Capital Program Update

Jon Ganz, Section Head
Sewer Design Section

CMAA Southern CA Chapter
Breakfast of Champions
August 26, 2014
Wastewater System

- 23 Sanitation Districts
- 820 square miles
- 78 cities
- 5.5 million served
- 11 treatment plants
- 510 MGD treated
- 165 MGD for reuse
- 1,400 mi trunk sewers
Solid Waste System

- 6 Landfills (2 open)
- 2 Refuse-to-Energy Facilities
- 2 Recycling Facilities
- 3 Transfer Facilities
Sanitation Districts of Los Angeles County Organization Chart

LEGAL COUNSEL

BOARDS OF DIRECTORS

SECRETARY TO THE BOARDS OF DIRECTORS

CHIEF ENGINEER AND GENERAL MANAGER

ASSISTANT CHIEF ENGINEER AND ASSISTANT GENERAL MANAGER

ENGINEERING DEPARTMENT

FACILITIES PLANNING DEPARTMENT

FINANCIAL MANAGEMENT DEPARTMENT

HUMAN RESOURCES DEPARTMENT

SOLID WASTE MANAGEMENT DEPARTMENT

TECHNICAL SERVICES DEPARTMENT

WASTEWATER MANAGEMENT DEPARTMENT

SEWER DESIGN

PLANNING

ACCOUNTING

EMPLOYMENT SERVICES

MONITORING

WASTEWATER POLLUTION CONTROL PLANT

WASTEWATER & SOLID WASTE DESIGN

PROPERTY MANAGEMENT

BUDGETING & FINANCE

PAYROLL

ENERGY RECOVERY OPERATIONS & ENGINEERING

WASTEWATER RESEARCH

WATER RECLAMATION PLANTS

STRUCTURAL & ARCHITECTURAL DESIGN

PUBLIC INFORMATION

INSURANCE & CLAIMS

EMPLOYEE BENEFITS

SOLID WASTE RESEARCH & MONITORING

WATER QUALITY

WASTEWATER COLLECTION SYSTEMS

ELECTRICAL & INSTRUMENTATION DESIGN

GEOGRAPHIC INFORMATION SYSTEMS

PURCHASING

EMPLOYEE RELATIONS

AIR QUALITY

LABORATORIES

FIELD ENGINEERING

INFORMATION TECHNOLOGY

REVENUE COLLECTION

EMPLOYEE RELATIONS

LABORATORIES

ENVIRONMENTAL HEALTH & SAFETY

GENERAL SERVICES

GENERAL SERVICES

DOCUMENT SERVICES
### 10-Year CIP Projection

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Wastewater</td>
<td></td>
</tr>
<tr>
<td>Treatment Plant</td>
<td>$613 million</td>
</tr>
<tr>
<td>Sewer</td>
<td>$316 million</td>
</tr>
<tr>
<td>Outfall Tunnel</td>
<td>$616 million</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$1,545 million</strong></td>
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Santa Clarita Valley
Chloride Compliance

Valencia WRP

Saugus WRP
San Jose Creek WRP Flow Equalization Facilities
# Power Distribution System Modifications

<table>
<thead>
<tr>
<th>Water Reclamation Plant (WRP)</th>
<th>Cost ($ millions)</th>
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<tr>
<td>San Jose Creek WRP</td>
<td>9.3</td>
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<tr>
<td>Los Coyotes WRP</td>
<td>17.0</td>
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<tr>
<td>Valencia WRP</td>
<td>4.0</td>
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<tr>
<td>Pomona WRP</td>
<td>3.4</td>
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<tr>
<td>Long Beach WRP</td>
<td>3.4</td>
</tr>
<tr>
<td>Saugus WRP</td>
<td>3.5</td>
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<tr>
<td>Lancaster WRP</td>
<td>2.4</td>
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<tr>
<td><strong>Total:</strong></td>
<td><strong>43.0</strong></td>
</tr>
</tbody>
</table>
JO “A” – 6 Trunk Sewer Rehabilitation
JO “B” - 1A Trunk Sewer Rehabilitation
The Clearwater Program recommended alignment.

JWPCP Shaft Site

Royal Palms Beach Shaft Site
The northern part of the alignment is in alluvial material.

19,500" +/-
The southern part of the alignment is in rock-like material.
The groundwater profile will have an impact on the tunnel design.

**Groundwater Elevations**
- **Zone 1**: -20 to -15 feet
- **Zone 2**: -20 to -15 feet, but can be +10 feet when injecting.
- **Zone 3**: -20 to +35 feet
- **Zone 4**: highly variable
- **Zone 5**: ~+4 feet
There is a potential of encountering an abandoned oil well.
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To handle the internal pressure, a post-tensioned tunnel liner design is being evaluated.
The current design has two tendons per ring assembly.
To test the design, a proof of concept will be built.
Construction at Royal Palms Beach will be challenging.
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Construction at Royal Palms Beach will be challenging.
Construction at Royal Palms Beach will be challenging.
Connections will be done under live conditions.
The project should advertise next year.

|------|------|------|------|------|------|------|------|

Final Design

Advertise and Bid

Submittals and TBM Fabrication

JWPCP West Shaft Construction

Tunnel Construction

JWPCP Structures and Interconnections

Royal Palms Structures and Interconnections
Bid Information

● Engineering Counter
  – Joint Administration Office, Whittier, CA
  – (562) 908-4288 x1205

● Website (www.lacsd.org)
  – Bid Information
    • Listing of Advertised Construction Projects
      – Project Information and Important Dates
      – Plan Holder List
      – Bid Item Sheets
      – Bid Results
    • Amendments to Standard Specifications for Public Works Construction and Standard Drawings