

Looking Ahead: The Future of Urban Water Conservation

SELECT COMMITTEE ON REGIONAL APPROACHES TO
ADDRESSING THE STATE'S WATER CRISIS

March 14, 2012

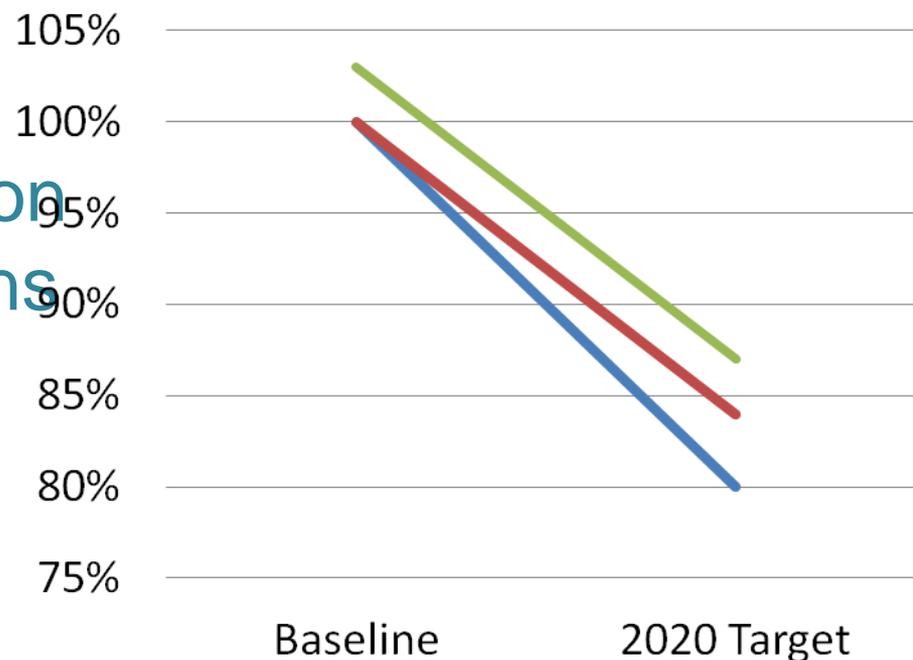
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Natural Resources Defense Council



Observations from UWMP Reviews

Impacts of:

- 2010 Census Data on Baseline Calculations



— 20x2020 Goal

— 2010 UWMPs (2000 Census Data)

— Illustration of Potential Change to Water Use Calculations using 2010 Census Data

Water Savings Potential in Southern California is still HUGE

- Pacific Institute (2003) estimated potential savings in Southern California at 2.3 million acre-feet (MAF)
- DWR (2010) estimates potential savings and reuse in Southern California at approximately 1 million acre-feet (MAF)*

* Estimate did not include enhanced conservation rate structures or implementation of revised Model Landscape Ordinance



Conservation Options that are Here Today

- Conservation pricing
- Multi-family submetering
- Advanced metering infrastructure
- More accurate meters
- Water loss reduction
- High efficiency washers
- Pool covers

2012

Source: Vertex42.com

January							February							March							
Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa	
1	2	3	4	5	6	7				1	2	3	4						1	2	3
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15	16	17	18	19	20	21	12	13	14	15	16	17	18	11	12	13	14	15	16	17	
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April							May							June							
Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa	
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July							August							September						
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October							November							December						
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December						
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30	31					

Conservation Pricing for Water & Wastewater Service

- 70% of California households pay flat rates for sewer service
- CUWCC Urban BMP requires volumetric rates
- Volumetric pricing statewide could save
 - ≈ 150,000 AF by 2020 and
 - ≈ 300,000 AF long term
- An NRDC factsheet and FAQ are available at <http://www.nrdc.org/water/volumetric-pricing.asp>



Volumetric Pricing for Sanitary Sewer Service in California Would Save Water and Money

Volumetric sewer pricing is the simple concept of billing a customer for the volume of water discharged to the sewer based on the water meter reading—water the customer actually uses as opposed to a flat charge. The less water a customer uses, the less the bill will be. As a result, wastewater volumetric rates provide important incentives for water efficiency to customers and offer a more fair pricing structure. According to a study commissioned by the Natural Resources Defense Council (NRDC), converting flat-rate residential customers to volumetric rates could eventually save California nearly 100 billion gallons of water per year, a significant benefit to both water suppliers and wastewater treatment agencies.



