Lewis Carlsbad Desalination Plant
Intake & Discharge System Modifications

Water Planning & Environmental Committee Meeting
October 24, 2019

Jeremy Crutchfield, Water Resources Manager
1. Lewis Carlsbad Desalination Plant Contract Administration Memorandum (CAM) for Interim Operations Period

2. Water Authority Consent of Proposed Sale of Lewis Carlsbad Desalination Plant
1. Lewis Carlsbad Desalination Plant Contract Administration Memorandum (CAM) for Interim Operations Period

2. Water Authority Consent of Proposed Sale of Lewis Carlsbad Desalination Plant
Status of Plant Operations

- Began commercial operations on December 23, 2015
- Over 52 billion gallons of desalinated ocean water produced to date
- Revised NPDES Permit for standalone operations adopted by the San Diego Water Board on May 8, 2019
- Currently operating under Temporary Stand-Alone Operations
**Transition to Stand-Alone Operations**

- **Drivers**
  - Closure of Encina Power Station requires new, permanent stand-alone intake for the CDP (Closure)
  - 2015 Ocean Plan Amendment (OPA)

- Contemplated and addressed in the Water Purchase Agreement
  - Both Closure and OPA are considered Change In Law in WPA
    - Water Authority responsible for incremental cost
    - WPA provided a cap for closure related costs

- Implemented through 3 operational phases
  - Five year time frame to come into full compliance with the OPA
Interim Operations

Our Region’s Trusted Water Leader
San Diego County Water Authority
Phasing Schedule

December 11, 2018
Encina Power Station ceases power generation

December 12, 2018 thru June 2020
Temporary Stand-Alone Operations Period (TSOP)

June 2020 thru December 2023
Interim Operations Period (IOP)

December 2023 thru WPA Completion
Permanent Operations Period (POP)
Interim Operations Period (IOP)

- Includes installing new fish-friendly dilution pumps and modifying existing intake channels
- Multiple workshops conducted with Poseidon to review five Key Areas:
  1. Risk Transfer
  2. Duration
  3. Capital and O&M Costs
  4. Financing
  5. Unit Price Adjustment

Validation of terms and costs thoroughly reviewed by Water Authority staff with technical, financial and legal support
Interim Modifications

- New Dilution Pumps
- Exist. Intake Structure
- Exist. Desal Intake Pump Station
- Exist. Discharge Channels
- Relocated Brine Discharge
The Water Purchase Agreement contains two separate cost cap provisions:
1. Baseline Unit Price Cap (10% annual/30% cumulative)
2. Specific capital and operating caps associated with the intake modifications

- TSOP was the first unit price adjustment applicable to the Baseline Unit Price Cap provisions
- IOP unit price adjustment applies to both baseline cap provisions and specific caps associated with intake modifications
Cap Provisions in the WPA

Baseline Cost Cap
- 10% Annual
- 30% Cumulative

Intake Closure Cap
- Capital and operating costs attributed to closure compared against the WPA caps
## IOP Key Area 1 - Risk Transfer

<table>
<thead>
<tr>
<th>Risk Description</th>
<th>Poseidon</th>
<th>SDCWA</th>
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<tbody>
<tr>
<td>Permitting</td>
<td></td>
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</tr>
<tr>
<td>Financing</td>
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<tr>
<td>Interest Rate</td>
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<td>Construction/Uncontrollable Circumstances</td>
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<tr>
<td>Technology</td>
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<td>Operating Performance</td>
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<td>Pipeline Operating Risk</td>
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<tr>
<td>Electricity</td>
<td>Consumption</td>
<td>Pricing</td>
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<td>Water Demand</td>
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<td></td>
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<tr>
<td>Regulation</td>
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</table>
IOP Key Area 2 - Duration

- Begins with the commercial operation of the new dilution pumps (anticipated by June 2020)
- Continues until the commissioning of new screened-intake (anticipated by December 2023)
- Ongoing discussions with City of Carlsbad and NRG regarding potential schedule impacts related to Encina Power Station demolition plan
  - City Council Meeting on November 12, 2019
# IOP Key Area 3 - Capital and Operating Costs

<table>
<thead>
<tr>
<th>Interim Modifications Capital Costs</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Design-Build and Pre-Procurement Contracts</td>
<td>$21,907,000</td>
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<tr>
<td>Permitting</td>
<td>$8,416,000</td>
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<tr>
<td>Financing</td>
<td>$3,669,000</td>
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<tr>
<td>Construction Risk Allowances</td>
<td>$3,613,000</td>
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<tr>
<td>Preliminary Design</td>
<td>$1,902,000</td>
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<tr>
<td>Permit Required Studies</td>
<td>$1,600,000</td>
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<tr>
<td>Construction Management</td>
<td>$1,342,000</td>
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<tr>
<td>Misc. Equipment and Services</td>
<td>$1,339,000</td>
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<tr>
<td>Administration</td>
<td>$843,000</td>
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<tr>
<td>Construction Rent, Insurance and Inspection</td>
<td>$369,000</td>
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<tr>
<td><strong>Total Cost for Interim Mods</strong></td>
<td><strong>$45,000,000</strong></td>
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</table>
Reserve Funds

