APPENDIX EE
<table>
<thead>
<tr>
<th>Project Area</th>
<th>Project Name</th>
<th>Year</th>
<th>Type</th>
<th>Level</th>
<th>Description</th>
<th>Flow Capacity</th>
<th>Treatment</th>
<th>Cost (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Supply</td>
<td>Watershed Management</td>
<td>2022</td>
<td>High</td>
<td>Low</td>
<td>Flow Capacity</td>
<td>10,000</td>
<td>$5,000</td>
<td>$5,500</td>
</tr>
<tr>
<td></td>
<td>Watershed Management</td>
<td>2022</td>
<td>High</td>
<td>Low</td>
<td>Flow Capacity</td>
<td>10,000</td>
<td>$5,000</td>
<td>$5,500</td>
</tr>
<tr>
<td></td>
<td>Watershed Management</td>
<td>2022</td>
<td>High</td>
<td>Low</td>
<td>Flow Capacity</td>
<td>10,000</td>
<td>$5,000</td>
<td>$5,500</td>
</tr>
<tr>
<td></td>
<td>Watershed Management</td>
<td>2022</td>
<td>High</td>
<td>Low</td>
<td>Flow Capacity</td>
<td>10,000</td>
<td>$5,000</td>
<td>$5,500</td>
</tr>
</tbody>
</table>

**Total:** $5,500,000
## WASTEWATER CIP

### Project: 200 Ridge Road Manhole Replacement

**Carroll Capital:**
- YES
  - 200 Ridge Road Manhole Replacement

**Ridge Capital:**
- NO
  - 200 Ridge Road Manhole Replacement

### Priority Capital:
- JC

### Project:
- Priority Capital: JC

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Reimbursement</th>
<th>Collection</th>
<th>Penalties</th>
<th>Consultant</th>
<th>FM</th>
<th>Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>

### Details:
- **Capacity:**
  - Transient
  - Non-Treatment
  - Distribution

### Costs:
- **Carroll Capital:**
  - YES: $70,715
  - NO: $92,388

### Summary:
- **Total:** $163,103
PIPPINES – 2019/2020 CIP

Priority Pipeline Projects for Amador Water Agency

PROPOSED PRIORITY PIPELINE PROJECTS FOR 2019-2020 CIP

- Hayden Alley - Sutter Creek
- Tucker Hill/Hanford - Sutter Creek
- Broadway/Borg (Eureka) - Sutter Creek
- North Arroyo Seco - Ione
- South Amador Street - Ione
- Quail Drive (Robin Lane) - Pine Grove
- Lynn Way - Pine Grove
SUTTER CREEK

CITY OF IONE
### Hayden Alley

<table>
<thead>
<tr>
<th>Feet of Pipe</th>
<th>Pipe Size</th>
<th>Fire Hydants</th>
<th>Valves</th>
<th>Laterals</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>545</td>
<td>6-inch</td>
<td>1</td>
<td>6</td>
<td>8</td>
<td>$249,284</td>
</tr>
</tbody>
</table>

### Tucker Hill

<table>
<thead>
<tr>
<th>Feet of Pipe</th>
<th>Pipe Size</th>
<th>Fire Hydants</th>
<th>Valves</th>
<th>Laterals</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>225</td>
<td>8-inch</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>$121,976</td>
</tr>
</tbody>
</table>
### Broadway/Borge (Eureka)

<table>
<thead>
<tr>
<th>FEET OF PIPE</th>
<th>PIPE SIZE</th>
<th>FIRE HYDANTS</th>
<th>VALVES</th>
<th>LATERALS</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>1250</td>
<td>6-INCH</td>
<td>4</td>
<td>7</td>
<td>16</td>
<td>$551,213</td>
</tr>
</tbody>
</table>

### North Arroyo Seco

<table>
<thead>
<tr>
<th>FEET OF PIPE</th>
<th>PIPE SIZE</th>
<th>FIRE HYDANTS</th>
<th>VALVES</th>
<th>LATERALS</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>720</td>
<td>6 &amp; 8-INCH</td>
<td>2</td>
<td>4</td>
<td>10</td>
<td>$308,326</td>
</tr>
</tbody>
</table>
**SOUTH AMADOR STREET**

<table>
<thead>
<tr>
<th>FEET OF PIPE</th>
<th>PIPE SIZE</th>
<th>FIRE HYDANTS</th>
<th>VALVES</th>
<th>LATERALS</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>530</td>
<td>6-INC</td>
<td>2</td>
<td>10</td>
<td>5</td>
<td>$270,967</td>
</tr>
</tbody>
</table>

**QUAIL DRIVE**

**(ROBIN LANE)**

<table>
<thead>
<tr>
<th>FEET OF PIPE</th>
<th>PIPE SIZE</th>
<th>FIRE HYDANTS</th>
<th>VALVES</th>
<th>LATERALS</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>4-INC</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>$193,005</td>
</tr>
</tbody>
</table>
### Comparison of Pipeline Priorities

<table>
<thead>
<tr>
<th>PIPELINE</th>
<th>PIPE SIZE AND CONDITION</th>
<th>AREA OF BENEFIT (people in area of benefit)</th>
<th>WATER QUALITY AND LOOPING</th>
<th>FIRE FLOW AND PROTECTION</th>
<th>NUMBER OF CONNECTIONS</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAYDEN ALLEY</td>
<td>Poor, many repairs, disconnected pipelines</td>
<td>Sutter Creek, Citywide (2010)</td>
<td>YES</td>
<td>YES</td>
<td>8</td>
<td>$249,284</td>
</tr>
<tr>
<td>TUCKER HILL</td>
<td>Poor, 2-inch feed line crosses Main Street</td>
<td>Tucker Hill (20)</td>
<td>-</td>
<td>YES</td>
<td>6</td>
<td>$121,976</td>
</tr>
<tr>
<td>BROADWAY/BORG(EUREKA)</td>
<td>Poor, existing 3-inch line with minimal flow</td>
<td>Eureka &amp; Broadway (73)</td>
<td>YES</td>
<td>YES</td>
<td>16</td>
<td>$551,213</td>
</tr>
<tr>
<td>NORTH ARROYO SECO</td>
<td>Poor, pipeline failing apart</td>
<td>N Arroyo Seco (55)</td>
<td>-</td>
<td>YES</td>
<td>10</td>
<td>$308,326</td>
</tr>
<tr>
<td>SOUTH AMADOR ST</td>
<td>Poor, disconnected pipelines</td>
<td>South-East Ione (419)</td>
<td>YES</td>
<td>YES</td>
<td>5</td>
<td>$270,967</td>
</tr>
<tr>
<td>QUAIL DR (ROBIN LN)</td>
<td>Poor, disconnected pipelines</td>
<td>South Pine Acres (363)</td>
<td>YES</td>
<td>YES</td>
<td>8</td>
<td>$193,005</td>
</tr>
<tr>
<td>LYNN WAY</td>
<td>Poor, shallow line with many repairs</td>
<td>West Lynn Way (7)</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>$139,024</td>
</tr>
</tbody>
</table>

**FEET OF PIPE** | **PIPE SIZE** | **FIRE HYDANTS** | **VALVES** | **LATERALS** | **COST** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>365</td>
<td>4-INCH</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>$139,024</td>
</tr>
<tr>
<td>RANKING</td>
<td>PIPELINE</td>
<td>PIPE SIZE AND CONDITION</td>
<td>AREA OF BENEFIT (people in area of benefit)</td>
<td>WATER QUALITY AND LOOPING</td>
<td>FIRE FLOW &amp; PROTECTION</td>
</tr>
<tr>
<td>---------</td>
<td>------------------</td>
<td>--------------------------</td>
<td>---------------------------------------------</td>
<td>---------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>1</td>
<td>HARDEN ALEY</td>
<td>Poor, many repairs, disconnected pipelines</td>
<td>Sulker Creek, Citywide (2010)</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>2</td>
<td>QUAIL DR (ROBIN LN)</td>
<td>Poor, disconnected pipelines</td>
<td>South Pine Acres (363)</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>3</td>
<td>NORTH AMADOR BLVD</td>
<td>Poor, pipeline falling apart</td>
<td>Tucker Hill (20)</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>4</td>
<td>SOUTH AMADOR ST</td>
<td>Poor, disconnected pipelines</td>
<td>South-East lone (419)</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>5</td>
<td>BROADWAY Milp Mea</td>
<td>Poor, existing 6-inch line with minimal flow</td>
<td>Eureka &amp; Broadway (73)</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>6</td>
<td>TUCKER HILL</td>
<td>Poor, 2-inch feed line crosses Main Street</td>
<td>Tucker Hill (20)</td>
<td>YES</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>VICTORY WAY</td>
<td>Poor, until the riverbank (20)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

PIPELINE RANKINGS – CIP 2019-2020
APPENDIX FF
Engineering & Planning Committee  
(Directors Farrington and Peters)  
March 27, 2019  
1:30 p.m.  
12800 Ridge Rd  
Sutter Creek CA 95685

Public Notice: Members of the public will have the opportunity to directly address the Engineering Committee on any item listed on the Agenda below before or during consideration of that item.

There is a three minute time limit per person.

1. CALL TO ORDER

2. WATER AND WASTEWATER SYSTEMS
   a. Upcoming 5 year Capital Improvement Plan Projects
   b. Draft CIP for FY 2019-20 Budget
   c. Miscellaneous Project updates

3. ADJOURNMENT

In compliance with the Americans with Disabilities Act, if you are a disabled person and you need a disability-related modification or accommodation to participate in this meeting, then please contact Cris Thompson at (209) 223-3018 or (209) 257-5281 (fax). Requests must be made as early as possible, and at least two-full business days before the start of the meeting.
Public Notice: Members of the public will have the opportunity to directly address the Engineering Committee on any item listed on the Agenda below before or during consideration of that item.

There is a three minute time limit per person.

1. CALL TO ORDER

2. WATER AND WASTEWATER SYSTEMS
   a. 5-year Capital Improvement Plan Projects
   b. Draft CIP for FY 2019-20 Budget
   c. Taste and Odor Status & Control
   d. Miscellaneous Project updates

3. ADJOURNMENT

In compliance with the Americans with Disabilities Act, if you are a disabled person and you need a disability-related modification or accommodation to participate in this meeting, then please contact Cris Thompson at (209) 223-3018 or (209) 257-5281 (fax). Requests must be made as early as possible, and at least two-full business days before the start of the meeting.
Engineering & Planning Committee  
(Directors Farrington and Peters)  
May 15, 2019  
1:30 p.m. or as soon thereafter as may be heard  
12800 Ridge Rd  
Sutter Creek CA 95685

Public Notice: Members of the public will have the opportunity to directly address the Engineering Committee on any item listed on the Agenda below before or during consideration of that item.

There is a three minute time limit per person.

1. CALL TO ORDER

2. WATER AND WASTEWATER SYSTEMS

a. Project Ranking & CIP for FY 2019-20  
b. Ione Taste and Odor Control & Status  
c. Strategic Plan Update Status  
d. Rabb Park Fire Hydrant Installation Status  
e. HMGP Tank Replacement Project Status  
f. Tanner Backwash Recycling Status  
g. Miscellaneous Project updates

3. ADJOURNMENT

In compliance with the Americans with Disabilities Act, if you are a disabled person and you need a disability-related modification or accommodation to participate in this meeting, then please contact Cris Thompson at (209) 223-3018 or (209) 257-5281 (fax). Requests must be made as early as possible, and at least two-full business days before the start of the meeting.
Public Notice: Members of the public will have the opportunity to directly address the Engineering Committee on any item listed on the Agenda below before or during consideration of that item

There is a three minute time limit per person.

1. CALL TO ORDER

2. AGENCY GENERAL
   A. Review of Capital Project Procedures Draft

3. ADJOURNMENT

In compliance with the Americans with Disabilities Act, if you are a disabled person and you need a disability-related modification or accommodation to participate in this meeting, then please contact Cris Thompson at (209) 223-3018 or (209) 257-5281 (fax). Requests must be made as early as possible, and at least two-full business days before the start of the meeting."
<table>
<thead>
<tr>
<th>Name</th>
<th>Date modified</th>
<th>Type</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Agreements</td>
<td>7/30/2018 12:44 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>40 Project Accounting</td>
<td>8/20/2019 8:49 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>70 Environmental</td>
<td>4/16/2019 1:52 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>215 Surveying</td>
<td>11/9/2017 4:47 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>216 Easements</td>
<td>6/15/2018 9:56 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>223 Electrical Force Account</td>
<td>9/12/2018 11:56 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>237 Permits</td>
<td>3/17/2017 3:45 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>309 Information at Start</td>
<td>2/6/2017 11:53 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>310 Plans-Specs-RFs</td>
<td>9/7/2017 8:58 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>311 Contractor</td>
<td>7/30/2018 12:31 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>312 Submittals</td>
<td>4/24/2019 1:37 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>353 Grants</td>
<td>3/15/2019 4:04 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>360 Construction Manager</td>
<td>6/20/2019 9:27 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>362 Inspector Reports-Photos</td>
<td>8/9/2019 4:17 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>369 Geotechnical Engineer</td>
<td>4/24/2019 10:36 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>377 Change Orders</td>
<td>9/25/2017 1:07 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>381 Progress Payments</td>
<td>8/18/2019 10:29 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>Labor Compliance</td>
<td>9/17/2018 3:42 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>Landscaping</td>
<td>4/30/2018 10:18 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>Letters</td>
<td>7/30/2018 12:45 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>Maps and Drawings</td>
<td>5/17/2019 3:38 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>Misc</td>
<td>2/26/2019 4:15 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>Notices and Liens</td>
<td>10/15/2018 11:06 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>SWPPP</td>
<td>3/15/2018 3:32 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>Tech Specs</td>
<td>4/2/2019 10:58 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>Z - Camanche Redwood Tank 9 Demo</td>
<td>3/26/2019 11:44 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>2019 Camanche Village inspection letter</td>
<td>7/24/2019 9:36 AM</td>
<td>Adobe Acrobat</td>
<td>599 KB</td>
</tr>
</tbody>
</table>

Offline status: Online
Offline availability: Not available
APPENDIX HH
## Project Expenses through 07-31-19

### WATER PROJECTS

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Funded By</th>
<th>Status</th>
<th>Funding Contract Deadlines</th>
<th>FY 19-20 Budget ($K)</th>
<th>Expended to date ($K)</th>
<th>% of FY 19-20 Budget</th>
<th>Expended Life of Project ($K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lone Hydroelectric, Redwood Tanks Replacement - Hazard Mitigation Grant</td>
<td>Grant/Loan</td>
<td></td>
<td>12/31/2019</td>
<td>2,222,000</td>
<td>435,783</td>
<td>81%</td>
<td>1,548,179</td>
</tr>
<tr>
<td>CDAA Storm Repairs - Amando Canal</td>
<td>Grant/Oper Rates</td>
<td>3/1/2020</td>
<td>$921,819</td>
<td>1,161,410</td>
<td>2,673</td>
<td>0%</td>
<td>76,634</td>
</tr>
<tr>
<td>Pioneer Phase II CDIG</td>
<td>Grant/Oper Rates</td>
<td>$1,820,997</td>
<td>106,675</td>
<td>4,090</td>
<td>0%</td>
<td>2%</td>
<td>7,665</td>
</tr>
<tr>
<td>Pioneer Phase III USDA</td>
<td>Grant/Oper Rates</td>
<td>$4,991,321</td>
<td>249,896</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>9,480</td>
</tr>
<tr>
<td>Water Master Plan</td>
<td>Part, Fees / Prop Taxes</td>
<td></td>
<td>$1,976,000</td>
<td>2,001,486</td>
<td>481</td>
<td>0%</td>
<td>100,573</td>
</tr>
<tr>
<td>Water Modeling</td>
<td>Prop tax 40%</td>
<td></td>
<td>$57,010</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fire Protection improvements</td>
<td>Part, Fees</td>
<td></td>
<td>$8,786</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fire Flow Testing Program</td>
<td>Operating Rates</td>
<td></td>
<td>$13,880</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Security Upgrades - Lone</td>
<td>Operating Rates</td>
<td></td>
<td>$23,786</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Lone WTP Rehabilitation</td>
<td>Part, CFD</td>
<td></td>
<td>$1,386,023</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Buckhorn Backwash Cover</td>
<td>Part Fees</td>
<td></td>
<td>$65,694</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Buckhorn WTP Membrane Replacement and Upgrades</td>
<td>Part Fees</td>
<td></td>
<td>$57,208</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Standby Generators Tanks A &amp; B</td>
<td>Part Fees</td>
<td></td>
<td>$82,571</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SCADA Improvements</td>
<td>Part Fees</td>
<td></td>
<td>$59,890</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mt Crossman Tank</td>
<td>Part Fees</td>
<td></td>
<td>$55,206</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CAWP Water Right</td>
<td>Part Fees</td>
<td></td>
<td>$48,029</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tank and Pipeline Cathodic Protection Study</td>
<td>Part Fees</td>
<td></td>
<td>$37,571</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>AWA Portion SGMA and Monitoring Wells</td>
<td>Part Fees</td>
<td></td>
<td>$35,528</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ridge Rd Raw Water Pipeline</td>
<td>Part Fees</td>
<td></td>
<td>$38,726</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Camanche Reserves</td>
<td>Camanche Reserve</td>
<td></td>
<td>$25,126</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>18-19 Generator Carryover</td>
<td>Operating Rates</td>
<td></td>
<td>$55,838</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Buckhorn Stairs</td>
<td>Operating Rates</td>
<td></td>
<td>$50,000</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Buckhorn Snow-Ice Protection over entry door</td>
<td>Operating Rates</td>
<td></td>
<td>$1,000</td>
<td>-</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### WASTEWATER PROJECTS

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Status</th>
<th>FY 19-20 Budget ($K)</th>
<th>Expended to date ($K)</th>
<th>% of FY 19-20 Budget</th>
<th>Expended Life of Project ($K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ridge Road Manhole Replacement</td>
<td>Operating Rates</td>
<td>107,727</td>
<td>-</td>
<td>0%</td>
<td>-</td>
</tr>
<tr>
<td>Hwy 40 E/E Upsies</td>
<td>Operating Rates</td>
<td>120,910</td>
<td>-</td>
<td>0%</td>
<td>-</td>
</tr>
<tr>
<td>WW Standby Generators</td>
<td>Camanche Reserves</td>
<td>83,371</td>
<td>11,424</td>
<td>14%</td>
<td>-</td>
</tr>
<tr>
<td>Reclamation Master Planning</td>
<td>Operating Rates</td>
<td>10,362</td>
<td>-</td>
<td>0%</td>
<td>-</td>
</tr>
<tr>
<td>Lift Station 2 Improvements</td>
<td>Operating Rates</td>
<td>131,537</td>
<td>-</td>
<td>0%</td>
<td>-</td>
</tr>
<tr>
<td>Pine Grove Realignment Design Review</td>
<td>Operating Rates</td>
<td>4,919</td>
<td>-</td>
<td>0%</td>
<td>-</td>
</tr>
<tr>
<td>Martell &amp; Camanche Inflow &amp; Infiltration - Study</td>
<td>Operating Rates</td>
<td>131,703</td>
<td>-</td>
<td>0%</td>
<td>-</td>
</tr>
<tr>
<td>Martell Sewer Improvement Study</td>
<td>Operating Rates</td>
<td>12,090</td>
<td>-</td>
<td>0%</td>
<td>-</td>
</tr>
</tbody>
</table>

| Total                                                                               |              | 6,444,625           | 363,667               | 6%                   | 6%                           |
APPENDIX II
AMADOR WATER AGENCY

FINANCIAL SYSTEMS ANALYSIS
AND
RECOMMENDATIONS

June 26, 2014

Municipal Resource Group, LLC
675 Hartz Avenue—Suite 300, Danville, CA 94526
925.314.3889
# AMADOR WATER AGENCY

## FINANCIAL SYSTEMS ANALYSIS AND RECOMMENDATIONS

### Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Introduction</td>
<td>1</td>
</tr>
<tr>
<td>B. Project Scope &amp; Executive Summary</td>
<td>1</td>
</tr>
<tr>
<td>C. Recommendations and Action Plan</td>
<td>4</td>
</tr>
<tr>
<td>D. Report Contents</td>
<td>8</td>
</tr>
<tr>
<td>1. Finance Group Organizational Structure</td>
<td>8</td>
</tr>
<tr>
<td>2. Information Technology</td>
<td>9</td>
</tr>
<tr>
<td>3. Financial Practices &amp; Procedures</td>
<td>11</td>
</tr>
<tr>
<td>4. Financial Policies</td>
<td>14</td>
</tr>
<tr>
<td>5. Internal Controls</td>
<td>16</td>
</tr>
<tr>
<td>6. Chart of Accounts</td>
<td>18</td>
</tr>
<tr>
<td>7. Financial Planning &amp; Cost Allocation Plan</td>
<td>19</td>
</tr>
<tr>
<td>8. Financial Reporting and Budgeting</td>
<td>20</td>
</tr>
</tbody>
</table>
AMADOR WATER AGENCY
FINANCIAL SYSTEMS ANALYSIS
AND
RECOMMENDATIONS

A. INTRODUCTION

The Amador Water Agency (Agency) provides water and wastewater service to approximately 10,000 customers in Amador County. In addition to residents and businesses in unincorporated areas, the Agency sells water on a retail or wholesale basis to the cities of Ione, Jackson, Plymouth, Sutter Creek, Amador City and several special districts.

The Amador Water Agency is one of the major employers in Amador County and currently employs a work force of about 40 who are challenged to meet the growing service demands of a diverse county of 568 square miles, ranging in elevation from 200 to 9,000 feet and including 5 cities and several unincorporated communities. The Amador Water Agency also owns and operates 11 small community wastewater systems.

The Agency Fiscal Year 2013-14 operating budget totals $11.3 million and capital projects budget is $10.9 million.

The Amador Water Agency issued a Request for Proposals in 2013 in which it solicited proposals to conduct a comprehensive review of the Agency's financial systems, policies procedures, soft and hardware, reports, and related activities. The goal of the review was to assist the Agency in improving its financial activities including: efficiencies and effectiveness, transparency, consistency, developing meaningful and user-friendly reports as well as assessing the Agency’s compliance with federal, state and local financial reporting requirements.

The Agency requested the final work product be a written report containing recommendations to improve accuracy, efficiency and effectiveness of the financial system.

B. PROJECT SCOPE & EXECUTIVE SUMMARY

The scope of this analysis included a review of the Amador Water Agency’s current financial system including operating procedures, financial policies, hardware and software, and financial information which is currently provided to management, the Board of Directors and ratepayers. The scope of work also included a review of the current organizational structure of the Finance Group, the current and proposed chart of accounts and the existing level of internal financial control to identify any potential areas for improved operating efficiency or effectiveness. Interviews were conducted with Agency staff, the General Manager and Board of Directors.
Agency documents and reports were gathered and analyzed. Discussions were held with current software vendors. Information on water and wastewater utility best practices was obtained from other public utilities and utility organizations.

Municipal Resource Group conducted this independent review of the financial operations of the Amador Water Agency over a period of four months between October 2013 and February 2014. Agency management and staff cooperated fully in this process and provided much insight into the current operating practices and challenges faced in accomplishing assigned work tasks. Although the Agency operates with limited staffing due to financial constraints, the staff of this organization is conscientious in their work ethic and clearly dedicated to furthering the success of the organization.

This report focuses on the following areas related to the Agency’s financial activities:

1. Finance Group Organizational Structure
2. Information Technology
3. Financial Practices
4. Financial Policies
5. Internal Controls
6. Agency Chart of Accounts

Each section of this report includes a summarization and observation of current practices, identification of any identified potential areas of risk and recommendations for action or further consideration.

1. Finance Group Organizational Structure
Municipal Resource Group conducted a thorough review of the financial organization including financial management, reporting processes and internal controls. After completing a thorough review of the current financial operating activities of the Agency, no major areas of concern were identified. Overall, a solid system of internal control has been implemented by a competent staff. The General Manager participates in the daily operations of the organization, has a clear understanding of current operating practices and is informed of issues or potential matters of concern as they arise. Finance staff is competent and performs their assigned work well.

As the result of a current vacancy, the organization has the opportunity to restructure the Finance group which could enhance the management of the financial activities of the Agency.

2. Information Technology
The findings in this report indicate that the organization is not currently optimizing the use of technology and is performing a number of tasks either manually or inefficiently which reduces the productivity of the Agency’s limited staff resources and increases the opportunity for human error. This situation is partially the result of the current software systems which are outdated and not functionally integrated. The Agency’s financial software is cumbersome, does not offer a comprehensive financial/job cost reporting package and has limited report options. The lack of unified information places additional burdens on staff who must manually reenter data and increases the opportunity for error. A number of our recommendations in this report cite the
need to address the Agency’s current information silos, the need to automate manual practices and discontinue unnecessary or duplicate financial activities.

3. Financial Practices
The report identifies current financial operating practices and adopted financial policies. It identifies a number of minor modifications to current practices in the areas of payroll, purchasing, utility billing, accounts receivable processing, monthly reporting and grants management which will further enhance the effectiveness of the Agency.

4. Financial Policies
The report contains recommendations for modifications to several existing policies and development of several additional financial policies. These recommendations are related to the Agency’s reserves, intra-agency internal loans, management of accounts receivable, fixed asset management and identification, cash handling, budget management and the use of infrastructure development fees and restricted funds. The Agency does have a number of sound financial policies which have been implemented and are complied with.

5. Internal Controls
The report indicates that the Agency has implemented a well-designed system of operating policies and procedures which are diligently followed by staff.

We found that three areas of Agency activity could benefit from the creation of additional, enhanced internal control policies.
- The first relates to the Agency’s management of the electrical inventory. We recommend assigning responsibility for the electrical inventory to the Purchasing Agent to insure adequate controls and inventory management practices are implemented and managed.
- The second relates to the Agency’s policy regarding the use of credit cards by employees and the cumulative impacts of minor purchases on competitive purchasing practices.
- The third relates to the Agency’s controls on information technology access and regular security reviews by an information technology professional. The Agency is currently conducting its information technology activities on an in-house basis and could benefit from the use of third-party professional services support to insure adequate security and access practices are implemented and maintained.

6. Agency Chart of Accounts
The report indicates that the Agency is currently developing a new chart of accounts reflecting the current organizational structure. We recommend the Agency make every effort to implement of the chart of accounts for the 2014-15 fiscal year. This will simplify the financial reporting process and allow increased accuracy and clarity in financial reports. Implementation of a chart of accounts reflecting the current organizational structure will also allow the Agency to take advantage of the report writing capacity of its existing financial software, improving the quality of reporting and reducing staff workload.

7. Financial Planning
The report identifies an opportunity for the Agency to enhance its financial planning efforts by developing a Five Year Financial Forecast to provide a perspective of the Agency’s future
financial status, including revenue and expenditure trends and capital funding requirements to meet the needs of the Agency’s infrastructure.

The report also identifies the need for an Agency-wide cost allocation plan which conforms generally accepted accounting principles and state and federal agency requirements.

8. Financial Reporting, Budgeting and Community Involvement
The report identifies the Agency’s Annual Budget, financial reporting and community involvement as key components of the Agency’s long-term success and provides recommendations for planning, community involvement and fiscal engagement and outlines tools which would enhance those activities.

C. RECOMMENDATIONS & ACTION PLAN
This report includes twenty-three recommendations for further consideration and action. The recommendations are listed in the order in which they are presented in the report and are prioritized with a priority of high, medium or low importance. A recommended timeline for implementation of each recommendation is also presented.

