July 24, 2019

Attention: Imported Water Committee

Professional Services Contract with Black & Veatch Corporation for the Regional Conveyance System Study. (Action)

Staff recommendation
Authorize the General Manager to award a professional services contract to Black & Veatch Corporation to provide professional services to implement the Scope of Work for the Regional Conveyance System Study for a not-to-exceed amount of $1,890,000.

Alternative
Do not approve staff’s recommendation and direct staff to conduct a Request for Proposals (RFP) process and negotiate with other professional service contractors. This process would delay completion of the study by four to six months and add up to $300,000 to the cost of the study.

Fiscal Impact
There are sufficient funds within the project budget and the fiscal years 2020 and 2021 Capital Improvement Program appropriation to support this action. The rate category for this project is customer service.

Executive Summary
- The Water Authority currently receives its Quantification Settlement Agreement (QSA) supplies through an Exchange Agreement with the Metropolitan Water District of Southern California (MWD) but has studied alternative conveyance of these supplies to the San Diego region for decades.
- A professional services contractor is needed to implement the scope of work for a new two-phase study that would not only evaluate alternative delivery options for the QSA supplies, but also potential multi-use, partnerships, and funding opportunities, to provide regional benefits.
- Black & Veatch completed several past studies spanning 1996 to 2017 and, as a result, has extensive historical knowledge that would support efficient completion of the scope of work, saving up to $300,000 and four to six months.
- Upon Board approval, a professional service agreement totaling $1,890,000 would be executed for Phase A and B work, with each phase taking 12 months to complete.
- Staff would then return upon completion of Phase A to present study results and recommend for Board consideration a go/no-go decision to proceed to Phase B.

Background
As part of the 2003 QSA, the Water Authority has rights to 280,000 acre-feet of Colorado River supplies each year from a conserved water transfer with the Imperial Irrigation District (IID) and
the lining of the All-American and Coachella Canals. The Water Authority does not have a pipeline or aqueduct to the Colorado River to directly convey its QSA supplies to the San Diego region. These supplies are currently transported to the Water Authority service area through MWD’s system via an Exchange Agreement with MWD that was recently extended by 10 years to align with the term of the IID Water Transfer Agreement. While both agreements expire in 2047, the IID Water Transfer Agreement includes an option for extension through 2077, with mutual consent by both parties. The MWD Exchange Agreement does not contain a similar provision; therefore, the Water Authority does not have a guaranteed option for transportation of the IID transfer water past 2047.1

Extending the MWD Exchange Agreement has allowed time to continue to explore alternative conveyance of QSA supplies to maintain the reliability of our region’s water supply at an affordable cost. The development of an alternative transportation option that would deliver water directly from Imperial Valley to San Diego is not a new concept, with reports dating back to a study by the Bureau of Reclamation in the 1940s and continuing to present day. Recent reports for an alternative conveyance by the Water Authority include a preliminary study completed by Black & Veatch in 1996 with updates in 2002 and 2013 as part of the Water Authority’s Regional Water Facilities Optimization and Master Plan Update (Master Plan), and most recently in 2017 as part of the decision to align the terms of the Exchange and Water Transfer Agreements.

Over the years, staff has engaged with the Board on this work and continues to do so through the Colorado River Work Group (CRWG), which was formed in October 2018 to provide guidance to staff and make recommendations to the Board on Colorado River issues, including the continued study of alternative conveyance. Thus far, the CRWG met in February, March, May, and July 2019. At these meetings, staff presented a draft scope of work for a proposed new study which incorporated comments received from the Member Agency Managers and ultimately addressed input received from the CRWG and Board as well. The CRWG also discussed the required budget for consultants and staff to implement the study, $3.9M, which was included in the FY 2020-2021 Board adopted budget. Staff also presented options for completing this work: (1) procuring professional services via an RFP process or, (2) contracting with Black & Veatch via a competitive acquisition waiver. Staff recommended entering into discussions with Black & Veatch for a potential contract because of their involvement in past studies and the efficiencies and cost savings their historical knowledge could provide. The CRWG concurred with staff’s recommendation. Staff returned to the CRWG to discuss the proposed scope and fee negotiated with Black & Veatch and received the CRWG’s concurrence to proceed with staff’s recommended action for consideration at the July 25, 2019 Imported Water Committee meeting.

