



**REPORT TO MAYOR AND CITY COUNCIL**

AGENDA ITEM

TO: THE HONORABLE MAYOR  
AND CITY COUNCIL

DATE: February 17, 2009

SUBJECT: Replacement Water Wells 15 and 22, Project No. 07-47 and 08-32;  
Approve Plans and Specifications and Authorize Bid Advertisement  
to Construct Replacement Wells

**Report in Brief**

The purpose of this project is to abandon and replace two municipal water wells that have been offline for several months due to sand infiltration and structural damage. Projects 07-47 and 08-32, will construct two replacement municipal groundwater wells at separate locations. Well 15 and Well 22 are located in the southeast area of the City and both serve the same general portion of the water distribution system. The first phase of the project includes well abandonment and well construction of both Well 15 and Well 22. The second phase of the project includes pump station construction. This project is approved in the current capital budget. Approved funding for FY08/09 is \$2,000,000. The estimated cost for the project is \$1,956,790.

Staff recommends that the City Council authorize bid advertisement and approve the plans and specifications for construction of the Replacement Wells Project Phase I, Project Nos. 07-47 and 08-32.

**Background**

Well 15 is located in the northeast corner of Campbell Park along Colette Way. The well was constructed in 1976 and it produced approximately 1,800 gallons per minute (gpm). The well has a history of sand infiltration, screen failures and screen ruptures due to land subsidence. Well 15 was rehabilitated under the 2006 California Energy Commission energy conservation project. That rehabilitation included a steel patch repair over a well screen compression failure, the pump's tube and line shaft assemblies were rehabilitated and a new pump bowl was installed. In July of 2008, the amount of sand being pumped into the system significantly increased. Inspection of the well showed the well could not be repaired and a replacement well needed to be drilled.

Well 22 is located in the southwest corner of Klenhard Park along E. Gum Avenue. The well was constructed in 1994 and it initially produced approximately 2,100 gpm. Currently, the well is offline due to sand and gravel infiltration; a continuous problem the City has encountered during this well's

operational life. Several efforts were made to reduce sand production; the problem however was recurring. The most recent rehabilitation efforts on this well were to fill the bottom of the well with impervious material to eliminate groundwater production from the deepest screen where the sand was thought to be coming from. This was done to reduce the velocity of the groundwater into the well in hopes to eliminate or significantly reduce sand infiltration. This effort reduced the well's water production from 2100gpm to 1200gpm and did not fix the problem. The well must now be re-drilled to reduce the size of the well's gravel pack and screen size to prevent future sand infiltration.

Phase I of the project will abandon and re-drill the replacement wells. The second phase will design and construct the above ground, on-site facilities, including pump, motor, pipes and connection to the City water system. Both wells will be drilled approximately 75 feet from their current location as shown in the attached site layouts. Phase I and II are anticipated to start and finish in FY08/09. The project will utilize the existing well pumps, motors, generator, electrical service and other above ground improvements to keep the cost per well at about half the cost of a new well at another site.

### **Discussion**

Construction of the replacement wells is necessary to maintain the water system's capability to meet demands in the City by supplying adequate flow to the southeast area while also maintaining adequate pressures in the southwest area of the City. The new water wells will replace existing wells (Well 15 and 22). They will have the same or similar pumping capacities as the existing wells, and will be located at the same sites (Campbell and Klenhard Parks). Temporary sound attenuation measures will be employed during construction to minimize noise generated by well drilling, and the new wells will be housed in a noise reduction structure designed with sound attenuation features in order to reduce the off-site operational noise levels consistent with the noise requirements of the City. As a result, the Well Replacement Project is considered categorically exempt under the California Environmental Quality Act based on CEQA Guidelines Sections 15302(c), Replacement or Reconstruction.

The project plans and specifications for Phase I are complete and ready for bid upon Council authorization. Plans and Specs for Phase II will be finalized and brought back to Council at a later date. A full set of plans and specifications are available for review at the Public Works Municipal Services Center counter. Anticipating one or more responsive and responsible bids within the project budget, the bid award is anticipated in March 2009 with construction in April 2009.

### **Fiscal Impact**

The design engineer's estimate for Phase I is \$1,015,000 and Phase II is \$951,790; the total for both phases is \$1,956,790. The project is approved and budgeted in the current Capital Budget. The total project budget for Phases I and II is \$2,000,000. All project costs are allocated to the Water Enterprise Fund; therefore, there is no impact to the General Fund. These projects are included in MPFP 07-47 and 08-32 (Replace Well 22 and Well 15 Replacement Projects).

**Public Contact**

Posting of the City Council agenda. Additionally, a public notification letter will be mailed to the local neighbors notifying them of the construction to take place in their proximity and a neighborhood meeting will be held in February to provide a forum to discuss any issues with residents near the construction area and to instruct the neighborhood residents on how we will keep them informed during all phases of the project.

**Recommendation for Action**

Staff recommends that the City Council authorize bid advertisement and approve the plans and specifications for construction of the Replacement Wells Project Phase I, Project Nos. 07-47 and 08-32.

Prepared by: Clara Olmedo  
Associate Engineer

Reviewed by: Doug Baxter  
Senior Civil Engineer

Reviewed by: Greg Meyer  
Director of Public Works

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Mark G. Deven  
City Manager

Attachment: Site Layouts for Well 15 and Well 22



COLETTE WAY

50'

100'

- Legend**
- Storm Main
  - Sewer Main
  - Sewer Lateral

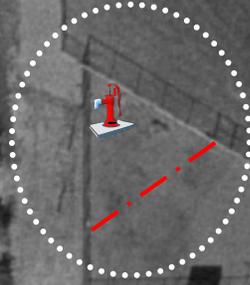
0 12.5 25 50 Feet  
1 inch equals 30 feet

**Well 15**

 City of Woodland

# Well 22 Replacement Location

New Location  
for W22



Klenhard Park

W22

E. Gum Avenue

STOP

STOP

1