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Priority</th>
<th>Timeline for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ensure that a staff member is cross-trained and able to perform each of the key finance functions, including payroll, accounts payable, accounts receivable and monthly financial reporting.</td>
<td>High</td>
<td>Immediate &amp; Ongoing</td>
</tr>
<tr>
<td>2. Develop a plan for preparing procedures manuals for each of the key finance activities.</td>
<td>Medium</td>
<td>FY 2014-15</td>
</tr>
<tr>
<td>3. Reclassify the vacant Controller position to a position with a broader financial and organizational emphasis which would include strong analytical, planning, management and communication skills.</td>
<td>High</td>
<td>Immediate</td>
</tr>
</tbody>
</table>
### 4. Continue discussions with the Agency’s current financial software provider regarding the future of that organization and impact of potential changes on Amador Water Agency. If it is determined that Datastream will continue to support its current product for an extended period of time, identify the cost and feasibility of interfacing the Maintenance Connection work order system into the Datastream financial system. If it is determined that Datastream is not a long term viable solution, explore alternative software providers.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Priority</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>As a long term solution, an integrated comprehensive financial and job cost reporting system should be implemented. Given limited staffing resources and the need to provide reliable and timely financial information, the Agency would benefit from implementation of a fully functional financial reporting system. Detailed cost and functionality information should be solicited from Springbrook Software and at least two other software providers.</td>
<td>High</td>
<td>December 2014</td>
</tr>
<tr>
<td>6.</td>
<td>Implement an effective interface between the work order and financial systems to eliminate duplicate timecard reporting.</td>
<td>High</td>
<td>September 2014</td>
</tr>
<tr>
<td>7.</td>
<td>Discontinue the Agency practice of issuing a separate payroll check for overtime.</td>
<td>Medium</td>
<td>FY 2014-15</td>
</tr>
<tr>
<td>8.</td>
<td>Explore the possibility of implementing the purchasing module for issuing purchase orders and encumbering funds on the existing financial software. If a decision is made to migrate to another financial software system, an integrated purchasing module should be included in the requirements for the replacement system.</td>
<td>High</td>
<td>FY 2014-15</td>
</tr>
<tr>
<td>9.</td>
<td>Implement a lockbox payment processing system for utility payments.</td>
<td>Medium</td>
<td>FY 2014-15</td>
</tr>
<tr>
<td>10.</td>
<td>Continue discussions with Datastream to resolve the issue of posting accounts receivable transactions to the general ledger.</td>
<td>High</td>
<td>On-going</td>
</tr>
<tr>
<td>11.</td>
<td>Replace use of outdated greenbar report printing with laser printed documents and develop and implement procedures to be in conformance with Administrative Policy 3090 governing records retention.</td>
<td>Medium</td>
<td>July 2014</td>
</tr>
<tr>
<td></td>
<td>Develop financial reports which provide necessary and useful information and eliminate the current cumbersome and complex spreadsheet reporting process. Reports should be available at several levels of detail to provide information appropriate for the needs of the user.</td>
<td>High</td>
<td>Immediate</td>
</tr>
<tr>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>13</td>
<td>Develop a grants management policy. Assign responsibility for organizing and implementing the grants management policy to the Finance Manager position.</td>
<td>Medium</td>
<td>FY 2014-15</td>
</tr>
<tr>
<td>14</td>
<td>Prepare Reserve and Internal Loan policies for Board consideration and approval.</td>
<td>Medium</td>
<td>FY 2014-15</td>
</tr>
<tr>
<td>15</td>
<td>Develop additional financial policies addressing accounts receivable collection and write-off procedures, petty cash and cash handling, the transfer of budgeted funds and the appropriate use of capital facilities fees and restricted Agency funds. Ensure that all approved financial policies are documented and readily accessible to staff. Provide periodic training to staff on key financial policies such as purchasing, travel and use of Agency credit cards. Include a review of key policies in the orientation process for new employees.</td>
<td>High</td>
<td>FY 2014-15</td>
</tr>
<tr>
<td>16</td>
<td>Transfer responsibility for control of the electrical inventory to the Purchasing Agent.</td>
<td>High</td>
<td>July 2014</td>
</tr>
<tr>
<td>17</td>
<td>Conduct an annual physical count of all inventory items.</td>
<td>High</td>
<td>July 2014</td>
</tr>
<tr>
<td>18</td>
<td>Amend the current credit card policy to specify the types of small routine purchases which may be made by credit card. Require large purchases to be processed by the Purchasing Agent.</td>
<td>High</td>
<td>July 2014</td>
</tr>
<tr>
<td>19</td>
<td>Utilize contract services for Information Technology support of desktop computers and network systems.</td>
<td>Medium</td>
<td>FY 2014-15</td>
</tr>
<tr>
<td>20</td>
<td>Proceed with review, testing and implementation of the new chart of accounts. Provide training to staff on the new account structure.</td>
<td>High</td>
<td>Immediate</td>
</tr>
<tr>
<td>21</td>
<td>Develop a formal Cost Allocation Plan for Board Consideration and Approval</td>
<td>Medium</td>
<td>FY 2014-15</td>
</tr>
<tr>
<td>#</td>
<td>Task Description</td>
<td>Priority</td>
<td>Timeframe</td>
</tr>
<tr>
<td>---</td>
<td>------------------</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>22</td>
<td>Develop a Five Year Financial Forecast of operating and capital activities.</td>
<td>High</td>
<td>July 2014</td>
</tr>
<tr>
<td>23</td>
<td>Conduct an annual strategic planning process including an organization-wide cycle of refinement and review. Identify and incorporate the critical elements of the Agency’s Strategic Plan into the budget and financial planning process. Create a schedule for the strategic planning and budget/financial planning process which includes a public information and outreach component to insure the opportunity for public involvement.</td>
<td>High</td>
<td>FY 2014-15</td>
</tr>
</tbody>
</table>
D. REPORT CONTENTS

1. Finance Group Organizational Structure

The financial functions of the Amador Water Agency are currently performed by the following four positions:

- Controller (currently vacant)
- Accounting Clerk III (payroll)
- Accounting Clerk II (accounts payable)
- Purchasing Agent (purchasing/warehouse)

The AWA Controller position performs general accounting functions, generates financial reports, coordinates the annual budget and financial audit process, is responsible for cash management and provides supervisory oversight to the other three positions. The Agency Finance staff was formerly managed by a Finance Manager position which was eliminated as a cost saving measure several years ago. Many of the duties of the Finance Manager position were re-assigned to the Controller. The Controller position is currently vacant.

The primary responsibility of the Accounting Clerk III position is processing the Agency’s bi-weekly payroll. Additionally this position provides support to the Controller and to the Accounting Clerk II. In the Controller’s absence, the Accounting Clerk III has been assigned responsibility for generating the Agency’s monthly financial reports.

The Accounting Clerk II position’s primary area of responsibility is to conduct the Agency’s accounts payable and billing functions.

The Purchasing Agent administers the purchasing function including the issuance of purchase requisitions and purchase orders and is responsible for oversight of the inventory warehouse.

The Human Resources/Office Manager is currently assigned responsibility for the Agency’s utility billing/customer service and meter reading functions including supervision of assigned staff.

Observations

The Finance staff is a well-organized, professional and conscientious group. Each staff member knows the requirements of their position and is committed to the well-being of the organization. This small group works together as a team with staff routinely providing support to one another as needed. The Finance group understands and follows good accounting principles and is able to manage and maintain their work assignments.

Backup Support: Given limited staffing resources, one challenge is to provide back-up support for key functions – payroll, accounts payable, billing. Each staff member has a full workload and duties are segregated which makes it difficult to remain current on cross-training activities. One tool which can assist in this process is developing and maintaining detailed written process manuals. While it is difficult to find the time for this activity, the creation of process manuals
and cross-training of staff to enable them to perform the key elements of each activity as necessary should be a high priority to ensure accurate and timely financial workflow.

Controller Position: While accounting is a key and critical component of an effective organization, an equally important activity is financial planning and fiscal analysis. With the current vacancy in the Controller position, there is an opportunity for restructuring this position and recruiting candidates with broader financial and management backgrounds and skills.

The individual in the revised position should possess a good understanding of governmental accounting principles and processes, but should also possess strong financial, organizational, analytical, planning, management and communication skills. The title of this position should be changed from Controller to a broader descriptor such as Finance Manager.

Recommendation: Ensure that a staff member is cross-trained and able to perform each of the key finance functions, including payroll, accounts payable, accounts receivable and monthly financial reporting.

Recommendation: Develop a plan for preparing procedures manuals for each of the key finance activities.

Recommendation: Reclassify the vacant Controller position to a position with a broader financial and organizational emphasis which would include strong analytical, planning, management and communication skills.

Recommendation: Redistribute various work assignments which would provide the Finance staff additional time to focus on accounting, financial reporting and financial analysis. Those re-assignments would include:
- Transfer responsibility for payroll processing from the Account Clerk III in the Finance group to staff reporting to the Human Resources/Office Manager. This would allow the Account Clerk III to assume additional accounting activities in support of the new Finance Manager position.

Re-assign responsibility for servicing the front counter, customer telephone calls and customer walk-ins from the Customer Service Representative to the Administrative Assistant position – these positions all report to the Human Resources/Office Manager. This re-assignment, combined with implementation a lockbox payment processing system, would provide the opportunity for the current Customer Service clerical staff to provide support to the Human Resources/Office Manager with payroll processing and more routing human resource activities which would then allow the Human Resources/Office manager to focus on higher level human resource needs.

2. Information Technology

The Amador Water Agency currently utilizes Datastream Business Solutions for its financial applications. The Agency runs general ledger, accounts payable, accounts receivable, cash receipts, payroll and utility billing on the Datastream platform. The Agency utilizes Maintenance
Connection as its computerized maintenance management software (CMMS) for its maintenance and work order system. The Datastream and Maintenance Connection systems currently operate independently and do not share information which has resulted in operational inefficiencies, staff frustration and duplicated work efforts.

**Observations**

Datastream is a small software provider located in Southern California. There are currently three water utilities in the San Diego area similar in size to Amador Water Agency which are utilizing various modules of this software. Datastream does not offer a web-based application and has no plans to do so in the future. Due to the current system limitations, the Agency has chosen to not utilize the automated purchasing and human resource modules and administers these functions with manual work-around systems. While the Datastream financial system is currently functional, it is outdated and offers little flexibility. Datastream has recently announced that it has partnered with another software provider, Springbrook Software, Inc. and is encouraging current clients to evaluate the Springbrook system.

The Agency is faced with several alternatives. One would be to continue the current practice of operating separate and non-integrated financial and maintenance management systems and continuing the current manual workarounds for purchasing and human resources. This is not recommended.

Discussions with both Datastream and Maintenance Connection have provided information indicating that the Agency may be able to resolve some of the current requirements for double entry of data into both the Maintenance Connection and Datastream systems. Maintenance Connection staff have indicated that it could be possible to upload information on a daily basis from their maintenance/work order system to the Datastream financial system. If the direct loading of Maintenance Connection data to the Datastream system proves to be feasible, the current duplication of information would be reduced or eliminated. Employees could then enter their time card information directly into the Maintenance Connection System. The data would then be uploaded to the Datastream payroll system eliminating the need for paper timesheets and much of the manual data entry currently being done by the Accounting Clerks. The cost of this system enhancement has been requested but has not yet been provided.

As Datastream has recently announced that it is partnering with Springbrook Software rather than upgrading its own system, indications are that Datastream is not a long-term viable financial reporting solution for the Agency. The Agency has received a cost proposal for the migration from Datastream to the Springbrook Software platform. The proposal includes a first year cost of $185,000 and annual system maintenance costs of approximately $20,000. Springbrook has offered an option of financing this cost over a period of four to six years. In order to make an informed decision regarding the best course of action, cost and functionality information should be solicited from other software providers. With that information available, the Agency can make an informed decision to either stay with the current system or implement a more robust and comprehensive software solution – either Springbrook or an alternative software provider.

**Recommendation:** Continue discussions with the current financial software provider regarding the future of that organization and impact of potential changes on Amador Water Agency. If it is determined that Datastream will continue to support its current product for an extended period of
time (which is not anticipated), continue to explore cost and feasibility of interfacing the Maintenance Connection work order system into the Datastream financial system. In any event, this would most likely be a short-term solution to a longer-term issue.

**Recommendation:** As a long term solution, an integrated comprehensive financial and job cost reporting system should be implemented. Given limited staffing resources and the need to provide reliable and timely financial information, the Agency would benefit from implementation of a fully functional financial reporting system. Detailed cost and functionality information from Springbrook Software and at least two other software providers should be evaluated.

3. **Financial Practices & Procedures**

Finance staff is well trained and have developed sound operating procedures. The key functions of the group are completed in a timely and organized manner. Accounts are reconciled on a regular basis, journal entries are prepared with supporting documentation, proper approvals are obtained on financial transactions, monthly financial reports are prepared and distributed and management and the Board of Directors are kept apprised of the Agency’s financial status.

With limited staffing resources, it is important that daily operations be structured as efficiently as possible taking advantage of current technology and sound financial practices. There are currently a number of activities/processes which could be handled in a more efficient manner.

**Observations**

**Payroll**

The current process for time entry is labor intensive and requires duplicative effort by staff throughout the organization. Payroll is a bi-weekly activity and should be automated wherever possible. Employees currently prepare manual timesheets (in many cases duplicating entries from the work order system). This information is entered manually onto a spreadsheet and then entered again into the payroll system. Staff has initiated discussions with both the financial and work order software providers to identify a possible method to transfer data directly between the two systems. Staff estimates that between 60 and 70 percent of payroll information is entered into the work order system and then entered again onto the employee’s timesheet. It is recommended that these discussions continue and that consideration be given to implementing electronic timesheets if possible.

The current payroll practice of the Agency is to issue a separate check for overtime worked. This creates an additional step in the payroll process, requires additional and unnecessary staff work. It is recommended that the Agency discontinue the current practice of issuing a separate check for overtime worked which conforms with current industry standards and practices.

**Purchasing**

The purchasing module of the financial system is not currently being utilized. Staff believes that the software is too cumbersome. At this time, purchase orders are issued manually and tracked on an excel spreadsheet rather than through the financial system.
One result of this practice is that when a purchase order is issued, funds are not encumbered in the financial software system. Monthly financial reports, therefore, reflect only expenditures and not committed funds. The agency should consider reviewing the Datastream purchasing module to determine whether it can be implemented with minor modifications. If the agency decides to evaluate other financial software systems, purchasing should be one of the modules required.

Utility Billing
The Agency issues approximately 10,000 utility bills per month. Payment of those bills is made by mail, on-line and in person. All payments received through the mail are processed by Agency staff. This is a labor intensive and time-consuming process. The Agency should consider utilizing the service of a third party lockbox payment processor for processing utility payments. The cost of a lockbox payment processing service would be approximately $22,000 per year and would allow staff to focus attention on more critical tasks.

Accounts Receivable
The miscellaneous accounts receivable module in the Datastream financial system is used for job costing, billings for damage to Agency property, engineering services and other miscellaneous charges. The accounts receivable system does not interface with the general ledger. Cash payments must be manually entered into the accounts receivable module through “counter cash” in order to post to the general ledger. Timecards and work orders must also be manually entered into the accounts receivable system. Datastream is currently looking at this process to determine if it is possible to directly post accounts receivable transactions (utility payments currently do post directly to the utility accounts). It is recommended that discussions with Datastream continue to resolve the issue of posting accounts receivable directly to the general ledger.

Records Retention
Administrative Policy 3090 provides guidelines for retention and disposal of Agency records. Financial reports are currently produced utilizing outdated greenbar printing technology. These reports require a significant amount of space for storage and are difficult to convert to electronic format for records retention. It is recommended that consideration be given to eliminating the greenbar printer and that all reports be printed on a laser printer. Staff has been provided with several options to accomplish this task. It is also recommended that staff follow the records retention guidelines in Administrative Policy 3090 and develop a procedure for scanning documents, verifying then destroying paper copies to reduce the storage of paper files.

Monthly Reports
Information for the monthly revenue, expenditure and investment reports is downloaded from the financial software system to a series of excel spreadsheets. This is a very time consuming and complicated process with multiple steps and complex calculations required. The opportunity for error is high due to the complexity of this process. The information required should be available in a much more readily accessible format.

We recommend that reports be developed within the financial system which provide the required financial information and which can replace the current cumbersome and complex excel worksheets. For the monthly revenue and expenditure reports, the annual budget is divided into twelve equal segments and that figure is compared to the monthly financial activity. It is recommended that summary reports comparing the total budget by fund to year to date activity be prepared as an additional management tool. Examples of recommended financial reporting
formats providing information for users at various levels within and outside of the organization are attached. See Appendix A for a series of recommended financial reporting formats for staff, Board and public levels.

**Grants Management**
Responsibility for managing and reporting grant activity is shared between the Finance and Engineering sections of the organization with no clear delegation of responsibility. No one individual or group is tasked with overall responsibility for ensuring compliance with grant provisions, reporting and ensuring the timely draw down of grant funds to the Agency.

We recommend that consideration be given to developing a grants management policy which identifies criteria for grant applications and delegates responsibility for managing Agency grants. It is recommended that the Finance Manager position be assigned lead responsibility for organizing and implementing the grants management policy.

**Recommendation:** Implement interface between work order and financial systems to eliminate duplicate timecard reporting.

**Recommendation:** Discontinue the current practice of issuing a separate payroll check for overtime worked.

**Recommendation:** Implement the currently available purchasing module for issuing purchase orders and encumbering funds. If a decision is made to migrate to another financial software system, this should be one requirement of the new system.

**Recommendation:** Implement a contract with a private vendor for lockbox payment processing for utility payments to free-up existing staff to perform higher level functions.

**Recommendation:** Continue discussions with Datastream to resolve the issue of posting accounts receivable transactions to the general ledger.

**Recommendation:** Replace use of outdated greenbar report printing with laser printed documents and develop a procedure complying with the retention guidelines contained in Administrative Policy 3090.

**Recommendation:** Develop reports in the Datatstream software system which provide necessary and useful financial information and eliminate the current cumbersome and complex spreadsheet reporting process.

**Recommendation:** Develop a grants management policy. Assign responsibility for organizing and implementing the grants management policy to the Finance Manager position.
4. Financial Policies

Well documented financial policies are a key component of establishing strong financial controls. Financial policies should be well thought out to ensure that they fit within the organizational culture. It is helpful to solicit input from staff when developing financial policies. Involving staff is important because staff is trained and understands how these policies impact their daily operating practices. It is also imperative that the Agency’s management is committed to following and enforcing all provisions of the approved policies. The policies should be reviewed on a regular basis and adjustments made as needed.

Observations

Amador Water Agency has developed a fairly comprehensive Administrative Policy Manual which contains general organizational policies and financial operating policies. The approved financial policies include:

- Delegation of Authority for contracts and expenditures (Policy 2090)
- Investment of Agency Funds (Policy 3050)
- Purchasing (Policy 3060)
- Credit Card Usage (Policy 3060.9)
- Inventory Management (Policy 3065)
- Use of Public Financing (3080)
- Disposal of Surplus Property or Equipment (Policy 3120)

The Administrative Policy Manual indicates that a Fixed Asset Accounting Policy is currently being developed (Policy 3040). There is some reference to accounting for fixed assets in the existing Inventory Management Policy. Policies related to Agency reserves and internal loans have been drafted but not yet approved. A brief Travel Compensation Policy is included in the Amador Water Agency Employee Handbook. This policy should be expanded to provide additional guidelines for business-related travel and included in the Administrative Policy Manual.

Overall, the organization has done a good job of documenting key financial policies. Additional policies impacting day to day financial activities including internal inter-fund loans, management of accounts receivable, fixed asset, petty cash and cash handling, budget transfers and use of capital development fees and restricted funds should be developed to further strengthen the system of internal controls within the organization.

A listing of existing financial policies and recommended policies to be developed are listed in the following table.
<table>
<thead>
<tr>
<th>Policy Description</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delegation of Authority</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Investment Policy</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Purchasing Policy</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Credit Card Policy</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Inventory Management Policy</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Use of Public Financing Policy</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Disposal of Surplus Property or Equipment Policy</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Travel Policy</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>(could be expanded)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reserve Policy (Draft)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Internal Loan Policy (Draft)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Accounts Receivable Collection and Write-off Policy</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Fixed Asset Policy</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Petty Cash and Cash Handling Policy</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Budget Transfer Policy</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Use of Participation/Buy-In (Capital Development) Fees Policy</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Use of Restricted Funds (Assessment Districts/CFD)</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**Recommendation:** Finalize and approve the draft Reserve and Internal Loan policies.

**Recommendation:** Develop additional financial policies addressing the following: accounts receivable collection and write-off procedures; petty cash and cash handling; transfer of budgeted funds; and the appropriate use of buy-in (capital development) fees and restricted Agency funds.

**Recommendation:** Ensure that all approved policies are documented, readily accessible to staff.

**Recommendation:** Provide periodic training to staff on key financial policies such as purchasing, travel and use of Agency credit cards. Include a review of key policies in the orientation process for new employees.
5. Internal Controls

Internal control is a process for assuring achievement of an organization's objectives in operational effectiveness and efficiency, reliable financial reporting, and compliance with laws, regulations and policies. A robust system of internal control is necessary to ensure the proper management of financial assets and to detect transactions which violate agency policy or in the extreme case, violate law. While not all risk can be eliminated, a good system of internal control will minimize the opportunity for improper transactions and will provide a mechanism for identifying any such matters in a timely manner. This is especially important in a smaller organization with limited staff required to perform multiple functions.

A comprehensive group of clearly documented, well communicated and strictly enforced financial policies improves the level of internal control and reduces the risk of misuse (or perceived misuse) of government funds.

Observations

Amador Water Agency has implemented a functionally effective system of operating policies and procedures. Development of several additional policies will strengthen the level of internal control and minimize potential organizational risk. Most staff appear to be diligent in their effort to follow the existing operating guidelines. During discussions with staff and observation of operating procedures, three potential internal control practices were noted which warrant further consideration.

Inventory Management

The Purchasing Agent has responsibility for oversight of the Agency’s purchasing function and also maintains the warehouse inventory. The Agency maintains a separate electrical inventory which is housed in a separate facility and is managed by the Supervisor of Electrical Control and Information Technology. The Purchasing Agent has no involvement with the electrical inventory. The value of this inventory is unknown. The tracking of the electrical inventory is done manually which provides lack of control and the opportunity for loss. The current practice for managing the electrical inventory does not conform to the provisions of Administrative Policy 3065-Inventory Management. It is recommended that management consider placing the electrical inventory under the control of the Purchasing Agent, that a physical count be completed and that this inventory be maintained in accordance with the provisions of Administrative Policy 3065. It is also recommended that a physical count of all Agency inventory be completed at the end of each fiscal year.

Agency Credit Cards

Certain Amador Water Agency employees have been issued credit cards for use in conducting Agency business. Section 3060.9 of the Administrative Policy for Purchasing provides guidelines for the use of Agency issued credit cards and states that cardholders must follow the Agency’s purchasing policy in all credit card transactions. During a review of recent credit card statements, it was noted that large purchases were being made with Agency credit cards with no pre-approval or documentation that the lowest price was obtained. For example, expenditures totaling $4,579 were made at Fry’s Electronics between November 6 and November 19, 2013. While these purchases were individually below the threshold where competitive pricing is required, the cumulative total is large enough that the expertise of the Purchasing Agent would
have added expertise to the purchases ensure that the Agency was receiving the best price. In order to avoid criticism for not following a competitive process, it is recommended that large purchases be processed through the Agency’s purchasing system rather than by credit card. Typically, a credit card should be used for small transactions, employee travel or for emergency purchases. Individual purchases made on a credit card are difficult to track in the financial system. It is also recommended that the existing credit card policy be reviewed and amended to specify the types of purchases which may be made using an Agency credit card, the purchasing process which must be followed and the documentation to be provided.

**Information Technology Access**

Agency employees have access to various Agency computer systems depending on their job assignment and level of responsibility. We believe that system access should be reviewed periodically to verify that the proper level of access has been granted based on the employee’s job requirements.

The Agency’s Information Technology support is currently provided by the Supervisor of Electrical Control and Information Technology as one component of that individuals work assignment. Many agencies the size of Amador Water contract for Information Technology support services. The level of support can be tailored to the Agency’s needs, but can include regular desktop computer and server maintenance, troubleshooting, upgrades and repairs. Services can be provided on an as needed basis or on a set schedule. It is recommended that the Agency contract for Information Technology support services. This would provide an increased level of support to current users and would allow the Supervisor of Electrical Control and Information Technology to devote time to more critical tasks.

**Recommendation:** Transfer responsibility for control of the electrical inventory to the Purchasing Agent.

**Recommendation:** Conduct an annual physical count of all inventory items.

**Recommendation:** Amend the current credit card policy to specify the types of small routine purchases which may be made by credit card. Require large purchases to be processed by the Purchasing Agent.

**Recommendation:** Utilize contract services for Information Technology support of desktop computers and network systems.
6. Chart of Accounts

The current chart of accounts does not reflect the operational and billing/revenue consolidations recently made by the Agency. Changes to the existing chart of accounts are needed to align to the current organizational and utility rate structure. A draft revision to the chart of accounts was recently developed by Agency staff. The new chart of accounts combines the previous Amador Water System Fund (Fund 04), LaMel Heights Fund (Fund 09), Camanche Water Fund (Fund 13) and CAWP Retail Fund (Fund 14) into a new consolidated System-Wide Water Fund (Fund 02). The existing Outside Services, Agency General, CAWP Wholesale and Waste Water (General, Camanche and Martell) will retain their current individual fund designations. Implementation of a new chart of accounts is a major undertaking as there are approximately five hundred accounts which must be modified. Updating the chart of accounts will result in better financial reporting and will address the previous issues related to accounting for restricted and non-restricted funds as well as tracking improvement and replacement costs.

A draft chart of accounts has been preliminarily reviewed by the General Manager and the Agency’s financial audit firm. It is anticipated that the Fiscal Year 2014-15 Budget will be developed utilizing the new account structure with existing financial data converted at the end of the current fiscal year. Revising the chart of accounts to reflect the current organizational structure will also simplify the process of generating monthly financial reports directly from the financial system.

**Recommendation:** Proceed with review, testing and implementation of the new chart of accounts. Provide training to staff on the new account structure.

7. Financial Planning & Cost Allocation

**Long Range Financial Planning**

In order for an organizational leadership and the Agency Board to conduct effective financial management to accomplish the objectives of the organization it must have an accurate and reliable method of developing financial forecasts. Financial forecasts identifying revenues and anticipated operating and capital costs are a useful tool for management and the Board of Directors. The Agency should consider developing a five year financial forecast including a five year capital plan to ensure that necessary funding is available when needed and to avoid future unanticipated significant rate adjustments. This Financial forecasting tool should be developed in concert with and as part the Agency’s development of a five year strategic plan.

**Cost Allocation Plan**

The Agency allocates administrative and overhead costs to various funds and projects. A comprehensive, well-documented cost allocation plan which reflects the current organizational structure is essential to ensure that all appropriate costs are identified and properly allocated and that the allocation can be justified and defended. The Agency does not currently have a formal Cost Allocation Plan. Overhead billing rates were developed by staff in March 2012. The Agency should consider budgeting for development of a formal cost allocation plan. Generally,
cost allocation plans are developed by outside consulting firms to insure accuracy and compliance with Federal and State grant and loan requirements. Once developed, the plan should be reviewed on an annual basis and can be updated by staff as necessary to reflect organizational changes. The cost of developing a cost allocation plan would be approximately $25,000.

**Recommendation:** Develop a Five Year Financial Forecast of operating and capital activities.

**Recommendation:** Develop a formal Cost Allocation Plan in concert with the Agency’s Five Year Strategic Plan.

### 8. Financial Reporting, Budgeting and Community Involvement

The Agency’s Annual Budget represents a critical portion of the Agency’s financial roadmap for the future. It is the culmination of a series of planning and programming efforts that takes months to complete and must represent a unified plan that is consistent with, and supportive of, the Agency’s long-range goals. The preparation of the Budget, Agency financial reporting and community involvement are all key elements of a successful public agency. The Amador Water Agency’s recent fiscal distress, combined with staff shortages and the need for tactical rather than strategic fiscal management has kept the Agency from fully achieving an integrated financial planning, budgeting, public involvement and public information system.

Described below are a number of recommendations and examples of the types of planning, community and Board involvement as well as organizational development efforts we believe will lead to a successful multi-year fiscal program. Agency staff have expressed their interest in achieving a budgeting, financial planning and community involvement/information system which will insure these key elements are adequately addressed:

**Recommendations for Planning, Community Involvement and Fiscal Engagement:**

**Public Involvement**—the Agency is committed to involving the public, ratepayers and stakeholders in the process of establishing long-term goals and objectives as the Board considers the future activities of the Agency. This public involvement is essential to maintaining the public trust, development of informed service recipients and the ongoing engagement of the communities the Agency serves.

**Fiscal Stability**—the Agency is committed to insuring the fiscal stability of the organization in the short, mid and long-term. This requires a multi-pronged strategy for insuring quality services while addressing ongoing and future capital and operational needs.

**Facilities Maintenance & Improvement**—the Agency is committed to maintaining the existing physical resources and improving and expanding them to assure high quality and reliable services to its customers. This requires an ongoing commitment to maintenance, longer-range facilities planning, and development of plans to address future service needs.

**Regulatory Compliance**—the Agency is committed to maintaining compliance with regulatory requirements and planning to address any current issues as well as planning to respond to future regulatory requirements.
Recommended Tools to Achieve Planning, Community Engagement and Fiscal Engagement:

Strategic Planning and Multi-year forecasting—the Agency will benefit from development of a multi-year financial forecast as described in Section 7 of this report. The basis for the multi-year forecast should be established annually by the staff and Board working together to review the prior year’s activities, current and future needs and developing a schedule of goals and objectives for the Agency. The Strategic Plan and Multi-year forecast should be reviewed by the staff and Board periodically during the fiscal year and updated and modified as needed.

Annual Budget Process—the Agency’s Annual Budget represents a one-year financial plan for the organization. The Budget is a one year segment of the longer-range multi-year financial forecast. The Budget projects revenues and expenditures, capital expenditures and outlines the Agency’s activities for the fiscal year. The Budget is the culmination of the financial and strategic planning work developed by the Agency staff, the Board and public. Listed below is the outline of a recommended budget format for the Agency to review and adopt:

Executive Summary—Budget Transmittal from General Manager
- Key statement of Agency’s financial and operational direction (brief overview of fiscal, operational, capital)
- Factors affecting the Agency’s direction (issues defined, opportunities identified)
- Agency’s Strategic Plan status (any issues affecting the strategic plan)
- Budget Statement (is the budget balanced, revenues adequate, etc.)
- Long-term financial outlook statement (strengths, weaknesses, opportunities, threats)
- Significant accomplishments prior year (brief statements)
- Priorities for upcoming year (brief—based on Strategic Plan)
- Operations (any changes, issues, need for additional resources)
- Infrastructure (update on status, projects, capital activities)
- Long-Term Fiscal Sustainability (five year outlook, issues on horizon)
- Operations status/rate modifications (status rate cycle, status of any studies)
- Facilities needs (brief overview of status, etc.)

