

SUPPLEMENTAL AGREEMENT
Engineering Services Division

Project Title and Job Number: **Stormwater Monitoring Services WM66**
Date: **08/29/07**
Purchase Order #: **6WM6605194**

Supplemental Agreement No: **2**

The City of Sacramento ("City") and Larry Walker Associates ("Consultant"), as parties to that certain Consultant and Professional Services Agreement designated as Agreement Number CA2005-0194, including any and all prior supplemental agreements modifying said agreement (said agreement and supplemental agreements are hereafter collectively referred to as the "Agreement"), hereby supplement and modify the Agreement as follows:

1. The scope of Services specified in Exhibit A of the Agreement is amended as follows:

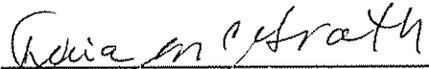
Consultant shall perform the Services described in Attachment 1 to Exhibit A, attached hereto and incorporated herein by this reference.

2. In consideration of the additional and/or revised services described in Section 1 above, the maximum not-to-exceed amount that is specified in Exhibit B of the Agreement for payment of Consultant's fees and expenses, is increased/decreased by \$572,447, and said maximum not-to-exceed amount is amended as follows:

Agreement's original not-to-exceed amount:	\$ <u>588,039</u>
Net change by previous supplemental agreements:	\$ <u>581,789</u>
Not-to-exceed amount prior to this supplemental agreement:	\$ <u>1,169,828</u>
increase/decrease by this supplemental agreement:	\$ <u>572,447</u>
New not-to-exceed amount including all supplemental agreements:	\$ <u>1,742,275</u>

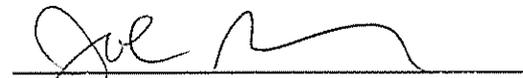
3. The hourly rates specified in Exhibit B of the Agreement shall be replaced by the rates shown on Attachment 1 to Exhibit B, attached hereto and incorporated herein by this reference.
4. Consultant agrees that the amount of increase or decrease in the not-to-exceed amount specified in Section 2 above, and the rates specified in Section 3 above, shall constitute full compensation for the additional and/or revised services specified in Section 1, above, and shall fully compensate Consultant for any and all direct and indirect costs that may be incurred by Consultant in connection with such additional and/or revised services, including costs associated with any changes and/or delays in work schedules or in the performance of other services or work by Consultant.
5. Consultant warrants and represents that the person or persons executing this supplemental agreement on behalf of Consultant has or have been duly authorized by Consultant to sign this supplemental agreement and bind Consultant to the terms thereof.
6. Except as specifically revised herein, all terms and conditions of the Agreement shall remain in full force and effect, and Consultant shall perform all of the services, duties, obligations, and conditions required under the Agreement, as supplemented and modified by this supplemental agreement.

Approval Recommended by:



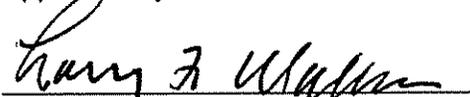
Project Manager

Approved as to Form By:



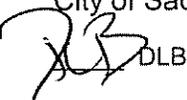
City Attorney

Approved By:



Consultant

Approved By:

City of Sacramento
 DLB

Attested to By:

City Clerk

Attachment 1 to Exhibit A

CONSULTANT SCOPE OF SERVICES Sacramento Stormwater Monitoring Program, 2007-08

This Scope of Work describes the consulting services to be provided by Larry Walker Associates, Inc. (LWA) and its subcontractors (collectively, "Consultant") to the Sacramento Stormwater Quality Partnership (Partnership) during the 2007-08 contract year, under the terms of LWA's Stormwater Monitoring Program contract with the City of Sacramento Department of Utilities.

Task 1. MONITORING MANAGEMENT & COORDINATION

This task involves all work related to monitoring activity coordination, including providing weather forecasts and interpretations to the Partnership, Coordinated Monitoring Program (CMP) coordination, and providing updates following monitoring mobilization efforts related to this contract. These activities provide general monitoring support for all of the monitoring activities. Specific monitoring tasks are included under in this Scope of Services to cover the individual study monitoring and reporting tasks.

Subtask 1.1 Preseason Preparations

Preseason preparations refer to specific maintenance, planning, and training tasks that occur before active monitoring begins.

Sampling Plan Preparation and Field Crew Training

The Consultant will update the urban tributary (including additional pesticide, rainfall, and metals biotic ligand model - BLM) and bioassessment sampling and analysis plans (SAP) for the 2007-08 monitoring year. The urban tributary SAP will specify sampling locations, analytical constituents, laboratories, bottle and equipment cleaning procedures, QC rotation schedule, communication plan, and field procedures for dry and wet weather monitoring. Analytical constituents and associated sample collection procedures will conform with the requirements of the NPDES Permit, in particular the schedules for monitoring of constituents listed in the NPDES Permit, Tables 1, per Monitoring and Reporting Program Section II.A. This scope of work does not cover changes that are expected with the upcoming NPDES Permit renewal that will likely be adopted during the 2007-08 monitoring period. However, the Consultant will modify sampling plans as necessary and prepare a cost analysis of any significant changes required by the Permit. Consultant shall identify and secure the services of qualified laboratories to perform all sample analyses specified in the SAP, and assign qualified consultant team staff to perform all required monitoring functions.

