

Scope of Work For As-Needed Water Quality, Sediment Quality and Biological Resource Services

1. Total Maximum Daily Loads (TMDL) Support: Provide technical support, including hydrodynamic/water quality/sediment transport and bioaccumulation modeling related to the implementation of TMDLs. Assist in the creation of monitoring/compliance/implementation plans, design of special studies, and selection of Best Management Practices (BMPs). Conduct source investigation and other related field studies. Work specific to the Inner Cabrillo Beach bacteria TMDL could include state of the art bacterial investigations and performance of a Quantitative Microbial Risk Assessment (QMRA).
2. Water Resources Action Plan (WRAP) Hydrodynamic and Water Quality Model: Refine and enhance the Harbor Department's Environmental Fluid Dynamics Code (EFDC-based) WRAP hydrodynamic and water quality model. Provide model runs to predict effects of BMPs and remediation activities. Provide design support for special studies related to improving the model.

Information regarding the WRAP can be found on the Port's website at: <http://www.portoflosangeles.org/environment/wrap.asp>.

3. WRAP Control Measures: Assist in activities related to the implementation of WRAP control measures. Provide assistance in the four main controls: land use (LU), on-water discharges (OW), sediment quality, and watershed sources of pollutants. Provide assistance with LU1 and LU3, LU5 and OW2.
4. Stormwater Support: Provide stormwater sampling, permit compliance, and tenant outreach activities related to stormwater and other National Pollutant Discharge Elimination System (NPDES) permit compliance and program development. Firms will be expected to mobilize rapidly to sample multiple locations throughout the Port of Los Angeles during a storm event from both land and water. Assist in review of regulatory changes.
5. Water Quality Studies: Provide technical design and implementation, including sample collection, of studies to characterize water quality in the Los Angeles Harbor as required for regulatory compliance, Harbor Department development activities, or Harbor Department-directed special studies. Maintain and enhance a real time water quality data collection and display system. Water quality monitoring services include the collection and analysis of water quality samples for toxicity testing and chemical analyses, the placement/retrieval of oceanographic monitoring equipment (e.g., current meters) for long-term deployment, and the processing of water quality metric data.

6. Sediment Dredge Support: Provide technical support including preparation of, obtaining agency approval for, and carrying out dredged material Sampling and Analysis Plans in accordance with appropriate guidance manuals. This includes associated sediment and water quality sampling and analyses. All dredge support sediment sampling and testing must conform to guidance provided in the United State Environmental Protection Agency (USEPA)/United States Army Corps of Engineers (USACE) 1991 (or subsequent) publication "Ecological Evaluation of Proposed Discharged or Dredged Materials into Ocean Waters" and "Inland Testing Manual", as amended by USEPA guidance and Region IX practice. Firms should demonstrate experience in sediment and water quality monitoring services in support of dredging, dredged material placement projects and show capabilities in monitoring and reporting water quality in real-time using advanced technologies such as Acoustic Doppler Current Profiler (ADCPs), Laser In-Situ Scattering and Transmissometry (LISSTs), and telemetry and experience in evaluating water quality using dredged material fate and transport models.

7. Sediment Quality Studies: Provide technical design and implementation, including sample collection, of studies to characterize sediment quality in the Los Angeles Harbor as required for regulatory compliance, Harbor Department development activities, or Harbor Department-directed special studies. This may include the collection and analysis of sediment and pore water samples, processing of electronic sediment core logs, and conducting sediment evaluation based on the multiple lines of evidence approach outlined in the Statewide Sediment Quality Objectives (sediment chemistry, sediment toxicity, and benthic invertebrate community condition). Firms should demonstrate experience in sediment quality monitoring services including the operation of required sampling equipment such as vibracores, Van Veens, and box cores. Firms will be expected to respond quickly (within 24-hours for on-call services) and efficiently.

8. Chemical Laboratory Support: Provide laboratory analyses capabilities to characterize water, sediment and tissue samples. Laboratories must be certified by the State Department of Health Services, Environmental Laboratory Accreditation Program (ELAP). Firms must have familiarity and experience with appropriate methodologies (Green Book, Inland Testing Manual, and Upland Testing Manual) and capabilities to provide adequate detection levels. Firms must have the ability to accommodate large numbers of samples and expedited turn-around. Firms should demonstrate: experience with intricate matrices such as seawater, tissue and marine sediment; the ability to obtain ultra-low method detection limits (MDL) to address water quality criteria in the low part-per-trillion to low part-per-trillion range; experience with performance-based methods such as Polychlorinated biphenyls (PCBs) by congeners, trace metals by coprecipitation/chelation, mercury by purge/trap Cold Vapor Atomic Fluorescence Spectrophotometer

(CVAFS), and dioxins/furans by high resolution gas chromatography/mass spectrometry (GC/MS).

9. Bioassay Support: Provide biological toxicity testing as required for sediment dredge support, Sediment Quality Objectives (SQO), or other Harbor Department projects, as directed. Testing capabilities should include liquid/particulate phase and solid phase bioassays using USEPA approved test organisms. Bioassay laboratories must be ELAP accredited. Firms should demonstrate experience with a wide variety of testing protocols, including the Green Book, Inland Testing Manual, Upland Testing Manual, as well as whole effluent and whole sediment Toxicity Identification Evaluations (TIEs) in accordance with USEPA guidance manuals.
10. Caulerpa/Eelgrass Surveys: Provide qualified/certified personnel that can perform *Caulerpa* surveys in accordance with the *Caulerpa* Control Protocol and eelgrass surveys and mitigation activities in accordance with the Southern California Eelgrass Mitigation Policy or any policies that supersede these.
11. Ballast Water and Invasive Species Support: Provide technical support related to the control of biological organisms in ballast water and invasive species. Assist in review of regulatory changes. Provide support for potential eradication activities.
12. Other Biological Surveys: Provide qualified biological personnel that can perform surveys of aquatic and terrestrial plants and wildlife, including marine mammals, as required for regulatory compliance, Harbor Department development activities, or Harbor Department-directed special studies. Firms must be able to operate all the required sampling equipment such as fish nets (lampara, otter trawl, etc.), Van Veen and box core samplers, and dive equipment.
13. Reports – Provide written reports containing statistical analyses to a variety of data sets. Report may include, but are not limited, Draft and Final Sampling and Analysis Plans; Bioassay Evaluation Reports; Receiving Water Monitoring Reports; Periodic Status Reports; Draft and Final Project Reports; and White Paper Issue Reports.

WATER QUALITY AS-NEEDED AGREEMENTS

Please incorporate/address these elements in each agreement:

1. There is no guaranteed level of work to be assigned under as-needed contract.
2. Work is assigned on an as-needed basis through Project Directives (PD). Each PD will specify:
 - Task & Deliverables
 - Schedule
 - Total Compensation
 - Method of Compensation
 - Subconsultant Participation
3. Methods of Compensation includes (1) time & materials, (2) deliverable based, (3) equal payment, or (4) combination of all three methods, as delineated in each PD.
4. Subconsultants are approved by being listed on the agreement, listed on a PD, or through written approval by the Director of Environmental Management.
5. No mark-ups or premiums will be paid to Consultant.

Standard Contract Language

Attached is a sample agreement distributed to all consultants for review of contract language. All have agreed to the terms of the agreement except for AMEC. AMEC's comments are attached to their Term Sheet packet.