Budget Overview—Provides Graphic and Narrative Statements
- Financial Activities by Fund (major elements of the Agency—e.g. sewer, water, etc.)
- Graphics/brief summary statements (revenues/expenditures/trends/fund status)
- Revenue & expenditure trends (narratives on issues, status)
- Debt statements (standard reporting summaries)
- Internal service funds (status, needs, updates)
- Capital Improvement Funds (expenditures, project status, long range needs)
- Description of Agency (concise summary)
- Organizational Chart
- Staffing Level Summary
- Budget Adoption Resolution
- Gann Appropriations Limit
Operating Activities by Fund
- Summary Charts/graphics (overview & trends)
- All Operating Activities (including detail sheets with notes)

Debt Service
- Payment Schedules, Summaries

Capital Improvements Schedule
- Project Descriptions, status, funding sources (from 5 year financial forecast)

Financial Reporting—Monthly Updates—is an ongoing process of staff providing fiscal information to the Board, generally on a monthly basis. More detailed levels of data may be appropriate for the Board Finance Subcommittee and full Board but, to be effective, the reporting must also include a concise summary of the fiscal condition of the agency represented in text and graphically. The information presented must be easily understood by the average member of the public. A sample format for this material is listed below in outline form. The Executive Summary should be in a standard narrative format and be no longer than two pages with the detailed Departmental Activity and Capital segments containing brief explanatory narrative sections:

- **Executive Summary: Narrative format**
  - Are the revenues and expenditures generally within expected ranges?
  - If there are anomalies in revenue and expenditures, briefly explain.
  - Are operational activities meeting the budget goals and service levels?
  - Are capital projects progressing to meet the Board set deadlines—both in planning and construction stages.
  - Is the Agency currently projected to meet the overall goals in the Budget?
    - If not, what issues should the Board be made aware of.

- **Detailed Departmental/Activity Revenue & Expenditure and Capital Report**
  - Listings by Budget Categories of Budget Activities with a one paragraph summary of the status of the activity and any anomalies.
  - Summaries of the status of capital and major maintenance activities and any anomalies.
  - Summaries of upcoming Budget issues and important organizational activities, again a brief narrative summary.

Community Outreach and Participation—is a critical element of the Agency’s daily and long-term strategic focus. Information provided to customers and the public will form the basis of the critical interfaces with customers in the field and as the Agency is perceived when there are issues requiring community involvement. We believe that the Agency could benefit from targeted relatively simple and straightforward outreach and community involvement efforts to augment current activities. These include:

- Monthly newsletters and public outreach efforts
- Involvement of the community in the Agency’s annual strategic planning and budget preparation activities
Establishment of customer service and feedback programs
Expanding the effectiveness of the information exchanges between Agency staff including the Customer Service Representatives, field personnel, meter readers, etc. and customers.
Providing information via the Agency website, allowing for interactive exchanges and Agency 'blasts' via e-mail
Annual formal events updates on strategic planning and budgeting

**Service Development and Enhancement**—is an opportunity area for the Agency. There are various service enhancements in which the Agency is engaged in (e.g. the Gravity Supply Line project) and other specific projects or service upgrades that can be used as opportunities to engage customers and larger community groups and inform them of the issues and activities the Agency is currently engaged in as it relates to their service and the overall Agency service levels.

**RECOMMENDATIONS:**
Our recommendations for this section of the report include brief narrative descriptions and graphic representations of the recommendations listed by subject area beginning on the next page of the report.
Recommendation: Conduct an Annual Strategic Planning Process to insure the Agency has examined its fiscal, operational, capital and other issues and developed a planning document to address those issues utilizing components of organizational effectiveness.

Components of Organizational Effectiveness

- Strategic Planning
- Community Involvement & Annual Budget Preparation and Approval
- Budget Implementation: Board & Community Involvement

Annual Process to Insure Policy and Programmatic Congruence in Organizations
Recommendation: Integrate key organizational initiatives to assure the Agency is engaged in a continuous annual cycle of refinement and review.

Basis for Key Organizational Initiatives

- Capital Projects
- Revenue Trends
- Grant Funding,
- Organizational Issues

- Priorities Established
- Operational Goals
- Economic Realities addressed
- The Agency Strategic Plan is integrated with the Financial Plan and the Cost of Service Analysis providing unified Budget Strategies

- Monthly Board Updates
- Customer Education
- Updates on Projects
- Updates on Initiatives

- Financial Planning Operations
- Capital Projects
- Community Involvement
- Board Approval

Continuous Annual Cycle of Refinement & Review
Strategic Planning Process Elements

Recommendation: Identify the critical elements of the Agency’s strategic planning activities.
Recommendation: Insure public involvement in the Agency's strategic planning program

Public Involvement in Strategic Planning

Key Information Venues:
- Website
- Newsletter
- Newspaper
- Radio
- Television
- Social Media

Continuous Cycle of Public Involvement
Recommendation: Identify the critical components of Agency success and address them in the strategic planning process.

Critical Components of Success

Inter-Related Elements of Organizational Sustainability
Recommendation: Establish an integrated schedule for the Agency’s strategic planning, budget development and implementation cycle

Strategic Planning, Budget Development and Implementation Cycle

Ongoing Annual Process
Recommendation: Identify and incorporate the critical elements of the Agency's budget process into the organizational activities.

Annual Budget Preparation Elements

- Public Input & Involvement
- Board Participation & Approval
- Annual Budget
- Organizational Input & Research
- Modifications as Needed during Year
**Recommendation:** Identify and implement a public information and outreach program which will insure customers and the community are informed of the Agency’s activities.

**Public Information & Outreach Elements**

- Monthly Newsletters
- And
- Public Outreach Efforts
- Involvement in Strategic Planning and Budget Preparation
- Customer Service & Feedback Programs
- Public Contact with Employees
- Annual/ Formal Events—Strategic Planning/Budgeting
- Informal Informational Inquiries—Website/Other
Sample Annual Budget Summary EBMUD
Preparing for a Surge in Infrastructure Investment

The EBMUD budget protects the East Bay's $4 billion investment in a massive water and wastewater system that serves 1.3 million people every day.

This legacy system of more than 4,200 miles of pipe, multiple treatment plants and dozens of reservoirs is more than 100 years old in some areas. Completing the system upgrades necessary for another century of service will require years of investment.

Throughout the most recent recession, balancing the budget without reducing services to customers was a challenge. Administrative costs were cut, positions were frozen, employee unions agreed to forgo salary increases and maintenance, upgrades and equipment replacements were deferred.

This year, a budget turnaround begins as EBMUD expands its infrastructure renewal programs and continues making strides at reducing its long-term debt by paying for important infrastructure work through revenue instead of bond funding.

Significant investments this fiscal year support increased maintenance and upgrading of aging pipes and operational facilities and stabilize EBMUD after a period of drought, economic recession and declining water sales.

EBMUD Budget

Operating Budget

<table>
<thead>
<tr>
<th>EBMUD budget ($millions, rounded)</th>
<th>July 2013–June 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water service</td>
<td>$181.7</td>
</tr>
<tr>
<td>Storage, treatment and delivery of high-quality water to 1.3 million customers; day-to-day maintenance of water supply and distribution systems; planning and engineering for future water supply; recycled water; and meter reading.</td>
<td></td>
</tr>
<tr>
<td>Infrastructure improvements and supplemental water supply</td>
<td>$181.2</td>
</tr>
<tr>
<td>Repayment of bonds that have been sold to pay for long-term investments in infrastructure, supplemental water supply and resource recovery.</td>
<td></td>
</tr>
<tr>
<td>Wastewater service</td>
<td>$64.1</td>
</tr>
<tr>
<td>Operation and engineering at wastewater treatment plant, laboratory and wet weather facilities that serve more than 650,000 customers; educational outreach to residences, businesses and communities for industrial discharge, source control and private sewer programs.</td>
<td></td>
</tr>
<tr>
<td>Support services</td>
<td>$23.3</td>
</tr>
<tr>
<td>Human resources, finance, information technology and other internal support services and overhead.</td>
<td></td>
</tr>
<tr>
<td>Customer service</td>
<td>$14.5</td>
</tr>
<tr>
<td>Water conservation programs, public information, school outreach, billing services, call center and additional services to customers.</td>
<td></td>
</tr>
<tr>
<td>Natural resource management and protection</td>
<td>$14.1</td>
</tr>
<tr>
<td>Environmentally sound management of 50,000 acres of watershed lands, operation of public recreation facilities and fisheries programs.</td>
<td></td>
</tr>
<tr>
<td>Total operating budget</td>
<td>$478.9</td>
</tr>
<tr>
<td>Total capital improvement budget</td>
<td>$234.7</td>
</tr>
<tr>
<td>Total budget</td>
<td>$713.6</td>
</tr>
</tbody>
</table>

View the entire EBMUD operating and capital improvement budgets at www.embud.com.
Each year on July 1, EBMUD begins a new fiscal year. The most recent two-year budget was approved June 11, 2013. It includes rate increases that take effect July of 2013 and 2014.

Operating and capital budgets
EBMUD’s budget has two parts. The operating budget outlines the annual cost of providing all water and wastewater services and repayment of bonds for investments in infrastructure, supplemental water supply and resource recovery.

The capital improvement budget is primarily for long-term projects to upgrade aging infrastructure, prepare for earthquakes, protect natural resources and ensure a future water supply.

Committed to reasonable rates
EBMUD sets rates and charges to cover the costs of the water and wastewater services it provides.

From July 2013 to June 2014, the average residential water customer who uses 10 units, or 246 gallons per day, pays about $44.41 per month, and the average residential wastewater customer pays about $17.79 per month.

5 frequently asked questions

1. How does EBMUD pay for the water and wastewater system?
EBMUD’s budget to operate the water and wastewater systems comes from water sales and wastewater treatment charges. Other revenue sources include property taxes, new meter installations, seismic improvement surcharges, interest on investments, renewable energy sales, hydropower generation and additional fees.

2. Why is the cost of water increasing if customers are using less?
Customers’ water conservation ensures a reliable, long-term supply of water. Yet, when customers use less water it does not reduce the costs of storing, treating and delivering water from the Sierra to the tap; maintaining distribution pipelines, reservoirs, pumping plants and dams; and subsequently treating wastewater and discharging effluent.

3. How do EBMUD’s rates compare to those of other utilities?
EBMUD’s water rates are below the average of all Bay Area water utilities. Wastewater rates are competitive compared to rates at other regional wastewater utilities.

4. Why is debt service such a large part of the budget?
EBMUD’s water system infrastructure is nearly a century old in some areas. As infrastructure ages, it takes more work and investment to make sure reliable water supplies arrive at customer taps every day, and during droughts and emergencies. These investments have increased today’s debt service. With recent important projects completed, such as EBMUD’s Sacramento River dry-year supply, EBMUD’s future capital expenditures will be to maintain or replace existing infrastructure.

5. Does EBMUD offer assistance to low-income customers?
Yes. The Customer Assistance Program provides a discount on services to households that earn up to 60 percent of the region’s median income.

EBMUD has a proud history of providing high-quality drinking water for 1.3 million customers in Alameda and Contra Costa counties. The District’s award-winning wastewater treatment protects San Francisco Bay and serves 650,000 customers.

Board of Directors
John A. Calenan · Katy Foulkes · Andy Katz
Doug Linney · Less R. McIntosh
Frank Mellon · William B. Patterson

General Manager
Alexander R. Coate

East Bay Municipal Utility District
Toll Free: 1-866-40-EBMUD
www.ebmud.com
Your Wastewater System: Where does each dollar go?

- Infrastructure improvements
- Wastewater treatment
- Administration
- Customer service
- Pollution prevention
- Water service
- Regulatory compliance
- Infrastructure expenditures
**Revenue**

Revenue is income used to pay the City's expenses. The Adopted Budget General Fund Revenues are projected to increase by 7% compared to last year, to $13.3 million, driven primarily by increases in two of the three primary sources of General Fund revenue:

1. Transient Occupancy Tax (3% increase).
2. Property Tax (2% decrease) due to two one-time events. Property tax, excluding the above items, is expected to increase by 1%.  
3. Sales Tax (4% increase) due to the passage of Measure J, a 1/2-cent sales tax increase, as well as improved consumer spending.

These revenues comprise approximately 79% of total General Fund revenue.

**General Fund – Revenue**

$13.3 Million

---

**Expenditures**

The General Fund supports every City department and allows the City to make capital improvements. The chart below shows the breakdown of City expenditures for FY 2013-14.

Public Safety is the largest category of expenditures, at 26% of the budget.

**General Fund – Expenditures**

$12.7 Million

---

**Budget Highlights**

The City of Half Moon Bay is an example of a budget that meets a healthier financial state, enhances service delivery, improves infrastructure, and increases operational efficiency. In the next year, the City will continue to build on its upward progression.

The Adopted General Fund FY 2013-14 budget has a surplus of $0.6 million. The projected General Fund Revenue is $13.3 million, with spending expectations of $12.7 million. The FY 2013-14 expenditures include:

1. $3.5 million to increase retirement stabilization reserves by $0.4 million to pay down future retirement liabilities. These are one-time expenditures to improve the long-term health of the City.

The City’s FY 2013-14 budget is publicly available on the City’s website. The Budget is located on the Financial Reports section of the Finance Department webpage, under the City Services tab.
The City is committed to improving transportation and safety in the community. The 2013-14 Capital Improvement Plan (CIP) focuses on projects that address critical infrastructure needs, including roads, bridges, and parks. The plan includes a variety of initiatives aimed at improving traffic flow, enhancing safety, and supporting community development.

**2013-14 Accomplishments**

1. **Street improvements:** The city completed several street projects, including the repaving of several roads and the installation of new traffic signals.
2. **Parks and recreation:** The city expanded its park system with new playgrounds and picnic areas.
3. **Safety improvements:** The city implemented new traffic calming measures and enhanced pedestrian crossings.
4. **Green infrastructure:** The city continued its efforts to improve stormwater management and reduce runoff.

**2013-14 Priorities**

- **Transportation projects:** The city prioritized projects that address congestion and improve connectivity, including the expansion of the bus network and the construction of new bike lanes.
- **Safety improvements:** The city focused on improving pedestrian safety and reducing accidents.
- **Funding:** The city sought additional funding through grants and partnerships to support its improvement projects.

**DID YOU KNOW...**

- The city's 2013-14 Capital Improvement Plan (CIP) was approved by the City Council and includes projects totaling $7.0 million.
- The city's capital budget for 2013-14 is $12.5 million, with $9.5 million allocated for the CIP.
- The city's sales tax revenue for 2013-14 is estimated at $9.2 million, up from $8.7 million in the previous year.
- The city is working to reduce its reliance on sales tax revenue and is exploring other funding sources, such as grants and partnerships.

**City of Half Moon Bay**

Half Moon Bay is a thriving community located in the heart of the Bay Area. The city's 2013-14 Capital Improvement Plan focuses on improving transportation, enhancing safety, and supporting community development. The city is committed to providing high-quality services to its residents and businesses.
Sample Budget Report Contra Costa Water District
GOALS OF THE DISTRICT

The Goals of the Contra Costa Water District are:

1. Ensure that the District delivers high quality and reliable water supplies for current and future needs.

2. Provide excellent customer service and high levels of customer satisfaction.

3. Plan, design, and construct high quality facilities consistent with District needs, and industry standards.

4. Effectively manage the District’s financial resources in conformance with Board policies.

5. Ensure that all District activities surpass all applicable laws and regulations.

6. Operate, maintain, and protect District facilities in a safe and cost-effective manner.

7. Provide leadership in water affairs.

8. Actively enhance effective community relations and public information.

9. Create and maintain a work environment that fosters teamwork and individual excellence.

10. Manage and maintain the United States Bureau of Reclamation and District’s natural and recreation resources, and protect public safety and water quality.
Ten-Year Financial Plan - Key Assumptions

General

1. The Ten-Year CIP is a dynamic capital planning document that will be reviewed and revised annually.
2. Expenditures for capital improvements will be authorized by the Board as part of the budget process.
3. Facility Reserve Charges (FRCs) are a funding source for capital projects. A portion of the FRC will fund CIP projects related to growth or future water supplies. Allocations between existing and future customers will be consistent with the findings of the February 1998 FRC Report. The FRC methodology is used in the Financial Plan.
4. Capital projects with non-District funding sources (such as applicant funds and grants) are included in CIP cost estimate totals and the outside funding is included in revenue projections.
5. The District utilizes short-term financing consistent with District policy. Short-term debt, other than that eligible for refinancing with low interest State Revolving Fund loans, will be converted to 30-year fixed bonds in the future, or paid off from reserves.
6. District policy and bond covenants require maintaining a debt coverage ratio of at least 1.25:1.
Revenue Forecasting

Consumption estimates are updated annually by the Planning Department for each customer class. The FY13-FY14 consumption estimates have incorporated impacts of the economy and weather, with recovery from drought/recession levels by 2017 based on current economic growth projections.

The table below shows a ten-year trend in actual water sales and projected water sales revenue by customer class. The table indicates that untreated water and treated water residential water sales comprise the largest two customer classes for the District. Water sales are projected to increase in FY13-FY14 due to a rebound in consumption as the District, and planned annual rate increases of 3.5% in FY13 and FY14.

Water Sales Trends

![Water Sales by Customer Class](image)

Inflation

1. Inflation is projected at 3% per year for operating and maintenance expenditures (excluding energy and purchased water) based on the historical average.
2. An annual inflation rate of 3% per year is applied to all capital costs in the Financial Plan based on the long-term trend of the *Engineering News Record* Construction Cost Index.
3. CVP water costs are estimated to increase by approximately twice the rate of inflation per year, beginning in 2013.
### Budget Process

The budgetary process as outlined below includes the department head's preparation of estimated expenditures required for the next two fiscal years, beginning with expenditures estimated to start July 1, 2012. These estimates include operating and capital and debt service expenditures. The proposed budget also includes estimated sources of funding for the budgeted fiscal years. This particular budget is a two-year budget covering the period of FY13 through FY14 (July 2012 through June 2014). Quarterly reports are presented to the Finance Committee, and a Mid-Year budget review is presented to the Board in February of each year. A Mid-Cycle review will be completed in May of 2013, with any adjustments to the FY14 budget to be adopted by the Board in June 2013.

The schedule for the development and review/monitoring for this FY13 through FY14 budget cycle follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>January - March 2012</td>
<td>FY13/FY14 budget requests prepared by the Departments</td>
</tr>
<tr>
<td>March - April 2012</td>
<td>General Manager review of the proposed budget</td>
</tr>
<tr>
<td>May 2, 2012</td>
<td>Board review of the proposed budget</td>
</tr>
<tr>
<td>May 16, 2012</td>
<td>Board Adoption of the FY13 and FY14 budgets</td>
</tr>
<tr>
<td>October 2012</td>
<td>FY13 – 1st Quarter Report to the Finance Committee</td>
</tr>
<tr>
<td>January 2013</td>
<td>FY13 – Mid-Year Review (2nd Quarter Report) to the Board</td>
</tr>
<tr>
<td>April 2013</td>
<td>FY13 – 3rd Quarter Report to the Finance Committee</td>
</tr>
<tr>
<td>May - June 2013</td>
<td>FY13/FY14 – Mid-Cycle Budget Review</td>
</tr>
<tr>
<td>June 2013</td>
<td>Adoption of Adjustments to FY14 budget (if required)</td>
</tr>
<tr>
<td>August 2013</td>
<td>FY13 – Year End Report to the Finance Committee</td>
</tr>
<tr>
<td>October 2013</td>
<td>FY14 – 1st Quarter Report to the Finance Committee</td>
</tr>
<tr>
<td>January 2014</td>
<td>FY14 – Mid-Year Review (2nd Quarter Report) to the Board</td>
</tr>
<tr>
<td>April 2014</td>
<td>FY14 – 3rd Quarter Report to the Finance Committee</td>
</tr>
<tr>
<td>August 2014</td>
<td>FY14 – Year End Report to the Finance Committee</td>
</tr>
</tbody>
</table>
DISTRICT OVERVIEW

TOTAL BUDGET COMPARISON

<table>
<thead>
<tr>
<th>($000)</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>% Variance from FY12</th>
<th>% Variance from FY13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Expense</td>
<td>$60,834</td>
<td>$71,229</td>
<td>$64,392</td>
<td>$73,141</td>
<td>14%</td>
<td>3%</td>
</tr>
<tr>
<td>Capital Expense</td>
<td>62,807</td>
<td>100,458</td>
<td>84,221</td>
<td>33,475</td>
<td>-60%</td>
<td>8%</td>
</tr>
<tr>
<td>Contingencies</td>
<td>45,353</td>
<td>77,700</td>
<td>76,047</td>
<td>42,696</td>
<td>-44%</td>
<td>10%</td>
</tr>
<tr>
<td>Vehicle Replacement Fund</td>
<td>-</td>
<td>1,381</td>
<td>-</td>
<td>978</td>
<td>-</td>
<td>2%</td>
</tr>
<tr>
<td>Sub-Total</td>
<td>168,294</td>
<td>250,968</td>
<td>224,014</td>
<td>149,590</td>
<td>-33%</td>
<td>6%</td>
</tr>
<tr>
<td>Los Vaqueros Refilling Expense</td>
<td>2,978</td>
<td>2,978</td>
<td>5,720</td>
<td>92%</td>
<td>4,110</td>
<td>-28%</td>
</tr>
<tr>
<td>Total</td>
<td>$168,294</td>
<td>$253,946</td>
<td>$226,992</td>
<td>$155,310</td>
<td>-32%</td>
<td>$163,353</td>
</tr>
<tr>
<td>Staffing (FTB)</td>
<td>323.5</td>
<td>312.5</td>
<td>310.5</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

The FY13/FY14 budget reflects the District's continued commitment to cost containment while simultaneously improving water quality, system reliability, and customer service levels. The budget provides funding for completion of Los Vaqueros Expansion and begins normal operations with Los Vaqueros (LV) fully back in service. With the growing uncertainty about the reliability of water supplies from the Delta, the District's water reliability will improve with this project's operation. The budget also funds significant water supply and water quality improvement projects, including $5.5 million of funding for the Canal Replacement - Reach 5, $2.8 million coming from a grant. The budget also includes $7.1 million of funding for the District Center Seismic Upgrade and the finishing expense for the Los Vaqueros Expansion of approximately $5.4 million. This budget includes funding for the operating costs associated with these new assets, while keeping two-year increases less than inflation assumed in the 2013-2022 Capital Improvement Program (CIP) and Ten-Year Financial Plan. This is achieved through the District's continued commitment to cost control and productivity. Examples include aligning staffing with operating and capital requirements by eliminating the four temporary staff (equivalent to two full-time positions), five Project Permanent positions and six other full-time positions.

The two-year budget totals $318.6 million, and is comprised of budgeted expenditures of $155.3 million in FY13 and $163.4 million in FY14. The FY13 budget represents a 32% overall decrease compared to the FY12 budget. This is the result of lower capital expenditures ($72.7 million) primarily the result of the significant completion of the LV Expansion and lower debt service ($33.4 million). The significant decrease in debt service is the result of a scheduled application of Department of Water Resources (DWR) grant funds to reduce the outstanding debt associated with the Middle River Intake Project. The FY13/FY14 Capital Budget is lower than the most recent CIP by $20.9 million because of the elimination of two applicant funded projects, Clayton Regency Pipeline and Golf Club Road Pipeline, that will include a budget request at the time of contract awards and the delays in two project cash flows, Canal Replacement and the Shortcut Pipeline. The two-year operating budget is consistent with the operating costs despite double-digit increases in taxes and benefits because each department was able to hold staffing costs to increases at 3% or less with all other non-variable cost increases to 1% or less.

FY13/FY14 Budget – District Overview – Page 26
Directory Overview

District Budget — Total Budget by Department
The following table provides a breakdown of the District Budget by Department.

<table>
<thead>
<tr>
<th></th>
<th>FY11 Actual</th>
<th>FY12 Actual</th>
<th>FY13 Budget</th>
<th>FY14 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>General District Activities</td>
<td>7,629</td>
<td>9,293</td>
<td>12,030</td>
<td>13,084</td>
</tr>
<tr>
<td>Board of Directors</td>
<td>260</td>
<td>259</td>
<td>514</td>
<td>306</td>
</tr>
<tr>
<td>General Management</td>
<td>2,213</td>
<td>2,093</td>
<td>2,054</td>
<td>2,145</td>
</tr>
<tr>
<td>Public Affairs</td>
<td>1,095</td>
<td>1,109</td>
<td>1,353</td>
<td>1,396</td>
</tr>
<tr>
<td>Engineering</td>
<td>4,943</td>
<td>4,509</td>
<td>7,044</td>
<td>5,577</td>
</tr>
<tr>
<td>Operations &amp; Maintenance</td>
<td>37,617</td>
<td>40,698</td>
<td>47,640</td>
<td>46,457</td>
</tr>
<tr>
<td>Planning &amp; Water Resources</td>
<td>6,420</td>
<td>4,063</td>
<td>6,965</td>
<td>6,282</td>
</tr>
<tr>
<td>Watershed &amp; Lands</td>
<td>4,012</td>
<td>3,677</td>
<td>4,708</td>
<td>4,361</td>
</tr>
<tr>
<td>Human Resources &amp; Risk</td>
<td>1,933</td>
<td>1,956</td>
<td>2,282</td>
<td>2,358</td>
</tr>
<tr>
<td>Finance</td>
<td>9,990</td>
<td>9,723</td>
<td>10,998</td>
<td>11,988</td>
</tr>
<tr>
<td>Construction</td>
<td>47,530</td>
<td>74,211</td>
<td>16,750</td>
<td>22,120</td>
</tr>
<tr>
<td>Sub-Total</td>
<td>123,641</td>
<td>151,591</td>
<td>112,337</td>
<td>116,074</td>
</tr>
<tr>
<td>Debt Service</td>
<td>45,354</td>
<td>76,047</td>
<td>42,696</td>
<td>46,982</td>
</tr>
<tr>
<td>Contingencies</td>
<td>-</td>
<td>-</td>
<td>978</td>
<td>998</td>
</tr>
<tr>
<td>Other Adjustments</td>
<td>(700)</td>
<td>(646)</td>
<td>(700)</td>
<td>(700)</td>
</tr>
<tr>
<td>Total</td>
<td>168,295</td>
<td>226,993</td>
<td>155,311</td>
<td>163,353</td>
</tr>
</tbody>
</table>
DISTRICT OVERVIEW

District Budget – Total Budget by Department

The following table provides a breakdown of the District Budget by Department.

<table>
<thead>
<tr>
<th>($000)</th>
<th>FY11 Actual</th>
<th>FY12 Actual</th>
<th>FY13 Budget</th>
<th>FY14 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>General District Activities</td>
<td>7,629</td>
<td>9,293</td>
<td>12,030</td>
<td>13,084</td>
</tr>
<tr>
<td>Board of Directors</td>
<td>260</td>
<td>259</td>
<td>514</td>
<td>306</td>
</tr>
<tr>
<td>General Management</td>
<td>2,213</td>
<td>2,093</td>
<td>2,054</td>
<td>2,145</td>
</tr>
<tr>
<td>Public Affairs</td>
<td>1,095</td>
<td>1,109</td>
<td>1,353</td>
<td>1,396</td>
</tr>
<tr>
<td>Engineering</td>
<td>4,943</td>
<td>4,509</td>
<td>7,044</td>
<td>5,577</td>
</tr>
<tr>
<td>Operations &amp; Maintenance</td>
<td>37,617</td>
<td>40,698</td>
<td>47,640</td>
<td>46,457</td>
</tr>
<tr>
<td>Planning &amp; Water Resources</td>
<td>6,420</td>
<td>4,063</td>
<td>6,965</td>
<td>6,282</td>
</tr>
<tr>
<td>Watershed &amp; Lands</td>
<td>4,012</td>
<td>3,677</td>
<td>4,708</td>
<td>4,361</td>
</tr>
<tr>
<td>Human Resources &amp; Risk</td>
<td>1,933</td>
<td>1,956</td>
<td>2,282</td>
<td>2,358</td>
</tr>
<tr>
<td>Finance</td>
<td>9,990</td>
<td>9,723</td>
<td>10,998</td>
<td>11,988</td>
</tr>
<tr>
<td>Construction</td>
<td>47,530</td>
<td>74,211</td>
<td>16,750</td>
<td>22,120</td>
</tr>
<tr>
<td>Sub-Total</td>
<td>123,641</td>
<td>151,591</td>
<td>112,337</td>
<td>116,074</td>
</tr>
<tr>
<td>Debt Service</td>
<td>45,354</td>
<td>76,047</td>
<td>42,696</td>
<td>46,982</td>
</tr>
<tr>
<td>Contingencies</td>
<td>-</td>
<td></td>
<td>978</td>
<td>998</td>
</tr>
<tr>
<td>Other Adjustments</td>
<td>(700)</td>
<td>(646)</td>
<td>(700)</td>
<td>(700)</td>
</tr>
<tr>
<td>Total</td>
<td>168,295</td>
<td>226,993</td>
<td>153,311</td>
<td>163,353</td>
</tr>
</tbody>
</table>
District Budget – Total Budget by Expense Category

The following table provides a breakdown of the District budget by major expense category. The major factor for variation in the service category is related to capital projects in process during the 12-month budget cycle, and is consistent with the Ten-Year Financial Plan.

