



**Conserving Together
MMWD Water Conservation Summit
July 8, 2009, 8:00 a.m. – 12:00 p.m.
Summary**

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Conserving Together: An Overview

On July 8, 2009, the Marin Municipal Water District (MMWD) sponsored a Water Conservation Summit, “Conserving Together” at the Embassy Suites hotel in San Rafael. The Water Conservation Summit convened MMWD and members of the community the District serves to explore ways to work together to conserve water.

As part of its increased efforts in conservation, the District adopted a Water Conservation Master Plan in 2007, which set ambitious conservation goals through 2030. The Summit was an opportunity to identify the community’s and the District’s roles in promoting the conservation goals outlined in the Master Plan.

Approximately 175 people attended “Conserving Together.” Participants represented a variety of interests, including local nonprofit and advocacy organizations, government agencies, utilities, interest groups, and private companies.

The Summit program included the following:

- Welcome address by David Behar, MMWD Board Vice President
- Conservation Summit overview by Paul Helliker, MMWD General Manager
- Current Water Conservation Program Activities by Dan Carney, MMWD Conservation Program Manager.
- Panel Discussion “How Far Can We Realistically Go”
 - Chris Brown, Executive Director, California Urban Water Conservation Council
 - Bill Maddaus and Michelle Maddaus, principal and project manager with Maddaus Water Management
 - Dan Carney, MMWD Conservation Program Manager
- Topical breakout sessions
 - Lawns and Landscaping
 - Gray Water
 - Rainwater Catchment
 - Residential Behaviors and Motivating Change
 - Paying for Conservation
 - What’s New in Water Legislation?
 - Long-term Conservation Planning

The following summary is intended to capture the highlights of the Conservation Summit. It highlights key information provided by MMWD and reflects the comments,

ideas, and questions of the people who participated in the four-hour Summit. It is not intended to serve as an official meeting transcript.

Presentations

Following an introduction by Vice President David Behar, MMWD General Manager Paul Helliker provided an overview of MMWD's water supply and demand issues, and posing the question, "How far can the conservation programs realistically go in reducing water demand?"

MMWD Conservation Program Manager Dan Carney gave an overview of past and present conservation programs, including educational programs and conservation tools and technologies, including automated meters and leak detection systems.

Summary of Panel Discussion

A highlight of the Summit was a panel discussion with experts in water conservation, who provided both local and statewide perspectives on the key topic, "How Far Can We Realistically Go?" Panelists included Chris Brown, executive director at California Urban Water Conservation Council, Bill Maddaus and Michelle Maddaus, principal and project manager with Maddaus Water Management, and Dan Carney, MMWD Conservation Program Manager.

Below is a summary of the experts' key points, followed by a summary of the question and answer session that followed the panelist discussion.

Chris Brown, Executive Director, California Urban Water Conservation Council

The California Urban Water Conservation Council is a membership organization dedicated to encouraging conservation throughout the state of California. It is composed of water agencies from throughout the state, and has grown from 100 members to more than 400, the majority of which are water agencies. The California Urban Water Conservation Council provides a framework from which to share best management practices that provide verifiable water savings. This framework serves as a model for other groups throughout the country. Chris Brown noted that the key to providing sustainable long-term water savings is a balanced approach of implementing conservation technologies and motivating change in conservation behaviors.

According to Brown, the main challenge that MMWD and other water agencies face in the near future is the state's commitment to a 20 percent reduction of demand in water-use by the year 2020. He believes that, to achieve additional water savings by 2020, there will have to be behavior change, as toilets, showerheads and aerators cannot alone create the additional savings. For example, it is common that, after people install low-flow showerheads, they feel ok taking longer showers.

Brown pointed out that in the governor's policy paper on water conservation two major ways to conserve more were identified: reducing system leakage and reducing

landscape use. There has not been policy enacted to formally require these actions, but this may change in the near future through state legislation.

