed at the last Sources Pathways and Loadings Workgroup meeting. The Trends Strategy analyses will be integrated into an update for the STLS Multi-Year Plan along with the revised management information needs in the reissued MRP (to be effective by late 2015 or early 2016).

At its January 29, 2015, the RMP Steering Committee directed the STLS Team to prepare a proposal for the use of the left over funds to address stormwater management questions. The STLS group met to discuss priorities and generated a list of possible projects. This list was then presented to the TRC on March 11, 2015 and refined slightly. The STLS team has now crafted a detailed work plan for each of the activities that includes a budget and deliverables with deadlines.

Work Plan:

1. Reconnaissance Characterization fieldwork. Up to \$30k.

Should climatic conditions allow in calendar year 2015, fieldwork at a greater number of wet weather POC watershed sites will be completed. This use directly addresses STLS management question (MQ) 1: Which Bay tributaries (including stormwater conveyances) contribute most to Bay impairment from POCs. It also provides data to support improved calibration of the RWSM and therefore helps to provide baseline regional loads estimates that will ultimately provide a consistent and agreed basis to support estimating the project loads reductions from management efforts (MQ4).

Deliverable: Quality assured data on PCB and Hg concentrations at watershed outlets for roughly another half dozen locations for inclusion into our annual POC loading report.

Due date: Report drafted each winter reporting on the previous winter season of data collection.

2. PCB source areas. \$25k.

BASMAA member agencies and to some extent the Water Board have been making improvements to the information on sources of PCB and Hg in various GIS databases. The goal of this task is to compile updated and improved information on source areas into one database to improve our understanding of regional scale loads

and support management decisions. This use addresses MQ2 (regional scale loads estimated through the RWSM) and will continue to help support MQ1 and MQ4.

Deliverable: Quality Assessed GIS database of PCB and Hg source areas.

Due date: Fall, 2015.

3. Statistical analyses to support Trends Strategy. \$35k.

Carry out technical analysis such as power analysis or other statistical methods to support the development of the Trends Strategy. This year's budget (\$35k) is only enough to develop a framework for the strategy. There is not budget do much if any analytical work to test the usefulness of each proposed indicator based on currently available baseline data and future potential change. This use would support MQ3. What are the decadal-scale loading or concentration trends of POCs from small tributaries to the Bay. It would also help in the design decisions for monitoring in relation to MQ1 and preparation of the revised Multi-Year Plan.

Deliverable: Tables and graphic outputs to support Strategy Development.

Due date: Fall, 2015.

4. Remote sampler pilot study support. \$30k.

During 2015, STLS implemented a reconnaissance sampling program that continued with the “normal wet weather field staff based sampling elements” but included cost saving refinements over the 2011 design (paired watershed sampling allowing for two sample sites per storm, composite sample analysis). The short coming of this design remains staff availability during storms especially during late nights, holidays and weekends when by definition, half of samples are usually taken. As such, during 2015 STLS has also been trialing of two remote sampler designs (the Walling tube and the Hamlin sampler). In an effort to develop a more cost-effective sampling method with a lower likelihood of missing critical large events, this task will test an additional type of sampler (a CLAM - continuous low-level aquatic monitoring sampler), a sampler that has applicability to sediment associated pollutants (not dissolved phase and therefore will not address all the analytes). This task aims to improve the chance of identifying high leverage watersheds (MQ1).

Deliverable: Quality assured data on PCB and Hg concentrations for selected locations for inclusion into the annual POC loading report.

Due date: Report drafted each winter based on the previous winter season of data collection.

5. STLS Coordination Support. \$13k.

The RMP has allocated \$26 k annually for this support but last year this budget was insufficient. The objective of this support is to help keep all parties apprised of real-time developments and to more carefully document action items, expectations, responsible parties, and timelines based on consensus agreements at meetings using a traffic light spreadsheet as a means for tracking outcomes. In addition planning should begin for updating the Multi-Year Plan, consistent with the developing Trends Strategy and upcoming reissuance of the MRP. Agendas will consistently include standing items (5-10 minute updates on each project) and special items (that are integrative or connective or project discussions at greater detail). Budget will also be allocated to attending BASMAA Monitoring / POCs Committee meetings.

Deliverable: Meeting agendas, summaries, RMP “traffic light” system for tracking actions.

Due date: Meeting during 2015; December 31st 2015