<table>
<thead>
<tr>
<th></th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary &amp; Benefits</td>
<td>$40,596</td>
<td>$42,811</td>
<td>$45,651</td>
<td>$47,063</td>
</tr>
<tr>
<td>Purchased Goods</td>
<td>8,005</td>
<td>7,675</td>
<td>9,015</td>
<td>9,509</td>
</tr>
<tr>
<td>Services</td>
<td>64,270</td>
<td>85,856</td>
<td>37,251</td>
<td>40,860</td>
</tr>
<tr>
<td>Other</td>
<td>10,771</td>
<td>15,248</td>
<td>20,419</td>
<td>18,642</td>
</tr>
<tr>
<td>Sub-Total</td>
<td>$123,641</td>
<td>$151,591</td>
<td>$112,336</td>
<td>$116,074</td>
</tr>
<tr>
<td>Debt Service</td>
<td>45,354</td>
<td>76,047</td>
<td>42,696</td>
<td>46,982</td>
</tr>
<tr>
<td>Contingencies</td>
<td>-</td>
<td>-</td>
<td>978</td>
<td>998</td>
</tr>
<tr>
<td>Other Adjustments</td>
<td>(700)</td>
<td>(646)</td>
<td>(700)</td>
<td>(700)</td>
</tr>
<tr>
<td>Total</td>
<td>$44,654</td>
<td>$226,993</td>
<td>$155,310</td>
<td>$163,553</td>
</tr>
</tbody>
</table>

Total Budget by Expense Category ($000)
# DISTRICT OVERVIEW

District Budget – Operating by Expense Category

The following table provides a breakdown of the District operating budget by major expense category.

<table>
<thead>
<tr>
<th>Operating Budget</th>
<th>FY11 Actual</th>
<th>FY12 Actual</th>
<th>FY13 Budget</th>
<th>FY14 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries/Benefits</td>
<td>$33,530</td>
<td>$35,852</td>
<td>$38,605</td>
<td>$40,570</td>
</tr>
<tr>
<td>Purchased Goods</td>
<td>$5,585</td>
<td>$5,647</td>
<td>$6,592</td>
<td>$6,629</td>
</tr>
<tr>
<td>Services</td>
<td>$12,010</td>
<td>$11,328</td>
<td>$14,729</td>
<td>$15,123</td>
</tr>
<tr>
<td>Other</td>
<td>$9,710</td>
<td>$11,565</td>
<td>$13,214</td>
<td>$13,331</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>$60,834</td>
<td>$64,392</td>
<td>$73,141</td>
<td>$75,653</td>
</tr>
<tr>
<td><strong>Los Vaqueros Refilling Expense</strong></td>
<td>-</td>
<td>$2,978</td>
<td>$5,720</td>
<td>$4,110</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$60,834</td>
<td>$67,370</td>
<td>$78,861</td>
<td>$79,763</td>
</tr>
</tbody>
</table>

## Operating Expenses by Category ($000)

![Operating Expenses by Category Chart]

- Labor
- Purchased Goods
- Services
- Other

**FY11 FY12 FY13 FY14 Actual Actual Budget Budget**
Sample Quarterly Financial Report—T.U.D
Reporting

- Consistent with new board policy
- Finance Committee monthly
- Report to Board quarterly
- Accurate, timely and consistent
What’s included?

- Discussion and analysis
- Statements of net position
- Statements of revenues, expenses, and changes in financial position
- Statements of cash flow
- Schedule of capital investments
## Analysis - Balance Sheet

<table>
<thead>
<tr>
<th></th>
<th>9/30/2013</th>
<th>6/30/2013</th>
<th>$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current assets</td>
<td>$11,291,619</td>
<td>$10,458,504</td>
<td>$833,115</td>
<td>8%</td>
</tr>
<tr>
<td>Other assets</td>
<td>9,524,627</td>
<td>10,196,458</td>
<td>(671,831)</td>
<td>-7%</td>
</tr>
<tr>
<td>Capital assets</td>
<td>66,515,213</td>
<td>66,559,506</td>
<td>(44,293)</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Total assets</td>
<td>87,331,459</td>
<td>87,214,468</td>
<td>116,991</td>
<td>0.1%</td>
</tr>
<tr>
<td>Current liabilities</td>
<td>(7,460,651)</td>
<td>(8,342,212)</td>
<td>(881,561)</td>
<td>-11%</td>
</tr>
<tr>
<td>Long term liabilities</td>
<td>(8,196,149)</td>
<td>(7,946,698)</td>
<td>249,451</td>
<td>3%</td>
</tr>
<tr>
<td>Total liabilities</td>
<td>(15,656,800)</td>
<td>(16,288,910)</td>
<td>(632,110)</td>
<td>-4%</td>
</tr>
<tr>
<td>Net position</td>
<td>(71,674,659)</td>
<td>(70,925,558)</td>
<td>749,101</td>
<td>1%</td>
</tr>
</tbody>
</table>
### Analysis - Income Statement

<table>
<thead>
<tr>
<th></th>
<th>9/30/2013</th>
<th>Budget</th>
<th>$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating revenue</strong></td>
<td>$3,654,588</td>
<td>$3,105,216</td>
<td>$549,372</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Labor</strong></td>
<td>(1,995,338)</td>
<td>(2,216,046)</td>
<td>(220,708)</td>
<td>-10%</td>
</tr>
<tr>
<td><strong>Nonlabor</strong></td>
<td>(698,462)</td>
<td>(708,701)</td>
<td>(10,239)</td>
<td>-1%</td>
</tr>
<tr>
<td><strong>Total operating exp</strong></td>
<td>(2,693,800)</td>
<td>(2,924,747)</td>
<td>(230,947)</td>
<td>-8%</td>
</tr>
<tr>
<td><strong>Net</strong></td>
<td>960,788</td>
<td>180,469</td>
<td>780,319</td>
<td>432%</td>
</tr>
<tr>
<td><strong>Nonoperating</strong></td>
<td>173,197</td>
<td>415,390</td>
<td>(242,193)</td>
<td>-58%</td>
</tr>
<tr>
<td><strong>Capital revenue</strong></td>
<td>403,897</td>
<td>381,502</td>
<td>22,395</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Change</strong></td>
<td>$1,537,882</td>
<td>$977,361</td>
<td>$560,521</td>
<td>57%</td>
</tr>
</tbody>
</table>
Sample Monthly Reports
Summary Level to Detailed Level
Summary Report
Revenues and Expenditures
By Operating Unit and Account Type
General Ledger
Revenue vs. Expenses by Account Type

<table>
<thead>
<tr>
<th>Account</th>
<th>Description</th>
<th>Budget</th>
<th>Period Amount</th>
<th>YTD Amount</th>
<th>YTD Variance</th>
<th>10/12 Budg Amt % Budg Expended</th>
</tr>
</thead>
<tbody>
<tr>
<td>6000 REVENUE</td>
<td>Water Enterprise Fund</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Charges for Service</td>
<td>3,042,614.00</td>
<td>320,658.23</td>
<td>2,306,668.74</td>
<td>735,945.26</td>
<td>2,335,511.70</td>
</tr>
<tr>
<td></td>
<td>Miscellaneous Revenue</td>
<td>199,896.00</td>
<td>13,740.00</td>
<td>125,693.97</td>
<td>68,204.03</td>
<td>101,581.70</td>
</tr>
<tr>
<td></td>
<td>Transfer in</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td><strong>REVENUE Totals:</strong></td>
<td>3,242,512.00</td>
<td>334,398.23</td>
<td>2,432,362.71</td>
<td>804,149.29</td>
<td>2,437,093.30</td>
</tr>
<tr>
<td>6000-1050 EXPENSES</td>
<td>Finance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supplies</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Services</td>
<td>3,500.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>2,500.00</td>
</tr>
<tr>
<td></td>
<td><strong>6000-1015 Totals:</strong></td>
<td>3,500.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>2,500.00</td>
</tr>
<tr>
<td>6000-1030</td>
<td>(No Description) Services</td>
<td>50,000.00</td>
<td>1,817.50</td>
<td>10,561.54</td>
<td>39,438.46</td>
<td>41,666.70</td>
</tr>
<tr>
<td></td>
<td><strong>6000-1030 Totals:</strong></td>
<td>50,000.00</td>
<td>1,817.50</td>
<td>10,561.54</td>
<td>39,438.46</td>
<td>41,666.70</td>
</tr>
<tr>
<td>6000-3030</td>
<td>Engineering Supplies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Services</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td><strong>6000-3030 Totals:</strong></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>6000-7000</td>
<td>Water Administration Supplies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Services</td>
<td>443,777.00</td>
<td>0.00</td>
<td>221,888.30</td>
<td>221,888.30</td>
<td>369,814.20</td>
</tr>
<tr>
<td>Account</td>
<td>Description</td>
<td>Budget</td>
<td>Period Amount</td>
<td>YTD Amount</td>
<td>YTD Variance</td>
<td>10/12 Budg Amt</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------</td>
<td>--------</td>
<td>---------------</td>
<td>------------</td>
<td>--------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Expenses</td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>6000-7000</td>
<td>6000-7000 Tots:</td>
<td>443,777.00</td>
<td>0.00</td>
<td>221,888.50</td>
<td>221,888.50</td>
<td>369,814.20</td>
</tr>
<tr>
<td>Water Supply</td>
<td>Water Supply Salaries</td>
<td>966,155.00</td>
<td>59,381.91</td>
<td>538,518.82</td>
<td>407,641.18</td>
<td>788,462.50</td>
</tr>
<tr>
<td>Supplies</td>
<td>Supplies</td>
<td>119,155.00</td>
<td>2,929.18</td>
<td>34,073.45</td>
<td>85,081.35</td>
<td>99,259.80</td>
</tr>
<tr>
<td>Services</td>
<td>Services</td>
<td>885,775.00</td>
<td>33,504.70</td>
<td>610,133.97</td>
<td>283,641.03</td>
<td>746,479.70</td>
</tr>
<tr>
<td>Expenses</td>
<td>Expenses</td>
<td>490,946.00</td>
<td>0.00</td>
<td>233,182.00</td>
<td>238,182.00</td>
<td>408,035.70</td>
</tr>
<tr>
<td>OPED</td>
<td>OPED</td>
<td>50,000.00</td>
<td>0.00</td>
<td>491.03</td>
<td>29,508.97</td>
<td>25,000.00</td>
</tr>
<tr>
<td>6000-7010</td>
<td>6000-7010 Tots:</td>
<td>2,481,449.00</td>
<td>95,415.79</td>
<td>1,415,394.27</td>
<td>1,066,054.73</td>
<td>2,067,874.20</td>
</tr>
<tr>
<td>Transfer Out</td>
<td>Transfer Out Expenses</td>
<td>152,375.00</td>
<td>0.00</td>
<td>0.00</td>
<td>152,375.00</td>
<td>126,979.20</td>
</tr>
<tr>
<td>6000-9095</td>
<td>6000-9095 Tots:</td>
<td>152,375.00</td>
<td>0.00</td>
<td>0.00</td>
<td>152,375.00</td>
<td>126,979.20</td>
</tr>
<tr>
<td>Appropriated</td>
<td>Appropriated Reserve</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Expenses</td>
<td>Appropriated Reserve</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>6000-9099</td>
<td>6000-9099 Tots:</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>EXPENSES</td>
<td>EXPENSES Tots:</td>
<td>3,135,101.00</td>
<td>97,233.29</td>
<td>1,647,844.31</td>
<td>1,482,256.69</td>
<td>2,608,417.50</td>
</tr>
<tr>
<td>Totals</td>
<td>6000 Totals:</td>
<td>106,411.00</td>
<td>-237,164.94</td>
<td>784,518.40</td>
<td>-678,107.40</td>
<td>88,673.80</td>
</tr>
<tr>
<td></td>
<td>REVENUE TOTAL</td>
<td>3,236,512.00</td>
<td>334,398.23</td>
<td>2,432,362.71</td>
<td>804,149.29</td>
<td>2,697,091.30</td>
</tr>
<tr>
<td></td>
<td>EXPENSE TOTAL</td>
<td>3,135,101.00</td>
<td>97,233.29</td>
<td>1,647,844.31</td>
<td>1,482,256.69</td>
<td>2,608,417.50</td>
</tr>
<tr>
<td></td>
<td>GRAND TOTAL</td>
<td>106,411.00</td>
<td>237,164.94</td>
<td>784,518.40</td>
<td>-678,107.40</td>
<td>88,673.80</td>
</tr>
</tbody>
</table>

GL - Revenue vs Expenses (04/21/2014 - 5:15)
Summary Report By Revenue/Expenditure Category
<table>
<thead>
<tr>
<th>Account</th>
<th>Description</th>
<th>Budget</th>
<th>Period Amount</th>
<th>Year to Date Amount</th>
<th>Year to Date Variance</th>
<th>Percent Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>6000</td>
<td>Water Enterprise Fund</td>
<td>3,042,614.00</td>
<td>2,396,668.74</td>
<td>2,396,668.74</td>
<td>755,945.26</td>
<td>24.18</td>
</tr>
<tr>
<td></td>
<td>Charges for Service</td>
<td>193,898.00</td>
<td>125,693.97</td>
<td>123,693.97</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Miscellaneous Revenue</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>TRANSFERS IN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>REVENUE Totals</td>
<td>3,236,512.00</td>
<td>2,432,362.71</td>
<td>2,432,362.71</td>
<td>804,149.29</td>
<td>24.84</td>
</tr>
<tr>
<td></td>
<td>Salaries</td>
<td>946,155.00</td>
<td>538,513.82</td>
<td>538,513.82</td>
<td>407,641.18</td>
<td>74.08</td>
</tr>
<tr>
<td></td>
<td>Supplies</td>
<td>119,155.00</td>
<td>34,075.45</td>
<td>34,075.45</td>
<td>85,081.55</td>
<td>69.47</td>
</tr>
<tr>
<td></td>
<td>Services</td>
<td>1,392,652.00</td>
<td>842,584.01</td>
<td>842,584.01</td>
<td>549,467.99</td>
<td>69.47</td>
</tr>
<tr>
<td></td>
<td>Expenses</td>
<td>690,204.00</td>
<td>232,182.00</td>
<td>232,182.00</td>
<td>458,022.00</td>
<td>67.18</td>
</tr>
<tr>
<td></td>
<td>OPEB</td>
<td>182,375.00</td>
<td>491,03</td>
<td>491,03</td>
<td>311,652.00</td>
<td>67.18</td>
</tr>
<tr>
<td></td>
<td>EXPENSES Totals</td>
<td>3,130,191.00</td>
<td>1,647,844.31</td>
<td>1,647,844.31</td>
<td>1,482,256.69</td>
<td>47.35</td>
</tr>
<tr>
<td>6000</td>
<td>Totals</td>
<td>106,411.00</td>
<td>784,518.40</td>
<td>784,518.40</td>
<td>(678,107.40)</td>
<td>(637.25)</td>
</tr>
<tr>
<td></td>
<td>REVENUE TOTAL</td>
<td>3,236,512.00</td>
<td>2,432,362.71</td>
<td>2,432,362.71</td>
<td>804,149.29</td>
<td>24.84</td>
</tr>
<tr>
<td></td>
<td>EXPENSES TOTAL</td>
<td>3,130,191.00</td>
<td>1,647,844.31</td>
<td>1,647,844.31</td>
<td>1,482,256.69</td>
<td>47.35</td>
</tr>
<tr>
<td></td>
<td>GRAND TOTAL</td>
<td>106,411.00</td>
<td>784,518.40</td>
<td>784,518.40</td>
<td>(678,107.40)</td>
<td>(637.25)</td>
</tr>
</tbody>
</table>
Summary Report
Trial Balance
<table>
<thead>
<tr>
<th>Account</th>
<th>Type</th>
<th>Beginning Balance</th>
<th>Debit This Period</th>
<th>Credit This Period</th>
<th>Ending Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>6000</td>
<td>Assets</td>
<td>(4,924,662.11)</td>
<td>5,176,772.42</td>
<td>4,551,435.97</td>
<td>(6,521,162.65)</td>
</tr>
<tr>
<td></td>
<td>Liabilities</td>
<td>(1,005,634.22)</td>
<td>890,091.97</td>
<td>696,893.22</td>
<td>(551,432.92)</td>
</tr>
<tr>
<td></td>
<td>Fund Balance</td>
<td>5,989,085.45</td>
<td>0.00</td>
<td>0.00</td>
<td>5,989,085.45</td>
</tr>
<tr>
<td></td>
<td>Revenue</td>
<td>0.00</td>
<td>331,196.41</td>
<td>2,815,559.12</td>
<td>(2,432,302.71)</td>
</tr>
<tr>
<td></td>
<td>Expenses</td>
<td>0.00</td>
<td>1,677,183.66</td>
<td>29,341.35</td>
<td>1,647,844.31</td>
</tr>
<tr>
<td></td>
<td>6000 Totals:</td>
<td>(0.88)&lt;sup&gt;-&lt;/sup&gt;</td>
<td>8,043,246.46&lt;sup&gt;-&lt;/sup&gt;</td>
<td>8,043,246.46&lt;sup&gt;-&lt;/sup&gt;</td>
<td>(0.88)&lt;sup&gt;-&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Report Totals: (0.88)<sup>-</sup>
# Recommendations from Financial Systems Analysis

**August 27, 2019**

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ensure that a staff member is cross-trained and able to perform each of the key finance functions, including payroll, accounts payable, accounts receivable and monthly financial reporting.</td>
<td>Payroll has been reassigned and cross trained. Finance Functions have been better delineated from Customer Service. AP has been cross trained. Ongoing</td>
</tr>
<tr>
<td>2. Develop a plan for preparing procedures manuals for each of the key finance activities.</td>
<td>Ongoing</td>
</tr>
<tr>
<td>3. Reclassify the vacant Controller position to a position with a broader financial and organizational emphasis which would include strong analytical, planning, management and communication skills.</td>
<td>Completed – Finance Manager</td>
</tr>
<tr>
<td>4. Continue discussions with the Agency’s current financial software provider regarding the future of that organization and impact of potential changes on Amador Water Agency. If it is determined that Datastream will continue to support its current product for an extended period of time, identify the cost and feasibility of interfacing the Maintenance Connection work order system into the Datastream financial system. If it is determined that Datastream is not a long term viable solution, explore alternative software providers.</td>
<td>Completed See #6</td>
</tr>
<tr>
<td>5. As a long term solution, an integrated comprehensive financial and job cost reporting system should be implemented. Given limited staffing resources and the need to provide reliable and timely financial information, the Agency would benefit from implementation of a fully functional financial reporting system. Detailed cost and functionality information should be solicited from Springbrook Software and at least two other software providers.</td>
<td>Completed Springbrook</td>
</tr>
<tr>
<td>6. Implement an effective interface between the work order and financial systems to eliminate duplicate timecard reporting.</td>
<td>Customer Data integration completed – Timcard process still needs review</td>
</tr>
<tr>
<td>7. Discontinue the Agency practice of issuing a separate payroll check for overtime.</td>
<td>Complete</td>
</tr>
<tr>
<td>Recommendation</td>
<td>Status</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>8. Explore the possibility of implementing the purchasing module for issuing purchase orders and encumbering funds on the existing financial software. If a decision is made to migrate to another financial software system, an integrated purchasing module should be included in the requirements for the replacement system.</td>
<td>Completed-Springbrook</td>
</tr>
<tr>
<td>9. Implement a lockbox payment processing system for utility payments.</td>
<td>Completed</td>
</tr>
<tr>
<td>10. Continue discussions with Datastream to resolve the issue of posting accounts receivable transactions to the general ledger.</td>
<td>Complete-Springbrook</td>
</tr>
<tr>
<td>11. Replace use of outdated greenbar report printing with laser printed documents and develop and implement procedures to be in conformance with Administrative Policy 3090 governing records retention.</td>
<td>Completed</td>
</tr>
<tr>
<td>12. Develop financial reports which provide necessary and useful information and eliminate the current cumbersome and complex spreadsheet reporting process. Reports should be available at several levels of detail to provide information appropriate for the needs of the user.</td>
<td>Ongoing</td>
</tr>
<tr>
<td>13. Develop a grants management policy. Assign responsibility for organizing and implementing the grants management policy to the Finance Manager position.</td>
<td>To be developed (2019-2020) Assigned to AGM</td>
</tr>
<tr>
<td>14. Prepare Reserve and Internal Loan policies for Board consideration and approval.</td>
<td>Completed</td>
</tr>
<tr>
<td>15. Develop additional financial policies addressing accounts receivable collection and write-off procedures, petty cash and cash handling, the transfer of budgeted funds and the appropriate use of capital facilities fees and restricted Agency funds. Ensure that all approved financial policies are documented and readily accessible to staff. Provide periodic training to staff on key financial policies such as purchasing, travel and use of Agency credit cards. Include a review of key policies in the orientation process for new employees.</td>
<td>Completed/ ongoing training-Collection and write off procedures have been completed. Cash and cash handling procedures have been reviewed and revised. Cash handling is tracked and reported daily. Financial policies have been reviewed and are being updated. Employee Handbook is being updated</td>
</tr>
<tr>
<td>Recommendation</td>
<td>Status</td>
</tr>
<tr>
<td>----------------</td>
<td>--------</td>
</tr>
<tr>
<td>16 Transfer responsibility for control of the electrical inventory to the Purchasing Agent.</td>
<td>Complete</td>
</tr>
<tr>
<td>17 Conduct an annual physical count of all inventory items.</td>
<td>Complete and ongoing</td>
</tr>
<tr>
<td>18 Amend the current credit card policy to specify the types of small routine purchases which may be made by credit card. Require large purchases to be processed by the Purchasing Agent.</td>
<td>Complete</td>
</tr>
<tr>
<td>19 Utilize contract services for Information Technology support of desktop computers and network systems.</td>
<td>Completed</td>
</tr>
<tr>
<td>20 Proceed with review, testing and implementation of the new chart of accounts. Provide training to staff on the new account structure.</td>
<td>Completed</td>
</tr>
<tr>
<td>21 Develop a formal Cost Allocation Plan for Board Consideration and Approval</td>
<td>To be developed 2019-2020</td>
</tr>
<tr>
<td>22 Develop a Five Year Financial Forecast of operating and capital activities.</td>
<td>Completed</td>
</tr>
<tr>
<td>23 Conduct an annual strategic planning process including an organization-wide cycle of refinement and review. Identify and incorporate the critical elements of the Agency’s Strategic Plan into the budget and financial planning process. Create a schedule for the strategic planning and budget/financial planning process which includes a public information and outreach component to insure the opportunity for public involvement.</td>
<td>Partially Complete Ongoing</td>
</tr>
</tbody>
</table>
Amador Water Agency
Audit Management Letter Items
Status Update – August 27, 2019

Accounting Policies and Procedures:
The Agency has procedures documenting cash receipts, accounts payable, miscellaneous accounts receivable, payroll and utility billing. Most of these need to be updated (the exception being utility billing) as they were created a couple of years ago. The general ledger component is not complete and is in the process of being created currently by the Finance Manager and Staff Accountant. Completion is anticipated to be late April 2019.

A request was sent out to the CSMFO (California Society of Municipal Financials Officers) regarding accounting policies from other like Agencies. These accounting policies will be reviewed by the accounting and management teams with recommendations to the Policy committee anticipated in May 2019. Updated accounting policies have been drafted and will be distributed to the management team for review September 2 – 6. The budget reformatting and grand jury responses delayed distribution to the management team.

Risk Assessment Process:
Establishing the risk assessment process for the Agency needs to include staff and the Board. Staff is currently collecting risk assessment processes from other agencies for review. Handed off to HR Manager and AGM. Draft policy has been created.

Fraud Reporting Procedures:
The Agency has attained policies from other agencies for review by the management team. The policies/procedures include fraud prevention and whistleblower policies. After review, the management team will provide recommendations to the Policy committee. Anticipated recommendation timeframe is March 2019. Handed off to HR Manager. Draft policy created by HR and Finance managers, was distributed to the management team for review April 24, 2019. Budget process and subsequent events delayed additional review. Will be redistributed for review September 2 – 6.

Approval of Adjustments/Write-offs:
This approval process needs to contain definition as to the type of adjustment and threshold for write-off limits for the Office Manager and Finance Manager. This policy does not currently exist for the Agency. It will be developed and recommended to the Policy committee with an anticipated timeframe of March 2019. Process completed and signed off by Auditors during interim work July 17, 2019.

Vendor Payments:
A process for mailing vendor payments by someone other than the roles active in processing the payments has already been established and implemented. The vendor payments and corresponding documentation (if any) are provided to the Admin Assistant II who puts the payments into envelopes and applies postage. Completed and signed off by Auditors during interim work July 17, 2019.
**Grant Tracking:**

A process for grant tracking has not yet been identified. All parties involved need to assess the best way to provide information and confirm that it has been delivered and/or received. The parties involved are the project manager, AGM and the FM and/or accountant. Update to follow at the April 2019 Budget and Finance meeting.

**Revenue General Ledger Accounts:**

The auditors remarked that some of the revenue accounts have “generic” names. The Agency receives revenue from many different sources and sometimes are unexpected. It is the recommendation of the Finance Manager that this task fall into a broader project of creating descriptions, not changing titles, of all general ledger accounts. The descriptions will address the concerns of the auditors in additional to assisting managers/supervisors with the budgeting process and coding of invoices. Update to follow at the February 2019 Budget and Finance meeting. The process of creating descriptions is in progress.

**Fixed Assets:**

The fixed assets are currently under review by the Accountant and Finance Manager. The Agency alerted the auditors to the fact that the fixed asset listing was under review as items were identified as no longer being owned by the Agency. It is anticipated that the review and confirmation of items on the fixed asset list will continue until at least June 30, 2019. Update to follow at the February 2019 Budget and Finance meeting. The review of fixed assets to be removed from the list based on surplus/disposal has been completed for the 2018-19 audit process and auditors have been updated as of July 17, 2019.

**Inventory Valuation:**

The Springbrook software currently contains some items owned by the Agency prior to the software conversion in 2015. The Agency still owns these items and they are valued at the purchase price. The importance of this issue may be more about educating the auditors on how the software calculates or represents the current value based on multiple purchases at changing prices based on the “going rate” at the time of purchase. Identifying and documenting this component will be included in the review and update of the purchasing policies. This task will be researched by the Purchasing Agent and Finance Manager. Recommendations and alternate options will be provided to the Management team for review. Further recommendations will be provided to the policy committee. Anticipated progress to be completed in May 2019. Issues identified are related to converted data from Legacy software. Finance Manager worked with Springbrook to correct issues and data will be correct as of the 2018-19 audit.

**Deposits from Customers:**

To articulate the situation, after a service pack update from Springbrook, the process by which the Agency was processing the receipt of customer deposits no longer provided the same reporting outcome. The details of the service pack changes were not made clear to the Agency. The customer deposits are reflected in the customer accounts in Springbrook but reports derived from such information are limited. Currently, the Customer Service Rep III is manually correcting the information
so reporting is accurate. Update - the Customer Service Rep III and Accountant are currently working together to reconcile and correct where necessary.

The Accountant identified that the report reflects cash transactions and the general ledger is accrual and captures billing information instead of cash receipts. The Accountant is currently updating the reports to reflect correct information that corresponds to the general ledger. Subsequently, the Accountant and Finance Manager is create a report that will pull accrual transactions instead of cash transactions.

**Credit Card Receipts:**

The management team has discussed and relayed the importance of better documentation for credit card receipts to all cardholders. It has been determined that the Agency’s current credit card policy is limited in scope and needs to capture definition of processes, an outline of accountability for the cardholder and any subsequent consequences if the policy is not adhered to. Credit card policies have been received from other agencies for review and recommendation by the management team. Update to follow at the April 2019 Budget and Finance Meeting. This will remain an issue as the auditors identified what they believe to be an issue during the July 17 interim work.

**Gift Cards Provided to Employees:**

Previously, the Agency had provided gift cards with a value of $25 to each employee to a specific vendor as a Christmas gift. The process was changed at Christmas this year to avoid providing the employees with a gift with a cash value. Gifts of “Cash or cash equivalent fringe benefits (for example, gift certificates, gift cards, and the use of a charge card or credit card), no matter how little, are never excludable as a de minimis benefit”. IRS Publication 15B. Issue addressed and resolved. Completed.
APPENDIX LL
BACKGROUND

The Amador Water Agency (Agency) is a public, not-for-profit special district created in 1959 by the California State Legislature. The purpose of the Agency is to provide water, waste water, and storm drainage services to Amador County. The 2011-2012 Amador County Grand Jury conducted an investigation of the Agency based on citizen complaints received regarding the Agency’s financial Health and long-term debt. The 2011-2012 Grand Jury recommended the investigation into the Agency continue. The Follow-up Committee of the 2012-2013 Grand Jury (Grand Jury) reviewed the details of the response. Based on the Agency’s response, improvements were made in several areas. A few issues remained outstanding. The Grand Jury determined that a formal follow-up investigation was in order.

AUTHORITY

Per California Penal Code §933.5, A grand jury may at any time examine the books and records of any special-purpose assessing or taxing district located wholly or partly in the county or the local Agency formation commission in the county, and, in addition to any other investigatory powers granted by this chapter, may investigate and report upon the method or system of performing the duties of such district or commission.

METHOD OF STUDY

- Interviews with past and present Agency’s Board of Directors
- Interviews with ratepayers
- Interviews with Agency personnel
- Review of Agency’s website, Board of Directors’ meeting minutes, and budgets
- Review of Government Code 66013 (GC66013) – Water Fees and Charges Regulations
- Attendance at Board of Directors’ meetings and subcommittee meetings

GLOSSARY OF TERMS

- Replacement Cash Reserves (RCR): monies held for projects funded by water and wastewater rate proceeds
- Participation Fee Cash Reserves (PFCR): monies held for each water and wastewater system and comes from new water connections
DISCUSSION

The Grand Jury evaluated the Agency's response and realized there were gaps in knowledge about the Agency's financial accountability. The perception by the public that the Agency's finances were hidden and inaccurate sparked our curiosity. There were no adequate checks and balances in place within the Agency. Once inquiries began, the current Board and Agency management proceeded to apply due diligence.

