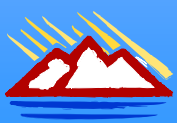


Environmental Values in the Water Industry



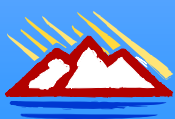
Bart Miller

Water Program Director, Western Resource Advocates



Overview

- The Challenge
 - Increasing population and water demand
 - Growing tension over multiple water uses
- The Solution
 - Creative Solutions—A Balanced Approach
 - Satisfying water demands; while also
 - Protecting rural communities and environment



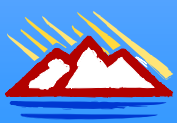
The Southwest



National Park Service



Jeff Widen



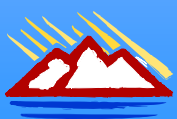
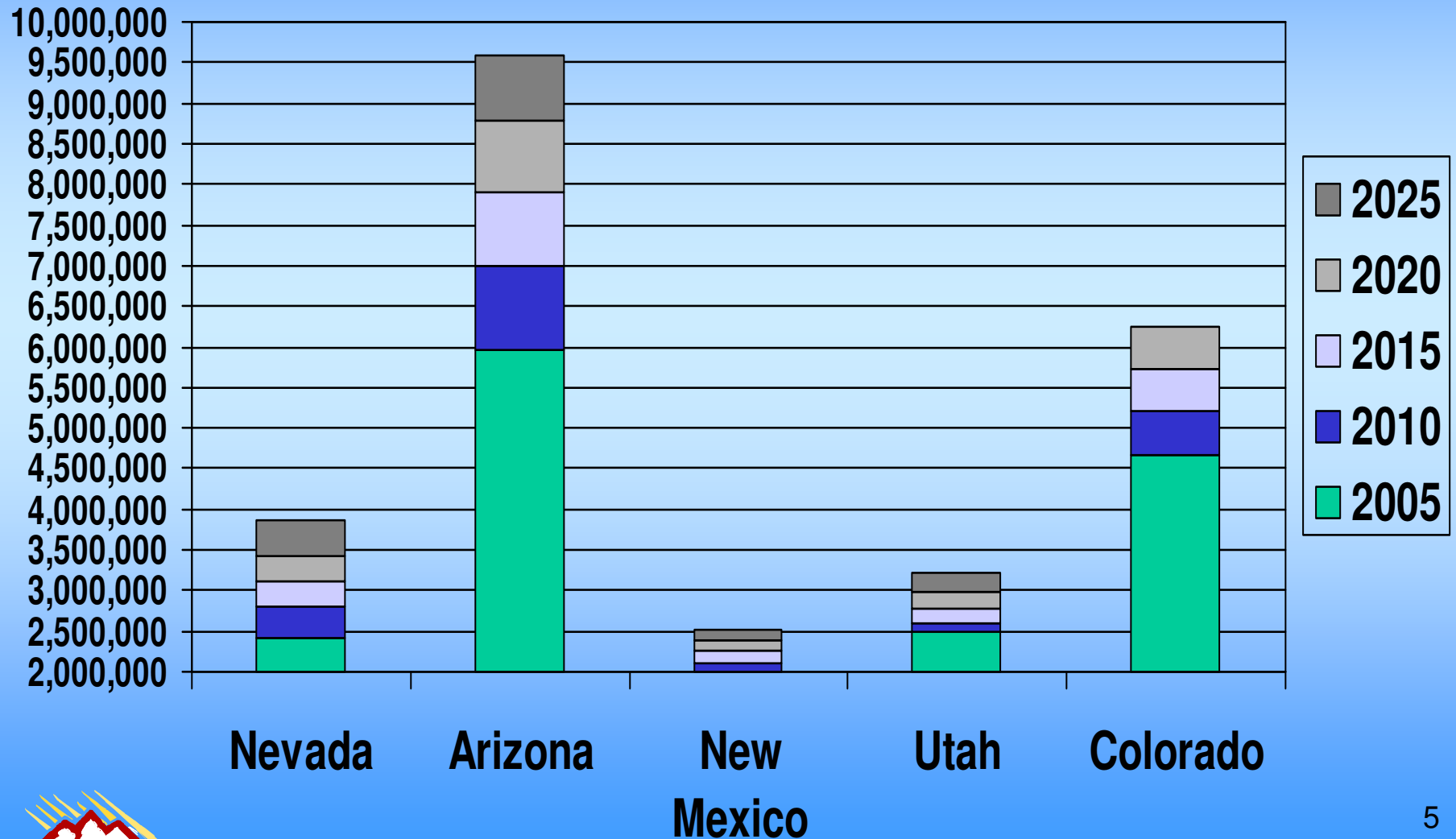
Recent Population Growth

