# OFFICE OF THE CITY ATTORNEY ROBERT E. SHANNON, City Attorney 333 West Ocean Boulevard, 11th Floor Long Beach, CA 90802-4664

#### <u>AGREEMENT</u>

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THIS AGREEMENT is made and entered, in duplicate, as of September 19, 2007 for reference purposes only, pursuant to a minute order adopted by the City Council of the City of Long Beach at its meeting on September 18, 2007, by and between KINNETIC LABORATORIES, INC., a California corporation, with a place of business at PO Box 1040, Santa Cruz, California 95601 ("Consultant"), and the CITY OF LONG BEACH, a municipal corporation ("City").

WHEREAS, City requires specialized non-point source runoff water quality monitoring services requiring unique skills to be performed in connection with the obligations imposed on the City under its California Regional Water Quality Control Board, Los Angeles Region, Order No. 99-060 ("Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges Within the City of Long Beach") (also known as the "Permit"), those services to be referred to herein as the "Project"; and

WHEREAS, City has selected Consultant in accordance with City's administrative procedures and City has determined that Consultant and its employees are qualified, licensed, if so required, and experienced in performing these specialized services; and

WHEREAS, City desires to have Consultant perform these specialized nonpoint source runoff water quality monitoring services, and Consultant is willing and able to do so on the terms and conditions in this Agreement;

NOW, THEREFORE, in consideration of the mutual terms, covenants, and conditions in this Agreement, the parties agree as follows:

#### 1. <u>SCOPE OF WORK OR SERVICES</u>.

A. Consultant shall furnish specialized services more particularly described in Exhibit "A", attached to this Agreement and incorporated by this reference, in accordance with the standards of the profession, and City shall pay for these services in the manner described below, not to exceed \$429,675, at the

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rates or charges shown in Exhibit "A".

- B. Consultant may select the time and place of performance for these services; provided, however, that access to City documents, records and the like, if needed by Consultant, shall be available only during City's normal business hours and provided that milestones for performance, if any, are met.
- C. Consultant has requested to receive regular payments. City shall pay Consultant in due course of payments following receipt from Consultant and approval by City of invoices showing the services or task performed, the time expended (if billing is hourly), and the name of the Project. Consultant shall certify on the invoices that Consultant has performed the services in full conformance with this Agreement and is entitled to receive payment. Each invoice shall be accompanied by a progress report indicating the progress to date of services performed and covered by the invoice, including a brief statement of any Project problems and potential causes of delay in performance, and listing those services that are projected for performance by Consultant during the next invoice cycle. Where billing is done and payment is made on an hourly basis, the parties acknowledge that this arrangement is either customary practice for Consultant's profession, industry or business, or is necessary to satisfy audit and legal requirements which may arise due to the fact that City is a municipality.
- D. Consultant represents that Consultant has obtained all necessary information on conditions and circumstances that may affect its performance and has conducted site visits, if necessary.
- E. CAUTION: Consultant shall not begin work until this Agreement has been signed by both parties and until Consultant's evidence of insurance has been delivered to and approved by City.
- 2. TERM. The term of this Agreement shall commence at midnight on October 1, 2007, and shall terminate at 11:59 p.m. on September 30, 2010, unless sooner terminated as provided in this Agreement, or unless the services or the Project is

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completed sooner.

#### 3. COORDINATION AND ORGANIZATION.

Consultant shall coordinate its performance with City's Α. representative, if any, named in Exhibit "B", attached to this Agreement and incorporated by this reference. Consultant shall advise and inform City's representative of the work in progress on the Project in sufficient detail so as to assist City's representative in making presentations and in holding meetings on City shall furnish to Consultant information or materials, if any, the Project. described in Exhibit "C", attached to this Agreement and incorporated by this reference, and shall perform any other tasks described in the Exhibit.

- B. The parties acknowledge that a substantial inducement to City for entering this Agreement was and is the reputation and skill of Consultant's key employee Marty Stevenson. City shall have the right to approve any person proposed by Consultant to replace that key employee.
- 4. INDEPENDENT CONTRACTOR. In performing its services, Consultant is and shall act as an independent contractor and not an employee. representative or agent of City. Consultant shall have control of Consultant's work and the manner in which it is performed. Consultant shall be free to contract for similar services to be performed for others during this Agreement; provided, however, that Consultant acts in accordance with Section 9 and Section 11 of this Agreement. Consultant acknowledges and agrees that (a) City will not withhold taxes of any kind from Consultant's compensation; (b) City will not secure workers' compensation or pay unemployment insurance to, for or on Consultant's behalf; and (c) City will not provide and Consultant is not entitled to any of the usual and customary rights, benefits or privileges of City employees. Consultant expressly warrants that neither Consultant nor any of Consultant's employees or agents shall represent themselves to be employees or agents of City.

#### 5. INSURANCE.

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As a condition precedent to the effectiveness of this Agreement, Consultant shall procure and maintain, at Consultant's expense for the duration of this Agreement, from insurance companies that are admitted to write insurance in California and have ratings of or equivalent to A:V by A.M. Best Company or from authorized nonadmitted insurance companies subject to Section 1763 of the California Insurance Code and that have ratings of or equivalent to A:VIII by A.M. Best Company, the following insurance:

- (a) Commercial general liability insurance (equivalent in scope to ISO form CG 00 01 11 85 or CG 00 01 10 93) in an amount not less than \$1,000,000 per each occurrence and \$2,000,000 general aggregate. This coverage shall include but not be limited to broad form contractual liability, cross liability, independent contractors liability, and products and completed operations liability. City, its boards and commissions, and their officials, employees and agents shall be named as additional insureds by endorsement (on City's endorsement form or on an endorsement equivalent in scope to ISO form CG 20 10 11 85 or CG 20 26 11 85), and this insurance shall contain no special limitations on the scope of protection given to City, its boards and commissions, and their officials, employees and agents. This policy shall be endorsed to state that the insurer waives its right of subrogation against City, its boards and commissions, and their officials, employees and agents.
- (b) Workers' Compensation insurance as required by the California Labor Code and employer's liability insurance in an amount not less than \$1,000,000. This policy shall be endorsed to state that the insurer waives its right of subrogation against City, its boards and commissions, and their officials, employees and agents.
- (c) Professional liability or errors and omissions insurance in an amount not less than \$1,000,000 per claim.

(d) Commercial automobile liability insurance (equivalent in scope to ISO form CA 00 01 06 92), covering Auto Symbol 1 (Any Auto) in an amount not less than \$500,000 combined single limit per accident.

