(12/17/14) Public Workshop
Urban Water Conservation
Deadline: 12/17/14 by 12:00 noon

IRVINE RANCH WATER DISTRICT
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SWRCB Clerk

December 16, 2014

The Honorable Felicia Marcus
c/o Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

RE: Comment Letter – Urban Water Conservation Workshop

Dear Chair Marcus:

Thank you for the opportunity to provide comments for the State Water Resources Control Board's (SWRCB) consideration as it solicits input on potential next steps and future actions related to urban water conservation if drought conditions persist into the new calendar year. IRWD has a long-standing commitment to water conservation and the efficient use of water resources. As previously discussed with the SWRCB, the backbone of IRWD's water conservation efforts has been its allocation-based tiered rate structure, which is compliant with California Water Code Section 370, and targeted customer outreach.

As the SWRCB considers potential next steps related to urban water conservation, we urge the SWRCB to carefully consider approaches that would result in both near-term and sustained, long-term water conservation. Such approaches could include incentivizing urban water agencies to move to a rate structure that encourages long-term conservation and reduces an agency's dependence on water sales; encouraging agencies to work with inefficient or high-volume water users to gain greater conservation; or urging agencies to address unreasonable system loss.

The SWRCB took a positive first step in this direction when it recognized allocation-based tiered rate structures as a method for complying with its July 2014 Emergency Urban Water Conservation Regulations. IRWD believes that there are additional steps the SWRCB can take to encourage urban drought response that will result in sustained water conservation. We offer the following comments for your consideration as you consider how to address further urban water conservation and response to the drought.

Rate Structure Impacts on Sustained Conservation Gains

As has been shown throughout the state, an agency's rate structure can impact its ability to respond to a drought and to obtain long-term total water demand reductions. ***IRWD suggests that the SWRCB consider adopting an approach that incentivizes agencies to continue implementing rate structures that will produce greater savings in the long run and better positon California to adapt to sustainable changes in its water supply picture.***

As shown from IRWD's experience, superior short-term and permanent water savings can be achieved from the adoption of an allocation-based rate structure as compared with imposing mandatory but temporary restrictions on water use.

Since implementing its allocation-based rate structure in 1991, IRWD has seen the rate of landscape water use drop by 48 percent from 4.2 acre-feet per acre to an average of 2.2 acre-feet per acre per year within our service area. IRWD's residential gallons per capita per day (GPCD) has dropped 25 percent from 115 GPCD prior to implementation of the rate structure to 84 GPCD in 2014 with recent changes to the rate and allocation structure that became effective on July 1, 2014. The combined savings of IRWD's rate structure and other efforts has resulted in a 5,256 acre-feet per year savings, or 156 percent, more than the savings that would have occurred if the District had implemented mandatory two-day per week watering restrictions only.

As with past droughts, the District expects any further reduction to become a largely sustained reduction in customer demand and permanent conservation savings. This expectation is based on the fact that since IRWD has implemented and continued to refine its allocation-based tiered rate structure, the District has seen a long-term downward trend in its water use. IRWD has chosen not to roll-back allocations at the end of droughts, which is different from most agencies that implement temporary measures during a drought and then repeal them later. While IRWD is able to sustain lower levels of demand regardless of drought, the sustained higher level of efficiency reduces IRWD's potential for additional savings in later years.

As proven by IRWD's experience and the experience of other urban water agencies using allocation-based tiered rates throughout the state, moving to an allocation-based tiered rate can achieve both immediate and sustained water conservation. ***SWRCB policy should encourage and incentivize agencies to move towards allocation-based tiered rate structures by maintaining an agency's ability to use an allocation-based tiered rate structure to comply with urban water conservation and drought response goals. The SWRCB should also consider providing agencies that are actively moving toward implementing an allocation-based tiered rate structure credit for complying with any new urban conservation mandates and should consider helping agencies tackle the challenges faced in moving to such a rate structure.***

Allocation-based rate structures can be very effective in promoting not only water conservation but also revenue stability. Many agencies have not adopted such a rate structure due to perceived implementation challenges or real implementation costs. The SWRCB may be able to provide assistance to agencies to overcome some of these obstacles through advice, grants and/or low cost State Revolving Fund loans.

IRWD has put together a list of implementation challenges and some potential solutions to those challenges that can be supported by the SWRCB.

