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December 13, 2010

Manucher Alemi
California Department of Water Resources
Water Use Efficiency Branch
SBX7-7 Program
P.O. Box 942836
Sacramento, CA 94236-0001

SUBJECT: Enactment of Emergency Regulations

Dear Manucher,

The intent of this letter to you, your staff, and Department of Water Resources' (DWR) policy makers is to provide some context to the water measurement regulations required pursuant to Paragraph 10608.48(i)(1) of SBX7-7 and attempt to offer a path to move forward to comply with this legislation.

From our perspective, the Ag Stakeholder Committee (ASC) process led by DWR has been very focused on specific measurement devices and an accuracy standard that will severely restrict a range of options that is required by the legislation. In the absence of new information, it seems evident that next week we will simply be discussing what DWR has decided upon in terms of the device and accuracy. Obviously, it would have been easier for all of us if the legislature would have just written those specifics into SBX7-7; however, the legislature did not and, in fact, provided for flexibility for measurement. We are hopeful that DWR, the Water Commission, and others will consider carefully the language of the legislation, as well as its intent prior to adopting regulations for measurement.

Our view is that the legislation is not intended to simply measure water for the sake of measurement, rather the intent is that water supplies are used efficiently and conserved where possible. This ASC process must focus on those broader policy implications. Unfortunately and understandably, DWR has focused on the measurement debate in the ASC meetings to comply with dates in the legislation; however, as a result, we have lost the context of measurement to pricing and efficiency, which need to be included in order to have a balanced discussion on measurement methods and accuracy.

To date, I have heard of three purposes as to why to measure:

1. Because the legislation says so
2. It is an efficient water management practice
3. To implement volumetric pricing based, in part, on quantity delivered

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Unfortunately, until a determination is made for the ultimate purpose and need for measurement, it will be impossible to arrive at a measurement solution and a range of options as mandated by the legislation. Below, I have outlined some perspectives associated with the above three purposes.

Measurement – Because the legislation says so

We have heard on several occasions that measurement is required because the legislature passed SBX7-7. No one will disagree that we need to comply with the law; however, DWR and the stakeholder members must agree that the legislation is open to interpretation of what is actually required. If it were not, we would not be having this discussion. Questions such as "aggregate turnout deliveries" and "range of options" within the legislation allow for ASC members on all sides to have differing opinions on how to implement measurement. Thus, to simply point at the legislation and state "just do it," is a disservice to all, and we must move on to the other two remaining purposes of measurement and, in essence, arrive at a "policy" as to why we are measuring and what information is needed as to device and performance standards to meet that overall policy. DWR has the ability to set policy as it pertains to the "end goal" of measurement and should endeavor to do so.

Yet, even while this legislation is in the process of being implemented, some are already calling for "additional conservation measures, such as minimum performance criteria for management and maintenance by agricultural water suppliers; water application and consumption rates for principal crops and soils; and development of an operational definition of water "waste" that can establish a contemporary floor for acceptable water management."
(http://switchboard.nrdc.org/blogs/bnelson/a_water_agenda_for_governor_br_1.html)

If, in fact, the above "conservation" measures are the unspoken purposes of measurement, then we should have that discussion from a policy standpoint on meeting these future information and regulatory needs, and not be frustrated by this process in which we are attempting to institute measurement for the sole purpose of implementing volumetric pricing pursuant to SBX7-7.

Measurement – Efficient Water Measurement Practice

Section 10608.48(b). 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…… (which states that an agricultural water supplier shall submit an annual report to the department that summarizes aggregated farm-gate delivery data, on a monthly or bi-monthly basis, using best professional practices).*

Water agencies have, and will continue to expand, active and robust measurement throughout their distribution systems including main diversion points, laterals, sublaterals, spill points, relift stations, etc. In fact, water agencies have made significant investments in canal automation, measurement reports, conjunctive use programs, conveyance

improvements, and reuse facilities all for the purpose of managing water supplies under a broad range of hydrology, delivery constraints, and ecosystem needs. As reported in *DWR's Bulletin 160*, ag water efficiency in the state is very high and, in terms of conserving water that is truly wasted, there are few opportunities remaining, with most recoverable water being used for other beneficial uses.

If DWR wants to know the volume that water agencies deliver to their respective customers in order to calculate efficiency, which measurements are appropriate or, better said, where should "aggregated farm gate delivery" be calculated? For example, if an agency has a main diversion point on a river, then compares that to the total of all laterals, then compares that to the total of all farm gate deliveries, which "aggregated data" is correct, or which number would be used to calculate an "efficient water measurement practice." As an example, the California Aqueduct uses Venturi meters (known to have measurement error exceeding 20%) to deliver water to water agencies, who then have propeller meters (6% manufacturer accuracy) on individual turnouts. From an efficient water measurement practice standpoint, which device(s) or total use is appropriate for efficiency calculations? Both are aggregated volumes, but which should be reported under 531.10?