Amendments to the Bioassessment sampling plan will be submitted at the Partnership direction to consider recommendations from the first four years of monitoring and comments from the CVRWQCB.

Consultant will plan, arrange, and conduct a half-day training session for Partnership and Consultant field personnel, covering clean sampling techniques and the procedures outlined in the urban tributary monitoring SAP.

Urban Tributary Station Preparations

The urban tributary locations are generally "manually" sampled using one-time grab samples or composites of manually collected aliquots. The Consultant will procure and deploy all equipment, materials, and supplies necessary to perform the urban tributary monitoring activities specified in the SAP. Testing and calibration of field equipment will be performed as needed. The Consultant will collect equipment blank samples for Teflon tubing and composite bottles for metals and trace organics, if necessary based on actual equipment deployed.

Subtask 1.2 Pre-storm Activities

Pre-storm activities refer to the tasks performed by the consultant immediately before a targeted storm event. These activities include procuring and mobilizing sampling equipment, reviewing updated weather forecast information, and coordinating field-staffing logistics.

Equipment Preparation

The Consultant will prepare and mobilize all necessary equipment to complete monitoring activities including composite bottles (carboys), pump tubing, sample bottles, portable pumps, field meters, coolers, ice, etc. The equipment will be mobilized to the appropriate field staff including Partnership staff as necessary. Equipment that comes in direct contact with sample will be laboratory-cleaned according to the Partnership protocols.

Weather Tracking

This sub-task involves all work related to providing weather updates to the Partnership with biweekly written forecasts and unlimited 24-hour, 7-day per week phone consultation when prior arrangements are made. A specialized weather consultant will be contracted to provide primary forecasting services. The Consultant will generally act as the primary point of contact for the forecaster unless alternative arrangements are made. The Consultant will provide forecast information to other consultants performing monitoring for the Partnership in the form of daily weekday written forecasts and business hour phone communication or pre-arranged after-hour support. As candidate storm events are identified, the Consultant will notify field crews and consult the Partnership as necessary.

Study Coordination

The consultant will maintain contact with all key field staff for each study including the CMP ambient river monitoring crew. Field crews will be updated, as necessary, according to the Partnership "storm action levels" which specify readiness and mobilization status. The Consultant will present monitoring options to the Partnership with regard to storm selection and event timing as forecasts develop. The Partnership "storm contact" will provide feedback on whether to mobilize for a storm event or in scheduling dry weather events.

Consultant will assist in the activities of the CMP to provide support for collection of American and Sacramento River samples during up to two coordinated wet weather monitoring events and two coordinated dry weather events. Consultant will arrange for the collection and analysis of CMP samples during these events for the constituents in Tables 1 of the Monitoring and Reporting Program (MRP) that are not included within the normal CMP analytical suite. If needed, consultant will make all necessary arrangements to ensure that such samples are collected by CMP staff, including labeling and delivering sample bottles, preparing chain of custody forms, and ensuring sample delivery to the analytical laboratories. CMP staff will collect river samples. Analytical costs are not included in this agreement, and will be billed directly to the Partnership by the CMP.

Urban tributary, receiving water, and discharge characterization monitoring will be coordinated to the extent possible with each other and other Sacramento area monitoring efforts. When feasible, monitoring will be timed to coincide with ambient river monitoring conducted under the CMP, Sacramento River Watershed Program monitoring, or other monitoring as requested by the Partnership.

Subtask 1.3 Storm Activities

This subtask involves the general oversight and coordination by the "monitoring manager" during the storm event of all field activities including urban tributary, additional pesticide, rainwater, and CMP river. The Consultant monitoring manager will remain available by phone throughout the entirety of the sampling event to coordinate weather forecast reporting, field condition evaluation, storm progress tracking, sample pick-up, staffing, equipment troubleshooting, as well as providing essential mobilization

and tracking duties. It may also be necessary for the monitoring manager to mobilize to the field for final site visits at the end of the monitoring event.

Subtask 1.4 Post-storm Activities

This subtask cover activities following the completion of sampling related to preparation of storm composites, sample shipment, coordination with laboratories, and monitoring activity summary e-mails:

Sample Disposition

At the conclusion of each monitoring event for each of the studies, Consultant will deliver the samples from the field stations to the staging area. The composite samples will be broken down by Consultant into appropriate containers for all required analyses as specified in the SAP, and placed on ice. All samples will be promptly packed and delivered to the analytical laboratories. Consultant will prepare chain of custody documentation to accompany the samples from staging area to laboratory. Consultant will pay for commercial delivery services as needed.