State	% Growth 2005-2006	Estimated Population		
		July 1, 2006	July 1, 2005	July 1, 2004
1. Arizona	3.6	6,166,318	5,739,879	5,577,784
2. Nevada	3.5	2,495,529	2,332,898	2,241,700
3. Idaho	2.6	1,466,465	1,395,140	1,368,111
4. Georgia	2.5	9,363,941	8,918,129	8,746,849
5. Texas	2.5	23,507,783	22,471,549	22,099,136
6. Utah	2.4	2,550,063	2,420,708	2,378,696
7. North Carolina	2.1	8,856,505	8,540,468	8,422,375
8. Colorado	1.9	4,753,377	4,601,821	4,548,071
9. Florida	1.8	18,089,888	17,385,430	16,993,369
10. South Carolina	1.7	4,321,249	4,197,892	4,146,753

**US Census data*



Projected Population Growth 2005-2025



Result =

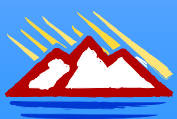


Photo by K.C. Becker



Photo courtesy John Fielder

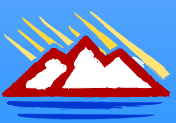
Urban/ Suburban Expansion



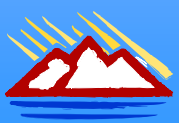
The historic water solution...



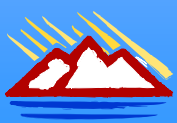
Photos by Ken Neubecker



...and its consequences

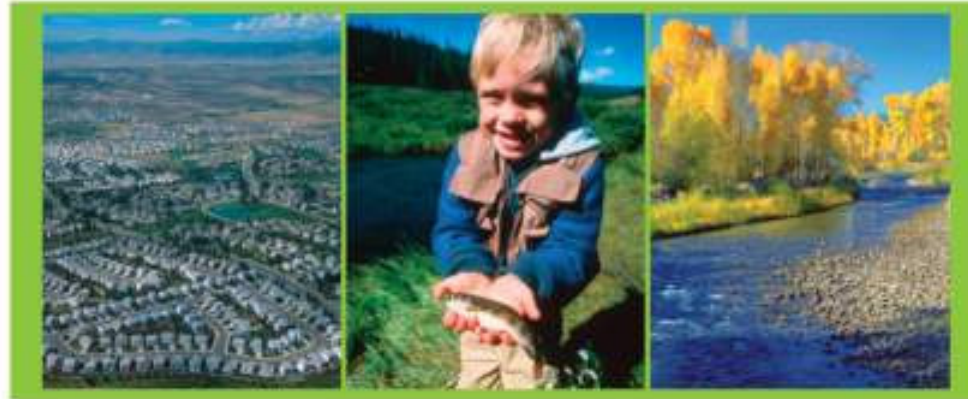


Additional Values of Water



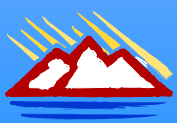
Photos by Brian Holmes, Jeff Widen & USFWS

Facing Our Future



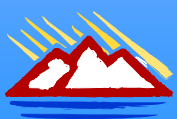
A Balanced Water Solution

- Old formula won't work--new balanced plan will:
 - Water conservation and efficient supply are top sources of new water
 - Any new water supply projects must conserve, protect, and restore rivers for environmental and recreational benefits



How We Accomplish This...

