

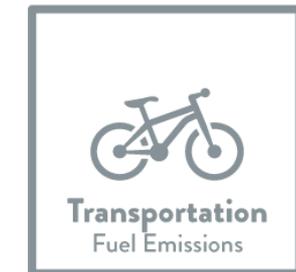
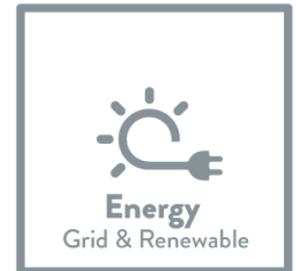


#BeBetterTogether

# Climate Action Collaborative Stakeholders

## Meeting

Dec 10, 2018





# Agenda

- I. Welcome & Meeting Goals
- II. Session 1: CAC Governance Update
- III. Session 2: Sector Working Group Updates
- IV. Session 3: Behavior Change Campaign
- V. BREAK
- VI. Session 4: Eagle River Water & Sanitation District Presentation
- VII. Session 5: Dates for 2019 CAC Meetings
- VIII. Adjourn!



## Meeting Goals

- #1 Celebrate 2018
- #2 Share updates on working group initiatives including behavior change campaign updates
- #3 Learn about the state of water in our community from ERWSD
- #4 Keep Up Momentum!

A look back at  
2018..

# Global Warming of 1.5°C

An IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty.



# Global Warming of 1.5°C

ABOUT ▾ CHAPTERS ▾ DOWNLOADS ▾

## FOURTH NATIONAL CLIMATE ASSESSMENT

### Volume II: Impacts, Risks, and Adaptation in the United States

The National Climate Assessment (NCA) assesses the science of climate change and variability and its impacts across the United States, now and throughout this century.

SUMMARY FINDINGS

REPORT CHAPTERS

OVERVIEW

DOWNLOADS

Volume I presents an assessment of the physical science  
underlying this report: [science2017.globalchange.gov](https://science2017.globalchange.gov)



**67%** Chance of limiting warming to 1.5 degrees C

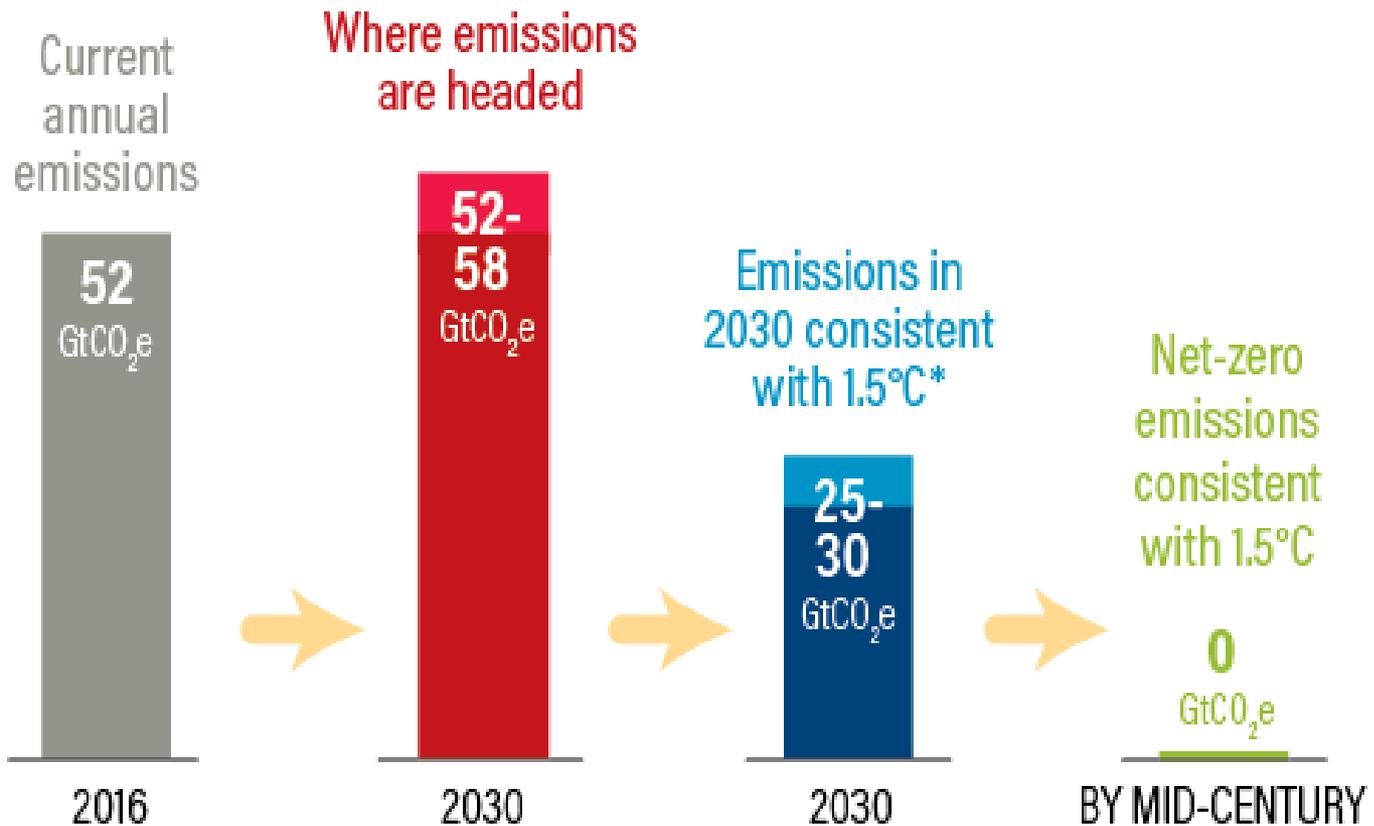
**570 Gt CO<sub>2</sub>**

Total carbon budget for World

Even if all Paris Commitments are met,  
we are on track to blow through entire  
carbon budget (for likely scenario) by

**2030**

# The World Is Not on Track to Limit Temperature Rise to 1.5°C



Notes: \*on average, no or low overshoot.



WORLD RESOURCES INSTITUTE

Avoiding the  
Worst

Peak Emissions by  
**2030**

Net-Zero Emissions  
within **25 years**

**Remove** carbon from  
the atmosphere

# HALF A DEGREE OF WARMING MAKES A BIG DIFFERENCE:

EXPLAINING IPCC'S 1.5°C SPECIAL REPORT

	1.5°C	2°C	2°C IMPACTS
<b>EXTREME HEAT</b> Global population exposed to severe heat at least once every five years	 <p>14%</p>	 <p>37%</p>	<b>2.6x WORSE</b>
<b>SEA-ICE-FREE ARCTIC</b> Number of ice-free summers	 <p>AT LEAST 1 EVERY 100 YEARS</p>	 <p>AT LEAST 1 EVERY 10 YEARS</p>	<b>10x WORSE</b>
<b>SEA LEVEL RISE</b> Amount of sea level rise by 2100	 <p>0.40 METERS</p>	 <p>0.46 METERS</p>	<b>.06M MORE</b>
<b>SPECIES LOSS: VERTEBRATES</b> Vertebrates that lose at least half of their range	 <p>4%</p>	 <p>8%</p>	<b>2x WORSE</b>
<b>SPECIES LOSS: PLANTS</b> Plants that lose at least half of their range	 <p>8%</p>	 <p>16%</p>	<b>2x WORSE</b>

**ECOSYSTEMS**  
 Amount of Earth's land area where ecosystems will shift to a new biome



**1.86x WORSE**

**PERMAFROST**  
 Amount of Arctic permafrost that will thaw



**38% WORSE**

**CROP YIELDS**  
 Reduction in maize harvests in tropics



**2.3x WORSE**

**CORAL REEFS**  
 Further decline in coral reefs



**UP TO 29% WORSE**

**FISHERIES**  
 Decline in marine fisheries



**2x WORSE**

## Eagle County Emissions

1,405,856 mT of CO<sub>2</sub> in 2014

0.0000024% of worlds total CO<sub>2</sub> budget

While we are small, **every metric ton matters** if we are going to avoid the worst effects of climate change

And we're on  
the way!

## ENERGY SMART

**774.19** metric ton of CO<sub>2</sub> reduction  
2018 (through Q3 only)

# BRING YOUR OWN BAG!



THE TOWN OF AVON'S PLASTIC BAG  
BAN AND TEN-CENT PAPER BAG FEE  
GO INTO EFFECT ON

**May 1, 2018**

For more information  
visit: [www.avon.org/bags](http://www.avon.org/bags)



And we're on  
the way!

# BRING

## A Summer of Sole Power!

Sole Power is an annual competition for Eagle Valley Residents and Businesses to encourage walking, biking, skating, and other forms of alternative transportation during the summer months.



After a summer of Sole Power our community has reduced **42,878 lbs of CO2!**



267

Number of participants in 2018 Challenge



\$6899

Dollars of fuel saved in 2018 Challenge



46749

Miles logged in 2018 Challenge



42878

LBS of carbon reduced in 2018 Challenge

May 1, 2018

For more information  
visit: [www.avon.org/bags](http://www.avon.org/bags)



# BRING

## A Summer of Sole Power!

Competition for Eagle Valley Residents and Businesses to... and other forms of alternative transportation



Send your waste to a better place

...produced 42,878 lbs of CO2!



267

Number of participants in 2018 Challenge

Dollars of fuel saved in 2018 Challenge

42878

LBS of Carbon Dioxide

eagle county waste wizard

May 1, 2018

For more information visit: [www.avon.org/bags](http://www.avon.org/bags)



# BRING

A Summer of Sole Power!



**VAIL  
HONEYWAGON**  
Rubbish & Recycling  
[www.vailhoneywagon.com](http://www.vailhoneywagon.com)  
(970)476-3511

For more information  
visit: [www.avon.org/bags](http://www.avon.org/bags)



BRING

A Summer

CLIMATE  
**ACTION**  
COLLABORATIVE

# LED LIGHTBULB SWAP

This is not just an LED lightbulb.  
It's a **Money Saving Machine.**  
Replace 2 of your inefficient lightbulbs with LED and save  
\$16 per year on electric bills and cut 230 pounds of air pollution.

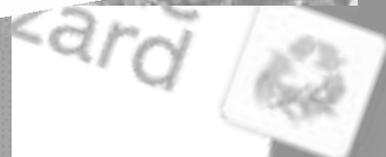


**R & H MECHANIC**

30,346.26 lbs of CO2 reduced in 2018

[avon.org/bags](http://avon.org/bags)

AVON  
SINCE 1886



IDEA

CLIMATE ACTION

# Benchmarking & Energy Management

Wednesday, December 12th | 4:30pm-6:30pm

Walking Mountains Science Center, Avon CO



energ/bags



# Benchmark

Wednesday  
Walk



## ECO TRANSIT NEEDS YOUR INPUT! *join the conversation!*

**WED  
NOV  
14TH**

### FIRST/LAST MILE STRATEGY STUDY

Come provide your input on how to improve access to and from ECO Transit stops! We'll be discussing opportunities for bicycle and pedestrian infrastructure, Transportation Demand Management, ridehailing and bike share that will make it easier to take the bus.

🕒 6:30 - 8:30 P.M.

