

Milestone ⁽¹⁾	Farm-gate ⁱ Measurement (at ±5% or better Laboratory Accuracy Level) ⁽²⁾
2012	Report existing water measurement and include improvement plan in the 2012 WM Plan to achieve 20XX compliance
20XX	Measure Farm-gates ⁽³⁾ accounting for no less than 95% of total water deliveries

(1) Milestone dates are for achieving water measurement compliance coverage. Farm-gate delivery reporting is on an annual basis, per AB1404 requirements.

(2) Only water measurement or metering devices that can be shown to be ±5% accurate in the laboratory are acceptable. The devices shall be appropriate for the site and correctly installed, maintained, and read in the field as outlined in section (4) below. Manufacturer's accuracy rating can be used for proprietary devices. In-houseⁱⁱ manufactured devices shall be certified to meet ±5% laboratory accuracy or better by an independent testing and certifying entity/laboratory. For on-siteⁱⁱⁱ built devices, the design and installation procedure shall be certified to meet ±5% laboratory accuracy or better by an independent testing and certifying entity/laboratory.

(3) Measurements at lateral^{iv} in lieu of farm-gate may be accepted **only**:

a. When extreme low-flow conditions exist that no water measurement device can measure such low water flows accurately, as in the case of flow-through irrigation water in the rice fields after first two irrigations. First two irrigation flows, which generally are large flows, must be measured at farm gate level. These conditions must be verified by irrigation specialists, district's registered engineer, registered professional engineer, or by water supplier's water conservation coordinator, and fully documented in the Water Supplier's Agricultural Water Management Plans.

or,

b. For community ditches^v in existence prior to the enactment of this law on November 10, 2009 for which control of water changes from water supplier to its customers at the lateral. This provision applies to a ditch that water

ⁱ Farm-gate is the point of change in control from the water supplier to the farmer.

ⁱⁱ In-house built devices are devices manufactured by or for the supplier by entities not certified to meet industry standards.

ⁱⁱⁱ On-site built devices are devices or structures that are built in-situ on the water delivery canal.

^{iv} Lateral is the diversion point from the supplier's water distribution system (main canal/pipeline) to a community ditch or a canal serving several farm-gates.

^v A community ditch is a canal not owned nor controlled by the supplier.

supplier does not have any control on water or authority and access to the land, canal or ditch for facilitating, managing, monitoring or maintaining the ditch for water delivery purposes.

Under the above conditions, all turn-outs have to be measured accounting for 100% of total water deliveries by year 20XX. Absence of these conditions, all water measurements must be made at farm-gate.

(4) Device installation, maintenance, inspection, and data quality control

- a. Installation and maintenance
 - i. Off-the-shelf proprietary devices shall be installed and maintained as per manufacturer's recommendations and specifications. Proper installation of the water measurement device must be verified by irrigation specialists, district's engineer, registered professional engineer, or by water supplier's water conservation coordinator.
 - ii. Devices manufactured in-house or built on-site shall be installed and maintained according to the recommendations and specifications of the testing and certifying entity/laboratory. Proper installation of in-house or on-site manufactured/built devices must be verified by an irrigation specialist, district's engineer, registered professional engineer, or by water supplier's water conservation coordinator.
- b. Water measurement methods, procedures, practices, and data collection
 - i. For off-the-shelf devices, water measurement methods, procedures, practices, and data collection must follow manufacturer's recommendations specific to the device being used and must be verified by an irrigation specialist, district's engineer, registered professional engineer, or by water supplier's water conservation coordinator.
 - ii. For in-house and on-site manufactured/built devices, water measurement methods, procedures, practices, and data collection must follow recommendations developed by the testing and certifying entity/laboratory must be verified by an irrigation specialist, district's engineer, registered professional engineer, or by water supplier's water conservation coordinator.
- c. Compliance of device accuracy, installation, and operational conditions for existing agricultural water measurement devices in use for compliance with this regulation shall be certified by a professional testing and certifying entity/laboratory.
- d. On a rotating basis, all measurement devices shall be periodically inspected, and at least once every five years, for installation and maintenance compliance.
- e. Each device must be visually inspected before each water delivery event to make

sure that the device is in good operational condition and free of obstacles to water flow, free of sediments, etc., as specified by manufacturer's or the testing and certifying entity/laboratory's recommendations and prevailing professional practices. If an installed device is found out of compliance (e.g., operational conditions do not meet the manufacturer's or the testing and certifying entity/laboratory's specifications), then either 1) the device will be re-engineered and/or re-installed, 2) a more suitable device installed, or 3) a calibration curve developed, or 4) the device will undergo servicing or replacement as appropriate.

- f. Written records sufficient for independent verification to ensure that the device is performing as intended shall be maintained, at least for 10 years, by the agricultural water supplier. This shall include at a minimum: date of inspection, maintenance, repairs, calibrations, reset of water measurement devices, and adjustments to farm-gate and lateral deliveries.
- g. As part of quality control and verification, the water supplier may be required by DWR to conduct, through an independent entity, an audit/inspection of water measurement devices and their operational conditions.
- h. The agricultural water supplier must include all records of installation and maintenance, calibration, and inspections in their agricultural water management plan to be submitted to DWR per requirements of SBX7-7.