Brown said that current landscaping practices are often inefficient and that there is room for potential water savings in this area, especially during summer months when there is peak water usage. The answer lies in the message, according to Brown, which must be integrated with program delivery and the pricing structure. He thinks irrigation restrictions and converting grass lawns have worked in some cities, but there needs to be a clear message of leadership from the water agency to show when people are succeeding. This can be accomplished through a process of certification and recognition. Brown said that he thinks the real question is whether we can look at ourselves and our landscapes and change the popular culture of today—our laissez-faire attitude towards water.

Bill Maddaus and Michelle Maddaus, Principal and Project Manager with Maddaus Water Management

Maddaus Water Management works with many water agencies to develop a portfolio of tools and strategies to reduce water demand. Maddaus Water Management's intent during the panel discussion was to address the question, "How much more conservation can MMWD achieve?" According to Michelle Maddaus, she has found that, compared to many other water agencies both locally and on the national level, MMWD has implemented tougher conservation goals because it is important to them. MMWD is currently enacting a comprehensive conservation program referred to as "Program D," which is a suite of approximately 31 conservation measures. Maddaus Water Management developed programs "A" through "D," with each program being more aggressive than the previous, in terms of water savings goals. "Program D" had toughest goals for water conservation, but at the request of MMWD, Maddaus Water Management has created a more aggressive "Program E." This program was developed by analyzing each measure in "Program D" and determining how to improve upon each of them.

For example, one component of "Program D" that Maddaus Water Management examined was watering systems designed to prevent landscape over-watering. In order to be even more effective, Maddaus, as an example, suggested implementing a remote Automatic Metering System (AMS) that sends alerts to users to warn them if water-use is outside of a certain range. This system can provide real-time information to educate the water user, and in so doing, help to reduce water leaks, enhance surveys and water budgets, and create a system that allows the water-user to be proactive by controlling how much water they are using at a given time.

After analyzing the measures outlined in "Program E" based on a Water Utility Benefit-to-Cost ratio, which compares potential water savings to price of implementation, Maddaus believes that MMWD can pursue the more aggressive "Program E" for additional water savings. Maddaus Water Management determined that, by incorporating state-of-the-art and innovative conservation technology, a "Program E" would be cost-effective and provide additional water conservation.

Finally, Maddaus believes, based on the analysis and work that they have done with other water agencies, that both “Program D” and “Program E” are aggressive on both the local and national levels. According to the local and national studies Maddaus has completed in the last 10 years, with the current “Program D,” MMWD has one of the highest costs of conservation per capita (dollars spent per person on promoting conservation).

Dan Carney, Conservation Program Manager at Marin Municipal Water District

Dan Carney posed the question “How far can we [MMWD and its ratepayers] go?” According to Carney, the real answer to this question hinges on future behavior change of MMWD customers, and not just what new and better technology MMWD can implement.

Question and Answer Session

What are your thoughts on MMWD as compared to other water agencies in terms of how creative is it for solutions to water conservation?

The city of Santa Rosa’s water agency is within the closest proximity to Marin. It has a long list of practices and areas that it plans to improve upon, so pay attention to them in the future. The city of Las Vegas, for example, has had to implement new, aggressive conservation programs that now have some of the highest funding in the country, like their “cash for grass” program. San Antonio, Texas also has a creative program for extensive rain catchment.

Marin has clearly been aggressive for years, and now they really have to be creative in finding areas where there can be additional reductions in water use. (Chris Brown)

What did you mean by Conservation Department cost-sharing for Automated Metering Systems?

We were referring to a budget analysis and determining who would have to pick up the cost. In this analysis we looked at the system and internal costs, and assigned a portion of these costs to the Conservation Department and the remaining costs to other MMWD departments. (Michelle Maddaus)

Why weren’t you asked to look at rainwater catchment and gray water in your water analysis savings? Why hasn’t MMWD considered these programs for landscape water-use savings?

