


**AGENDA**

**ENGINEERING COMMITTEE MEETING  
LEUCADIA WASTEWATER DISTRICT**  
Wednesday, March 1, 2017 – 8:30 a.m.  
1960 La Costa Avenue, Carlsbad, CA 92009

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- 1. Call to Order**
- 2. Roll Call**
- 3. Public Comment**
- 4. New Business**
  - A. Authorize the General Manager to execute Amendment Number 2 to Task Order Number 31 with Infrastructure Engineering Corporation (IEC) for engineering design services to design a future Recycled Water Pump Station in an amount not to exceed \$53,305. (Pages 2 - 6)
- 5. Information Items**
  - A. Tactical Goal Update - Evaluate the Need for a Small Vehicle to Tow the Mini-Jetter for Hydrocleaning (verbal)
- 6. Directors' Comments**
- 7. General Manager's Comments**
- 8. Adjournment**

**MEMORANDUM**

**DATE:** February 23, 2017  
**TO:** Engineering Committee  
**FROM:** Paul J. Bushee, General Manager   
**SUBJECT:** Recycled Water Pump Station – Engineering Design Services

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**RECOMMENDATION:**

Staff requests that the Engineering Committee recommend that the Board of Directors:

1. Authorize the General Manager to execute Amendment Number 2 to Task Order Number 31 with Infrastructure Engineering Corporation (IEC) for engineering design services to design a future Recycled Water Pump Station in an amount not to exceed \$53,305.
2. Discuss and take other action as appropriate.

**BACKGROUND:****Tactical Goal: Infrastructure and Technology / Recycled Water Pump Station Design**

The Leucadia Wastewater District (District) was one of the agencies that established the North San Diego Water Reuse Coalition (Coalition) in 2010. The Coalition has been successful in obtaining grant funding for the Coalition's North San Diego County Regional Recycled Water Project (RW Project) under California State Proposition 84 (Prop 84); The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006. The grant funding awarded to the Coalition has been divided equally between the ten Coalition member agencies. As a result, the District has been allocated a \$90,000 grant to design our portion of the RW Project. This design grant expires in May 2017.

One of the components of the District's portion of the RW Project is to construct a recycled water pump station. This pump station is needed to pump recycled water produced at the Gafner Advance Water Treatment Facility (Gafner) into a regional recycled water system. It is envisioned that the RW Project would interconnect the District with either or both the adjacent Carlsbad Municipal Water District (CMWD) and Olivenhain Municipal Water District (OMWD) recycled water distribution systems, thereby forming a portion of the regional recycled water distribution system. However, to justify the expenditure to construct the pump station, the District must have agreements in place to provide recycled water to CMWD and / or OMWD. Although the District does not currently have these necessary agreements, Staff does not want to lose the benefit of the Prop 84 grant funding and believes it is prudent to develop a preliminary design for a recycled water pump station. If the agreements are executed in the future the design can be modified, as necessary, into a final design to construct the pump station.

**DISCUSSION:**

In January 2017, staff executed Task Order Number 31 with Infrastructure Engineering Corporation (IEC) to conduct a Recycled Water Pump Station Preliminary Design Review (PDR). For design purposes, Staff selected OMWD as the most likely agency that will need additional recycled water supplies. As IEC completes the PDR, they will proceed quickly into the design phase. Amendment Number 2 is for pump station design. IEC submitted a proposal, attached, for engineering design services. The Scope of Work includes:

- Survey  
IEC will complete a digital topographic survey utilizing aerial photography and supporting field surveying (including survey of rim and invert elevations of storm drains and sanitary sewers) for the District's Gafner site. Easements, right-of-way, APNs, and property lines will be mapped per record information.
- Final Design  
IEC will prepare general, civil and mechanical plans, specifications and an engineer's opinion of probable construction costs for the proposed Recycled Water Pump Station. The plans and specifications are proposed to consist of general, civil and mechanical design components and do not include a geotechnical investigation, structural or electrical design. The planset is expected to be comprised of the following:
  - ❖ Three (3) General sheets including a title sheet, list of abbreviations, legend, general notes and key map.
  - ❖ One (1) sheet showing existing site conditions and demolition
  - ❖ One (1) civil site plan showing proposed site layout, grading and surface improvements
  - ❖ Two (2) piping plan and profile sheets.
  - ❖ One (1) civil detail sheet.
  - ❖ Three (3) mechanical plan and section sheets
  - ❖ One (1) mechanical detail sheet

IEC's proposed fee for design services is \$53,305. The PDR cost is \$22,320 which includes Amendment Number 1 for \$4,220 for hydraulic analysis of OMWD's Northwest Quadrant Phase II Project. The hydraulic analysis is required to evaluate and establish the parameters for pumping recycled water into OMWD's distribution system. The estimated total cost for design is \$75,625. Staff believes the Amendment Number 2 proposal is fair and reasonable. The remaining amount of approximately \$14,000 will be used as a contingency for possible additional engineering services as design progresses. Therefore, staff recommends that the Board authorize the General Manager to execute Amendment Number 2 to Task Order Number 31 with IEC for engineering design services for the Recycled Water Pump Station Design.

