

# CITY OF LOS ANGELES

CALIFORNIA



ERIC GARCETTI

MAYOR

February 26, 2015

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—  
WASTEWATER ENGINEERING SERVICES DIV.  
2714 MEDIA CENTER DRIVE  
LOS ANGELES, CA 90065  
FAX: (323) 342-6210 OR  
(323) 342-6211

## ELECTRONIC MAIL

To: 25 Pre-Qualified On-Call Contract Consultants of LA Sanitation

### LA SANITATION ON-CALL CONSULTANT SERVICES CONTRACTS ISSUANCE OF TOS SN-18 – FINISHED WATER DISINFECTION STANDARD STUDY AT TIWRP AWPF

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The City is soliciting responses from 25 Prime Consultants on Pre-Qualified On-Call List. Attached are details of the Task Order Solicitation (TOS) required services.

All questions regarding this TOS must be submitted in writing to the City Project Manager, Seung Tag Oh, by March 5, 2015.

The deadline for proposal submittal is **March 19, 2015**. If your firm is interested in this TOS, please submit an electronic copy of proposal via e-mail to the following LASAN's staff, no later than 2:00 P.M. on the indicated due date, to:

- Seung Tag Oh, [seung-tag.oh@lacity.org](mailto:seung-tag.oh@lacity.org)
- Thu-Van Ho, [thu-van.ho@lacity.org](mailto:thu-van.ho@lacity.org)

Thank you for your interest and we look forward to receiving your response to this TOS.

Sincerely,

for, Ali Poosti, Division Manager  
Wastewater Engineering Services Division  
LA Sanitation

AP:tvh

Attachment: Details of required services for TOS SN-18.

c: Abdul Danishwar, WESD  
Scott Hare, WESD

\\82mtcfs1\wesd\Div Files\New Oncall 2014-19\TOS SN-18\_TIWRP Water Disinfection Std Study\INITIATION

**Zero Waste • One Water**

AN EQUAL EMPLOYMENT OPPORTUNITY - AFFIRMATIVE ACTION EMPLOYER

Recyclable and made from recycled waste

Thu-Van Ho, WESD  
Mark Starr, TIWRP  
Seung Tag Oh, TIWRP

**City of Los Angeles  
Department of Public Works  
BUREAU OF SANITATION**

**On-call Consultant Services Contract**

**Task Order Solicitation (TOS) SN-18**

**For**

*Finished Water Disinfection Standard Study at TIWRP AWTF*

**February 2015**

**1. Introduction**

The City of Los Angeles Bureau of Sanitation (LASAN) plans to expand the Terminal Island Water Reclamation Plant (TIWRP) Advanced Wastewater Treatment Facility (AWTF) to achieve, among other goals, 100%, or near 100%, recycled water injection in the Dominguez Gap Seawater Intrusion Barrier (DGB). LASAN will provide advanced treated water meeting the CA Department of Drinking Water (DDW), formerly the CA Department of Public Health (CADPH), regulations for Indirect Potable reuse (IPR).

LASAN will produce the treated water that will be supplied to the Water Replenishment District (WRD) via the Los Angeles Department of Water and Power (LADWP) for injection in the DGB owned and operated by the Los Angeles County Department of Public Works (LACDPW).

As the operator, LACDPW has developed water quality standards for injection of drinking water from the Metropolitan Water District of So. Cal. (MWDSC) and AWTF finished water. The most recent standards were put in place in 2009 and communicate to LASAN in a letter dated 01/07/2009 (attached). Those standards are meant to address public health protection as well as barrier operation issues such as well clogging and fouling.

