



**SPECIAL MEETING**  
**IMPORTED WATER COMMITTEE**

**AGENDA**

SEPTEMBER 14, 2017

1:30 p.m. - Board Room

|                              |                |
|------------------------------|----------------|
| Mark Weston – Chair          | Marty Miller   |
| Lois Fong-Sakai – Vice Chair | Jim Murtland   |
| Tom Kennedy – Vice Chair     | Ken Olson      |
| David Barnum                 | Elsa Saxod     |
| Kristin Gaspar               | Joel Scalzitti |
| Michael Hogan                | Fern Steiner   |
| Keith Lewinger               | Doug Wilson    |
| Jim Madaffer                 |                |

1. Roll call – determination of quorum.
2. Additions to agenda (Government Code Section 54954.2(b)).
3. Public comment – opportunities for members of the public to address the Committee on matters within the Committee’s jurisdiction.
4. 2017 Transfer and Exchange Agreement Decision: Alternative Conveyance and Basin States Impacts. (Presentation)
5. **CLOSED SESSION**
  - 5-A Conference with Legal Counsel – Existing Litigation Scott Slater  
Government Code §54956.9(d)(1)  
State Water Resources Control Board Petition of Imperial Irrigation District for Modification of Revised Water Rights Order 2002-0013
  - 5-B Conference with Legal Counsel – Existing Litigation Scott Slater  
Government Code §54956.9(d)(1)  
SDCWA v. Metropolitan Water District of Southern California;  
Case Nos. CPF-10-510830; CPF-12-512466; CPF-14-514004;  
CPF-16-515282; CPF-16-515391; A146901; A148266; BS169881; and  
CA Supreme Court Case No. S243500
6. **ADJOURNMENT**

Melinda Nelson, Clerk of the Board

**NOTE:** This meeting is called as an Imported Water Committee meeting. Because a quorum of the Board may be present, the meeting is also noticed as a Board meeting. Members of the Board who are not members of the Committee may participate in the meeting pursuant to Section 2.00.060(g) of the Authority Administrative Code (Recodified). All items on the agenda, including information items, may be deliberated and become subject to action. All public documents provided to the committee or Board for this meeting including materials related to an item on this agenda and submitted to the Board of Directors within 72 hours prior to this meeting may be reviewed at the San Diego County Water Authority headquarters located at 4677 Overland Avenue, San Diego, CA 92123 at the reception desk during normal business hours.

September 7, 2017

**Attention: Imported Water Committee**

2017 Transfer and Exchange Agreement decision: alternative conveyance and Basin States impacts (**Presentation**).

**Purpose**

This report provides background for the Water Authority Board decision related to the future duration of the Water Transfer Agreement (transfer agreement) with the Imperial Irrigation District (IID) and the Exchange Agreement (exchange agreement) with the Metropolitan Water District of Southern California (MWD). At the December 7, 2017 Water Authority Board meeting an action item will be considered to either extend the exchange agreement with MWD by 10 years to 2047 or reduce the transfer agreement with IID by 10 years to 2037.

**Background**

The transfer agreement and exchange agreement have allowed for the conservation and delivery of water to the Water Authority since 2003, as part of the Quantification Settlement Agreement (QSA). Since this time IID has reliably conserved the specified annual transfer volumes<sup>1</sup> through the implementation of fallowing, on-farm water conservation, and irrigation system efficiency programs. Lacking its own infrastructure from the river, the Water Authority relies on MWD to transport the volume of IID conserved water from the Colorado River to the San Diego region via the Colorado River Aqueduct (CRA), as an exchange. MWD has delivered this exchange of like quantity and quality Colorado River water since 2003, meeting scheduled annual water transfer and canal lining volumes conserved for the Water Authority in the Imperial and Coachella Valleys. The Water Authority's QSA supplies are made available to MWD at its Colorado River diversion point at Parker Dam. While the initial term of the Transfer Agreement is 45 years, the Exchange Agreement with MWD to transport the conserved water to the Water Authority has an initial term of 35 years<sup>2</sup>. There are stipulations in both agreements that sync the timing of both the transfer and exchange by either (1) extending the exchange with MWD an additional 10 years to coincide with the 45-year term of the transfer agreement, or (2) terminating the IID water transfer 10 years early to match the existing 35-year exchange term. Either option is a unilateral Water Authority Board decision and does not require the consent of IID or MWD.

**Discussion**

Throughout the course of 2017 staff provided updates to the Board on a number of items that served to provide context for the transfer and exchange agreement decision. What follows focuses on alternative conveyance options in lieu of an exchange with MWD, and a Colorado River Basin States update to better inform the December 2017 decision.

*Alternative Conveyance*

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

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<sup>1</sup> Due to pending QSA litigation, IID under-delivered the annual volume in 2011 but made up the difference in 2012.

