Water Commission
7:00 p.m. – Monday, October 6th, 2014
Council Chambers
809 Center Street, Santa Cruz

Water Department

Action Minutes of a Water Commission Meeting

Call to Order –Chair Baskin called the meeting to order at 7:03 p.m. in the City Council Chambers.

Roll Call

Present: D. Baskin, A. Schiffrin, D. Schwarm, D. Stearns, W. Wadlow, and L. Wilshusen.
Absent: G. Mead (with notification)
Staff: R. Menard, Water Director; T. Goddard, Administrative Services Manager; N. Dennis Principal Management Analyst; G. Rudometkin, Administrative Assistant III.
Others: Approx. 6 members of the public.

Presentation –There were no presentations.

Statements of Disqualification – There were no statements of disqualification.

Oral Communications –There were no oral communications.

Announcements –There were no announcements.

Approval of Minutes

Commissioner D. Schwarm moved approval of July 7th and August 25th, 2014 Water Commission minutes. Commissioner D. Baskin seconded.
VOICE VOTE: MOTION CARRIED for the July 7th meeting
AYES: ALL
NOES: None.
ABSTAINED: None.

VOICE VOTE: MOTION CARRIED for the August 25th meeting
AYES: D. Baskin, A. Schiffrin, D. Schwarm, D. Stearns, and L. Wilshusen.
NOES: None.
ABSTAINED: W. Wadlow due to absence from the July 25th meeting.

Consent Agenda

1. City Council Items Affecting Water
2. Water Commission Bylaws Update
3. Correspondence from Gary Patton dated 8/5/2014

Commissioner A. Schiffrin pulled item 2 off the Consent Agenda. Commissioner L. Wilshusen moved the Consent Agenda as amended. Commissioner A. Schiffrin seconded.
VOICE VOTE: MOTION CARRIED
AYES: ALL
NOES: None.

Items Removed from the Consent Agenda

Item 2: Water Commission Bylaws Update

Commissioner A. Schiffrin moved the approved proposed Bylaws amendments presented by the subcommittee and the City staff for recommendation to City Council at their October 28th meeting. Commissioner W. Wadlow seconded.
VOICE VOTE: MOTION CARRIED
AYES: ALL
NOES: None.

General Business

1. Long Term Conservation Master Plan

Presentation introduced to by Water Director, R. Menard and provided by T. Goddard; Administrative Services Manager and responded to commission question.

Public Comments: Oral Comments made by S. Holt.

Commissioner L. Wilshusen recommends this Technical Memorandum for the Conservation Master Plan, with readability improvements as noted, to the City Council as the interim plan for budgeting purposes and refer this Technical Memorandum as well to the Water Supply Advisory Committee for its review and comment. Commissioner D. Schwarm seconded.
VOICE VOTE: MOTION CARRIED
AYES: D. Baskin, D. Schwarm, D. Stearns, L. Wilshusen, and W. Wadlow.
NOES: A. Schiffrin.

2. Drought Update

Presentation provided by T. Goddard; Administrative Services Manager and responded to commission question.

Public Comments: Oral Comments made by R. Longinotti.

Commissioner A. Schiffrin recommended that the Commission recommend to the City Council to adopt the resolution extending the Stage 3 Water Shortage Emergency on a month to month basis and at that time that staff provide the Council with information regarding criteria for lifting the rationing requirements at least on a temporary basis. Commissioner D. Stearns seconded.
VOICE VOTE: MOTION CARRIED
AYES: ALL
NOES: None.

3. System Development Charges Policy Framework Discussion
Presentation introduced to by Water Director, R. Menard and provided by S. Gaur of Raftelis Consulting and responded to commission question.

Public Comments: Oral Comments made by R. Longinotti.

Subcommittee/Advisory Body Oral Reports No items.
1. WSAC Update (Oral Report)

Director's Oral Report No action shall be taken on this item.
1. Monthly Status of Water Supply

Documents for Future Meetings No action shall be taken on this item.
1. None

Information Items No action shall be taken on this item.
1. Work plan for Cost of Service Analysis, Rate Redesign and System Development Charges
2. Modeling and Forecasting Working Group

Items Initiated by Members for Future Agendas

Adjournment **Meeting adjourned at 9:41 pm,** the next meeting of the Water Commission is scheduled for November 3, 2014.

