

SEWER AUTHORITY MID-COASTSIDE  
Recycled Water Committee Meeting  
AGENDA

6:00 PM, Monday, June 22, 2009

SAM Administration Building, 1000 N. Cabrillo Highway, Half Moon Bay, CA 94019

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*(Please note: The times listed on this agenda are approximate)*

1. **CALL TO ORDER / ROLL CALL** ..... (6:00)
  
2. **PUBLIC COMMENT / ORAL COMMUNICATION** ..... (6:05)  
*Persons wishing to address a matter not on the Agenda may be heard at this time*
  
3. **CLOSED SESSION** ..... (none)  
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4. **CONSENT AGENDA** ..... (6:10)  
    A. [Approve Minutes – May 26, 2009 Recycled Water Committee Meeting](#)
  
5. **OLD BUSINESS** ..... (6:15)  
    A. [Receive and File Recycled Water Articles](#)  
    B. [Review and Possibly Recommend Action on Letters from CCWD](#)  
    C. [Receive Summary Of and Discuss Alternatives For Recycled Water Project – Phase 2 - Storage](#)
  
6. **NEW BUSINESS** ..... (none)  
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7. **TOPICS FOR FUTURE COMMITTEE CONSIDERATION** ..... (6:50)  
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8. **PUBLIC COMMENT / ORAL COMMUNICATION** ..... (6:55)
  
9. **ADJOURNMENT** ..... (7:00)  
.

*NEXT: Recycled Water Committee Meeting - 6:00 p.m., Monday, June 22, 2009, SAM Administration Building unless otherwise scheduled.*

## SEWER AUTHORITY MID-COASTSIDE BOARD MEETING NOTES & GUIDELINES

In the case of an emergency, items may be added to the Agenda by a majority vote of the Board of Directors. An emergency is defined as a work stoppage; a crippling disaster; or other activity, which severely imperils public health, safety, or both. Also, items that arise after the posting of the Agenda may be added by a two-thirds vote of the Board of Directors.

All matters listed under the Consent Calendar will be voted upon by one motion. There will be no separate discussion of these items, unless a Board Director, staff member, or member of the public requests that a particular item(s) be removed from the Consent Calendar, in which case the item will be considered separately by the Board. Consent Agenda Items are expected to be routine and non-controversial. Recommended action will be taken at the beginning of the meeting with or without discussion.

Any writing that is a public record and relates to an agenda item for an open session of a regular meeting that is distributed to the Board less than 72 hours prior to the meeting, is available for public inspection, during normal business hours, at the District office, the address of which is set forth above.

Board meetings are accessible to people with disabilities. Upon request, this agenda will be made available in appropriate alternative formats to persons with a disability. Request for a disability-related modification or an accommodation in order to participate in the public meeting should be made to Jeannette L. Tracy at (650) 726-0124 2 (two) days in advance of the meeting.

Copies of individual agenda items may be obtained at the Sewer Authority Mid-Coastside Administration Building, located at 1000 North Cabrillo Highway, Half Moon Bay, California after 9 a.m. by contacting Jeannette L. Tracy, Supervisor of Administrative Services at (650) 726-0124, ext. 130 on the Friday preceding the Board meeting.

Materials presented to the Board as part of testimony that is to be made part of the record must be left with the Recording Secretary prior to the meeting start time. These include photographs, slides, charts, diagrams, etc. Anyone intending to make a presentation using slides, overheads, computer graphics, or other media should coordinate with Jeannette L. Tracy, Supervisor of Administrative Services at 650-726-0124 ext. 130 two (2) days in advance of the meeting.

Some Board members may attend a meeting by teleconference. At any time during the regular session, the Board may adjourn to a closed session to consider litigation, personnel matters, or to deliberate on a decision to be reached based on evidence introduced in a hearing. [Government Code section 11126(a), (d) and (q)]

Meetings of the Sewer Authority Mid-Coastside (SAM) Board normally are held on the fourth Monday of each month in the SAM Administration Building located at 1000 North Cabrillo Highway, Half Moon Bay, California 94109. They are scheduled to begin at 7:00 p.m. Meetings held at other locations will be noticed to the public at SAM's regular posting place, located outside the SAM Administration Building at 1000

North Cabrillo Highway, in Half Moon Bay, CA.