<sup>2</sup> Exchange of the Water Authority's canal lining supplies is guaranteed for the 110-year term of the projects and will not be impacted by this decision.

Bureau of Reclamation (Reclamation) in the 1940's and continuing to present day. Recent reports for an independent conveyance facility include a feasibility study conducted in 2002 and the Water Authority's 2013 Regional Water Facilities Optimization and Master Plan Update (facilities master plan).

The facilities master plan includes an update of a preliminary study completed by Black and Veatch in 1996 with subsequent updates in 2001 and 2013. This study focuses on two alignment options, known as 5A and 5C. Alignment 5A is an 84-mile "tunnel" option beginning at the west end of the All-American Canal, extending north with a parallel canal to 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 a 92-mile "pipeline" option that 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 map of these alignments is shown in Figure 1. In both alignments, conveyance capacity was sized to meet the Water Authority's QSA supplies of just under 300,000 AF per year.

Environmental permitting and compliance necessary to implement the project that was analyzed in the 1996 Black and Veatch study was found to be largely unchanged as part of the 2013 facilities master plan update, which included new information obtained from the construction of San Diego Gas & Electric's Sunrise Powerlink project and the 2008 Eastern San Diego County Resource Management Plan. Water quality and treatment options for the highly saline Colorado River water were a significant consideration in the facilities master plan analysis, wherein both a centralized treatment facility in Imperial Valley and blending options in the San Vicente Reservoir were considered. Due to its lower cost, the San Vicente blending option was chosen over a centralized treatment in the Imperial Valley. The Imperial Valley option would have also included the loss of approximately 21,000 AF per year due to the reverse osmosis treatment process.



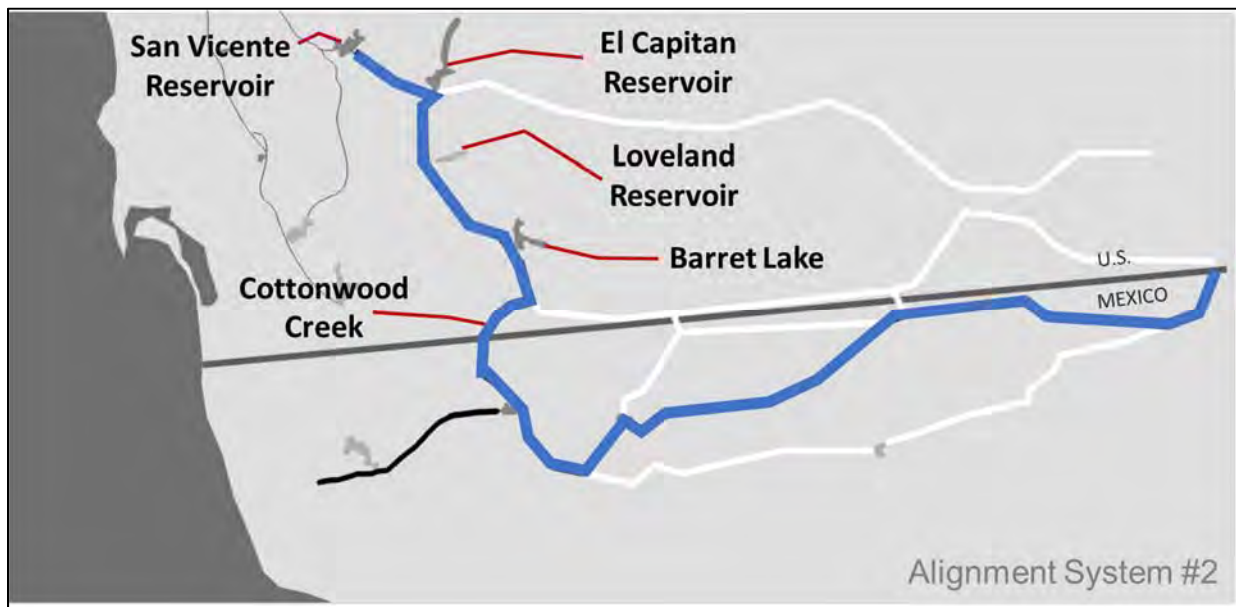
*Figure 1. Alignments 5A and 5C of Alternative Colorado River Conveyance Facilities*

In 2017 dollars, the estimated capital cost of Alignment 5A is \$2.4 billion with annual O&M at \$76.7 million, while Alignment 5C is estimated at \$2.7 billion and \$144.1 million respectively.