📍 Eagle County Building's Garden Level Classroom  
550 Broadway Eagle, CO 81631

*First/Last  
Mile* STRATEGY



# ement

n  
0

CLIMATE  
ACTION  
COLLABORATIVE

# ECO TRANSIT NEEDS YOUR INDUSTRY

Ben

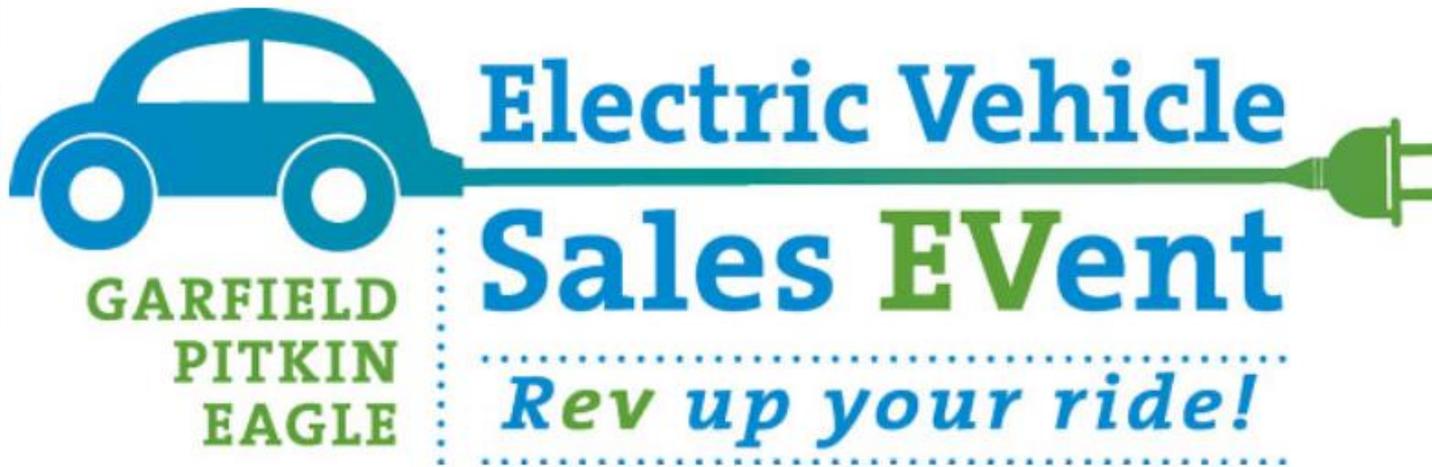
nt



epicpromise FOR A  
**ZERO  
FOOTPRINT**



Be



ent

**August 1 to October 31, 2018**

**Dealer discounts** plus **state and federal tax credits** make **NOW** the right time to buy an electric vehicle.

Plug-in hybrids (PHEV) and all-electric battery (BEV) models on offer.

- Zero tailpipe emissions
- Cut your car's carbon footprint by 36%
- Use Colorado-produced electricity to fuel your EV
- Save money on fuel! Drive for \$1.10 / e-gallon national average (Holy Cross Energy customers can drive for 95 cents / e-gallon.)





# Electric Vehicle



**Buildings**  
Residential & Commercial

lower emissions by **25%**  
by **2025**

## Double Money Back for Energy Efficiency Upgrades!

A partnership between the Town of Vail and Energy Smart Colorado at Walking Mountains Science Center not only provides double rebates and more! **Available now, for a limited time in 2018!**

[Sign up for an Energy Assessment Today!](#)



- Use Colorado-produced electricity to fuel your EV
- Save money on fuel! Drive for \$1.10 / e-gallon national average (Holy Cross Energy customers can drive for 95 cents / e-gallon.)





**Transportation**  
Fuel Emissions

**10%**  
lower by 2025

## Electric-Assist Bike Share Demo This Week!

**What:** Electric-assist bike share demos with Bewegen, an e-bike share provider

**Who:** Elected officials and general public.

**When:** August 8th-10th | 11AM-3PM

**Where:** Avon Station | Avon, CO

For more information, click [here!](#)

Sign up for an e-bike share



YOUR LOCAL ENERGY EFFICIENCY PARTNERS

- Use Colorado-produced electricity to fuel your EV
- Save money on fuel! Drive for \$1.10 / e-gallon national average (Holy Cross Energy customers can drive for 95 cents / e-gallon.)



Transportation  
Fuel Emissions

Electric-Assist

What: Electric-assist



activelygreen®

high 25%

10%  
lower by 2025

This Week!

in e-hike share provider

## How Do I Make The Right Purchasing Decisions For My Business?

Actively Green, our local green business certification program, is hosting a "[Buying Clean & Green](#)" Workshop on July 25th to talk to local businesses about strategies to buy more sustainable products. Whether you are an Actively Green Certified or not, the workshop is open to any business interested in learning more about sustainable purchasing!



An aerial night photograph of a mountain town, likely Aspen, Colorado. The town is illuminated with warm yellow and white lights, contrasting with the cool blue tones of the twilight sky and the dark, forested mountains in the background. Long, curved light trails from traffic on a highway sweep across the lower left and middle of the frame. The overall mood is serene yet dynamic, capturing the town's activity at dusk.

# SEVENTY70THIRTY

Our new energy goal is set. 70% clean energy by 2030



CLIMATE  
ACTION  
COLLABORATIVE

#BeBetterTogether

Photo By Matt Inden Climate Action Collaborative



**Session #1**  
CAC  
Governance  
Update

- Update on income for 2019
- Annual Report Update

# Income 2019

Organization	2019 Contribution
Eagle County	\$56,000.00
Edwards Metro District	\$5,000.00
ERWSD	\$6,000.00
WECMRD, ERYC	\$5,000.00
Holy Cross Energy	\$15,000.00
RA Nelson	\$3,333.00
Town of Avon	\$11,900.00
Town of Basalt	\$3,000.00
Town of Eagle	\$5,000.00
Town of Minturn	\$1,775.00
Town of Vail	\$15,000.00
Vail Resorts	\$8,000.00
Vail Health	\$5,000.00
R&H Mechanical	\$1,000.00
<b>Total Contributions Confirmed</b>	<b>\$141,008.00</b>
<b>Total Gap in Proposed Budget</b>	<b>\$2,040.00</b>

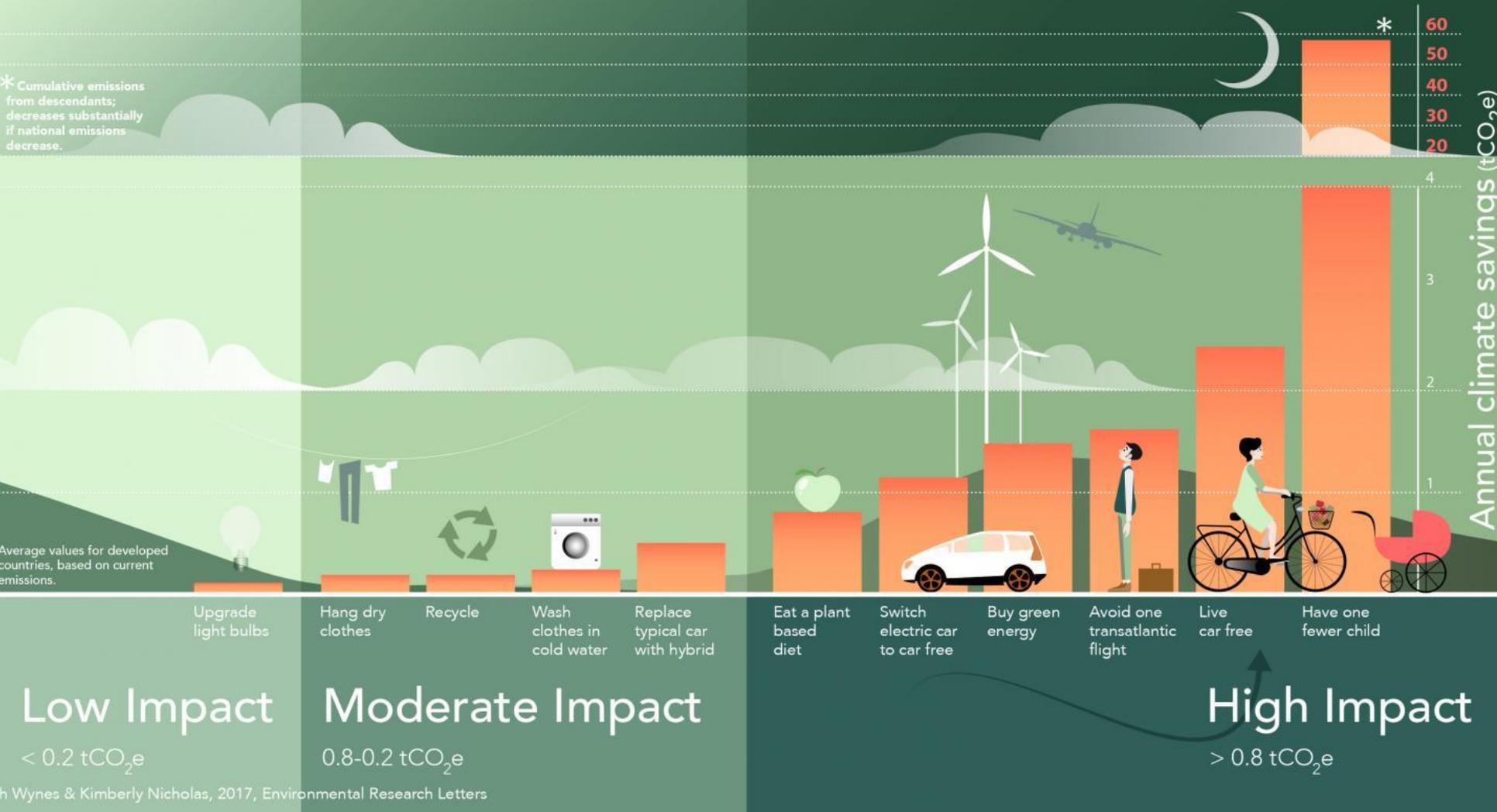
# Annual Report 2018

- Page 2 & 3
  - 2018 Working Group Accomplishments
  - Working Group Priorities 2019
  - Programmatic highlights
    - Energy Smart
    - Actively Green
    - Other Highlights

# Personal choices to reduce your contribution to climate change

\* Cumulative emissions from descendants; decreases substantially if national emissions decrease.

Average values for developed countries, based on current emissions.



# Annual Report 2018

- Page 6 & 7
  - Survey Results from CAP Survey
  - Pulled out into separate report to share with community
- Page 8 & 9
  - Collaborative Partner Highlights!

**JUST A FEW  
EXAMPLES**



**PARACHUTE  
SOLAR FLOWERS**

Unique array powers I-70 Rest Area. Others power Parachute's library, town hall and water plant.



**ENERGY EFFICIENT  
BUSINESSES**

277 businesses tapped incentives and technical advice to make energy upgrades, such as East Third Street Professional Building and Elder Trucking in Rifle.



**SILT WATER PLANT SOLAR**

Water treatment plants are major energy users. A 234 kW solar array powers 100% of Silt Water Treatment Plant annual electricity.



**WASTEWATER TREATMENT  
EFFICIENCY**

Fine-tuning operations at New Castle's wastewater treatment plant delivered cost savings.



**LOCAL POWER  
FOR BUSINESS**

Glenwood Springs Subaru replaced parking lot lights with dimmable LEDs and installed a 96 kW solar array, cutting electric bills by 44%.



**CNG FLEETS AND  
FUELING**

Compressed natural gas (CNG) is a locally-produced alternative fuel for truck fleets. Fueling stations in Glenwood Springs, Parachute and soon in Rifle meet new demand.

**PARACHUTE**



**RIFLE**

**SILT**

**NEW  
CASTLE**

**GLENWOOD  
SPRINGS**

Colorado River



**BETTER BOTTOM LINE**

Businesses achieve rapid payback from electrical savings by replacing old fluorescents with LEDs, such as Toad & Co. and Glenwood Adventure Co. in Glenwood Springs.



**BATLEMENT MESA WATER PLANT**

Mesa Metro District installed a 435 kW solar array for its water treatment plant, providing all its electricity.



**RESIDENTIAL REVOLVING LOAN FUND**

GCE Revolving Loan Fund has financed energy efficiency upgrades for 44 households since 2012. For most families, energy savings offset loan payments.