At the Public Comment/Oral Communication section of each agenda, persons may speak on matters within the Board's jurisdiction that are not specific agenda items. Specific agenda items may be addressed by the public following discussion by the Board. The Board welcomes comments at the meeting. Comments should be kept to three (3) minutes max time.

<i>Title</i>	<i>Name</i>	<i>Representing</i>
Chair		
Vice Chair	Marina Fraser	City of Half Moon Bay
Interim Treasurer / Secretary	Ric Lohman	Granada Sanitary District
Director	John Muller	City of Half Moon Bay
Director	Scott Boyd	Montara Water and Sanitary District
Director	Jim Harvey	Montara Water and Sanitary District
Director	Leonard Woren	Granada Sanitary District
Alternate Director	Paul Perkovic Kathryn Slater-Carter	Montara Water and Sanitary District
Alternate Director	Matthew Clark	Granada Sanitary District
Alternate Director	Naomi Patridge	City of Half Moon Bay
General Counsel	James L. Copeland	Sidley Austin, LLP
Manager	John F. Foley III	Sewer Authority Mid-Coastside
Supv. of Admin Svcs.	Jeannette L. Tracy	Sewer Authority Mid-Coastside
Technical Svcs. Supv.	Tony Pullin	Sewer Authority Mid-Coastside

SEWER AUTHORITY MID-COASTSIDE  
Staff Report

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**Subject / Title**

Review and Approve Minutes of the May 26, 2009 SAM Recycled Water Committee Meeting

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**Staff Recommendation:**

Review and Approve Minutes of the May 26, 2009 SAM Recycled Water Committee Meeting

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**Fiscal Impact:**

None.

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**Discussion/Report:**

Attached please find the Minutes of the May 26, 2009 SAM Recycled Water Committee meeting for your review and approval.

**MINUTES**  
**SAM RECYCLED WATER COMMITTEE (RWC) MEETING**  
**May 26, 2009**

**1. CALL TO ORDER:** The meeting was called to order at 6:05 p.m. at the SAM Administration Building, located at 1000 N. Cabrillo Highway, Half Moon Bay, CA.

**ROLL CALL:** Present: Fraser, Boyd, Lohman  
Absent: None  
Alternate Present: None

**PRESENT:** Manager Foley, General Counsel Copeland, Recording Secretary Turbay.

**2. PUBLIC COMMENT/ ORAL COMMUNICATION - None**

**3. CLOSED SESSION – None**

**4. CONSENT AGENDA**

**4A. Approve Minutes – April 27, 2009 Recycled Water Committee Meeting**

Director Lohman moved and Director Fraser seconded the motion to approve the Minutes for the April 27, 2009 RWC meeting.

Lohman/Fraser/3Ayes/0 Noes. The motion passed.

**5. OLD BUSINESS**

**5A. Receive and File Recycled Water Articles**

There was no discussion regarding the recycled water articles.

**5B. Receive Report and Possibly Take Action on Draft Delegation Agreement**

Manager Foley informed the Committee that SAM has not yet received the letter from CCWD regarding the Draft Delegation Agreement.

Tanya Yurovsky of SRT Consultants addressed the Committee and summarized the recycled water project status. She reviewed the funding, the benefits, coordinating with Ocean Colony Partners, and the next steps for the recycled water project. A discussion ensued. The Committee directed Staff to meet as soon as possible with CCWD to address the miscommunications that were discussed at the May 19 CCWD Board meeting. Director Boyd suggested that staff give CCWD a copy of all the SAM recycled water committee meeting minutes so that both SAM and CCWD recycled water committees will be aware of each others' discussions on the project.

**5C. Receive Summary of and Discuss Alternatives for Recycled Water Project – Phase 2**

Manager Foley stated that at the last SAM Board meeting, Director Lohman had suggested that the Recycled Water Committee start discussions on Phase 2 of the recycled water project. Manager Foley discussed the scope of and various options for recycled water projects. These options were based on Carollo Engineers and SRT Consultant studies.