Respectfully submitted,

Gloria Rudometkin
Digitally signed by Gloria Rudometkin
DN: cn=Gloria Rudometkin, o=City of Santa Cruz, ou=Water, email=grudometkin@cityofsantacruz.com, c=US
Date: 2014.02.10 09:12:05 -08'00'

Staff

Gloria Rudometkin

From: Rick Longinotti <longinotti@baymoon.com>
Sent: Saturday, October 04, 2014 8:01 AM
To: Gloria Rudometkin
Subject: Soquel Creek District experience with WDO
Attachments: 06-03-14 Item 5.2.6 WDO Program.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Complete

Hi Gloria,
Could you please pass this on to the Water Commissioners before their meeting Monday evening?
Thanks,
Rick

Dear Commissioners,

I'm attaching a Soquel Creek Water District agenda report that discusses their Water Demand Offset program. The District has operated the program since 2003 and is contemplating changes to the program to incorporate what they have learned in that time. I hope this will be helpful to your discussion Monday evening.

Best,

-Rick

Water Demand Offset (WDO) Program

Purpose

The purpose of this attachment is to propose a novel approach to the Water Demand Offset (WDO) Program for the Board to consider that may alleviate having to declare a moratorium and addresses some of the concerns that have been raised about the Program. As the WDO Program is complex, staff is prepared to provide additional details that may not be fully addressed in this attachment and answer questions at the public hearing.

Due to the current focus on the Water Use Reduction Plan (WURP) development and implementation, the District does not have the staffing resources to make changes to the WDO Program at this time. Once the WURP is launched and operational, staff can implement the recommendations identified in this attachment if the Board concurs. In the interim, staff proposes to continue operating the current WDO Program as-is (i.e. developers must perform residential toilet replacements, or commercial toilet/urinal replacements if the retrofit properties are owned by the developer/project applicant) with one exception. Staff suggests allowing developers to retrofit toilets and urinals in public schools within the District for offset credit. As schools will have to comply with the upcoming WURP Best Management Practices for these fixtures, allowing developers to perform these retrofits will ease the cost-burden on public schools.

Introduction

Staff has developed a modified approach for the WDO Program that may suffice in addressing the two following main concerns about continuing the Program if a supplemental supply is not obtained and thus the District has to rely solely on water demand reductions to reduce groundwater pumping:

(1) The program is "stealing" from the future water conservation supply pool and thus insufficient water savings will be achievable to prevent seawater intrusion; and

(2) Existing customers will be burdened by higher costs in the long run because developers will have performed the lower cost offsets leaving the more expensive water saving methods to be implemented at the expense of existing customers.

Addressing these two questions should support the continuation of the WDO program because 66% of District customers participating in the 2014 survey indicated they supported the WDO program instead of a moratorium. While there is concern that the respondents didn't understand the limitations of the current program, their answer also means that if the program did not have the limitations listed above, it would be highly supported.

Background

In 2012, the District developed an approach (i.e. Full Tool Box) to determine what methods and associated costs it would take to solve the overdraft problem via hyper-conservation and mandatory water restrictions. **Figure 1** shows the methods and associated water savings achievable. **Figure 2** shows the same methods and the cost per acre-foot saved associated with each method.