<table>
<thead>
<tr>
<th>Allowance/Reserve Fund</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Differing Site Conditions Allowance</td>
<td>$2,443,000</td>
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<tr>
<td>Limited Notice to Proceed Fixed</td>
<td>$495,000*</td>
</tr>
<tr>
<td>Construction Contingency Fixed</td>
<td>$675,000</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$3,613,000</strong></td>
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</table>

- **Differing Site Conditions Reserve**
  - Funding mechanism to cover Uncontrollable Circumstances encountered during construction (closure cap may apply)
  - Any unused funds will be returned to Water Authority

- **LNTP Reserve**
  - Will be fixed following end of LNTP period (November 2019) and prior to execution of the CAM (closure cap may apply)

- **Construction Contingency**
  - Mirrors risk-based contingency assigned for construction of the plant
Operating and Electricity Charges

- Incorporates annual fixed and variable costs for operating the Interim Modifications
  - Operating = $2.2 million/year
  - Electricity = $0.4 million/year

Dredging

- With closure of the EPS, Poseidon is responsible for dredging operations in Aqua Hedionda Lagoon
- First two dredging events to be handled as a direct payment (2020 and 2023)
  - Dredging events after 2023 to be incorporated into the unit price
IOP Key Area 4 - Poseidon Financing

- Water Purchase Agreement requires Poseidon to secure financing for capital improvements
- Bank Loan results in significant savings

<table>
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<tr>
<th>Financing</th>
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<tbody>
<tr>
<td>Bank Loan Amount (max)</td>
<td>$45 million</td>
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<tr>
<td>Term</td>
<td>6 years (interest only years 1-3)</td>
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<tr>
<td>Rate</td>
<td>2.74%</td>
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- Principal amount expected to be refinanced along with 2012 Plant Bonds prior to Year 4
- Rating confirmations resulted in one affirmation and one upgrade to the plant and pipeline bonds
### IOP Key Area 5 - Unit Price Adjustment

<table>
<thead>
<tr>
<th>Cost Components</th>
<th>IOP Unit Price Adjustment</th>
<th>IOP Unit Price</th>
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<tbody>
<tr>
<td>Debt Service</td>
<td>$22/AF</td>
<td>$609/AF</td>
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<tr>
<td>Equity Return</td>
<td>$18/AF</td>
<td>$428/AF</td>
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<tr>
<td>Fixed Operating</td>
<td>$46/AF</td>
<td>$522/AF</td>
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<tr>
<td>Variable Operating</td>
<td>$0/AF</td>
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<tr>
<td>Fixed Electricity</td>
<td>$8/AF</td>
<td>$174/AF</td>
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<tr>
<td>Variable Electricity</td>
<td>$0/AF</td>
<td>$693/AF</td>
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<tr>
<td><strong>Total Unit Price</strong></td>
<td><strong>$94/AF</strong></td>
<td><strong>$2,549/AF</strong></td>
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*Current Unit Price (w/ TSOP)*

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<tr>
<th>Current Unit Price (w/ TSOP)</th>
<th>$2,590/AF</th>
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*Change in Unit Price*

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<thead>
<tr>
<th>Change in Unit Price</th>
<th>($41)/AF</th>
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Next Steps

- Complete DB Contractor's preliminary investigation and LNTP period - November 2019
- Amend Settlement Agreement with City of Carlsbad and NRG - November 2019
- Execute Interim Operations CAM - November 2019
- Execute Bank Loan Agreement - November 2019
- Complete Interim Modifications and begin operation of the new dilution pumps - June 2020
Recommendation

- Authorize the General Manager to execute a Water Purchase Agreement Contract Administration Memorandum (CAM) between the Water Authority and Poseidon Resources (Channelside) LP for the Second Phase of Intake and Discharge System Modifications at the Lewis Carlsbad Desalination Plant
Agenda

1. Lewis Carlsbad Desalination Plant Contract Administration Memorandum (CAM) for Interim Operations Period

2. Water Authority Consent of Proposed Sale of Lewis Carlsbad Desalination Plant
June 13, 2019 Poseidon provided notice of proposed sale to Aberdeen Standard Investments

Under WPA, Water Authority must consent to the proposed Change In Ownership
- Consent cannot be unreasonably withheld

Considerations include:
- Financial strength and integrity
- Background and reputation
- Compliance with Water Authority conflict of interest requirements
- Obligations under Water Purchase Agreement
Summary of Sale and Purchase Transaction

Prior to Sale:
- Brookfield Infrastructure Fund III
- Minority Interests
  - Poseidon Water LLC
  - Stonepeak Associates LLC
  - Orion Water Partners, LLC

Following Sale:
- Standard Life Aberdeen Plc
  - Korean Teachers Credit Union
  - The-K Yedaham Co.
  - Hanwha General Insurance
  - Aberdeen Standard Carlsbad GP
  - Aberdeen Standard Carlsbad LP
  - Aberdeen Standard Carlsbad HoldCo