Another study of conveyance facilities from the Imperial Valley to San Diego included a joint binational conveyance project with portions of the alignment in both the U.S. and Mexico. The 2002 Regional Colorado River Conveyance Feasibility Study (2002 feasibility study) was authorized in 1999 under Minute 301 to the 1944 U.S.- Mexico border and water treaty. It examined 10 potential alignments for a shared binational conveyance system from the All-American Canal in the Imperial Valley to San Diego to transport the Water Authority's QSA

supplies and a portion of Mexico's Colorado River supplies to Tijuana. Each alignment delivers water to the same delivery points: San Vicente Reservoir for the Water Authority, and a water treatment plant north of El Carrizo reservoir for Mexico. The 10 alignments differ in several key respects including horizontal alignment, vertical alignment, and length of shared facilities. These differences result in different lengths and pumping costs, different land use and jurisdictional issues, different cost shares among the two countries, and differences in overall capital and operating costs. Conveyance system design flows ranged from 300,000 AF to 400,000 AF for the Water Authority and 100,000 AF to 200,000 AF for Mexico.

Based on scoring criteria that examined construction costs, environmental and social impacts, and implementability and system reliability, Alignment System #2 was ranked the highest for the Water Authority (Figure 2). The estimated total capital cost of this alignment in 2017 dollars is \$4.4 billion with annual operations and maintenance costs at \$15.3 million. The Water Authority's share of those costs would equal \$3.0 billion and \$11.2 million respectively with the balance assigned to Mexico.



*Figure 2. Water Authority's Preferred Conveyance Alignment in the 2002 Feasibility Study*

The legal framework to implement the project, which would include a new Minute to the U.S.-Mexico Treaty, would require close coordination with the U.S. and Mexico sections of the International Boundary and Water Commission who handle the distribution of Colorado River water between the two countries. The Water Authority would be responsible for preparing and certifying all state and federal environmental requirements for portions of the project in the U.S., obtaining a Presidential Permit from U.S. Department of State, and amending the current Domestic Water Supply Permit from the State Water Resource Control Board Division of Drinking Water to implement the project. Mexico's obligations would be similar for portions of the project within its jurisdiction.

#### *Colorado River Hydrology and Basin States Activities Update*

The Water Authority secured its independent Colorado River supplies through the QSA as part of its supply diversification strategy. Colorado River allocations have historically been guaranteed, with all users receiving full annual allocations. To date, an official shortage has never been declared

on the river, which would result in cutbacks to certain users. These cutbacks were defined in 2007 under the Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead (2007 Interim Guidelines). A shortage declaration under the 2007 Interim Guidelines would result in reduced allocations to Arizona and Nevada, but no cuts to California users, and is determined based on the Reclamation's hydrology projections of Lake Mead's elevation relative to designated shortage triggers.

As the chance of Lower Basin shortage increased significantly over the last several years, the seven Colorado River Basin States began collaborating on a Lower Basin Drought Contingency Plan (DCP) to help build elevation in Lake Mead and reduce the chance of a shortage declaration in upcoming years. The proposed DCP includes voluntary cuts to Lower Basin users, including California. In addition to the U.S. shortage criteria defined in the 2007 Interim Guidelines and the proposed DCP, an amendment to the 1944 Treaty between the United States and the Republic of Mexico known as Minute 319 authorized a period from 2013-2017 in which Mexico also agreed to share in cutbacks to its annual Colorado River apportionment of 1.5 million acre-feet. A successor minute, Minute 323, is being finalized and is scheduled to be signed in the third quarter of 2017. Minute 323 builds upon and extends Minute 319, and acts as an interim agreement for the remaining period of the 2007 Interim Guidelines expiring on December 31, 2026. Minute 323 continues the shortage-sharing and environmental components of Minute 319 and establishes a Binational "Water Scarcity Contingency Plan" (WSCP). The WSCP is only effective upon implementation of the U.S. DCP and is the Mexican equivalent of the DCP — including additional cutbacks to Mexico beyond the existing shortage-sharing components at the same additional elevation triggers as the DCP. Table 3 displays the reductions under the three agreements: 2007 Interim Guidelines, DCP, and Minute 323. Once Minute 323 is completed, the Basin States and Reclamation will reconvene to finalize the agreements for the DCP.

A major benefit of the Water Authority's QSA supplies is their high priority status on the river, falling into IID and Coachella Valley Water District's shared priority 3A designation. Under the 2007 Interim Guidelines, there is no designated cut to any California user under the defined shortage levels. If Lake Mead dropped even further than the defined criteria and the Secretary of Interior declared a cut to California, the implication is the reductions would occur based on the priority system — falling on the lowest priority user, MWD. Under the DCP, these rules would change and California users would agree to cutbacks of 200,000 to 350,000 AF per year beginning at Lake Mead elevation 1,045 feet (Table 1). If the DCP is adopted, reductions would impact all California users proportional to their average annual diversion. As the largest diverter, IID would contribute 60 percent of California's reduction through additional efficiency-based conservation. Currently, these cutbacks are considered voluntary and would not impact the Water Authority's annual volume from the IID water transfer.