- B. Any self-insurance program, self-insured retention, or deductible must be separately approved in writing by City's Risk Manager or designee and shall protect City, its officials, employees and agents in the same manner and to the same extent as they would have been protected had the policy or policies not contained retention or deductible provisions.
- C. Each insurance policy shall be endorsed to state that coverage shall not be reduced, non-renewed or canceled except after thirty (30) days prior written notice to City, shall be primary and not contributing to any other insurance or self-insurance maintained by City, and shall be endorsed to state that coverage maintained by City shall be excess to and shall not contribute to insurance or self-insurance maintained by Consultant. Consultant shall notify City in writing within five (5) days after any insurance has been voided by the insurer or cancelled by the insured.
- D. If this coverage is written on a "claims made" basis, it must provide for an extended reporting period of not less than one hundred eighty (180) days, commencing on the date this Agreement expires or is terminated, unless Consultant guarantees that Consultant will provide to City evidence of uninterrupted, continuing coverage for a period of not less than three (3) years, commencing on the date this Agreement expires or is terminated.
- E. Consultant shall require that all subconsultants or contractors that Consultant uses in the performance of these services maintain insurance in compliance with this Section unless otherwise agreed in writing by City's Risk Manager or designee.
- F. Prior to the start of performance, Consultant shall deliver to City certificates of insurance and the endorsements for approval as to sufficiency and form. In addition, Consultant shall, within thirty (30) days prior to expiration of the insurance, furnish to City certificates of insurance and endorsements evidencing renewal of the

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insurance. City reserves the right to require complete certified copies of all policies of Consultant and Consultant's subconsultants and contractors, at any time. Consultant shall make available to City's Risk Manager or designee all books, records and other information relating to this insurance, during normal business hours.

- G. Any modification or waiver of these insurance requirements shall only be made with the approval of City's Risk Manager or designee. Not more frequently than once a year. City's Risk Manager or designee may require that Consultant, Consultant's subconsultants and contractors change the amount, scope or types of coverages required in this Section if, in his or her sole opinion, the amount, scope or types of coverages are not adequate.
- The procuring or existence of insurance shall not be construed or H. deemed as a limitation on liability relating to Consultant's performance or as full performance of or compliance with the indemnification provisions of this Agreement.
- 6. ASSIGNMENT AND SUBCONTRACTING. This Agreement contemplates the personal services of Consultant and Consultant's employees, and the parties acknowledge that a substantial inducement to City for entering this Agreement was and is the professional reputation and competence of Consultant and Consultant's employees. Consultant shall not assign its rights or delegate its duties under this Agreement, or any interest in this Agreement, or any portion of it, without the prior approval of City, except that Consultant may with the prior approval of the City Manager of City, assign any moneys due or to become due Consultant under this Agreement. Any attempted assignment or delegation shall be void, and any assignee or delegate shall acquire no right or interest by reason of an attempted assignment or delegation. Furthermore, Consultant shall not subcontract any portion of its performance without the prior approval of the City Manager or designee, or substitute an approved subconsultant or contractor without approval prior to the substitution. Nothing stated in this Section shall prevent Consultant from employing as many employees as Consultant deems necessary for performance of this Agreement.

- 8. <u>MATERIALS</u>. Consultant shall furnish all labor and supervision, supplies, materials, tools, machinery, equipment, appliances, transportation and services necessary to or used in the performance of Consultant's obligations under this Agreement, except as stated in Exhibit "C".
- 9. OWNERSHIP OF DATA. All materials, information and data prepared, developed or assembled by Consultant or furnished to Consultant in connection with this Agreement, including but not limited to documents, estimates, calculations, studies, maps, graphs, charts, computer disks, computer source documentation, samples, models, reports, summaries, drawings, designs, notes, plans, information, material and memorandum ("Data") shall be the exclusive property of City. Data shall be given to City, and City shall have the unrestricted right to use and disclose the Data in any manner and for any purpose without payment of further compensation to Consultant. Copies of Data may be retained by Consultant but Consultant warrants that Data shall not be made available to any person or entity for use without the prior approval of City. This warranty shall survive termination of this Agreement for five (5) years.
- 10. <u>TERMINATION</u>. Either party shall have the right to terminate this Agreement for any reason or no reason at any time by giving fifteen (15) calendar days prior notice to the other party. In the event of termination under this Section, City shall pay Consultant for services satisfactorily performed and costs incurred up to the effective date of termination for which Consultant has not been previously paid. The procedures for payment in Section 1.B. with regard to invoices shall apply. On the effective date of termination, Consultant shall deliver to City all Data developed or accumulated in the

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performance of this Agreement, whether in draft or final form, or in process. Consultant acknowledges and agrees that City's obligation to make final payment is conditioned on Consultant's delivery of the Data to City.

- 11. CONFIDENTIALITY. Consultant shall keep all Data confidential and shall not disclose the Data or use the Data directly or indirectly, other than in the course of performing its services, during the term of this Agreement and for five (5) years following expiration or termination of this Agreement. In addition, Consultant shall keep confidential all information, whether written, oral or visual, obtained by any means whatsoever in the course of performing its services for the same period of time. Consultant shall not disclose any or all of the Data to any third party, or use it for Consultant's own benefit or the benefit of others except for the purpose of this Agreement.
- 12. BREACH OF CONFIDENTIALITY. Consultant shall not be liable for a breach of confidentiality with respect to Data that: (a) Consultant demonstrates Consultant knew prior to the time City disclosed it; or (b) is or becomes publicly available without breach of this Agreement by Consultant; or (c) a third party who has a right to disclose does so to Consultant without restrictions on further disclosure; or (d) must be disclosed pursuant to subpoena or court order.

#### 13. ADDITIONAL COSTS AND REDESIGN.

- Any costs incurred by City due to Consultant's failure to meet the standards required by the scope of work or Consultant's failure to perform fully the tasks described in the scope of work which, in either case, causes City to request that Consultant perform again all or part of the Scope of Work shall be at the sole cost of Consultant and City shall not pay any additional compensation to Consultant for its re-performance.
- B. If the Project involves construction and the scope of work requires Consultant to prepare plans and specifications with an estimate of the cost of construction, then Consultant may be required to modify the plans and

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specifications, any construction documents relating to the plans and specifications, and Consultant's estimate, at no cost to City, when the lowest bid for construction received by City exceeds by more than ten percent (10%) Consultant's estimate. This modification shall be submitted in a timely fashion to allow City to receive new bids within four (4) months after the date on which the original plans and specifications were submitted by Consultant.

