

CITY OF NAPA CITY COUNCIL
AGENDA REPORT

CONSENT CALENDAR
AGENDA ITEM 14.D.
Date: April 07, 2015

To: Honorable Mayor and Members of City Council

From: Jacques R. LaRochelle, Public Works Director

Prepared by: Joy Eldredge, Water General Manager

Subject: Hazard Mitigation Grant Application and Budget Appropriation for Pipeline Rehabilitation Project PJ0415

ISSUE STATEMENT:

Adopt a resolution authorizing the Public Works Director to execute documents for funding under the California Governor's Office of Emergency Services (Cal OES) Hazard Mitigation Grant Program (HMGP), authorizing a budget appropriation, and determine that the action is exempt from CEQA pursuant to Section 15302(c).

DISCUSSION:

On August 24, 2014, at 0320 hours the magnitude 6.0 South Napa Earthquake occurred on the West Napa Fault. The extensive ground movement resulted in 241 known locations of water system breaks predominantly located in Browns Valley and southwest Napa known as the Westwood Area.

The City's water system experienced 120 water main breaks on the distribution system within the first six days. During the following six months the water system experienced an additional 121 water main breaks including three failures on the 36-inch major transmission main. The 36-inch transmission main is critical to supplying sufficient water to the service area. The section of transmission main from the Barwick Jamieson Treatment Plant on the south side of the water system is composed of asbestos cement (AC) pipe. This type of pipe is subject to failure due to earth movement. Failures of AC pipe tend to be catastrophic in nature because the pipe self-erodes resulting in a large break and greater water loss. When this occurs the water system rapidly loses in-system storage and tanks begin to drain as the system feeds the leak.

The leaks on the 36-inch pipe that have occurred in recent years have been first discovered by the water treatment facility operator who monitors treatment operations and storage tank levels using the Supervisory Controls and Data Acquisition (SCADA) system. The operators have observed what appears to be an abnormally high demand and either the draining of tanks or if in a fill cycle, the inability to fill a tank. To investigate the problem they contact on-call or on-duty staff who mobilize to the field along the pipeline alignment to locate the leak, then close valves to isolate the leak. Once the proper valves are identified it requires an additional 30 minutes to safely close

the transmission main valves to avoid transient pulses or water hammer in the pressurized system. After the leak is isolated, another challenge with making repairs on the large transmission main is the length of time required to drain the pipe in order to start repairs. Typical valve spacing on transmission mains is greater than a mile. Especially in flat areas the water drains slowly out of the isolated pipe and often has to be pumped out over a period of 36 – 72 or more hours before repairs can commence.

The South Napa Earthquake identified a band of faults that exist along the southwestern and western areas of the City of Napa. The aforementioned critical 36-inch water transmission main runs through this area. It was extremely fortunate that this major transmission main did not fail immediately following the August seismic event simultaneously with the initial 120 distribution system leaks that occurred, or the impacts to customers and the water system would have been significantly greater. Loss of fireflow and delivery of water for basic needs would have been the situation for weeks when people needed it most to clean up the aftermath and strive to return to normalcy. City of Napa customers have invested in a reliable water system and they are accustomed to a high level of service without interruption every day. For this reason interruption of water service would be extremely disruptive to one's daily life at a time when insecurities run high. The three leaks that occurred in the weeks following the earthquake were challenging. The two simultaneous leaks on the 36-inch line resulted in substandard service to nearly 400 customers along the west side of the City for several weeks while repairs were made. The fire department was put on notice of specific areas that would not have the normally expected flows from hydrants and special responses would have been necessary in the event of a fire.

The proposed Pipeline Rehabilitation Project PJ0415 (Project) includes installing eleven (11) valves in the transmission main system. Five (5) of these valves will include electric actuators that will be programmed into the SCADA system. This will allow the water treatment facility operator to press a button that starts the controlled slow manipulation of the valve to isolate the segment of pipe to stop the leak and prevent pipe erosion and system storage loss. The time gained in isolating the leak in an emergency situation is critical. In addition, six (6) manually operated valves will be installed to decrease the length of pipe that needs to be shut down in order to facilitate repairs.

The California Governor's Office of Emergency Services (Cal OES) Hazard Mitigation Grant Program (HMGP) sets aside funds estimated at 15% of the total damage due to the disaster, in this case the South Napa Earthquake, and allocates those funds to mitigating hazards in future events. This Project is an excellent example of the intent of this program. It will facilitate the availability of water for drinking and fire protection that is critical at all times, but especially during catastrophic events. The HMGP provides 75% of the funds for the Project and requires the applicant to match 25% of the funds.

The recommended resolution authorizes the Public Works Director as the City's representative to execute documents associated with the HMGP for this important Project and designates the 25% matching funds for the Project.

FINANCIAL IMPACTS:

The total project cost is estimated at \$2,074,000. If the grant is approved, the water enterprise 25% proportional share would be \$518,500 and the federal share would be \$1,555,500. Funds in the amount of \$7,389,126 are available in undesignated reserve account 53000 25399 within the water enterprise fund. Staff recommends council authorize the City Manager to approve the budget transfer of \$518,500 from 53000-25399 into Capital Improvement Account 53104 WT15PW03 and a budget increase of \$1,555,500 HMGP revenue into Capital Improvement Account 53104 WT15PW03 upon notification of grant award. The net impact to the water enterprise fund will be \$518,500.

CEQA:

City staff recommends that the City Council determine that the project is exempt from CEQA pursuant to CEQA Guidelines Section 15302(c), Replacement or Reconstruction, which exempts replacement and reconstruction of existing utility systems involving no expansion of capacity.

DOCUMENTS ATTACHED:

Attachment 1: Resolution authorizing the Public Works Director to execute documents for funding under the California Governor's Office of Emergency Services (Cal OES) Hazard Mitigation Grant Program (HMGP) and authorizing a budget appropriation.

NOTIFICATION:

Joe Peterson, Grant Administrator for California Governor's Office of Emergency Services (Cal OES) Hazard Mitigation Grant Program (HMGP)

RECOMMENDED ACTION:

Staff recommends that the City Council move, second and approve each of the actions set forth below, in the form of the following motion. Move to:

Adopt a resolution authorizing the Public Works Director to execute documents for funding under the California Governor's Office of Emergency Services Hazard Mitigation Grant Program and authorizing a budget appropriation.