The combination of hydrology projections, existing storage conditions, and reservoir operational decisions feed into the determination of a Lower Basin shortage, which is ultimately triggered by Lake Mead elevation projections falling below specified trigger levels. The 2007 Interim Guidelines incorporate criteria for equalizing flows between Lake Powell and Lake Mead based on annual runoff projections to balance the storage levels between these two major reservoirs. Reservoir releases from Lake Powell (which supplies Lake Mead) and Lake Mead (which supplies the Lower Basin states of California, Arizona, and Nevada as well as Mexico) are determined based on hydrology modeling performed by Reclamation in August for the upcoming

year. Similarly, a shortage condition is also determined by these August projections of lake elevations and not necessarily the actual lake level itself.

*Table 1. Cutbacks under Shortage Criteria in the 2007 Interim Guidelines, DCP, and Minute 323*

| 2007 Interim Guidelines + Drought Contingency Plan + Minute 323 Binational Water Scarcity Contingency Plan<br>(numbers in thousand acre feet) |                         |     |    |                          |     |    |                 |             |       |
|---|-------------------------|-----|----|--------------------------|-----|----|-----------------|-------------|-------|
| Lake Mead Elevation   | 2007 Interim Guidelines |     |    | Drought Contingency Plan |     |    | Minute 323      |             | TOTAL |
|   | CA                      | AZ  | NV | CA                       | AZ  | NV | Mexico Shortage | Mexico WSCP |       |
| 1090'   | 0                       | 0   | 0  | 0                        | 192 | 8  | 0               | 41          | 241   |
| <b>1075'</b>  | 0                       | 320 | 13 | 0                        | 192 | 8  | 50              | 30          | 613   |
| <b>1050'</b>  | 0                       | 400 | 17 | 0                        | 192 | 8  | 70              | 34          | 721   |
| 1045'   | 0                       | 400 | 17 | 200                      | 240 | 10 | 70              | 76          | 1,013 |
| 1040'   | 0                       | 400 | 17 | 250                      | 240 | 10 | 70              | 84          | 1,071 |
| 1035'   | 0                       | 400 | 17 | 300                      | 240 | 10 | 70              | 92          | 1,129 |
| 1030'   | 0                       | 400 | 17 | 350                      | 240 | 10 | 70              | 101         | 1,188 |
| <b>1025'</b>  | 0                       | 480 | 20 | 350                      | 240 | 10 | 125             | 150         | 1,375 |

Reclamation recently completed its August 2017 modeling which determines the operations for 2018. The August projections show reservoir elevations that indicate an above average release from Lake Powell of 9 million acre-feet and Lower Basin users receiving their full annual allocations in 2018. There will not be a declared shortage under the 2007 Interim Guidelines criteria in 2018. Reclamation also updated its five-year shortage projections which show an increased chance of shortage in 2020 to 2022 (Table 2).

*Table 2. Five-Year Outlook of Projected Lower Basin Shortage Probabilities*

| 2018 | 2019 | 2020 | 2021 | 2022 |
|------|------|------|------|------|
| 0%   | 15%  | 42%  | 45%  | 52%  |

The Colorado River has operated under defined shortage criteria since 2007 and there has never been a declared shortage on the river. Negotiations for renewal of the 2007 Interim Guidelines are scheduled to begin in 2020 and if the DCP is finalized, its components could set the stage for potential changes to the replacement agreement that may impact the Water Authority's QSA supplies starting in 2027 under the new operating regime.

Staff will continue analyzing these components as they relate to long-term projections and the upcoming decision on the term lengths of the Transfer and Exchange Agreements in the coming months. The item will be brought to the Board of Directors for action at its December 7 meeting.

Prepared by: Kara Mathews, Senior Water Resources Specialist  
 Reviewed by: Dan Denham, Assistant General Manager  
 Approved by: Maureen Stapleton, General Manager



September 7, 2017

**Attention: Imported Water Committee**

**CLOSED SESSION:**

**Conference with Legal Counsel – Existing Litigation**

**Government Code §54956.9(d)(1)**

**State Water Resources Control Board Petition of Imperial Irrigation District for  
Modification of Revised Water Rights Order 2002-0013**

**Purpose**

This memorandum is to recommend a closed session, pursuant to Government Code §54956.9(d)(1), to discuss the above-referenced matter at the September 14, 2017 meeting.

General Counsel's office will not be in attendance at this Closed Session. It will be conducted by outside Special Counsel.

Prepared by: Mark J. Hattam, General Counsel



September 7, 2017

**Attention: Imported Water Committee**

**CLOSED SESSION:**

**Conference with Legal Counsel – Existing Litigation**

**Government Code §54956.9(d)(1)**

**Name of Case: SDCWA v. Metropolitan Water District of Southern California;  
Case Nos. CPF-10-510830; CPF-12-512466; CPF-14-514004;  
CPF-16-515282; CPF-16-515391; A146901; A148266; BS169881; and  
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