- 14. AMENDMENT. This Agreement, including all Exhibits, shall not be amended, nor any provision or breach waived, except in writing signed by the parties which expressly refers to this Agreement.
- 15. LAW. This Agreement shall be governed by and construed pursuant to the laws of the State of California (except those provisions of California law pertaining to conflicts of laws). Consultant shall comply with all laws, ordinances, rules and regulations of and obtain all permits, licenses and certificates required by all federal, state and local governmental authorities.
- 16. ENTIRE AGREEMENT. This Agreement, including all Exhibits, constitutes the entire understanding between the parties and supersedes all other agreements, oral or written, with respect to the subject matter in this Agreement.
- 17. INDEMNITY. Consultant shall, with respect to services performed in connection with this Agreement, indemnify and hold harmless City, its Boards, Commissions, and their officials, employees and agents (collectively in this Section, "City") from and against any and all liability, claims, demands, damage, loss, causes of action, proceedings, penalties, costs and expenses (including attorney's fees, court costs, and expert and witness fees) (collectively "Claims" or individually "Claim"). Claims include allegations and include by way of example but are not limited to: Claims for property damage, personal injury or death arising in whole or in part from any negligent act or omission of Consultant, its officers, employees, agents, sub-consultants or anyone under Consultant's control (collectively "Indemnitor"); willful misconduct; misrepresentation; and Claims by any employee of Indemnitor relating in any way to

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worker's compensation. Independent of the duty to indemnify and as a free-standing duty on the part of Consultant, Consultant shall defend City and shall continue this defense until the Claim is resolved, whether by settlement, judgment or otherwise. No finding or judgment of negligence, fault, breach or the like on the part of Indemnitor shall be required for the duty to defend to arise. Consultant shall notify City of any Claim within ten (10) days. Likewise, City shall notify Consultant of any Claim, shall tender the defense of the Claim to Consultant, and shall assist Consultant, as may be reasonably requested, in the defense.

- 18. AMBIGUITY. In the event of any conflict or ambiguity between this Agreement and any Exhibit, the provisions of this Agreement shall govern.
- 19. COSTS. If there is any legal proceeding between the parties to enforce or interpret this Agreement or to protect or establish any rights or remedies under it, the prevailing party shall be entitled to its costs, including reasonable attorneys' fees.

#### 20. NONDISCRIMINATION.

- In connection with performance of this Agreement and subject to applicable rules and regulations, Consultant shall not discriminate against any employee or applicant for employment because of race, religion, national origin, color, age, sex, sexual orientation, AIDS, HIV status, handicap or disability. Consultant shall ensure that applicants are employed, and that employees are treated during their employment, without regard to these bases. These actions shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- B. It is the policy of City to encourage the participation of Disadvantaged, Minority and Women-Owned Business Enterprises in City's procurement process, and Consultant agrees to use its best efforts to carry out this policy in its use of subconsultants and contractors to the fullest extent consistent with the efficient performance of this Agreement. Consultant may rely on written representations by

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subconsultants and contractors regarding their status. City's policy is attached as Exhibit "D" to this Agreement. Consultant shall report to City in May and in December or, in the case of short-term agreements, prior to invoicing for final payment, the names of all subconsultants and contractors hired by Consultant for this Project and information on whether or not they are a Disadvantaged, Minority or Women-Owned Business Enterprise, as defined in Section 8 of the Small Business Act (15 U.S.C. Sec. 637).

21. NOTICES. Any notice or approval required by this Agreement shall be in writing and personally delivered or deposited in the U.S. Postal Service, first class, postage prepaid, addressed to Consultant at the address first stated above, and to City at 333 West Ocean Boulevard, Long Beach, California 90802, Attn: City Manager, with a copy to the City Engineer at the same address. Notice of change of address shall be given in the same manner as stated for other notices. Notice shall be deemed given on the date deposited in the mail or on the date personal delivery is made, whichever occurs first.

#### 22. COPYRIGHTS AND PATENT RIGHTS.

- Consultant shall place the following copyright protection on all Data: © City of Long Beach, California \_\_\_\_\_, inserting the appropriate year.
- B. City reserves the exclusive right to seek and obtain a patent or copyright registration on any Data or other result arising from Consultant's performance of this Agreement. By executing this Agreement, Consultant assigns any ownership interest Consultant may have in the Data to City.
- C. Consultant warrants that the Data does not violate or infringe any patent, copyright, trade secret or other proprietary right of any other party. Consultant agrees to and shall protect, defend, indemnify and hold City, its officials and employees harmless from any and all claims, demands, damages, loss, liability, causes of action, costs or expenses (including reasonable attorney's fees) whether or not reduced to judgment, arising from any breach or alleged breach of this warranty.

- 23. <u>COVENANT AGAINST CONTINGENT FEES</u>. Consultant warrants that Consultant has not employed or retained any entity or person to solicit or obtain this Agreement and that Consultant has not paid or agreed to pay any entity or person any fee, commission or other monies based on or from the award of this Agreement. If Consultant breaches this warranty, City shall have the right to terminate this Agreement immediately notwithstanding the provisions of Section 10 or, in its discretion, to deduct from payments due under this Agreement or otherwise recover the full amount of the fee, commission or other monies.
- 24. <u>WAIVER</u>. The acceptance of any services or the payment of any money by City shall not operate as a waiver of any provision of this Agreement or of any right to damages or indemnity stated in this Agreement. The waiver of any breach of this Agreement shall not constitute a waiver of any other or subsequent breach of this Agreement.
- 25. <u>CONTINUATION</u>. Termination or expiration of this Agreement shall not affect rights or liabilities of the parties which accrued pursuant to Sections 7, 10, 11, 17, 19, 22 and 28 prior to termination or expiration of this Agreement.
- 26. TAX REPORTING. As required by federal and state law, City is obligated to and will report the payment of compensation to Consultant on Form 1099-Misc. Consultant shall be solely responsible for payment of all federal and state taxes resulting from payments under this Agreement. Consultant's Employer Identification Number is If Consultant has a Social Security Number rather than an Employer Identification Number, then Consultant shall submit that Social Security Number in writing to City's Accounts Payable, Department of Financial Management. Consultant acknowledges and agrees that City has no obligation to pay Consultant until Consultant provides one of these numbers.
- 27. <u>ADVERTISING</u>. Consultant shall not use the name of City, its officials or employees in any advertising or solicitation for business or as a reference, without the prior approval of the City Manager or designee.