- Work directly with staff and decision makers to advocate for
 - Improved Demand Side Management
 - Innovative Supply Side Solution
 - Integrate Resource Planning
 - Cooperation Between Water Providers



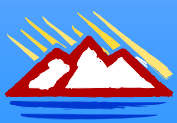
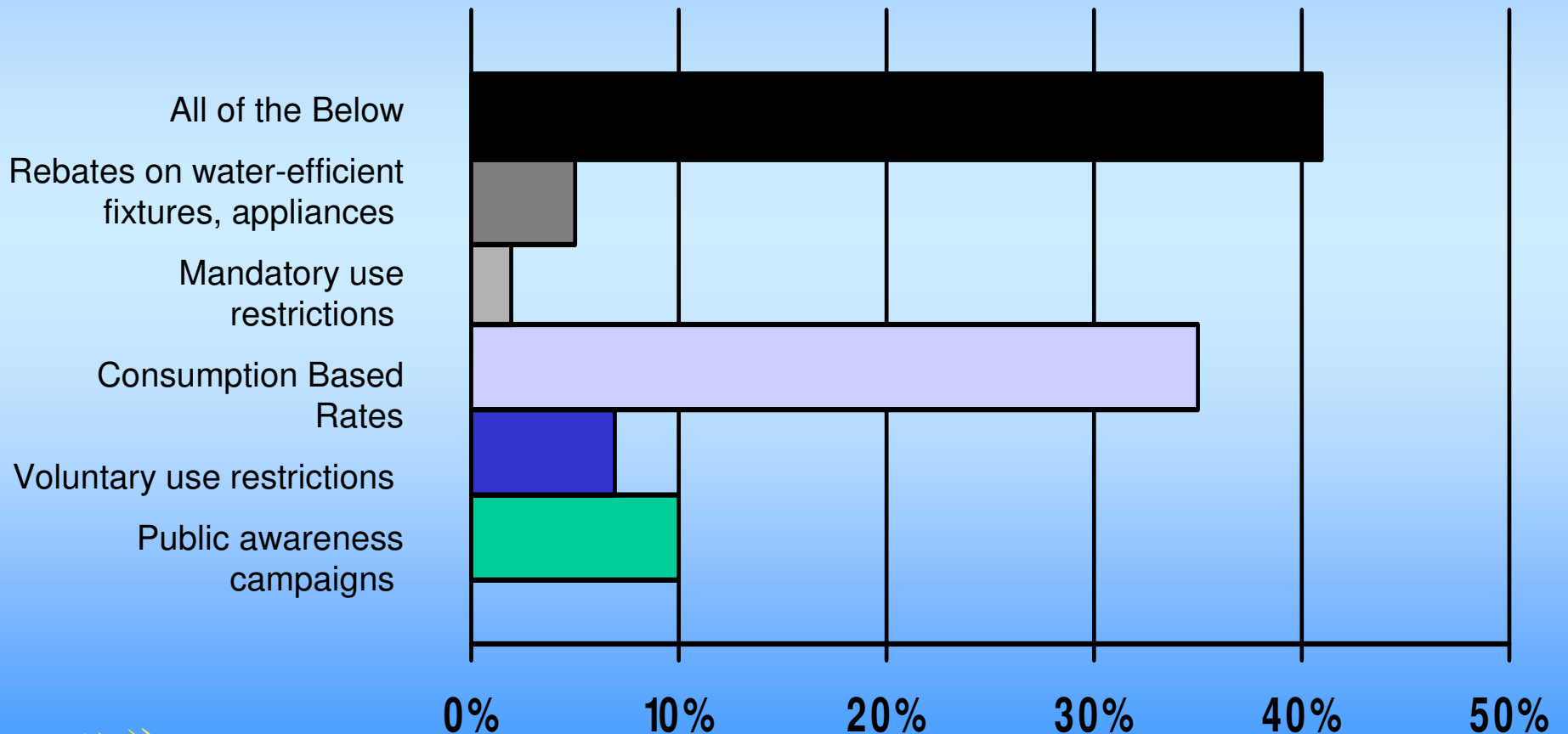
Demand-Side Efficiency

