Welcome to the 2020 Water Conservation Symposium

We will get started in a couple minutes.
Who is CWW?

• Colorado WaterWise is addressing the state's water challenges by improving water efficiency through diverse community connections, innovative solutions and valuable member resources.

• We offer educational tools, events and resources to our members and the public to allow you to make a difference.
2020 Symposium Sessions

- **Oct. 13 1 p.m.** - System-wide technologies: real-world review of AMI and Leak Detection systems
- **Oct. 15 10 a.m.** - Managing water in the headwaters of Colorado
- **Oct. 20 10 a.m.** - Supporting water resources through alternative water supplies
- **Oct. 22 1 p.m.** - Introduction to landscape and irrigation certification programs in Colorado
- **Oct. 27 2 p.m.** - Understanding water conservation efforts across Colorado
- **Oct. 29 10 a.m.** - Advancing Water Efficient Landscape Ordinances: What’s been done and where do we go next?
Thank you to our 2020 sponsors
JOIN US!

COLORADO WATERWISE

SYMPOSIUM

HALLOWEEN

HAPPY HOUR

COSTUME CONTEST!

OCTOBER 27 | 4 TO 5:30 PM
ZOOM
Managing water in the headwaters of Colorado
Managing water in the headwaters of Colorado

- Origin of 4 Major River Basins
- Colorado waters reach 17 States & 2 countries (U.S. & Mexico)
- Approx. 80% Colorado’s population Front Range
- Approx. 80% precipitation falls on the Western Slope
- The rate of warming in the last century alone was higher than in the last thousand years.
Session Speakers:

Mike Eytel
Colorado River Water Conservation District

Marjo Curgus
Del Corazón Consulting

Rachel Zerowin
High Country Conservation Center
Managing Water In The Headwaters of Colorado

Michael Eytel
Sr Water Resource Specialist
Colorado River District
October 15, 2020
To lead in the protection, conservation, use, and development of the water resources of the Colorado River basin.
• The Colorado River District covers 28% of the area of Colorado
• The District contains 80% of the state’s water but only 10% of the population
• Each county has representation on the District’s Board of Director’s
• Funded exclusively through mill levy & water activity enterprise
Keeping water flowing to farms and ranches

Securing legal protections to keep water on the West Slope

Maintaining healthy rivers

Protecting adequate drinking water supplies
<table>
<thead>
<tr>
<th>Basin or Sub-basin (gage)</th>
<th>Natural Streamflow (maf)</th>
<th>Proportion of Colorado River at Imperial (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green River (nr Green River, UT)</td>
<td>5.4</td>
<td>34 %</td>
</tr>
<tr>
<td>Colorado River (nr Cisco, UT)</td>
<td>6.8</td>
<td>42 %</td>
</tr>
<tr>
<td>San Juan River (nr Bluff, UT)</td>
<td>2.1</td>
<td>13 %</td>
</tr>
<tr>
<td>Total Upper Basin (Lees Ferry)</td>
<td>14.8</td>
<td>92 %</td>
</tr>
<tr>
<td>Inflows between Powell and Mead</td>
<td>0.8</td>
<td>5 %</td>
</tr>
<tr>
<td>Inflows between Mead and Imperial Dam</td>
<td>0.4</td>
<td>3 %</td>
</tr>
<tr>
<td>Total inflows between Powell and Imperial Dam</td>
<td>1.3</td>
<td>8 %</td>
</tr>
<tr>
<td>Total Colorado River above Imperial Dam</td>
<td>16.1</td>
<td>100 %</td>
</tr>
<tr>
<td>Gila River (nr Dome, AZ at mouth)</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>Total Colorado River at Yuma, AZ</td>
<td>17.2</td>
<td></td>
</tr>
</tbody>
</table>
Basin temperatures: 2º F of warming since 1980
Upper Basin streamflow

Streamflow, maf

Precipitation, in.