Poseidon Resources Channelside Holdings LLC
  - Poseidon Resources GP Inc.
  - Poseidon Resources (Channelside) LP

Poseidon Resources Channelside Holdings LLC
  - Poseidon Resources GP Inc.
  - Poseidon Resources (Channelside) LP

Our Region’s Trusted Water Leader
San Diego County Water Authority
Recommendation

- Authorize the General Manager to provide written consent for the proposed sale and change in ownership of the Carlsbad Desalination Plant from Orion Water Partners LLC to Aberdeen Standard Investments
Cyclic Storage Agreement with Metropolitan Water District and San Diego County Water Authority

Water Planning and Environmental Committee
October 24, 2019

Kelley Gage
Director of Water Resources
In April 2019, MWD modified its Cyclic Storage Program and authorized the GM to enter into cyclic agreements to provide a “cost-offset” credit for a maximum up to $225/AF for deliveries, based on water supply conditions.

Cyclic Agreements enhance MWD’s operational flexibility during wet and dry periods to store water:
- Wet Years: Cyclic accounts allow MWD to ‘pre-deliver’ and store water in its member agency, or sub-agency, surface reservoirs/groundwater basins.
- Dry Years: Cyclic accounts would be operated as part of MWD’s storage reserves to help meet the water needs within its service area.
Water deliveries into the account are at MWD’s discretion

Member agencies have the discretion to accept the water from MWD in any given year

Stored water in the cyclic account is sold at MWD’s prevailing full service water rate in effect at the time payment is made on an agreed-upon schedule, not to exceed five years
  - Excluded from MWD Capacity Charge calculations
  - Is subject to MWD Readiness-to-Serve Charge
  - Eligible credits applied, only when Cost-Offset Credit program is activated and not to exceed $225/AF
Cyclic Storage Program Documents

- Cyclic Storage Agreement
  - Cost-Offset Credit Agreement
  - Letter Agreement Operating Plan & Payment Schedule
  - Monthly Certification Form
Cyclic Storage “Master” Agreement - MWD-SDCWA

- Sets the overall terms and maximum stored volume over a 10-year period
  - Water Authority may store up to a maximum of 50,000 acre-feet of MWD water in a cyclic storage account at any one time over a 10-year period

- Water Authority will facilitate delivery of MWD water into a cyclic storage account
  - Delivery into Water Authority owned storage, or
  - Water Authority will work with member agencies to coordinate delivery into member agency’s storage through separate three-party agreement

- Specifies deliveries excluded from MWD Capacity Charge calculations
Cost-Offset Credit Agreement

Cyclic Storage Agreement

Cost-Offset Credit Agreement

Letter Agreement Operating Plan & Payment Schedule

Monthly Certification Form
Cost-Offset Credit Agreement

- May or may not be activated when MWD determines water is available for cyclic account deliveries in a given year
  - MWD staff to evaluate supply, demand and storage through the WSDM process; if additional supply management actions are needed, GM may initiate

- Sets Cost-Offset Credit Terms
  - Evaporative losses credit for surface water deliveries will be calculated as annual 5% reduction, up to two years
  - Pumping credit
  - Treatment Surcharge credit
  - Other credits deemed eligible by MWD
Letter Agreement

Cyclic Storage Agreement

Cost-Offset Credit Agreement

Letter Agreement Operating Plan & Payment Schedule

Monthly Certification Form
When MWD determines water is available for delivery in any year, and Water Authority and/or its member agency(ies) agree to accept the delivery, a separate Purchase Agreement letter will be executed:

- Defines the delivery amount, timing and payment schedule
- Specific delivery terms will be defined in the Letter Agreement
  - Baseline operations vs. Cyclic Storage deliveries
Monthly Certification Form

Cyclic Storage Agreement

Cost-Offset Credit Agreement

Letter Agreement Operating Plan & Payment Schedule

Monthly Certification Form
Monthly Certification Form

- Certifies monthly delivery volumes through MWD connection by ‘normal’ vs. Cyclic Storage deliveries
- All parties required to sign off on monthly certification form for submittal to MWD
- MWD uses certification form to account for Cyclic Storage volume deliveries not subject to Capacity Charge and to apply Cost-Offset Credits, if any
Cyclic Storage "Master" Agreement

Cyclic Storage Agreement

Cost-Offset Credit Agreement

Letter Agreement Operating Plan & Payment Schedule

Monthly Certification Form
Next Steps

- Cyclic Storage Agreement - Water Authority Board consideration of approval October 24, 2019
  - Establishes Cyclic Account with Water Authority
  - Max of 50,000 AF in account at any time over 10-year term
  - Deliveries not subject to MWD Capacity Charge Calculations

- Continue engagement with member agencies
  - Reviewed “master” agreement with member agencies at September MAMM
  - If approved, continue to solicit interest in participation this year and in future years
    - If interested, bring individual Cost-Offset Credit and Purchase Letter Agreements to Board for approval
Staff Recommendation