Tanya Yurovsky of SRT Consultants discussed some of the other aspects of Phase 2. She discussed the project paying for itself, sizing, and the amount of water needed by other customers. A discussion ensued. Director Lohman requested staff to do a report entailing what is currently known on recycled water storage.

**6. NEW BUSINESS - None**

**7. TOPICS FOR FUTURE COMMITTEE CONSIDERATION**

Director Lohman suggested that Phase 2 needs to move forward and CCWD should participate in the meetings to incorporate any new ideas they might have to move the project further along.

**8. PUBLIC COMMENT / ORAL COMMUNICATION**

Brian Ginna, member of the public, addressed the Board and asked them to schedule a joint meeting with CCWD for the next Recycled Water Committee meeting on June 22, 2009. Director Fraser thanked Mr. Ginna for his comments.

**9. ADJOURNMENT**

The meeting was adjourned at 6:42 p.m., to the next SAM RWC meeting scheduled for June 22, 2009, at 6 p.m., in the SAM Administration Building, located at 1000 North Cabrillo Highway, Half Moon Bay, CA.

Respectfully submitted,

John F. Foley III  
Manager

## SAM Recycled Water Articles

- Marina agreement enables recycled water development
- Rethinking water consumption
- Plumbing Retrofit Bill Moves to Assembly
- The Dry Garden: L.A. offers rebate for ripping out your lawn
- Recycling 'Gray Water' Cheaply, Safely
- Muscling in on gray water
- NWRI White Paper on the Status of Advancing Water Recycling in California Now Available
- Thirsty: Desalination Plants and Water Needs in California

June 18, 2009

## Marina agreement enables recycled water development

Last week, the Marina Coast Water District and the Monterey Regional Water Pollution Control Agency signed a joint agreement setting the stage for the Regional Urban Water Augmentation Project.

The first component of the RUWAP will be recycled water to meet non-potable water demand at the former Fort Ord.

Desalinated water would be provided in the future to complete the RUWAP.

In addition to the Fort Ord area demands, 300 acre-feet of recycled water would be set aside for the Monterey Peninsula.

Recycled water produced at MRWPCA's treatment plant will be piped down General Jim Moore Boulevard to Del Rey Oaks.

This distribution system will be constructed and operated by MCWD. From there, other peninsula communities would be able to tie into the system.

The recycled water distributed by the RUWAP will be used for irrigation and other non-potable applications such as the existing golf courses in Seaside.

Approval of the joint RUWAP agreement was facilitated by the recently formed Ad-Hoc Water Committee which included MRWPCA, MCWD and Monterey County Water Resources Agency.

Efforts are underway to obtain funds for construction of the recycled water system. A combination of stimulus grants, new Federal funding, and loans will be utilized for project financing.





## Rethinking water consumption

06/11/2009

The state's drought condition is labeled as severe, according to the California Department of Water Resources Web site. From San Francisco to San Diego, local newspapers have been publishing one article after another on the state's growing water problem. On television, there have been numerous water conservation commercials appealing to the public to rethink water usage. In fact, one commercial shows a man making phone calls, shaving his face and doing a variety of other activities in the shower. The point — turn off the water when you aren't using it!

After seeing the commercial of the man in the shower, I felt obligated to ask a friend how much time he spent in the shower. He said that he had a full routine and that, until there was a drought emergency, he wasn't going to change his habits.

Speaking to a colleague, I was informed about a man who routinely waters a small patch of grass until the point it begins to flood onto the street.

There is an old adage that says, "You don't know what you have until it's gone."

Americans are spoiled. We read about drought issues, and then disregard conservation requests. We continue our routine as if the rules don't apply to us. But just as we have seen the state budget dry up, the same will happen with our water supply if we don't start making changes now.