Aside from the issue of where measured data should be aggregated and how to comply with 531.10 reporting, the question then becomes will accurate water measurement equate to efficient water use? No, it will not. To date, not one person in the stakeholder group has stated that water measurement, in and of itself, will result in water conservation or efficient water use. If measurement is tied to pricing, perhaps there could be some reduction of applied water (though not necessarily water conservation) at the field level but, to date, there has been no comprehensive discussion of measurement <u>and</u> pricing. For example, growers do not look at a meter and determine how much water to apply to a field; they use information such as moisture sensors, satellite ET information, plant tissue samples, reuse, or use water for dual purposes including environmental enhancement, etc. to determine delivery and use, but never by setting a flow rate on a meter. A meter is simply used to calculate the cost associated with that water use.

I raise this issue because there seems to be significant effort and concern to arrive at an extremely high level of accuracy at the farm gate, yet other factors must be evaluated or, better said, DWR has left other factors associated with measurement unaddressed, including pricing and basin efficiencies. If DWR is looking solely at farm gate measurement and accuracy as a justification that it will increase water use efficiency, that makes little sense. For example, if a grower has a crop that requires 4.0 acre-feet/acre, a device that is 6% variable will read 0.24 acre-feet/acre high or low, another device that is 15% variable will read 0.60 acre-feet/acre high or low. The question is, for that additional 0.36 acre-feet/acre (.60 -.24) of more accuracy, will the grower take an action to conserve water or be more efficient?

Yet, in the context of the ASC meetings, we have been looking at increased accuracy in the context of measurement only and trying to develop regulations that DWR can adopt, and this is a disservice to the process. It is not until the measurement conversation is

paired with pricing, or basin efficiencies, does the accuracy of measurement then become relevant.

Measurement - To implement volumetric pricing based in part on quantity delivered
Section 10608.48(b): 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.

It has been several years since AB1404 passed and, to date, DWR has not implemented the reporting requirements in 531.10 that was a provision of AB1404, nor have other entities demanded that AB1404 be enforced. In other words, reporting of "aggregated farm gate deliveries" has not been a significant issue and no one has stated that simply reporting water use pursuant to 531.10 would result in more efficient use of water. Therefore, it is only the requirement to adopt a pricing structure based in part on quantity delivered that is necessitating the need and "renewed interest" in measurement at the farm gate level.

Volumetric Pricing
.... Adopt a pricing structure for water customers based at least in part on quantity delivered.

The legislation does not require that water agencies report to DWR how they will comply with this pricing requirement, other than to state that pricing should be a component of the Water Conservation Plan.

As stated above, for agencies charging volumetrically, the amount measured will have a direct effect on the amount charged to the grower. However, the legislation allows for water agencies to have a pricing structure that is based in part on quantity delivered; therefore, it is likely and should be expected that some agencies may not charge strictly or entirely on a volumetric basis.

For example, an agency may charge 75% of its costs using a fixed land assessment, with the 25% balance of the costs being charged volumetrically. Agencies may prefer this revenue method as reducing applied water doesn't reduce costs and having a "base revenue or assessment" would ensure collection of annual revenue to cover costs. Under this pricing scenario, the accuracy of measurement becomes even less critical as only a portion of the total water supply is measured volumetrically.

Hopefully, the above information and examples provide some context as to the need to identify how measurement information may be used; why a high level of measurement accuracy may not be warranted; why including basin efficiency in the discussion is relevant; and why a pairing pricing with measurement is a necessary conversation.

Based on the above information, a course of action to move forward would be the following:

1. DWR should develop a Policy defining the purpose of measurement and pricing as it pertains to the legislation. If the purpose is conservation and water use efficiency, the Policy should clearly articulate how measurement and pricing will result in conservation and efficiency and, additionally, how quantifying levels of accuracy will meet that Policy directive.

2. Consistent with this new Policy, develop a range of performance based options that that allows for acceptable measurement practices, including measurement at the turnout or measurement at the lateral. Also, another option would be to include a specific measurement exemption to CVP contractors complying with USBR Conservation Plans.

3. Consistent with this new Policy, implement a phased approach to comply with the measurement requirement. Water agencies do not have enough time during the maintenance season to install measurement devices in a single year or the finances to do so by July 2012. Further, it is also unlikely that manufacturers will have the devices available in a single year to supply all the water agencies in the state who would be installing new devices.

4. Consistent with this new Policy, discuss pricing and basin efficiencies in concert with measurement and how all these activities will jointly meet DWR's policy.

5. DWR, in consultation with water agencies, develop a pilot project that will demonstrate that measurement, pricing, and basin efficiencies will support DWR's Policy and be consistent with the legislation. This information could also be used in the reporting requirements back to the State Water Resources Control Board and the Legislature.

Our hope is that this effort is not regulatory in nature, but rather is a voluntary program that will meet the requirements of the legislation, provide data to DWR and others that is useful in statewide water use and planning, and ensure water supplies are being used as efficiently as possible from local, regional, and statewide perspectives.

Thank you for your consideration.

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