#### **FISCAL IMPACT:**

Staff appropriated funds in the FY17 Budget for this project. The budget contains sufficient funds to cover the design services to be provided under this amendment. It should be noted that Prop 84 grant funding is a State reimbursement. Therefore, the District must first disburse the funds for the services then submits for reimbursement from the State.

rym:PJB

Attachment



February 22, 2017

Mr. Robin Morishita  
Technical Services Manager  
Leucadia Wastewater District  
1960 La Costa Avenue  
Carlsbad, CA 92009

**Reference: Recycled Water Pump Station - Request for Amendment 2 – Final Design**

Dear Mr. Morishita:

It has been our pleasure to assist the District with the Recycled Water Pump Station Project. This letter summarizes the project budget and requests an amendment to provide the District with additional engineering design services for the final design phase for the recycled water pump station. The services requested under this amendment supplement, and do not overlap with, services authorized under either the original task order or amendment 1.

IEC is in the process of finalizing a preliminary engineering report for the subject project. The preliminary engineering report included a site scoping study, hydraulic modeling of the Olivenhain Municipal Water District receiving recycled water system, and pump selection. IEC based the site scoping study on the District's available CADD files from the LWD Administrative Building site upgrades. The CADD files included sufficient information for a scoping study, however, they do not include an as-built topographic survey. IEC recommends the existing topographic conditions be verified by an updated aerial based topographic survey.

As discussed with the District, the design of the pump station includes civil and mechanical design only. This design will provide a pump station mechanical plan and sections, identify grading and drainage modifications to allow for construction of the new pump station, and design new pipeline connections to the pump station. Electrical and structural design, geotechnical investigations and relocation of chemical, electrical or treatment facilities is not included in this scope.

**SCOPE OF WORK**

***Task 4 – Survey***

IEC will complete a digital topographic survey utilizing aerial photography and supporting field surveying (including survey of rim and invert elevations of storm drains and sanitary sewers) for the District's Gafner site. Easements, right-of-way, APNs, and property lines will be mapped per record information.

***Task 5 – Final Design***

IEC will prepare general, civil and mechanical plans, specifications and an engineer's opinion of probable construction costs for the proposed Recycled Water Pump Station. The plans and specifications are proposed to consist of general, civil and mechanical design components and do

not include a geotechnical investigation, structural or electrical design. The planset is expected to be comprised of the following:

- Three (3) General sheets including a title sheet, list of abbreviations, legend, general notes and key map.
- One (1) sheet showing existing site conditions and demolition
- One (1) civil site plan showing proposed site layout, grading and surface improvements
- Two (2) piping plan and profile sheets.
- One (1) civil detail sheet.
- Three (3) mechanical plan and section sheets
- One (1) mechanical detail sheet

The design submittal will be based on the preliminary engineering report and will include the following level of detail:

- Plans will clearly show the proposed pump station site layout, piping and grading. Impacted surface improvements will be identified but detailed demolition details for work inside buildings such as removing electrical panels in the Gafner electrical control room or relocating chemical feed pumps and piping in the chemical building will not be included in this scope and will be indicated to be designed and constructed by others.
- Specifications will include the civil and mechanical specifications. Specialty structural and electrical specifications will not be included in this scope and structural and electrical components will be noted in the plans to be provided by others.
- The Engineer's Opinion of Probable Construction Cost will include the base civil and mechanical design, and a planning level cost opinion for the structural, electrical and demolition work not included in the scope of this design. A 35% contingency will be applied to account for the planning level nature of the cost opinions for work not included in this design.


This scope assumes a 90%, 100% and final submittal with a review meeting at the 90% and 100% project milestones.

#### FEE ESTIMATE

A breakdown of the scope and fee is attached.

We propose to complete this work on a time and materials basis at a total cost not to exceed \$53,305. This brings the total requested project budget to \$75,625.

Sincerely,



Jamie Fagnant, P.E.  
Senior Project Engineer

Cc: Robert S. Weber, P.E.

**FEE ESTIMATE  
LEUCADIA WASTEWATER DISTRICT  
FY16 Gravity Lines Repair Project**

Task/ Subtask	Task/Subtask Description	<i>Sr. Project Manager (Rob Weber)</i>	<i>Project Manager (Jane Costello)</i>	<i>Project Manager (Dave Padilla)</i>	<i>Project Engineer (Jamie Fagnant)</i>	<i>Project Surveyor (Gary Rush)</i>	<i>Engineer I/ CAD I Designer (Marie Fawcett)</i>	<i>Word Processor (Annette Moore)</i>	Subtask Labor-Hours	Subtask Labor Cost	Direct Cost	Subcontract	Total Cost
		\$180.00	\$170.00	\$170.00	\$130.00	\$130.00	\$110.00	\$65.00					
TASK 4	Survey												\$6,955
	Survey				1	24	6		31	\$3,910	\$420	\$2,625	\$6,955
TASK 5	Final Design												\$46,350
	Plans	1	24		20		192		237	\$27,980	\$0	\$0	\$27,980
	Specifications	1	12		16		16	6	51	\$6,450	\$0	\$0	\$6,450
	Engineer's Opinion of Probable Construction Cost	1	4		8		16		29	\$3,660	\$0	\$0	\$3,660
	QA/QC	1	2	16	8		20		47	\$6,480	\$0	\$0	\$6,480
	Review Meetings (2)				6		8		14	\$1,660	\$120	\$0	\$1,780
		4	42	16	59	24	258	6	409				
		\$720	\$7,140	\$2,720	\$7,670	\$3,120	\$28,380	\$390		\$50,140	\$540	\$2,625	<b>\$53,305</b>

**TOTAL NOT-TO-EXCEED FEE: \$53,305**