FACTS

1. The Agency combined the RCR and PFCR into a single account in July 2004.

2. No existing Board member, General Manager, or Controller were on staff in 2004.

3. The Agency engineers and General Manager reviewed Agency projects from 2004 to present. This determined which costs should be for replacement and which costs should be for improvements/expansion.

4. The Agency Controller reconciled cash accounts from 2004 to present to determine actual project costs. These costs, based on the project analysis, have been divided between replacement and improvements/expansion.

5. As of 2012, PFCR and RCR funds have been separated into two accounts. Journal entries have been completed, including interest earned on all the funds.

6. Per GC66013, fees collected must be used solely for the purpose for which they were collected.

7. Per GC66013, collected fees must be kept in separate accounts from all other funds. The Agency is correcting the GC66013 violation by separating PFCR and RCR. The State imposes no penalties for not filing annual reports.

8. Internal loans between water systems were made to eliminate the negative cash balances in various water supply systems.

9. Internal loans are legal and may be necessary to keep systems solvent within the Agency.

10. Fiscal Year 2010-2011 audit was accepted in April 2013. The delay was caused by negative fund balances in several of the Agency's systems. Fiscal Year 2011-2012 financial reports are contingent on Board acceptance of the prior year's audit.

11. Generally Accepted Accounting Principles (GAAP) require all funds must have a positive balance at the end of each fiscal year.
12. In recent years, the Agency has experienced an increase in:
- Attorney costs
- Length of Board meetings (since 2008)
- Increase in Public Records Act requests

![Amador Water Agency Attorney Annual Costs](chart1)

![Amador Water Agency Duration of Board Meetings](chart2)

13. The Budget and Finance Committee reviews and discusses monthly budget status reports. The reports are then given to the Board for review. These meetings are open to the public.

14. Monthly budget status reports detail:
- Agency budget, income to date, percentage of budget completed
- System specific budget, income to date, percentage of budget completed
- Agency budget, expenses to date, percentage of budget completed
- System specific budget, expenses to date, percentage of budget completed
- Any known income or expense that will occur before the end of the fiscal year affecting available water systems balances

**FINDINGS**

F1. The Agency has implemented financial reporting that follows the standard accounting practices in line with the State's General Accounting Standards Board (GASB) and GAAP. (Facts 13, 14)

F2. The Project Analysis determined percentages of all projects based on replacement or improvements/expansion. (Fact 3)

F3. The State does not penalize for not filing GC66013 reports. (Fact 7)

F4. Members of the public are interested in budget status reports for their particular water supply system, as well as the Agency overall. (Facts 13, 14)
F5. Some members of the public are instrumental in voicing concerns and challenging financial information on behalf of some ratepayers. (Fact 12)

F6. When controversial items are added to a Board agenda, the discussion at the meetings can be lengthy. This extends the duration of Board meetings. Lengthy meetings may change the public’s availability to hear the discussion about their particular item and to address the Board. (Fact 12)

F7. Between 2008 and 2012, the length of time spent at Agency Board meetings has increased 123%. (Fact 12)

F8. Policies that identify and address the accounting activities used within the Agency were generally unwritten. (Facts 1, 9, 11)

RECOMMENDATIONS

R1. The Grand Jury recommends the Agency should provide a link on their web homepage showing the budget information in simple, easy to read formats. Use of charts and graphs should be included. (Finding 1, 4) (Appendix A)

R2. The Grand Jury recommends that the Agency limit the public comment time to 3 minutes, similar to the Amador County Board of Supervisors. (Finding 6)

R3. The Grand Jury recommends the Agency develop and adopt policies to ensure standard accounting practices be consistent. This will ensure discrepancies and inconsistencies in accounts do not reoccur. Policies can be made available on the Agency’s webpage to aid in public transparency. (Finding 1, 2, 3) (Appendix A)

REQUEST FOR RESPONSE

Per California Penal Code §933(c) - No later than 90 days after the grand jury submits a final report on the operations of any public Agency subject to its reviewing authority, the governing body of the public Agency shall comment to the presiding judge of the superior court on the findings and recommendations pertaining to matters under the control of the governing body.

DISCLAIMERS

This report of the Amador Water Agency Financial Road to Recovery is issued by the 2012-2013 Grand Jury with the exception of one member of this Grand Jury, who might have a perceived conflict of interest. This juror was excluded from all parts of the investigation, which included interviews, deliberations, and the writing of this report. This report is based on information obtained from outside sources with none of the information being obtained from the excluded Grand Juror.
APPENDIX
Appendix A – Sample of budget charts and graphs

Amador Water Agency
2012-2013 Projected Revenue

Amador Water Agency
2012-2013 Projected Expenses

AWA - All Systems Operating Budget (6-28-2012)
UPCOUNTRY WATER SOLUTION
AMADOR WATER AGENCY

BACKGROUND

In the 1970's, there were major water outages in the upcountry areas due to a severe drought. Amador County (County) entered into a Joint Powers Agreement with the Amador Water Agency (Agency) in 1977. Construction began in 1978 of the "Emergency Pipeline" (Pipeline) from the Tiger Creek Afterbay to Buckhorn Water Treatment Plant (BWTP). Water service agreements were executed in 1978 with each of 10 districts that would receive water. In 1979 the Agency began operations of the Central Amador Water Project (CAWP) system.

The Gravity Supply Line (GSL) concept was initiated in early 2010 by the Agency's Board of Directors (Board). At that time, there was public concern about the Pipeline's ability to help fight an Upcountry fire. There was also the desire to offer a means of delivering water to customers at a lower cost. No studies were done to ascertain the actual condition of the Pipeline. Numerous objections and citizen complaints were brought to the Board. Some of these complaints related to the cost of a new system. Other concerns were voiced that the present system was adequate for the existing customer base. The GSL project has to be evaluated on its own merits without political bias.

AUTHORITY

Per California Penal Code §933.5, a grand jury may at any time examine the books and records of any special-purpose assessing or taxing district located wholly or partly in the county or the local agency formation commission in the county, and, in addition to any other investigatory powers granted by this chapter, may investigate and report upon the method or system of performing the duties of such district or commission.

METHOD OF STUDY

- Interviews with current employees, management, and directors of the Agency
- Interviews with past directors of the Agency
- Interviews with former County Directors
- Attendance at Agency Committees and Board meetings
- Review of contracts, project status reports, audit reports, and opinion papers
- Tour of existing pipeline locations, pump stations, Tiger Creek Afterbay, and the Tiger Creek Regulator
- Review of websites of the Agency and the Ratepayer Protection Alliance
DISCUSSION

The Agency is the primary provider of drinking water. The North Fork of the Mokelumne River is the primary source of water for the CAWP system. Water from the Tiger Creek Afterbay is pumped to BWTP. This water is used by Pine Grove, Pine Acres, Sunset Heights, Fairway Pines, Jackson Pines, Pioneer, Gayla Manor, Ranch House Estates, Pine Park East, Toma Lane, Sierra Highlands, Silver Lake Pines, Ridgeway Pines, Rabb Park, and Mace Meadows. This is the CAWP system.

FACTS

Existing System Lifespan

1. The Pipeline itself is an air type pipe, not a water type pipe.
2. Life span of an air type pipe is between 35-40 years.
3. In 1977, 4 year old pipe was purchased from Pacific Pipe Company.
4. From the Tiger Creek Afterbay, the Pipeline ascends 1,300 feet straight up. Water is forced uphill by electrical pumping.
5. Maps pinpointing the exact location of the pipe are not known to exist at this time. Of the over 9,000 feet of pipe used, only those sections closest to the intakes and outtakes of the pump stations are known.
6. Repairs of the pipe, even if the location were known, are difficult in wet or adverse conditions due to terrain and lack of access routes.
7. Pipe seams were compromised when the coating within the joints melted under the heat of welding.
8. Catastrophic failure of the existing pipeline occurred in January 1980, destroying 1 house and eroding the hillside. (Photo 1)
9. Potential damage to homes has increased due to more residential construction.
10. Repairs to the existing system have increased as the system ages and the parts become unavailable.

Photo 1: Landslide caused by break in pipeline, January 1980
Photo provided by Amador Water Agency
11. From 2004 to 2008, there have been 163 Pipeline failures:
   - 97 electrical/mechanical
   - 14 communications
   - 52 power outages:
     - 18 were less than 4 hours
     - 28 were between 4 and 24 hours
     - 4 were greater than 24 hours
     - 2 caused by wildfires

12. The Agency’s BWTP was replaced with a state of the art facility in 2004/2006.

13. The whole system is antiquated. Vacuum tubes are still used in electrical panels. Parts are not readily found, except on internet auction sites. There is no Cathode Protection along the pipes.

14. High pressure must be maintained to meet water demand.

15. The system at the pump station is dangerous, as Arc-Flashing is possible. There is no room at some stations for added back up pumps, electrical outlets, or emergency power generators.

16. The system sometimes operates beyond its capacities, putting stress on the components. (For example: water hammering, pipe shifting, etc)

17. The system can be used for a backup system for the GSL, but is not required by either the Agency or PG&E. Maintenance costs will vary while Pipeline is dormant.

18. Assembly Bill (AB) 32 discourages use of fossil fuels.

19. Under the Agency's current water rights, the system runs close to maximum capacity during the summer months.
20. The Tiger Creek Regulator holds 500-acre feet of water at any given time on any one day. This is equal to six months of the Agency's demand.

21. PG&E gives the Agency top priority water rights, second to East Bay Municipal Utilities District (EBMUD).

22. The Tiger Creek Pump Station is situated on land that is eroding.

23. The Silver Lake Pines and Tiger Creek Pump Stations have corroded pipes that go into concrete, making inspection impossible.

24. Brackets holding pipe are broken and/or loose.

**Gravity Supply Line**

25. The GSL will need some initial pumping to start the flow of water.

26. The GSL will use a combination of 3 different pipes. The pipes have different costs per foot and maximum PSI capacities. This will result in a longer lifespan.

27. The GSL will use automated communications and remote alarms to avert service interruptions.

28. As it is designed, the GSL has the capacity to transmit water under adverse conditions (i.e. storms, snow, electrical outages, and fire).

29. The GSL allows water transmission greater than needed for the existing customer base.

30. The GSL will use larger diameter pipe. The growth factor used in the GSL design was based on the Urban Water Regional growth plan, not the County General Plan.
31. The GSL provides a pressurized system that will improve fire suppression activities:
   - A reliable water source not dependent on electricity
   - An available large reserve storage of water
   - Fire hydrants located along the GSL

32. Amador Fire Protection District Agencies and the Amador County Fire Chiefs Association have endorsed the GSL stating the potential positive impacts on fire suppression.

**Fiscal Concerns**

33. CAWP has had no rate increase since 2006.

34. The cost to replace or repair the existing pipeline system will equal the cost of constructing the GSL. The GSL would actually be cheaper to construct with available government grants.

35. The funding plan for the GSL was approved by the Board in April 2013. It has no rate increase for existing CAWP ratepayers.

36. In early 2010, a public workshop was held to present cost comparisons of the Pipeline versus the GSL.

37. The Agency and the ratepayers will no longer pay PG&E for the pumping costs of the Pipeline. Pumping costs have increased over the years:
   - In 1988-1989 = $109,000
   - In 2003-2004 = $310,000
   - In 2011-2012 = $256,000

38. Liability to the Agency increases if employees are injured working on dangerous or antiquated systems.

39. A loan from the County ($900,000) was spent on Engineering and Environmental Reviews. Grant funds from the United States Department of Agriculture (USDA) will repay the County.

40. The cost to construct the GSL is $13.4 million: $5.1 million from USDA grant and $8.3 million from USDA low-interest loan.

41. The USDA grant of $5.1 million is in danger of expiring in September 2013. Grant funds do not require repayment.

42. The interest rate for the USDA loan has lowered from 3.25% to 2.7% and is now 2.5%.
43. Some public dissention has extended the timeline of construction on the proposed GSL.

FINDINGS

F1. Some members of the public are instrumental in voicing concerns and challenging any new project and funding source on behalf of some ratepayers. (Facts 33, 34, 40)

F2. The lifespan of pipe used for air is unknown when used for water. Although the pipe was pressure tested, inspected, sand blasted, and coated per specifications, it was not used as intended (air vs. water). Water pressures and directional changes may have compromised the integrity inside the pipe. (Facts 1, 2, 6, 7, 15, 22, 23)

F3. The existing Pipeline must continue to be fully operational while an alternate water supply is developed, constructed and implemented. (Facts 6, 10, 13)

F4. The existing pump stations pose a danger to employees with the high pressure contained in the pipes and the fast moving parts of the pumps. (Facts 13, 14, 15, 37)

F5. There are maintenance issues with the pumps and pump stations. (Facts 6, 10, 22, 23)

F6. An alternate water supply to the existing pipeline is needed to eliminate the need for electricity and constant monitoring. This will also reduce the dangerous conditions for both employees and residents. (Facts 4, 8, 9, 11, 36, 37)

F7. An alternate water supply would reduce the fiscal concerns of the ratepayers. (Facts 33, 34, 36)

F8. Costs from PG&E are unknown if the existing pipeline has to be activated as the GSL’s backup. Pumping costs increased by 3.9% this past year. (Fact 36)
RECOMMENDATIONS

R1. The Grand Jury recommends that some preventive maintenance be performed on the existing pipeline. Preventive maintenance includes wire-brushing of the exposed rust and treating areas with a rust retardant. (Findings 3, 5)

R2. The Grand Jury recommends the GSL should be constructed as an alternative to the Pipeline. (Findings 6, 7)

R3. The Grand Jury recommends that the existing pipeline not be considered or used as a backup to the GSL. (Findings 4, 8)

CONCLUSION

Due to the public interest in the GSL project, the Grand Jury would like to see the Agency provide a link on their web homepage during its construction. The Agency could include on the webpage, the project status, percent of project completion to date, and dollars spent to date. Use of pie charts and photos of various construction stages could also be included.

REQUEST FOR RESPONSE

Pursuant to California Penal Code §933 (c), a response to this report is required. No later than 90 days after the Grand Jury submits a final report on the operations of any public agency subject to its reviewing authority, the governing body of the public agency shall comment on the findings and recommendations.
DISCLAIMERS

This report of the Upcountry Water Solution - Amador Water Agency is issued by the 2012-2013 Grand Jury with the exception of one member of this Grand Jury, who might have a perceived conflict of interest. This juror was excluded from all parts of the investigation, which included interviews, deliberations, and the writing of this report. This report is based on information obtained from outside sources with none of the information being obtained from the excluded Grand Juror.

1 **Cathodic Protection (CP):** is a technique used to control the corrosion of a metal surface by making it the cathode of an electrochemical cell. The simplest method to apply CP is by connecting the metal to be protected with a piece of another more easily corroded "sacrificial" metal to act as the anode of the electrochemical cell.

2 **Arc Flash:** a type of electrical explosion that results from a low-impedance connection to ground or another voltage phase in an electrical system. An arc flash is the light and heat produced from an electric arc supplied with sufficient electrical energy to cause substantial damage or harm, fire or injury.

3 **Types of pipe:** HDPE - 0-135 psi, ductile iron - 135-205 psi, welded steel - 205-350 psi

Photographs provided by Crane, Parmenter, and Bourgeois unless otherwise noted.
INDEPENDENT AUDITOR’S REPORT

To the Board of Directors
Amador Water Agency
Sutter Creek, California

Report on Financial Statements

We have audited the accompanying financial statements of Amador Water Agency (the Agency), which comprise the statement of net position as of June 30, 2018, and the related statements of revenues, expenses, and changes in net position and cash flows for the year then ended, and the related notes to the financial statements.

Management’s Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor’s Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America the standards applicable to financial audits contained in Governmental Auditing Standards issued by the Controller General of the United States and the State Controller’s Minimum Audit Requirements for California Special Districts. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor’s judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity’s preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.
To the Board of Directors
Amador Water Agency

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Agency, as of June 30, 2018, and the changes in financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America as well as accounting systems prescribed by the State Controller’s Office and State regulations governing special districts.

Change in Accounting Principles

As discussed in Note L to the financial statements, during the year ended June 30, 2018, the Agency adopted new accounting guidance, GASB No. 75, Accounting and Financial Reporting for Postemployment Benefits Other than Pensions. Our opinion is not modified with respect to this matter.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management’s discussion and analysis on pages 4 to 8 and other required supplementary information on pages 35 to 36 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of the financial reporting in placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management’s responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Report on Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Agency’s basic financial statements. The combining fund financial statements are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The combining fund financial statements are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the combining fund financial statements are fairly stated in all material respects in relation to the financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated December 13, 2018, on our consideration of the Agency’s internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations and contracts and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal
To the Board of Directors
Amador Water Agency

to control over financial reporting and compliance and the results of that testing and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the Agency’s internal control over financial reporting and compliance.

December 13, 2018
APPENDIX NN
August 7, 2015

District Fiscal Officer
Amador Water Agency
12800 Ridge Road
Sutter Creek, CA  95685-9630


Dear District Fiscal Officer:

This letter provides information regarding the 2014-15 Special Districts Financial Transactions Report (FTR). Government Code (GC) section 53891 requires the financial transactions of each local agency to be submitted to the State Controller’s Office (SCO) within 90 days after the close of the fiscal year or within 110 days if filed electronically.

The financial reports are due September 28, 2015. If filing electronically, the due date is October 19, 2015. Please submit the following documents:

- Financial Transactions Report
- U.S. Bureau of Census survey form
- Government Compensation in California (GCC) Report (if applicable)
  - Information regarding the 2014 GCC Report was mailed in June 2015

Please visit www.sco.ca.gov/ard_locinstr_districts_forms.html for the electronic reporting program, as well as paper reporting forms, instructions, and information. Special District Reporting staff is available if you need assistance with downloading the electronic program.

If filing electronically, your username and password for the electronic reporting program are as follows:

  Username:  Amador Water Agency
  Password:  [Redacted]

MAILING ADDRESS:  P.O. Box 942850, Sacramento, CA 94250
STREET ADDRESS:  3301 C Street, Suite 740, Sacramento, CA 95816
About This Site

In its ongoing efforts to promote transparency in government, the California State Controller's Office (SCO) created this website to make it easier for taxpayers to track revenues, expenditures, and other financial data reported by California's 57 counties, 482 cities and more than 4,800 special districts. This also includes approximately 76 transportation planning agencies, 272 transit operators, and 126 state and local government pension plans.

What is open data?

Open data is online data that anyone can access, use and share. It allows information to be freely used, reused, and redistributed. The SCO established this website to encourage users to review, compare, visualize, and analyze data and share their discoveries in real time.

Open data has the potential to help the public identify wasteful spending and increase government efficiency, as well as promote community involvement and improve California's business climate.

What data is available?

This site includes revenues and expenditures reported by cities, counties, special districts, transportation planning agencies, and transit operators, for Fiscal Years 2002-03 through 2015-16, on their financial transactions reports (FTRs). Also included on this site are additions and deductions from public retirement systems for Fiscal Years 2002-03 through 2015-16.

Beginning Fiscal in Year 2016-17, the FTRs were revised by the SCO to incorporate recent Governmental Accounting Standards Board (GASB) pronouncements such as GASB 68. Users should be cautious when making comparisons with prior Fiscal Years data.

This site contains information for governmental funds, which account for most basic services such as administration and public safety, as well as proprietary funds, which account for business-type activities, such as electrical utilities paid for through user fees or commodity-based revenues.
BACKGROUND

The Amador Water Agency (Agency) is a public, not-for-profit special district created in 1959 by the California State Legislature. The purpose of the Agency is to provide water, waste water, and storm drainage services to Amador County. The 2011-2012 Amador County Grand Jury conducted an investigation of the Agency based on citizen complaints received regarding the Agency’s financial health and long-term debt. The 2011-2012 Grand Jury recommended the investigation into the Agency continue. The Follow-up Committee of the 2012-2013 Grand Jury (Grand Jury) reviewed the details of the response. Based on the Agency’s response, improvements were made in several areas. A few issues remained outstanding. The Grand Jury determined that a formal follow-up investigation was in order.

AUTHORITY

Per California Penal Code §933.5, A grand jury may at any time examine the books and records of any special-purpose assessing or taxing district located wholly or partly in the county or the local Agency formation commission in the county, and, in addition to any other investigatory powers granted by this chapter, may investigate and report upon the method or system of performing the duties of such district or commission.

METHOD OF STUDY

- Interviews with past and present Agency’s Board of Directors
- Interviews with ratepayers
- Interviews with Agency personnel
- Review of Agency’s website, Board of Directors’ meeting minutes, and budgets
- Review of Government Code 66013 (GC66013) – Water Fees and Charges Regulations
- Attendance at Board of Directors’ meetings and subcommittee meetings

GLOSSARY OF TERMS

- Replacement Cash Reserves (RCR): monies held for projects funded by water and wastewater rate proceeds

- Participation Fee Cash Reserves (PFCR): monies held for each water and wastewater system and comes from new water connections
DISCUSSION

The Grand Jury evaluated the Agency's response and realized there were gaps in knowledge about the Agency's financial accountability. The perception by the public that the Agency's finances were hidden and inaccurate sparked our curiosity. There were no adequate checks and balances in place within the Agency. Once inquiries began, the current Board and Agency management proceeded to apply due diligence.

FACTS

1. The Agency combined the RCR and PFCR into a single account in July 2004.

2. No existing Board member, General Manager, or Controller were on staff in 2004.

3. The Agency engineers and General Manager reviewed Agency projects from 2004 to present. This determined which costs should be for replacement and which costs should be for improvements/expansion.

4. The Agency Controller reconciled cash accounts from 2004 to present to determine actual project costs. These costs, based on the project analysis, have been divided between replacement and improvements/expansion.

5. As of 2012, PFCR and RCR funds have been separated into two accounts. Journal entries have been completed, including interest earned on all the funds.

6. Per GC66013, fees collected must be used solely for the purpose for which they were collected.

7. Per GC66013, collected fees must be kept in separate accounts from all other funds. The Agency is correcting the GC66013 violation by separating PFCR and RCR. The State imposes no penalties for not filing annual reports.

8. Internal loans between water systems were made to eliminate the negative cash balances in various water supply systems.

9. Internal loans are legal and may be necessary to keep systems solvent within the Agency.

10. Fiscal Year 2010-2011 audit was accepted in April 2013. The delay was caused by negative fund balances in several of the Agency's systems. Fiscal Year 2011-2012 financial reports are contingent on Board acceptance of the prior year's audit.

11. Generally Accepted Accounting Principles (GAAP) require all funds must have a positive balance at the end of each fiscal year.
12. In recent years, the Agency has experienced an increase in:
   - Attorney costs
   - Length of Board meetings (since 2008)
   - Increase in Public Records Act requests

![Amador Water Agency Attorney Annual Costs](chart1)
![Amador Water Agency Duration of Board Meetings](chart2)

13. The Budget and Finance Committee reviews and discusses monthly budget status reports. The reports are then given to the Board for review. These meetings are open to the public.

14. Monthly budget status reports detail:
   - Agency budget, income to date, percentage of budget completed
   - System specific budget, income to date, percentage of budget completed
   - Agency budget, expenses to date, percentage of budget completed
   - System specific budget, expenses to date, percentage of budget completed
   - Any known income or expense that will occur before the end of the fiscal year affecting available water systems balances

**FINDINGS**

F1. The Agency has implemented financial reporting that follows the standard accounting practices in line with the State's General Accounting Standards Board (GASB) and GAAP. (Facts 13, 14)

F2. The Project Analysis determined percentages of all projects based on replacement or improvements/expansion. (Fact 3)

F3. The State does not penalize for not filing GC66013 reports. (Fact 7)

F4. Members of the public are interested in budget status reports for their particular water supply system, as well as the Agency overall. (Facts 13, 14)
F5. Some members of the public are instrumental in voicing concerns and challenging financial information on behalf of some ratepayers. (Fact 12)

F6. When controversial items are added to a Board agenda, the discussion at the meetings can be lengthy. This extends the duration of Board meetings. Lengthy meetings may change the public's availability to hear the discussion about their particular item and to address the Board. (Fact 12)

F7. Between 2008 and 2012, the length of time spent at Agency Board meetings has increased 123%. (Fact 12)

F8. Policies that identify and address the accounting activities used within the Agency were generally unwritten. (Facts 1, 9, 11)

RECOMMENDATIONS

R1. The Grand Jury recommends the Agency should provide a link on their web homepage showing the budget information in simple, easy to read formats. Use of charts and graphs should be included. (Finding 1, 4) (Appendix A)

R2. The Grand Jury recommends that the Agency limit the public comment time to 3 minutes, similar to the Amador County Board of Supervisors. (Finding 6)

R3. The Grand Jury recommends the Agency develop and adopt policies to ensure standard accounting practices be consistent. This will ensure discrepancies and inconsistencies in accounts do not reoccur. Policies can be made available on the Agency's webpage to aid in public transparency. (Finding 1, 2, 3) (Appendix A)

REQUEST FOR RESPONSE

Per California Penal Code §933(c) - No later than 90 days after the grand jury submits a final report on the operations of any public Agency subject to its reviewing authority, the governing body of the public Agency shall comment to the presiding judge of the superior court on the findings and recommendations pertaining to matters under the control of the governing body.

DISCLAIMERS

This report of the Amador Water Agency Financial Road to Recovery is issued by the 2012-2013 Grand Jury with the exception of one member of this Grand Jury, who might have a perceived conflict of interest. This juror was excluded from all parts of the investigation, which included interviews, deliberations, and the writing of this report. This report is based on information obtained from outside sources with none of the information being obtained from the excluded Grand Juror.
APPENDIX
Appendix A – Sample of budget charts and graphs

Amador Water Agency
2012-2013 Projected Revenue

Amador Water Agency
2012-2013 Projected Expenses

AWA - All Systems Operating Budget (6-28-2012)
UPCOUNTRY WATER SOLUTION
AMADOR WATER AGENCY

BACKGROUND

In the 1970's, there were major water outages in the upcountry areas due to a severe drought. Amador County (County) entered into a Joint Powers Agreement with the Amador Water Agency (Agency) in 1977. Construction began in 1978 of the "Emergency Pipeline" (Pipeline) from the Tiger Creek Afterbay to Buckhorn Water Treatment Plant (BWTP). Water service agreements were executed in 1978 with each of 10 districts that would receive water. In 1979 the Agency began operations of the Central Amador Water Project (CAWP) system.

The Gravity Supply Line (GSL) concept was initiated in early 2010 by the Agency's Board of Directors (Board). At that time, there was public concern about the Pipeline's ability to help fight an Upcountry fire. There was also the desire to offer a means of delivering water to customers at a lower cost. No studies were done to ascertain the actual condition of the Pipeline. Numerous objections and citizen complaints were brought to the Board. Some of these complaints related to the cost of a new system. Other concerns were voiced that the present system was adequate for the existing customer base. The GSL project has to be evaluated on its own merits without political bias.

AUTHORITY

Per California Penal Code §933.5, a grand jury may at any time examine the books and records of any special-purpose assessing or taxing district located wholly or partly in the county or the local agency formation commission in the county, and, in addition to any other investigatory powers granted by this chapter, may investigate and report upon the method or system of performing the duties of such district or commission.

METHOD OF STUDY

- Interviews with current employees, management, and directors of the Agency
- Interviews with past directors of the Agency
- Interviews with former County Directors
- Attendance at Agency Committees and Board meetings
- Review of contracts, project status reports, audit reports, and opinion papers
- Tour of existing pipeline locations, pump stations, Tiger Creek Afterbay, and the Tiger Creek Regulator
- Review of websites of the Agency and the Ratepayer Protection Alliance
DISCUSSION

The Agency is the primary provider of drinking water. The North Fork of the Mokelumne River is the primary source of water for the CAWP system. Water from the Tiger Creek Afterbay is pumped to BWTP. This water is used by Pine Grove, Pine Acres, Sunset Heights, Fairway Pines, Jackson Pines, Pioneer, Gayla Manor, Ranch House Estates, Pine Park East, Toma Lane, Sierra Highlands, Silver Lake Pines, Ridgeway Pines, Rabb Park, and Mace Meadows. This is the CAWP system.

FACTS

Existing System Lifespan

1. The Pipeline itself is an air type pipe, not a water type pipe.

2. Life span of an air type pipe is between 35-40 years.

3. In 1977, 4 year old pipe was purchased from Pacific Pipe Company.

4. From the Tiger Creek Afterbay, the Pipeline ascends 1,300 feet straight up. Water is forced uphill by electrical pumping.

5. Maps pinpointing the exact location of the pipe are not known to exist at this time. Of the over 9,000 feet of pipe used, only those sections closest to the intakes and outtakes of the pump stations are known.

6. Repairs of the pipe, even if the location were known, are difficult in wet or adverse conditions due to terrain and lack of access routes.