Implementation Challenge	Potential Solution
Changing the billing system to allocation-based billing is cost prohibitive.	1) There are off-the-shelf billing programs that can handle allocation-based billing. 2) The cost of the billing system can be recovered through potential over-allocation charges when the structure is first implemented. 3) The State could provide low interest loans or grants to assist with up-front implementation costs.
Access to weather stations or evapotranspiration data is necessary for implementation of an allocation-based rate structure, but access is often	1) The Department of Water Resources (DWR) provides free access to evapotranspiration (ET) data through its California Irrigation Management Information System (CIMIS) network, and there may be a CIMIS station in the agency's climate zone. 2) DWR also provides free access to Spatial CIMIS. This provides free

perceived as unobtainable.	daily ET data throughout the state with a 2 km^2 resolution. Spatial CIMIS can also be used where there are multiple climate zones and zip codes in a service area. 3) Most billing systems can import this information in with a relatively simple program. 4) The State could provide low interest loans or grants to assist with the cost of programing needs or weather station implementation costs.
Irrigated acreage area data is not available and is too costly to obtain for many agencies.	1) The State may have access to aerial imagery that could be made available to agencies seeking to implement an allocation-based rate structure. 2) Grant funding can help agencies obtain aerial imagery at the appropriate resolution, link parcel data to aerial images, and link parcels and acreage to specific customer meters. 3) Agencies can use field measurements of sample areas to develop basic defaults for residential neighborhoods. 4) Landscapers and property managers can be asked to provide information for non-residential sites, and submit landscape plans for any new sites. 5) Temporary employees can be hired to identify acreages associated with specific meters for non-residential sites with multiple meters, or areas that are difficult to measure with aerial imagery.
Customer specific information is difficult to obtain.	1) Census data can be used to develop defaults for the number of people per household for residential customers. 2) Customers can be provided with information about applying for variances and the process can also be made available on-line. 3) Variances typically expire and need to be renewed periodically. Billing software can generate automatic renewal notices to customers ahead of time. 4) Analysis of historical use can be initially used to set non-residential allocations. Accounts with significant variation can be contacted for information and review.
Allocation-based rate structures are often perceived as too difficult for customers to understand.	1) With proper communications, customers with this rate structure understand and support it. 2) Any rate structure change requires outreach. 3) Agencies that have transitioned to this rate structure can offer assistance to those interested in an allocation-based rate structure.
Does it comply with Proposition 218?	1) Allocation-based rate structures do comply with Proposition 218. The key, as with any rate structure, is to have a strong administrative record. The SWRCB could develop a "how-to" guide to aid agencies in moving to an allocation-based rate structure and

	guidance on how to create a strong administrative record. 2) Allocation-based rates balance Proposition 218 with Article X of the California Constitution, which requires the reasonable use of water. 3) Section 375 of the Water Code specifically addresses the use of allocation-based rates.

IRWD urges the SWRCB to consider how it can best aid agencies with these challenges, and urges the Board to consider placing an implementation guide on its website as to how agencies looking to move towards an allocation-based rate structure can overcome these hurdles. The SWRCB may also want to consider creating a work group of agencies that have implemented an allocation-based rate structure to assist those agencies that may be interested in moving towards a conservation-based rate structure.

IRWD would also like to note that while allocation-based rate structures can result in sustained conservation, it is important for the SWRCB to remember that it is not the only rate structure that can obtain sustainable water savings. Agencies should retain the ability to determine how they structure their rates.

System Water Loss Control and Leak Detection

Agencies may also obtain significant water savings through addressing system water loss and leak detection. IRWD has a full system leak detection and water loss reduction program because the District understands the important role such a program has in conserving water resources and reducing District costs.

IRWD follows the guidelines in the 3rd edition of the American Water Works Association (AWWA) M36 Publication, *Water Audits and Loss Control Programs,* that was adopted by the California Urban Water Conservation Council (CUWCC) and which CUWCC members report on. The same methodology was adopted by the California Legislature in 2014, and all urban agencies will now be required to report system loss using the AWWA methodology in their 2016 Urban Water Management Plan. AWWA offers free software to help agencies implement the adopted methodology.

The SWRCB may want to consider providing grants to agencies to conduct system water loss audits and component analysis, as well as grants and/or low interest loans to agencies to improve aging infrastructure. The SWRCB should encourage agencies to implement system water loss/leak detection and should encourage agencies who have unreasonable system water loss to improve their system.