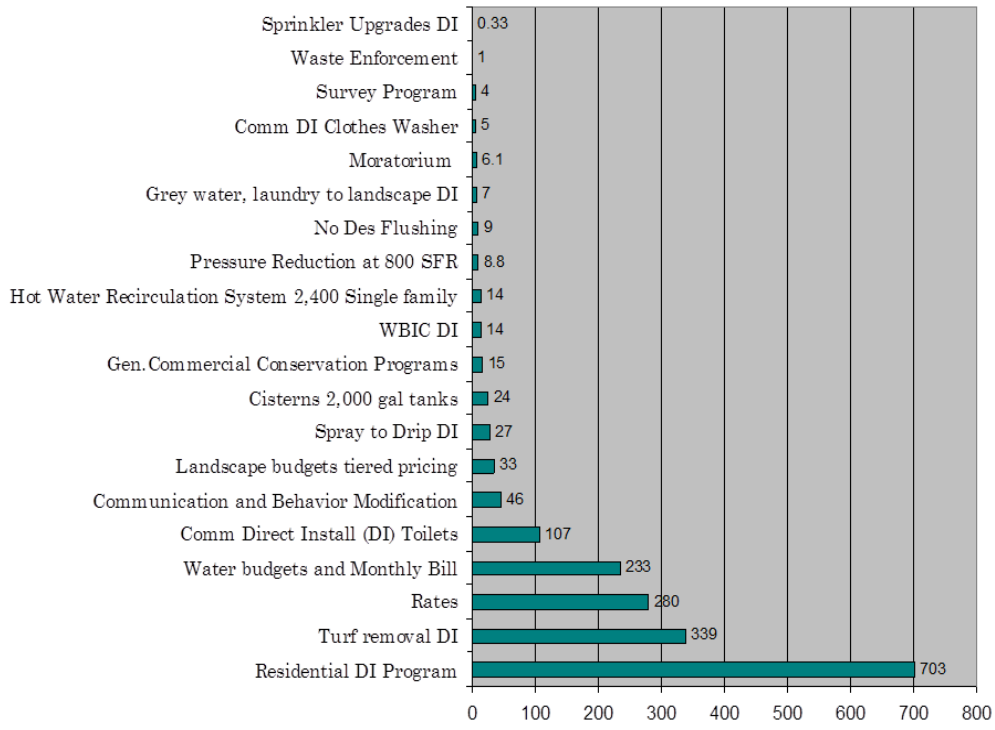

Figure 1. Water savings achieved from different methods in the Full Tool Box. DI = direct install, SFR = single family residential, WBIC = weather based irrigation controller

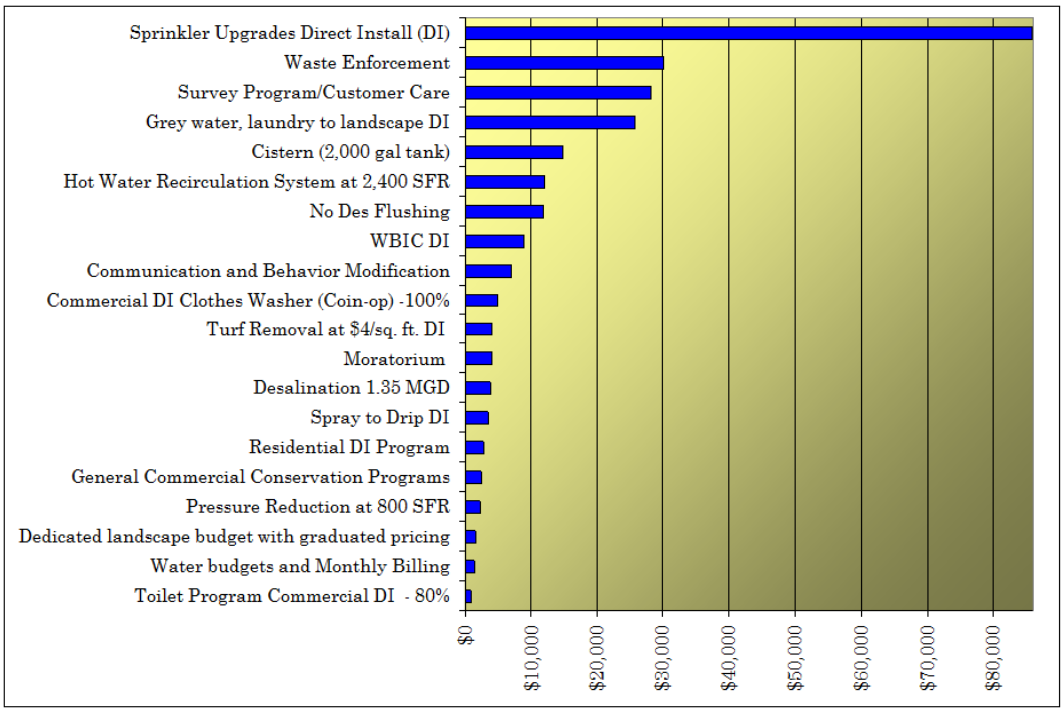

Figure 2. Cost per acre-foot of water saved in the Full Tool Box program.
DI = direct install, SFR = single family residential, WBIC = weather based irrigation controller

When the Full Tool Box approach was developed in 2012, it had been determined that the District would need to reduce groundwater pumping to 2,900 acre-feet per year and maintain this pumping level for 20 years to restore groundwater to protective levels and prevent seawater intrusion. To reduce pumping to this level, the District would have to reduce baseline water demand by approximately 1,600 acre-feet per year. Thus, the total water savings achieved via the conservation methods shown in Figure 1 amounts to 1,600 acre-feet per year. The Full Tool Box incorporated all of the identifiable and proven measures available to save water, including a moratorium. Although Figure 1 shows that a moratorium prevents an additional six (6) acre-feet per year from being added to demand, a more current estimate is 10 acre-feet per year. Thus, after a twenty year period, an additional 200 acre-feet per year would be added to the demand.