7. Pipe seams were compromised when the coating within the joints melted under the heat of welding.

8. Catastrophic failure of the existing pipeline occurred in January 1980, destroying 1 house and eroding the hillside. (Photo 1)

9. Potential damage to homes has increased due to more residential construction.

10. Repairs to the existing system have increased as the system ages and the parts become unavailable.

Photo 1: Landslide caused by break in pipeline, January 1980
Photo provided by Amador Water Agency
11. From 2004 to 2008, there have been 163 Pipeline failures:
   - 97 electrical/mechanical
   - 14 communications
   - 52 power outages:
     - 18 were less than 4 hours
     - 28 were between 4 and 24 hours
     - 4 were greater than 24 hours
     - 2 caused by wildfires

12. The Agency’s BWTP was replaced with a state of the art facility in 2004/2006.

13. The whole system is antiquated. Vacuum tubes are still used in electrical panels. Parts are not readily found, except on internet auction sites. There is no Cathode Protection along the pipes.¹

14. High pressure must be maintained to meet water demand.

15. The system at the pump station is dangerous, as Arc-Flashing is possible.² There is no room at some stations for added back up pumps, electrical outlets, or emergency power generators.

16. The system sometimes operates beyond its capacities, putting stress on the components. (For example: water hammering, pipe shifting, etc)

17. The system can be used for a backup system for the GSL, but is not required by either the Agency or PG&E. Maintenance costs will vary while Pipeline is dormant.

18. Assembly Bill (AB) 32 discourages use of fossil fuels.

19. Under the Agency's current water rights, the system runs close to maximum capacity during the summer months.
20. The Tiger Creek Regulator holds 500-acre feet of water at any given time on any one day. This is equal to six months of the Agency's demand.

21. PG&E gives the Agency top priority water rights, second to East Bay Municipal Utilities District (EBMUD).

22. The Tiger Creek Pump Station is situated on land that is eroding.

23. The Silver Lake Pines and Tiger Creek Pump Stations have corroded pipes that go into concrete, making inspection impossible.

24. Brackets holding pipe are broken and/or loose.

**Gravity Supply Line**

25. The GSL will need some initial pumping to start the flow of water.

26. The GSL will use a combination of 3 different pipes. The pipes have different costs per foot and maximum PSI capacities. This will result in a longer lifespan.

27. The GSL will use automated communications and remote alarms to avert service interruptions.

28. As it is designed, the GSL has the capacity to transmit water under adverse conditions (i.e. storms, snow, electrical outages, and fire).

29. The GSL allows water transmission greater than needed for the existing customer base.

30. The GSL will use larger diameter pipe. The growth factor used in the GSL design was based on the Urban Water Regional growth plan, not the County General Plan.
31. The GSL provides a pressurized system that will improve fire suppression activities:
   • A reliable water source not dependent on electricity
   • An available large reserve storage of water
   • Fire hydrants located along the GSL

32. Amador Fire Protection District Agencies and the Amador County Fire Chiefs Association have endorsed the GSL stating the potential positive impacts on fire suppression.

**Fiscal Concerns**

33. CAWP has had no rate increase since 2006.

34. The cost to replace or repair the existing pipeline system will equal the cost of constructing the GSL. The GSL would actually be cheaper to construct with available government grants.

35. The funding plan for the GSL was approved by the Board in April 2013. It has no rate increase for existing CAWP ratepayers.

36. In early 2010, a public workshop was held to present cost comparisons of the Pipeline versus the GSL.

37. The Agency and the ratepayers will no longer pay PG&E for the pumping costs of the Pipeline. Pumping costs have increased over the years:
   • In 1988-1989 = $109,000
   • In 2003-2004 = $310,000
   • In 2011-2012 = $256,000

38. Liability to the Agency increases if employees are injured working on dangerous or antiquated systems.

39. A loan from the County ($900,000) was spent on Engineering and Environmental Reviews. Grant funds from the United States Department of Agriculture (USDA) will repay the County.

40. The cost to construct the GSL is $13.4 million: $5.1 million from USDA grant and $8.3 million from USDA low-interest loan.

41. The USDA grant of $5.1 million is in danger of expiring in September 2013. Grant funds do not require repayment.

42. The interest rate for the USDA loan has lowered from 3.25% to 2.7% and is now 2.5%.
43. Some public dissention has extended the timeline of construction on the proposed GSL.

FINDINGS

F1. Some members of the public are instrumental in voicing concerns and challenging any new project and funding source on behalf of some ratepayers. (Facts 33, 34, 40)

F2. The lifespan of pipe used for air is unknown when used for water. Although the pipe was pressure tested, inspected, sand blasted, and coated per specifications, it was not used as intended (air vs. water). Water pressures and directional changes may have compromised the integrity inside the pipe. (Facts 1, 2, 6, 7, 15, 22, 23)

F3. The existing Pipeline must continue to be fully operational while an alternate water supply is developed, constructed and implemented. (Facts 6, 10, 13)

F4. The existing pump stations pose a danger to employees with the high pressure contained in the pipes and the fast moving parts of the pumps. (Facts 13, 14, 15, 37)

F5. There are maintenance issues with the pumps and pump stations. (Facts 6, 10, 22, 23)

F6. An alternate water supply to the existing pipeline is needed to eliminate the need for electricity and constant monitoring. This will also reduce the dangerous conditions for both employees and residents. (Facts 4, 8, 9, 11, 36, 37)

F7. An alternate water supply would reduce the fiscal concerns of the ratepayers. (Facts 33, 34, 36)

F8. Costs from PG&E are unknown if the existing pipeline has to be activated as the GSL's backup. Pumping costs increased by 3.9% this past year. (Fact 36)
RECOMMENDATIONS

R1. The Grand Jury recommends that some preventive maintenance be performed on the existing pipeline. Preventive maintenance includes wire-brushing of the exposed rust and treating areas with a rust retardant. (Findings 3, 5)

R2. The Grand Jury recommends the GSL should be constructed as an alternative to the Pipeline. (Findings 6, 7)

R3. The Grand Jury recommends that the existing pipeline not be considered or used as a backup to the GSL. (Findings 4, 8)

CONCLUSION

Due to the public interest in the GSL project, the Grand Jury would like to see the Agency provide a link on their web homepage during its construction. The Agency could include on the webpage, the project status, percent of project completion to date, and dollars spent to date. Use of pie charts and photos of various construction stages could also be included.

REQUEST FOR RESPONSE

Pursuant to California Penal Code §933 (c), a response to this report is required. No later than 90 days after the Grand Jury submits a final report on the operations of any public agency subject to its reviewing authority, the governing body of the public agency shall comment on the findings and recommendations.
DISCLAIMERS

This report of the Upcountry Water Solution - Amador Water Agency is issued by the 2012-2013 Grand Jury with the exception of one member of this Grand Jury, who might have a perceived conflict of interest. This juror was excluded from all parts of the investigation, which included interviews, deliberations, and the writing of this report. This report is based on information obtained from outside sources with none of the information being obtained from the excluded Grand Juror.

1 Cathodic Protection (CP): is a technique used to control the corrosion of a metal surface by making it the cathode of an electrochemical cell. The simplest method to apply CP is by connecting the metal to be protected with a piece of another more easily corroded "sacrificial" metal to act as the anode of the electrochemical cell.

2 Arc Flash: a type of electrical explosion that results from a low-impedance connection to ground or another voltage phase in an electrical system. An arc flash is the light and heat produced from an electric arc supplied with sufficient electrical energy to cause substantial damage or harm, fire or injury.

3 Types of pipe: HDPE - 0-135 psi, ductile iron - 135-205 psi, welded steel - 205-350 psi

Photographs provided by Crane, Parmenter, and Bourgeois unless otherwise noted.
Background
The Amador Water Agency (Agency) is a public, not-for-profit special district created in 1959 by the California Legislature. The purpose of the Agency is to provide water, waste water, and storm drainage services to Amador County. The 2011-2012 Amador County Grand Jury conducted an investigation of the Agency based on citizen complaints received regarding the Agency’s financial health and long-term debt. The 2011-2012 Grand Jury recommended the investigation into the Agency continue. The Follow-up Committee of the 2012-2013 Grand Jury reviewed the details of the response received from the Agency on August 31, 2012. Based on the Agency’s response, improvements were made in several areas. A few issues remained outstanding.

Discussion
The 2012-2013 Grand Jury determined a continuing investigation was in order. The 2012-2013 Grand Jury made 8 Findings and 3 Recommendations relating to the Agency’s financial health. Pursuant to Penal Code §933(c), a response to the findings and recommendations was required. The Agency responded on September 20, 2013. The 2013-2014 Grand Jury accepted the Agency’s response with one exception. The exception was to need to confirm a financial consultant contract to look into the Agency’s financial policies (Recommendations 1, 3). The 2013-2014 Grand Jury confirmed the following:
- The Agency’s Board of Directors, at their general meeting September 12, 2013 (item 6B), unanimously authorized the General Manager to negotiate a contract with a financial management firm
- The contract agreement was executed on September 24, 2013
Work has begun and a report is to be provided to the Agency in early spring 2014.

Conclusion
The 2013-2014 Grand Jury commends the Agency’s commitment to sound financial policies and thoroughness of the financial analyses that occurred on behalf of the ratepayers. The 2013-2014 Grand Jury accepts the response and no further action is necessary.
APPENDIX QQ
TABLE OF CONTENTS

Sacramento Suburban Water District

<table>
<thead>
<tr>
<th>Introductory Section (Unaudited)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter of Transmittal</td>
<td>I-VI</td>
</tr>
<tr>
<td>Certificate of Achievement in Financial Rep</td>
<td>VII</td>
</tr>
<tr>
<td>Principal District Officials</td>
<td>VIII</td>
</tr>
<tr>
<td>Organization Chart</td>
<td>IX</td>
</tr>
<tr>
<td>District Service Area Map</td>
<td>X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amador Water Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required per GASB 34: CA State Special District Uniform Accounting and Reporting Procedures – December 2018 Edition GAAP Requirements</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Auditor’s Report</td>
<td>1-2</td>
</tr>
<tr>
<td>Management’s Discussion &amp; Analysis</td>
<td>3-12</td>
</tr>
<tr>
<td>Basic Financial Statements:</td>
<td></td>
</tr>
<tr>
<td>Statements of Net Position</td>
<td>13</td>
</tr>
<tr>
<td>Statements of Revenues, Expenses and Changes in Net Position</td>
<td>14</td>
</tr>
<tr>
<td>Statements of Cash Flows</td>
<td>15-16</td>
</tr>
<tr>
<td>Notes to Basic Financial Statements</td>
<td>17-58</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required Supplementary Information Other that MD&amp;A (Unaudited)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule of Funding Progress – Other</td>
</tr>
<tr>
<td>Schedule of Contributions to the OPEB Plan</td>
</tr>
<tr>
<td>Schedule of Changes in the Net OPEB Liability and Related Ratios</td>
</tr>
<tr>
<td>Schedule of Proportionate Share of the Net Pension Liability</td>
</tr>
<tr>
<td>Schedule of Contributions to the Pension Plan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statistical Section (Unaudited)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contents</td>
</tr>
<tr>
<td>Statements of Net Position</td>
</tr>
<tr>
<td>Changes in Net Position</td>
</tr>
<tr>
<td>Operating Revenues by Source</td>
</tr>
<tr>
<td>Retail Water Rates</td>
</tr>
<tr>
<td>Facility Development Charges</td>
</tr>
<tr>
<td>Principal Retail Rate Payers</td>
</tr>
<tr>
<td>Outstanding Debt by Type and Number of Connections</td>
</tr>
<tr>
<td>Schedule of Net Revenues</td>
</tr>
<tr>
<td>Demographic and Economic Statistics - Sacramento County</td>
</tr>
<tr>
<td>Principal Employers – Sacramento County</td>
</tr>
<tr>
<td>Annual Water Production</td>
</tr>
<tr>
<td>Wheeling Water Deliveries</td>
</tr>
<tr>
<td>Operating Activity</td>
</tr>
<tr>
<td>Full-Time Equivalent Employees</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Compliance Report</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report of Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards</td>
<td>79-80</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Auditor’s Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards</td>
</tr>
<tr>
<td>Schedule of Findings</td>
</tr>
</tbody>
</table>
District Transparency Certificate of Excellence

This program was created in an effort to promote transparency in the operations and governance of special districts to the public and to provide special districts with an opportunity to showcase their efforts in transparency.

There are no fees for this certificate and districts will be recognized for two full years. Three main subject areas include:

http://sdlf.org/programs/transparency4
Why earn it?

1. The certificate covers all general, website, and outreach best practices and requirements regarding transparency for special districts.

2. Earning the certificate is a tangible acknowledgement of your transparency efforts.

3. Demonstrate to your constituents and other stakeholders your district’s commitment to being open and accessible to them.

Sample Policies

Included for your review are sample policies similar to those requested in the application. These are samples that can be used as a starting point for policy/document development. SDLF always recommends you seek legal review prior to adopting district policy to ensure full compliance with any applicable laws and/or regulations.

- Brown Act Compliance
- Public Records Act Requests
- Reimbursement Policy
- Annual Disclosure
- Conflict of Interest Policy
- Code of Ethics Policy

Application

1. Complete the application
2. Send application and all supporting materials to SDLF.
3. Approval process review performed by SDLF staff
4. Receive your certificate and recognition

Download application

http://sdlf.org/programs/transparency4
4. Earning the certificate demonstrates a commitment to engaging the public in creating greater awareness of your district's activities.

Earning the certificate is a tangible acknowledgement of transparency efforts. Demonstrate to your constituents and other stakeholders your district's commitment to being open and accessible to them.
District of Distinction Accreditation

In a time where proper fiscal management and responsibility in public agencies is paramount and the task of governing these agencies has become even more complex, regulated and costly, it has become increasingly important to demonstrate to constituents that districts have sound fiscal management policies and practices in place among other areas of importance.
Why earn it?

- The accreditation criterion gets to the heart of best practices in public agencies. Demonstrate that your district:

- Understands and respects the responsibilities inherent in providing essential public services.

- Has clean financial audits and operates in a fiscally responsible and transparent manner.

- Is conscious of the ever-changing operating environment by having current and relevant policies and procedures in place that conform to all statutes and regulations under state law.

Requirements

- They undergo regular financial audits, have no major deficiencies and apply any recommendations to future years.

- Their operations conform to all statutes and regulations under state law as reflected in a policies and procedures manual.

- All directors/trustees, general manager and executive staff (as designated by the district) have received training in governance as well as compliance with AB 1234 Ethics Training and AB 1825 Harassment Prevention Training.

- They have completed SDLF’s District Transparency Certificate of Excellence.

Application

1. Complete the application
2. Send application and all supporting materials to SDLF.
3. Approval process review performed by SDLF staff
4. Receive your certificate and recognition

Download application

http://sdlf.org/programs/districts-of-distinction3232
• Places an emphasis on continuing education completed by having ethics training for a district's board of trustees, and staff in ethics, governance and leadership training.

• Focuses on having sound policies in the areas of governance, board conduct, district finances, transparency and reserves.

DOD Seal and Levels

Earn the right to use the program's seal as visual proof that your special district stands out from others. Complete multiple SDLF programs and obtain various levels of this accreditation. Levels of accreditation include silver, gold, and platinum!

http://sdlf.org/programs/districts-of-distinction3232
The Special District Administrator Certification is a voluntary designation sought by individuals who strive to be the best. Administrators with various academic and professional backgrounds, as well as from all sizes of special districts, can be candidates for the program.

The certification examination and study guide were available at http://sdlf.org/programs/sda-certification.
developed through the participation of over 100 volunteer subject matter experts who know special district administration. Guided by the SDLF Board, Certification Advisory Committee, and under direction by a professional examination development firm, this certification will give successful candidates recognition unmatched by any other program.

Is it for you?

- Demonstrates your commitment to the profession and special districts.
- Makes you stand out as one of the recognized "best in the field."
- Reflects achievement and that you have fulfilled a set of standards and requirements.
- Improves your career opportunities.
- Improves your overall skills and knowledge.
- Offers greater professional recognition from peers and agency governing boards.

Exam

This certification helps document and recognize a candidate's knowledge, skills and capabilities as a special district administrator. The two-hour exam covers all key aspects of special district administration, including:

- Governance
- Legal Requirements
- Policy Development
- Ethics in Public Service
- Strategic Planning
- Public & Customer Relations
- Organization
- Budget and Finance
- Personnel and Supervision
- And more...

Application

To qualify for the examination, a candidate must have worked three out of the last five years in a position of management in a California special district. A total of 400 points is required to qualify for the opportunity to take the examination, to be obtained through professional special district and related work experience, continuing education courses, higher education background and community service.
To qualify for the examination, a candidate must have worked three out of the last five years in a position of management in a California special district. A total of 400 points is required to qualify for the opportunity to take the examination. Points are obtained through special district and related work experience, continuing education courses, higher education background and community service.
APPENDIX SS
AMADOR WATER AGENCY
SPECIAL MEETING
OF THE
BOARD OF DIRECTORS OF THE
AMADOR WATER AGENCY
HAS BEEN CALLED BY THE PRESIDENT FOR
February 12, 2018
1:00 p.m.
12800 Ridge Rd
Sutter Creek CA 95685

Public Notice: Members of the public will have the opportunity to directly address the
Agency Board of Directors concerning any item listed on this
Special Meeting Notice before or during consideration of that item.

There is a three-minute time limit per person.

AGENCY ADHOC ORGANIZATIONAL STUDY WORKSHOP

1. CALL TO ORDER

2. AGENCY GENERAL
   A. Review of Adhoc Organizational Study
      1. Discussion and possible direction to the Adhoc Committee regarding the
         report

3. ADJOURNMENT

In compliance with the Americans with Disabilities Act, if you are a disabled person and you
need a disability-related modification or accommodation to participate in this meeting, then
please contact Cris Thompson at (209) 223-3018 or (209) 257-5281 (fax). Requests must be made
as early as possible, and at least two-full business days before the start of the meeting.
AWA AD HOC ORGANIZATIONAL STUDY COMMITTEE REPORT

Directors Farrington and Molinelli

February 7, 2018

EXECUTIVE SUMMARY

The Committee recommends the following organizational changes, subject to the Agency's Meet and Confer requirements,

1) Create a new Administrative Manager/Executive Secretary/Clerk of the Board position using the attached job description (Exhibit A); review and adjust the salary commensurate with like positions in similar water agencies;

2) Abolish the Assistant General Manager/Clerk of the Board Position;

3) Create and fill a new Customer Service Rep. (CSR) II by spring;

4) Increase the Finance Manager (FM) salary by approximately 25% to be commensurate with the Agency's salary survey;

5) Reassign the Customer Service Staff from the Human Resource Coordinator/Office Manager (HR/OM) to the FM starting July 1; revise the FM Job Description; review and adjust the salary commensurate with like positions in similar water agencies;

6) Reclassify the current HR/Office Manager to HR Manager/Safety Coordinator, eliminating the Office Manager duties after moving Customer Service under the FM; review and adjust the salary commensurate with like positions in similar water agencies;

7) Reclassify the Administrative II in the CS Dept. to a CSR I with pay protection;

8) Refill the GIS/CAD Technician in FY 2018-19.

INTRODUCTION

President Thomas appointed Directors Farrington and Molinelli to an Ad Hoc Organizational Study Committee in September 2017 to “look at the whole AWA organization for improvements in efficiencies and effectiveness.” The Committee developed a plan for the Organizational Study with the General Manager (GM). The work was divided into 3 phases: fact-finding, analysis, and recommendations. The Committee held 8 meetings with the GM. It also interviewed the Management Team (AGM, FM, HR/OM, and Operations Manager -- OM) once in a group and twice individually, once without the GM and once with the GM. The Committee interviewed the HR/OM, FM and GM twice as a group to evaluate the feasibility of moving the
Customer Service Department to the FM from the HR/OM. The Committee met twice with the AGM and GM, and once with the Administration II with the Employee Association Representative and HR/OM.

Following a notice sent to all employees on October 26, 2017 (attached as Exhibit B/1-5; B-6 identified in December), the Committee held two group meetings with non-management employees. The notice described the issues the Committee planned to address, a preliminary range of possible management organizational designs, and an invitation to comment.

The Committee recommendations are based on the information collected and analyzed during the study. Information collected includes notes from interviews and meetings, organization charts for 2001, 2002 and each year from 2009 to the present, and job descriptions for the Management Team (GM, AGM, OM, FM, HR/OM, and Engineering Manager -- EM). Other job descriptions collected for reference were the 2000 Financial Services Manager, the 2002 CS Supervisor, the 2006 HR Coordinator, and CSR’s I -- III.

Interviews with each Manager, except the EM, included 5 basic questions: (1) Accuracy of job description; needed additions or deletions, (2) Lead versus support roles, (3) Oversight needed by the AGM, (4) FTE’s (Full-Time Equivalents) required to perform the duties in the job description, and (5) Preference for organizational alternatives in the October 26 notice or any new proposals.

HISTORICAL PERSPECTIVE

AWA went through a very difficult financial period from 2009 to 2016. The loss of revenue from home foreclosures and developer fees became so severe between 2009 and 2011 that the Agency eliminated 25 positions in 2011, from 66 to 41, the staff was reorganized, and employees made painful wage concessions. Four of the eliminated positions were Managers: Financial Services Manager, Construction Superintendent, Engineering Manager and IT Manager. In addition, the Human Resource Coordinator position was modified to combine HR duties with those of both the Customer Services Supervisor and Office Manager, essentially folding multiple positions into one. In the period 2014 to 2016, the drought and State mandated reduction in water sales by 24% caused another downfall in revenue with associated problems.

In 2012, the Agency discovered that restricted and unrestricted funds had been improperly combined each year for the prior 7 years. As a result, the Agency’s annual government code 66013 reports were not accurate. The agency was sued by a local group over the issue before staff made appropriate corrections.

Correcting the accounting of funds required a large amount of financial research of 10 years of records. During the same period, the Agency experienced a shortage of financial expertise in the staff. In 2010, the long-time Controller retired, and the Financial Services Manager position was abolished as a cost cutting measure. A
Controller was hired in 2012 and left within 2 years. A Finance Manager position was filled in 2014, and it was vacated after about 7 months. The current Finance Manager has been in place about 2 years, from 2016.

During this difficult period of transition, the Executive Secretary/Clerk of the Board helped with the heavy financial workload, including research for the financial lawsuit, 66013 annual reports, budget preparation, support to the consulting firm MRG's financial study of the agency, conversion and integration of new a financial software program replacing the old financial program in use for the prior 35 years, extensive California Public Records Act requests, coordination of annual audits, refinancing some $20 million in bonds for lower interest rates, and preparation of reimbursement requests for $13 million in expenses from the GSL construction grant and loan.

In May of 2014, three years after downsizing middle management, the Board of Directors realized that the GM was overloaded and appeared to be close to burnout. An Ad Hoc Committee was appointed that discussed the need for additional oversight of several departments with the GM and Board. As a result, an Assistant General Manager (AGM) job description was proposed and approved. It was combined with the existing position of Executive Secretary/Clerk of the Board. The AGM was able to assist the GM in many ways through the difficult period after downsizing, including through the transitions between 3 financial leaders to 2017 and in teaming with the new Operations Manager and GM to oversee and supervise the Engineering Department prior to filling the Engineering Manager position.

FINDINGS

As of January 2018, the Engineering Manager position is filled, and the Management Team is functioning with much less supervision by the AGM. An Accountant was recently hired in the Finance department to replace a retired Accounting Clerk, and he is being trained. A CSR II employee was promoted internally to Lead CSR III, and in this new position is working to assume the responsibilities of the former Customer Service Supervisor position that was eliminated in 2010. The new EM has taken over supervision of the engineering department which reduces the load primarily on the Operations Manager as well as the AGM and GM.

The Operations Manager (OM) is performing at a high level. He has been spread overly thin over the past years and has spent many extra hours on the job. However, the addition of the Engineering Manager has relieved the OM of having to oversee the engineering staff. This allows the OM to focus on management of the water and wastewater operations that is needed to provide safe, reliable water services. The need for the Assistant General Manager to provide supervision to the finance, customer service, operations, and engineering departments which existed from 2014 – 2017 has diminished and can be taken over by the GM.

The Employee Association recommended five alternative reorganization charts (Exhibit C/1-5). In summary, of the alternatives recommended for consideration:
5 of 5 – eliminate AGM
5 of 5 – create a CS Supervisor over CRS III, II, & I (4 positions in CS Dept.)
5 of 5 – move Purchasing to OM
4 of 5 – move Admin II out of CS
4 of 5 – change HR/OM to HR
4 of 5 – move CS under EM
2 of 5 – create Adm III Board Clerk
1 of 5 – create an Adm I/Board Clerk
1 of 5 – change HR/OM to HR/Board Clerk
1 of 5 – create an Adm II Board Clerk

Assistant General Manager – The AGM job description contains key duties that are redundant with other Agency managers. These duties have become no longer necessary with the filling of the previously vacant manager positions. However, the AGM continues to lead many important administrative management tasks. Examples of duplicated duties with other manager’s job descriptions are:

1) AGM: “Direct, oversee and participate, with division and/or department managers’ cooperation, in the preparation and administration of the Agency’s budget; direct the forecast of additional funds needed for staffing, equipment materials and supplies; monitor and approve expenditures.”

Finance Mgr: “Prepare and administrate the Agency’s annual budget; assist the General Manager in reviewing departmental budget requests; Plan, develop, implement and administer the cash management, debt management and investment programs.”

2) AGM: “Direct the preparation of plans and specifications for work which the Board orders.”

Engineering Mgr: “Manages and directs the implementation of projects, programs and responsibilities as assigned, including engineering design documents, negotiation and implementation of agreements and contracts, coordination of grant funding projects.”

3) AGM: “Direct the planning and execution of a comprehensive and integrated program of activities relating to the production, storage, treatment, transmission and distribution of the Agency’s water supply.”

Operations Mgr: “The incumbent has broad management authority for the day-to-day operations of the Water Agency, as well as functional authority/responsibility for overseeing numerous activities related to the operation, construction, and maintenance of the Agency’s water, wastewater, distribution, transmission and related facilities.”
In addition, the duty below is listed in the AGM job description but can and should be carried out by the GM now that manager positions have been filled and the GM has more time available:

AGM: “Select, train, motivate and evaluate personnel; provide or coordinate staff training; conduct performance evaluations; implement discipline procedures; maintain discipline and high standards necessary for efficient and professional operation of the Agency.”

The Committee’s research revealed the AGM does not currently directly evaluate performance or discipline any employees even though the approved Agency organization chart for 2017-2018 shows that the position supervises the Finance, Operations and HR/Office Managers. The apparent stove-pipe line of authority beneath the GM has contributed to misunderstandings among the department managers and employees on the roles, responsibilities, and authorities of the AGM and GM.

AGENCY ORGANIZATIONAL EFFICIENCY & EFFECTIVENESS

For the Agency organization to work efficiently and effectively, each position needs to have clear duties, responsibilities and authorities that do not duplicate other jobs. Once these distinct duties and responsibilities are clarified for both managers and employees, this clarity should result in better leadership from the GM and Management Team, improved morale, trust, and respect for management among employees. The GM needs to maintain closer contact with each of the managers and needs to be more visible to the employees below this level. This should enhance efficiency of, and respect for, the GM position by all employees.

AGENCY ORGANIZATIONAL NEEDS & RECOMMENDATIONS

In light of the above, the Committee recommends the following:

Create an Administrative Manager for Grant Acquisition & Administration – Acquiring grants to restore the Agency’s aging water and wastewater systems without adversely impacting customers is an important need. Currently, the responsibility for applying and administering grants is in the Finance Manager’s job description; however, the FM has insufficient time for this important work considering all the other FM responsibilities. Therefore, the Agency needs a dedicated person to seek grant opportunities, coordinate with the EM, FM, OM, & GM on what to apply for, prepare the typically massive application packages, and administer grants through completion, including reports and any audits.

As such, the Committee recommends creating a non-supervisory Administrative Manager to be responsible for grants as well as the water conservation program, to administer service contracts and agreements, and to lead policy development and a variety of administrative programs. The Administrative Manager should be combined
with an Executive Secretary/Clerk of the Board using the attached job description. Salary should be commensurate with like positions in similar water agencies. While the Committee does not envision supervisory duties for the Administrative Manager currently, there may be supervisory duties in the future if administrative staff is approved.

Eliminate the AGM Position – In light of the redundancy of the AGM position with other manager positions, the Committee recommends abolishing the AGM/Clerk of the Board.

Enhanced Role for Human Resources/Safety Coordinator – The Committee recommends that the HR and Safety roles get more emphasis. The HR and Safety duties in the current HR/Office Manager job description are only minimally accomplished. Only 20% of an FTE is available for these 2 programs. To increase the emphasis, the Committee recommends the HR Manager/Safety Coordinator be made a stand-alone position. It should not supervise employees to be a more independent counselor for all employees. The Committee recommends that the staff supervised by the HR/Office Manager position be moved to the Finance Manager starting July 1 to increase the emphasis in HR and Safety programs.

Increase Finance Manager Salary – The salary of the FM is lower than this job in similar water agencies based on the Agency’s salary survey. The Committee recommends that it be increased commensurate with this survey, and it should be reviewed again for an increase after the FM takes over supervision of the CS staff on July 1.

Reclassify Administrative Assistant II – This position is in the Customer Service Staff where it is needed. Prior to 2011 it was in engineering as an assistant to the Engineering Manager. It is not needed there or elsewhere in the organization at this time. Thus, the Committee recommends that it be reclassified to a Customer Service Rep. level I with pay protection.