Oversee Laboratory Activities

Laboratories shall be instructed to batch Sacramento stormwater samples separately, or exclusively with samples of a compatible matrix, to minimize analytical interferences from other sources. Laboratory turn-around times shall be 30 days from receipt of samples. Laboratories shall be requested to output analytical data into spreadsheet files in the format established for the Sacramento Stormwater Monitoring Database, and provide them to the Consultant along with hard copy lab reports.

Completion of specified analyses is contingent upon collection of adequate composite sample volume during monitoring events; if less than the desired composite sample is obtained, Consultant will consult with Partnership staff to determine how the analyses can make optimal use of the available sample volumes.

Consultant shall conduct follow-up communications with analytical laboratories as needed, to confirm laboratory receipt of samples, verify laboratory instructions for sample preparation and analysis, and assist laboratory personnel with other questions or issues as they arise.

Summary E-mail Notification

This subtask involves distribution of status e-mails following any mobilization effort and event summary memoranda following successfully captured monitoring events. The post event status email will be sent to the Partnership within 48 hours of the completion of any mobilization effort whether it results in a successfully captured event or a false start. The e-mails will provide a brief summary of the forecast, decision-to-mobilize discussion, monitoring activities, problems encountered, rainfall totals, and any recommendations for future events.

Task 2. DISCHARGE MONITORING SPECIAL PROJECTS

The three discharge monitoring sites are not scheduled for sampling in 2007-08 per the sampling frequency specified in the Permit MRP. Discharge monitoring work performed in 2007-08 will focus on assessments of the potential relocation of one site to an area of new development. This task involves all specific work related to updating the discharge monitoring "power analysis", evaluating locations for a new development monitoring location, and performing site maintenance at all three locations/.

Sub-task 2.1 Power Analysis Update

This subtask involves work related to performing a power analysis to quantify the number of samples and sample collection frequency necessary to draw conclusions on changes in urban runoff quality for selected constituents. A power analysis was previously performed for the Partnership in support of long term effectiveness (LTE) evaluations. This assessment will be updated to consider more recent data collection, the Discharge Characterization 2005 Report, and additional factors such as the replacement

of one long-term site with a site that characterizes new development. This task will contain several meetings to discuss progress and results, and a draft and final technical memorandum deliverable.

Subtask 2.2 Equipment Maintenance/Upgrade

This subtask involves work related to system maintenance and repairs to the current long-term monitoring sites. Depending on the outcome of the site relocation plans, at least two sites will require additional maintenance during 2007-08 in preparation for monitoring in 2008-09. Specifically at Strong Ranch Slough it will be necessary to replace the flow meter, probe, side-channel conduit, and the sampler liquid detection unit. Additionally, the intake points at all of the sites should be assessed for representativeness and improvements to system reliability, especially with regard to aliquot volume variability.

TASK 3. CREEK MONITORING

This task relates to monitoring activities on Willow Creek in Folsom, Arcade Creek, and Morrison Creek, as required by the Sacramento Stormwater NPDES Permit (Monitoring and Reporting Program section II.B-2, Urban Tributary Monitoring).

Subtask 3.1 Urban Tributary and Rainfall Monitoring

Urban tributary monitoring includes studies of three long-term creek monitoring stations and six additional pesticide locations.

Creek Monitoring

Consultant will collect creek samples from Arcade Creek at Watt Avenue (Sacramento), Morrison Creek at Brookfield Drive (Sacramento), and Willow Creek at Blue Ravine Road (Folsom), during three wet weather events and one dry weather event during the period September 1, 2007 – June 30, 2008. Consultant will target the first event of the wet season forecasted with a minimum 0.25" of rain during a 24-hour period and a minimum 50% probability of precipitation. These mobilization criteria may be modified with Partnership approval/direction.

For the first wet weather monitoring event of the season, samples will be collected throughout the duration of the storm event hydrograph, with a maximum limit of 24 hours if automated composite samplers are used and 18 hours if sample aliquots are collected manually. For this event only, composite samples will be collected as multiple grab sample aliquots. Each individual sample aliquot volume will be proportional to the approximate creek flow. Aliquots will then be composited to form an approximate flow-proportioned composite sample representative of the sampling period. At a minimum, the composite sample shall be representative of a majority of the storm hydrograph, be collected at inter-aliquot intervals no greater than four hours, and composed of at least five aliquots. Flow measurements will make use of available flow monitoring structures or equipment to the extent feasible, and flow rates (or equivalent) will be recorded along with the timing of each sample aliquot. Where only stage data are available, flow proportioning will be based on standard stage-flow relationships. For constituents that cannot be composited (i.e., those which must be collected as grabs), grab samples will be collected as near to the peak of the hydrograph as is feasible. The Consultant will contact the Partnership storm contacts before terminating sampling activities. If the Partnership contacts are not available, the Consultant will terminate sampling using best professional judgment and minimum guidelines discussed above to adequately characterize the storm event runoff. If storm runoff conditions persist longer than the specified maximum period, the Consultant will contact the Partnership to discuss sampling scheme alternatives to extend the sampling period and increase the percentage of the runoff event captured in the composite sample.