- Authorize the General Manager to enter into an agreement with the Metropolitan Water District of Southern California (MWD) for a Cyclic Storage account.
Local Resources Program Agreement for the Oceanside Pure Water and Recycled Water Expansion Phase I Project

Water Planning and Environmental Committee
October 24, 2019

Goldy Herbon
Senior Water Resources Specialist
Local Resources Program

- LRP is used to help meet local supply targets
- MWD financial incentive program
  - Established in 1981, last updated in 2014
  - $33.1M for 215,000 AF in 2018
- Funds new local water supply projects
- Target increased to 170,000 AF/Y in 2018
City of Oceanside Project

Pure Water Oceanside
- Advanced Water Purification Facility
- Injection & groundwater Monitoring Wells
- Conveyance Pipelines
- Blending Facilities
City of Oceanside Project

Recycled Water Expansion Phase I

- Reservoirs
- Pump stations
- Pipelines
Recycled Water Expansion Map
Pure Water & Recycled Water Expansion Phase I

Construction Costs: $134.3 M
Annual Operation and Maintenance Costs: $5.8 M
Project Yield: 6,049 AF/Y

Upper Conveyance
1,680 AFY FAT
  560 AFY Title 22
2,240 AFY Total

Lower Conveyance
449 AFY Title 22

Pure Water
3,360 AFY FAT (injected into aquifer)
Application Process

Oceanside submitted to Water Authority

Water Authority submitted application to MWD

MWD developed draft agreement

Agreement to be executed by MWD, Water Authority and Oceanside
Next Steps

- September 26, 2019 - Oceanside City Council Approval
- October 24, 2019 - Water Authority Board Approval
- November 5, 2019 - MWD Board Approval (anticipated)
Staff Recommendation

Authorize the General Manager to execute a Local Resources Program agreement with the Metropolitan Water District of Southern California and the City of Oceanside for the Oceanside Pure Water and Recycled Water Expansion Phase I Project.
Local Resources Program Agreement for the Pure Water San Diego Program - North City Project Phase 1

Water Planning and Environmental Committee
October 24, 2019

Goldy Herbon
Senior Water Resources Specialist
Construction Costs: $1.4 B
Annual Operation and Maintenance Costs: $8.4 M
Project Yield: 33,600 AF/Y
City of San Diego Project

North City Pure Water Facility

- 33,600 AFY
- Advanced water treatment processes

Rendering of North City Advanced Water Purification Facility
Conveyance Pipeline to Miramar Reservoir
San Diego submitted to Water Authority

Water Authority submitted application to MWD

MWD developed draft agreement

Agreement to be executed by MWD, Water Authority and San Diego
Next Steps

- October 22, 2019 - San Diego City Council Approved
- October 24, 2019 - Water Authority Board Approval
- November 5, 2019 - MWD Board Approval (anticipated)
Authorize the General Manager to execute a Local Resources Program agreement with the Metropolitan Water District of Southern California and the City of San Diego for the Pure Water San Diego Program - North City Project Phase I.
Fiscal Sustainability Task Force Update

Administrative & Finance Committee
October 24, 2019

Frank Hilliker, FSTF Chair
Lisa Marie Harris, Director of Finance/Treasurer
Summary of FSTF Meetings #4 & #5

- FSTF covered the following items on September 27 and October 11
  - Staff handed out Questions/Responses from Task Force Members

- Lengthy discussion of TSWAR - SAWR transition
  - Leading to FSTF Board Recommendation on November 21

- Roll-Off & Detachment Impacts
- Fixed Charge Policy Guidance and Rate Design Considerations

- Schedule and Next Steps
Fiscal Sustainability Task Force (FSTF) Overview

- FSTF Meeting Schedule - Water Authority Open Fridays
  - Have held five meetings (8/8, 8/30, 9/13, 9/27, 10/11)

- Discussion has Included:
  - Why Are We Here?
  - Study Integration & FSTF Timeline
  - Rate Setting Principles
  - Financial Metrics
  - Long-Range Demand Forecast Development
  - Historical Demand Analysis
  - Cost of Service Report Walk-Through
  - Transitional Special Agriculture Water Rate (TSAWR)
  - SAWR Reliability Benefit to M&I Customers, Rate Design & Sensitivity Analysis
  - Roll-Off & Detachment Impacts
  - Fixed Charge Policy Guidance & Rate Design Considerations
## TSAWR Program (Cost Benefit and Reduced Level of Service)

<table>
<thead>
<tr>
<th>Supply Rate Credit</th>
<th>Supply Reliability Charge Exemption</th>
<th>Storage Charge Exemption</th>
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</thead>
<tbody>
<tr>
<td>Differential between SDCWA Melded Supply and MWD Tier 1</td>
<td>Excludes TSAWR deliveries from share of supply reliability charge</td>
<td>Excludes TSAWR deliveries from share of storage charge</td>
</tr>
<tr>
<td>MWD Allocation Level and Duration</td>
<td>MWD Allocation Level and Duration (forgo reliability benefit of desal and QSA)</td>
<td>ESP Event Cutback (twice the level of M&amp;I customers)</td>
</tr>
<tr>
<td>No Access to Carryover Storage Supplies</td>
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Meetings #4 & #5 Focused on Special Agriculture Water Rate

TSAWR program reflects a lower level of service provided to Agriculture customers. Primary FSTF focus is to transition TSWAR to SAWR, to continue lower level service to AG program prior to program sunsets at the end of CY 2020.

