Water Diversion Measurement Workshop

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Kent Frame, Program Manager II
Water Use and Efficiency Branch
DWR, DSIWM
Topics of the Presentation

- The Statute
- The Rulemaking Process
- Stakeholder Process and Issues
- The Regulation Components
SBX7-7 requirement

- The department shall adopt regulations that provide for a range of options that agricultural water suppliers may use or implement to comply with the measurement requirement.
- Agricultural water suppliers shall implement all of the following critical efficient management practices:
  - (1) Measure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 and to implement paragraph (2).
  - (2) Adopt a pricing structure for water customers based at least in part on quantity delivered.
Relationship of Applicability of Agricultural Water Measurement Provisions

Water Supplier Delivery Threshold

- 0 acres
- 2,000 acres (or 2,000 ac of annual delivery)
- 10,000 acres
- 25,000 acres

§531.10 Measure & Report Aggregated Farm-Gate Delivery Data

§10608.48(i) DWR Measurement Regulations

All Comply

All Comply only if Funding Provided
Furthermore

- Must Report 2 critical EWMP (measurement & Volumetric pricing)
- Stipulates reporting other EWMP’s locally cost effective
- Report AWMP to DWR
- Reporting Provisions for Fed contractors
- Reporting Provisions for AWMC MOU signatories
The Rulemaking
Preliminary Activities

- Workgroup and Stakeholder Meetings
- Data Analysis
- Draft of Regulation
- Approval by DWR Management and Legal Counsel
- Approval by California Water Commission
Opportunities for Public Comment

- **Emergency Regulation in Force (180 Days)**
  - **Regular Rulemaking**
    - Possible continuation for 6 months

- **Preliminary Activities**
  - Emergency Rulemaking

- **5 Day Public Comment Period**
- **45 Day Public Comment Period**
- **Additional Public Comment Period(s) as Needed**

- **Possible Approval by OAL**

California Water Commission
## Regular Rulemaking

### Rulemaking Package
- **Prepared by DWR**
- **Submitted to OAL**
- **Published in Regulatory Notice Register**

### Emergency Regulation in Force (180 Days)

<table>
<thead>
<tr>
<th>Month 1</th>
<th>Month 2</th>
<th>Month 3</th>
<th>Month 4</th>
<th>Month 5</th>
<th>Month 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 Day Public Comment Period</td>
<td>Public Hearing(s)</td>
<td>DWR responds to comments Revises regulation and holds additional public comment periods, if necessary</td>
<td>Submit Final Regulation Package OAL Review</td>
<td>OAL Final Decision – If Approved Final Regulation In Effect</td>
<td>Possible continuation for 6 months</td>
</tr>
</tbody>
</table>

- **Month 1:**
  - 45 Day Public Comment Period

- **Month 2:**
  - Public Hearing(s)

- **Month 3:**
  - DWR responds to comments Revises regulation and holds additional public comment periods, if necessary

- **Month 4:**
  - Submit Final Regulation Package OAL Review

- **Month 5:**
  - OAL Final Decision – If Approved Final Regulation In Effect

- **Month 6:**
  - Possible continuation for 6 months
Stakeholder Concerns
Agricultural Stakeholder Committee Discussions

- Follow authorization of statute.
- Applicability
  - Proposed text for CVP water suppliers
- Accuracy Standards
- Verification of Measurement Devices
- Prescribe Device Type
- Farm gate vs. Upstream measurement
- Implementation (phased vs. date certain)
- Costs
Ag stakeholders Proposed

- An alternative was proposed by some members of the Agricultural Stakeholder Committee to use the Option (a) numeric accuracy standards for Option (b), namely:
  - ±12% for an existing device
  - ±5% in the laboratory for new or replacement devices with laboratory certification
  - ±10% in the field for new or replacement devices with non-laboratory certification
Option c- CVP water suppliers

- Two other alternatives were discussed to potentially include as measurement Option (c) for CVP Water Suppliers
  1. Federal 2008 standard or its future amendment that complies with State regulation
  2. Federal 2008 standards or its future amendment
Velocity, flow rate, and volume

- If device measures flow rate:
  - Volume (cubic feet) = flow rate (cubic feet per second) \times duration of delivery (seconds).

