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WATER CONSERVATION PLANNING in the COLORADO BASIN:

A COMMON UNDERSTANDING?

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Cindy Dyballa

Sligo Creek Resources

c_dyballa@yahoo.com

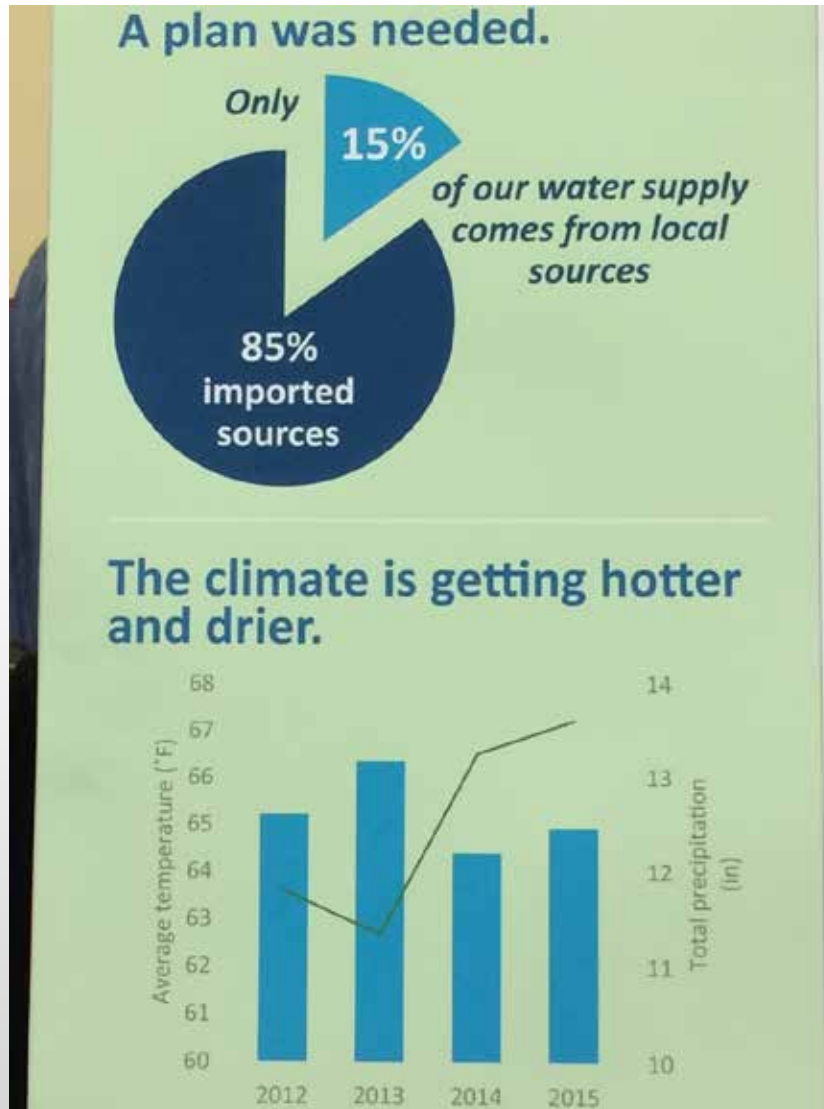


Today's Topics

- Set the Colorado Basin stage
- Outline municipal water conservation frameworks of the 7 Basin states and the USBR
- Highlight each state's unique twists
- Consider how planning programs can best stimulate municipal water efficiency in the Basin– Consistent plan requirements? Common set of suggested BMPs? Other?
- Info based on project to explore USBR planning in Basin



Chula Vista, CA:



Why Plan?

- Respond to rapidly changing conditions
- Systematically identify issues your community faces
- Look at alternatives
- Consider what solutions work best for your situation

Colorado River Basin

- Basin water in short supply—now and in future, drought or not
- Regional per capita water use down, but growth still up
- New approaches are needed; old ones not enough
- Municipal water efficiency can contribute
- Local water efficiency adoption not consistent
- 7 Basin states with different rules, plus Reclamation planning



Conservation Planning Requirements

- 6 Basin states have some form of municipal water conservation planning system or requirements
- 3 (CA, CO, UT) are considered outstanding by AWE
- At least 4 states review or approve individual plans
- Recent uptick in smaller communities filing plans in several states

Best Management Practices

- Several sets of suggested best management practices (AZ, CA, CO, UT, USBR)
- Several sets of “how to plan” guidelines for communities
- Each of these systems differs in approach, content, scope, and requirements (if any)
- AWWA standard and manual
- AWE tracking tool
- What about benefits and costs?