For subsequent wet weather events and the dry weather event, all samples will be collected as one-time grabs. For these wet weather events, samples will be timed to be as close to the peak of the hydrograph as feasible. All grab samples and composite sample aliquots will be collected at mid-stream, mid-depth

where feasible. Composite samples for the first event will be analyzed for all constituents in Tables 1 and 2 of the MRP. Subsequent events are grab samples only collected for OP pesticides, standard field measurements, bacteriological indicators and constituent for which the water body is impaired downstream of the monitoring station.

Additional Pesticide Monitoring

In September 2005, the Consultant prepared a technical memorandum advising the Partnership to request the removal of several additional pesticide locations as the data collected at those sites was represented by the long-term creek sites. If necessary, Consultant will perform additional monitoring for diazinon and chlorpyrifos in Elder Creek at Morrison Creek, Elk Grove Creek at Laguna Road, Natomas East Main Drain at Elkhorn Road, Natomas East Main Drain at San Juan Road, Chicken Ranch Slough, and Morrison Creek at Sunrise Road. The exact location of monitoring may be modified if conditions do not permit safe access. The additional pesticide monitoring locations and protocols will be included as distinct sections within the creek monitoring SAP. The monitoring will be performed during one storm event during the dormant spray application season (January – February), one storm event following the dormant spray season, and once during the dry season (May – September).

Monitoring will be coordinated to coincide with creek monitoring events, and monitoring protocols will be as described for creek monitoring above and in the 2007-08 Creek Monitoring Sampling and Analysis Plan, except that samples will be collected as single, rather than multiple grab samples. Samples will be collected at mid-depth, mid-stream locations (where feasible), and timed to be as near the peak of the hydrograph as possible during wet weather events.

False Starts

In the event that a storm is selected for monitoring and sample collection activities commence, but the storm does not or is not projected to produce sufficient rainfall within a reasonable period to produce adequate runoff for collection of the minimum composite sample volume, field crews will be demobilized and the event will be considered a false start, upon concurrence of the Partnership contact and the Consultant monitoring task manager. Labor hours and other direct costs are budgeted for two false starts.

Blackout periods

Monitoring will not be required under this Scope of Work during the following period (all dates inclusive): November 21, 2006 – November 26, 2006 and December 23, 2006 – January 2, 2007; and other periods to be determined jointly by Consultant and Partnership during the course of the wet weather monitoring season. The monitoring task manager will remind Partnership contacts and field crews in advance of these blackout dates.

Subtask 3.2 Urban Tributary and Rainwater Reporting

The Consultant will prepare a report summarizing field activities and the reported data for the creek, pesticide persistence, additional pesticide, and rainwater monitoring efforts described in subtask 3.1.

Consultant will check all lab data reports to verify that all requested analyses were completed and that all requested results were reported (including laboratory internal QA/QC results), and that specifications for holding times, analytical methods, and reporting limits were met by the laboratories. Consultant will contact laboratory personnel to request that they correct errors, provide missing information, or rerun sample analyses as needed. The designated agency contacts will be copied on all formal memoranda sent to analytical labs.

Consultant will conduct a comprehensive evaluation of all QA/QC data produced by the analytical laboratories, apply the QA/QC results to the environmental sample data, and qualify any data which do

not meet data quality objectives, according to protocols established in the most recent Partnership Data Quality Evaluation Plan (DQEP).

Draft and Final Creek Monitoring Report

Consultant will prepare a draft creek monitoring report containing the results of all monitoring events, including a description of monitoring field activities, rainfall/runoff measurements during the monitoring events, antecedent precipitation conditions, analytical results, and the full documentation of the data evaluation according to the DQEP. The report will include results from creek monitoring, pesticide persistence monitoring, additional pesticide monitoring, and rainwater monitoring. The report will be organized according to format approved by the Partnership. The draft report will be delivered for Partnership review and comment by July 23, 2008 in electronic format (Microsoft Word and PDF format).

Consultant will respond to Partnership review comments on the draft report, incorporate changes where necessary, and deliver 12 copies of the final report within three weeks of receipt of Partnership comments. Consultant also will provide electronic copies (Microsoft Word and PDF formats) of the report and the updated stormwater database files within two weeks of submittal of the final report.

Additional Pesticide Reporting

QA/QC samples and data produced for creek monitoring will be shared for evaluation of additional pesticide monitoring data. The data produced by the additional pesticide monitoring will be evaluated along with the creek monitoring data.

The additional pesticide monitoring results will be reported as distinct sections within the creek monitoring report, according to the schedule as described above. Data from additional pesticide monitoring also will be included with the creek monitoring data in the assessments of compliance with standards, as described above.

Rainwater Reporting

Rainwater data, if collected by the Permittees, will be reported as a separate section within the creek monitoring report.

