

TITLE 23. WATERS
DIVISION 2. DEPARTMENT OF WATER RESOURCES
CHAPTER 5.1 WATER CONSERVATION ACT OF 2009
ARTICLE 2. Agricultural Water Measurement
**SUPPLEMENT TO THE
INITIAL STATEMENT OF REASONS**

**Certificate of Compliance Rulemaking
Related to Emergency Rulemaking File #2011-0624-01E**

The regulation is necessary to provide information to agricultural water suppliers to meet the intent of the Water Code and to implement the requirements of the various sections of Water Code listed here:

1. Water Code declares under section 10608 (e) “The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of **measurable outcomes** related to water use or efficiency” [emphasis added]
2. Water Code Section 10608.4 declares the intent of the Legislature and under section 10608.4(e) states “Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers”
3. Water Code Section 10608.48 (b) requires “Agricultural water suppliers shall implement all of the following critical efficient water management practices”
4. Water Code Section 10608.48(i) requires DWR to adopt a regulation and develop a range of options the agricultural water suppliers may use or implement to comply with the measurement requirement in paragraph (1) of subdivision (b) of Water Code Section 10608.48.
5. Paragraph (1) of subdivision (b) of Water Code Section 10608.48 requires certain water suppliers to “Measure the volume of water delivered to customers with sufficient accuracy to comply with Water Code Section 531.10 and implement paragraph (2)”. See item 7 below.
6. Water Code Section 531.10 requires water suppliers to report aggregated farmgate delivery to DWR. Section 531.(a) defines “aggregated farmgate delivery to mean “information reflecting the total volume of water an agricultural water supplier provides to its customers and is calculated by totaling its deliveries to individual customers”.
7. Paragraph (2) of subdivision (b) of Water Code Section 10608.48 requires agricultural water suppliers “Adopt a pricing structure for water customers based at least in part on quantity delivered”.
8. Water Code Section 10608.48(d) requires agricultural water suppliers to report estimate of efficiency improvements in the agricultural water management plan.

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Therefore, this regulation is necessary in order to comply with the measurement requirement in paragraph (1) of subdivision (b) of Water Code Section 10608.48 and to give agricultural water suppliers the necessary options for them to be consistent with the statute policy declarations and to comply with its requirements. Item (1) above justifies the need for water measurement. So it is necessary to measure volume of water delivered to customers to assess water use and water use efficiency.

Item (2) above justifies the necessity of a regulation with consistent standards and terms for implementation.

Items (2) and (4) above, require adoption of the regulation by DWR for consistency, therefore, the development of the accuracy standards and other requirements of the regulation cannot be delegated to local agencies.

Section 597.1 Applicability

Item (3) above, calls for certain agricultural water suppliers to implement efficient water management practices, including water measurement and a volumetric pricing structure. The section is necessary because it defines the broad criteria for applicability of this regulation and identifies those entities that are required to comply and those that are exempted. This section was also necessary to further clarify who this regulation does and does not affect based on criteria specified in the SB X7-7 legislation (Statute). The specific entities and categories of suppliers are described with the respective applicability conditions. Furthermore it is necessary to identify the acreage threshold for applicability of the proposed regulation. For clarity and consistency for implementation of the regulation the following specific criteria are necessary and have been included in the applicability section of the regulation.

- a) Clarifies applicability to wholesale agricultural water suppliers that may deliver or supply water to other agricultural retail water agencies, through their facilities and do not have control of the delivery of water to their retail customers. This clarification is necessary because the Statute did not address this circumstance of wholesale water suppliers where an agency is simply transporting water to another supplier and not delivering it to the retail supplier's customers.
- b) Clarifies applicability to suppliers providing water to wildlife refuges by determining that they pertain to this Article and to the acreage provisions in Water Code Section 10608.12(a). Many stakeholders were uncertain about the applicability of wildlife refuges and whether or not they are considered a customer of a water supplier as defined in the Statute and regulation. This statement clarifies the definition of customer by including wildlife refuges as a type of customer.
- c) Excludes agricultural water suppliers providing water to less than 10,000 irrigated acres as specified by Statute.
- d) Excludes agricultural water suppliers providing water to 10,000 or more irrigated acres but less than 25,000 irrigated acres, unless funding is provided as specified by Statute.
- e) Clarifies applicability to canal authorities and entities that only deliver water through federal facilities to other water agencies that then deliver the water to customers. This clarification is necessary because the Statute did not address this circumstance where

an agency is simply transporting water and not delivering it to the retail supplier's customers.

- f) Excludes suppliers that are part of the Quantification Settlement Agreement as specified in the Statute.
- g) Excludes the Department of Water Resources as specified in the Statute.

Section 597.3 Range of Options for Agricultural Water Measurement

This section is necessary because it provides a range of options for agricultural water measurement as required by Water Code §10608.48(i)(1) and stated above (in Item 5); furthermore, the description of these measurement options is necessary and stated above (in Item 5); for the purpose of providing guidance and assistance to agricultural water suppliers with a way of complying with the measurement requirement and reporting their water deliveries and to adopt a volumetric water pricing structure. Water measurement device accuracy standards are set for the different identified range of options because of differing circumstances where some devices are manufactured, laboratory tested and certified for accuracy while others were built on site and tested after installation. All of these circumstances require appropriate accuracy standards because these various conditions would necessitate different accuracies. Additionally there are already existing devices, therefore, the range of accuracy options was included to account for new and existing devices.