Add Customer Service Rep. II – The Committee recommends adding a second CSR level II to the Customer Service Department because of the increased workload created by eliminating the Office Manager (OM) duties from the HR/Office Manager. Without adding a CSR II, the CSR III will not be able to fully perform the level III duties, and there could be greater CS impact on the Finance Manager duties. Currently the average split in FTE’s between HR & OM duties is 20/80. Moving CS to the FM would shift 10% of OM’s CS duties to the Finance Manager and 70% to the CSR III. The additional CSR II would take the 70% from CSR III, 5% of phone coverage that is being provided by the account clerk and allow the additional 25% for overdue Project and Task list items that are not currently being completed. Adding this position would staff the CS Department the same as it was in 2009. It would be consistent with the AWA Employee Association’s recommendation of four CSRs, and it would better achieve the Agency’s Mission Statement to provide “excellent customer service.”
OTHER RECOMMENDATIONS

1) In meetings with Managers and the GM, the Committee noted the need for some additions and corrections to Management Team job descriptions. The Committee's notes on this will be provided to the Personnel Committee and HR.

2) Some Managers and first line supervisors have not had supervisory training other than on-the-job at the Agency. Accordingly, Supervision and Leadership training is needed for these positions. In addition, coordination of training opportunities is needed in the rest of the organization. The Committee recommends the HR Manager be responsible for coordinating management, supervisory and certification/license training opportunities for all employees.

3) The GM should "check-in" more frequently with members of the Management Team and employees to reinforce their responsibilities and be "more visible" to improve morale. As such, the Committee recommends the GM manage by walking around and visiting different work sites at least monthly. This should be a factor in the GM's performance evaluation.

4) The Agency water and wastewater maps are incomplete and out of date. As a result, the Committee recommends the Agency fill the former GIS/CAD Technician in FY 18/19. This position is needed to complete and update the mapping of pipelines, valves and fire hydrants. The financial plan calls for filling the position in FY 19/20, but this Committee recommends filling it sooner.

5) The Committee recommends keeping the Purchasing Agent under the FM for financial accountability reasons.

RECOMMENDATIONS FOR FUTURE FOLLOW-UP THAT ARE OUTSIDE THE COMMITTEE'S SCOPE

1) The Agency Time Card process needs to be streamlined.

2) Encourage and engage employees to find and report cost savings and improvements in efficiency. Use employee committees periodically to address opportunities and issues.

3) The Staff needs to create a plan to fully implement the Strategic Plan direction on infrastructure "Preventive/Predictive/Corrective Maintenance."

4) The employees in the Customer Service Department are the Agency's "face" to many of its customers. Managers should encourage and appreciate these employees for being customer friendly and helpful.
AMADOR WATER AGENCY

Job Title: ADMINISTRATIVE MANAGER/EXECUTIVE SECRETARY/CLERK OF THE BOARD

Department: Management
Approval By: Board of Directors
Approved Date: DRAFT 2/5/2018
FLSA Status: Exempt

SUMMARY
Under general direction of the General Manager, performs duties of the Administrative Manager; manages the grant and conservation programs in coordination with other departments; develops and oversees Service Contracts; manages development, interpretation, and administration of administrative policies; acts as the Agency’s point of contact for the public, including functioning as the Custodian of Records. It is expected that the incumbent will spend his/her time primarily in the exercise of independent judgment and discretion in fulfilling the Administrative Management responsibilities. In addition to those duties, the incumbent also acts as Executive Secretary to the GM and as Clerk of the Board.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. Reasonable accommodations will be made as appropriate to enable individuals with disabilities to perform the essential functions. Other duties may be assigned.

ADMINISTRATIVE MANAGER:

Leads the planning, acquisition and administration of grants and loans in coordination with Operations, Engineering, and Financial departments. Attends Funding Fairs and coordinates information with Engineering, Operations, Finance, General Manager, and the Board of Directors on project identification, prioritization, and grant application. Prepares grant/loan applications and supporting information. Prepares budgets for grant-related activities. Serves as a contact with funding agencies. Coordinates, tracks, and submits project reimbursement requests. Complies with grant/loan requirements and completes required pre- and post-construction reports. Maintains the Agency’s grant/loan accounting system. Reports on the status of grants and loans.

Coordinates and directs the work of consultants and contractors for assigned areas of support in coordination with other Agency Managers, including but not limited to, outside service agreements, fleet vehicles, building cleaning and maintenance, information technology for office software and equipment, website design and maintenance, support to public relations activities, office supplies and equipment,
document management and retention, Agency facilities security, surplus equipment, bottled water program for raw water customers audits, financial studies, labor compliance services, and other contracts as assigned.

Manages the Water Conservation program in coordination with Financial, Customer Service, Operations, and Engineering Departments. Acts as the Agency's conservation coordinator, including overseeing the meter changeout program.

Responsible for administrative policies and procedures in coordination with other department managers, and coordinates implementation of adopted policies, including, but not limited to, the Administrative Policy Manual (excluding employment policies), Water and Waste Water Codes, and Policy Principles. Uses independent judgment to develop, review, propose, and revise administrative policies, including developing proposals for alternative ways of performing Agency business.

Works as a peer team member with other department heads. Monitors and reports on critical Agency deadlines, implementation of administrative policies, enforcement, and government codes to the Agency Management Team and General Manager.

Administers the Records Retention policy and program. Administers legal filings including for easements, agreements, CEQA and other legal documents. Acts as the Custodian of Records for the Agency. Coordinates revisions of Water and Wastewater Codes, miscellaneous fees, and other policy updates. Ensures compliance with local, state and federal regulations for assigned responsibilities.

In coordination with the General Manager, acts as the Agency's Public Information Officer. Manages the Agency public relations activities, including coordination with other departments on responding to public information requests, website design and operation, social media, public outreach, notices, emergencies, ground breaking and ribbon cutting events, newsletters, parade and fair exhibits, and press releases.

Researches, prepares and presents staff reports and correspondence.

Prepares the Agency administrative services budget in cooperation with department managers. Monitors and periodically reports on administrative budget and expenditures.

Participates in the agency strategic planning, long-term planning of capital improvements, financial planning, and the administration of the Agency's Capital Improvement Plan.

Reviews contracts and other legal and financial documents.

Attends Board Committee meetings on Administrative issues. Explains Administrative policies, procedures and programs except for Human
Resources (HR) programs.

Researches, prepares and presents staff work, including administrative reports and studies to the General Manager, Board of Directors, and Committees; prepares written correspondence.

Coordinates administrative support with outside agencies as needed.

Builds and maintains positive working relationships with co-workers, other Agency employees and the public using principles of good customer service. Performs other administrative duties as assigned.

EXECUTIVE SECRETARY

Performs a variety of responsible secretarial duties for the General Manager. Schedules appointments for GM, drafts correspondence, maintains confidential Agency files, exercises mature judgement in matters of a confidential nature; develops and maintains effective working relationships with the GM, other employees, and consultants.

CLERK OF THE BOARD:

Performs a variety of responsible secretarial duties for the Board of Directors, including drafting correspondence and maintaining confidential files for the Board. Schedules appointment, coordinates changes in Board positions and assignments. Prepares and coordinates agenda packages for Board of Directors' Regular, Special and Committee meetings. Records action minutes for Board approval and maintains permanent records of the official activities of the Agency. Publishes agendas, public and legal notices and files required documentation. Confirms committee review of Accounts Payables for Board packet. Coordinates scheduling of Board Committee meetings. Reviews Director monthly meeting compensation claims. Provides administrative policy information and manuals to Board Members. Coordinates and files required Fair Political Practices Commission and other legal forms. Monitors and coordinates required Board of Director training with the Human Resources Manager. Acts as the Agency's Notary Public. Executes various routine details of the Board of Director transactions. Maintains confidential files as needed. Maintains effective working relationships with the Board of Directors, Agency Staff and public. Coordinates with legal counsel on assignments as needed. Performs other duties as necessary with staff. Informs the public of the procedures and legal requirements for presentation to the Board; exercises mature judgment in confidential matters.

QUALIFICATIONS The requirements listed below are representative of the knowledge, skill, and/or ability required to perform the functions of this job:

Knowledge of principles, practices and techniques of public administration; principles and practices of organization, administration and personnel management, pertinent
Federal, State and Local laws, rules and regulations; basic principles of California water law; principles and practice of budget preparation and administration; effective community relations practices; modern office procedures, methods and computer equipment; and principles and practices of safety management.

EDUCATION and/or EXPERIENCE
Any combination of education, experience and training that has led to the acquisition of the knowledge, skills and abilities indicated above may be qualifying. A typical way to obtain the required knowledge and abilities would be:

Education: High school graduate and an equivalent to a bachelor's degree from an accredited college or university with major course work in public or business administration, or a closely related field.

Experience: Seven years of progressively responsible experience in a municipal or special district organization involving the responsibility for planning, organizing, implementing and supervising varied work programs; including three years of administrative and management responsibility.

CERTIFICATES, LICENSES, REGISTRATIONS
Active California Notary license

OTHER SKILLS AND ABILITIES
Prepares accurate financial reports; reviews and checks staff work as appropriate; analyzes budgets, contracts and technical reports; requires knowledge of accounting principles; interprets and evaluates staff reports and related documents; knows and interprets Agency-related laws, regulations, codes and procedures; assists with solving department related issues; and explains and interprets administrative policy and procedures. Administers Administrative budget; gains cooperation through discussion and persuasion; analyzes problems, identifies alternative solutions, consequences or proposed actions and implements recommendations in support of goals; interprets and applies Agency, County, State and Federal administrative policies, procedures, rules and regulations; exercises leadership, authority and management tactfully and effectively; is a strong team-orientated leader; works effectively under time deadlines and within limited financial and staffing resources; analyzes, interprets, summarizes and presents administrative information and data in an effective manner and makes sound policy and procedural recommendations; proficiently uses computers including the use of email, word processing, and spreadsheet software; complies with safety policies and practices; communicates clearly and concisely orally and in writing; establishes and maintains effective working relationships with those contacted in the course of work. Supervises any part-time support personnel in the Grants and Conservation programs.

PHYSICAL DEMANDS
The physical demands described here are representative of those needed to successfully perform the essential functions of this job. Reasonable accommodations
will be made, as appropriate, to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to sit. The employee frequently is required to use hands to finger, handle, or feel objects, tools, or controls, and to talk or hear. Specific vision abilities required by this job include close vision and the ability to adjust focus.

WORK ENVIRONMENT
Requires working at a desk and in meetings for long periods of time; may intermittently twist to reach equipment surrounding desk; perform simple grasping and fine manipulation; use telephone, write or use a keyboard and mouse to communicate through written means. Travels periodically on Agency business. The noise level in the work environment is usually low to moderate. The ability to visit field infrastructure sites and other utility agency offices is desirable.

This job specification should not be construed to imply that these requirements are the exclusive standards of the position. Incumbents will follow any other reasonable instructions, and perform any other related duties, as may be required.
Gene Mancebo  Oct 27, 2017 at 6:08 AM
To All:
I apologize, I just noticed there was an error in the last sentence which should have read "The Agency management team has already met with the committee and will not be participating in this meeting.
Sincerely,
Gene

From: Gene Mancebo
Sent: Thursday, October 26, 2017 5:36 PM
Subject: Organization Structure Ad Hoc

To All Employees:
The Board assigned a special Board Committee (Ad Hoc) which includes Directors Farrington and Molinelli to review the Agency's organizational structure with the intent of improving efficiency and effectiveness. Their work follows and continues concepts such as the Board's decision to fill the Engineering Manager position instead of the recently vacated Engineering Supervisor position, the creation of the Accountant position, and the creation of the Customer Service Representative III position as examples. The committee is also investigating potential salary inequities and job responsibilities. The committee is dedicated to hearing from all employees prior to making a recommendation to the full Board. The committee is currently performing its' fact-finding activities. Attached is a list of possible issues and some possible organizational structures. These are only concepts and the committee is open to expanding options to consider and would like to hear from you. The organizational structures are simplified and remain unchanged for positions not shown; however, the committee would like to discuss other changes anywhere in the structure to improve efficiency and effectiveness. The committee will be available following the All Employee meeting November 1. If you are unavailable or wish you speak to the committee individually, please feel free to contact either Board member directly. The Agency management team has already met with the committee and will be participating in this meeting.

Director Farrington: 925-216-9491
Director Molinelli: 209-969-5431

Sincerely
Gene

Gene Mancebo
General Manager
Amador Water Agency
(209) 257-524
Identified Issues to Address

1. Operation Manager supervises a substantially greater number of employees as compared to other managers.
2. HR/Office Manager has limited time for HR and certain areas do not seem to be receiving adequate time. Examples:
   a. Safety training including safety manual
   b. Orientation for new employees
   c. Availability for employee/manager walk-ins needing HR advice
3. General Manager is not spending adequate or quality time addressing certain priorities of the Board. Some items could be delegated and others require more time from General Manager. Examples
   a. Strategic Planning
   b. Master Planning
   c. Legislation
   d. Watershed-ERC/UMRWA
   e. Grant acquisition and administration
   f. ACWA, Mountain Counties participation and involvement in forthcoming issues including conservation, Bay Delta, WaterFix, etc
   g. Outreach Committees
4. Responsibilities which are not specifically assigned to any one person/job description:
   a. Grant Administration
   b. Security
   c. IT Contract Management
   d. Document Management/Laser Fiche/File archive
   e. Outside Service Contracts
   f. Building Management/Contract Administration
   g. Public Information Officer duties
   h. Website Management
   i. Photocopy Contract Management
   j. General Contract Management (Including Fleet Lease)
   k. Conservation Administration
   l. Public Outreach (including Agency Facebook, email blasts, flyers, fair, parades, newsletters, general ongoing info to public)
   m. Updating Agency manuals, policies, water/wastewater codes
5. Evaluate Organizational Structure to look for efficiency improvements including "Stove Pipe" structures which may foster duplication and unclear roles and responsibilities.

6. Evaluate Organizational Structure and job titles to build upon changes in progress to further enhance and define associated roles and responsibilities. Also review salaries for any ranges substantially low or high.

7. Agency Maps are not being kept current with the ongoing vacancy of the GIS/Cad position.
EXHIBIT B-6
ADDITIONAL ALTERNATIVES IDENTIFIED IN DEC. 2017

I

GM

HR

FIN MGR

ADMIN MGR + (COP B)

OPS MGR

ENGR MGR

Customer Service

FIN/Accounting

J

GM

HR Clerk/Bo.

ADM. MGR

FIN MGR

OPS MGR

ENGR MGR

Customer Service

FIN/Accounting
AMADOR WATER AGENCY BOARD OF DIRECTORS
Special Board Meeting
February 12, 2018

MINUTES

Directors Present: Art Toy, President
                  Paul Molinelli Jr, Vice President
                  Gary Thomas
                  Robert Manassero
                  Rich Farrington

Directors Absent: None

Staff Present: Gene Mancebo, General Manager
               Cris Thompson, Assistant General Manager
               Damon Wyckoff, Operations Manager
               Darrel Evensen, Engineering Manager
               Tracey Hays, Finance Manager
               Karen Gish, HR/Office Manager

AGENCY ORGANIZATIONAL WORKSHOP

CALL TO ORDER  President Toy called the Special Board meeting to order at 1:05 p.m.

AGENCY GENERAL
Review of Organizational Adhoc Committee Report (02:35-2:12:05)
Discussion and possible direction to the Adhoc Committee regarding the report

Public Comment:
Joel Mottishaw, AWAEA member
Joel Mottishaw, as an employee
David Evitt, Sutter Creek
Linda Nafus, AWAEA member
Andrea Hinton, AWAEA member
Andrea Petretti, AWAEA member
ADJOURNMENT- President Toy adjourned the meeting at 3:17 p.m.

Cris L. Thompson
Clerk of the Board of Directors

Approved:

2/22/18
<table>
<thead>
<tr>
<th>Project Description</th>
<th>Award Year</th>
<th>Agency</th>
<th>Grant Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pioneer Phase I</td>
<td>2016</td>
<td>CDBG</td>
<td>$1,420,000</td>
</tr>
<tr>
<td>Pioneer Phase III</td>
<td>2018</td>
<td>USDA</td>
<td>$1,976,000</td>
</tr>
<tr>
<td>Pioneer Phase II</td>
<td>2018</td>
<td>CDBG</td>
<td>$4,991,321</td>
</tr>
<tr>
<td>Six Tank REPL</td>
<td>2017</td>
<td>HMGP</td>
<td>$921,819</td>
</tr>
<tr>
<td>Tree Mortality</td>
<td>2017</td>
<td>CDAA</td>
<td>$400,000</td>
</tr>
<tr>
<td>Tree Mortality</td>
<td>2017</td>
<td>LATM</td>
<td>$19,000</td>
</tr>
<tr>
<td>Tanner BW</td>
<td>2017</td>
<td>DWR Drought</td>
<td>$4,617,155</td>
</tr>
<tr>
<td>Amador Canal</td>
<td>2017</td>
<td>CDAA</td>
<td>TBD</td>
</tr>
<tr>
<td>Preston</td>
<td>2017</td>
<td>CDAA</td>
<td>$370,000</td>
</tr>
<tr>
<td>Eggiman</td>
<td>2017</td>
<td>CDAA</td>
<td>$41,140</td>
</tr>
<tr>
<td>Tiger Creek</td>
<td>2017</td>
<td>CDAA</td>
<td>$90,749</td>
</tr>
<tr>
<td>Camanche WW</td>
<td>2015</td>
<td>SWRCB</td>
<td>$500,000</td>
</tr>
<tr>
<td>Buckhorn DBP</td>
<td>2016</td>
<td>SWRCB</td>
<td>$2,761,773</td>
</tr>
<tr>
<td>Camanche Tank</td>
<td>2016</td>
<td>SWRCB</td>
<td>$1,933,403</td>
</tr>
<tr>
<td>Ione Hydro</td>
<td>2017</td>
<td>CEC</td>
<td>$750,000</td>
</tr>
<tr>
<td>Ione Backwash</td>
<td>2016</td>
<td>DWR Drought</td>
<td>$728,510</td>
</tr>
<tr>
<td>GSL</td>
<td>2013</td>
<td>USDA</td>
<td>$5,070,000</td>
</tr>
<tr>
<td>Gayla</td>
<td>2011</td>
<td>ARRA</td>
<td>$375,612</td>
</tr>
<tr>
<td>AWS Leak Detection</td>
<td>2012</td>
<td>PROP 84</td>
<td>$341,509</td>
</tr>
<tr>
<td>Camanche Tank and Laterals</td>
<td>2012</td>
<td>PROP 84</td>
<td>$553,000</td>
</tr>
<tr>
<td>Camanche Water Repairs</td>
<td>2013</td>
<td>County</td>
<td>$150,000</td>
</tr>
<tr>
<td>SNC Regional Reuse</td>
<td>2009</td>
<td>SNC</td>
<td>$270,000</td>
</tr>
<tr>
<td>Camanche Groundwater Supply Study</td>
<td>2010</td>
<td>DWR</td>
<td>$247,547</td>
</tr>
<tr>
<td>Mokewise Planning</td>
<td>2012</td>
<td>DWR</td>
<td>$878,605</td>
</tr>
<tr>
<td>Tanner Hydro PGE Incentive</td>
<td>2015</td>
<td>PGE</td>
<td>$133,750</td>
</tr>
<tr>
<td>Camanche Laterals Phase II</td>
<td>2014</td>
<td>PROP 84</td>
<td>$562,175</td>
</tr>
</tbody>
</table>

**Total Grant Amount:** $30,103,068
APPENDIX UU
3 Demand Projections

In order to evaluate the Agency’s ability to meet current and projected future demands under the long-lasting impacts of climate change and a potential Wild and Scenic designation on the Mokelumne River, the Agency’s assumed ultimate demand at Amador County’s build-out must be quantified. For the purposes of this Study, “build-out” is assumed to occur at 2100, although this date is a rough estimate given typical growth rates. The true build-out occurs when available land is fully utilized. Several different methodologies were considered to quantify future demand using historical demand data, and a method using land use planning as the basis, with multiple additional factors considered, was chosen for use in this analysis. Future levels of conservation and impacts from climate change were then applied to these demand projections to determine an ultimate anticipated demand.

3.1 Service Area

The Agency is statutorily authorized to provide water service to all territory in Amador County (West’s Ann. Water Code App., Secs. 95-1 and 95-4). The Agency’s statutory authorization to provide public water service also imposes a “duty to serve” upon the Agency (Maddock, The Role of Water Agencies in Land Use Planning (March 1992) California Water Law and Policy Reporter, at p.105).

The duty to serve requires public utilities, such as the Agency, “to provide adequate and reasonably efficient service in an impartial manner, without unjust discrimination, to those within the agency’s service area who comply with its rules and regulations and pay its rates and charges.” (Id.)

Accordingly, the Agency “must hold itself out as ready to serve” and must provide water service to its service area without discrimination or preferences, unless differences in the services provided are justified by differences in cost of service (Butte County Water Users’ Association v. Railroad Commission (1921) 185 Cal. 218, 224-225). Furthermore, the Agency has an obligation to “exert every reasonable effort” to augment and expand its supplies and facilities to meet increasing demands for service within the County (Swanson v. Marin Municipal Water District (1976) 56 Cal. App. 3d 512, 524).

The demand projection methodologies described in Section 3.2 vary from method to method, and is only specifically defined in the land use demand projection method.

3.2 Methodologies

There are several common methods used to project water demand in the future. Most rely on using historical demand data specific to the region being considered and then increasing or decreasing that historical demand based on expected population growth and/or land use changes. Three different methods were considered for use in this Study: one based on population projections, one based on the historical growth rate of water connections, and one based on planned future land use.

3.2.1 Population Growth Projections

The first method considered to project future demands was conducted by multiplying anticipated future population by a per capita water use factor. Two approaches were considered within this method, the first being an extension of the demand projection approach used in the Agency’s 2015 UWMP. This demand projection method used the water use per connection for the period from 2008 through 2012 and increased this demand by the projected growth rate of the population served. Different water use types, including single-family residential, multi-family residential, commercial/institutional, industrial, and agricultural irrigation were considered, along with wholesale customer demands and water loss. This method does not account for changes in water use over time. Population projections were derived from the Department of Finance (DOF) through 2060 and extrapolated linearly through 2100. For the purposes of this projection, it was assumed that the Agency would serve 95% of the new population growth in the County. This
APPENDIX VV
Note 5 - Long-Term Debt: (Continued)

Certificates of Participation (Continued)

In October 1996, the Agency issued California Special Districts Finance Corporation, 1996 Z, Certificates of Participation, totalling $1,180,000 with interest rates ranging from 4.05% to 5.50%. Principal payments are due August 1st, interest is payable on August 1st and February 1st. The issue matures August 1, 2010. The principal outstanding at June 30, 2006 totalled $495,000.

In March 2006, the Amador Water Agency Financing Corporation issued $23,240,000 Amador Water System Revenue Certificates of Participation, 2006 Series A. A portion of the proceeds were used to extinguish $910,000 of the California Special Districts Finance Corporation, 1996 Series AA Certificates of Participation. Net proceeds of approximately $946,144 were used to purchase government securities. Those securities were deposited in an irrevocable trust with an escrow agent to provide for all future debt service payment on the 1996 Series AA Certificates of Participation. As a result, the 1996 Series AA Certificates of Participation are considered to be defeased and the liability for the debt has been removed from the District’s financial statements. The principal amount outstanding on the 2006 Series A at June 30, 2006 totalled $23,240,000.

Although the refunding resulted in a deferred amount on refunding of $71,410 for the year ended June 30, 2006, the District in effect reduced its aggregate debt service payments by approximately $301,344, over the next 10 years and obtained an economic gain of approximately $60,659. The deferred amount on refunding is being amortized over the life of the refunded debt. The 2006 Certificates of Participation are payable in annual installments including principal and interest at rates ranging from 4% to 5% and mature in June 2036.

Changes in Certificate of Participation consisted of the following at June 30, 2006:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$910,000</td>
<td>$</td>
<td>$(910,000)</td>
<td>$</td>
<td>$ -0-</td>
<td>$ -0-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>590,000</td>
<td>(95,000)</td>
<td>495,000</td>
<td>105,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amador Water System Revenue Certificates of Participation, 2006 Series A</th>
<th>Unamortized discount and premium</th>
<th>Deferred amount on refunding</th>
<th>Balance at June 30, 2005</th>
<th>Additions</th>
<th>Deletions</th>
<th>Current Portion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,500,000</td>
<td>(40,797)</td>
<td>(41,323)</td>
<td>$2,177,819</td>
<td>22,240,000</td>
<td>(71,410)</td>
<td>$23,735,000</td>
</tr>
</tbody>
</table>

24
APPENDIX WW
Regarding customer service, the City Manager serves as the ombudsman. The City reported that there were no complaints in 2013.

The City demonstrated partial accountability in its disclosure of information and cooperation with LAFCO. While requests required several follow-ups, the City ultimately responded to LAFCO’s written questionnaire, interview and document requests.

Management

The City implemented a council-manager management approach in 2003. The City Council acts as the legislative and policy-making body for the City. The Council appoints the city manager, city attorney, and all members of any boards and commissions, which serve in an advisory capacity to the City Council. The daily operations of the City are managed by the city manager, who is responsible for implementing the policies and priorities of the City Council.

By way of performance evaluation, the City conducts a strength-weakness-opportunities-threats (SWOT) analysis process on a periodic basis. The City reported that its recent accomplishments include solving its recurring annual problem with flies after the County Fair.

Plymouth employs 9.0 FTEs. The City reports that it does not have the financial means to support full-time city management. Employees are evaluated annually. Probationary employees are evaluated at three and six months after hire.

Plymouth updated its general plan in 2009. The current general plan was originally adopted in 1986 and amended in 2001. The City also has a revitalization plan for the downtown area (1997), which has not been updated since adoption. In the future Plymouth is planning to prepare a historic downtown master plan, as well as a downtown parking study and plan.

The City’s financial planning efforts include annually adopted budgets. The City reported that its financial practices include annual financial audits. The most recently audited financial statement provided by Plymouth to LAFCO was for FY 12-13. Plymouth adopted a five-year capital improvement plan in June 2007. The City reports that the CIP is updated every five years. The City is currently in the process of updating its CIP.

The City carries general liability, automobile liability, property coverage, and workers compensation insurance.

Service Demand and Growth

Land use in Plymouth is primarily agricultural and low-density residential. Most land in the western half of the City is low-density residential, followed by parks and open space and mobile home parks. The small amount of commercial land use in Plymouth is concentrated downtown along Main Street. The eastern half of Plymouth’s bounds is classified as agricultural land use; nearly all of this land is specified for vineyards. There are many vacant lots in the City along SR 49.  

136 City of Plymouth, General Plan Land Use Map, 2009.
APPENDIX XX
31 January 2012

Mr. Gene Mancebo, P.E.
General Manager
Amador Water Agency
12800 Ridge Road
Sutter Creek, CA 95685-9630

Subject:    Engineer's Letter of Opinion – Condition Assessment Tiger Creek and Silver Lake Pump Station System – Central Amador Water Project
            Amador Water Agency
            K/J 1170036, 6.01

Dear Mr. Mancebo:

This letter documents the efforts undertaken by Kennedy/Jenks Consultants to review the existing physical conditions and operational practices associated with the Amador Water Agency (AWA) Central Amador Water Project (CAWP) water supply facilities.

In general, both pump stations are at or beyond the end of their useful life for the pump suction cans and piping. The pump stations operate with no reliable capacity and are forced to pump water under changed conditions that they were not designed to operate under. It is impractical and unreasonable to attempt to make significant repairs to these existing pump stations during peak water demand times due to the lack of redundancy. Failure of major facilities such as the encased pump cans, pipelines and electrical equipment will require investment in expensive repairs to worn out equipment at a reduced level of service. We recommend that these pump stations at a minimum be replaced with new facilities. Given the condition of the pump stations and ancillary equipment, an extended water outage is likely within the next five years.

Scope of Work:

Kennedy/Jenks Consultants (Kennedy/Jenks) was retained in 2001 to complete a design for the replacement of the Tiger Creek and Silver Lake Pines pump stations. This prior work did not include the transmission main from Tiger Creek to the Silver Lake Pines Pump Station. AWA requested that Kennedy/Jenks provide an opinion as to the existing condition of the two pump stations given our familiarity with the facilities and knowledge regarding pump stations.

The Scope of Work included reviewing operational records and documents provided by AWA, touring both pump stations and interviewing the operations staff responsible for the two pump stations and the Buckhorn Water Treatment Plant. This work was completed on 2 December 2011. This memorandum provides the observations and Kennedy/Jenks Consultants opinion as to the condition of the existing pump stations.
Background:

The CAWP system was developed in the late 1970's to provide water to serve approximately ten (10) existing potable water systems experiencing severe decline in groundwater availability. The project consisted of the emergency installation of the following principal facilities:

- Mokelumne River Diversion at the Pacific Gas and Electric Tiger Creek Dam.
- Tiger Creek Pump Station (TCPS)
- Tiger Creek to Silver Lake Pines High Pressure Transmission Main
- Silver Lake Pines Pump Station (SLP)
- Silver Lake Pines to Buckhorn Water Treatment Plant Transmission Main
- Buckhorn Water Treatment Plant (BHWTP)

These facilities were placed into service in approximately 1978 and the CAWP systems became reliant on the Mokelumne River diversions for potable water supply. The CAWP currently serves four (4) wholesale water systems including both AWA owned systems and non-AWA owned systems. Some of the original districts have been consolidated into larger systems.