**RIDE GARFIELD COUNTY**

The multi-year Ride Garfield County campaign promotes bicycling, walking and riding transit. The effort helped Glenwood Springs reduce traffic congestion during the 95-day bridge detour in fall 2017.

**CARBONDALE**



**BUILDING ENERGY  
NAVIGATOR**

CLEER's Building Energy Navigator website displays energy data for 90 government buildings countywide. It's a valuable tool for facility managers. Kiosks, like this one at the Carbondale Recreation Center, provide easy public access to energy data.



**100% SOLAR  
HIGH SCHOOL**

Through student initiative, Roaring Fork High School in Carbondale invested in efficiency, then installed a 379 kW solar array to power 100% of annual electric use.



**HELPING FAMILIES  
CUT ENERGY COSTS**

In a partnership with Energy Outreach Colorado and utilities, GCE and CLEER have provided free home energy upgrades to over 1,000 households countywide since 2015.



**PROJECTS SPUR BUSINESS  
DEVELOPMENT**

Clean energy projects have stimulated demand for 292 contractors and suppliers since 2010, such as these two home energy assessment and insulation contractors.



**ELECTRIC VEHICLE  
SALES EVENT**

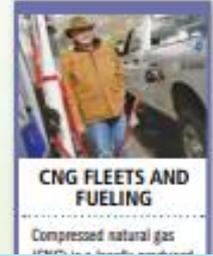
An innovative campaign in 2017 in Garfield, Pitkin and Eagle counties to promote electric vehicles led to sales of 42 EVs and an 85% increase in public charging stations.



**GARFIELD**



JUST A FEW  
EXAMPLES



PAR

# Please send me your stories!

keep it short & sweet



### CUT ENERGY COSTS

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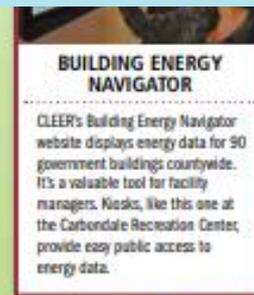
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Clean energy projects have stimulated demand for 292 contractors and suppliers since 2010, such as these two home energy assessment and insulation contractors.



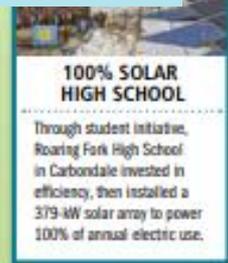
### ELECTRIC VEHICLE SALES EVENT

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### 100% SOLAR HIGH SCHOOL

Through student initiative, Roaring Fork High School in Carbondale invested in efficiency, then installed a 379-kW solar array to power 100% of annual electric use.



GARFIELD





## Session #2

### Sector Working Group Updates

1. Updates from Sector Groups
  - Energy Supply – Sarah
  - Buildings – James
  - Transportation – Chris
  - Materials Management – Jesse
  - Education & Outreach - Paul



## Sector Group Update: Energy Supply

### CAC Energy Supply this afternoon!

- 100% RE Report for Town of Avon
- REPP calculator in development through CAC in partnership with Holy Cross
- Renewable Purchasing Program push for 2019 (related to behavior campaign)
- Vail Resorts 100% RE through virtual PPA
- Utility Commitments
  - Seventy70thirty – Holy Cross
  - Carbon Neutral 2050 – Xcel
- Clean Energy Corridor Roundtable – Dec 13<sup>th</sup>



# CAC Buildings Update

- LED Swap
- Actively Green + Energy Smart Synergy
- Energy Smart Program
  - TOV Partnerships
  - CARE Program
- Green Building Group Events
- 2019 Priorities



# CAC Transportation Update

- First/Last Mile Study Underway
- Go EV – city/county program to commit to electrifying transportation fleets
  - Continue to push Evs in bus and single occupancy vehicles
- Bike Share Pilot with ECO in Spring 2019
- Set goal for Bus Ridership for ECO, Avon, Vail Routes
  - ECO updates including new payment system, new info portal, and first/last mile recommended improvements, Avon Comet, etc
- Behavior Change Campaign – Carpool or “Leave car behind”



# CAC Materials Management Update

- Increased public area recycling access
- Provide yard waste/compost drop sites in each municipality
- Construction and Demolition diversion program
- Education and outreach campaign continuation (including PSA's), specifying one point of contact as resource, i.e. Waste Wizard
- Textile Recycling Program
- Materials ban at the landfill (Example: Cardboard) (internal conversations with County staff and haulers on feasibility and cost)
- 'Green' user fee included when disposing at landfill; to create a funding mechanism for future diversion programs (internal conversations happening with County staff)



# CAC Education & Outreach Update

- Monthly Themes for next year's Editorials
- 2 for 1 ad space in Vail Daily
- Radio, social, and print outreach
- Budget planning to include behavior change campaign, will update at Q1 meeting
- Priorities until end of the year
  - #1 Waste Wizard
  - #2 REPP Calculator

## 2019 Schedule of Themes

<b>Dec 18 Issue</b>	Sustianable Holidays
<b>Jan 19 Issue</b>	No Idling Even in Cold Weather
<b>Feb 19 Issue</b>	Food Systems - whats the GHG impact of buying a strawberry in the middle of the winter
<b>March 19 Issue</b>	Rooftop Solar - how hard is it actually? (Maybe have this as an interview for someone who put on solar to show what the process looks like?)
<b>April 19 Issue</b>	Landscaping & Water - things to think about when setting up your garden for the summer
<b>May 19 Issue</b>	Sole Power Summer
<b>June 19 Issue</b>	Get your Bike in Shape for Summer (or topic related to bikes or ebikes)
<b>July 19 Issue</b>	The Plastic Problem
<b>Aug 19 Issue</b>	Compost & Water Retention
<b>Sept 19 Issue</b>	Sustainable Tourism - Vail Destination
<b>Oct 19 Issue</b>	Energy Efficiency (for home or businesses)
<b>Nov 19 Issue</b>	Recycling & Water Conservation
<b>Dec 19 Issue</b>	Sustainable Purchasing for the Holidays - gifts with less packaging, sourced from sustainable materials, local, etc



# Behavior Change Campaign 2018





# WHY?

**69%** of climate action survey respondents said they were alarmed about climate change and felt that individuals and governments need to act NOW

**16%** of climate action survey respondents said they were concerned and felt we need to talk action but have time to decide what the appropriate responses should be.

**85% TOTAL**



## What's Actually Happening?

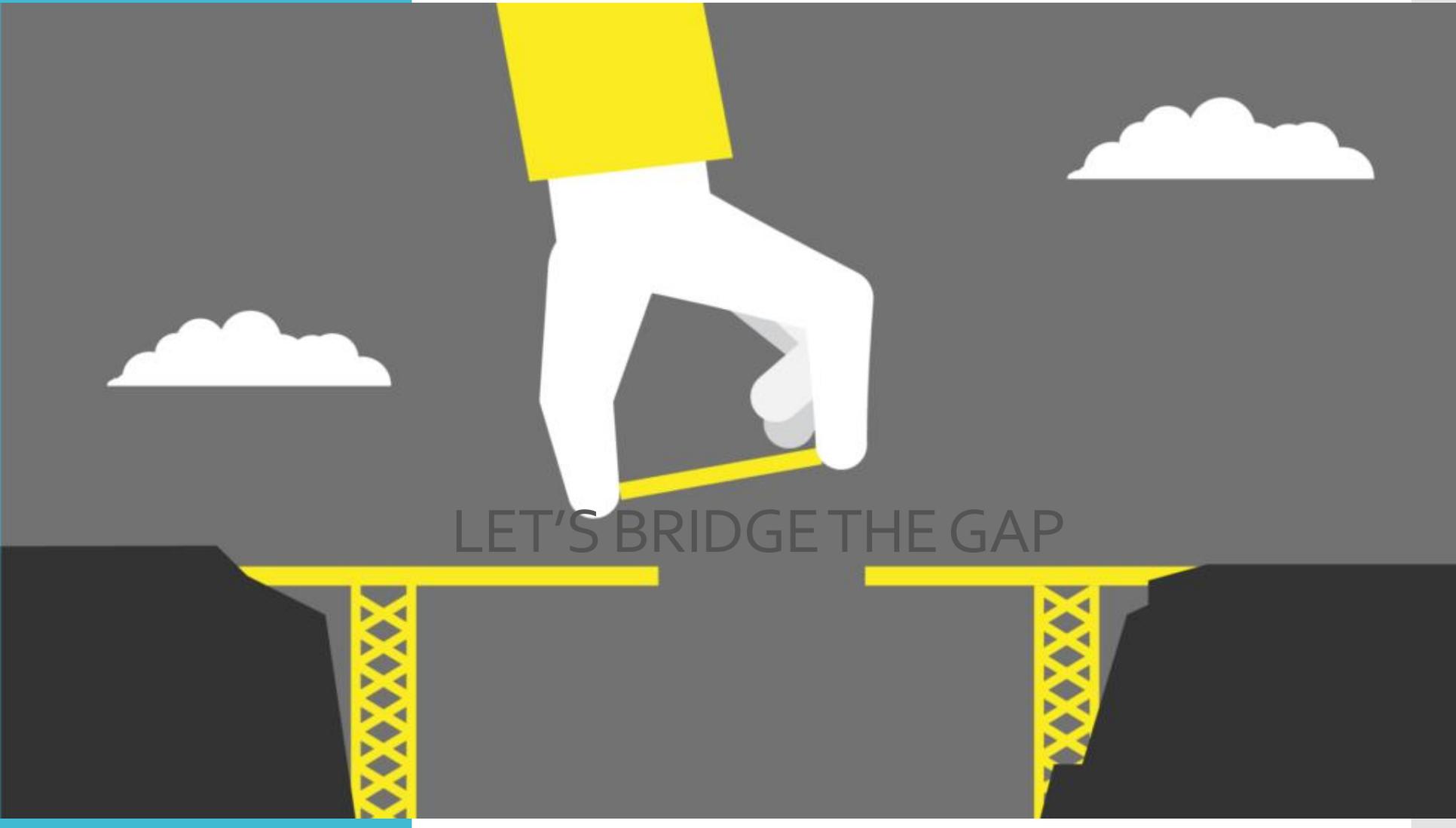
**22.2%** recycling rate (2017)

**6%** compost rate (2017)

**21%** weatherstrip & caulk homes (CAP Survey)

**44%** have changed to full LEDs (CAP Survey)

Bus Ridership down **3%** since **2009** (TDP)



LET'S BRIDGE THE GAP



## METHODOLOGY

	<b>GHG Impact</b>	<b>Probability (1-4)</b>	<b>Penetration</b>	<b>Applicability</b>
<b>Behavior</b>	Per Household in Eagle County per Day	Probability of adoption on scale of 0-4. 4 is most likely to adopt	Penetration rate is how many are currently doing this behavior. Number in matrix is inverse or the opportunity	Applicability is the percentage of people who can participate in the behavior



## Carpool to work twice a week

What do we mean?

Carpooling to work twice a week with one other person.