USBR: Municipal Planning Requirements

- Communities receiving federally supplied water (water delivery and repayment contracts)---small set
- Required under Reclamation Reform Act (1982)
- Different requirements in some areas, such as Central Valley Project
- First conservation plans first prepared in 1990's, updates every 5 years
- Policy & guidelines nearly 20 years old
- No formal plan approval or required implementation
- Decentralized program management to Area offices
- USBR shift in focus to agricultural water use, collaborations, cost shared projects

USBR: Conservation Measures

- Each plan must address 4 fundamental measures
- May consider a suite of other residential, commercial & industrial, landscape, and system measures
- Not updated since 1997

Fundamental (required) Measures	Measures to Consider
Water measurement and accounting	Residential and government audit program
Water pricing	Commercial and industrial audit program
Educational programs	Landscape program
Water conservation coordinator	Distribution system audit program
	Water shortage contingency plan
	Wastewater reclamation program
	Plumbing regulations
	Fixture replacement program
	Conjunctive use

California

- Extensive urban water management planning requirements before the drought included conservation
- California Urban Water Conservation Council Best Management Practices (2011)
- 14 measures in law
- State must approve plans
- 20% by 2020
- Drought led to more urgency
- State per capita day reduction targets
- Climate change plans and CUWEP



Colorado

- Robust planning requirements
- 9 specific conservation measures in law
- Use reports by customer categories, uses, and measurements
- Plans must be approved by state
- Great technical support



Arizona

- Two systems for AZ communities
- In 5 groundwater active management areas (AMAs):
 - State-set conservation requirements vary by community size and relative water supply
 - State does conservation planning by AMA in 5-year periods
 - Over 50 BMPs as appropriate
- Outside AMAs:
 - Communities must submit a system water plan and annual water use report
 - This includes a conservation plan



Nevada

- State requires conservation plans and 5-year updates of all water suppliers
- State approves plans
- Specific savings estimates and pricing criteria in each plan
- Separate small systems program
- Only one major municipal system using Basin water



New Mexico

- Different approach
- Plan guidance emphasizes a system water audit and setting gpcd goal before identifying measures
- No statewide list of best management practices
- Focus on reproducible metrics to assist in tailoring to the community
- Link to water use accounting for water rights



Utah

- Plans and 5 year updates required by state code
- Every water provider with more than 500 connections
- 14 practices communities consider in planning
- State does not approve plans
- Context of 25% gpcd reduction by 2025



Wyoming

- No formal conservation planning requirements
- No formal state conservation program for communities
- Only one city using Basin water



How to Stimulate More Conservation?

- Share community successes and planning approaches among states?
- Develop a common suggested set of municipal best conservation practices?
- Adopt consistent planning requirements?
- What will spark more innovation in forward-thinking communities?
- What will help bring up laggard communities and states to the common practice?



Proposed Next Steps

- Compare current BMPs lists
- Identify innovative practices
- Allow for local differences
- Share widely



WATER EFFICIENCY ACTION NETWORK
FOR THE COLORADO BASIN STATES

Credits

- Project of the Water Efficiency Action Network of the Colorado River Basin
- Explored USBR-required municipal water conservation plans in the Basin
- Partial support from the Walton Family Foundation

Cindy Dyballa
Sligo Creek Resources
c_dyballa@yahoo.com



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Cindy Dyballa
SLIGO CREEK RESOURCES
water & environmental issues [yahoo.com](mailto:c_dyballa@yahoo.com)

301-270-9041
515 Elm Ave
Takoma Park MD 20912

AWWA Conservation Standard

- . Dedicated staff for conservation efforts (point of contact)
- . Conservation planning
- . Integrated resources planning
- . Public information and education
- . Water waste ordinance
- . Universal metering practices
- . Non-promotional water rate
- . Monthly or bi-monthly billing based on metered use
- . Landscape efficiency program
- . Water loss control program

AWWA Planning Manual

1. Review detailed demand forecast
 2. Review existing water system profile and descriptions of planned facilities
 3. Evaluate the effectiveness of existing conservation measures
 4. Define conservation potential
 5. Identify conservation measures
 6. Determine feasible measures
 7. Perform benefit-cost evaluations
 8. Select and package conservation measures
 9. Combine overall estimated savings
- Optimize demand forecasts