	28. <u>AUDIT</u> . City shall have the right at all reasonable times during the
	term of this Agreement and for a period of five (5) years after termination or expiration of
l	this Agreement to examine, audit, inspect, review, extract information from and copy all
	books, records, accounts and other documents of Consultant relating to this Agreement.
l	29. THIRD PARTY BENEFICIARY. This Agreement is not intended or
	designed to or entered for the purpose of creating any benefit or right for any person or
	entity of any kind that is not a party to this Agreement.
ŀ	IN WITNESS WHEREOF, the parties have caused this document to be duly
١	executed with all formalities required by law as of the date first stated above.
١	IZININETIC I ADODATODIES INC. o

20ct 07, 2007 20ct 07, 2007	KINNETIC LABORATORIES, INC., a California corporation  By Africk Kinney  (Type or Print Name)  By Hill D. CARPENTER, Ph.D.  (Type or Print Name)
	"Consultant"
OUSUR 14, 2007 EXECUTED PURSUANT	CITY OF LONG BEACH, a municipal corporation  By Mustine J. Mappy  City Manager
TO SECTION 301 OF THE CITY CHARTER.	"City"
This Agreement is approved	as to form on $00000000000000000000000000000000000$
2007.	
	ROBERT E. SHANNON, City Attorney  By Deputy

#### CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California	ss.
County of	
On <u>(0/s/c)</u> , before me, <u>a</u>	THE LOOK KIM NOTH POHIC,
personally appeared	Name and Title of Officer (e.g., "Jane Doe, Notary Mulic")  Name(s) of Symer(s)
	☐ personally known to me ☐ proved to me on the basis of satisfactory evidence
TAEHOON KIM COMM # 149/800 NOTARY PUBLIC-CALFORNIAD SANTA CRUZ COUNTY () COMM. EXP. MAY 4, 2000 1	to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.
	WITNESS my hand and official seal.
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☐ Partner — ☐ Limited ☐ General	
Attorney in Fact	
□ Trustee	
☐ Guardian or Conservator	
☐ Trustee ☐ Guardian or Conservator ☐ Other:	

STATE OF CALIFORNIA COUNTY OF SANTA CRUZ	SS.
On DAG  Public, personally appeared Philip D. C	before me, A. Morrow a Notary
personally known to me (or proven to me on	the basis of satisfactory evidence) to be the
person(s)whose name(s) is/are subscribed to the	within instrument and acknowledged to me that
he/she/they executed the same in his/her/their au	thorized capacity(ies), and that by his/her/their
signature(s) on the instrument the person(s), or the	entity upon behalf of which the person(s) acted,
executed the instrument. WITNESS my hand and	official seal.
Signature A. Mollo Name (Typed or Printed) Notary Public in and for said County and Stat	A. MORROW COMM. # 1571816 NOTARY PUBLIC-CALIFORNIA D SANTA CRUZ COUNTY COMM. EXP. APRIL 22, 2009

# EXHIBIT "A"

Scope of Work

## City of Long Beach Department of Public Works

#### SCOPE OF WORK

for

Conducting Municipal Storm water Runoff and Dry Weather Water Quality Monitoring

## NPDES Permit No. CAS004003 (CI 8052) Requirements Within the City of Long Beach

#### INTRODUCTION

The City of Long Beach is required to conduct a water quality monitoring program for stormwater and dry weather discharges through the City's municipal separate storm sewer system (MS4). The water quality monitoring program began in the 1999/2000 wet weather season under terms of Order No. 99-060 National Pollutant Discharge Elimination System Permit No. CAS004003 (CI 8052).

The City's Stormwater Program continues to operate under extensions to the original NPDES permit. It is anticipated that the process of developing a new permit will be initiated by the Los Angeles Regional Water Quality Control Board (LARWQCB) within the next year at which time the water quality monitoring program may undergo some adjustments. Until such time the new permit is issued, the City will be conducting the water quality monitoring program in accordance with the original permit and annual adjustments specified by the LARWQCB at the end of each monitoring year.

The City of Long Beach requests proposals from qualified firms (Consultant) to continue the necessary water quality monitoring services to meet the City of Long Beach's NPDES permit requirements starting in October 2007 and continuing until September 2008. Optional one-year contract extensions may be awarded up to a maximum for three additional years.

#### SCOPE OF SERVICES

The Consultant will provide water quality monitoring services, maintain existing equipment, and provide any additional equipment necessary to meet the City of Long Beach's monitoring requirements. The City owns monitoring equipment currently installed at each of the four existing mass emission monitoring sites. All water monitoring will follow 40 CFR 122.41 (j) as required in the City of Long Beach Municipal NPDES permit <a href="http://www.lbstormwater.org/permit/99-060.pdf">http://www.lbstormwater.org/permit/99-060.pdf</a>, page 24 of 34, Item B#1 through #5, with details of implementation as directed by the City with concurrence of the Regional Board.

The activities to be performed under this contract will include water quality sampling, equipment operations and maintenance, field observations, analytical laboratory testing, bioassay testing with Toxicity Identification Evaluations (TIEs), data analyses, data interpretation, annual report preparation, assistance with presentations to regulatory agencies, meeting attendances, and general consulting with the City on the stormwater monitoring program. Assistance with revisions to the program may be required as necessitated by the NPDES permit conditions, by

ongoing monitoring results, and by the Regional Board, including cooperation and participation in certain regional studies.

#### **Mass Emission Monitoring Site Locations**

Monitoring sites specified in the permit are as follows:

- Basin 14: Dominguez Gap Pump Station Monitoring Site
- Basin 20: Bouton Creek Monitoring Site
- Basin 23: Belmont Pump Station Monitoring Site
- Portions of Basins 18, 19, 27 and 29: Los Cerritos Channel Monitoring Site

#### Monitoring Equipment

Each of the four mass emission monitoring sites has been equipped with telemetered, automatic flow-compositing stormwater samplers. These systems include acoustic Doppler flow meters and/or pressure transducers, a datalogger/control module, cellular or landline telecommunications equipment, a rain gauge, and a peristaltic sampler. The Bouton Creek site also incorporates a pressure and multiple conductivity sensors for accomplishing the required discharge sampling at this intertidal site.

All equipment installed at the monitoring sites is owned by the City of Long Beach. Most of the stormwater monitoring equipment was purchased in either 2000 or 2001. It is expected that some upgrading and replacement of existing equipment will become necessary within the next few years. The Consultant, however, will be responsible for calibration and maintenance of all equipment at these existing sites including replacement of any disposal items such as deep cycle marine batteries.

#### Sampling Frequencies

#### Wet Weather Events.

Four storm events are to be monitored each year during the wet-weather period between October 1 and April 15 for each of the four mass emission monitoring sites.

Stormwater monitoring (for TSS only) is also required at the four mass emission sampling sites during all storm events where rainfall is forecasted to equal or exceed 0.25 inches.