Subtask 3.3 DO, pH, & Temperature Follow-up

This subtask includes assignments related to follow-up work on dissolved oxygen, pH, and temperature monitoring in Sacramento urban tributaries. Some exceedances of water quality standards in these urban tributaries led to assessment work and continuous monitoring of these parameters. Additional follow-up work is planned including source identification work and additional monitoring. The scope of this task will be determined by work currently underway but may include additional monitoring or installation of more permanent continuous monitoring equipment in urban tributaries.

TASK 4. BIOASSESSMENT

Pacific EcoRisk (PER) will direct all aspects of the bioassessment study for the Partnership, including the sampling for benthic macroinvertebrates (BMI), as subcontractor to LWA. PER will subcontract organism identification services to EcoAnalysts Incorporated for analysis of the collected BMI samples. LWA will provide overall technical and administrative oversight, including review of key task deliverables. The Consultant will also collect field samples of sediment and water for both pesticide concentration and toxicity.

Subtask 4.1 Bioassessment Monitoring

Bioassessment sampling will be performed in accordance with the bioassessment monitoring plan approved by the CVRWQCB. Sampling will be performed in spring 2006. Pacific EcoRisk field crews, currently trained to perform bioassessment sampling following the CSBP and/or modified USEPA EMAP protocols as directed by the Partnership, as well as protocols for snag and soft bottom habitats, will be

trained in any additional aspects of the sampling required per the approved plan. Pacific EcoRisk field crews will review the chain-of-custody (COC) records prior to delivery of samples to the laboratories performing sample analyses. Copies of all COC records will be made available to the Partnership, California Department of Fish and Game Aquatic Bioassessment Laboratory (CDFG-ABL) and CVRWQCB upon request.

Pacific EcoRisk staff will sort all samples according to the laboratory SOP in the Bioassessment Monitoring Plan. The level of sorting (*i.e.*, number of organisms) and sub-sampling are documented in that SOP. Pacific EcoRisk will identify all organisms to Level III taxonomy as specified by the Central Valley Bioassessment Reference Condition Committee (CVBRCC); identification to species will be performed by EcoAnalysts. Intra-laboratory QA/QC will be performed for sub-sampling and taxonomic validation. Inter-laboratory taxonomic validation will be performed on 20% of the samples. Stormwater program organisms will be maintained in the Pacific EcoRisk voucher specimen collection, which will be made available to Partnership agency staff upon request.

Subtask 4.2 Bioassessment Reporting

PER will enter all bioassessment data electronically in a format consistent with the Surface Water Ambient Monitoring Program (SWAMP). The electronic data deliverable (EDD) will be submitted to the Partnership along with the study report. The EDD will also be submitted to the CDFG-ABL for inclusion in the Statewide Access Bioassessment Database, at the request of the Partnership.

PER will prepare a draft and final Bioassessment Study report. The report will include all information specified for the bioassessment monitoring requirements in the Sacramento Stormwater NPDES Permit. The draft report will be electronically submitted to Partnership agency staff for comments by July 31, 2008. The Consultant will respond to Partnership review comments on the draft report, incorporate changes where necessary, and deliver 12 copies of the final report within three weeks of receipt of Partnership comments. Consultant also will provide electronic copies (Microsoft Word and PDF formats) of the report within two weeks of submittal of the final report.

TASK 5. TECHNICAL EXPERTISE

The Consultant will assist the Partnership in the preparation of technical reports and “as-needed” regulatory assistance related to Permit compliance or regional regulatory activities (e.g., TMDL development, Basin Plan amendments, etc.). Sub-tasks noted as “optional” will be performed at the direction of the Partnership only if additional project funds are approved to cover the costs of these additional items.

Subtask 5.1 Prepare Notice of Water Quality Exceedances

Consultant will promptly review all CMP river and creek monitoring data and compare the results to applicable water quality standards as required by NPDES Permit provision “B. Receiving Water Limitations”, and Monitoring and Reporting Program requirements I C and I D. The “water quality standards” are broadly defined in the Permit language; this is interpreted to include applicable standards, objectives and criteria within the Basin Plan, California Toxics Rule, National Toxics Rule, California Department of Health Services (Title 22), and California Department of Fish and Game (diazinon and chlorpyrifos criteria). CMP data will be delivered to the Consultant with sufficient time to prepare the analysis and letter. The Consultant will prepare a Notice of Water Quality Exceedance (NWQE) for submittal to the CVRWQCB. The Consultant will use the agreed upon evaluation process and will document this process for the inclusion in the Annual Monitoring Report. The draft letter will be submitted in an editable electronic format to the Partnership at least one week before it is due to the CVRWQCB or three weeks after the data is provided by the CMP, whichever is sooner.

Subtask 5.2 NPDES Permit Renewal Assistance

The Consultant will assist the Partnership, as necessary, with tasks related to reissuance of the NPDES Permit as expected in December 2007 or early 2008. Tasks may include data review and analysis, preparation of comment letters, review of Permit language, preparation of materials to support Water Board meetings or hearings, support of antidegradation analysis, and others.