Previous Board action: On June 27, 2019, the Board approved $3.9 million for the Regional Conveyance System Study as part of the Fiscal Year 2020 and 2021 Capital Improvement Program budget.

1 Exchange of the Water Authority’s canal lining supplies is guaranteed for the 110-year term of the projects.
Discussion
In keeping with the past incremental approach to studying alternative conveyance, this new study would build upon past studies, be conducted in two phases, Phase A and Phase B, and allow offramps for the Board at the end of each phase. It would also expand upon the previous single-use concept, meaning a pipeline for delivery of QSA supplies only, to a multi-benefit concept to provide regional benefits. As such, this study of a “Regional Conveyance System” (RCS) would also evaluate potential partners with compatible needs and funding opportunities. Some examples of potential partnership projects along the proposed RCS routes include surface water and underground storage, solutions for the Salton Sea, renewable energy generation and use, and bi-national projects with Mexico. Conceptually, the pipeline would be 96 inches in diameter with a length of approximately 75 to 90 miles and include other facilities such as pump stations and power generating facilities as needed and feasible.

There are three proposed alignments that would be studied further, two southern and one northern as shown in Attachment 1. Past studies focused on two proposed southern alignment options, 5A and 5C. Alignment 5A has significant tunneling and begins at the west end of the All-American Canal, extending north along IID’s Westside Main Canal, and then traveling west across Anza Borrego State Park and the Cleveland National Forest areas to San Vicente Reservoir. Alignment 5C is mainly open trench construction and begins at the west end of the All-American Canal, then extends westward close to the international border for much of the route before shifting north to San Vicente. A third proposed northern Alignment 3A, was assessed in 1996 but did not advance to subsequent studies as a preferred alignment due to a variety of factors. This alignment also has substantial tunneling and begins at the west end of the All-American Canal, extends north along the Westside Main Canal, and then traveling west across Borrego Springs and through Anza Borrego State Park to the Water Authority’s Twin Oaks Valley Water Treatment Plant (TOVWTP). Staff is proposing that Alignment 3A be re-evaluated to determine its feasibility resulting from changed conditions since 1996 such as the construction of TOVWTP and like the other alignments, the impact of potential multi-benefit partnerships, and funding opportunities on offsetting costs and reducing risk to the Water Authority and its member agencies.

With regard to the study approach, Phase A entails bringing the study of Alignment 3A up to the same level of detail as that of Alignments 5A and 5C to facilitate equal comparison; refining all three alignments; evaluating elements that were not studied in the past, such as integration of the RCS into the Water Authority system; and considering the regional approach. The objective of Phase A is to narrow options down to less than three alignments—ideally two—based on criteria such as all-in-cost, net present value, and risk. The objective of Phase B would be to study any remaining alignments further to identify a preferred alignment. It is important to note that each phase would assess multi-benefit, partnership, and potential funding opportunities and conduct a sensitivity analysis of the potential impact on cost and project viability. Additionally, at the end of each phase, there would be offramps for the Board to consider next steps.

The specific scope of work for each phase has addressed input received from the Member Agency Managers group, CRWG, and Board and includes necessary work that must be
completed to better inform the technical viability and all-in cost of each alignment. Table 1 summarizes key scope items, cost, completion time, and offramps by phase.