- Water Rate/Pricing Structures
 - Increasing block rates
- Permanent Rebate and Retrofit Programs
- Education & Outreach to Customers
- Ordinances, e.g.:
 - Landscape and irrigation guidelines
 - Plumbing codes
 - Subdivision covenants



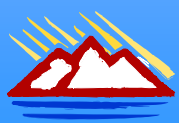
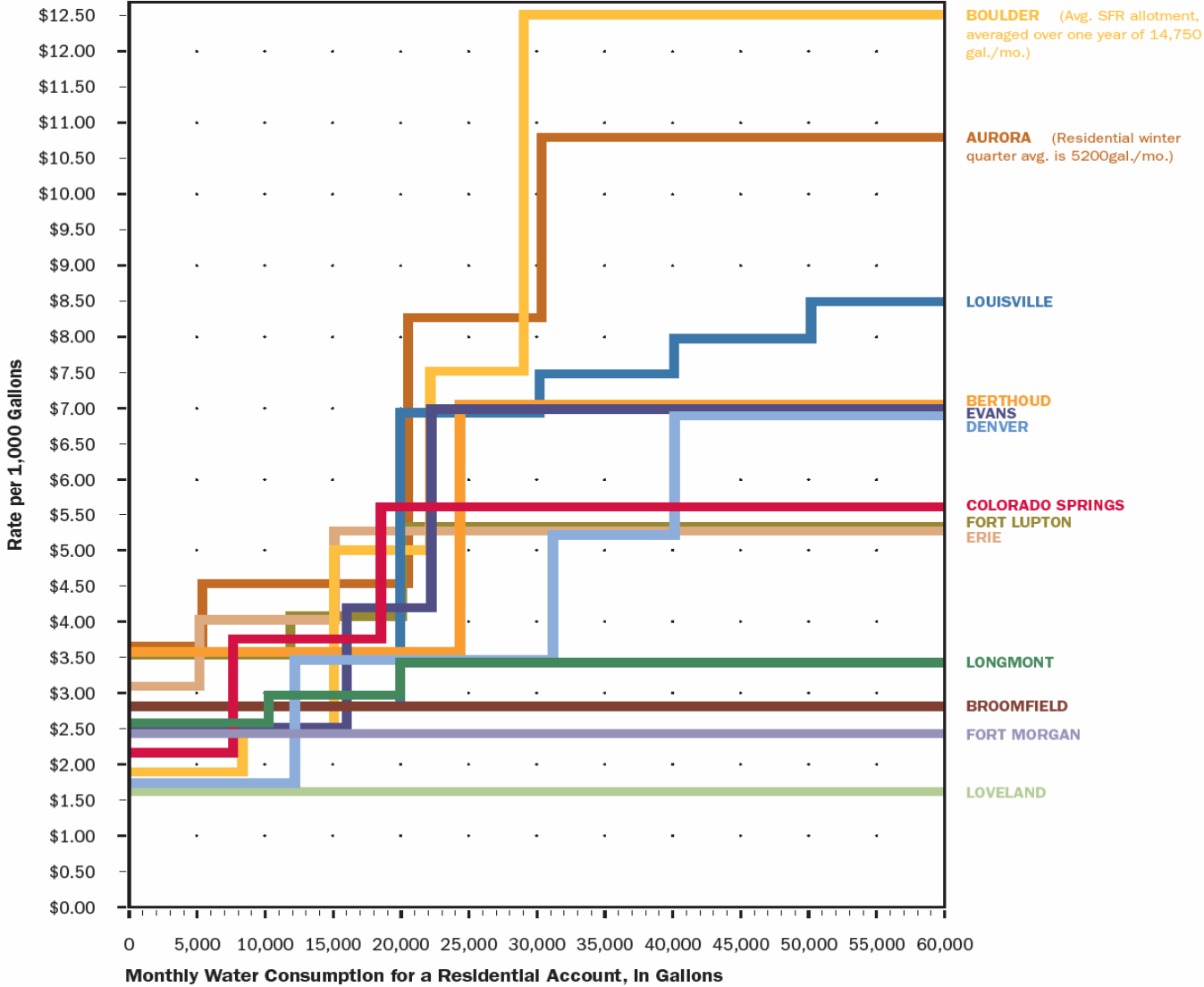
2008 AWWA Quick Poll

What's the best way to get customers to use less water?