In particular, the standard requiring 3 - 4 mg/L of total chlorine residual was devised to address biofouling issues related to the injection of MWDSC drinking water and evidenced in CH2MHill – Well Redevelopment Study, Phase I and Phase II reports (1998, 2003). With the expansion of the TIWRP AWTF, the injection water will be 100%, or near 100%, recycled AWTF water having received a high level of treatment and purification using microfiltration (MF), reverse osmosis (RO), and advanced oxidation process (AOP) based on high dose ultraviolet (UV) light radiation and free chlorine. This process was specifically adapted for the TIAWWTP and proved more efficient and less costly than the traditionally used UV/Hydrogen Peroxide AOP. Under this AOP, there is no residual ammonia due to the breakpoint chlorination implemented to ensure a free residual of chlorine required for the AOP. As such, the residual disinfectant going to the DGB will be free chlorine, unless it is quenched by adding ammonia back to the finished water to form mono-chloramine.

The goal of the study will be to evaluate the use of free chlorine in lieu of total chlorine as a residual disinfectant for the injection of 100%, or near 100%, of advanced treated recycled water in the DGB. The issues to be evaluated will include well fouling protection, and blending with MWDSC water that is chloraminated.

## **2. Scope of Services**

### **Task 1 – Project Communication and Project Management**

This task will focus on the communication and coordination of the projects goals, scope of work, methodologies, schedule, budget, and findings with the project stakeholders including but not limited to:

- LASAN
- LADWP
- WRD
- LACDPW

It will consist of two stakeholders meeting to build consensus around the project approach and the final recommendations. Meeting materials, presentations, agenda, draft, and final minutes will be prepared. This task will also address the project management and reporting needs of the project including monthly progress reports, and draft and final reports.

### **Task 2 – Hydraulic Modeling of the DGB system under three blending scenarios.**

A hydraulic model was developed by CH2M Hill that is capable of describing and predicting blending patterns of AWTF water and MWDSC water. It is assumed that the model is calibrated using existing operations pressure and flow rate data. Under this task, simulations of future standard operations (i.e. 100% or near 100% AWWT water injection) will be performed. This task will simulate chlorine/chloramines blending patterns and resulting chemistry under three blending scenarios as follows:

- 500 gpm of MWDSC water
- 200 gpm of MWDSC water
- Intermittent use of 100% MWDSC water

The latter scenario will evaluate the impact of temporary shutdown of the TIWRP AWTF for maintenance.

The results will be reviewed and presented with focus on blending patterns and resulting water quality at the point(s) of injection. The analysis will establish the resulting chlorine chemistry and if any undesirable byproducts are formed that would negatively affect the ground water quality in the long term.

### **Task 3 – Results Analysis and Recommendations**

In this task, the results of the various investigations will be presented and analyzed. Alternatives using free chlorine at TIWRP AWTF and breakpoint chlorination stations at the points of MWDSC entry point(s) will be evaluated against re-ammoniation of the finished water at TIWRP.

A final recommendation will be prepared, in consensus with the stakeholders, in terms of the residual disinfectant selection for the TIWRP AWTF finished water.

A final summary of the study will be prepared and will present the background, the project goals, the study plan and methodology, as well as the results, the analysis, and the final recommendations.

A draft report will be prepared for review, and will be finalized by integrating the comments from LASAN and the stakeholders.

### **3. Term of Engagement**

The term of engagement is twelve months from the issuance date of NTP. It is estimated that the cost ceiling for this TOS is approximately \$53,000.

### **4. Solicitation Schedule**

- Issue Task Order Solicitation .....Date of Cover Letter.
- Receive Solicitation Responses.....As indicated in Cover Letter.
- Conduct Interviews if necessary .....5 weeks after issuance of TOS.
- Select and Negotiate.....7 weeks after issuance of TOS.
- Issue Task Work Order.....9 weeks after issuance of TOS.