Subtask 5.3 Work Plan Development

This subtask is related to development of several work plans in support of projected changes to the monitoring program in the forthcoming Permit.

Pyrethroids in Urban Tributary Sediment

Studies performed in the Sacramento Region have concluded that pyrethroid use causes toxicity in amphipod species (*Hyalella azteca*) in creek sediments. The spatial extent of this toxicity is known to vary, and may be associated with urban runoff outfalls. The Consultant will work with Partnership staff and Water Board staff to develop a work plan to better understand the specific causes of the toxicity, the spatial distribution of toxicity, and potential control measures for urban runoff to limit

Upper Laguna Creek Watershed Monitoring

Consultant will provide technical assistance related to watershed monitoring in a developing watershed in the upper reaches of Laguna Creek. The study may be designed to quantify effectiveness of new development control measures or the impact of land use changes within the watershed. It is expected that the Consultant will participate/lead planning up to three meetings related to study objectives, design, and implementation that may include participation from the Upper Laguna Creek Watershed Council, the Upper Laguna Creek Collaborative, Partnership staff, Water Board staff, and other stakeholders. Consultant will assist in the preparation of a work plan including providing technical expertise including literature searches, site selection, sampling methods and recommendations on sampling frequency and required data.

Camden Park BMP Study

Consultant will provide technical assistance related to development of study to assess the effectiveness of selected control measures. It is expected that several control measures and best management practices (BMPs) will be evaluated for use in the study. Consultant will perform site visits with Partnership staff, perform a literature search, and prepare a technical memorandum summarizing selection criteria, sampling/data collection methods, and suggested sample collection frequency.

Evaluate New Discharge Monitoring Location

This subtask involves all work related to selecting a monitoring site that is representative of new development urban runoff. A short list of locations in Natomas, Elk Grove, and Folsom will be considered for a number of factors including, but not limited to, existing monitoring data, safety, representativeness, ease-of-sampling, and installation costs. A technical memorandum recommending the site location, required equipment, and installation costs will be prepared. This analysis will use results of the power analysis performed in task 2.1.

Subtask 5.4 Prepare Annual Monitoring Report Sections

The Consultant will provide assistance in the preparation of the Joint Program Annual Report, due to the RWQCB by October 1, 2008. The Consultant will prepare the monitoring section and the Report of Water Quality Exceedance (RWQE) appendix of the Joint Report. The Partnership will consider and provide guidance on these sections. The schedule for delivery of these items will be determined by the Partnership before July 1, 2008. The monitoring section will follow the same general format as previous years and summarize key monitoring activities. The RWQE is prepared according to the Permit requirements. Upon a determination by either the Permittees or the RWQCB that urban discharges are

causing or contributing to exceedance(s) of a water quality standard within Sacramento-area receiving waters, and on an as-needed basis as determined by the Permittees, Consultant will prepare a Report of Water Quality Exceedance, pursuant to the procedure specified in Receiving Water Limitation B 2 of the Sacramento stormwater NPDES Permit. The report will describe BMPs that are currently being implemented and additional BMPs that will be implemented to prevent further such exceedances. The report will be in such format as decided upon in consultation with the Permittees and CVRWQCB staff.

Subtask 5.5 Effectiveness Evaluation Assistance

The Consultant will assist the Partnership, as needed, in development of a monitoring effectiveness evaluation program. The program will consider the historical data collected to date, new monitoring projects, and the basic approach included in the June 2007 Draft Joint Stormwater Quality Improvement Plan (SQIP). The objective of the program is to provide a structure to identify water quality issues of concern and track the effectiveness of management program activities in improving or correcting the issue.

Subtask 5.6 Target Pollutant List Update

The Consultant will work with Partnership staff to evaluate the target pollutant selection and prioritization process, perform the required calculations, and prepare an updated and prioritized target pollutant list technical memorandum. The 2001 Target Pollutant Prioritization Procedure Report will be used as the basis for the re-prioritization; however, the Consultant and Partnership staff will first consider other alternatives or modifications to the procedure.

TASK 6. CITY OF SACRAMENTO SERVICES

Consultant will provide as-needed services to the City of Sacramento that will not be billed to other Partnership members. It is expected that will include work related combined wastewater-stormwater system, drinking water, and solid waste related water quality regulatory issues.

TASK 7. PROJECT MANAGEMENT

Consultant will provide project management to ensure that the project is completed on time and within budget, including project coordination and administration necessary to achieve the tasks previously described, and periodic communications with the Partnership and subcontractors. Consultant will provide qualified staff to complete all tasks as described in the preceding Scope of Services.

Consultant will schedule, prepare for and attend bi-monthly progress meetings with the Partnership to discuss progress and results of the monitoring program. Consultant will prepare an agenda and distribute to Partnership agencies in advance of each scheduled progress meeting.