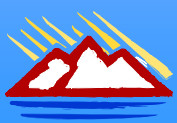
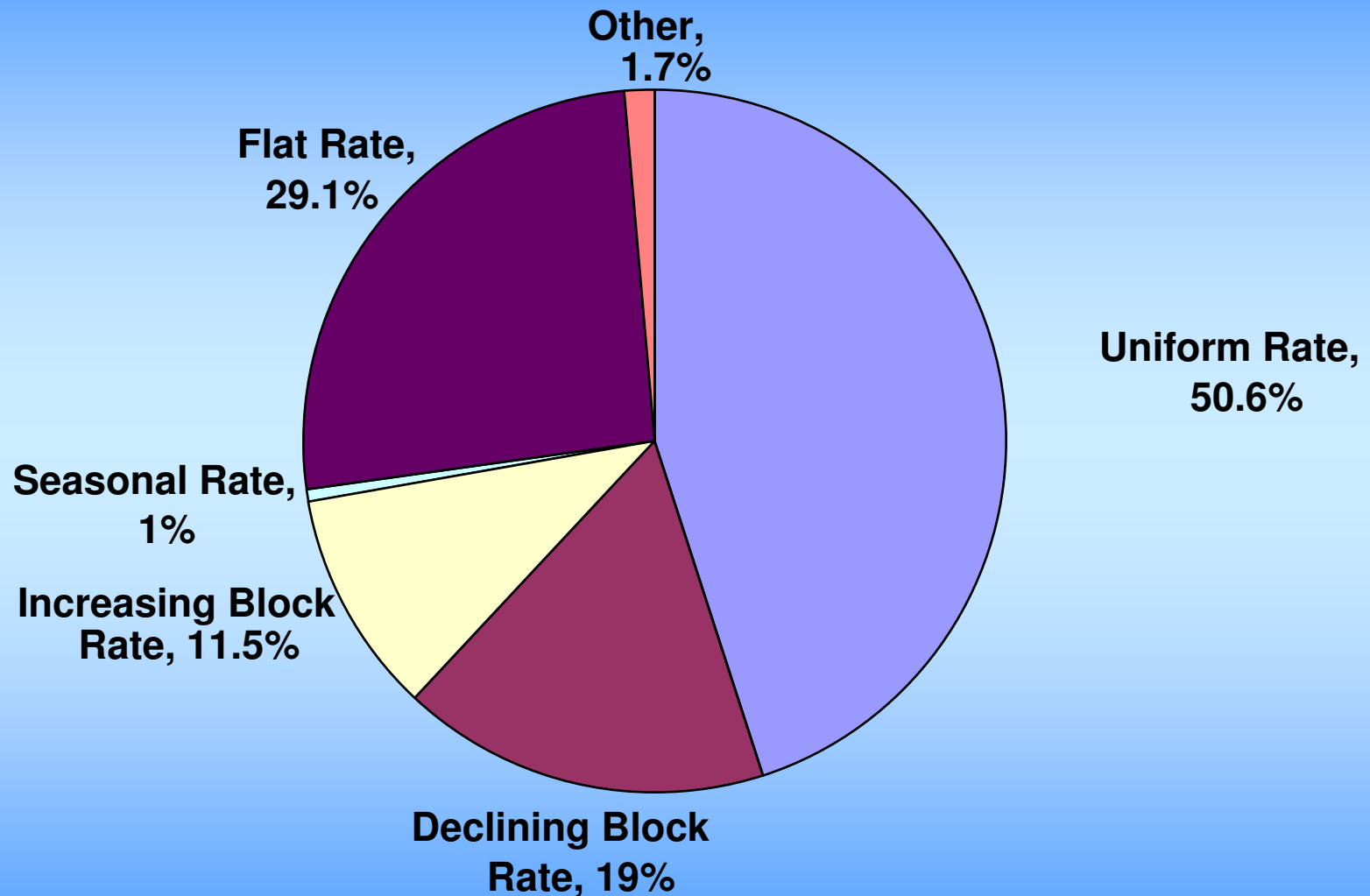