- **Supply Reliability:**
  - TSAWR customers forgo additional reliability benefit associated with QSA and Carlsbad Desalination Project supplies

- **Supply Component:**
  - Occurs when MWD is allocating supplies to Water Authority
  - Reduction equal to MWD cutback to Water Authority
  - Reduction period corresponds to MWD cutback duration

- **Storage Component:**
  - Emergency Storage Program
    - TSAWR customers cutback at twice level of regional M&I cutback - up to 90%
    - Water reallocated to commercial and industrial customers
  - Carryover Storage Program
    - TSAWR customers receive no deliveries from CSP
Meetings #4 & #5 Focused on Special Agriculture Water Rate

- Define a reasonable and actionable level of service difference
  - Storage (ESP)
  - Supply Reliability
  - Source of Supply
  - Severity of Delivery Cutbacks

- Create a SAWR Program Criteria for Expanded Use
  - Provide Region’s Agriculture Industry users certainty about a permanent program to assist in future investment decisions
  - Allow for new users to join program
  - Streamline annual validation and process
  - Provide a permanent solution that meets cost of service

- Task force shortlisted four preferred alternatives for further review and analysis by staff and its Cost of Service consultant
  - Provide FSTF Recommendation to Board on November 21, 2019.
FSTF Next Steps

- Friday, October 25
  - Evaluate Four SAWR Proposals for Board Consideration
  - Continued Discussion of Fixed Charge Guidance
  - Revenue & Rate Design Alternatives

- Thursday, November 21
  - FSTF SAWR Recommendation for Board Consideration

- Future Topics
  - SAWR Policy and Implementation
MWD’s Mid-Cycle Biennial Budget Review

Imported Water Committee
October 24, 2019

Liz Mendelson-Goossens
Senior Water Resources Specialist
MWD’s Forecasted & Actual Water Sales

Demand for MWD Water (Acre-Feet)

Calendar Year

2010 2015 2020 2025 2030 2035 2040

- Actual Demand on MWD
- 2005 MWD UWMP
- 2010 MWD UWMP
- 2015 MWD UWMP

Our Region’s Trusted Water Leader
San Diego County Water Authority
Fiscal Year 2019 Key Financial Results

Budget to Actual Comparison: Revenues

- **Budget**: $461M
- **Actual**: $415M

Revenues under budget: ~$206M

$ in Millions

<table>
<thead>
<tr>
<th>Budget</th>
<th>Actual</th>
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<tbody>
<tr>
<td>Water sales &amp; exchanges</td>
<td>Hydropower</td>
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<tr>
<td>Fixed charges</td>
<td>Taxes</td>
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<tr>
<td>Interest</td>
<td>Other</td>
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Fiscal Year 2019 Key Financial Results

Budget to Actual Comparison: Expenditures

- Expenditures under budget: ~$173M

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<td>$50M</td>
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<td>$6400-6800</td>
<td>$25M</td>
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- State Water Contract
- Supply Programs
- Demand Management
- CRA Power
- Departmental O&M
- Debt Service
Fiscal Year 2019 Key Financial Results

Unrestricted Reserves

Budget

$415M

Actual

$461M

At End of FY 2019

Revenues under budget: ~$206M

Expenditures under budget: ~$173M
Fiscal Year 2020 Outlook

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

Expenditures
Shortfall:
~170M

Projected

$325M

Projected Unrestricted Reserves at End of FY 2020

No Management Actions

FY 2020

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San Diego County Water Authority
Fiscal Year 2020 Outlook

Projected FY 2020 CIP Expenditures

- **Budget**: $120M
  - PAYGo: $80M
  - Debt: $40M
- **Projected**: $300M
  - PAYGo: $270M
  - Debt: $30M

Projected Unrestricted Reserves at End of FY 2020

- **No Management Actions**: $325M
- **Repurpose PAYGo**: $415M

Our Region’s Trusted Water Leader
San Diego County Water Authority
Recent Trends

- MWD’s revenues are highly dependent on water sales
- Sales highly variable
MWD’s approach to managing revenue gaps

- Divert PAYGo funds budgeted for CIP
  - Increases debt-funded CIP from budget
- Utilize unrestricted reserves
MWD’s approach to managing revenue gaps

Budgeted and Actual Capital Expenditure Funding

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<tbody>
<tr>
<td>PAYGo</td>
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<td>Bonds &amp; Notes</td>
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</tbody>
</table>

$ in Millions

Our Region’s Trusted Water Leader
San Diego County Water Authority
MWD’s approach to managing revenue gaps

- Divert PAYGo funds budgeted for CIP
- Increases debt-funded CIP from budget
- Utilize unrestricted reserves

