Davis-Woodland Water Supply Project

UC Davis Role in the Project

City of Davis Water Advisory Committee
February 23, 2012
# Campus Water Systems

<table>
<thead>
<tr>
<th>System</th>
<th>Wells</th>
<th>Production</th>
<th>Source(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic&lt;sup&gt;1&lt;/sup&gt;</td>
<td>6</td>
<td>≈2,400 af/year</td>
<td>Deep aquifer</td>
</tr>
<tr>
<td>Utility</td>
<td>5</td>
<td>≈1,200 af/year</td>
<td>Intermediate aquifer</td>
</tr>
<tr>
<td><strong>Field Teaching &amp; Research</strong></td>
<td>21</td>
<td>Variable</td>
<td>4,000 af/year - Solano Project&lt;br&gt;Supplemented by wells from shallow &amp; intermediate aquifers</td>
</tr>
</tbody>
</table>

1. An interconnection between campus and city domestic water systems provides mutual backup in the event of an upset condition

2. Does not include Field Teaching and Research use on 1,500 acres at the Russell Ranch
Domestic Water Production
(Acre-feet / year)

2,500 acre-feet/year = 2.2 million gallons/day
UC Davis Interest in DWWSP

• Supply
• Quality
• Reliability
Supply

• Long-term planning horizon – 40+ years
  – Campus domestic water needs could double
  – Population and research growth
  – Public-private partnerships
  – For example - West Village ≈ 425 af/year

• Management flexibility with diversity of supplies
  – Sacramento River Surface Water (2,000 af/yr)
  – Solano Project Surface Water (2,000 af/yr)
  – Deep aquifer groundwater

• Better able to respond to:
  – Drought
  – Climate Change
  – Program opportunities
  – Upset conditions
Quality

• Surface water quality dependable over long-term
• Groundwater quality could degrade
• Central water treatment plant allows more options for treatment to manage quality
• Sacramento River water quality superior to Solano Project water for wastewater discharge permit compliance
Reliability

- Deep aquifer evaluation by city and campus
  - Confined
  - Limited vertical and lateral discharge
  - Already can measure interference between existing wells

- Significantly increased pumping to meet projected needs likely to reduce dependability of deep aquifer (quantity and quality)

- Increased demand by various jurisdictions likely to increase
  - Campus
  - City of Davis
  - Solano Irrigation District
  - Others

- 2003 UC Davis Long Range Development Plan EIR findings and mitigation

- Avoid issues regarding groundwater rights
UC Davis Participation

- Involved since 1994 filing of water right application
- Formal agreements reflect evolving participation

<table>
<thead>
<tr>
<th>Date</th>
<th>Participants</th>
<th>UC Davis Share</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Volume (af/year)</td>
</tr>
<tr>
<td>July 2000</td>
<td>Davis, UC Davis</td>
<td>11,000</td>
</tr>
<tr>
<td>November 2003</td>
<td>Davis, UC Davis</td>
<td>11,000</td>
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<td>June 2005</td>
<td>Davis, Woodland, UC Davis</td>
<td>7,000</td>
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<tr>
<td>October 2007</td>
<td>Davis, Woodland, UC Davis</td>
<td>2,000</td>
</tr>
<tr>
<td>In preparation</td>
<td>Davis, Woodland, UC Davis</td>
<td>2,000</td>
</tr>
</tbody>
</table>

- Shifted water from UC Davis to City of Woodland increasing their share
- Managed preparation of project EIR
- Assigned water rights to the JPA
Woodland-Davis Clean Water Agency

• Participating Agency
  – Non-voting member of the board

• Water Service Agreement and Contract
  – Identifies milestone for campus to exercise contract
  – Capital and operating expenses to be paid by UC Davis
  – Method for calculating retroactive expenses to be paid by UC Davis
Summary

• Long-term goal to bring high quality surface water to the campus
  – Supply
  – Quality
  – Reliability

• Long-term reliance on groundwater is not dependable

• Sacramento River water is superior to Solano Project water despite higher cost (over 2X)

• UC Davis supports the DWWSP as the best long-term water supply solution for the partners