MMWD has addressed these programs by wrapping the equipment list for these programs into the Maddaus Water Conservation Report. Equipment for rainwater catchment has now become part of our landscape rebate program, which is included in Program D. (Dan Carney)

What about a cash-for-grass system like they have in Los Angeles? Can you adjust the water rate structure to enforce water saving?

An MMWD cash-for-grass program is being actively developed. We hope that this program will go beyond just grass and will include rain catchment systems and planting native plants; we want to offer additional incentives for a program that's more comprehensive than just grass removal. There is a method where you cover your lawn with cardboard and then put mulch on top, which will easily convert your lawn to a garden. Some of the details we don't have yet, but plan to shortly. We agree that the rate structure is an essential tool. (Dan Carney)

In Irvine Ranch, they have established a system where the water conservation programs will be funded by the highest water users. There are just some people who will not change their behavior based on price the price of water. (Chris Brown)

Talk a little about San Quentin Prison and some of the entrepreneurial ideas you have there to conserve water. For example, San Quentin just found that there is wastewater dumped into the bay from Central Marin that they could possibly use.

We are constantly looking for partnerships and developing relationships, including with cities like San Rafael. We are currently working to unify regulations between the two municipalities. (Dan Carney)

Regarding using recycled water for San Quentin, some of the recycled water is too salty. Trees and shrubs are intolerant of that water, because the salinity level is three times too high. We have looked at some other ideas and estimates, but the one I have recommended is having the equipment to recycle water on site. I will keep working with them to explore options. Because they are currently in the midst of planning and building, it could be a great opportunity for San Quentin to incorporate gray water into the plans. I'll need your help. (Bob Castle)

Have you looked at how Australians are moving recycled water and rainwater into their houses?

We have designed programs that Marin can start with. As new technologies become available, the program could become more extensive. We have placed rainwater and gray water in one program, and this way MMWD can hit the targets that we placed in the package. The goals are not set in stone. There will be more decision-making down the road, and a main part is flexibility. Right now citizens are more than welcome to carry out some of those recommendations from Australia. (Bill Maddaus)

We have two staff members certified in rainwater catchment, and we are part of the Northern California Association of Rainwater Catchment Systems and we are looking closely at other water agencies so that we can share best practices. (Dan Carney)

In reference to a graph that was shown by Paul Helliker, is there a way to look at behavior and project how that would impact water use?

We can put the water saving devices out there and provide incentives, but the rest will be up to the water users. Without a change in behavior, updated plumbing codes will not be enough. People have to be willing to try new things. (Paul Helliker)

Are you aware that International Panel on Climate Change (IPCC) models found that this region will actually be 5 percent wetter as a result of climate change?

We had a report for our board last week including a 2008 study from Dan Cayan, who looked at IPCC models and found that the precipitation will decline and the variance will increase. There will be more discussion about this in future meetings. (Paul Helliker)

Breakout Groups

Breakout sessions followed the panel discussion, allowing attendees to participate in a dialogue with District staff and other specialists to explore the following conservation subjects: Residential Behaviors and Motivating Change, Lawns and Landscaping, Gray Water, Rainwater Catchment, Paying for Conservation, What's New in Water Legislation?, and Long-term Conservation Planning. Summit participants selected which breakout group to join.

Highlights from each breakout group follow. More detailed information about each breakout group and individual comments can be found on the MMWD Website (<http://marinwater.org/documents/ConservationSummitNotes.pdf>).

Residential Behaviors and Motivating Change

This group discussed the factors that influence people's behaviors and looked at approaches and tools for supporting water-efficient lifestyles and promoting best practices.

The group found that perhaps MMWD's current message that the District is a leader in conservation is detracting from efforts to achieve water savings. When ratepayers hear this message, it may lead them to believe that they do not have to decrease water usage. To address this challenge, there should be multiple approaches directed at a variety of user groups and audiences. Suggestions included a friendly competition to encourage water conservation, increasing education in multiple languages, and further promoting the available water conservation programs.

Lawns and Landscaping

This group examined the water-savings potential of efficient landscaping practices, and the costs and opportunities associated with "water smart" plantings and irrigation equipment.