Fortunately for this current situation, the changes don't have to be drastic. Instead of a grassy lawn that needs thousands of gallons of water a year to stay green, we could plant native flora — California, in its natural setting, has always been a rather dry state. Instead of a 20 minute shower, stop up the bathtub or sink while you shave and turn off the water. Instead of washing the car every week, cut back to once a month and drive a dirty car with pride — after all, this is for the well being of the environment and you are just doing your part.

Many of us, we have already made these changes. We pride ourselves on less is more — we have dirty cars, take shorter showers and have drought tolerant gardens. So what else can we do?

Think 'gray water.'

While it is prohibited to recycle water used in routine household activities in California unless a rather pricey system is installed (\$5,000 in most cases), many homeowners have taken it upon themselves to create a makeshift system that carries bathwater, dishwater and water from the washing machine to their lawns and gardens. While we don't advocate doing things illegally, the fact of the matter is that a growing number of homeowners have begun to see a drastic savings. For one Southern California resident, she has seen a savings of 100 gallons of water per week.

Arizona has set the national precedent for allowing homeowners to recycle their water with permit free systems. The only regulations — follow a set of guidelines to ensure safety and no cross contamination.

Although the future of cheap permitted gray water systems in the state of California appears to be a way's away, for those who understand the importance of conservation and our severe drought situation, gray water is the future. We need to take it upon ourselves to start advocating for new ways to save our most precious natural resource.

For more information on gray water, go to [www.graywater.org](http://www.graywater.org) or [www.npr.org](http://www.npr.org), and search for 'gray water'.

## Plumbing Retrofit Bill Moves to Assembly

Posted by [ACWA Staff](#) on 6/10/2009 3:51:06 PM. Updated on 6/10/2009 3:54:08 PM



An ACWA-sponsored bill aimed at accelerating retrofits of homes and businesses with water-efficient plumbing fixtures cleared the Senate last week and is now in the Assembly. Metropolitan Water District of Southern California and San Francisco Public Utilities Commission are co-sponsors of the bill, SB 407 (Padilla).

As amended May 20, the bill would require residential and commercial property owners to replace inefficient plumbing fixtures with water-conserving models. Inefficient fixtures include toilets using more than 1.6 gallons of water per flush, showerheads with a flow capacity of more than 2.5 gallons per minute, and faucets that emit more than 2.2 gallons per minute.

Based upon ongoing discussions with the California Association of Realtors and commercial property interests, the bill will be amended to move away from a retrofit-at-resale approach and instead require all properties, by a date certain, to replace inefficient plumbing fixtures with more efficient models. The bill would also require property owners to disclose whether non-conserving fixtures have been replaced prior to the sale or transfer of the property. It would also require retrofits as a condition of receiving a permit for major improvements or renovations.

Exemptions are provided for historical buildings and properties for which retrofits are not technically feasible due to the age or configuration of the property.

In light of the proposed amendments, the author anticipates the Realtors and business property interests will withdraw their opposition. The bill must clear the Assembly policy committee by the July 10 deadline.

## [The Dry Garden: L.A. offers rebate for ripping out your lawn](#)

07:27 PM PT, Jun 10 2009

As if broken sprinklers, polluting mowers or the simple desire to conserve water weren't enough, the Los Angeles Department of Water and Power is giving its customers more motivation to let go of their lawns. Single-family homes can get a rebate of up to \$2,000, assuming you meet criteria for the Residential Drought Resistant Landscape Incentive Program.

The program was announced in The Times' California Briefing last week. L.A. at Home's drought-tolerant-gardening columnist, Emily Green, offers some additional details as well as some context: Though the program is a good idea, she says, L.A. is still playing catch-up to places such as Las Vegas, which offered its residents 50% more money to do the same thing.

Check out Green's full column after the jump.

-- Craig Nakano

*Photo credit: Debra Lee Baldwin*

By Emily Green

Fast on the heels of the new watering ordinances that took effect June 1, the Los Angeles Department of Water and Power has begun a cash-for-grass program. Single-family homes served by the DWP will be eligible to receive \$1 for every square foot of turf that they replace with less thirsty alternatives.