8/22/08

Consumption Prices – Colorado Front Range Cities -- 2006/07

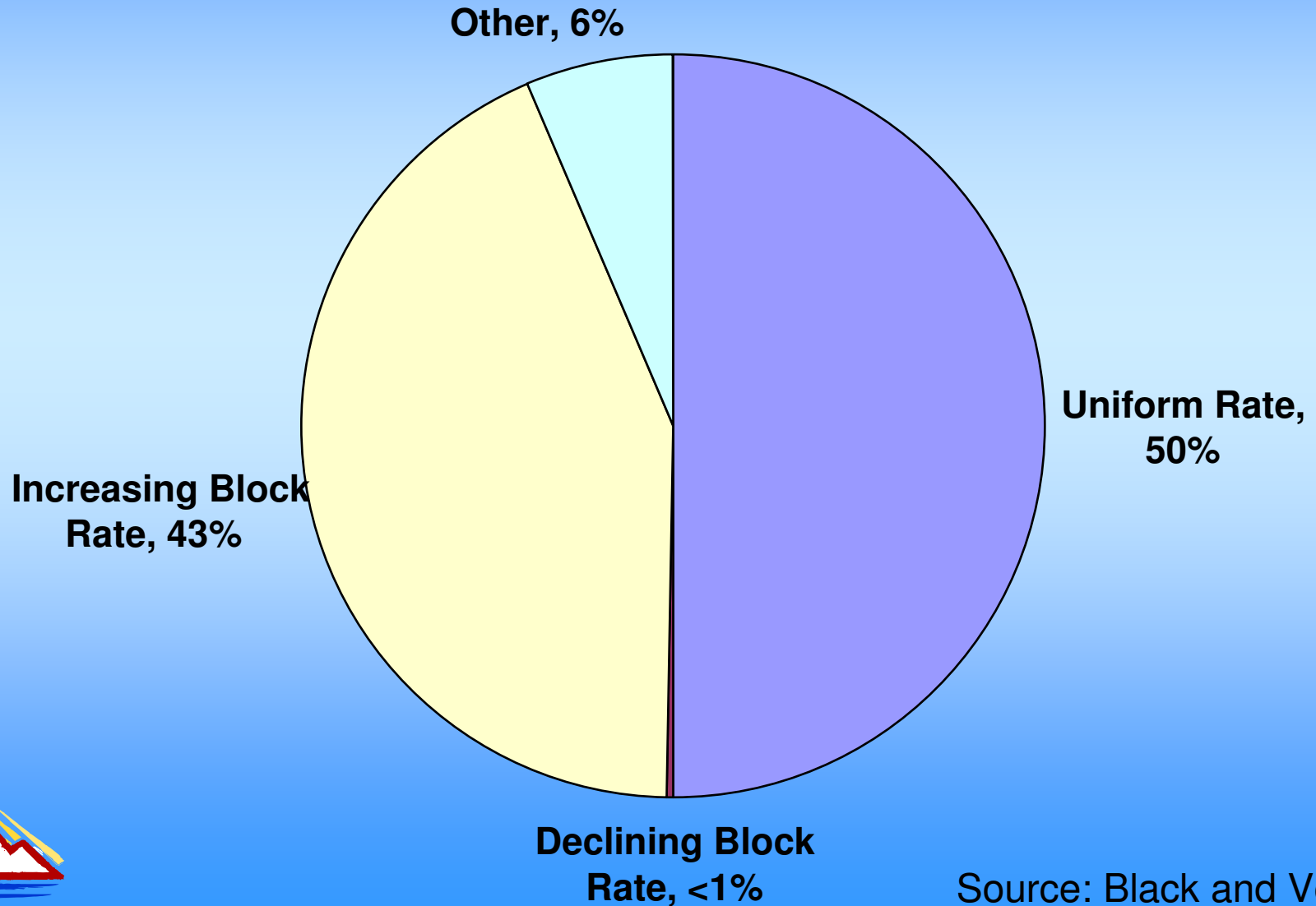


Residential Rate Survey, 2000



Note: Does not add up to 100% because some use more than one rate type.
EPA Community Water Survey, 2000 (>1,200 communities surveyed)

California Residential Rate Survey, 2006



Conservation in Colorado's Future

Measure	Potential Water Savings (AF/year)	Estimated Cost range of program AF of Savings (\$/AF)
Toilet Rebates	55,800 AF in 2030	\$7,230 @ \$150 rebate per toilet
Turf Replacement	125,757-211,656 AF	\$7,000-\$25,000 depending on level of rebates offered

Source: Colorado Water Conservation Board Statewide Water Supply Initiative (2004)



Demand-Side: Outdoor Conservation

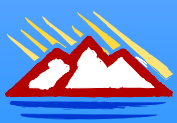
In most Southwestern cities, 50%-70% of all water use is outside the home or office

Much landscape irrigation is inefficient – even modest conservation efforts can yield significant water savings:

- > Xeriscape
- > Efficient Landscape Design
- > Efficient Watering



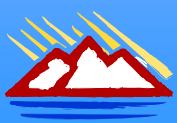
Photo by Dave Shows and Assoc., Inc.



Moderate Water-Using Residential Landscape – 50% of Bluegrass Watering



Photos & notes by Jim Knopf, landscape architect
WaterWise Landscaping Trees, Shrubs & Vines



Supply-Side Efficiency Alternatives

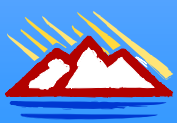
Water Loss Reduction



Water Reuse



Photos by American Water Works Association



Supply-Side Efficiency Alternatives

Aquifer Storage & Recovery



Temporary Water Transfers, i.e., Dry-Year Leasing and Fallowing