	GHG Impact	Probability (1-4)	Penetration	Applicability
Carpool to work	38.9	1.7	94%	47%

Behavior	Weight (B*C*D*E)	Rank	Annual Cost/Savings	Cobenefits
Recycling	4.67775	6	\$0.00	<ol style="list-style-type: none"> <li>1. Support local industry</li> <li>2. Preserve landfill life</li> </ol>
Reduce Food Waste	6.426	5	\$0-\$200	<ol style="list-style-type: none"> <li>1. Increased CO2 sequestration and water retention in soil</li> <li>2. Support local industry</li> <li>3. Preserve landfill life</li> </ol>
No Idling 10 min each day	1.6362016	9	\$25.55	<ol style="list-style-type: none"> <li>1. Reduce local air pollution</li> <li>2. Protect vehicle from excessive wear (\$ savings)</li> </ol>
Keep Tires Full	4.25	7	\$63.87	<ol style="list-style-type: none"> <li>1. Reduce local air pollution</li> <li>2. Save money that can be reinvested in local economy</li> </ol>
Bike to Work (May - Sept)	0.441675	12	\$942.91	<ol style="list-style-type: none"> <li>1. Reduce local air pollution</li> <li>2. Reduce congestion</li> <li>3. Save money that can be reinvested in local economy</li> </ol>
Carpool to Work	29.216234	2	\$322.40	<ol style="list-style-type: none"> <li>1. Reduce local air pollution</li> <li>2. Reduce congestion</li> <li>3. Save money that can be reinvested in local economy</li> </ol>
Renewable Purchasing Program	83.7216	1	Wind - \$130.05 Hydro - \$182.07 Solar - \$208.08	<ol style="list-style-type: none"> <li>1. Support development of local renewable energy</li> </ol>
Rooftop Solar	21.1006125	3	\$12,500 (after rebates) \$894 yearly savings, 13.9 yr payback	<ol style="list-style-type: none"> <li>1. Contribute to local renewable energy development</li> </ol>
LED Lighting (Res Only) - replace 5 incandescents	1.05393	10	\$31.02	<ol style="list-style-type: none"> <li>1. Save money that can be reinvested in local economy</li> </ol>
Program/Install Thermostats	4.185	8	\$50.00	<ol style="list-style-type: none"> <li>1. Save money that can be reinvested in local economy</li> </ol>
Turn Temp down on Water Heater	0.9466875	11	\$30.00	<ol style="list-style-type: none"> <li>1. Save money that can be reinvested in local economy</li> </ol>
Air Sealing	12.738525	4	\$310.75	<ol style="list-style-type: none"> <li>1. Save money that can be reinvested in local economy</li> </ol>



## Next Steps

- × Kim will send finalized Matrix, meeting notes, and methodology
- × Set date for next meeting to brainstorm campaign ideas
- × Work with Marketing to figure out budget for campaign, will update at next meeting

**START BRAINSTORMING  
CREATIVE CARPOOL IDEAS!**

Time for a BREAK!