The group thought that education through schools and community organizations, like housing associations, and through websites and other venues, ratepayers will be encouraged to conserve. Group members thought that there should be clear information about potential savings of new technologies and that this information should be promoted through these schools and community groups. In addition, more partnerships (like the one with Bay-Friendly Landscaping) through MMWD and companies and other agencies will encourage more people to get on board.

Gray Water

This group discussed the latest on gray water policies and requirements and the safety, availability and affordability of this alternative conservation strategy.

This group learned about some regulatory initiatives by Housing and Community Development (HCD) which has recently come out with some new recommendations.

The group thought the statewide drought could encourage earlier adoption of some potential upcoming initiatives. The group believed that statewide adoption would be beneficial because the County of Marin or local governments might make the code more restrictive and therefore more expensive for those who do not comply.

The group discussed gray water hardware and the different brands, and noted that marketing had not yet caught up with demand. The group expects that there will be an evolution in the next year or so, and residents should be able to do more with gray water than ever before.

Rainwater Catchment

This group heard an explanation of catchment systems and the associated costs. They discussed the appropriate use of rain catchment systems and the potential for water savings.

This group discussed a number of water uses that do not need treated, potable water. They talked about ways that a system for the use of recycled and untreated water could be highly beneficial.

The group agreed that group rain gardens, partnerships with other agencies, and having a central location, or “one-stop shop” to pick up everything for rainwater catchment systems could be very beneficial to promote catchment systems. The group discussed rebates, as well as a District-funded point-of-purchase incentive. The group thought a breakdown of costs and the showcase of demonstration gardens could serve to educate people on the devices and uses in rainwater catchment. The group thought that peer pressure could be an effective motivator.

Paying for Water Conservation

This session provided an overview to the “Pay as You Save” approach, the impact of rates and the rate structure on water use, and the financial challenges of conservation.

The “Pay as You Save” system funds the purchase of an efficient, water-saving device, through the monetary savings on the water bill of the device user.

The group did not want the District to spend lots of money on new water supply and new conservation programs without first fixing system leaks. Group members used the analogy of a leaky bucket; as new resources are being added to the bucket, the older resources are flooding out of the bottom. The “Pay as You Save” approach would work best as a supplement to fixing the “leaks” in the system, group members concluded.

What’s New in Water Legislation

This group discussed whether conservation should be legislated by the state. Group members received an overview of the latest legislative and policy developments in water conservation, including the gray water bill, Assembly Bill 811 (Energy Efficient Improvements). This group considered how gray water and rain catchment could be used for wastewater (toilet flushing) and irrigation, and could be a simple solution. The group also learned about Assembly Bill 49, which will make water reductions mandatory if enacted.

Long-Term Conservation Planning

This group discussed approaches and estimates for long-term conservation planning in the Food and Water Watch Report and MMWD reports.

This group thought that there needs to be an established “moral” leadership that utilizes peer pressure to encourage conservation activities, including recycled water. They discussed the need for an education program with broad participation. The group members put forth the idea that conservation participation would more likely increase in the long term if there was across-the-board cooperation with other water agencies, especially with a common message of conservation.

Closing Comments by David Behar, MMWD Board Vice President

David Behar closed by stating that MMWD will be assessing what was heard at the “Conserving Together” Summit. Behar thanked all the Summit participants for their contribution and hoped that the dialogue would continue about how we can all work together to conserve water. MMWD would like to encourage ratepayers to visit the MMWD Website (www.marinwater.org), where the [presentation](http://marinwater.org/documents/MMWDSummitPresentationCompressed.pdf) (<http://marinwater.org/documents/MMWDSummitPresentationCompressed.pdf>) and this summary will be posted. MMWD now has a Facebook page (<http://www.facebook.com/pages/Corte-Madera-CA/Marin-Municipal-Water-District/94757861157>) and MMWD blog (thinkbluemarin.wordpress.com); both are a forum for promoting additional ideas and discussion.