For years Southern California water managers paid scant attention to outdoor water conservation. Then they saw stunning savings achieved in Nevada. According to the Southern Nevada Water Authority, in the last decade, Las Vegas has removed more than 125 million square feet of grass, saving 7 billion gallons of water a year. That's almost one-tenth of Southern Nevada's annual water supply.

Here in Los Angeles, the new Residential Drought Resistant Landscape Incentive Program is not region-wide. It applies only to Department of Water and Power customers, and it's not the \$1.50 per square foot that Vegas residents receive. Any other catches?

The agency won't be buying dead lawn, warns DWP spokeswoman Jane Galbraith. If you are lucky enough to live where the lawn is already dead, the water company takes the view that nature has already done the right thing for you.



But if you have 200 to 2,000 square feet of lawn that is doing little more than consuming water, then the DWP is willing to pay you to get rid of it. That includes the forlorn strip of lawn between the sidewalk and curb known as the "parkway."

Opening the DWP program to parkways makes good sense because watering with sprinklers is next to impossible there without creating runoff. Under the new drought ordinances, creating runoff is now illegal.

So instead of waiting for an inevitable ticket, homeowners can receive a rebate. The hardship is minimal: Cap the sprinklers, dig out the lawn and replace it with something smarter.

The single greatest challenge is choosing that something smarter. The rebate program requires that you have a plan for the successor landscape. Acceptable turf substitutes include drought-tolerant plants, mulch and permeable ground cover.

The department will steer participating homeowners to various gardening classes sponsored through [BeWaterWise.com](http://BeWaterWise.com) to help guide homeowners through the conversion process. You will find listings of Southern California dry gardening classes on this blog's event calendar and on my website, [Chance of Rain](#).

Whatever successor landscape you choose, the intent of the cash-for-grass program is to reduce the 50 to 90 inches of water routinely applied to turf every year. Drought-tolerant substitutes may require just 15 — in keeping with L.A.'s average annual rainfall.



## Recycling 'Gray Water' Cheaply, Safely

by Nancy Farghalli

*Morning Edition*, June 8, 2009 · A severe drought out West continues to threaten farms, fish, and water supplies to nearly everyone. Tighter water restrictions went into effect this month in much of Southern California, and the federal government issued a directive last week that could cut water delivery to farmers and residents in the state by 7 percent.

But some believe California is missing out on a key conservation method that's already available.

Susan Carpenter breaks California state plumbing code three times a week. Her accomplice is her washing machine. Rinse water from washing machines usually goes into the sewer — so what if you could recycle it? That's what Carpenter does, using it to water plants at her Southern California home.

"The washing machine is filling up with water, and it is going through its normal process of washing clothes," she says. "And after about eight minutes, you'll start to hear it spin and we will run outside and see it squirting through the tubes."

The "it" is gray water, which looks like its name — a bit gray, a bit cloudy. After all, it's the wastewater from bathtubs, sinks and washers.

The gray water lapping up Carpenter's dirty clothes will soon be lapped up by her passion fruit trees — and no, the fruit won't taste like Tide. She uses a special type of detergent that doesn't contain salt or boron, compounds which dehydrate plants.

"I spent about \$350 on my system, and what I've saved in water is about a 100 gallons a week," she says

So how does Carpenter's system work? She's hooked up a valve that drains the water outside to a garden. Roughly one million residents in California use a similar type of gray water contraption. Some of them have been trained by Laura Allen, the co-founder of Gray Water Guerillas in Oakland.

"Currently, the codes are very restrictive and basically make sustainability illegal," Allen says. "So the kinds of systems we do — safe, simple, economical — ... are accessible to most people."

California's code states that a legal gray water system needs to be nine inches under the ground. Those get-ups can be prohibitively expensive, costing up to \$5,000 dollars. In Los Angeles, there are fewer than 10 residential permits. Gray water advocates want California to follow Arizona's model.

Arizona is the nation's leading example of permit free systems. There, a resident can use gray water as long as they follow a set of guidelines to ensure safety and no cross contamination.

Allen says this "frees up homeowners to be able to know they are doing the right thing."