A receiving water plume study is also required to be conducted once during the wet season in upper Alamitos Bay. This plume study is to be carried out early in the storm season in association with a large (approximately 0.5 inch or greater) storm event.

#### Dry Weather Events.

Inspections and water quality sampling are to be done twice during the dry weather season at each of the mass emission monitoring sites. Typically, one sampling is carried out early in the summer (e.g. May-June) and one later (e.g. September).

#### Samples and Observations

#### Wet Weather Events.

Flow measurements and rainfall data are to be continuously recorded at each of the four mass emission stations throughout the wet weather season. During all rain events, the frequency of recording will be increased so that the flow hydrograph and rain gauge data can be obtained and real-time control of the sampler can be accomplished. A flow-composited water quality sample is required from each of the mass emission stations for chemical analysis and toxicity testing for four storm events per year. In addition, grab samples are to be taken during the rising or near the peak of the hydrograph for oil and grease, total recoverable petroleum hydrocarbons (TRPH), total and fecal coliform, and enterococcus testing.

During all additional events exceeding 0.25 inches of rainfall, flow-composited samples will be obtained from each mass emission site and analyzed only for total suspended solids (TSS).

#### Wet Weather Plume Study.

The purpose of this study is to implement a pilot receiving water program to more directly evaluate possible stormwater impacts on receiving waters in Alamitos Bay.

The primary objectives of the pilot receiving water program are the following:

- 1. Define the general vertical and horizontal extent of stormwater in Alamitos Bay, Marine Stadium and Los Cerritos Channel.
- 2. Evaluate toxicity and associated water quality characteristics of the stormwater plume.

This program is intended to be conducted once during the early portion of each wet-weather season. The study area will include all of Alamitos Bay, Marine Stadium and the Los Cerritos Channel up to the Pacific Coast Highway Bridge. The study will target an event where total rainfall approximates 0.5 inches to provide higher probabilities of encountering suitable ranges of stormwater concentrations in the study area. Field sampling will be initiated within 12 hours following the end of rainfall.

The first task of this field program will be to define the horizontal and vertical extent of the stormwater plume. This will require rapid characterization of the plume by use of a towed STD array deployed from a boom off the side of a research vessel. For establishing the horizontal extent of the plume, the STD will be towed at a depth of 0.5 to 1 feet. Data from the STD will be recorded on a datalogger. At a minimum, STD parameters will include conductivity, temperature, depth, salinity, and pH. A GPS unit will also be linked to the datalogger to provide concurrent locational data for all water quality data. Depth profiles will be conducted in the plume to determine the depth of freshwater influence. After establishing the general distribution of stormwater in receiving waters, sites will be selected for collection of water samples based upon salinity. Four sites will be selected to be representative of four different stormwater dilutions. To the extent practical, sites will be selected from locations within the defined study area where receiving water salinities range from approximately 15 to 30 ppt.

The following table represents the desirable ranges of conditions to be sampled in the field. This will provide stormwater concentrations ranging from 12 to 56 percent. The actual range will depend upon specific field conditions during the survey such as the general extent of the stormwater plume or presence of distinct plumes from different source areas.

Receiving Water Station Designation	Salinity (ppt)	Est. % Stormwater
RW-1	15	56
RW-2	20	41
RW-3	25	26
RW-4	30	12

Each receiving water sample will be subjected to the sea urchin fertilization test. This is the only test that has been found to suggest potential for toxicity in the marine/estuarine receiving waters of Alamitos Bay. These samples will also be analyzed for a subset of the analytes required for the stormwater monitoring program. The receiving water samples will be analyzed for total and dissolved trace metals (Cd, Cu, Ni, Pb, and Zn), TSS, ammonia-N, pH, conductivity, salinity and organophosphate pesticides (diazinon and chlorpyrifos). Reporting limits for these receiving water samples must be consistent with reporting limits in Table 1.

#### Dry Weather Events.

Inspections at each site will include whether water is present and whether this water is flowing or just ponded. At sites that are found not to have flowing water, inspections will be conducted in the upstream drains to verify that flow is not occurring into the site. When flowing water is present at one of these mass emission sites, then water quality measurements, flow estimates, and water samples will be taken along with observation of site conditions. Temperature, conductivity, and oxygen are to be measured at the site. For stations where flowing water was encountered, time-composited samples are to be taken along with grab samples (Oil & Grease, TRPH, and bacteria). Where possible, time composites are to be taken over a 24-hour period in order to assure that representative samples are obtained.

On occasion, elevated pH levels have been observed at two of the sites. When high pH levels occur, immediate upstream investigations must be performed to assist in determining if the pH excursions are due to instream effects or can be attributed to specific source areas.

#### **Laboratory Analysis**

#### Chemical Analysis.

The initial water quality constituents selected for this program were established based upon the requirements of the City of Long Beach NPDES permit for stormwater discharges. Based upon early results of this Long Beach monitoring program, the Regional Board has modified the analyte list and the required target detection limits. The current list of required chemical analytes, analytical methods, holding times, and reporting limits is given in Table 1.

#### Toxicity Analysis.

The toxicity of each discharge sample is to be evaluated using two chronic test methods: the water flea (*Ceriodaphnia dubia*) reproduction and survival test (freshwater) and the purple sea urchin (*Strongylocentrotus purpuratus*) fertilization test (marine). Toxicity testing is to be conducted on flow-rated composites samples from all sites except the Dominguez Gap Pump Station.

Samples from the stormwater plume study in the marine receiving waters of Alamitos Bay are to be tested with the sea urchin fertilization test. In the case of marine species, water samples are to

be diluted with laboratory seawater to produce a concentration series using procedures specific to each method. Test methods are to be as given in Table 2.

Toxicity Identification Evaluations (TIEs) are to be run on discharge samples that exhibit substantial ( $\geq 2~{\rm TU_{ec}}$  baseline toxicity for water fleas and  $\geq 3~{\rm TU_{ec}}$  for sea urchins), in order to determine the characteristics of the toxicants present. This strategy provides one full TU<sub>ec</sub> above the minimum detection limit of each test to allow assessment of the primary toxicant. Four or five treatments are applied to each sample. These treatments are particle removal, trace metal chelation, nonpolar organic extraction, organophosphate (OP) deactivation (except urchins), and chemical reduction. With the exception of organics extraction, each treatment is applied independently on a salinity-adjusted sample. Test methods are given in Table 2. A maximum of two TIEs is to be conducted for each species at each station during the wet weather season. During dry weather monitoring, a maximum of one TIE is required to be conducted for each species at each station.