Session #4:  
ERWSD  
Presentation

Guest Speakers

Diane Johnson & Amy Vogt  
Eagle River Water & Sanitation  
District



**EAGLE RIVER**  
**WATER & SANITATION**  
**DISTRICT**

**Clean Water. Quality Life.™**

# Clean Water. Quality Life.™



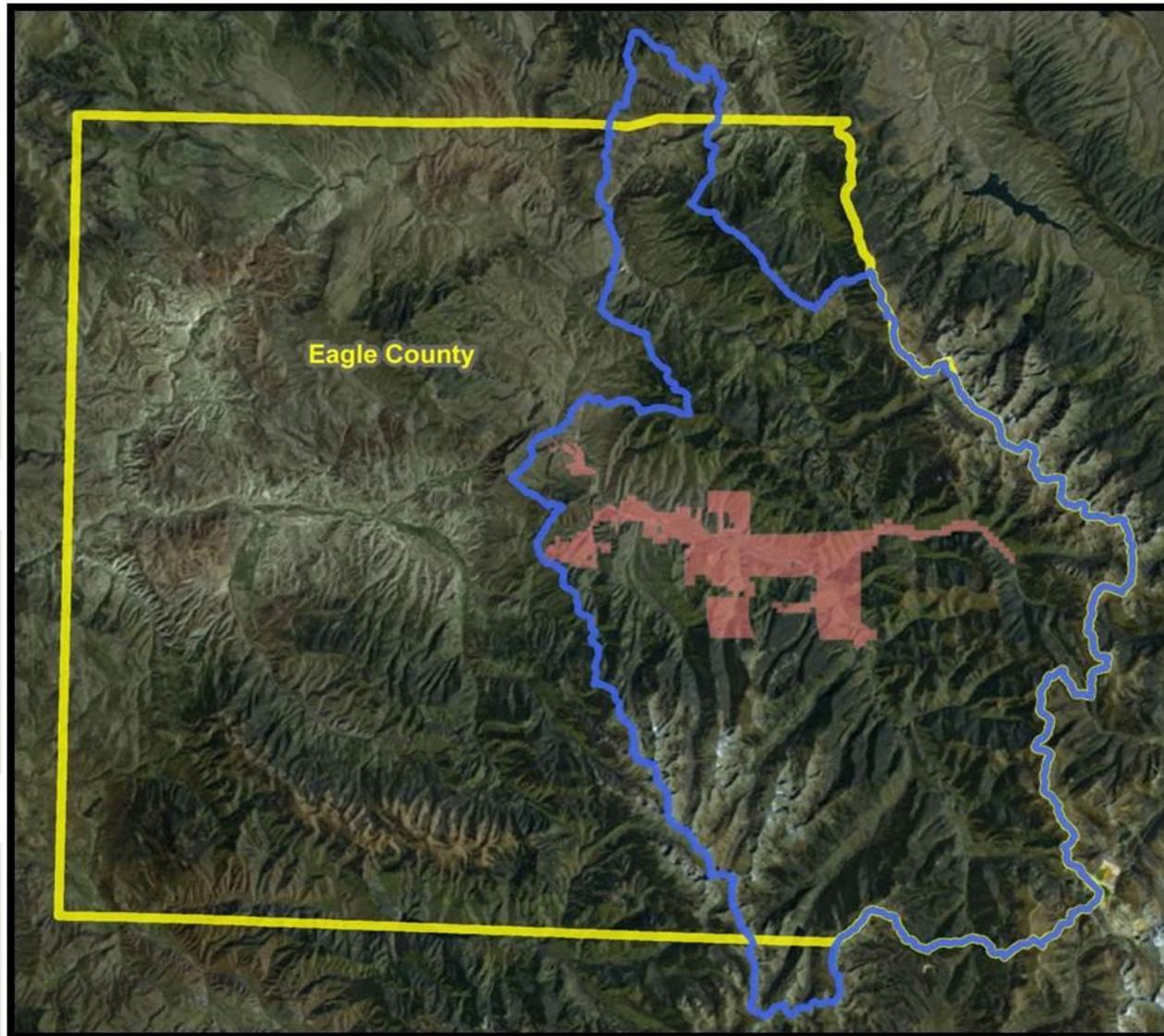
## Drought / Water Management

December 10, 2018 – Diane Johnson, Amy Vogt

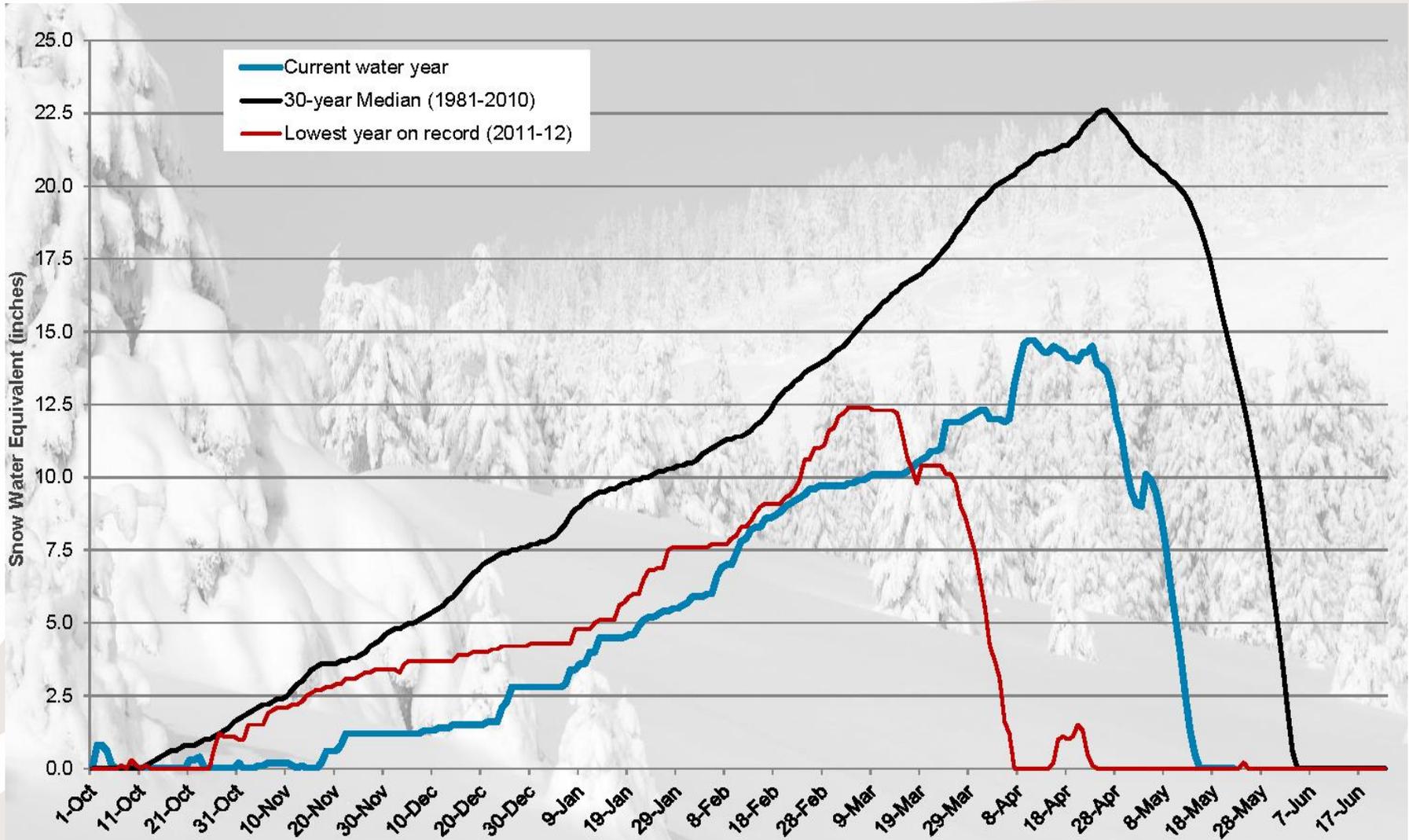


**EAGLE RIVER**  
**WATER & SANITATION**  
DISTRICT

# Service area and watershed

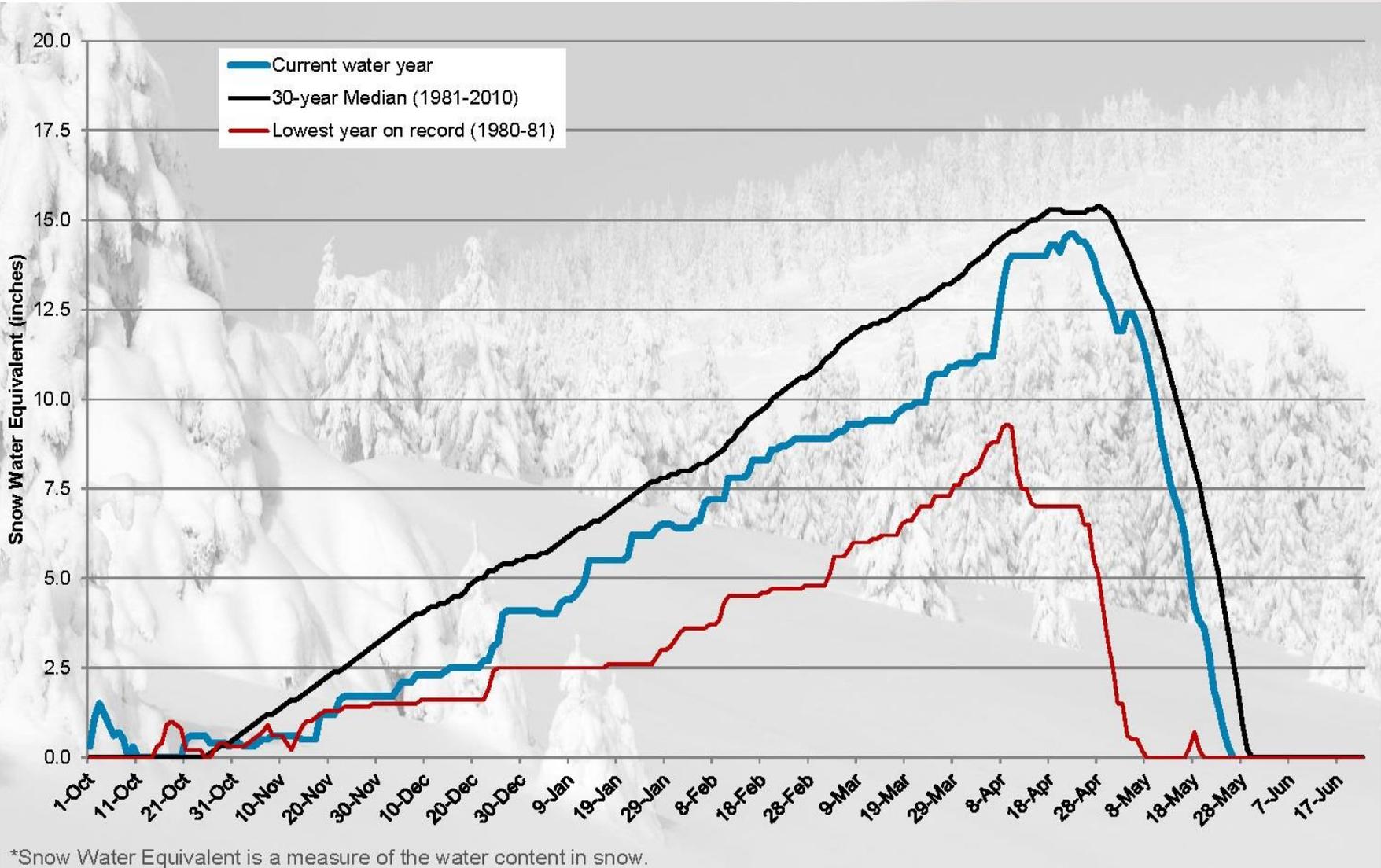


# Vail Mountain SNOTEL site



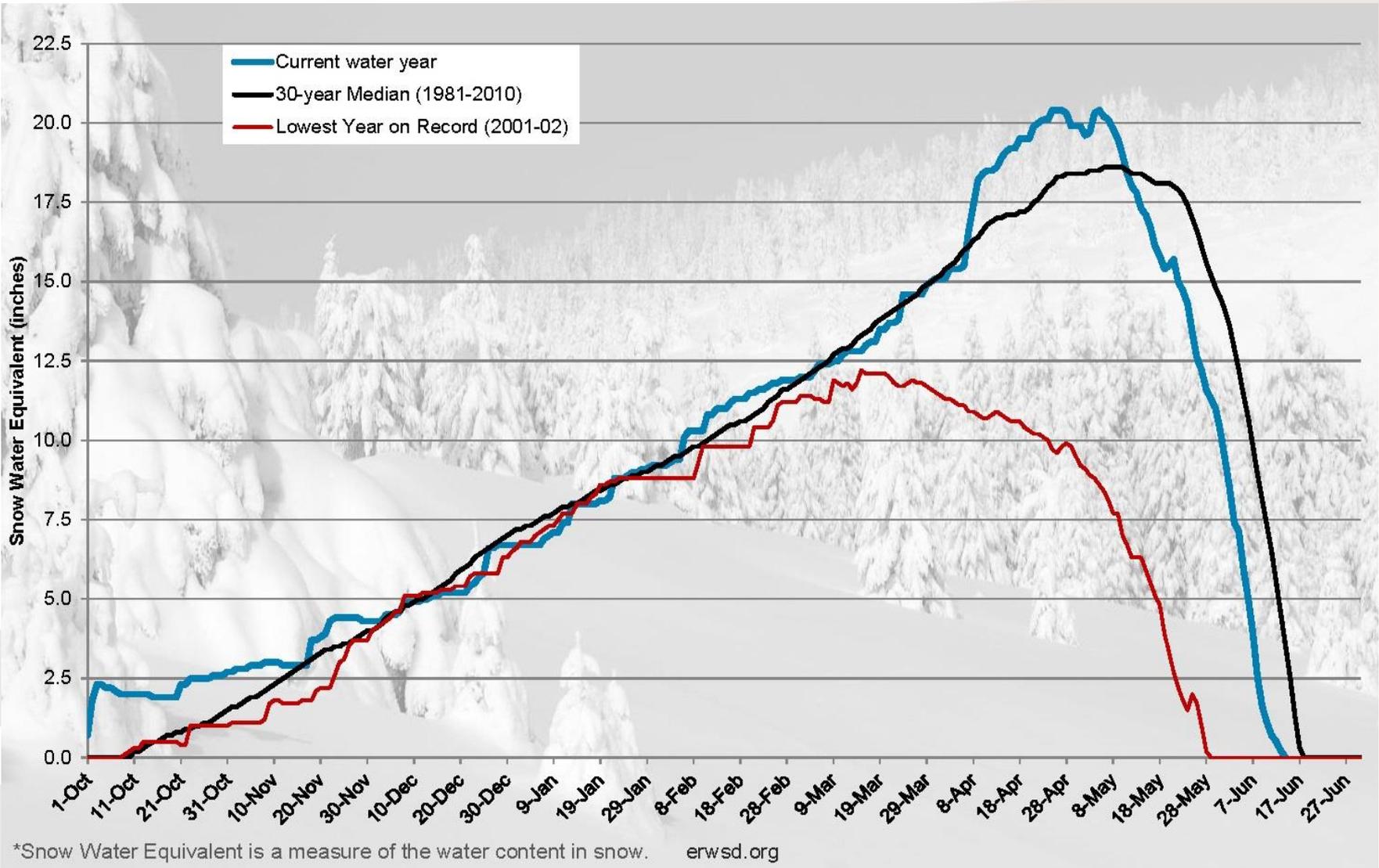
\*Snow Water Equivalent is a measure of the water content in snow. [erwsd.org](http://erwsd.org)

# Copper Mtn SNOTEL site



\*Snow Water Equivalent is a measure of the water content in snow.

# Fremont Pass SNOTEL site



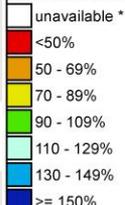
# Western U.S. May 1, 2018

## Westwide SNOTEL Current Snow Water Equivalent (SWE) % of Normal

May 01, 2018

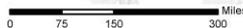
Notice: We anticipate this map will not be available next year due to staffing constraints.  
Alternate maps:  
<https://go.usa.gov/xnzxk>

Current Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median



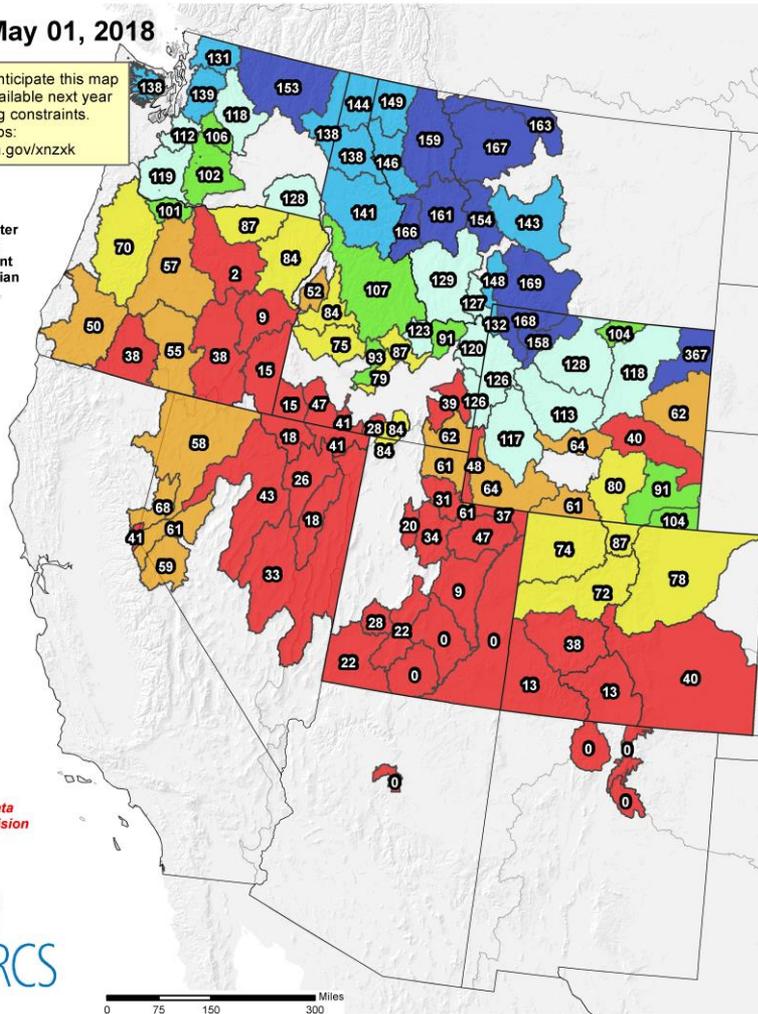
\* Data unavailable at time of posting or measurement is not representative at this time of year

Provisional data subject to revision



The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

Prepared by:  
USDA/NRCS National Water and Climate Center  
Portland, Oregon  
<http://www.wcc.nrcs.usda.gov>