### **5. Solicitation Response Requirements**

Solicitation Responses shall not exceed fifteen (15) pages, exclusive of cover, dividers and resumes. Solicitation Responses shall be submitted to the following Bureau's staff via e-mail, no later than 2:00 pm of proposal due date indicated in cover letter:

- Seung Tag Oh, [seung-tag.oh@lacity.org](mailto:seung-tag.oh@lacity.org)
- Thu-Van Ho, [thu-van.ho@lacity.org](mailto:thu-van.ho@lacity.org)

Solicitation Responses shall include:

- Resume demonstrating that the candidate is capable of meeting the requirements of the Scope of Work. Resume shall include work experience history with dates, and references from past employers, owners, and/or organizations.
- Provide a proposed individual cost breakdown by tasks.
- Provide a breakdown of estimated time for completion of task.
- Proposed Hourly Billing Rate Summary for the proposed candidate with all respective direct and indirect costs, markups, expenses, overhead rates and profit. (Sample Attached).
- MBE/WBE/ SBE/EBE/DVBE/OBE subcontractors utilized and the percent utilization.
- Provide copies of valid MBE/WBE/SBE/EBE/DVBE Certifications of MBE/WBE/SBE/EBE/DVBE sub-contractors utilized.
- Statement pertaining to the candidate's availability.

### **6. Selection Criteria**

The selection team will evaluate the proposals with the following criteria:

- Capability, and experience in providing the Scope of Services as demonstrated by the proposal.
- Expert knowledge and work experience associated with understanding of the issues, options, and approaches related to the recycled water distribution system.
- Experience and proven track record with local stakeholders.
- The value offered to the City considering cost in comparison to capabilities and experience of the candidates.
- Expert knowledge and experience in water chemistry related to recycled water chlorine residual requirements and hydraulic modeling.
- Ability to effectively and rapidly meet on going needs for the related stakeholder activities.

**7. Anticipated MBE/WBE/SBE/EBE/DVBE Participation Levels**

The City had set anticipated participation levels (APLs) for sub-consultants as follows:  
18% MBE, 4% WBE, 25% SBE, 8% EBE, and 3% DVBE

Note: Sub-consultants that are not listed on Schedule A in your contract cannot be added and or utilized without the performance of the outreach and approval of the LASAN.

**8. Task Order Manager**

The City's On-Call Contract Manager is: Ali Poosti, Division Manager, Wastewater Engineering Services Division, (323) 342-6228.

The Task Manager for this designated TOS is: Seung Tag Oh, Environmental Engineer, TIWRP, (310) 732-4715.

**9. Disclaimer**

The City may or may not decide to award any or part of this task order based on its sole convenience and shall not be responsible for any solicitation response costs.

## HOURLY BILLING RATES

(To be submitted for each Task Order Solicitation)

FIRM	Status	Last Name	First Name	Position	Rate (\$/hr)	Approved Overhead Rate	Approved Profit	Billing Rate (\$/hr)	Effective Date	Notes
Prime Firm	Prime									
Prime Firm	Prime									
Prime Firm	Prime									
MBE Firm Name 1	MBE									
MBE Firm Name 2	MBE									
MBE Firm Name 3	MBE									
WBE Firm Name 1	WBE									
WBE Firm Name 2	WBE									
SBE Firm Name	SBE									
EBE Firm Name	EBE									
DVBE Firm Name	DVBE									
OBE Firm Name 1	OBE									
OBE Firm Name 2	OBE									

Firm Name	Status	Fee	%Fee
MBE Firm Name 1	MBE		
MBE Firm Name 2	MBE		
MBE Firm Name 3	MBE		
WBE Firm Name 1	WBE		
WBE Firm Name 2	WBE		
SBE Firm Name	SBE		
EBE Firm Name	EBE		
DVBE Firm Name	DVBE		
OBE Firm Name 1	OBE		
OBE Firm Name 2	OBE		

Summary	Total Fee (\$)	% Fee
Prime		
MBE		
WBE		
SBE		
EBE		
DVBE		
OBE		
<b>Total</b>		



GAIL FARBER, Director

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

*"To Enrich Lives Through Effective and Caring Service"*

900 SOUTH FREMONT AVENUE  
ALHAMBRA, CALIFORNIA 91803-1331  
Telephone: (626) 458-5100  
<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:  
P.O. BOX 1460  
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE  
REFER TO FILE: **WR-4**