Our Region’s Trusted Water Leader
San Diego County Water Authority
Opportunity for Long Range Financial Planning

- 2004: Last update to MWD’s Long Range Finance Plan
- FY 2013: MWD starts including “Financial Forecast” in biennial budget
- Forecast is not long-range financial planning, does not include:
  - Connection to other planning documents
  - Strategies to manage changed conditions
Looking Ahead

- MWD’s 2021 and 2022 budget and rate setting
  - Jan. 2020: Process begins
  - Feb. 2020: Present proposed rates and charges
- MWD’s 2020 IRP update
  - Demand forecasts
  - Supply investments
    - Bay-Delta project
    - Regional Recycled Water Program
Sacramento Update

Legislation and Public Outreach Committee
October 24, 2019

Glenn Farrel, Government Relations Manager
October 13: Governor completed final action on 1,042 bills sent to him during 2019 legislative session
- Governor signed 870 bills
- Governor vetoed 172 bills (16.5% veto rate)
- 2,625 total bills were introduced in the Legislature during 2019
  - With 1,042 bills sent to the Governor, there are 1,583 two-year bills still active in the Legislature for 2020
Governor’s Action on Bills
Major-Takeaways from First Legislative Session

- He is not Jerry Brown
  - Governor Newsom signed several bills that were “do-overs” from Brown vetoes
  - Signaled early departure from predecessor’s approach on water, housing, and education

- He understands the power of image
  - Nearly daily signing ceremonies throughout California between September 13 and October 13

- The learning curve for a new Administration is steep
  - While highly successful in advancing progressive policies receiving national attention
    - Contradictory messaging on high-speed rail
    - Wavering on childhood vaccine legislation
    - “Being a governor, half of it is visioning and half of it is managing. On the visioning, he’s got an A-plus. On managing, there is room for improvement” (Mike Madrid - Sacramento political consultant, CalMatters - 10/13/19)
Sponsored Legislation - AB 1588 (Gloria/Gray)

- AB 1588 was co-sponsored by the Water Authority and the Otay Water District

- AB 1588 addresses the lack of satisfactory crediting and equivalency standards for military veterans transitioning into civilian water and wastewater system operator occupations

- Signed into law by Governor on October 11
### Scorecard on 2019 Water Authority Position Bills

<table>
<thead>
<tr>
<th>Water Authority Board Position</th>
<th># of Bills</th>
<th>Amendments Taken?</th>
<th>Chaptered</th>
<th>Vetoed</th>
<th>2-Year Bill</th>
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<tr>
<td>Sponsor/Co-Sponsor</td>
<td>2</td>
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<td>5</td>
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<td>9</td>
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<tr>
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<td>1</td>
<td>-</td>
<td>-</td>
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<td>1</td>
</tr>
<tr>
<td>Oppose Unless Amended</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>-</td>
<td>4</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>26</td>
<td>4</td>
<td>7</td>
<td>2</td>
<td>17</td>
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</table>
Final Disposition of Other Key Bills by Governor

- **AB 1184 (Gloria)** - Would have required public agencies to retain every public record transmitted by email for at least two years
  - Vetoed by Governor

- **AB 1290 (Gloria)** - Will require the use of PLAs as a condition of receiving state financial assistance for work performed on the City of San Diego’s Pure Water Program
  - Signed into law by Governor

- **SB 487 (Caballero)** - Would have required aerial snow surveys by DWR
  - Vetoed by Governor
Legislative Roundtable Event

- Congressmember Mike Levin (D-Oceanside)
- Wednesday, November 6
  - 1:30 PM: Reception
  - 2:00 PM - 3:00 PM: Roundtable event
Faces of the Water Industry

Legislation & Public Outreach Committee
Oct. 24, 2019

Mike Lee
Public Affairs Supervisor
Recognizing Water Industry Employees

San Diego County’s work force offers career opportunities for attainment, from high advanced degrees.

California celebrates Water Professionals Appreciation Week every October to recognize the people who provide safe and reliable water supplies statewide.

Joni German
Water Resource Specialist
Water Authority

Benjamin Parks
Engineering Inspector
Vista Irrigation District

Emma Ward-McNally
Engineer II
Water Authority

Rasheda Eastmon
Customer Service Representative
Helix Water District

Lincoln Anderson
Utility Worker II
Otay Water District

Mike Cross
Swee

Jillian Cardenas
Senior Office Assistant
Water Authority

Brett Graham
Systems Operator II
Fallbrook Public Utility District

Bernie Bootsma
Fleet Mechanic II
Water Authority
Social Media Highlights Member Agencies

- California Water Professionals Appreciation Week Oct. 5-13
  - Involve member agencies through JPIC
  - Highlight diversity of jobs and people in the industry
  - Feature military veterans
  - Promote on social media
  - Support B2U program
Calendars Extend Outreach Through 2020

- Promotional item for job fairs, offices, stakeholder groups, elected officials, colleges and more
  - Ready for distribution in November to agencies, job fairs and other events
  - 2,500+ requests from member agencies
Project Gains Admirers