**MAY 15, 2018**

**Colorado:**

**80% in some level  
of drought.**

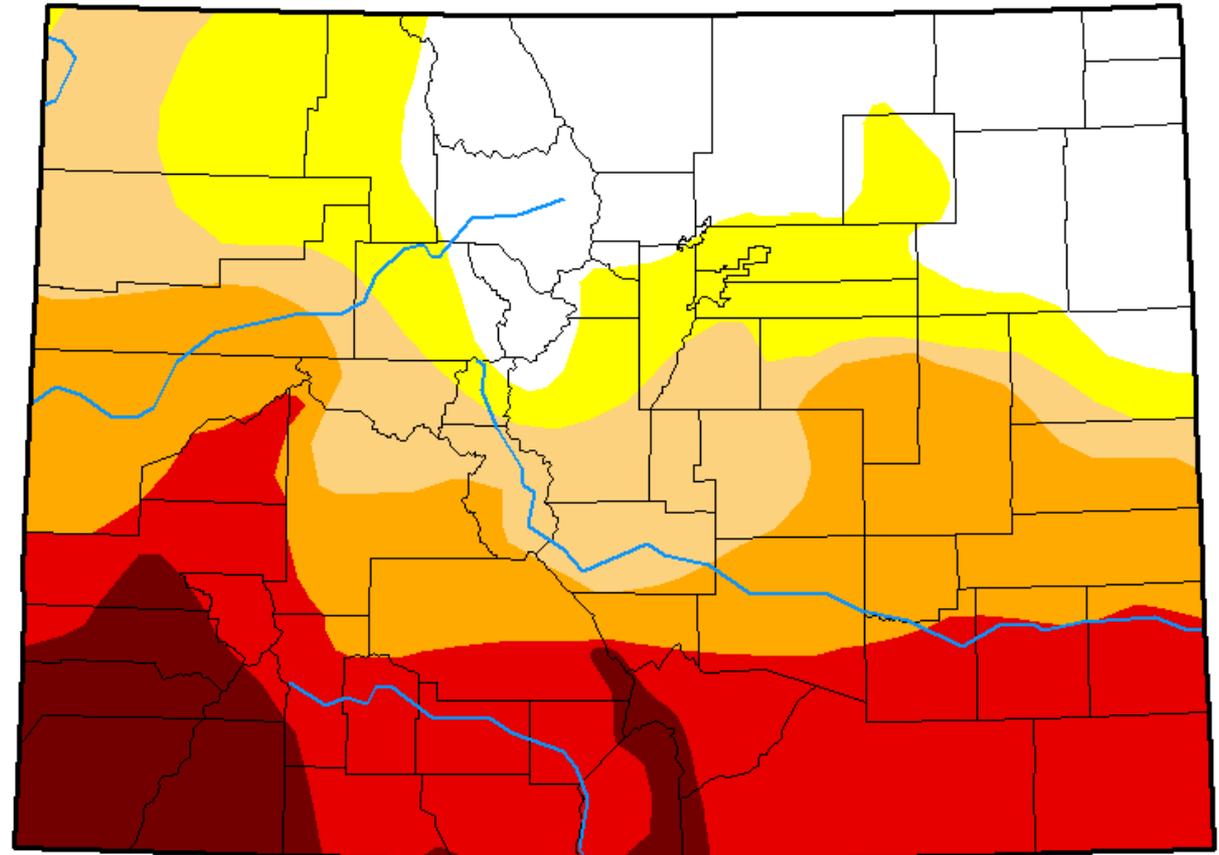
**31% is D3 or D4.**

**Eagle County:**

**D0 (abnormally dry)**

**Reduced from D1  
on April 3.**

**Drought Intensity  
Scale: D0 – D4**



**JULY 3, 2018**

**Colorado:**

**80% in some level  
of drought.**

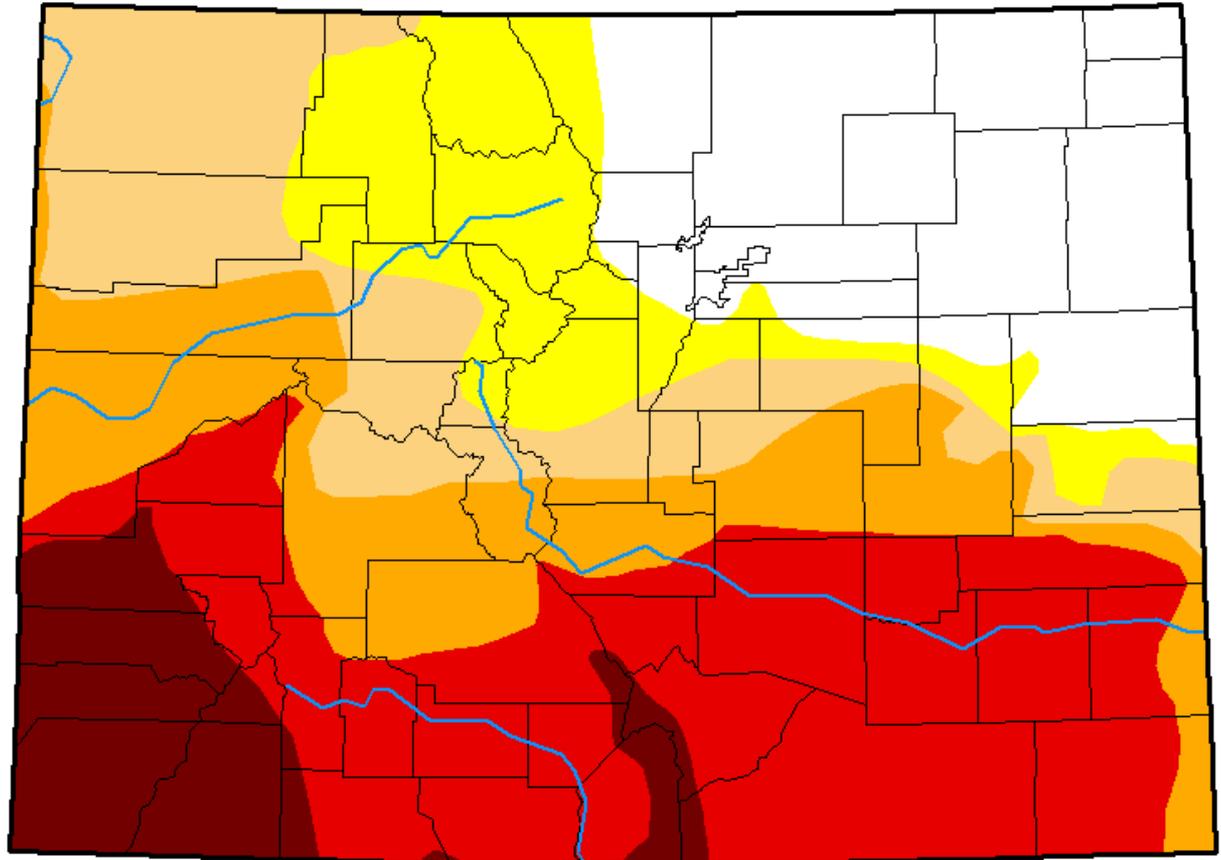
**37% is D3 or D4.**

**Eagle County:**

**D1 (moderate  
drought)**

**Increased from D0  
on June 12.**

**Drought Intensity  
Scale: D0 – D4**



**AUGUST 14, 2018**

**Colorado:**

**81% in some level  
of drought.**