Toxicity testing of the Dominguez Pump Station discharge was eliminated by the Regional Board prior to the 2002/2003 monitoring program.

#### **Quality Assurance**

Internal laboratory quality control checks include the use of internal standards, method blanks, matrix spike/spike duplicates, duplicates, laboratory control spikes, and Standard Reference Materials (SRMs). Data validation is to be performed in accordance with the National Functional Guidelines for Low Level Organic Data Review (EPA540-R-00-006), Inorganic Data Review (EPA540-R-00-006), and Guidance on the Documentation and Evaluation of Trace Metals Data Collected for the Clean Water Act Compliance Monitoring (EPA/821/B/95/002).

External QA/QC must include a blind duplicate from one site for each event given the availability of adequate sample volumes.

Toxicity testing quality assurance procedures are to be specific to each test protocol specified. These quality assurance procedures are to include control samples and a reference toxicant test to document the health of test organisms and the validity of the test conditions. Results are also to be compared to established performance criteria for control survival, reproduction, reference toxicant sensitivity, sample storage, and test conditions. Any deviations from the performance criteria such as control charts are to be noted in the laboratory records and prompted corrective action, ranging from a repeat of the test to adjustment of laboratory equipment. These are to include detailed monitoring and documentation of all test conditions.

#### Reporting

Two types of reports will be required: Monthly Contract Progress Reports and Annual Stormwater Monitoring Reports. The Monthly Contract Progress Reports will be provided with each invoice submittal as internal tracking documents. The Annual Stormwater Monitoring Reports are required to be submitted to the LARWQCB as permit compliance.

Required contents of the Annual Monitoring Report are specified in the NPDES Permit. At a minimum, the report must provide comparisons with appropriate benchmark water quality levels and provide estimates of annual pollutant loads from each mass emission monitoring station. The report should also provide a complete analysis of all data collected by the program to date and provide recommendations for improvements or program adjustments that would help to better address overall program objectives.

A draft of the Annual Stormwater Monitoring Report will be prepared in accordance with NPDES permit requirements <a href="http://www.lbstormwater.org/permit/99-060.pdf">http://www.lbstormwater.org/permit/99-060.pdf</a>, page 15 of 34, Item H.1.a, b, and c) and will be submitted to the Public Works Department by the consultant. The draft report is to be submitted on or before June 30<sup>th</sup> of each year. A final report will be submitted to the Department each year that will contain corrections based upon review comments and will be suitable for submission to the LARWQCB by July 15<sup>th</sup> for permit compliance.

All stormwater chemical and bioassay data are to be submitted annually to the LARWQCB in the Stormwater Monitoring Coalition's (SMC) Standardized Data Transfer Format (SDTF).

#### Consultation, Presentations, and Meetings

In addition to the monitoring program elements defined above, assistance may be required for presentations to regulatory agencies, for project meeting attendances, and for general consulting with the City on the stormwater monitoring program. Assistance with revisions to the program may be required as necessitated by the NPDES permit conditions, by ongoing monitoring results, and by the Regional Board, including cooperation/participation in certain regional studies.

A minimum of three to four meetings each year will be required with the Public Works Department to exchange necessary information, discuss the proposed work, set up a schedule of activities, and to present findings of the study to the LARWQCB.

#### References Cited

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- California Regional Water Quality Control Board, Los Angeles Region. 1999. Waste Discharge Requirements for Municipal Stormwater and Urban Runoff Discharges within the City of Long Beach. Order No. 99-060 National Pollutant Discharge Elimination Systems Municipal Permit No. CAS004003 (CI 8052), June 30, 1999.
- USEPA [U.S. Environmental Protection Agency]. 1983. Methods for the Chemical Analyses of Water and Wastes. EPA-600/4-79/020. Revised March 1983.
- USEPA [U.S. Environmental Protection Agency]. 1991. Methods for Aquatic Toxicity Identification Evaluations. Phase I, Toxicity Characterization Procedures (2<sup>nd</sup> Ed.) EPA/600/6-91/003. Office of Research and Development.
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- USEPA [U.S. Environmental Protection Agency]. 1994b. Short-Term Methods of Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. Edited by D. J. Klemm, G. E. Morrison, T. J. Norberg-King, W. H. Peltier and M. A. Heber. Vol. EPA/600/4-91/003. Cincinnati, OH: Environmental Monitoring Systems Laboratory:

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- USEPA [U.S. Environmental Protection Agency]. 1996. Marine Toxicity Identification (TIE) Phase I Guidance Document. EPA/600/R-95/054. Office of Research and Development, Washington D.C.
- USEPA [U.S. Environmental Protection Agency]. 2001. USEPA Functional Guidelines for Low Level Concentration Organic Data Review. EPA540-R-00-006
- USEPA [U.S. Environmental Protection Agency]. 2002. USEPA Functional Guidelines for Inorganic Data Review. EPA 540-R-01-008.

Table 1 Analytical Methods, Holding Times, and Reporting Limits.

Analyte and Reporting Unit	EPA Method Number	Holding Time	Target Reporting Limit or ML
CONVENTIONAL PARAMETERS			
Oil and Grease (mg/L)	1664	28 days	5.0
Total Phenols (mg/L)	420.1	28 days	0.1
pH (units)	150.1	ASAP	0 – 14
Orthophosphate-P (mg/L)	365.3	48 hours	0.01
Total Phosphorus (mg/L)	365.3	28 days	0.05
Turbidity (NTU)	180.1	48 hours	1.0
Total Suspended Solids (mg/L)	160.2	7 days	1.0
Total Dissolved Solids (mg/L)	160.1	7 days	1.0
Volatile Suspended Solids (mg/L)	160.4	7 days	1.0
Total Organic Carbon (mg/L)	415.1	28 days	1.0
Biochemical Oxygen Demand (mg/L)	405.1	48 hours	4.0
Chemical Oxygen Demand (mg/L)	410.1	28 days	4.0
Total Ammonia-Nitrogen (mg/L)	350.2	28 days	0.1
Total Kjeldahl Nitrogen (mg/L)	351.3	28 days	0.1
Nitrite Nitrogen (mg/L)	300.0	48 hours	0.1
Nitrate Nitrogen (mg/L)	300.0	48 hours	0.1
Alkalinity, as CaCO3 (mg/L)	310.1	48 hours	5.0
Specific Conductance (umhos/cm)	120.1	48 hours	1.0
Total Hardness (mg/L)	130.2	180 days	1.0
MBAS (mg/L)	425.1	48 hours	0.02
Chloride (mg/L)	300.0	48 hours	1.0
Fluoride (mg/L)	300.0	48 hours	0.1
BACTERIA (MPN/100ml)			
Total Coliform	SM 9221B	6 hours	<20
Fecal Coliform	SM 9221B	6 hours	<20
Enterococcus	SM 9230C	6 hours	<20
TOTAL AND DISSOLVED METALS (µg/L) <sup>1</sup>		## ## *** ****************************	
Aluminum	200.8	180 days	100
Arsenic	200.8	180 days	0.5
Cadmium	200.8	180 days	0.25
Chromium	200.8	180 days	0.5
Copper	200.8	180 days	0.5
Iron	236.1	180 days	25
Lead	200.8	180 days	0.5
Nickel	200.8	180 days	1.0
Selenium	200.8	180 days	1.0
Silver	200.8	180 days	0.25
Zinc	200.8	180 days	1.0

<sup>1.</sup> Samples to be analyzed for dissolved metals are to be filtered within 48 hours.