Conceptual Approach

The conceptual approach to solving the two main concerns discussed in the "Introduction" section above revolves around making developers pay for the cost of water demand offsets that would be associated with the more or most expensive cost measures shown in Figure 2. This concept of centering the WDO program on cost of future offsets is a paradigm shift for the program because it makes us think in terms of not just offset amounts, but also equitable cost. This would prevent the existing and future customers from being cost-burdened by new development only performing the lower cost offsets.

The other main concern that development would be "stealing" from the conservation pool may not be accurate because it would be several years out (e.g., 10 years) before the more expensive methods are implemented and during this time, it is expected new water-saving devices, regulations, etc., will be developed that were not considered in the Full Tool Box. For example, rainwater for toilet flushing was not legal when the Full Tool Box was developed and lower-flow showerheads are being engineered.

Figures 3 and 4 are used to demonstrate this idea of how to select the appropriate cost of offset credits that could be sold to developers. The graph in **Figure 3** is a plot of the data in Figure 2 and shows a "curve" of how the cost of water savings increases with the measures that are the least cost effective. **Figure 4** is the same graph as shown in Figure 3, except the green horizontal line shows one potential cost in the future that existing customers may have to pay to achieve water savings. There are many locations that the green line could be drawn, but the $40,000 per acre-foot level was selected for purposes of this memo because it seems to represent a reasonable, yet conservative value.

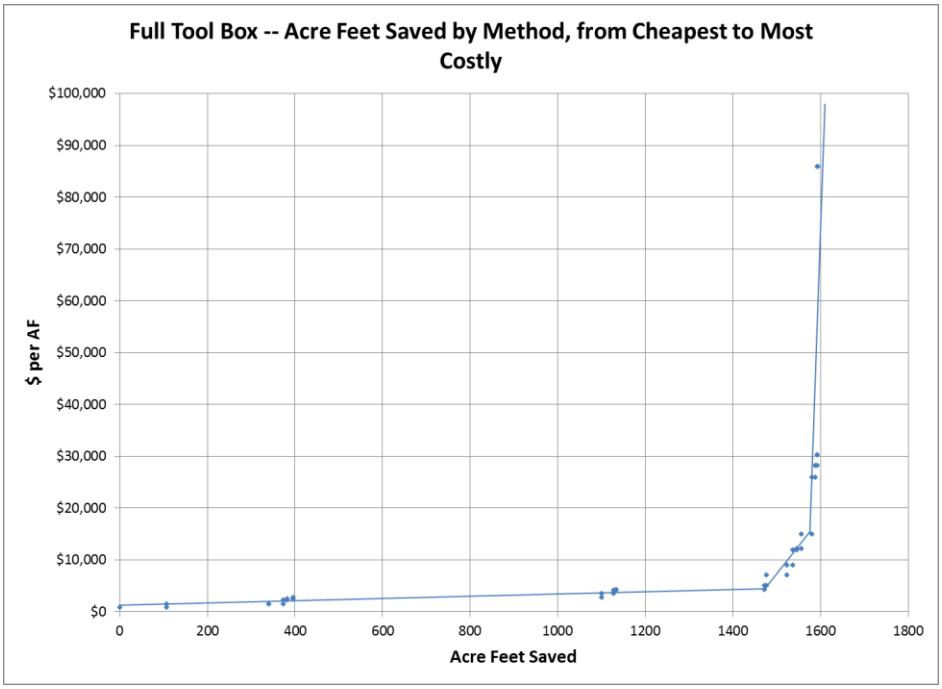

Figure 3. Plot of methods shown in Figure 2, by acre-feet saved: cheapest to most costly. (Source: Dr. Sue Holt, 2014)