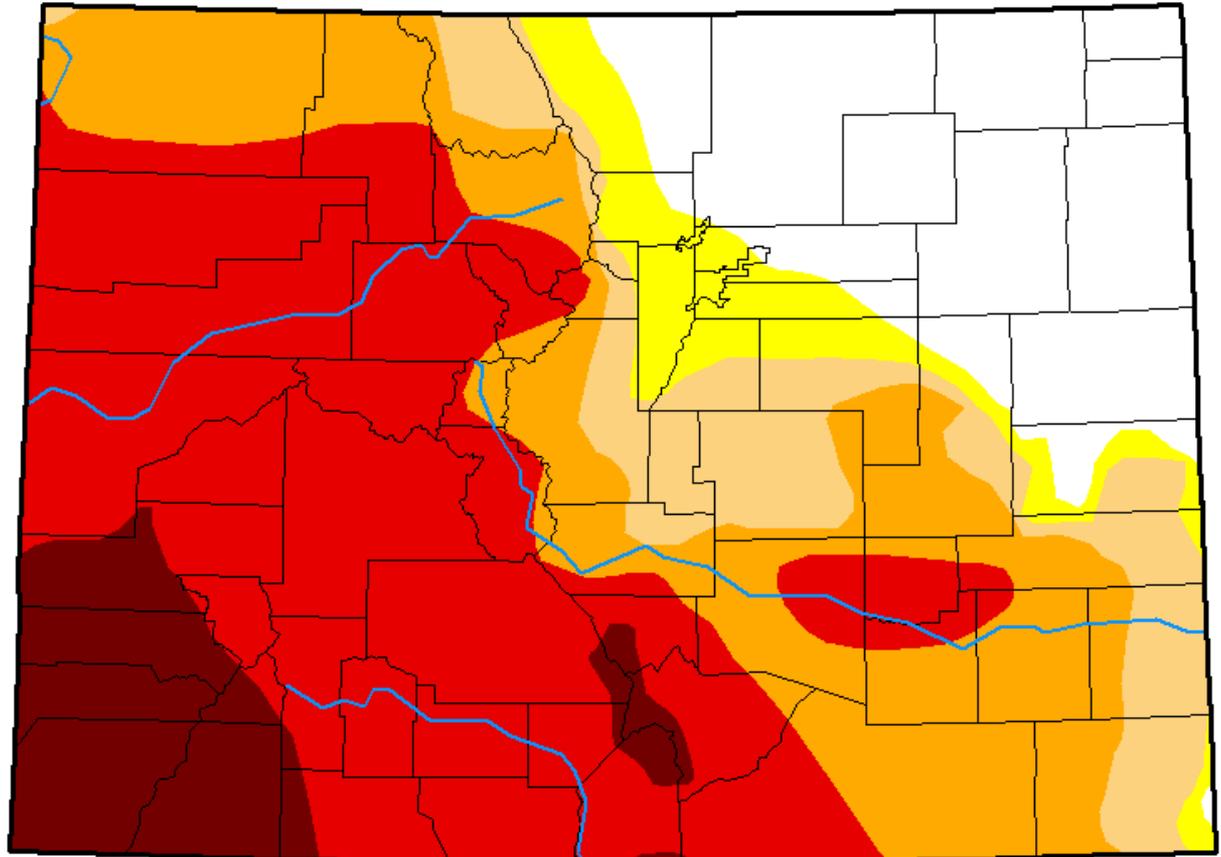
**46% is D3 or D4.**

**Eagle County:**

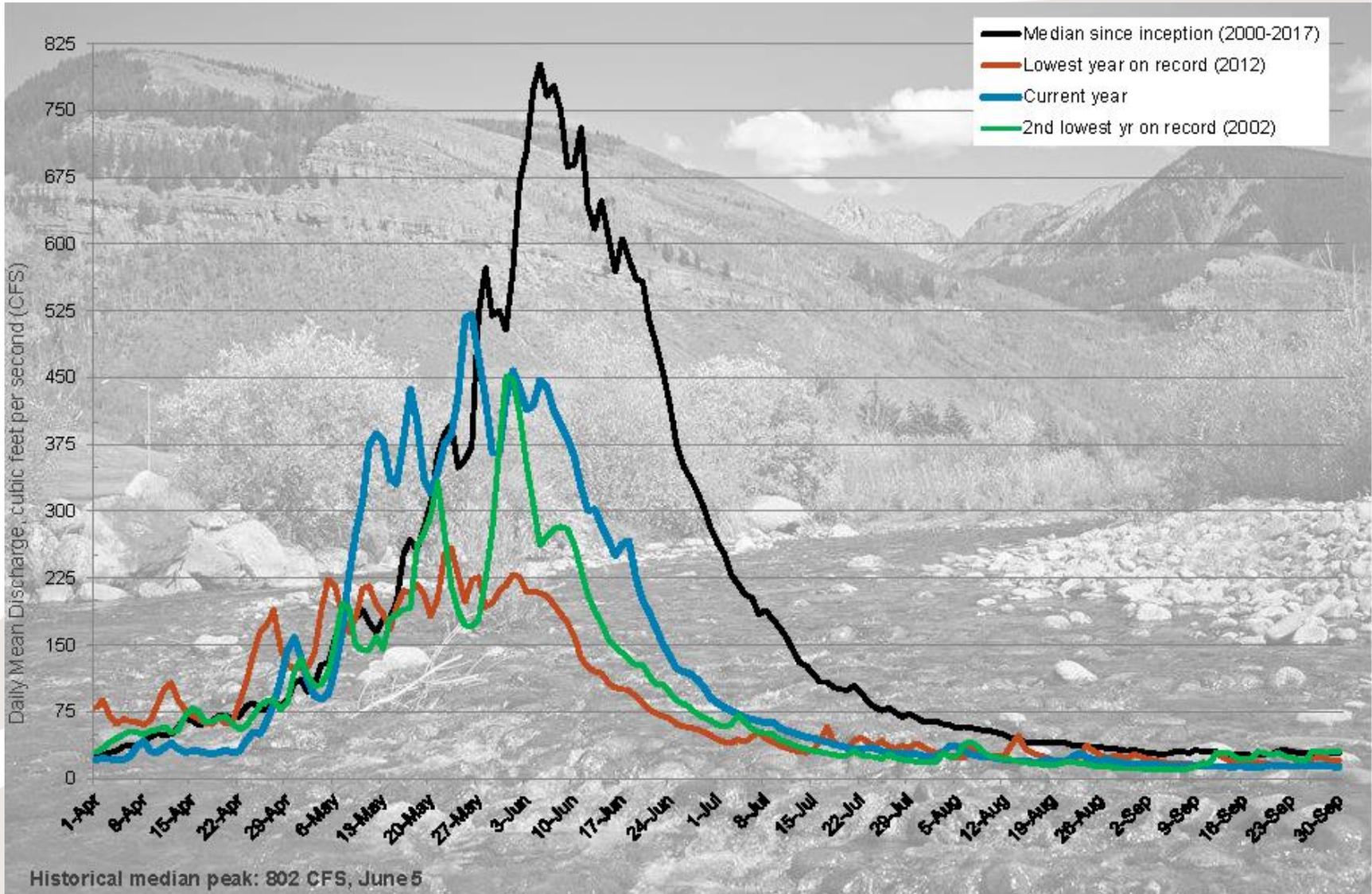
**D3 (extreme  
drought)**

**Increased to D2 in  
July; D3 on 8/14.**

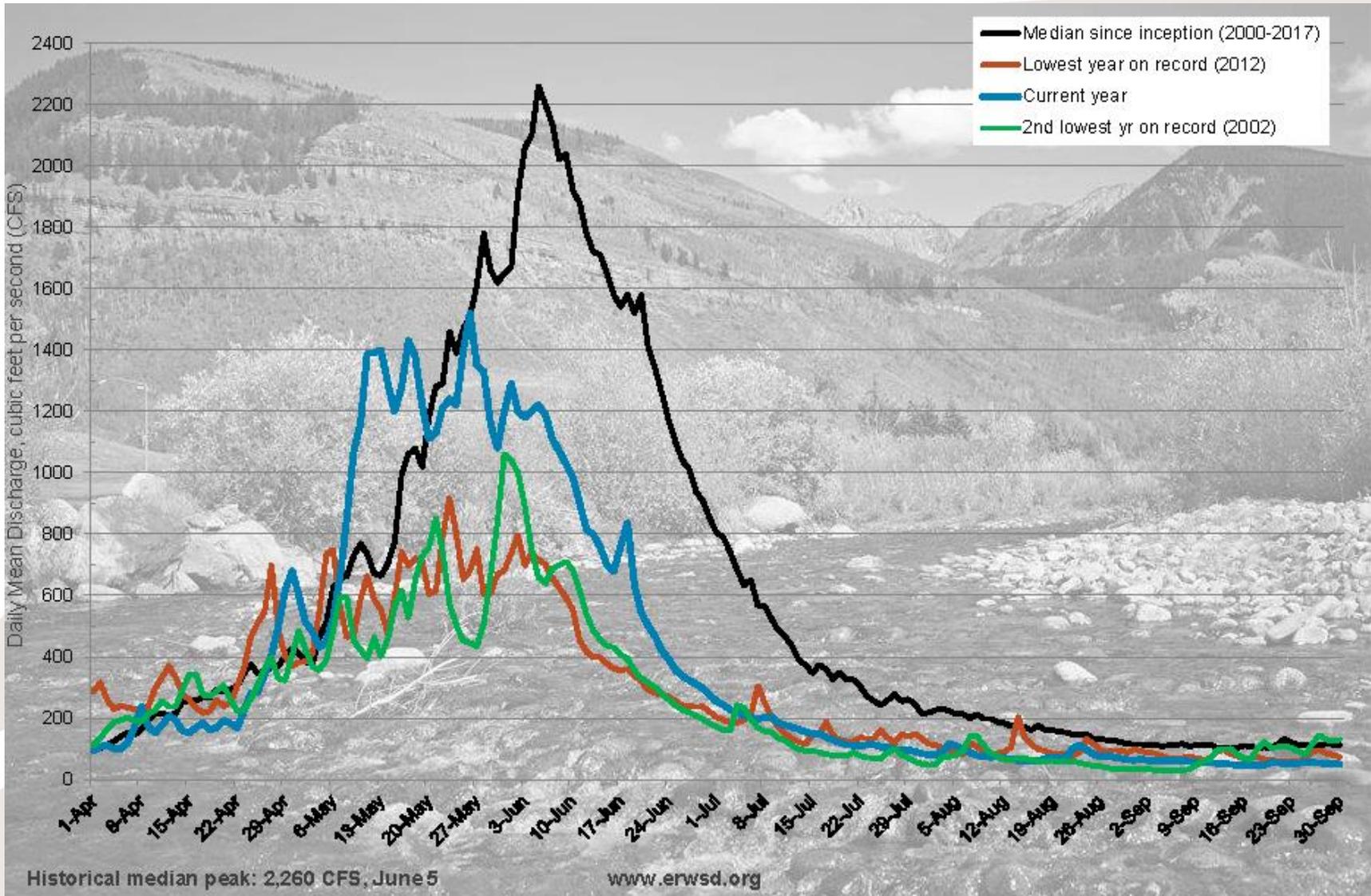
**Drought Intensity  
Scale: D0 – D4**



# Gore Creek USGS station (above Red Sandstone Creek)

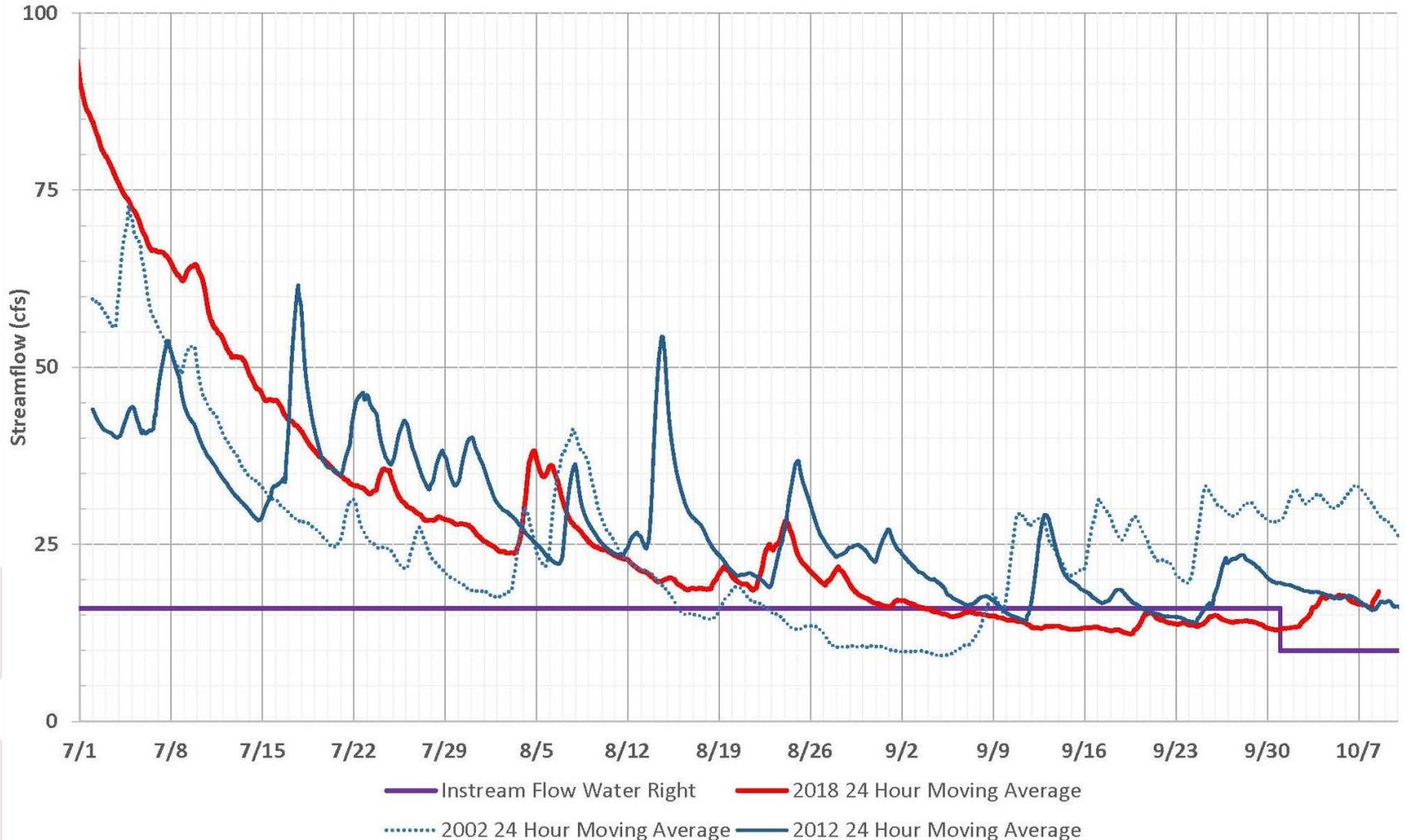


# Eagle River USGS station (below Avon wastewater plant)



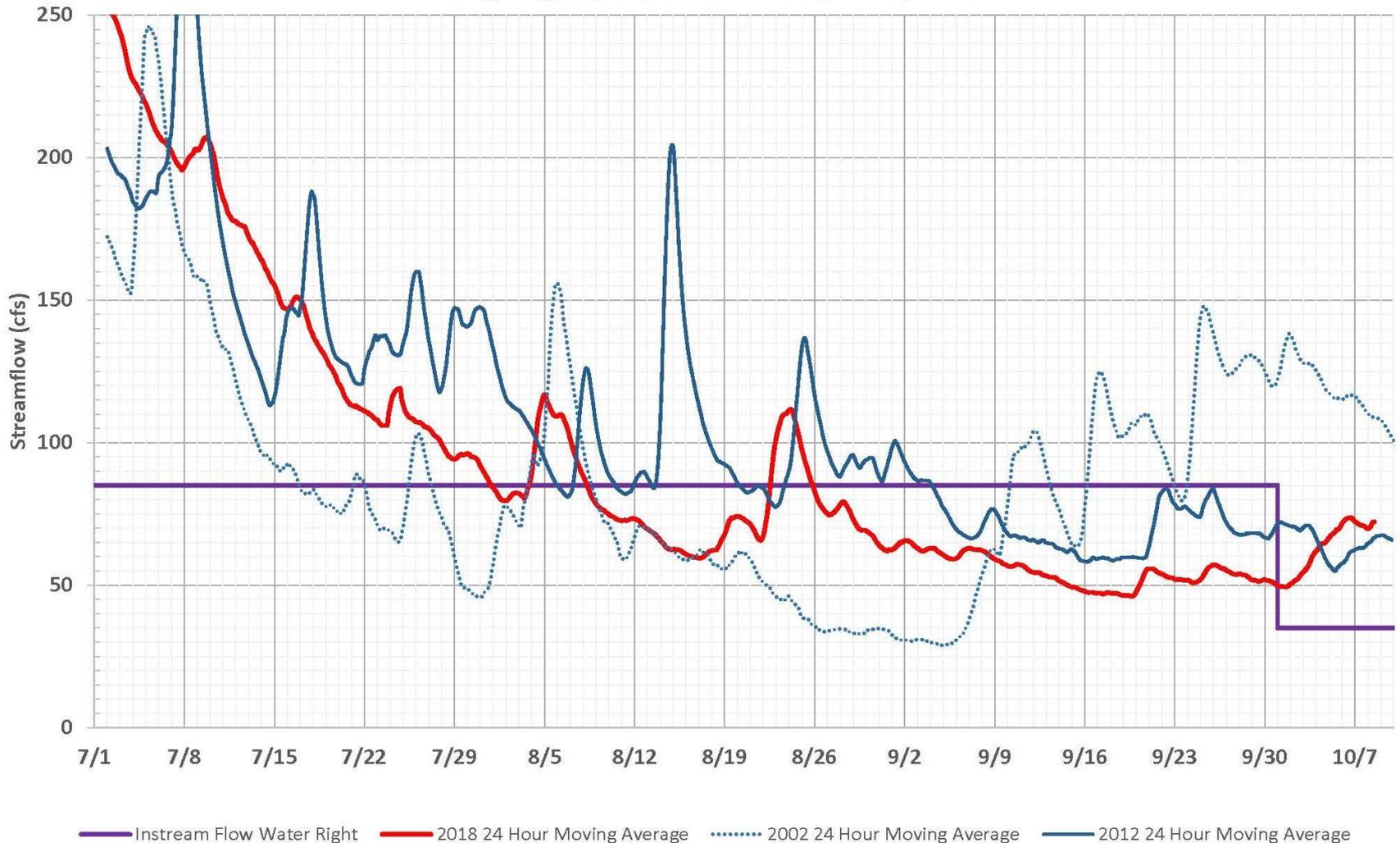
# Gore Creek USGS station (above Red Sandstone Creek)