Table 1. Key Scope Items, Cost, Completion Time, and Offramps

<table>
<thead>
<tr>
<th>Phase A</th>
<th>Phase B</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Data Gathering, Site Reconnaissance, and Analysis</td>
<td>- Demand Forecast Update</td>
</tr>
<tr>
<td>- Description of RCS Operations</td>
<td>- Refine Conveyance Alignment</td>
</tr>
<tr>
<td>- Demand Forecast and Impact on Aqueduct Operations (System Integration)</td>
<td>- Refine Tunnels</td>
</tr>
<tr>
<td>- Power Supply Alternatives</td>
<td>- Geotechnical Desktop Study</td>
</tr>
<tr>
<td>- Treatment, Blending, and Brine Disposal Options</td>
<td>- Partnership, Funding, and Multi-benefit Opportunities</td>
</tr>
<tr>
<td>- Permit and Environmental Requirements</td>
<td>- Project Implementation (Partnership Structures and Project Delivery Methods)</td>
</tr>
<tr>
<td>- Partnerships, Funding, And Multi-benefit Opportunities</td>
<td>- Refine Site Layouts</td>
</tr>
<tr>
<td>- Preliminary Cost Opinions and Economic Analysis</td>
<td>- Property Acquisition</td>
</tr>
<tr>
<td>- Risk Analysis (Qualitative/Quantitative) - Risk Register</td>
<td>- Refine Cost Update and Economic Analysis</td>
</tr>
<tr>
<td>- Comparison and Screening of Alternatives</td>
<td>- Risk Analysis Update</td>
</tr>
<tr>
<td>Phase Cost: $1,300,000</td>
<td>Phase Cost: $590,000</td>
</tr>
<tr>
<td>Phase Completion: 12 Months</td>
<td>Phase Completion: 12 Months</td>
</tr>
<tr>
<td>Offramp: Go/No-Go to Phase B</td>
<td>Offramp: Go/No-Go to next phase</td>
</tr>
</tbody>
</table>

As previously discussed, Black & Veatch is uniquely qualified to complete this work because of their extensive work on past studies dating back to 1996. The same Black & Veatch team that worked on the 2013 Master Plan Update and 2017 work related to the MWD Exchange Agreement decision would be the team engaged to complete the proposed scope. Waiving a competitive procurement process is deemed in the best interest of the Water Authority and its member agencies because of efficiencies gained by avoiding the learning curve for a new team. The cost of conducting an RFP process and the time spent for a new multidisciplinary team to review the Black & Veatch reports and several other reference documents completed since 1996 is estimated at $300,000. Additionally, the process for procuring a new team would delay the completion of the study by four to six months. In turn, the delay would affect the commencement of several long-lead activities required for a go/no-go decision on the project.

As such, staff recommends, and the CRWG concurs with, authorizing the General Manager to award a professional services contract to Black & Veatch Corporation to provide services to implement the Scope of Work for the Regional Conveyance System Study for a not-to-exceed amount of $1,890,000. Due to the limited subcontracting opportunities for this type of service, SCOOP outreach was not required.

It is also important to note that Water Authority staff and other consultants would work closely and collaboratively with the selected professional services contractor to integrate the technical, economic, financial, legal, and public outreach information into one comprehensive study.
Information provided by Water Authority staff would include the Urban Water Management Plan update and revised demand forecast, rate impact analysis and mitigation, funding analysis and financing alternatives, operational parameters, and information from meetings with potential partners and stakeholders. Other Water Authority consultant support would include legal counsel to support analysis of QSA and any new agreements; economists to assist with analysis of external factors; and financial advisors to assist with funding strategy, credit ratings impact, and grant/low interest alternatives.

Upon Board authorization, staff would execute a contract with Black & Veatch and provide authorization to proceed with Phase A. After completion of Phase A, or in approximately June 2020, staff would return to the Board to present the technical, financial, economic, and legal analysis results along with a go/no-go recommendation to proceed to Phase B, for the Board’s consideration. Black & Veatch would not proceed with Phase B until authorized to do so. Finally, staff would provide regular updates to and seek input from the Member Agency Managers group, CRWG, and Imported Water Committee as this work progresses.

Prepared by: Kelly Rodgers, Director of the Colorado River Program
Mojgan Poursadighi, Engineer P.E.
Reviewed by: Dan Denham, Assistant General Manager
Approved by: Sandra L. Kerl, Acting General Manager

Attachment:
Attachment 1 – Regional Conveyance System Study – Proposed Alignment Options