The Buckhorn Water Treatment Plant constructed in 1978 was replaced by a new water treatment plant starting operation in about 2003. All other facilities providing the Mokelumne River supply to the water treatment plant have remained in service since 1978 with 33 years of continuous service. The TCPS and SLP pump stations work in series with the water pumped at TCPS feeding the suction side of the SLP station. The original design provided pumps that had compatible performance conditions such that equilibrium would exist when the two pump stations were operating and the stations would work together without creating too high or too low a pressure condition at the SLP site.

Review of Existing Records:

A summary of daily log reports was reviewed for the period 2002 through 2011 with the following findings.

- The TCPS main electrical breaker required replacement following 18 months of failures. The circuit breaker failure mode was that it would trip repeatedly when a electrical load occurred. The service record description of the main electrical breaker failure demonstrates that the Agency operated the equipment to maximum life of the asset before replacing the main breaker.
Communication reliability is a recurring problem between the BHWTP, SLP and TCPS resulting in the need to manually restart equipment when communication is lost. The operators described the manual restart sequence as requiring a minimum of three people; one at the BHWTP, one at SLP and one at TCPS. The BHWTP calls for water and the TCPS is started manually with SLP in off position. This allows the suction side pressure to reach a minimum at which point the SLP pump is allowed to start. The timing is critical to avoid triggering a high pressure shut off at TCPS or SLP. The communication system between facilities requires immediate replacement to avoid complete failure. The TCPS is located in a remote area in a deep canyon making radio telemetry difficult and no public phone lines available near the site.

The log includes several entries listing "Low Suction Pressure" at both SLP and TCPS.

- The occurrence of low suction pressure at SLP appears to be the result of the SLP pumps moving more water than the TCPS can provide under certain conditions. The 2003 completion of the BHWTP reduced the pumping head required from the SLP station by approximately 150 feet and thereby increased the pump discharge under the fixed operating speed of the motors. This change in the discharge head and operating conditions at SLP has likely created an imbalance between the TCPS pumps and the SLP pumps, essentially being out of equilibrium as originally designed and operated. The AWA staff has made system improvements to allow for operation of the system; however the most common alarm failure is due to low suction at SLP due in part to this imbalanced pump installation and the timing of starts and stops.

- The TCPS station requires frequent cleaning of the suction strainer including daily cleaning in the spring. This is due in part on the absence of adequate straining at the lake diversion. This is not however a pump station condition issue as much as a service condition that could be improved with modifications to the lake diversion.

- The SLP station had a recurring overheating problem with one of the motors. This condition was corrected with the replacement of the motor.

- The SLP station includes vertical turbine canned pumps that have the suction cans embedded in concrete under the building. These cans are permanent installations and cannot be removed or replaced. One of the pump cans failed in 2003 and a liner repair was attempted and later failed. The 2003 liner failed in 2010 requiring multiple attempts to repair using custom fabrication. This repair took approximately 30 days. This type of recurring failure and repair cycle is typical of the level of reliability and service of equipment beyond its useful life.

- The SLP suction pipe manifold is anchored to concrete blocks outside the building. The pipe is abraded at the anchor straps showing that the pipe moves up to ½ inch on a frequent basis and the metal is shinnny from the wear. This level of movement is not recommended and can be expected to result in a failure of the manifold in the future due to these expansion and contraction stresses.
Each site was visited and reviewed with the AWA operation staff. The following observations were made:

- The SLP discharge pipeline is experiencing corrosion at the point it goes below grade. An examination of this corrosion shows a 1/8-inch thick spalling buildup of corrosion. If this level of corrosion is not corrected, it can be expected to progress and result in localized leaks which will be difficult to repair.

- The SLP and TCPS electrical require an evaluation and labeling advising service personnel of the appropriate protective measures to employ during servicing. The panels should be evaluated for arc flash hazard to be compliant with NFPA 70E requirements for warning labels and direction on appropriate protective gear to be worn during service.

- The TCPS station has two large pumps (Pump #1 and Pump #2). Pump #2’s buried can failed due to corrosion and required a pump can lining that reduced the depth of the pump chamber. One bowl was removed from the existing pump to accommodate fitting within the repaired can, which has reduced the pumping capacity of the Pump #2 contributing to the imbalance between the SLP and TCPS.

- The TCPS station is equipped with two large pumps and one smaller pump. During peak season both large pumps are operated continuously to meet system demands. The firm reliable capacity of this pump station is that which can be met with one of the large pumps off line. The California Department of Public Health (CDPH), per the Waterworks Standards, may require a third pump to provide a backup pump to accommodate a pump outage. There is no room to install an additional large pump within the existing pump station.

**Evaluation of Condition, Reliability and Risk Due to Failure:**

Public water supply facilities provide a critical service that a community relies on for health and sanitary purposes. Reliability is a key consideration in managing a water utility and factors such as physical condition to meet a minimum level of service, reliability through redundancy of critical features and an understanding of the consequences of a failure of a particular asset help define reliability. Acceptance of the customer to a standard level of service will vary by location and by customer and it is likely that the CAWP customer base may have become accustomed to infrequent water system emergency conservation requirements and periodic unscheduled outages.

Outages are the loss of water system pressure such that the customer can not flush a toilet or draw water from a faucet. Outages can be accommodated for short periods through emergency conservation, alternative water supplies, mutual aid agreements with neighboring water purveyors and ultimately with trucking water and temporary evacuation. Planned outages for scheduled events including maintenance, water line flushing and improvement project interties are typically carefully planned and distribution system reservoirs and tanks filled and the public notified to conserve prior to the schedule outage. Unplanned outages due to equipment failures, pipe rupture, natural disasters or water supply disruption occur without warning and the response is governed in part by the circumstances at the time.

[page 31 January 2012]

Mr. Gene Mancebo, P.E.
Amador Water Agency
31 January 2012
Page 4
Mr. Gene Mancebo, P.E.
Amador Water Agency
31 January 2012
Page 5

Understanding the acceptable level of service is critical in assessing the ability of the TCPS and SLP stations to meet that service in their current configuration and condition. The following minimum levels of service were assumed for the SLP and TCPS system.

- Water system pressures shall remain above 25 psi at all times.
- Installed pumping capacity is capable of meeting the maximum day demand without interruption for the system under reasonably anticipated normal operating conditions. These conditions include the following:
  - Power failure at pump stations and the water treatment plant.
  - Pump failure at the pump stations – assume one of the large pumps out of service.
- Extended unplanned outages do not occur.

**Pipeline Considerations:**

There is an existing steel pipeline that carries water from the TCPS site to the SLP site running across country and up the Mokelumne River canyon northslope. The pipeline location is approximately known with at least two known locations of existing air release valves. The pipe alignment does not have warning markers or other features that would allow for locating in an emergency or to alert the public from digging in the vicinity of the pipeline. The pipeline normal operating pressure at the TCPS station site is 350 psi. Transient surges during power failure or other uncontrolled shutdowns occur and are partially mitigated by a surge tank at the TCPS site. Pressures routinely reach 500 psi during start/stop sequences.

The condition of the pipe is unknown but is believed to be at risk per the operations staff due to it being such high pressure and likely installed with limited or no lining repairs following welding of the segments together in the late 1970's. The pipeline alignment in the vicinity of the TCPS was walked based on indications of a tractor path identified in the general area. The alignment is accessible to track mounted caterpillar equipment from the upper crossing of the Tiger Creek access road and emergency repairs could be completed during favorable weather and dry ground. A pipeline failure during the wet season could be difficult to access due to the steep slopes and absence of a defined access route.

The pipeline has experienced two significant leaks near the SLP. The uncertainty as to location and lack of a defined access route increases the consequences of a failure and duration of a repair along portions of the pipeline. It is recommended that the Agency use remote sensing methods combined with limited potholing to locate the pipeline and map it for future reference. The pipe alignment should be labeled with paddle type markers to protect from damage due to excavations and surface activities.
Operation and Maintenance Practices:

The interview with the operations staff confirmed that the AWA team is competent, knowledgeable and capable with regard to the methods and procedures needed to operate the SLP and TCPS facilities. Their understanding of the repair tactics for continued use of the poor condition telephone line for communications between the pump station controls and the procedure for manual restarting of the stations following loss of suction pressure at SLP reinforces how qualified and dedicated staff must be to operate the system in the current condition. The high operating pressures at TCPS, the movement of pipes under normal operating conditions at SLP, the need for improved arc-flash labeling on existing electrical panels represents some of the risk of working with these facilities as they continue to age.

The CAWP distribution system includes approximately 28 storage tanks at differing elevations. We discussed the strategies for protecting storage during an outage and the need to immediately and manually isolate the tanks in the vicinity of the BHWTP to allow the remote zones to rely on their local storage.

Findings Pump Stations:

The following findings are based on our observation of the facilities, review of records and interview with staff.

- In general, both pump stations are at or beyond the end of their useful life for the pump cans and piping. The movement of pipes during operation, corrosion and leaks of pump cans, insufficient pumping capacity to meet demand without running all pumps and risk of electrical equipment failure combine to make it likely that an extended outage will occur in the next five years. Changes in operating conditions and repairs to the cans have created an imbalanced pump selection that makes operation tedious and requires skilled staff to restart and troubleshoot the BHWTP, SLP and TCPS system.

- The pumps, mechanical equipment and electrical equipment are near the end of their useful life and replacement is likely to be required within five years to prevent failure. The lack of availability for spare parts makes repair of the electrical equipment problematic and unlikely.

- The existing electrical equipment may present a significant safety hazard if inadequate safety gear is not used when servicing. An arc flash analysis should be completed and labeling installed.

- The TCPS high pressure pipeline is vulnerable to damage and should be located and the condition determined. An appropriately assessed pipeline condition will help staff prepare a response to a high pressure leak that could create significant damage to the hillside and be difficult to repair.

- The SLP station appears to be in the worst condition than the TCSP. The SLP suction and discharge piping are showing signs of corrosion combined with damage from...
repeated movement at the anchorage. The buried pump suction cans can be expected to fail again and require specialty repairs or lining to return the station to service.

- It is not unreasonable to assume that a 5-day or longer outage could occur if a catastrophic electrical arc failure occurred at either station. A pipe failure or pump failure could also result in a multi-day outage depending on the degree of corrosion in the pipes and pump cans and availability of replacement equipment.

- The TCPS station is unreliable and can only provide approximately half the required firm capacity to meet current demands in the summer. Operation of the two largest pumps continuously for months to meet demands is not consistent with requirements of the California Waterworks Standards as enforced by CDPH. The communications link between TCPS and SLP is beyond its useful life and is at risk to fail at any time. It is estimated to replace this land line in an emergency situation with another land line or a new radio system would take multiple days.

- The Agency staff is capable of keeping these pump stations operating to the highest degree feasible, but there is increasing risk of catastrophic failure and damage resulting in an extended period of loss of water to the CAWP system and likely requiring emergency measures to maintain a minimum level of water service during repairs.

- We recommend that these pump stations at a minimum be replaced.

We appreciate the opportunity to review the existing condition, operating practices and risk of failure associated with the Amador Water Agency Tiger Creek Pump Station and Silver Lake Pines Pump Stations. If you need additional information or clarification on our report please do not hesitate to contact me at (916) 858-2725.

Very truly yours,

KENNEDY/JENKS CONSULTANTS

Alex R. Peterson, P.E.
Principal

Enclosure: Photographs site visit
Photographs AWA Staff

cc: 1170036/6.01
Photographs from 2 December 2011 site visit.

Photo 1 - Silver Lake Pines Pump Station discharge pipeline corrosion.

Photo 2 - Silver Lake Pines Pump Station inlet headed showing pipe movement.
Photo 3 - Silver Lake Pines Pump Station inlet header showing pipe movement scratches from pipe support.

Photo 4 – Silver Lake Pines Pump Station discharge severe pipe corrosion.
Photo 5 – Silver Lake Pines Pump Station – standby temporary power connection.

Photo 6 – Silver Lake Pines Pump Station – electrical motor switchgear.
Photo 7 – Tiger Creek Pump Station – discharge pipe support 350 psi operating pressure, 500 psi startup pressure.

Photo 8 – Tiger Creek Pump Station access road
Photo 9 – Tiger Creek Pump Station – discharge pressure reading

Photo 10 – Tiger Creek Pump Station - discharge piping coating damage
Photo 11 – Tiger Creek Pump Station – discharge pipe unlined buried pipe with 350 psi operating pressure.

Photo 12 – Tiger Creek Pump Station – discharge pipe supports with 350 psi operating pressure.
GSL vs. CAWP EMERGENCY PIPELINE

OPINION PAPER (4/5/13)
(by Rod Schuler, P.E.)

GSL PLUS SIDE

1. Eliminate pumping at the river and water treatment plant (WTP) ($400,000/yr pumping cost)

2. Eliminate risk of high pressure failures

3. Eliminate shut down of WTP due to poor water quality from storm runoff

4. Lower operation and maintenance costs

5. More reliable water supply to meet peak demand and future needs

6. More reliable fire protection

7. Non-corrosive pipe material

8. Even the GSL (5cfs) will only provide water to less than 50% of build out within the CAWP Service Area

CAWP EMERGENCY LINE DOWN SIDE

1. Beyond its service life (See Kennedy-Jenks Engineers Report on Current CAWP Pump System)

2. Lack of documentation to predict pipe failures

Page 1 of 2
GSL vs. CAWP EMERGENCY PIPELINE (Continued)

3. Risk of high pressure failure which can cause extensive damage to personnel and/or property

4. Poor water quality source

5. Steel pipe materials – corrosive

6. High energy use contributes to air quality issues from thermal power plant operations

7. Pipe size too small to meet peak day, as well as future, water demand

8. Current system was not designed as a permanent facility

9. Non-reliable fire protection

Conclusion: Not having the GSL in place before now is resulting in a huge risk of jeopardizing the health and safety of the people in the CAWP Service Area

Ref: 1. "Opinion Paper", by Rod Schuler, P.E., 2/10/12
    2. "Discussion on pipe size for Water Transmission" unpublished draft 4/19/12
CENTRAL AMADOR WATER PROJECT (CAWP)

EMERGENCY PIPELINE

Opinion Paper

(Final 2-10-12)

By

Roderick E. Schuler, PE
CENTRAL AMADOR WATER PROJECT (CAWP)
EMERGENCY PIPELINE

Opinion Paper (Final 2-10-12)

by

Roderick E. Schuler, PE

PREFACE

Even though the County and the Amador Water Agency (AWA) are separate and distinct entities, the County Board of Supervisors and Amador Water Agency Board of Directors worked together on water matters for the good of the county as a whole. While the AWA engaged in various water and wastewater studies over the years, it was agreed that the County would take the lead in design and construction of the Central Amador Water Project (CAWP), and then after completion, dedicate it to the AWA. Because of the severe 1976-77 Drought, the County implemented the “Emergency Pipeline Project to serve the upcountry water districts with a reliable water source. The mission was to get water to the Buckhorn Water Treatment Plant (BWTP) as quickly as possible. With the high water pressures inherent in the project, special pipe and appurtenances were acquired that were not available “off the shelf”. The question asked these days is: what is the expected service life of the “emergency pipeline?”

This Opinion Paper is a discussion (unsolicited by the AWA, current owner of CAWP) regarding my professional opinion of the risk of continued service of the CAWP Emergency Pipeline from the Tiger Creek Afterbay to the BWTP. This paper is based on my knowledge of the system, and project information gathered during the years since first employed with the County in October 1978. The American Waterworks Association (AWWA) Steel Pipe Manual M11 is the basis for some of the discussion items. Additional information, specific to the Emergency Pipeline, was gathered while reviewing the files (now located in the AWA “Archives”).

DISCUSSION

The following topics are related to the longevity of steel pipe and should be addressed during the design and construction phases of a pipeline project:

I. Design:
   a.) Tensile strength of the steel used in the pipe.
   b.) Hydraulic pressures (including water hammer)
   c.) Topography that requires special consideration in design and construction.
   d.) Corrosion, soil types and condition along the pipe route
6.) How was the trench prepared with regards to bedding and backfill (type and source, compaction tests results)?

7.) Was the bedding notched at the location of Victaulic Couplings to relieve stress on the pipe?

8.) Did the Victaulic Couplings meet AWWA Standards, and for what pressure and Safety Factor?

9.) What was the design of the thrust blocks, and were the thrust blocks placed in accordance with the design?

CONCLUSIONS

In theory steel pipe can last as long as 100 years or better*, if everything is done under a strictly controlled environment. *(History of Steel Water Pipe, its Fabrication and Design Development, by Walter H. Cates, Civil Engineer-Hydraulics). However, this is not the case in the “real world.” The CAWP pipeline has some unique circumstances that do not lend themselves to this theory. The county was faced with a water emergency situation and a very challenging topography resulting in design of a very high pressure water system.

It was always desired to have a gravity pipeline to feed the CAWP system, but at the time of the drought emergency, the force main, with pumps, was the quickest option with the least upfront cost.

Estimating pipe service life is difficult when there is lack of certifications. Documents certifying that specific standards were met with regards to the variables listed above would give more certainty in estimating the service life.

Mr. David Willer, PE, a Consultant for the AWA, estimated that the service life of the pipeline is about 35-years. Thus, the year that begins the risk of failure is 2012. After that, we are living on “borrowed time.” This is a reasonable estimate, and I support that estimate. This does not take into account the mechanical equipment, pumps, and controls that have a shorter service life and are far outdated already. With parts more and more difficult to acquire, the risk of getting the water system back in service, within a reasonable outage time, is becoming greater everyday.

It is one thing to be able to monitor and make repairs to areas that are exposed and visible, and another thing to monitor, let alone repair, the components that are buried and out of sight.

In my opinion, not having a long term reliable water system in place by now to serve the upcountry population is resulting in a huge risk of jeopardizing the health and safety of the people in the CAWP area.
e.) Type of pipe bedding and pipe backfill materials to be used

f.) Pipe lining and coatings

g.) American Water Works Association (AWWA) Standards

h.) Horizontal and vertical forces – Thrust Blocks

II. Construction:
   a.) Pipe handling, during loading, transporting, unloading, stringing, laying, and joining of pipe sections

b.) Trenching, width, depth, bottom preparation

c.) Field welding

d.) Lining and coating repair of damaged or field welds

e.) Coating of Victaulic couplings

PROTECTIVE COATINGS

The importance of obtaining proper coating and application cannot be overemphasized.
Coal tar was mentioned in an English patent in 1681. During the period of 1928 to 1932 considerable research was done to improve the material, and the coating has become a standard for steel pipe water lines.

The American Water Works Association (AWWA) has developed standards for two of the most widely used protective coatings. These are AWWA C203 for coal tar enamel and AWWA C205 and C602 for cement mortar linings and coatings. The County chose Coal Tar Enamel, AWWA C203 Standard.

The records indicate that the CAWP emergency pipeline was lined and coated per AWWA C203 Standard. However, the records did not reveal if the County required, or was furnished, an affidavit that all materials and methods complied with the requirements of this standard. The C203 Standard has some options that the purchaser may specify, such as after the bonding of the asbestos-felt wrap, the coating can be finished with one coat of water resistant whitewash or a single wrap of kraft paper. Also there are options on the type of primer and the type of coal-tar, and was the coating “rigidly” inspected during the sandblasting and coating periods? Were any of the materials tested for compliance?

Because it is more difficult to control field conditions, more care is required when coating in the field than when coating in the plant, under a controlled environment. Were the field application of primer and tape for fittings and repairs
performed, and if so, were they done according to Section 3 of the AWWA Standard, under strict inspection?

PIPE HANDLING AND TRANSPORTATION

Extreme care must be taken to protect the coating during the handling, transportation, storing, and "stringing" along the pipeline route. Lined and coated steel pipe should be handled with approved equipment, such as wide padded skids and wide canvas or rubber-covered slings.

During loading and unloading operations, pipe sections should not bear against each other. All chains, cables, and tie-downs should be carefully padded. One scratch in the lining or coating will shorten the life of the pipe, unless the scratch is appropriately "field-coated."

When the pipe is distributed along the pipeline Right-of-Way, the pipe ends need to be protected and supported to prevent contact with rocks and rough ground.

There is no apparent evidence that the pipe was handled with strict care to protect the lining and coating.

PIPELAYING

How the pipe is laid is also critical to optimizing the pipe's service life. The following questions or issues relative to the "Emergency Pipeline" were not addressed, or at least documents were not found, in the file search:

a.) Were the pipe sections properly blocked when stored at the trench site?

b.) Were "bell-holes" provided at each of the Victaulic fitted joints?

c.) Were pipe sling holes provided in the pipe bedding to accommodate, and provide for, the removal of the sling without damage to the pipe coating?

d.) How clean was the trench bottom, and what type of bedding was the pipe laid on?

e.) Did the workman walk on the pipe, if so, were the soles and heels of the shoes rubber or composition? If there was any damage, were the damaged areas "field" coated per AWWA Specifications?
f.) Careful design and construction of angle thrust blocks is related to the longevity of the pipe, and must be consistent with the safe bearing of the earth and carefully trimmed trench walls and bottom. The safe load which a thrust block can deliver against a given soil depends upon the consolidation characteristics and passive resistance (shear strength) of the soil.

**VICTAULIC COUPLINGS**

For most of the 7500 feet of steel pipe, Victaulic couplings were used to connect the pipe sections. Victaulic couplings consist of bolted metal clamps which compress a rubber gasket and makes a water tight joint. This type of coupler is generally used above ground and provide flexibility, ease of installation, and a water-tight joint.

The question remains, do the Victaulic Couplings meet AWWA Specifications and pressure demand and at what safety factor?

**CORROSION**

In corrosion, underground oxygen concentration in soils is one of the chief reasons for dissimilarity in an electrolyte (moist-earth). If the pipe coating is not sufficient, small particles of metal (ions) go into solution in the soil (electrolyte) leaving a tubercle pit.

If large clods of dirt, originally from different depths in the trench, rest against the unprotected pipe wall, the contact area becomes the corroding area. Soil through out the depth of the trench may be of uniform kind but, the pipe rest on heavy, moist, undisturbed ground at the bottom of the trench while remainder of circumference is in contact with drier and more aerated soil backfill.

Unequal compaction of trench backfill, unequal porosity of different soils, uneven distribution of moisture are potential for dissimilarity, thus creating a corrosive environment around the pipe. The greatest dissimilarity-and most dangerous condition-occurs along the narrow strip at the bottom of the pipe.

In the case of Amador Plaza Shopping Center, the bottom one-third of the galvanized corrugated metal pipe (CMP) was completely corroded away (disappeared) in less than 20-years. Under normal circumstances, galvanized CMP will last 30 to 50-years.

One corrosion pinhole in the CAWP pipeline (with more than 1300 feet of head (565 psi) plus transient pressures), could develop velocities greater than 170 feet per second which can scour a crater under mining the support of the pipe and/or structures.
FINDINGS

The following are excerpts from documents found during the file search:

1. 9 May 77 – County located 25,000 of used 12-inch diameter steel pipe through the Pacific Pipe Company of S.F.

2. 13 June 77 – The steel pipe adequately passed the pressure tests.

3. 30 June 77 – County ordered 1,600 feet of 12-inch diameter Asbestos-Cement (AC) pipe that met AWWA C400 Specifications.

4. 20 July - Notice to Bidder’s (opening date, August 2, 1977), County to supply most materials.

5. 2 August 77 – County purchased (from Pacific Pipe Co.), 7,500 feet of used 12-inch, 0.25 inch wall thickness, 3/8-inch grooved ends welded on pipe, Cold Tar Enameled and wrapped per American Water Works Association (AWWA) C 203 – 73 or "latest standard."

6. Approx mid. August 77 – the Contractor, Valley Engineers

Bid Schedule “A” pipeline:

5,070 feet, 12-inch steel pipe thru unimproved property.

2,000 feet, 12-inch steel pipe along Tiger Creek Road.

1,600 feet, 12-inch AC Pipe to treatment Plant

7. 2 September 77 – Letter report to FmHA regarding 4-year old steel pipe that [used in an air pipe system from a facility] was inspected, tensile tested, sand blasted inside and out, and lined / coated per AWWA Specifications.

8. Briefs from Inspector’s Reports (15 August 77 thru 18 November 77):

a.) 7,500', 12.75", 0.250" wall, used pipe, 40' – DRC with 3/8" wall grooved Victaulic ends from Pacific Pipe Co. – Coal Tar lined and single wrapped to AWWA Standard C-203.

b.) 13 September 77 – Contractor attempted to place (in one operation) more than 280 feet of welded joints, when the pipe buckled.

c.) The pipeline required field welding at several sites to repair damaged pipe, leaks, and adaptor(s).
OBSERVATIONS

A complete certified copy of the final set of Contract Specifications was not discovered during the file search. There were no documents found indicating that the field welded joints were treated to prevent corrosion or how any damaged coating was repaired. It is not clear if the re-welded “buckled” pipe was coated to resist corrosion. It is safe to say that the interior of the 40-foot sections of pipe at the field welds were not re-coated to resist corrosion.

No documentation was found stating that the Victaulic Couplings at the non-welded joints were coated and wrapped to prevent corrosion at these joints.

There was no indication that there was any Cathodic protection installed (or studies made) along the pipeline to protect the pipe from corrosion. Cathodic protection, however, is not necessary unless the pipeline is in highly corrosive soils, or near line currents or surface potentials. There were no documents found regarding this subject.

Variables that have not been certified (or at least file documents were not discovered) are the following:

Under the circumstances of emergency status, and limited staff and resources, the County met the challenge of providing water to the 10 separate water districts in the CAWP area. However, after the passing of many years, and many office relocations (6 or 7 moves), the CAWP files have been “diluted” to the point where specific documents that would be helpful in estimating the service life of the emergency pipeline could not be found.

The following is a list of variables that influence the service life of a pipeline, and apparently have not been addressed or compliance-certified through documentation. That is, there were no documents found in the files indicating such:

1.) What were the actual tests results on the pipe (steel yield point, pressure, safety factor)?

2.) What was the type of wrap used in the coating of the pipe?

3.) After the pipe was lined and coated, how was the pipe handled during the loading, transporting, unloading, stringing along the trench side, laying of pipe in the trench?

4.) How was any damage to the coating and lining repaired?

5.) How were field welds lined and coated?
### COMPARISON OF GSL VS. PUMPING AT 1% GROWTH

| Year | Water pumped, AF | Cost of Pump | Power Cost | Power Cost Current | County WDF Loan Repayment | SLP & TC PS O&M Cost | Power | Current | SLP & TC PS O&M CURRENT | Power | CURRENT | Power | CURRENT | GSL Debt Service with 30% Grant | GSL Debt Service with 30% Grant |
|------|-----------------|--------------|----------|-------------------|-------------------------|----------------------|-----------------|----------|----------------------|-----------------|----------|-----------------|----------|----------------|-------------------------------|-------------------------------|
| 2010 | 2,122           | 72,620       | 32,612   | 534,870           | 32,612                  |                      | JPEG | $13.9m               | $5.1m            | $5.1m           | $5.1m                          |               |                      | 20% of the cost of the pump station, this is based on USDA historical grant loan applications without ARRA funding. |
| 2011 | 2,122           | 72,620       | 32,612   | 534,870           | 32,612                  |                      | JPEG | $13.9m               | $5.1m            | $5.1m           | $5.1m                          |               |                      | 20% of the cost of the pump station, this is based on USDA historical grant loan applications without ARRA funding. |
| 2012 | 2,122           | 72,620       | 32,612   | 534,870           | 32,612                  |                      | JPEG | $13.9m               | $5.1m            | $5.1m           | $5.1m                          |               |                      | 20% of the cost of the pump station, this is based on USDA historical grant loan applications without ARRA funding. |
| 2013 | 2,122           | 72,620       | 32,612   | 534,870           | 32,612                  |                      | JPEG | $13.9m               | $5.1m            | $5.1m           | $5.1m                          |               |                      | 20% of the cost of the pump station, this is based on USDA historical grant loan applications without ARRA funding. |
| 2014 | 2,122           | 72,620       | 32,612   | 534,870           | 32,612                  |                      | JPEG | $13.9m               | $5.1m            | $5.1m           | $5.1m                          |               |                      | 20% of the cost of the pump station, this is based on USDA historical grant loan applications without ARRA funding. |
| 2015 | 2,122           | 72,620       | 32,612   | 534,870           | 32,612                  |                      | JPEG | $13.9m               | $5.1m            | $5.1m           | $5.1m                          |               |                      | 20% of the cost of the pump station, this is based on USDA historical grant loan applications without ARRA funding. |

**Note:** Water pumped inflated by 1%

-Pump Station Upgrades assume $4.7m project cost escalated to mid-point of construction (20% grant of $949k and $3.8m loan over 40 yrs @ 1.3% interest rate based on 2001 KJ 50% design required to get to 3 MGD)

-GSL assumes $13.9m project cost escalated to mid-point of construction (grant of $5.1m and $8.8m loan over 40 yrs @ 1.3% interest rate)

-Beginning with 2011 power costs for AF are inflated by 3% per year, based on 15 years of PG&E rate history data

-Beginning with 2012 power foregone estimated using 0.05 for partial peak QF pricing; then escalated 3% per year (2009 avg was $0.046 & 2010 avg was $0.047)

-We have assumed that a USDA grant might be available to cover 20% of the cost of the pump station; this is based on USDA historical (grant loan applications without ARRA funding).

-CAWP Pipeline Replacement at end of 50 year lifespan would cost $8,954,000 (escalated to 2010 with DDI loan over 40 yrs @ 1.3% interest rate paid off in 2070)
Comparison of GSL to Pump Station 1% growth

- Pump Station & CAWP Pipeline Replacement
- Gravity Supply Line Option With $5.1 Million Grant