Measurement options in Section 597.3(b)(1)(B) are necessary in order to take into consideration the preexisting variety of field and water flow conditions while accounting for existing infrastructure and technologies. This section also specifies certain conditions under which these options can be used and the type of documentation required from the agricultural water suppliers should they choose to use this option. These conditions and options are required because there are circumstances where the type of crop grown requires a varying water application rate at different times of the year and current existing technology does not allow for a device to accurately measure the range of flows however, an accurate measurement can be achieved upstream of multiple customers.

These options, furthermore, were chosen as opposed to others such as listing specific device type, because they are consistent with other current measurement techniques and do not favor one technology or brand of device.

The statute requires sufficient accuracy for water measurement as required in Items (5) and necessary for items (6) & (7) above. DWR's proposed accuracy standards range from +/-% 5 to +/-12%. These accuracy standards are in line with current industry standards as reported in water measurement device manufacturers' specifications. Also, the federal 2011 criteria require federal water suppliers in California to measure water with accuracy of +/-6%. DWR also consulted with subject matter experts on the reasonable accuracy standards and were advised the regulation's ranges of accuracy standards are within an acceptable and achievable range.

The inclusion of the accuracy standards as specified in the regulation is justified to provide for sufficient accurate measurement of water deliveries to customers for reporting aggregated farm-gate deliveries to DWR. The reason for individual device compliance with the accuracy standard is to ensure compliance with Water Code 531 (a) that requires measurement of water deliveries to individual customers (see item 6 above)

The accuracy standards are to be applied to individual water measurement devices, as compared to aggregated accuracy (or average accuracy) of all the water supplier's devices. For example; where one device may report accuracy of 20 percent and the other device 4 percent, the average of the two is 12 but one of the devices is not in compliance.

Furthermore, the accuracy standards are necessary to ensure that the individual water supplier customers' water measurement devices are meeting the accuracy standards so that customers are able to be billed for volume of water delivered to them based on readings of their respective individual measurement devices and to provide equitable pricing and billing of all customers. The pricing structure (see item 7 above) to be developed outside this regulation is required to be at least in part on the **quantity** [emphasis added] delivered. Therefore, measurement of water volume delivered to a customer is necessary to bill the customer on the quantity delivered.

The cost of measurement devices is comparable or less to those of devices already used by federal water suppliers as specified in the Reclamation 2011 Criteria.

The inclusion of section 597.3(b) also allows water suppliers who are unable to measure water at the individual customers' delivery points with the specified accuracies with a manufactured or on-site built device or devices to install a compliant device that measures water upstream of multiple customers. These upstream devices must meet the accuracy standards and all additional requirements found in these regulations that are applicable to the individual farm gate device. This provision is included to allow flexibility for unusual legal and field physical circumstances while meeting the requirements of the law. This provision is necessary to ensure all water suppliers are able to measure water with sufficient accuracy but provide flexibility for specific variable conditions. Other acceptable flexible methods include the use of other components, such as gauging rods or temporary measuring devices that are used for monitoring flow characteristics or structures to control water level at the farm-gate. There are other conditions that must be met in order to qualify for this upstream measurement option.

The statute, furthermore, specifically separates the water measurement and water pricing from the other 14 efficient water management practices (EWMP's). The later non critical EWMP's are required to be implemented only if technically feasible and locally cost effective. Therefore, DWR cannot make the water measurement subject to local cost effectiveness. The range of options allows the water supplier to select the least cost or the most effective measurement device for their circumstance as long as accuracy standards are met.

Section 597.4 Accuracy Certification, Records Retention, Device Performance, and Reporting

To meet the intent of the law for consistent implementation of the standards, it is necessary to certify that the devices meet the accuracy standards and that they be maintained to ensure

proper operation. DWR has established two options to certify proper device; one is testing and the second is device inspection by a professional. This provides flexibility for the operator to choose an option most suitable for their circumstance.

(a) Field testing or field inspection is needed to ensure that the devices that are installed meet the accuracy standards of the regulation. Field inspection of devices and approval by an engineer ensures that the requirements are met. Another method for certifying device accuracy is (the alternative) field testing a certain number of devices. However, in some circumstances this may cost more and be technically challenging, therefore the option of field inspection is also provided in the regulation.

(b) This section is included to provide clarity and establish consistency with the methods used for certifying the device's accuracy. The methods selected are consistent with best professional standards and practices are in many cases already utilized by the industry.

(c) This section is necessary for providing for the availability of water measurement information to the interested parties. The methods selected were consistent with best professional standards and practices are in many cases already utilized by the industry.

(d) This section is necessary to provide consistency in maintaining and operating the water measurement devices and to be able to achieve and maintain the accuracy standards. The methods selected were consistent with best professional standards and practices are in many cases already utilized by the industry.

(e) Item (8) above establishes the need for inclusion of guidance on what water measurement information is to be reported to DWR. This section is necessary to provide consistency in reporting the water measurement data to the state and ensures that the data adheres to the quality protocols specified in the regulation. The methods selected were consistent with best professional standards and practices are in many cases already utilized by the industry.

All of the above requirements were developed through a stakeholder process and when a consensus could not be reached DWR chose the most equitable and least arbitrary, capricious or burdensome approach.