Consultant will produce Progress Reports as needed to keep the Partnership apprised of work progress, schedule, and budget status.

Consultant will submit a monthly invoice with detailed budget status information on a subtask basis, and a monthly written report describing project activities and expenditures during the period covered by the invoice.

ATTACHMENT 1 TO EXHIBIT B

SACRAMENTO STORMWATER QUALITY PARTNERSHIP 2007-08 MONITORING BUDGET

TASK	DESCRIPTION	LABOR HOURS				LAB COSTS [1]	OTHER DIRECT COSTS [1]	TOTALS [1]
		LWA SENIOR ADVISOR	LWA PROJECT MANAGER	SENIOR ENG./SCI	STAFF ENG./SCI			
		225	200	175	115			
1.0 MONITORING MANAGEMENT AND COORDINATION								
1.1	<i>Preseason Preparations</i>	0	8	56	76	\$ 1,000	\$ 600	\$ 21,740
	<i>Sampling Plan Preparation & Training</i>	0	6	40	60	\$ -	\$ 500	
	<i>Station Preparations</i>	0	2	16	16	\$ 1,000	\$ 100	
1.2	<i>Pre-storm activities</i>	0	36	20	60	\$ 1,000	\$ 6,160	\$ 24,760
	<i>Equipment Preparation</i>	0	4	20	24	\$ 1,000	\$ 500	
	<i>Weather Tracking</i>	0	24	0	24	\$ -	\$ 5,610	
	<i>Study Coordination</i>	0	8	0	12	\$ -	\$ 50	
1.3	<i>Storm activities</i>	0	48	0	16	\$ 1,164	\$ 300	\$ 12,904
	<i>Coordinate activities</i>	0	40	0	16	\$ 1,164	\$ 300	
	<i>Weather Tracking</i>	0	8	0	0	\$ -	\$ -	
1.4	<i>Post-storm activities</i>	0	18	12	100	\$ -	\$ 1,250	\$ 18,450
	<i>Oversee Laboratory Activities</i>	0	2	4	36	\$ -	\$ -	
	<i>Sample Disposition</i>	0	8	8	60	\$ -	\$ 1,250	
	<i>Prepare Summary E-mail</i>	0	8	0	4	\$ -	\$ -	
	Sub TOTAL LABOR HOURS	0	110	88	252			
	Sub TOTAL COSTS					\$ 3,164	\$ 8,310	\$ 77,854
2.0 DISCHARGE MONITORING SPECIAL PROJECTS								
2.1	<i>Power Analysis Update</i>	0	144	28	0	\$ -	\$ 1,750	\$ 35,450
	<i>Review DCP Regression Equations</i>	0	40	8	0	\$ -	\$ -	
	<i>Develop Evaluation Criteria</i>	0	8	4	0	\$ -	\$ -	
	<i>Develop Monitoring Scenarios</i>	0	16	0	0	\$ -	\$ 500	
	<i>Perform Calculations</i>	0	40	16	0	\$ -	\$ 1,000	
	<i>Prepare Technical Memorandum</i>	0	40	0	0	\$ -	\$ 250	
2.2	<i>Equipment Maintenance</i>	0	10	0	80	\$ -	\$ 5,000	\$ 16,200
	<i>Evaluate Site Upgrades/Repair</i>	0	6	0	40	\$ -	\$ -	
	<i>Perform Site Maintenance</i>	0	4	0	40	\$ -	\$ 5,000	
	Sub TOTAL LABOR HOURS	0	154	28	80			
	Sub TOTAL COSTS					\$ -	\$ 6,750	\$ 51,650
3.0 URBAN TRIBUTARY MONITORING								
3.1	<i>Monitoring</i>	0	0	56	220	\$ 54,403	\$ 1,200	\$ 90,703
	<i>Urban Tributary</i>	0	0	40	160	\$ 50,740	\$ 1,000	
	<i>Additional Pesticide</i>	0	0	16	60	\$ 3,663	\$ 200	
3.2	<i>Reporting</i>	0	40	84	180	\$ -	\$ 550	\$ 43,950
	<i>Urban Tributary</i>	0	24	60	120	\$ -	\$ 500	
	<i>Additional Pesticide</i>	0	16	24	60	\$ -	\$ 50	
3.3	<i>DO, pH, & Temperature Follow-up</i>	0	24	60	40	\$ 500	\$ 6,000	\$ 26,400
	Sub TOTAL LABOR HOURS	0	64	200	440			
	Sub TOTAL COSTS					\$ 54,903	\$ 7,750	\$ 161,053
4.0 BIOASSESSMENT								
4.1	<i>Monitoring</i>	0	8	40	40	\$ 17,820	\$ 1,000	\$ 32,020
4.2	<i>Reporting</i>	0	4	80	10	\$ -	\$ 200	\$ 16,150
	Sub TOTAL LABOR HOURS	0	12	120	50			
	Sub TOTAL COSTS					\$ 17,820	\$ 1,200	\$ 48,170
5.0 TECHNICAL EXPERTISE								
5.1	<i>Prepare NWQEs</i>	0	24	100	0	\$ -	\$ -	\$ 22,300
5.2	<i>NPDES Permit Renewal Assistance</i>	8	60	0	0	\$ -	\$ 100	\$ 13,900
5.3	<i>Work Plan Development</i>	6	96	168	80	\$ 8,000	\$ 350	\$ 67,500
	<i>Pyrethroid Study</i>	2	16	64	8	\$ 8,000	\$ 50	
	<i>Camden Park BMP</i>	2	24	40	4	\$ -	\$ 50	
	<i>Upper Laguna Creek Watershed</i>	2	16	64	40	\$ -	\$ 250	
	<i>Evaluate New Monitoring Location</i>	0	40	0	28	\$ -	\$ -	
5.4	<i>Prepare AMR Sections</i>	0	16	60	8	\$ -	\$ 100	\$ 14,720
5.5	<i>Effectiveness Evaluation Assistance</i>	8	24	80	8	\$ -	\$ 50	\$ 21,570
5.6	<i>Target Pollutant List Update</i>	0	40	80	16	\$ -	\$ 150	\$ 23,990
	Sub TOTAL LABOR HOURS	22	260	488	112			
	Sub TOTAL COSTS					\$ 8,000	\$ 750	\$ 163,980
6.0 CITY OF SACRAMENTO ONLY								
		4	40	120	0	\$ -	\$ 150	\$ 30,050
	Sub TOTAL LABOR HOURS	4	40	120	0			
	Sub TOTAL COSTS					\$ -	\$ 150	\$ 30,050
7.0 CONTRACT MANAGEMENT								
		4	120	60	36	\$ -	\$ 150	\$ 39,690
	Sub TOTAL LABOR HOURS	4	120	60	36			
	Sub TOTAL COSTS					\$ -	\$ 150	\$ 39,690
TOTAL LABOR HOURS		30	760	1,104	970			
TOTAL COSTS						\$ 83,887	\$ 25,060	\$ 572,447