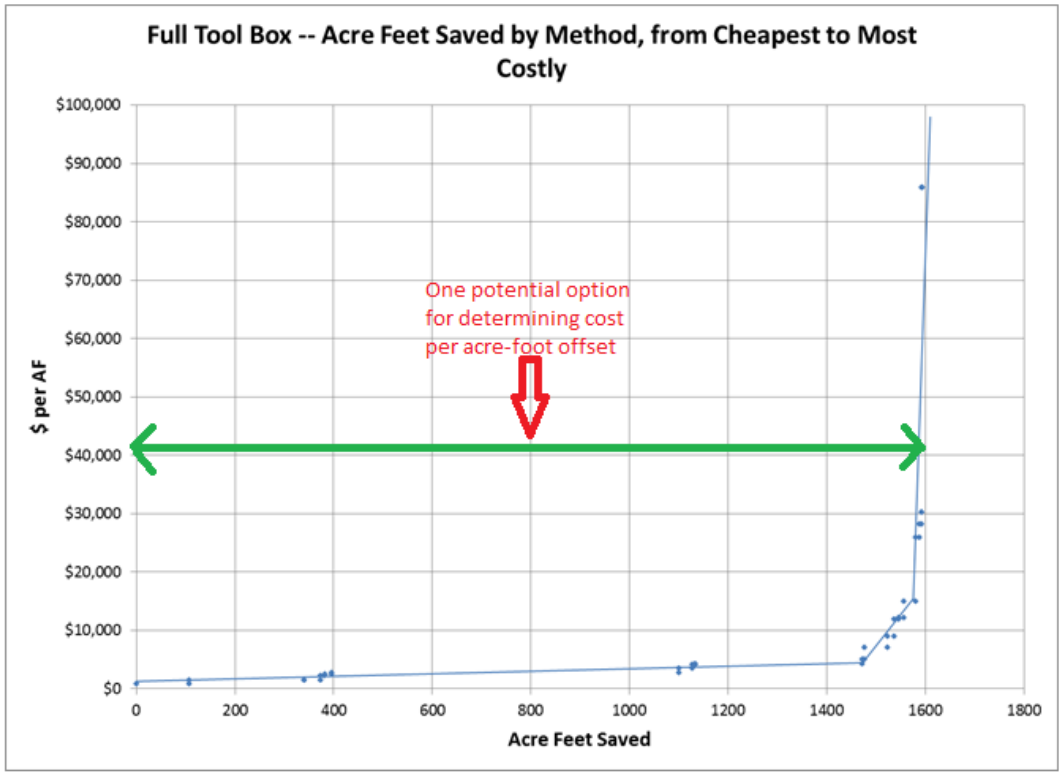

Figure 4. Green horizontal line showing one potential option for determining cost per acre-foot of offset for WDO program. (Source: Modified graph from Dr. Sue Holt, 2014)

Application of Conceptual Approach

The manner in which this approach could be applied to the WDO program is that once the Board selected a dollar per acre-foot value, then developers would be required to achieve or pay for that amount of offset in dollar value.

For example, one approach might be to change the WDO program so that developers can only achieve credit from performing turf replacements. For example, turf replacement with water-wise plants achieves about 0.000045 acre-feet of water savings per square foot (or about 2 acre-feet of water savings per acre). If a new development was projected to use 0.25 acre-feet of water and if an offset cost of $40,000 acre-feet was selected and applied to turf replacement, then (with the current 1.6 multiplier factor), a developer would need to pay $16,000 ($16,000 = 0.25 acre-feet x $40,000 per acre-foot x 1.6).

If the $16,000 in offsets was applied to a turf rebate program at $1 per square foot, then the water savings would equal 0.72 acre-feet of water savings ($16,000 x $1/square foot x 0.000045 acre-feet savings/square foot = 0.72 acre-feet). Under the current WDO program, the water savings achieved would only be 0.40 acre-feet (0.40 acre-feet = 0.25 acre-feet x 1.6). In summary, the concept is to take potential

future costs of offsets and apply that money to the current costs to achieve certain offsets, thus achieving a greater amount of water savings.

Another option for the program is to collect funds for offset projects, such as increasing recharge, rainwater catchment for toilet flushing, etc. that are equal or greater than the selected dollar value (e.g., $40,000) and that wouldn't be targeted for conservation through the District's Water Use Reduction Plan.

Pros and Cons of the Proposed Conceptual Approach

The pros are:

- Protects existing and future customers from being burdened by higher costs for water saving measures in the long run by making developers pay for the higher-cost retrofits now.
- Can achieve more water savings faster and earlier, than the current WDO Program design.
- Benefits existing customers because they are recipients of the WDO funding.

The cons are:

- Developers must pay more to meet their offset requirements and secure new water service. If the cost is too high, many projects may not be initiated or completed.
- There is a slight risk that innovations of water-saving methods will not be as great as anticipated.
- The District does not obtain maximum water savings now for toilet and urinal replacements currently performed under the WDO Program and instead relies on natural replacement (e.g., customer uptake rebates, perform remodels or sell properties and replace old toilets and urinals with more efficient models).

Another option the Board may want to consider is having a third party study and provide recommendations for ways the program can be structured to assure the offsets are additional (would not have occurred through District or customer efforts at conservation), long term, and results are measurable.

