



# CITY COUNCIL AGENDA REPORT

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MEETING DATE: MARCH 15, 2011

ITEM NUMBER:

**SUBJECT: PROFESSIONAL ENGINEERING SERVICES FOR THE PRELIMINARY ENGINEERING OF INDUSTRIAL WAY WATER QUALITY AND STORM DRAIN IMPROVEMENTS**

**DATE: MARCH 3, 2011**

**FROM: PUBLIC SERVICES DEPARTMENT/ENGINEERING DIVISION**

**PRESENTATION BY: PETER NAGHAVI, DIRECTOR, PUBLIC SERVICES DEPARTMENT**

**FOR FURTHER INFORMATION CONTACT: ERNESTO MUÑOZ, CITY ENGINEER,  
(714) 754-5335**

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## **RECOMMENDED ACTION:**

1. Award a contract to MWH Engineering, 19900 MacArthur Blvd, Suite 250, Irvine, California, 92612, in an amount not to exceed \$71,000 for preliminary engineering services, and authorize the Mayor and the City Clerk to execute the Professional Services Agreement (Attachment 1).
2. Approve Budget Adjustment No. 11-015, (Attachment 2) in the amount of \$71,000.

## **BACKGROUND:**

The City's Master Drainage Plan (MDP) was last updated and adopted by the City Council in August 2006. As part of the update, a hydrology analysis was conducted for the entire City which identifies storm infrastructure upgrades in the various City watersheds. The MPD calls for significant upgrades within Watershed No. 8. This watershed is generally bounded by Placentia Avenue, West 19<sup>th</sup> Street, Newport Boulevard, and West 16<sup>th</sup> Street, and is listed as a priority in the Council-adopted Storm Drain Improvement Priority List. The storm drain system in Watershed No. 8 was constructed decades ago, and is significantly undersized for the current runoff volumes generated by storm events during the wet season. The lack of adequate conveyance capacity creates localized flooding, risking personal property and safety. The hydrology analysis conducted for this Watershed concluded that the generated storm flows are larger than the capacity of the existing system by approximately 340 cubic feet per second (cfs).

Watershed No. 8 is primarily zoned industrial along with high density residential. Its 361 acre tributary area drains into the Rhine Channel in Lower Newport Bay, which is currently listed on the State of California 303d listing (Impaired Water Body List) for the following impairments: copper, lead, mercury, PCBs (polychlorinated biphenyls or electrical chemical waste), sediment toxicity and zinc. Surface pollutants from the surrounding area are washed into the storm drains flowing directly to the Pacific Ocean contributing to significant contamination of the harbor and beaches.

Preliminary computations suggest that a 10 foot in diameter or equivalent size conduit is required to supplement the existing system and provide adequate storm protection to this

Watershed. This area of the City is fully developed, and due to a number of existing underground facilities, such as sewer, gas and electric, the feasibility of constructing a system this size is questionable, and the contract under consideration requires the evaluation of complex alternatives to best meet the long term capacity of the Watershed while maintaining separation from existing utilities. The consultant will analyze conveyance and storm detention alternatives which may allow the incorporation of water quality solutions to enhance the quality of the storm outfall.

It should be noted that the Disaster Preparedness and Flood Protection Bond Act of 2006 (Proposition 1E) authorizes \$4.09 billion in general obligation bonds to rebuild and repair California's most vulnerable flood control structures to protect homes and prevent loss of life from flood-related disasters, including levee failures, and flash floods. Proposition 84 enhances these efforts with an additional \$800 million for flood control projects.

The first call for projects for Proposition 84, allocating 12Million, was in June 2010. Staff submitted an application for this watershed, as Industrial Way Water Quality and Storm Drain Improvement Project. Out of 297 projects submitted by various agencies, this project was ranked number 22 and did not meet the funding cutoff line.

It is anticipated that the first call for projects for Proposition 1E will take place in April 2011. Staff will be submitting an application for this project, and will utilize some of this contract's work product to meet the Proposition's eligibility requirements and increase the City's chances to capture funding.

It is necessary to conduct a preliminary engineering study and analyze various alternatives with their associated costs, construction, feasibility and impacts to the existing underground facilities. Not only will this allow designing a cost effective system to eliminate flooding, reduce the amount of surface pollutant entering the storm drain system, and minimize the construction impact to the surrounding businesses, but will also make this project more competitive for the available grant funding from either Proposition 84 or Proposition 1E.

#### **ANALYSIS:**

Staff advertised the project for preliminary engineering phase and received three proposals on December 20, 2010. All proposals were reviewed for compliance with the City's Request For Proposals (RFP), and the consultants were evaluated based on project understanding, depth of experience, technical expertise, ability to meet the schedule, and associated factors.

The scope of work for the Preliminary Engineering phase includes:

1. Based on the City's existing Master Drainage Plan, and using 25-year storm event data, conduct hydraulic analysis of the existing storm drain system from 19th Street and Anaheim Avenue to Newport Boulevard.
2. Develop and evaluate no fewer than three (3) alternative solutions to mitigate the lack of capacity and watershed flooding concerns and enhance the quality of the runoff into the Lower Newport Bay.
3. Conduct hydraulic analyses for all three alternatives.
4. Perform utility investigation and feasibility studies for all three alternatives.
5. Provide preliminary horizontal alignment for each alternative.
6. Provide Environmental permitting costs associated with each alternative.
7. Prepare detailed construction cost estimates for each alternative.
8. Include NPDES elements with each alternative and make recommendations for the capturing of grant funding for the construction phase of each alternative.
9. Make recommendations as to which alternative will best meet the City's needs and accomplish the project goals.

After careful review of all proposals, staff has selected MWH Engineering as well qualified to perform the work. The firm's Project Manager exhibited a thorough understanding of the project and documented technical ability and experience with similar projects in the City, as well as other jurisdictions. Staff has determined the competitive cost for consultant services, \$71,000, to be reasonable for meeting the City's requirements as listed in the Scope of Services.

**ALTERNATIVES CONSIDERED:**

The alternative to this Council action would be to not award a preliminary engineering services contract for the stated project, and perform the preliminary engineering work with City staff. Due to the volume of work and the large number of projects currently being handled by the Engineering Division, a significant delay in implementing this project would be experienced if staff were to perform the engineering in-house. Delays are estimated to be from twelve to fifteen months.

**FISCAL REVIEW:**

There is available fund balance in the Drainage Fee Fund to cover the costs associated with preliminary and final engineering for the project. The attached Budget Adjustment No. 11-015 will allocate \$71,000 of Drainage Fee fund balance towards the preliminary engineering phase of this project.

**LEGAL REVIEW:**

The City Attorney has reviewed and approved the attached Professional Services Agreement (Attachment 1) as to content and form.

**CONCLUSION:**

It is recommended that the City Council award the design services contract to MWH Engineering in an amount not to exceed \$71,000, authorize the Mayor and the City Clerk to execute the Professional Services Agreement; and approve Budget Adjustment No. 11-015 in the amount of \$71,000.

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**ERNESTO MUNOZ**  
City Engineer

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**PETER NAGHAVI, DIRECTOR**  
Public Services Department

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**COLLEEN O'DONOGHUE**  
Assistant Finance Director

Attachments:           1- [Professional Services Agreement](#)  
                                  2- [Budget Adjustment No. 11-015](#)

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