Notes:
[1] Includes 10% LWA markup for lab costs and subcontractor labor

SACRAMENTO STORMWATER QUALITY PARTNERSHIP MONITORING

Rate Schedule Effective July 1, 2007 – June 30, 2008

PERSONNEL	Rate \$/Hour	REIMBURSABLE COSTS	
<i>Principals</i>		Travel:	Travel:
Larry Walker	\$225.00	Local mileage	Local mileage
Tom Grovhoug	\$225.00	Transportation	Transportation
Gil Wheeler	\$225.00	Auto rental	Auto rental
Mack Walker	\$225.00	Fares	Fares
Ashli Cooper Desai	\$225.00	Room	Room
		Subsistence ⁽¹⁾	Subsistence ⁽¹⁾
<i>Associates</i>		Report Reproduction and Copying:	
Karen Ashby	\$200.00	<ul style="list-style-type: none"> • Actual outside expense • \$0.08 per black and white copy, in-house • \$0.89 per color copy, in-house • \$1.95 per binding, in-house 	
Betsy Elzufon	\$200.00		
Brian Laurenson	\$200.00		
Robert Smith	\$200.00		
Claus Suverkropp	\$200.00		
<i>Senior Staff</i>		Special Postage and Express Mail:	
Denise Connors	\$175.00	<ul style="list-style-type: none"> • Actual expense 	
Kristine Corneillie	\$175.00		
Stephen McCord	\$175.00		
Chris Minton	\$175.00		
Mitch Mysliwicz	\$175.00		
Shelli St. Clair	\$175.00		
Mike Trouchon	\$175.00		
<i>Project Staff</i>		Daily Equipment Rental Rates:	
David Martinez	\$150.00	<ul style="list-style-type: none"> • All single parameter field meters (pH, EC, D.O., Turbidity) \$25.00 each • Multi-parameter field meters \$35.00 • Peristaltic Sampling Pump \$35.00 • Professional grade GPS unit \$25.00 • Digital Flow Meter \$45.00 • Digital Fluorometer \$45.00 • Multi-parameter Data Sonde \$200.00 	
Airy Krich-Brinton	\$140.00		
Gorman Lau	\$140.00		
Juliet Simpson	\$140.00		
Laura Foglia	\$140.00		
Rachel Terpstra	\$140.00		
Susan Fishel	\$130.00		
Tracy Krueger	\$130.00		
Michael Marson	\$130.00		
Kathryn Walker	\$130.00		
Iain Clark	\$120.00		
Kate Lundberg	\$120.00		
Seth Derrick	\$105.00		
Ben Doctor	\$105.00		
Kathy Green	\$105.00		
Jodi Cope	\$90.00		
Greg Reide	\$90.00		
Alyssa Glimm	\$65.00		
<i>Principals</i>		Subcontractors:	
		Actual expense plus 10% fee	