Regional Conveyance System Study
Alternatives
Economic Session

October 27, 2020
Introductions

- **Welcome:** Sandy Kerl, General Manager, San Diego County Water Authority  
  5 minutes

- **Overview:** Dan Denham, Deputy General Manager, San Diego County Water Authority  
  5 minutes

- **Economics:** Bob Campbell, Principal at Water Resource Consultants; Rodney T. Smith, Ph.D., President of Stratecon Inc.  
  50 minutes

- **Questions**  
  60 minutes
Welcome
Background
QSA Conserved Water Sustains San Diego County

- More than half of county’s water is from 2003 QSA conservation agreement
- Agreement helps sustainably manage Colorado River
- QSA supplies are complementary to local supplies; both are necessary
- QSA supplies are lowest-cost source and highly reliable
Water Authority Board Must Make Long-Term Decision

- IID conserved water transfer initial term ends in 2047 with potential extension
- Exchange Agreement with MWD ends in 2047
- Water Authority Board must decide now in order to be prepared for and protect future generations
What are the transportation alternatives?

Alternative 1: Pay MWD to deliver water
Alternative 2: Build and own facilities

The Regional Conveyance System Feasibility Study is analyzing and comparing these two alternatives for delivery of our QSA water supply.
Economic Considerations
Economic Analysis and Risk Assessment of Water Delivery Alternatives

BOB CAMPBELL, PRINCIPAL, WATER RESOURCE CONSULTANTS, INC.

RODNEY T. SMITH, PH.D., PRESIDENT, STRATECON, INC.
The Issue
   ◦ Should the Water Authority Board of Directors conduct a feasibility study of alternatives for future delivery of QSA Water?

The Choices
   ◦ ALTERNATIVE 1 - RENTAL AGREEMENT – Rent Conveyance from Metropolitan Water District of Southern California (MWD)
   OR
   ◦ ALTERNATIVE 2 – OWN - Construct and own a Regional Conveyance System (RCS)
Alternative 1: Rental Agreement with MWD

Subject to MWD unregulated rates and political dynamics

MWD Exchange Agreement costs have increased more than 30% in past four years

The Water Authority will pay rent of $27.6 Billion through 2112

At end of term, Water Authority’s only “asset” is more preferential rights in MWD
Alternative 2: Own a RCS

Build and own a conveyance, treatment, and storage delivery system

Provide local control

Facilitate broad regional multi-benefit opportunities with partners

Mitigate risk of cost uncertainty of MWD rates and charges

Water Authority owns delivery system and other assets at estimated cost of $25.6 Billion through 2112
Phase A looked at technical aspects of project definition and costs, finding:

- QSA supplies are a low-cost base supply for the region
- IID Transfer Water and Canal Lining Water higher priority than MWD’s Colorado River rights

- Alternative 2: Owning a RCS:
  - Project is viable and feasible
  - Economically competitive with other options with a potential for long-term savings
  - Several potential partnership opportunities

Comprehensive economic, financial, and risk analysis recommended for Phase B
MWD Rates Far Outpace Inflation

History of MWD Untreated Water Rates

Annual Increases in Metropolitan’s Water Rate by Eras

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<td>MWD Water Rate</td>
<td>11.3%</td>
<td>3.0%</td>
<td>6.4%</td>
<td>6.9%</td>
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<tr>
<td>Inflation</td>
<td>5.4%</td>
<td>3.0%</td>
<td>1.6%</td>
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<tr>
<td>Real MWD Water Rate</td>
<td>5.7%</td>
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Deteriorating MWD Yields from Colorado River and SWP
Extension of SWP Contract
Delta Conveyance project
SWP aqueduct land subsidence
MWD Regional Recycled Water Program
MWD and SWP asset management programs
MWD Local Resource Program
MWD reduced water demands
Disputes over MWD cost allocation
Economic analysis and risk assessment of:
- Future MWD water rates and supply reliability
- Future SDCWA water rates and supply reliability
- Comparative analysis of SDCWA future with MWD conveyance (under Exchange Agreement or MWD proposal) versus RCS

Rigorous Analysis of Risk Factors

Use Risk Assessment and Control Framework to address uncertainty of future projections

Integrate findings into an RCS Decision Model
Risk Factor - MWD’s Cost Structure

- **Fixed costs**
  - Cost escalation of existing assets
  - Asset replacement costs
  - Cost of new water supplies
  - Multi-billion-dollar regional supply program commitments
  - Delta Conveyance Project
  - State Water Project contract extension

- **Variable costs**
  - Energy intensity in escalating state market
Risk Factor - MWD’s Demands

- **Water sales**
  - Member agency supply diversification
  - Recession
  - Declining demands driving unit costs up
MWD Total Water Sales

Fiscal Year Ending

Acre-Feet

With Exchanges  Without Exchanges
Risk Factor - MWD’s Supply Reliability

- Reliability
  - Colorado River sustainability
  - Colorado River priority
  - Continued demands on Bay-Delta
  - Speed and magnitude of climate change
Colorado River Water Conveyed Through Colorado River Aqueduct

Acre-Feet

MWD Supply  SDCWA Supply

0  100,000  200,000  300,000  400,000  500,000  600,000  700,000  800,000  900,000  1,000,000  1,100,000  1,200,000  1,300,000  1,400,000

State Water Project Allocation History

Final Allocation
10 Year Running Average
Annual Natural Flow of Colorado River Water at Lees Ferry

Acre Feet

Risk Factor - MWD’s Rate Structure

- **Rate Structure**
  - Use current MWD cost-of-service studies
  - Identify changes in principles
  - Rate restructuring probability and timing
  - Increased property taxes
  - Impact on member agencies
Risk Assessment and Control Framework

Risk Assessment
- Risk Planning
- Risk Identification
- Risk Analysis
  - Probability Analysis
  - Impact Analysis
  - Risk Response Planning

Risk Control
- Risk Response Implementation
- Risk Monitoring
- Risk Realized

Risk Assessment and Control Framework
EACH ALTERNATIVE MUST BE ADDRESSED WITH THE SAME RIGOR
The RCS is a feasibility study only

Phase A dealt with a limited number of issues

Phase B plans to include a complete economic analysis/risk assessment and comparison of the two alternatives

Approval of Phase B is not an approval of any project—it is merely board approval to proceed to Phase B because Phase A confirmed that a Regional Conveyance System Project may provide greater value and less risk for all San Diego ratepayers

A complete environmental review will be conducted at a later date should the board approve moving forward with the project

The board has a fiduciary obligation to ensure complete review of all alternatives
Live Event Q&A

Click the question mark icon at the top right of your screen.

Click here to submit a question.

Include your name and affiliation with questions.
You can also email questions to wateracademy@sdcwa.org.