What are the right guidelines for gray water? Sybil Sharvelle, an assistant professor at Colorado State University, is working on a five-year study that looks at the effect of gray water on soil quality and plant growth. She gets lots of requests from people looking for the results of the study.

"Most of the calls that I get are actually not just wanting a hint," Sharvelle says. "People are really applying pressure to get results and have us publicize the results that we have."

Those results won't be released until 2011, but California lawmakers aren't waiting. State Sen. Allen Lowenthal says California's Department of Housing and Community development is trying to come up with new rules.

"The emphasis is — as long as it is safe — to try to use gray water as a conservation tool in California and that is really where we are moving," Lowenthal says.

Back at Carpenter's house, the soapy water from the spin cycle has traveled through a PVC pipe and is shooting out of a black tube outside. Carpenter points out that it's sort of like cannibalism, "like whatever is you that is left gets eaten up by these microorganisms."

That could be the sign of what's to come as Californians and others in the West learn to grapple with new ways to use less water.

<http://www.npr.org/templates/story/story.php?storyId=105089381>



## Muscling in on gray water

### Novel ideas to reuse wastewater generated from household sinks, washing machines and baths or showers

By SUSAN CARPENTER  
Los Angeles Times

Updated: 06/06/2009 01:36:54 AM PDT

Even before Los Angeles' new water restrictions were scheduled to kick in, I'd been using a bucket to haul the murky bath waters from my dirt-encrusted 6-year-old's nightly scrub-down into my garden. I was on a mission to save as much water as possible, and the 30 gallons he was defiling every night seemed like an excellent resource.

The upside is I now have a lower water bill — and a raging pair of biceps, just in time for summer! The downside: The routine is a total drag.

Well-intentioned as it was, my enthusiasm for hauling so much water, bucket by sloshy bucket, was on the wane when I heard from the Australian company, Greywater Recycler International. Some genius in the land down under had invented something called an Enviro Water Boy, which promised to recycle my bath water, also known as gray water, without having to futz with any plumbing. It sounded ideal. Clearly, I needed this thing — I wanted this thing — even though I had a hard time conceiving how it would work.

Gray water is the wastewater generated from household sinks, washing machines and baths or showers. Already, I'm sort of a maniac for reusing it. It just makes sense to me, especially in desert areas during a drought. It is, however, largely illegal in California, which requires an elaborate and expensive system of plumbing, pumps and filters for systems to be legit. Although a new gray water code is being hammered out in the state capital and probably will legalize laundry water diversion systems like the one I (illegally) installed at my house last year, it only addresses one source of household gray water. It also won't go into effect until January 2011.

We're in a drought right now — a drought that may continue — so I'm trying to do my part by reducing my use of imported water and reusing as much as possible. Outdoor irrigation accounts for about 40 percent of a household's water use, according to the Los Angeles Department of Water and Power. The other half comes from inside the home, so it would make sense that whatever water can be salvaged from inside can be used for outdoor plants.

The top water hogs in a home: the toilet (which accounts for 26.7 percent of daily use), laundry appliance (21.7 percent), shower/bath (18.5 percent), faucets (16.7 percent) and dishwasher (1.4 percent), according to the Web site [H2Ouse.com](http://H2Ouse.com). I have low-flow and composting toilets, an unsanctioned gray water system for my laundry and a pan in my kitchen sink to catch the water I use from hand-washing my dishes.

The shower and bath were next on my list. In fact, they'd been on my list since autumn, when I purchased the valves and other plumbing I needed to divert the water from the sewer and into my landscape instead. A gray-water system for a bathtub or shower is a lot trickier than a washing machine, I learned when I crawled into the cramped, spider-web-ridden underbelly of my 1919 bungalow and checked out the maze of rusty pipes and fittings that needed to be hacksawed, removed and reconfigured. I don't like spiders. I'm not that handy. And the licensed plumber I approached about doing the job for me eventually stopped returning my calls.



That left me with the most basic of options: a bucket. A gallon of water weighs 8.3 pounds. An average bath uses about 30 gallons. Each night, it took me about 15 trips and twice as many minutes to complete this laborious task.

