



**Conserving Together  
MMWD Conservation Summit  
July 8, 2009  
Discussion Group Notes**

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**Conservation Behaviors and Motivating Change**

- Multiple showerheads and large lawns
- Competition fosters conservation; peer pressure; competition within neighborhoods
- “Green” bandwagon to motivate certified LEED remodels and new construction
- LEED standards need to address water use better
- Sustainable sites as examples
- MMWD ordinances of 2009
- “Prius” effect with a display of real time water use: AMS (Automatic Metering Systems); economic rate tiers with education
- Smart homes monitoring energy use
- Holistic perspective
- Public and legislative support needed
- Studies on motivation and behavior? Why conserve?
- Take a marketing approach
- MMWD surveys
- Disconnect about where water comes from; educate about source
- Visit production plant, etc.
- Behavior change within MMWD; role model
- Limitations to legal clout
- How to change behavior; senior population?
- Voluntary vs. mandatory; carrot vs. stick
- Negative message: “MMWD is already doing great”
- Why conserve if population growth continues – new development
- Water for fish in creeks is motivation; make the connection
- Connect people and students to watershed
- Leaks: sanitation of MMWD and old pipes; expand leak detection; where

## Conservation Behaviors and Motivating Change

- is the funding to repair the leaks?
- MMWD leak repair goal 800 AF + capital improvement – 1% per year
- Look at behavioral economics
  - Things like peer pressure
  - Healthy competition
  - Aversions to loss of money or water
- Restaurants: water served
- Diminishing Sierra snowpack as motivator
- Water-energy connection
- Factor in “will” to save
- Allotment (water budget) model
- Education in Ross and other areas
- Emotional response makes people change behavior
- Creative messaging: emotional response
- Conform, appear “green,” pride in accomplishments and economic savings
- Model gardens, transform “villa”
- Rainwater catchment model
- Bus advertising
- Certified “water miser” to acknowledge low water users
- Hispanic community education
- Not having water more motivating than price – drought for second year
- Message = water is in every decision you make
- Competition between 9 bay area counties to reduce per capita use
- Community needs influence on MMWD Board
- Public’s choice desalination or Russian River pipeline
- Recap:
  - Competition – friendly and other
  - Improve marketing
  - Emotional component
  - Perception of limits
  - Connection with energy costs
  - Educate: source to tap
  - Market to all types – visual, audio, etc.

## Lawns and Landscaping

- Water deeply – educate
- Expensive to redevelop
  - Rebates help
  - Sheet mulch helpful? Yes, according to Sonoma State
- Guidance in systems and type of grass

## Lawns and Landscaping

- Guidelines on technology on MMWD website
  - Formulas
  - Partnerships w/ MFRS (website, classes, information from the field, cultural requirements)
- Concerns about reducing water budget if landscape is removed (needs of landscape)
- Concern of future changes on landscape regarding a baseline
- Need to understand MMWD's water projections
  - Be more forthright and transparent
  - Will help influence people's acceptance of rebates
- Education needed – leverage knowledge in community
- MMWD enforcement regarding water waste; penalties?
- Rebate soil conditioners
  - “Bay-Friendly” linkage
- Soil types different within Marin County
- Partnerships (e.g., American Sheet Rock)
- Concern about water budget – 20% reduction (reconsider “analysis”)
- Give consideration to public areas
- Community lawns (minimize residential lawns)
- Create a sense of place with a new landscape ethic
- Develop edges of lawn to native
- Incentive for mulch and information on savings
- Need more information on MMWD website (e.g., type of mulch, sprinkler)
- List efficiencies for comparison
- Via manufacturer's website and Cal Landscape Contractors and Bay Friendly
- Sponsor seminars annually between manufacturers and landscape maintenance people
- Bilingual training
- List of qualified contractors (QWEL – certified); easy access on website
- Education for junior high and high school students
- Better organization on website links to conservation
- Consultants want more information regarding “Bay Friendly”
- Involve families – compost bins
- Educate beyond water – impact to environment, etc.
- “Billboard” with MMWD statistics

## Graywater

- Local jurisdictions within Marin County to promote and adopt usage within permit requirements
- Only 200 systems permitted out of 100,00 sample within California

