



REPORT TO COUNCIL

City of Sacramento

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www.CityofSacramento.org

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Consent
April 13, 2010

**Honorable Mayor and
Members of the City Council**

Title: Professional Services Agreement with Carollo Engineers

Location/Council District: Sacramento River Water Treatment Plant, 1 Water Street, and E.A. Fairbairn Water Treatment Plant, 7501 College Town Dr / Council Districts 1 and 3.

Recommendation: Adopt a Resolution that authorizes the City Manager to execute a Professional Services Agreement with Carollo Engineers to complete Phase 1 pre-design work for the Water Treatment Plants Rehabilitation Project (Z14006000) for a not to exceed amount of \$825,494.

Contact: David L. Brent, Engineering Services Manager, 808-420; Dan Sherry, Supervising Engineer 808-1419

Presenters: Dave Brent / Dan Sherry

Department: Utilities

Division: Engineering

Organization No: 14001321

Description/Analysis

Issue: The City's surface water treatment plants, Sacramento River Water Treatment Plant (SRWTP) and the EA Fairbairn Water Treatment Plant (FWTP) were constructed in 1920's and 1960's, respectively. Some of the treatment plants structures and equipment have exceeded their useful life and need to be rehabilitated or replaced. The Phase 1 preliminary design work will identify rehabilitation or replacement options, prepare a guidance design manual and estimate total project cost. Carollo Engineers has been selected through a Request for Qualifications (RFQ) process to provide engineering services for design work for this and future phases of the water treatment plants rehabilitation project.

Policy Considerations: This project, which provides the infrastructure for a safe and reliable water supply, is consistent with the City Council focus areas of public safety, economic development, and sustainability and livability. Staff has documented that Carollo Engineers has valid insurance policies in place as required.

Environmental Considerations:

California Environmental Quality Act (CEQA): Appropriate CEQA review for this project

will be completed prior to award of any construction contracts.

Sustainability Considerations: This project is consistent with the City's Sustainability Master Plan by providing a safe and reliable water supply for the Sacramento Region.

Other: Not applicable

Commission/Committee Action: Not applicable

Rationale for Recommendation: Approval of a Professional Services Agreement with Carollo Engineers will allow the City to make the needed repairs and improvements to its treatment plant facilities in order to provide a safe and reliable water supply to City customers today and into the future.

Financial Considerations: The agreement for the phase 1 services is for the amount not to exceed \$825,494. There are sufficient funds in Z14006000 to award phase 1 work.

Emerging Small Business Development (ESBD): Carollo Engineers is not an ESBE firm.

Respectfully Submitted by:



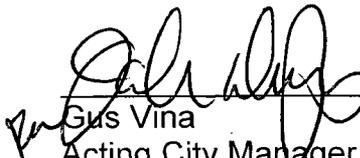
David L. Brent
Engineering Manager

Approved by:



Marty Hanneman
Director of Utilities

Recommendation Approved:



Gus Vina
Acting City Manager

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Attachment 1

BACKGROUND

Much of the existing infrastructure at the City's water treatment plants has exceeded its useful life. The Sacramento River Water Treatment Plant (SRWTP) and E. A. Fairbairn Water Treatment Plant (FWTP) were constructed in 1923 and 1964 respectively. Both of these facilities were expanded by 2005 but much of the existing infrastructure was not rehabilitated or replaced as part of the expansion projects.

The plant expansion projects included:

- FWTP Intake Structure Modification Project (ZF47) completed in 2003. This project extended the existing intake to provide additional low lift pumping capacity.
- SRWTP Replacement Intake Project (ZF57) completed in 2004. This project constructed a new intake structure to replace the existing intake that was constructed in the early 1920's.
- SRWTP Plant Expansion Project (ZF52) completed in 2004. This project added treatment facilities that increased the treatment capacity by approximately 70 mgd.
- FWTP Plant Expansion Project (ZF43) completed in 2005. This project added treatment facilities that increased the treatment capacity by approximately 80 mgd.