Expansion of Recycled Water Utilization

Implicit in the concept of reliability is the responsibility to develop an array of strategies to meet existing and future water needs. IRWD, like others throughout the state, has actively developed and made substantial investments in alternative local supplies, recycled water and water use efficiency in order to prepare for times of drought and limited imported water supplies. These efforts have not only allowed our agency to become more self-reliant, but have also aided the entire state by lessening the demand for imported water. During times of drought, the benefits of increased self-reliance continue to accrue to the state. A lower demand on the state's water supplies is a benefit for the entire state as it means those impaired supplies can go further.

One of the local supplies developed by the District has been recycled water. We have worked to expand the use of recycled water in our service area and throughout the state because we understand the important role recycled water can play towards building a reliable water supply for all of California. Often, customers of recycled water are

willing to switch from a potable water supply to a recycled water supply because recycled water is considered a more "drought-proof" water supply as recycled water is continually produced by local agencies even in times of drought.

Further SWRCB action on urban conservation and drought response should continue to reflect this understanding of recycled water, which if not used would need to be discharged without being put to beneficial use because the ability to store recycled water is limited. The SWRCB should further preserve the beneficial use of recycled water by giving local suppliers more flexibility and clarification in recycled water regulations and policies.

Water Use Metrics

IRWD would also like to provide the SWRCB comments on what additional data it should be collecting and how it could be used. ***IRWD suggests that the SWRCB consider collecting additional data from water suppliers to demonstrate that their overall water usage is reasonable in accordance with state law. This data could include the typical lot size/customer base within an agency's service area, and the typical climate of the service area as these factors influence water demands within an area and the reasonableness of an agency's GPCD. The SWRCB should also consider allowing agencies to report on how the weather it has experienced during a particular reporting period may differ from the baseline period and how it has impacted water demands during the reporting period. The frequency of reporting this additional data should be weighed against the added reporting burden placed on agencies and should be limited while providing the SWRCB current data.***

The SWRCB may wish to consider asking agencies to report any significant changes in land use within their service area or in its number of connections since the baseline period. Having this information would allow the SWRCB to better understand the effectiveness of an agency's drought response efforts and efficient use of water. For example, if an agency has experienced growth in population but the baseline population numbers is used to calculate GPCD, the calculated GPCD will not provide the SWRCB an accurate picture of water use within that agency's service area. Likewise, the SWRCB may want to consider asking agencies if they have reached build-out, if their customer portfolio has changed (e.g. redevelopment has occurred or higher density housing has been constructed), and what local water supply conditions and/or shortage levels are in order to better understand the agency's production, GPCD and conservation efforts.

Multi-year baseline periods are more effective than year over year comparisons unless variables such as weather or economic factors remain constant. A multi-year baseline provides a better comparison because it shows agency trends, is more likely to smooth climate/weather irregularities, and will provide the Board with a better idea of how an agency or region has performed over time.

IRWD would also like to remind the SWRCB that GPCD and other metrics are difficult to use as a comparison of one agency or area against another. At best, they are effective and should only be used to evaluate one agency's performance over time, but even then such a comparison can be complicated by changes in the service area from the baseline period. Additionally, there may be a high level of conservation hardening for agencies that have been aggressive in implementing long-term programs and past efforts should be considered as an agency's performance to the baseline period is evaluated.

The SWRCB should target poor performing areas after ensuring that the appropriate metrics are used to identify these areas. Once the poor performing areas are properly identified, a technical analysis should be performed, with a peer review by the CUWCC, to verify the causes and develop specific response actions. Depending on whether the poor performance is a result of demand hardening, economic conditions, weather patterns, resource limitations

or other causes will impact how it should be addressed. The SWRCB should also consider providing greater technical assistance to agencies, through either Board-available resources or industry partners, such as the CUWCC, to aid agencies in obtaining greater water savings.

Conclusion

We agree with the SWRCB that the management of any limited resource includes the practice of conservation and understand the impacts the drought is having on the state. We have implemented aggressive water conservation programs with a core feature of pricing that reward customers for conserving. These programs result in water being conserved both locally and statewide through reductions in dependence on imported water. These benefits are realized in both wet and dry periods. Future SWRCB action on urban conservation should not only seek to gain greater savings in light of the drought, but should also be structured in a way that results in sustained conservation.

Thank you again for considering our comments on urban conservation and drought response. Please do not hesitate to contact me at (949) 453-5590, or our Sacramento Advocate, Maureen O'Haren, at (916) 498-1900 if we can be of assistance to you or your staff.

Sincerely,

Paul A. Cook
General Manager