## Graywater

- Only one known permit within Marin County
- SB 1258 legislation mandates graywater be functional with interior usage solutions; commercial only
- PONTOS (German), NUBIAN (Australian), MATALA (Taiwanese) usage for graywater treatment systems
- GEZ (Green Enterprise Zone) = commercial usage/environment
- Bio-microbics = On-site wastewater treatment equipment
- Graywater for outside use
- Rainwater for internal use for balance
- Cost benefits to using graywater for irrigation and rainwater for toilet flushing
- Various devices, pumps to meet current environmental requirements
- Turn graywater into drinking water; current regulations don't allow

## Rainwater Catchment

- ARCSA (American Rainwater Catchment Systems Association) #1; Northern CA Chapter
- Build and design a rain catchment system?
  - Problems with hills
    - More engineering
    - Decentralized catchments
  - Rain Gardens
    - Slow water and spread out
  - Brad Lancaster – information online
  - Cost analysis is key
  - 1000 square feet of roof x 1 inch = 600 gallons
  - Filtration required
    - Gutter guards
  - Overflow system
    - Rain gardens
- Potential for reducing demand?
  - Many uses do not require potable water
- MMWD's role in support?
  - Rebates from MMWD?
  - Rebates and incentives!!!
  - 0% interest financing for rain catchment systems (on water bill)
- Order systems in bulk to reduce cost
- Involve community groups
- Provide technical support
- Rate that reflects on-site character
- Education
- "Fee-bate"

## Rainwater Catchment

- List contractors that install rain catchment systems on website (one stop shopping)
- How to motivate homeowners?
- “Doing the right thing”
- Look at long-term savings
- Get ready now
- Emergency preparedness
  - Saved water
  - Power outage means no water
  - Partner with emergency agencies
- Fire suppression
- Native habitat – rain garden
- Flood control
- Deferred damage cost could be used to install rain catchment systems
- New requirements of zero runoff
- Four test homes/landscapes (showing the different possibilities)
- Force larger users to convert to rain catchment systems
- Mandate catchment on new construction
- Bladders?
  - Expensive
  - PVC
- First flush
  - First X amount of gallons not captured
- Filter systems to make water potable
- Fabric on roof
- Drainage away from foundation of buildings
- Rainwater is better than treated water for irrigation
- Factor increase in water costs to analysis (of water savings)
- Save energy, reduce global warming
- Rules of thumb: 100 gallons for family of 4; rainwater catchment – 600 gal per 1000 sq ft by one inch

## Paying for Conservation

- Creative funding
- Partnerships
- Pay as you save
- Rates
- Mass purchasing
- Rebates
- Upfront cost means savings over time
- What works?
- What are other districts doing?

- Residential water budgets
- Outreach
- Start in the schools
- Rate structure
- No charge for meter
- More tiers

## Long-term Conservation Planning

- How to increase conservation participation?
- Education impacts long-term behavioral changes
  - What is MMWD doing to get conservation message out?
- Leadership driven conservation
  - Start at community leader level
  - Provide moral leadership
- Target top users through mandatory restrictions
  - Especially landscaping
  - Peer pressure and rewards
- Lack of communication and coordination between agencies to develop and integrate existing water resources
- MMWD representative to attend agency water planning meetings

## What's new in water legislation?

- [www.cvwcc.org](http://www.cvwcc.org)
- [www.h2ouse.org](http://www.h2ouse.org)
- Mandatory reduction?
- Housing & Community Development gray water rules
- AB 49 – Feuer
- SB 261 – Dutton
- Search CA legislative information
- SB 456 – Bond funding
- AB 300
- AB 408 – Saldana (low impact)
- AB 474 – Blumenfeld
- AB 1061 – Lieu
- AB 1465 - Kind
- SB 565 – Pavley (50% recycle target)
- A participant noted that water policy in the state is chaotic and this needs to be fixed before real supply solutions can be achieved.
- Long discussion in the group about gray water and water catchment. It was suggested MMWD take the lead on developing demonstration projects.
- It was suggested that a more comprehensive look at water use, sewerage

## What's new in water legislation?

- and agricultural use be made in relation to gray water.
- If AB 49 is made into law, it needs to include simple, mandatory and measurable methods to achieve water use reductions.
- A participant made the statement that gray water and catchment are the simple solutions to our dilemma.
- MMWD's messages on its entire program (water supply, demand and conservation) have to tie together well for people to get it.