



Santa Clara Valley Water District

File No.: 17-0311

Agenda Date: 5/25/2017

Item No.: 2.1.

BOARD AGENDA MEMORANDUM

SUBJECT:

Workshop on Cost Estimation, Risk Assessment and Management, and Cost Control for the California WaterFix.

RECOMMENDATION:

Receive and discuss information on cost estimation, risk assessment and management, and cost control for the California WaterFix.

SUMMARY:

Santa Clara County relies on imported water to meet 55 percent, on average, of its water needs, with 40 percent conveyed through the Sacramento-San Joaquin Delta. This agenda item provides an opportunity for the Board and the public to receive information from consultants working on the proposed California WaterFix project, specifically on the planning efforts to restore the health of the Delta ecosystem and to ensure the long-term reliability of water supplies conveyed through the Delta. The presentations in this workshop are tailored to answer specific questions related to project cost estimation, risk assessment and management, and cost control - with reference to other large tunneling projects constructed in the US and elsewhere.

Guest Speakers (see Attachment 2 for speaker biographies):

Chuck Gardner, the program manager for the California WaterFix project, will give an overview of the project status and schedule and introduce three consultants working within the Design Construction Enterprise, a special purpose enterprise within the Department of Water Resources dedicated to design and, if approved, construction and implementation of the conveyance project.

John Bednarski PE, an Engineering Section Manager with Metropolitan Water District on loan to the Design Construction Enterprise (DCE), will provide an overview of the engineering aspects of the California WaterFix project, including conveyance system's physical components, current cost estimate, proposed organizational structure for the DCE, and the anticipated construction schedule. He will also provide a review of several large tunnel projects from around the world including their similarities to the WaterFix tunnels.

Patrick Pettiette with 5RMK, a project management and planning organization that provides cost estimates for mega-projects around the globe, will describe the scope and basis for the California

WaterFix cost estimate.

Robert Goodfellow with Aldea Services LLC, a tunnel and underground construction engineering firm that specializes in risk management, will describe a cost risk analysis for the design and construction of the California WaterFix.

BACKGROUND

Santa Clara County relies on imported water to meet, on average, 55 percent of its water needs, with 40 percent conveyed through the Sacramento-San Joaquin Delta by the State Water Project (SWP) and Central Valley Project (CVP), and 15% diverted upstream of the Delta by the San Francisco Public Utilities Commission's Hetch-Hetchy project.

The District's SWP and CVP water supplies, together, are a critical component of the District's water supply portfolio, providing the majority of water supply to the District's three drinking water treatment plants, recharging the county's local groundwater basins to ensure sustainable supplies, and protecting local surface water and groundwater reserves.

The District's imported water supplies are at risk from several factors including increased salinity intrusion due to climate change and sea level rise, and seismic threats to the fragile Delta levee system. The Delta ecosystem no longer supports healthy populations of several native fish species, a worrisome situation that has driven increasing regulatory restrictions on SWP and CVP operations to protect fish and water quality.

To reduce these risks, the District joined other public water agencies beginning in 2006 to support the State's planning efforts for the Bay Delta Conservation Plan, and is now evaluating the potential benefits and costs of the California WaterFix consistent with Board Policy and CEO direction (Attachment 1).

The California WaterFix would provide an alternative conveyance pathway for moving water from the north Delta to the existing pumping plants in the south Delta. The location of the proposed California WaterFix intakes in the north Delta would protect water supplies against increasing salinity due to climate change and projected sea level rise and allow improved flow patterns in the south Delta to protect fish. In addition, the proposed California WaterFix tunnels would be designed to withstand seismic events. Having an alternative conveyance pathway is expected to increase the operational flexibility of the SWP and CVP to address future risks and reduce impacts on protected fish species.

The District has not yet made a decision on whether to participate in the California WaterFix. Staff has presented over a dozen Board agenda items and special Board workshops since 2013 discussing different aspects of and perspectives on the proposed California WaterFix project. Today's presentations are designed to answer specific questions related to project cost estimation, risk assessment and management, and cost control, with reference to other large tunneling projects.

Board Members have asked questions regarding the specific cost allocation to the District, what happens if other participants default on payments, the costs and risks of not participating, and potential financing mechanisms. Staff intends to bring further information in response to these

questions to the Board later this summer.

FINANCIAL IMPACT:

There is no financial impact associated with this item.

CEQA:

The recommended action does not constitute a project under CEQA because it does not have a potential for resulting in direct or reasonably foreseeable indirect physical change in the environment.

ATTACHMENTS:

- Attachment 1: Board Policy and CEO Direction
- Attachment 2: Guest Speaker Biographies
- Attachment 3: PowerPoint, Project Overview
- Attachment 4: PowerPoint, Cost and Risk

UNCLASSIFIED MANAGER:

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