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Multi-Family Submetering

- Potential Water Savings
 - 2004 Aquacraft Inc. study showed water savings of 15.3% for submetered properties.
 - Other studies show water use in submetered rental properties to be 18% to 39% less than other rentals.
- Barriers
 - Owners use water bill to levy administrative fees.
 - Lack of tenant protections for infrastructure under control of property owner.
 - HOAs don't want to take on the billing for water service to individual units.



**Submetered
apartments in
Santa Monica**

Water Loss Reduction

One way to locate leaks



A better way . . .



SCE consultant's report (2009):

- 870,000 AF lost to leaks in California statewide
- 350,000 AF could be cost-effectively eliminated

Swimming Pool Covers



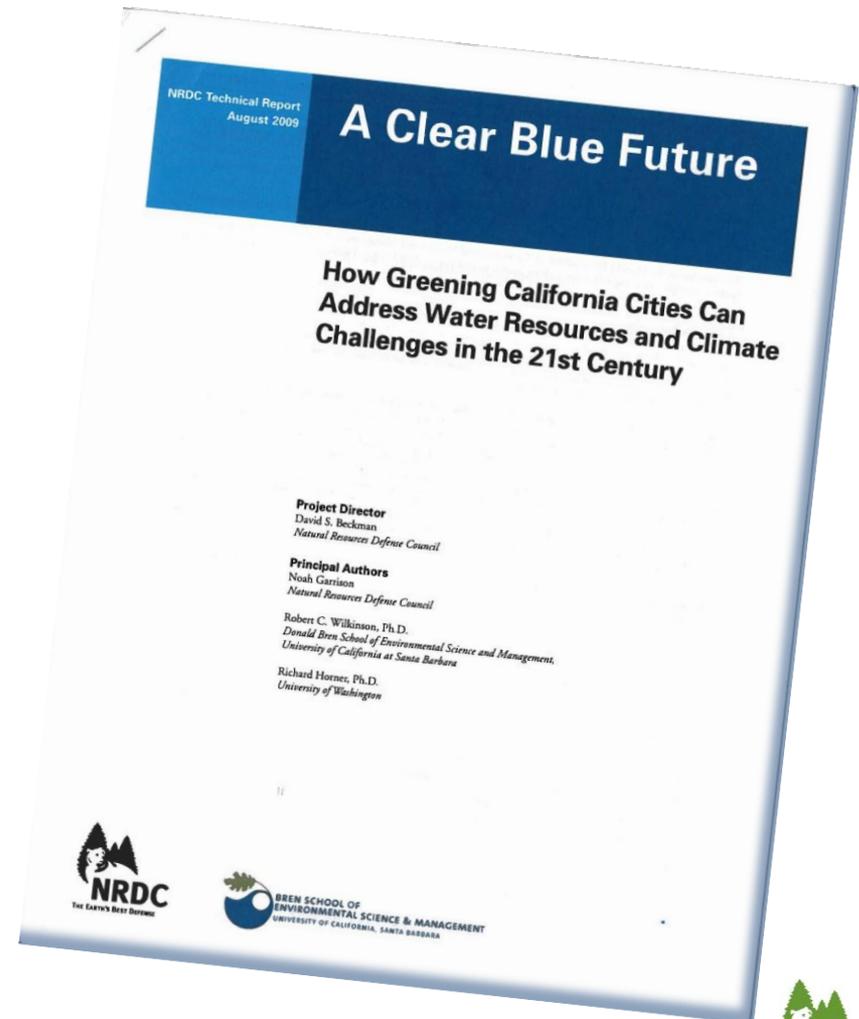
A typical backyard pool in LA loses nearly 40,000 gallons a year in evaporation



