Comments provided to
California Water Commission

SBx7-7 Draft Measurement Regulation
Fiscal Impacts

Submitted by the
California Farm Water Coalition
June 1, 2011

Gate Costs Issues

- CalFed Final Measurement Report put annual costs to achieve accuracy of +/- 6% by volume at $28,974,330 (2003 dollars) annually, or $579,486,600 over 20 years.

- SBx7-1 Ag Stakeholder Committee (ASC) participants provided costs of new installation for gates at $11,500 and $12,500 per gate as well. Using these professional estimates and DWR Gate counts could put the DWR capital cost estimate between $95.54 and 103.85 million.

- Please see the accompanying spreadsheet tab, "*Gate Costs*" for a discussion on how potential gate costs and gate counts are related.

Gate Count Issues

- DWR Average Affected Acres/Gate calculations
    - CalFed Measurement Report states that the average acres/gate is 48, not 58 as DWR figures show.
  - California's Median Farm size is 20 acres. Relatively few water supplier customers share responsibility for delivery points.
  - 72% of California's Irrigated Farms are less than 49 acres. This weighting of size distribution towards smaller farms tends to indicate that the acres/gate figure used by DWR underestimates the total number of delivery points.

- Estimates on Affected Acreage are problematic, as they attempted to exclude CVPIA contractors who would be subject to a new layer of measurement activity based on the May 18 DWR draft regulation.

- Gate counts fail to recognize CVPIA acreage. CVPIA gates that are replaced after the regulation is adopted would be subject to a higher accuracy standard

- Figures from ASC members indicate that there may be as many as 69,838 gates affected, more than 1.5 times the DWR estimate.

- CalFed data indicate that a majority of 114,646 gates* (see chart, next page) in the state that are currently at 15% or 6% would be affected by the new regulation if they were required to meet the 5% laboratory standard.

- Future Replacement of Existing Devices
    - DWR assumes that all devices currently in place will be replaced in the future would meet the standards proposed in the May 18, 2011 version of the Regulations. This ignores the fact that, absent of the regulation, future devices being installed to replace existing devices would typically be replaced with like-devices. DWR ignores the cost difference that the possible difference in cost between a 15%+/- device and a 6% +/- device is mandatory due solely to a need to comply with this regulation. (5.7 April 22,2011 Cost Analysis Document)

Implementation costs are affected by accuracy range targets.

- Accuracy range targets are affected by policy objectives.
    - CalFed identified baseline levels of measurement accuracy for state reporting use, concluding that the hardware currently in place is appropriate for planning and reporting purposes. (Pg 17)
        - CalFed indicates the following levels of accuracy to be sufficient for purposes of planning and reporting:

		Number of Measurement Points at Each Location			
Farm-gate Deliveries Regions	**Acres**	**15%**	**6%**	**3%**	**Total**
Sacramento Valley	1,623,670	7,808	23,423	7,808	39,039
Delta	451,548	1,612	3,322	4,813	9,747
Eastside San Joaquin	1,321,948	5,285	15,854	5,258	26,397
Westside San Joaquin	906,329	2,957	316	13,485	16,758
Southern San Joaquin	2,305,163	983	38,432	15,579	54,994
Other	1,556,832	0	14,654	7,601	22,255
Total	8,165,490	18,645*	96,001*	54,544	169,190

*114,646 gates identified by CalFed as currently (2003) meeting a 15% or 6% accuracy standard.

Using the CalFed gate counts, and CalFed's cost projections we would expect to see capital costs at $28.97 million annually to bring the 18,645 gates currently measuring at 15% to 6%. Total cost over 20 years would be $579 million. Using CalFed gate counts and DWR cost estimates of $5,500 per gate in replacement

costs and $2,500 per year in monitoring, repair and reporting costs over 20 years, the total fiscal impact is up to $1.03 billion.

Important Notes Regarding the CalFed Measurement Report:

- CalFed estimates indicate annual costs of 25-30 million dollars to achieve 6% accuracy.
- CalFed estimates indicate annual costs of 175- 200 million dollars to achieve 3% accuracy, It appears that some multiplier was applied to the figures to determine this lower number.
- CalFed estimates indicate annual costs of $340 / site annually at 15% accuracy
- CalFed estimates indicate annual costs of $1,554 / site annually at 6% accuracy
- CalFed estimates indicate annual costs of $2,313 / site annually at 3% accuracy

> Excerpt from CalFed Report: *Independent Panel on Appropriate Measurement of Agricultural Water Use* regarding volumetric pricing:
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> "If statewide policymakers decide to implement volumetric pricing or water use efficiency practices, the analysis suggests that more accurate farm-gate data is needed. **The current high level method *[6%]* used by many end users appears, based on the analysis, to be sufficient and appropriate to inform such an approach; "basic" *[15%]* is not.** The annual cost associated with shifting turnouts from the basic to the high level is expected to range from $20 million to $30 million statewide or $25 to $35 per affected acre. For those that are at the basic level, a literature review suggests that this approach may be sufficient to mandate incentive (but not volumetric) pricing."

- DWR has said that beyond reporting purposes 10608.48(i) instructs them to develop regulations imposing standards of accuracy sufficient to enable districts to engage in pricing based at least in part on volume of water delivered.

Implementing the Option B (3,6,10 %) Ranges at Farmgates

- Using DWR Gate counts, accuracy targets and Cost estimates, implementing Option B (3,6,10%) at the farmgate result in an initial capital cost approaching $609.72 million. While presenting only modest increases in accuracy percentages, this option has been presented by DWR Staff (Kamyar Guivetchi).

Implementing Option A (5,10,12%) Ranges at All Locations*

- Using DWR Gate counts, accuracy targets and Cost estimates, implementing Option A (5,10,12%) at all locations results in an initial capital cost of $65.16 million. While presenting only modest savings in capital costs, this option is favored by water suppliers.

*Agricultural water suppliers' preferred alternative

Example Farm Issues

- Costs for Average-sized farm is based on broad assumption that costs will be distributed evenly across all customers in affected acreage.
    - Actual cost per impacted average farm is based on per acre costs distributed evenly across affected acres. DWR divides the cost of measurement implement uniformly across all 2.88 million affected acres, instead of removing the affected, but already meeting criteria acreage.
    - It cannot be assumed costs will be distributed evenly among all customers in a district, landowners will vote through the 218 process to determine rate structures.

Summary of Cost Estimates

- Significant differences in cost per gate estimates exist, with estimates for gates measuring flow rate or velocity ranging from $5,500 to $12,500 per gate.
    - Water Suppliers estimated that capital costs may be as high as $12,500/gate for replacement of each gate. Allocations based on estimated repair/replacement activities for gates identified by water suppliers that need upgrading generate an initial cost is $103 million with a 20 year cost of approximately $294 million.
    - DWR figures show costs at $5,500/gate for replacement/$2,500 per year for ongoing costs. – Total $1.03 billion/20 years
    - CalFed figures indicate annualized costs of $1,554 /gate to attain 6% - $570 million/20 years

- Sources differ on the actual number of gates currently requiring modification or replacement in the affected 2.88 million acres, ranging from 20,990 to 32,084
    - Water Supplier figures indicate that approximately 32,084 gates will require some type of action to comply.
    - CalFed figures indicate that more than 27,416 gates will require some type of action to comply
    - DWR figures indicate that 20,990 gates will require some form of action to comply.

- Measurement regulation serves only to affect pricing based at least in part on volume.
    - CalFed indicated that measurement levels in 2003 were sufficient to provide meaningful data for reporting and planning purposes.