January 7, 2009

Mr. Martin Adams  
Director of Operations  
Los Angeles Department of Water and Power  
111 North Hope Street, Room 1449  
Los Angeles, CA, 90012

Attention Mr. Michael Grahek

Dear Mr. Adams:

### **DOMINGUEZ GAP BARRIER PROJECT REVISED RECYCLED WATER QUALITY REQUIREMENTS**

On July 31, 2001, the Water Replenishment District of Southern California (WRD), the City of Los Angeles Department of Water and Power (LADWP), and the County of Los Angeles entered into an agreement (County of Los Angeles Agreement No. 73570) regarding recycled water service to the Dominguez Gap Barrier Project (DGBP). To protect the DGBP and in accordance with Section 4.4 of the agreement, the County established water quality requirements for recycled water as set forth in the letter dated April 13, 2004.

In August 2007, Public Works partnered with the West Basin Municipal Water District, the LADWP, and the WRD to cooperatively fund a recycled water quality study. The primary purpose of the study was to examine the existing recycled water quality standards and determine their adequacy to ensure recycled water was the same or better in quality than imported water. A secondary goal of the study was to determine if the recycled water quality standards could be less stringent without negatively impacting the current barrier operation, maintenance, and infrastructure.



Mr. Martin Adams  
January 7, 2009  
Page 2

Carollo Engineers was selected to perform the recycled water quality study. Carollo reviewed existing reports, collected water samples for analysis from the seawater barriers and water recycling facilities, and evaluated the existing recycled water quality standards. Based on findings and recommendations identified in Carollo's Final Report for the Recycled Water Quality Standards Study, the water quality requirements for injecting recycled water at the DGBP have been revised as indicated in Attachment A. It is anticipated the revised recycled water quality standards will assist in preventing corrosion of the water supply line and mitigate against physical and biological clogging of the injection wells.

The revised water quality requirements for injecting recycled water at the DGBP will become effective July 1, 2009. If it is determined that at any time after this date the recycled water fails to comply with the revised water quality requirements, the recycled water flow to the DGBP must be suspended and Public Works notified immediately.

If you have any questions, please contact Mr. Eric Batman at (626) 458-6137 or at [ebatman@dpw.lacounty.gov](mailto:ebatman@dpw.lacounty.gov).

Very truly yours,

GAIL FARBER  
Director of Public Works



ROD H. KUBOMOTO  
Assistant Deputy Director  
Water Resources Division



EJB:vt

P:\wrd\Ops\Seawater Barriers\Recycled WQ Study\2009\_01\_05\_Revised Recycled WQ Standards\_LADWP.doc

Enc.

cc: Water Replenishment District (Robb Whitaker)

bc: Water Resources (Batman, Files)

**DOMINGUEZ GAP BARRIER PROJECT  
REVISED RECYCLED WATER QUALITY REQUIREMENTS**

**ATTACHMENT A**

<b>Clogging Influence</b>	<b>Criteria</b>	<b>Water Quality Requirement</b>	<b>Sampling Location</b>	<b>Frequency of Monitoring</b>	<b>Frequency of Compliance</b>
<b>Corrosion</b>	Langelier Saturation Index (LSI)	Between -0.5 and 0.5	Plant Effluent	24-hour Composite or Daily Grab Sample	Running Quarterly Average
<b>Biological</b>	Total Chlorine Residual	Between 3 and 4 mg/L	Plant Effluent	Continuous	Running Quarterly Average
<b>Particulate</b>	Modified Fouling Index (MFI)	<2 (ave) <2.5 (max)	Plant Effluent	One Measurement Weekly	Meet Average and Max Values at All Times
	Turbidity	<0.2 NTU (ave) <0.5 NTU (max)	Plant Effluent	Continuous	>95% of a 24-hour Period

Monthly water quality data must be provided to Public Works by the second week of the following month.