Andrew LaTour
Customer Services Field Worker
City of Poway

sdcwa
Poway, California

#WorkForWater #CAWater
#WaterAuthority #SanDiego #Poway

2d 1 like Reply

-cweamembers Outstanding pictures of CA water pros SDCWA! Can’t wait to see the next water pro featured... 🤚viron

2d 1 like Reply

— View replies (1)

myronlcompany Thank you Andrew 🙌

1d 1 like Reply

Liked by mikelee16 and 27 others

2 DAYS AGO

Add a comment...
“Faces” Receives Statewide Attention

FOCUSING
ON THE
MANY FACES
OF THE
WATER INDUSTRY

By Mike Lee

WATER AGENCIES ARE TYPICALLY PROFICIENT talking about all sorts of plans and programs that seem esoteric to regular residents — Urban Water Management Plans, Water Shortage Contingency Plans, Capital Improvement Projects and all the rest.
Water Conservation Garden
Eagle Scout Project

Legislation and Public Outreach Committee
October 24, 2019

Kellen Foster
Eagle Scout Candidate, BSA Troop 959
The Project

- Build pallet walls at Water Conservation Garden

**Goals:**

- Make more efficient use of exhibit space
  - Smaller turf exhibit
  - Space for new kids displays in back
- Promote Garden’s sustainability message
  - Use recycled materials as much as possible

Turf exhibit before project
Used pallets prior to disassembly and reconstruction
Re-assembling pallets as wall sections

Staining using leftover supplies

Framing and construction
Finished Walls

- Completed July 2019
- Three 6’ x 12’ sections
- 160+ hours (collection through construction)
- Thank you Garden, donors and supporters!

Special thanks to Paul Redeker for his support and assistance!
Proposed 2020 Legislative Policy Guidelines

Legislation and Public Outreach Committee
October 24, 2019

Glenn Farrel, Government Relations Manager
Legislative Policy Guidelines

- Annual update for 2020
- Legislative Policy Guidelines provide guidance on issues of importance and a framework to evaluate legislative and regulatory issues
LPGs: Major Areas Proposed for Modification

- Proposed substantive modifications
  - Imported Water Issues
    - Bay-Delta
      - Co-Equal Goals
      - Bay-Delta Conveyance Project
  - Imported Water Supply
    - Colorado River
    - Water Transfers
  - Water Planning
    - Climate Change
      - Funding
    - Land Use and Water Management
      - Local Conditions
Next Steps on Legislative Policy Guidelines

- Staff is requesting suggestions for revisions from Board members and member agencies
- Please return to Glenn Farrel by November 4
- Final proposed Legislative Policy Guidelines to be presented for Board’s consideration of approval on November 21
Lake Hodges Hydroelectric Facility
Unit 2 Outage Update

Engineering & Operations Committee
October 24, 2019

Jesus M. Meda
Operations and Maintenance Manager
Background

- 40-megawatt Facility began commercial operations in August 2012
- 25-Year Power Purchase Agreement with SDG&E
- 5-Year contract with a vendor (2012-2017) to operate and maintain the Facility
- WA O&M Department took over O&M functions effective November 1, 2017.
Main Components of a Turbine Generator
Rotor Prior to Installation

Bus Bars

12 Electromagnets (Field Poles)
O&M Staff became aware of an issue when a “Ground Fault” alarm was triggered by the Unit 2’s Excitation System.

- Excitation System provides DC power to the 12 electromagnets (field poles).
- Plant staff troubleshooted various components of the System.
- Ultimately inspected, tested and discovered an issue with the System’s Bus Bars.
- Consultant Specialist to Assist.
Consequences of Ground Faults

- A single ground fault triggers an alarm on the Unit’s Excitation System
  - Requires troubleshooting through the various Excitation System components to determine cause
  - It may prevent unit from starting
- If two ground faults occur on the unit
  - Arc-Flash Potential
  - Personnel Safety Issue
  - Significant Damage to Rotor and Stator
Unit #2 Rotor Installation

Bus Bars:
2 Leads

11 Jumpers

Stator’s Copper Windings

Gap
Insulated Bus Bar Leads and Jumper with Clamping Plates

- Bus Bar Leads
- Bottom Clamping Plate
- Top Clamping Plate
- Bus Bar Jumper
Bus Bar Connections to Field Poles