- If device measures velocity:
  - Volume (cubic feet) = velocity (feet per second) \times cross-section flow area (square feet) \times duration of delivery (seconds)
### Affected Acreage, Measurement Sites and Number of Suppliers

(≥ 25,000 acres)

<table>
<thead>
<tr>
<th>Regions</th>
<th>Acres per Turnout</th>
<th>Potentially Affected Irrigated Acres</th>
<th>Potentially Affected Turnouts</th>
<th>Potentially Affected Lateral Sites</th>
<th>Potentially Affected Suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sacramento Valley</td>
<td>80</td>
<td>595,629</td>
<td>7,445</td>
<td>317</td>
<td>13</td>
</tr>
<tr>
<td>Delta</td>
<td>50</td>
<td>25,760</td>
<td>515</td>
<td></td>
<td>1</td>
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<tr>
<td>East San Joaquin Valley</td>
<td>40</td>
<td>558,387</td>
<td>13,960</td>
<td></td>
<td>7</td>
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<tr>
<td>West San Joaquin Valley</td>
<td>100</td>
<td>60,108</td>
<td>601</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Southern San Joaquin Valley</td>
<td>60</td>
<td>1,452,402</td>
<td>24,207</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Southern California, Coast, Other</td>
<td>70</td>
<td>187,840</td>
<td>2,683</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>2,880,126</strong></td>
<td><strong>49,411</strong></td>
<td><strong>317</strong></td>
<td><strong>46</strong></td>
</tr>
</tbody>
</table>
## Fiscal Impacts

<table>
<thead>
<tr>
<th>Costs for average-sized farm (313 acres)</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Total affected acres</td>
<td>2,880,126</td>
</tr>
<tr>
<td>Initial cost per affected acre</td>
<td>$24.20</td>
</tr>
<tr>
<td>Annual ongoing cost per affected acre</td>
<td>$8.00</td>
</tr>
<tr>
<td>Average initial cost per affected farm</td>
<td>$7,570</td>
</tr>
<tr>
<td>Average annual ongoing costs per affected farm</td>
<td>$2,500</td>
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</table>
## Fiscal Impacts

### Statewide Present Value (PV) of Cost Over a 20-Year Horizon

<table>
<thead>
<tr>
<th>Description</th>
<th>PV</th>
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<tbody>
<tr>
<td>PV of capital and initial assessment</td>
<td>$66,668,000</td>
</tr>
<tr>
<td>PV of annual O&amp;M, capital replacement, administration &amp; reporting</td>
<td>$263,703,000</td>
</tr>
<tr>
<td><strong>Total PV</strong></td>
<td><strong>$333,371,000</strong></td>
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</table>
Agricultural Water Measurement
Regulation Contents

Applicability*

Range of options
a. Farm-gate standards (5, 10, 12%)
b. Lateral standards (5, 10, 12%)

Certification and Performance Requirements

Document submittal and retention

* DWR, QSA- Exempt
## Ag Water Suppliers in Four Size Categories

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number of Suppliers</th>
<th>Acreage</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Acres</td>
</tr>
<tr>
<td>A &lt; 2,000</td>
<td>50</td>
<td>19%</td>
<td>49,000</td>
</tr>
<tr>
<td>2,000 ≤ A &lt; 10,000</td>
<td>91</td>
<td>35%</td>
<td>486,000</td>
</tr>
<tr>
<td>10,000 ≤ A &lt; 25,000</td>
<td>46</td>
<td>18%</td>
<td>680,000</td>
</tr>
<tr>
<td>A ≥ 25,000</td>
<td>72</td>
<td>28%</td>
<td>5,694,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>259</strong></td>
<td><strong>100%</strong></td>
<td><strong>6,909,000</strong></td>
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</tbody>
</table>
Measurement Options

Option a - Farm-Gate

Accuracy Standards:
- Laboratory certified: -5%
- Non-lab certified: 10%
- Field tested/inspected: 12%
Measurement device upstream of multiple customers delivery points

Option b - Lateral

Accuracy Standards:
Laboratory certified - 5%
Non-lab certified - 10%
Field tested - 12%
Option b- Device Accuracy at Lateral (upstream of multiple customers)

- Provide documentation in AWMPs that:
  - No legal access to customers’ farm-gates
  OR
  - Large flow fluctuations exist (rice), and
  - Method is suitable for pricing structure, and
  - It accounts for differences in water use, and
  - Is adopted by the suppliers’ board
Certification Requirements

- Existing devices:
  - Field analysis/inspection
- New/replacement devices
  - Laboratory certification
  - Non-laboratory certification
Performance Requirements

- Installation and O&M follow Best Professional Practices
- Repair and replace if the device is non-compliant
Document Submittal

- Submit documentation in Agricultural Water Management Plans
  - Description of best professional practices
  - Compliance with option b
  - Plan and schedule of analysis or if repair/replacements not completed
  - Irrigation acreage, time, frequency of measurement, and volumetric calculations
Document Retention

- Water Supplier retain
  - Records of compliance with options a and b
  - Certification records of devices
  - Records of performance
  - Field analysis results

- Retain records for two cycles of AWMP
Thank you;

Questions?

Kent Frame
kframe@water.ca.gov
916-651-7055