In 2007 the Department of Utilities (DoU) contracted with Carollo Engineers to conduct a study to evaluate the condition and performance of the City's surface water treatment facilities. The study assessed the existing facility conditions, conducted operational tests to evaluate plant performance, assessed the reliability of the facilities, and developed a capital improvement program for rehabilitation and/or replacement of existing facilities. The study was completed in February 2009 and concluded that both treatment facilities require substantial rehabilitation work in order to provide reliable water treatment facilities. The major components of work include:

- Replace or decommission SRWTP Sedimentation Basin 1
- Replace or rehabilitate SRWTP Sedimentation Basin 2
- Replace or decommission SRWTP Filters 1 thru 16
- Replace SRWTP High Service Pump Station
- Install SRWTP & FWTP Solids Handling Facility

The study also recommended some rehabilitation work at the FWTP but due to the FWTP diversion limitations that apply under the Water Forum Agreement, the FWTP work is not as critical and can be deferred to a later date.

The table below compares the sustainable and reliable capacity of the City's existing and assumed future water supply infrastructure to the City's existing and projected water supply demands. Sustainable capacity is the treatment capacity that can be provided 24 hours per day 365 days per year and meeting all water quality goals. Reliable capacity takes into account the condition of the infrastructure and reduces the sustainable capacity based on dilapidated infrastructure that has a direct impact on the production of water.

EXISTING TREATMENT CAPACITY VS WATER DEMAND (Maximum Day)

Facility	Sustainable Capacity (mgd)	Reliable Capacity (mgd)
SRWTP	135	70
FWTP	100*	100*
Groundwater Wells	20	5
TOTAL	255	175
2009 MD Demand	192	

* The City's Water Forum diversion restrictions limit FRWTP diversions to 100 mgd when lower American River flows fall below the Hodge flow levels.

**YEAR 2020 TREATMENT CAPACITY VS WATER DEMAND (Maximum Day)
(Assumes Rehabilitation Projects Completed)**

Facility	Sustainable Capacity (mgd)	Reliable Capacity (mgd)
SRWTP	160	160
FWTP	100	100
Groundwater Wells	20	20
TOTAL	280	280
2020 Projected MD Demand	270	

In order for the City to provide a reliable water supply to its customers, it is critical that the existing infrastructure at the SRWTP be rehabilitated as soon as possible and that the City's groundwater wells be rehabilitated prior to year 2020.

On October 7, 2009 DOU issued a Request for Qualifications for design services for the Water Treatment Plants Rehabilitation Project. One Statement of Qualification (SOQ)

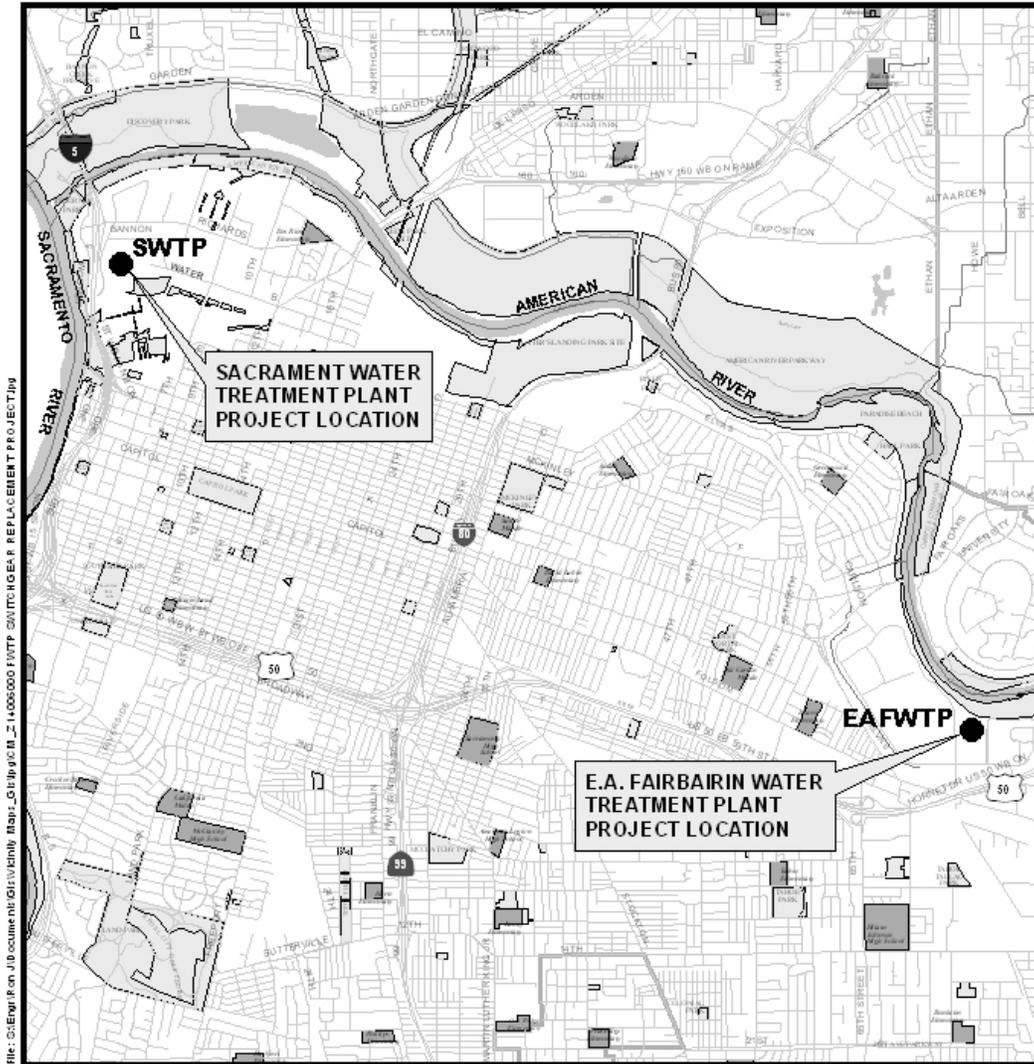
was received on November 10, 2009 from a team composed of Carollo Engineers and Montgomery Watson Harza. A six member review panel, with two members from outside agencies, was assembled to review the SOQ. The review panel recommended that the Carollo / MWH team be selected and this recommendation was passed along to the final selection committee, made up of two division managers and the Director of Utilities. The selection committee recommended that staff work with the Carollo Engineers/ Montgomery Watson Harza team to develop a scope of work and fee to take to City Council for approval.