Until my Enviro Water Boy showed up. It's a large plastic contraption that looks something like a city-issued trash can, only smaller. It's equipped with a handle, two wheels and two plumbing fixtures with hoses protruding from the front — one for sucking (and filtering) the water out of a bath or shower stall, the other to pump it out of its holding tank.

It's like a bathwater vacuum, only there's no cord. Plugging it into the wall for a few hours juices the battery, which runs the inlet and outlet pumps and lasts, in my experience, about a week even when used twice a day.

It's pretty ingenious, but it's also quite heavy. The model I've been sampling holds 16 gallons. That's a short shower by American standards. Still, it's a lot of liquid to haul around. When full, the water alone weighs 135 pounds. Add 65 pounds for the device itself, and you feel like you're wheeling around a stack of tires. It's a little unwieldy, especially for someone like me, who needs to navigate three steps to get the Enviro Water Boy outside and to my trees. But it's doable.

And far preferable to buckets.

Using the Enviro Water Boy, I continued the workout regimen I'd begun with my little silver pail, only the process was a lot easier and less time consuming. It isn't without its glitches, though. The Enviro Water Boy is supposed to turn itself off when it gets to capacity, but mine doesn't. The first time I used it, it sucked the water up the hose, into its cargo hold ... and onto my floor when the tank was full. When I tilted it back onto its wheels to roll it outside, the seam that's supposed to keep the water inside broke, which led to further sloshing. And the sprayer hose that draws water out of the Enviro Water Boy popped off after a mere three uses, requiring me to add a hose clamp to keep it in place.

Even with its flaws, I'm still a huge fan. None of its problems interfered with its operation, which is otherwise easy. And it doesn't cost that much: \$299 for the 8-gallon version, \$359 for 16 gallons, \$399 for 24 gallons, and that includes shipping from Australia. I asked the company's chief executive what guarantee or service is available for this product, as it doesn't have distribution or a support system in the U.S. There's a one-year replacement warranty, he told me. If anything goes wrong, customers send the unit back and the company ships a new one. A service kit is available for the battery. The pumps will hold up for at least 2,500 hours, the company says.

Like my laundry rig, which required me to switch to a vegetable-based, salt-free detergent so I wouldn't destroy my plants, the Enviro Water Boy has prompted me to change my bath products. The salon shampoos and conditioners I've been using contain a largely unpronounceable list of things that can't possibly be good for the trees whose produce I plan to eat. Methylchloroisothiazolinone, anyone?

I had changed to Dr. Bronner's pure castile soap, but I recently switched my shampoo to Alaffia, an obscure brand I found at Whole Foods that was the most natural product I could find. So far, my plants seem happy. And so does my pocketbook and my conscience.



## NWRI White Paper on the Status of Advancing Water Recycling in California Now Available

A new White Paper published by the National Water Research Institute (NWRI) and co-sponsored by WaterReuse California highlights the need for more effort in advancing the use of recycled water in the State of California.

Entitled *Views on the Status of "Water Recycling 2030: Recommendations of California's Recycled Water Task Force,"* the NWRI White Paper provides an overview of the progress made in the last 6 years to address the challenges associated with implementing water recycling projects. It concludes that, while some progress has been made, further and significant effort is necessary to increase the use of recycled water throughout the State.

Progress was determined based on whether recommendations made in 2003 by the California Water Recycled Task Force had been implemented and, if so, what level of success had been achieved in moving water recycling forward in the State.

These Task Force recommendations come from the 2003 report, *Water Recycling 2030: Recommendations of California's Recycled Water Task Force*, which was developed by the California Department of Water Resources, State Water Resources Control Board, and California Department of Public Health to determine the regulatory, economic, and societal issues affecting the implementation of water recycling projects. Twenty-six issues were identified (such as increasing state funding for water recycling projects), and recommendations were made on how to best address them.

According to the NWRI White Paper, the importance of these 26 issues has changed since 2003, with the new top five priorities being:

- Communication with the public.
- State leadership and advocacy.
- Regulatory consistency.
- Funding.
- Public support.