Rim Studs
Top Clamping Plate Removed

Start and Finish Leads

Bottom Plate

Jumper
Bus Bar Leads with Jumper Removed

Most Significant Insulation Damaged Areas

Peeled Insulation
Bus Bar Lead Removed from Rotor

Damaged Insulation

Flex Link
Bus Bar Lead with Damaged Insulation

Bare Copper
Primary Cause of Insulation Breakdown

Uncured and Tacky Epoxy Resin
Secondary Causes of Insulation Breakdown

- Original Flex Link is too stiff
- Clamping plates edges are sharp
- Insulation is in direct contact with steel clamping plates (no liner)
- Lack of insulation curing to design height
- Insulation Build-up on Inside Corners
Bare Bus Bars and Plates (Insulation/Coatings Removed)
Bare Bus Bar Lead (Insulation Removed)
Staff Performing Measurements on Bus Bar Spacing
Measurements on a Bus Bar Jumper
11 New Bus Bar Jumpers Fabricated
New Bus Bar Jumper
New Insulation Applied by O&M Staff
New Insulation Being Applied: First Tape
New Insulation Being Applied: 2nd Tape
New Insulation Applied on Inside Corner
New Insulation Being Applied: 3rd Tape
New Insulation Applied To Exact Thickness
Insulated Bus Bars Placed Within Pressure Molds
Proper Pressure Applied to Insulated Bus Bars
Leads and Jumpers Baked for Proper Curing
Fully Baked/Cured Jumper
Fully Baked/Cured Jumper
Summary of Challenges

- Complex Excitation System
  - Systematic Troubleshooting Approach
  - Ground Fault Only Occurred When Rotor Operating and Not When Unit was at Standstill
- Limited/Confined Work Space Area at Bus Bars
- Fabrication of New Jumpers
- Proper Curing of Insulation
  - Specialized Nature of Insulation Work (Expert Required)
  - Long Lead Time for Insulating Materials and Resins
  - New Insulation Specification Required to Match Available Materials/Resins
  - Design/Fabrication of New Molds Required for Proper Curing of Insulation
  - Detailed and Time Consuming Insulation and Curing Process
Next Steps

- Monitor Unit 1 Excitation System
- Activities Planned for Next Planned Maintenance Shutdown (Spring 2020)
  - Inspection of Unit 1’s Bus Bar System
  - Fabricate/Insulate Jumpers and Leads in Preparation
  - Fabricate and Insulate New Leads for Unit 2 to Address Flex Link Issue
Pipeline 4 Repair in Moosa Canyon Update

Engineering & Operations Committee
October 24, 2019

Neena Kuzmich
Engineering Manager
## Current Activities

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 30</td>
<td>Completed temporary aqueduct pressure relief system</td>
</tr>
<tr>
<td>October 2</td>
<td>Completed forensic analysis</td>
</tr>
<tr>
<td>October 3</td>
<td>Fibrwrap mobilized and began pipe preparation</td>
</tr>
<tr>
<td>October 10</td>
<td>Finalized carbon fiber design</td>
</tr>
<tr>
<td>October 10</td>
<td>Began installation of carbon fiber material</td>
</tr>
<tr>
<td>October 21</td>
<td>Completed carbon fiber material placement</td>
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</table>
Temporary Pressure Relief System - Complete
Carbon Fiber Design

Tyfo Fibrewrap System - Full Pipe Section

Our Region’s Trusted Water Leader
San Diego County Water Authority
Carbon Fiber Installation
Carbon Fiber Installation
Carbon Fiber Installation
Future Activities

- Disinfect pipeline
- Shutdown pipeline
- Remove bulkheads
- Return pipe to normal operation
Contract Summary

Fibrwrap Construction Services, Inc.

- Original Contract Amount $871,342
- Change Order 1 $140,409
- New Contract Amount $1,011,751
Staff recommendations

a. Ratify Change Order 1 to Fibrwrap Construction Services, Inc. in the amount of $140,409 for the carbon fiber repair of Pipeline 4 in Moosa Canyon.

b. Authorize the continuation of the emergency declaration for the repair of Pipeline 4 in Moosa Canyon.
UPDATE: POTENTIAL DETACHMENT OF RAINBOW/FALLBROOK

Board of Directors Meeting
October 24, 2019

Special Counsel Claire Hervey Collins
Rainbow Municipal Water District and Fallbrook Public Utility District have proposed to detach from the Water Authority and annex to Eastern Municipal Water District, a Riverside County agency.

This reorganization process is governed by the Local Agency Formation Commission (“LAFCO”)
May 2019 - Water Authority advised of potential detachment. Water Authority made a Public Records Act request to obtain information, which identified that:

- October 2018 - Rainbow & Fallbrook begin detachment planning
- January 2019 - Rainbow & Fallbrook approach San Diego LAFCO about process of multi-county change of organization
- Spring 2019 - San Diego and Riverside LAFCOs discuss sharing reorganization duties
Timeline (cont’d)

- Summer 2019
  - Rainbow, Fallbrook, and Eastern enter MOU
  - Water Authority meets with Rainbow & Fallbrook
  - Water Authority meets with San Diego LAFCO

- September 2019 - Water Authority requests consolidating LAFCO actions in San Diego

- October 2019 - San Diego LAFCO approves MOU with Riverside LAFCO to handle reorganization
Under MOU, San Diego LAFCO will handle all phases of the proposed reorganization including the Municipal Service Review and sphere of influence changes.

LAFCO resolution also called for a study to be conducted.

Concern expressed about rate neutrality at LAFCO meeting.
Next Steps

- Await detailed proposal from Fallbrook & Rainbow
- Engage in consultations - required by LAFCO policy
  - Member agencies are all affected and should be consulted, as well as the Water Authority
Questions?