Table 1 Analytical Methods, Holding Times, and Reporting Limits. (continued)

Analyte and Reporting Unit	EPA Method Number	Holding Time	Target Reporting Limit
CHLORINATED PESTICIDES (µg/L)			
Aldrin	8081A	7 days	0.005
alpha-BHC	8081A	7 days	0.01
beta-BHC	8081A	7 days	0.005
delta-BHC	8081A	7 days	0.005
gamma-BHC (lindane)	8081A	7 days	0.02
alpha-Chlordane	8081A	7 days	0.1
gamma-Chlordane	8081A	7 days	0.1
4,4'-DDD	8081A	7 days	0.05
4,4'-DDE	8081A	7 days	0.05
4,4'-DDT	8081A	7 days	0.01
Dieldrin	8081A	7 days	0.01
Endosulfan I	8081A	7 days	0.02
Endosulfan II	8081A	7 days	0.01
Endosulfan sulfate	8081A	7 days	0.05
Endrin	8081A	7 days	0.01
Endrin Aldehyde	8081A	7 days	0.01
Heptachlor	8081A	7 days	0.01
Heptachlor Epoxide	8081A	7 days	0.01
Toxaphene	8081A	7 days	0.5
PCBs (µg/L)			
Aroclor-1016	8081A	7 days	0.5
Aroclor-1221	8081A	7 days	0.5
Aroclor-1232	8081A	7 days	0.5
Aroclor-1242	8081A	7 days	0.5
Aroclor-1248	8081A	7 days	0.5
Aroclor-1254	8081A	7 days	0.5
Aroclor-1260	8081A	7 days	0.5
Total PCBs	8081A	7 days	0.5
ORGANOPHOSPHATE PESTICIDES (µg/L)			
Diazinon	8141A	7 days	0.01
Chlorpyrifos (Dursban)	8141A	7 days	0.05
Malathion	8141A	7 days	1.0
Prometryn	8141A	7 days	1.0
Atrazine	8141A	7 days	1.0
Simazine	8141A	7 days	1.0
Cyanazine	8141A	7 days	1.0

Table 2. Toxicity Testing and Toxicity Identification Evaluations (TIEs)

TEST TYPE	SPECIES	METHOD	END POINTS
BIOASSY TESTING			
Water Flea	Ceriodaphnia dubia	USEPA 1994c	6-8 day survival and reproduction
Sea Urchin	Strongylocentrotus purpuratus	USEPA 1995b	20 minute fertilization test
TOXICITY IDENTIFICATION EVALUATIONS (TIEs) Phase 1			
Freshwater	Ceriodaphnia dubia	USEPA 1991	96 hour survival
Marine	Strongylocentrotus purpuratus	USEPA 1996	20 minute fertilization test

### KINNETIC LABORATORIES, INC.

### 2007-2008 LABOR RATE SCHEDULE

PROFESSIONAL CATEGORY	<b>HOURLY RATE</b>
SCIENTIST V / PRINCIPAL	\$ 153.36
SCIENTIST IV / PROJECT MANAGER	\$ 142.50
SCIENTIST III	\$ 114.43
SCIENTIST II	\$ 95.37
SCIENTIST I	\$ 79.29
TECHNICAL EDITOR	\$ 86.37

## FOR EXTENDED PERIOD CONTRACTS: ESCALATION RATE IS 5% PER YEAR.

DIRECT COSTS	RATE
MILEAGE < 1 TON > 1 TON	\$ 0.36 / MILE \$ 0.46 / MILE
FACSIMILE	\$ ACTUAL
PHOTOCOPYING	\$ 0.15 / PAGE
KLI TRUCKS & VANS	\$ 75.00 / DAY
PER DIEM AND ACCOMODATIONS LODGING MEALS	\$125.00 / DAY \$ 48.25 / DAY
EQUIPMENT USEAGE FEES	AS QUOTED

## KINNETIC LABORATORIES, INC. DIRECT COSTS AND TRAVEL SCHEDULE

#### **EFFECTIVE 4/07**

ITEM	COST
Black & White Copying	\$0.15/Page
Color Copying / Printing	\$1.00/Page
Graphics Computer	\$20.00/Hour
Black & White Graphics – Bond	\$.020/Sq. Ft.
Black & White Graphics – Vellum	\$0.45/Sq. Ft.
Black & White Graphics – Film	\$2.35/Sq. Ft.
Color Graphics – Bond	\$1.45/Sq. Ft.
Color Graphics – Vellum	\$1.85/Sq. Ft.
Color Graphics – Film	\$2.85/Sq. Ft.
Facsimile	Actual
Telephone	Actual
Postage/Shipping	Actual
Vans/Pick-Up Trucks	\$50/Day
Service Trucks w/ Traffic Safety Equipment & Tools	\$75/Day
Vehicle Miles < 1 Ton	\$0.36/Mile
Vehicle Miles > 1 Ton	\$0.46/Mile
Per Diem	
Lodging	\$125/Day
Meals	\$48.25/Day
Parking/Tolls	Actual
Airfare	Actual
Rental Vehicles	Actual
Computer, Portable	Up to \$125/Day
Cellular Phones	Âctual
Camera, 35mm	Up to \$25/Day
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# KINNETIC LABORATORIES, INC. DIRECT COSTS AND TRAVEL SCHEDULE (continued)