Western Water Assessment
CIRES
University of Colorado Boulder
For every 1-degree Fahrenheit rise in temperature, streamflow is reduced between 2% to 6%.

Data:
- How Warming Drives Reductions in Streamflow Berghuijs et al. (2014), Barnhart et al. (2016), Deems et al. (2013)
- Colorado River flow dwindles as warming-driven loss of reflective snow energizes evaporation (P. C. D. Milly, K. A. Dunne, Science 2020)
• More fall and spring precipitation falling as rain instead of snow

• More snowpack lost to sublimation

• Earlier snowmelt

• A longer growing season
West Slope Water Supply Agreements

• Eagle River MOU
• Colorado Cooperative Agreement
• Windy Gap IGA
• Shop – Shoshone Outage Protocol
• LBD – Learning By Doing (CRCA)
• Wild & Scenic Alternative Management Plan
• Grand Lake Clarity MOU
• Set property boundaries to encompass natural watersheds to avoid competition for streams.

• Sell no more farmland that doesn’t have access to water.

• Do not rely on private water companies to develop water projects.
Percent Area for New Mexico

- D0
- D1
- D2
- D3
- D4

Years: 2000 to 2020
RIVER FLOWS

HEADLINE 2018:
The City, Feds make water deal to keep Rio Grande flowing through Abq

HEADLINE 2020:
Managers Warn That Rio Grande Could Go Dry In Albuquerque
When the river dries, a struggle to stay afloat. Thin mountain snowpack, recent heat wave and light monsoon have depleted water levels.
Flows in Roaring Fork and Crystal Rivers are Nearing Record Levels and That Is Not Good News

HEADLINE 2020:
Low Water Levels A Concern At Blue Mesa Reservoir in Gunnison County
LAND DEVELOPMENT PATTERNS MATTER FOR WATER LINKING LAND USE AND WATER.
1 SMALLER LOT SINGLE FAMILY DEVELOPMENT
Studies found 10 to 60% water savings with increased density of single-family residences.

2 MULTI FAMILY DEVELOPMENT
Multifamily units consume 35 to 50% less water than single family detached homes. If a high-density development requires cooling towers, the savings may decrease or be eliminated.

3 EFFICIENT LANDSCAPING AND IRRIGATION
Landscape code requirements can reduce outdoor water use by 35-50%.

4 INDOOR WATER USE
Water efficient fixtures and appliances, building and plumbing codes can have significant savings.
<table>
<thead>
<tr>
<th>Type of Standard</th>
<th>Strength of Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescriptive</td>
<td>Voluntary</td>
</tr>
<tr>
<td>Suggestive</td>
<td>Mandatory</td>
</tr>
</tbody>
</table>

**Voluntary Design Guidelines**

**Voluntary Water Use Restrictions**

**Landscape Standards**

**Water Conservation Ordinance**
3 DAY WORKSHOP

https://sonoraninstitute.org/resource/growing-water-smart-rfp/
Water Savings Resource Guide and Model Provisions for the Colorado Headwaters Region

https://nwccog.org/water-savings-guidance/
Water is life.
High Country Conservation Center (HC3)

Promoting practical solutions to resource conservation and waste reduction in Summit County
Blue River Watershed

- 6 municipalities, 4 ski resorts
- More than 80% is public land
- By 2050: Gap of 22k-48k AF per year between water supplies and demands
Blue River Watershed Water Efficiency Plan(s)

Supplying water while prioritizing:

• Environment/economy
• Mountain lifestyle
• Responsibility
• Collaboration
Blue River Watershed

Water Efficiency Plan(s)

Supplying water while prioritizing:

- Environment/economy
- Mountain lifestyle
- Responsibility
- Collaboration

Implementation

- Land use
- Technical efficiency
Discussion
& Questions

Please type your questions into the Q&A box.
Join us next Tuesday for “Supporting water resources through alternative water supplies” at 10 a.m.

Big thank you to our speakers today!