Pool covers can reduce water loss from the 750,000 swimming pools in Southern California to save $\approx 85,000$ AF

Alternative Sources of Water

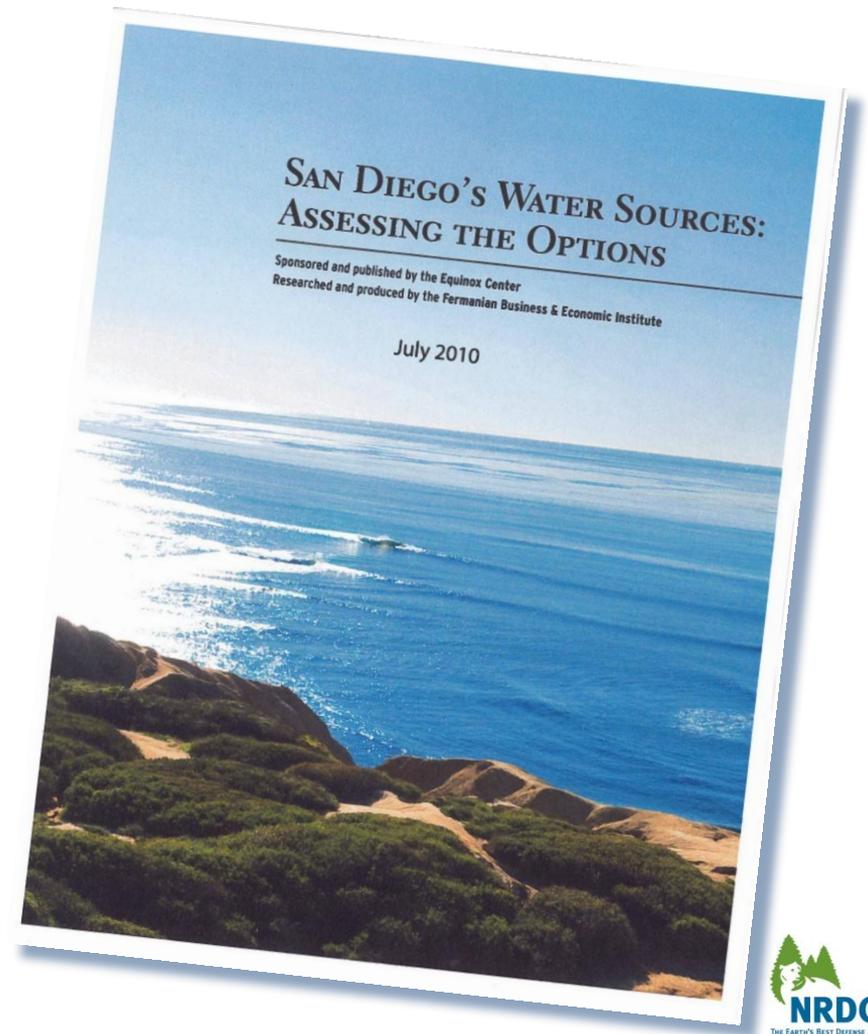
- Graywater treatment and reuse
- Rainwater capture and reuse
- Stormwater recharge
- NRDC & UCSB report *A Clear Blue Future* estimates savings from LID of between 194,500 and 342,000 AF per year in Southern California by 2030



Efficiency is still a Bargain

For San Diego, comparing 7 water source options, **efficiency** is –

- Lowest cost in 2010
- Lowest projected rate of real cost increase through 2030
- Lowest cost in 2020 and 2030



Future of Urban Water Conservation

As the cost of water increases...



a broader range of conservation measures will become cost-effective.

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