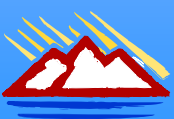


Photos by American Water Works Association



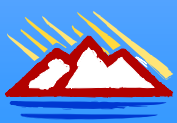
Challenges Faced by Providers

- Political Atmosphere
- Economic Atmosphere
- Revenue Stability
- Customer Acceptance & Understanding
- Funding
- Staffing



How to Overcome Challenges...

- Direct education and outreach to decision makers
- Analysis and explanations of different funding mechanisms
- Advocacy to aid in funding and staffing
- Technical expertise, analysis and review

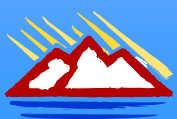


Successes

The Southwestern communities we work with have decreased per capita water demand and increased water use efficiency. Integrated resource planning is more common. Supply side projects are becoming more innovative.

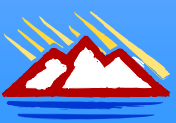
Key successes:

- **More effective increasing block rate pricing structures**
- **Rebate programs and other incentives for indoor appliance, Xeriscape, and irrigation controller retrofit**



Successes (continued)...

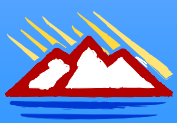
- Ordinances that encourage efficient water use;
- New construction becoming water-smart;
- Loss reduction programs;
- Aquifer storage and recovery;
- Increased State funding for planning and implementation of conservation measures.



A lot is at stake...



**...but the
choice is ours.**



Photos by Bureau of Land Management, National Park Service, and Brian Holmes

Thank you!

Bart Miller

Water Program Director

bmiller@westernresources.org

www.westernresourceadvocates.org



WESTERN RESOURCE
ADVOCATES