In addition, the following five new issues were identified:

- Constituents of emerging concern (trace levels of pharmaceuticals and personal care products in water supplies).
- Anti-degradation (protecting water quality conditions while supporting the beneficial uses of water resources).
- Salinity management (controlling salts and nutrients in our ground and surface water resources).
- Indirect potable reuse (augmenting drinking water with recycled water).
- Better information on water recycling in the State.

The NWRI White Paper also provides a list of recommended steps to moving forward. For example:

- Create a “report card” to track the status of these issues.
- Maintain the visibility of recycled water to have success with future water bonds.
- Work together with non-governmental organizations and the Department of Public Health regarding chemicals of emerging concern and the safety of recycled water.

Also of note, of the 26 issues identified by the Task Force, only two have been fully addressed since 2003. These issues include changing symbol requirements for recycled water in the California Plumbing Code and publicizing funding availability for outreach regarding water recycling.

As for the remainder of the issues, only nine had been partially implemented. Challenges to fully addressing these issues include lack of leadership (often, at the state level), the need for legislation changes, and lack of funding, among others.

The NWRI White Paper was prepared by Margaret N. Nellor, P.E., an environmental engineer with expertise in managing recycled water research studies. It can be downloaded at [www.nwri-usa.org/epublications.htm](http://www.nwri-usa.org/epublications.htm).

For questions or to further discuss the outcomes of this paper, please contact Jeff Mosher, Executive Director of NWRI, at (714) 378-3278 ([jmosher@nwri-usa.org](mailto:jmosher@nwri-usa.org)) or contact Dave Smith, Managing Director of WaterReuse California, at (916) 669-8401 ([dsmith@watereuse.org](mailto:dsmith@watereuse.org)).

JUNE 4, 2009, 12:05 PM ET

## Thirsty: Desalination Plants and Water Needs in California

The debates over what to do about water and electricity have a lot in common. There are ardent supply-siders who say we need to produce more of the stuff, and there are equally devoted demand-side types who stress conservation and efficiency.

It's not an academic question when it comes to water. In Spain, the Middle East, and Australia, thirsty governments are building big desalination plants to turn salty seawater into drinking water. One big downside is that the process is expensive—and uses a lot of energy.



Ground zero for the Marin County desal plant

The debate is coming to a head in California, too, which is facing its own water crisis. Plans are afoot to build as many as 20 desalination plants across the state. At issue is how to meet an expected increase in water use even as traditional water sources, from rivers to reservoirs, are getting drier.

Take Marin County, near San Francisco. Local officials, already faced with a water-supply deficit, are [proposing](#) a new desalination [plant](#) to head off an even bigger deficit in the future, in addition to water-conservation measures. The reasoning? Even conservation measures will only tackle half of the county's expected water deficit in 2025—making a new source of fresh water vital.

Critics of the plan say building new desalination plants are the worst way to meet water needs—from both an economic and environmental standpoint. Food and Water Watch, a non-profit group, released today a [detailed critique](#) of the Marin County plan. (The group took aim at desalination in general [earlier](#) this year.)

In a nutshell, the group says, getting water from desalination plants is more expensive than any of the alternatives—things like reducing irrigation waste, fixing pipeline leaks, and making toilets and laundry rooms stingier users of water.

FWW estimates water from the Marin County plant would cost about \$2,900 per acre foot a year—about ten times more costly than getting water through new efficiency measures like better toilets and washing machines.

Powering the desalination plants also requires a lot of energy to force millions of gallons of seawater through a membrane to strip out salt and other impurities. A new desalination plant could almost double Marin County Water Authority's electricity use, the report found.

Even [proponents](#) of desalination concede it's "obscenely" expensive compared to other alternatives. Many [water-use economists](#) also tend to frown on the rush to desalination, and figure there are better first steps to solve the water puzzle, such as putting a pricetag on water consumption.

Just like the battle over how to meet America's future electricity needs pits proponents of big new power plants against folks who think energy efficiency is the answer, the fight over how to keep the taps open will likely provide plenty of fisticuffs in the years to come.