The proposed scope of services has been divided into three phases:

- Phase 1 - Preliminary Design. This phase includes analysis and confirmation of treatment upgrades and recommendations from City staff, culminating in the recommended design scope and cost estimate. This task also includes surveying, geotechnical engineering and constructability and sequencing confirmation. Estimated timeline June 2010 – May 2011. Cost not to exceed \$825,494.
- Phase 2 – Design. This phase includes design services through 100 percent completion, with submittals and review with City staff at 30%, 60%, and 90% levels of completion. Estimated timeline June 2011 – December 2012. Estimated cost \$4M
- Phase 3 – Engineering Support during Bidding and Construction. This phase includes bid period services and engineering support during construction. Estimated timeline January 2013 – January 2015. Estimated cost \$1M
- The total project cost including design and construction is estimated at \$120M

At this time, staff is proposing a Professional Services Agreement with Carollo Engineers for only the phase 1 work, for an amount not to exceed amount of \$825,494. Montgomery Watson Harza will provide its services as part of the engineering team, as a subconsultant to Carollo Engineers. After completion of the phase 1 work, staff will return to City Council to approve the proposed phase 2 scope of work and fee.

ATTACHMENT 2
WATER TREATMENT PLANTS
REHABILITATION PROJECT
(PN: Z14006000)



Map Prepared By
City of Sacramento
Department of Utilities



RESOLUTION NO. 2010-

Adopted by the Sacramento City Council

AUTHORIZING A PROFESSIONAL SERVICES AGREEMENT WITH CAROLLO ENGINEERS

BACKGROUND

- A. The Sacramento River Water Treatment Plant (SRWTP) was constructed in the 1920's and 1930's and the E.A. Fairbairn Water Treatment Plant (FWTP) was constructed in the early 1960's. Many of the older structures at these facilities have reached the end of their useful life and need to be rehabilitated or replaced.
- B. Department of Utilities performed a condition assessment study that was completed in 2009 that identified infrastructure at the treatment plants requiring replacement or rehabilitation.
- C. Carollo Engineers, in conjunction with Montgomery Watson Harza as a subconsultant to Carollo Engineers, has been selected through a Request for Qualifications process to provide engineering services for design of the Water Treatment Plants Rehabilitation Project. The Phase 1 pre-design services for the project include analysis and confirmation of treatment upgrades and recommendations from City staff, culminating in the recommended design scope and cost estimate to complete the Water Treatment Plants Rehabilitation Project.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

- Section 1. The City Manager is authorized to sign a Professional Services Agreement with Carollo Engineers for the phase 1 pre-design services for the Water Treatment Plants Rehabilitation Project (Z14006000) for an amount not to exceed \$825,494.