ITEM	COST
Storm Water Monitoring*	#1 000/A ( 41-
Basic Station	\$1,000/Month
Security Enclosure	\$300/Month
Composite Sample Container (20liter)	\$50/Month
Depth Sensor	\$200/Month
Velocity/Flow Sensor	\$500/Month
Rain Gauge	\$100/Month
Cellular Telephone Link	\$100/Month
Solar Panel	\$50/Month
AC Power	Actual
Refrigerated Sampler (requires AC Power)	\$500/Month
Confined Space Entry Equipment	\$500/Day
Field Meters*	
Anemometer	\$25/Day
Conductivity and Temperature	\$35/Day
Dissolved Oxygen	\$35/Day
Nephelometer	\$75/Day
pH	\$35/Day
Boats*	
34' Research Vessel: D.W. Hood	\$1,500/Day
30' Research Vessel: Prophesy	\$1,350/Day
21' Zodiac Mark 5	\$450/Day
17' Boston Whaler	\$350/Day
14' Jon Boat	\$100/Day
13' Zodiac Mark 3	\$300/Day
15 hp Outboard Engine	\$75/Day
A-Frame w/ Puller Motor, for Whaler & Zodiac	\$50/Day

## KINNETIC LABORATORIES, INC. DIRECT COSTS AND TRAVEL SCHEDULE (continued)

ITEM	COST
Nevigation*	
Navigation* GPS, Differential w/ Base Station	\$350/Day
GPS, Differential w/ Beacon Receiver	\$150/Day
Loran C	\$40/Day
Mini Ranger	\$350/Day
Transit Surveyor	\$50/Day
Water Sampling*	
Diaphragm Pump, Teflon	\$25/Day
Go Flo Bottle	\$25/Day
Niskin Bottle w/ Messenger	\$25/Day
Peristaltic Pump	\$75/Day
Valskon Sampler	\$60/Day
VIPS, Trace Metals Sampler	\$250/Day
Sediment Sampling*	
Gravity Core, 3-1/2" X 8' w/ Butyrate Liners	\$125/Day
Gravity Core, 1-3/4" X 2' w/ Butyrate Liners	\$75/Day
Hand Core, Stainless-Steel	\$50/Day
Vibracore, 4" diameter up to 20' length w/ Generator	\$1,050/Day
Bucket Dredge, Stainless-Steel, 40-Gal. Capacity	\$200/Day
Gray/O'Hara Box Core, Halar Coated	\$150/Day
Smith/MacIntyre, Halar Coated	\$100/Day
Smith/MacIntyre, Galvanized Steel	\$75/Day
Van Veen, 0.1 m2, Halar Coated w/ Cage	\$100/Day
Van Veen, 0.1 m2, Stainless-Steel w/ Cage	\$75/Day
Van Veen, 0.1 m2, Kynar Coated	\$100/Day
Van Veen, 0.06 m2, Stainless-Steel	\$50/Day
Ponar Grab, 0.06 m2, Galvanized Steel	\$50/Day
Sediment Mixer, Hobart (30-Gal. Capacity)	\$150/Day
Dive Operations*	
Communication Gear, Diver to Diver or Diver to Ship	\$50/Day

## KINNETIC LABORATORIES, INC. DIRECT COSTS AND TRAVEL SCHEDULE (continued)

ITEM	COST
Oceanographic Monitoring*	# 400 /D
CTD w/ D.O. ph Transmissivity	\$400/Day
Current Meter, Doppler	\$2,000/Month
Current Meter, Acoustic	\$800/Month
Current Meter, Rotor	\$500/Month
Current Meter, Tape Reader	\$100/Day
Drogue, Holey Sock	\$35/Day
Drogue, Window Shade	\$35/Day
Fluorometer	\$150/Day
Fluorometer w/ Data Logger	\$175/Day
OBS, D&A, w/ Pressure Housing and Data Logger	\$500/Month
Underwater Beacon	\$150/ Month
Underwater Beacon Locator	\$150/Day
Release, Acoustic	\$400/Month
Release, Acoustic, Command Unit	\$300/Day
Thermistor Chain, 16 Array	\$750/Month
Thermistor Chain, 8 Array	\$600/Month
Data Logger*	
Datalogger/Controller	\$50/Day
Interface Device	\$25/Day
Multiplexer Device	\$25/Day
Storage Module	\$25/Day
Benthic and Bioaccumulation*	
Benthic Sampling Sieves, Table, Supplies	\$50/Day
Crab Trap, Plastic	\$25/Day
Long-Line Fishing Gear	\$25/Day
Otter Trawl, 25'	\$100/Day
Otter Trawl, 16'	\$90/Day
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## Biological Testing – ToxScan, Inc.

BIOASSAY/BIOACCUMULATION EXPOSURES	1 <sup>ST</sup> SAMPLE PRICE	ADDITIONAL SAMPLE PRICE
Suspended Particulate Phase Bioassays*		
Mytilus edulis / M. galloprovinciallis	\$1400	\$390
Mysidopsis bahia	\$1320	\$525
Menidia beryllina	\$1320	\$525
Solid Phase Bioassays – 10 day		
Ampelisca abdita	\$2250	\$700
Neanthes arenaceodentata	\$2250	\$700
Nephtys caecoides	\$2250	\$700
Rhepoxynius abronius	\$2250	\$700
Eohaustorius estuarius	\$2250	\$700
Chronic Bioassays – Marine**		
Haliotis rufescens	\$1400	\$390
Strongylocentrotus purpuratus	\$1275	\$330
Macrocystis pyrifera	\$1620	\$445
Atherinops affinis	\$2400	\$1440
Menidia beryllina	\$2400	\$1440
Chronic Bioassays – Freshwater**		
Ceriodaphnia dubia	\$1500	\$1080
Pimephales promelas	\$1980	\$1140
Selenastrum capricornutum	\$960	\$480
28 Day Bioaccumulation Exposures		
Nereis viriens	\$3625	\$990
Nephtys caecoides	\$3625	\$990
Macoma nasuta	\$3625	\$990

TOXICITY IDENTIFICATION EVALUATION (TIE) TESTING		
Ceriodaphnia dubia		
Phase 1	\$4500	
Phase 2	\$6500	
Phase 3	\$4000	
Pimephales promelas		
Phase 1	\$5500	
Phase 2	\$7000	
Phase 3	\$4500	
Haliotis rufescens		
Phase 1	\$4500	
Phase 2	\$6500	
Phase 3	\$4500	
Selenastrum capriconutum		
Phase 1	\$4500	
Phase 2	\$6000	
Phase 3	\$4500	

## EXHIBIT "B"

City's Representative:

City Engineer or His Designee

# EXHIBIT "C"

Materials/Information Furnished: NONE

### CITY OF LONG BEACH POLICY FOR DISADVANTAGED, MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES

It is the policy of the City of Long Beach to utilize Disadvantaged, Minority-Owned and Women-Owned Business Enterprises in all aspects of contracting, including construction, the purchase of materials and services, including professional services, leases and the granting of concessions.