Gloria Rudometkin

From: Scott Mcgilvray <scottm@wateraware.net>
Sent: Friday, October 03, 2014 7:55 AM
To: Gloria Rudometkin
Cc: Sue Holt; Doug Engfer; micah posner; Susan O'Hara; Toby Goddard; Rosemary Menard
Subject: Please forward to Water Commission prior to Monday 10/6 meeting Conservation Master Plan adoption

Categories: Complete

Dear Chair David Baskin, and the commissioners.

I understand that the Water Conservation Master plan is being considered for "interim" adoption. Having read Mr. Goddard's memorandum, it appears this is recommended for commission approval so that a budget item for Water conservation can be included in the budget for the coming year. If that is the reason, I support adoption.

However, if this recommendation is being made to suggest that the Water Conservation Master Plan has been discussed, and considered, I object strenuously. Since the Conservation master plan was conceived, several important omissions of the plan have been pointed out by members of the public, and no hearing on these omissions has been permitted. Specifically, there are two errors of omission that are enormous and must be addressed.

1. The Water Conservation Master plan fails to include customers that use over 60% of the City's water, namely the commercial, industrial, and landscape sectors. These customers pay a bulk rate for water at any level of consumption. The rest of the city pays for water through a tiered rate system, with 4 levels such that the first unit of water consumed costs about $2.00, while once the customer consumes the 11th unit in a month the cost is increased to over $8.00. This tiered rate system is a very effective conservation tool. We have not been allowed to even discuss, or project, or think about extending the same financial incentive to conserve to businesses and government that we require for residents.
2. The Master Plan prepared and presented by Maddaus and Associates tells us that we can save at least 200 million gallons per year by 2030, and possibly as much a 500 million gallons per year. For over 8 months, members of the public and the WSAC have asked to see the calculations that produce those estimates, item by item and year by year. It is very valuable to look into the formula that shows the savings for clothes washer upgrades, toilet retrofits, and all others. Inside those formulas are many assumptions regarding important considerations such as rate of adoption, gallons saved per unit adopted, cost of adoption, cost of incentive, cost of no incentive. Maddaus and the City have failed to provide this fundamental information, which is not proprietary; it is the facts and assumptions about the behavior and expenses of the Santa Cruz population.

The Water Conservation Master Plan and the Baseline Water Use Survey which preceded it are marvelous works and valuable tools. We need to be able to use them ourselves. We have been told, originally by Mr. Toby Goddard in November, 2013, and more lately by the Water Commission, and even more recently by Susie O'Hara that we would be provided access to the city's data within the model. This has never happened.

Please do what you need to tonight to get the budget item advanced. Then direct the city staff to open the model to inspection.

I regret not being able to attend meeting on October 6. I will be out of town.

Sincerely yours,

Scott McGilvray

Gloria Rudometkin

From: Rick Longinotti <longinotti@baymoon.com>
Sent: Thursday, October 02, 2014 4:40 PM
To: Gloria Rudometkin
Subject: for Water Commission

Follow Up Flag: Follow up
Flag Status: Completed

Dear Gloria,
Could you please forward this letter to the Water Commissioners?
Thanks,
Rick

Dear Water Commissioners,

I wish to support the Water Demand Offset program under discussion on your Monday agenda.

A WDO provides at least a temporary answer to the question, "How can we allow development to continue while faced with a limited water supply?" Growth in water demand due to new development will be neutralized by conservation measures.

An important consideration is whether the conservation measures to be assigned to offset growth are truly "additional" to conservation measures that existing customers fund in order to reduce their risk of high drought year curtailments. I believe that existing customers benefit from the savings provided by the measures in the Master Conservation Plan preferred option C. These are the most cost-effective measures to reduce water demand, and thus increase water reserves in the reservoir and aquifers.

There are a variety of other conservation measures that are not part of the Master Conservation Plan that could be funded through the developer fee (System Development Charge). For example, an enhanced turf replacement rebate for residential customers (doubling the existing $.50 per square foot of turf) could be funded by the developer fee. The cost of enhancing the existing program is $17,920 per million gallons saved, according to Maddaus. That is a reasonable basis for calculating the fee for water demand offsets.

Please note that a Water Demand Offset program is a great way to provide a financial incentive for developers to construct buildings that are highly water efficient. If developers can demonstrate efficient water use that is below the rate expected under current code, the developer would save on fees to offset new water use.

Thank you for considering,

Rick Longinotti