Streamflow, Gore Creek Above Red Sandstone  
July, August, September 2002, 2012, 2018



# Eagle River USGS station (below Avon wastewater plant)

Streamflow, Eagle River Below Avon WWTF  
July, August, September 2002, 2012, 2018

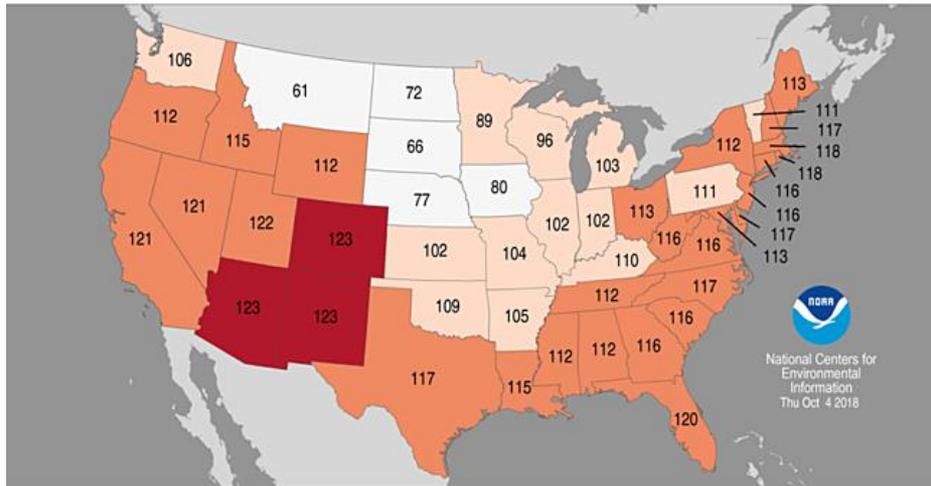


## TEMPERATURE

### Statewide Average Temperature Ranks

October 2017–September 2018

Period: 1895–2018

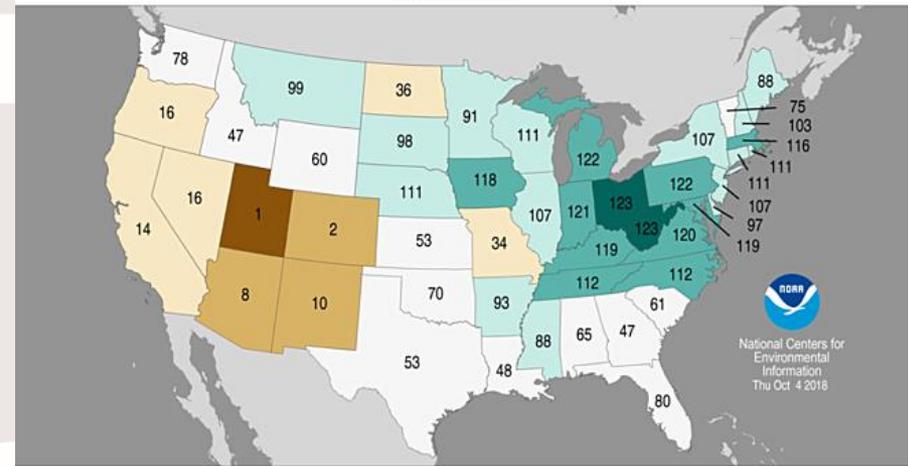


## PRECIPITATION

### Statewide Precipitation Ranks

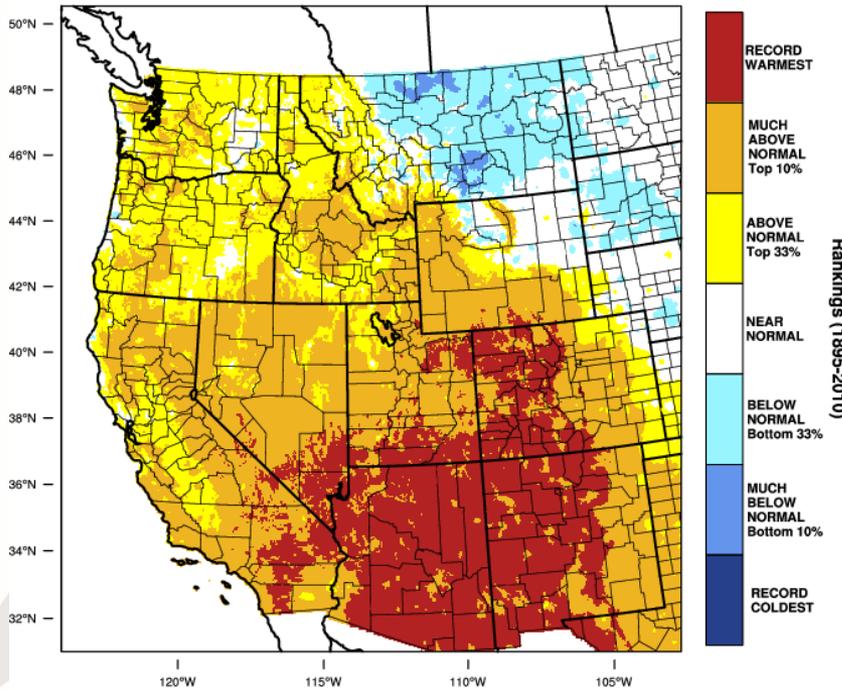
October 2017–September 2018

Period: 1895–2018



## TEMPERATURE

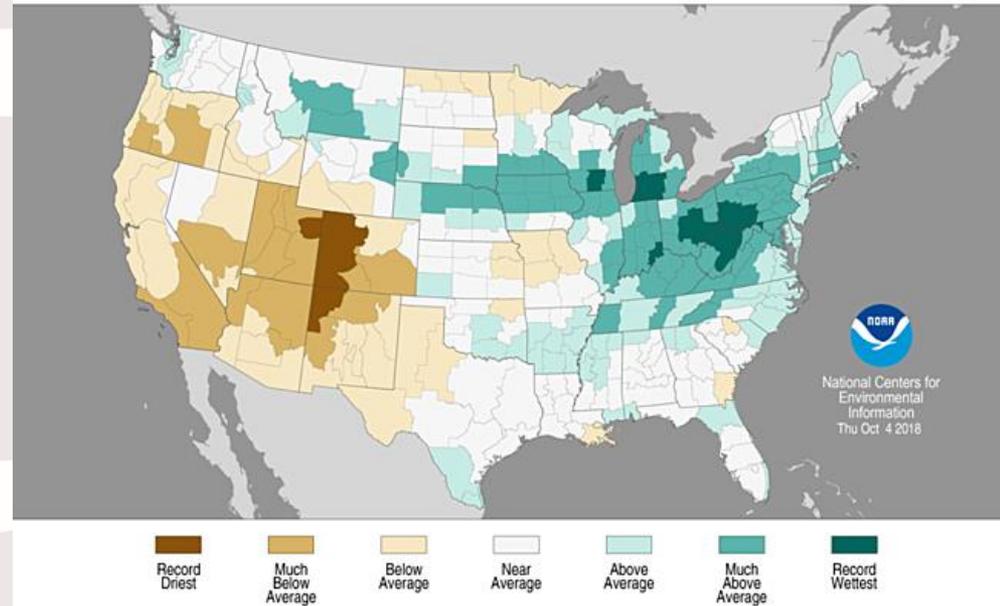
**Western United States - Mean Temperature**  
October-September 2018 Percentile



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 16 OCT 2018

## PRECIPITATION

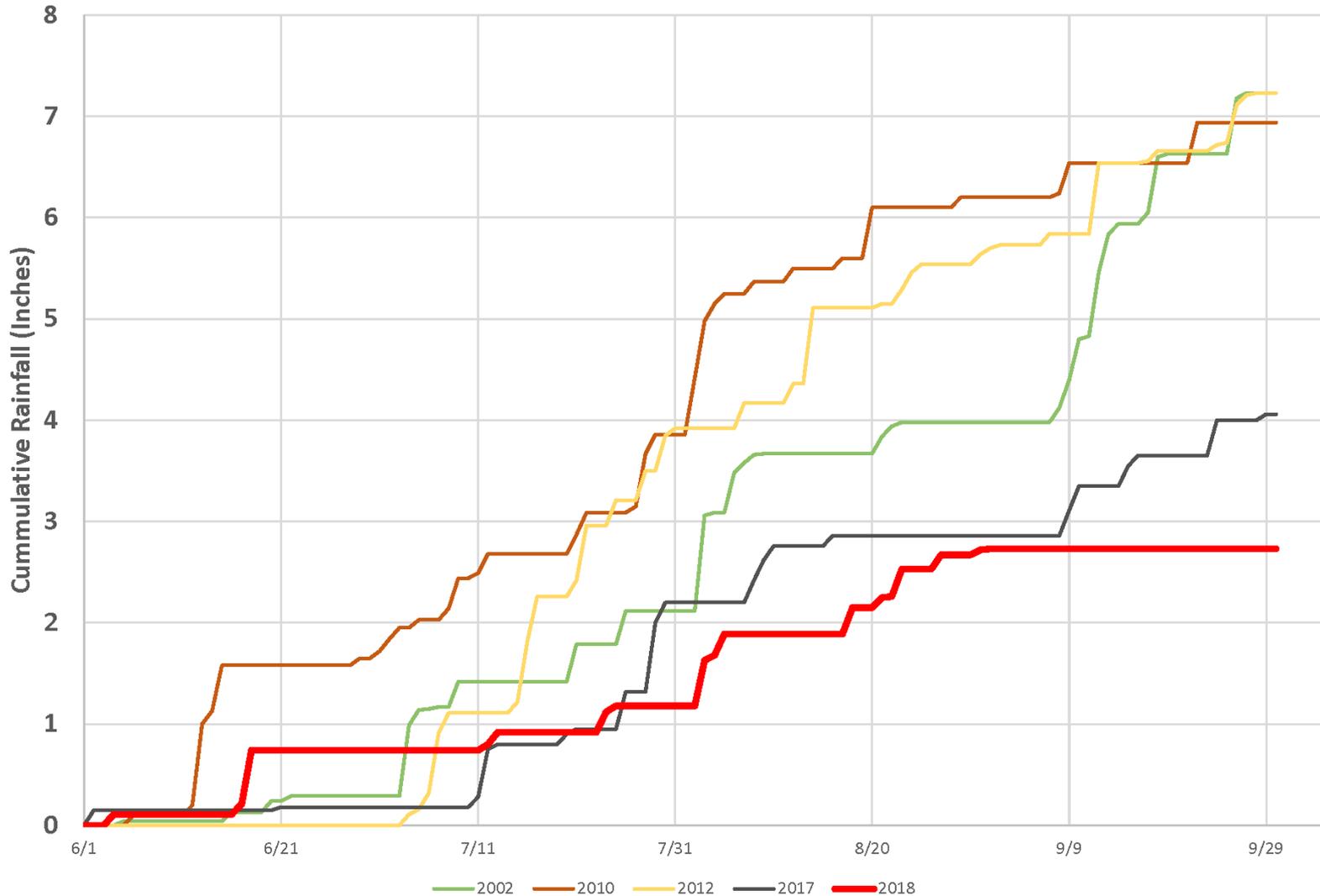
**Divisional Precipitation Ranks**  
October 2017-September 2018  
Period: 1895-2018



# Gore Creek USGS station

## Precipitation: June – Sept. 2018

Cumulative Rainfall from June 1st



## FIRE SUPPRESSION



## ESSENTIAL INDOOR USES

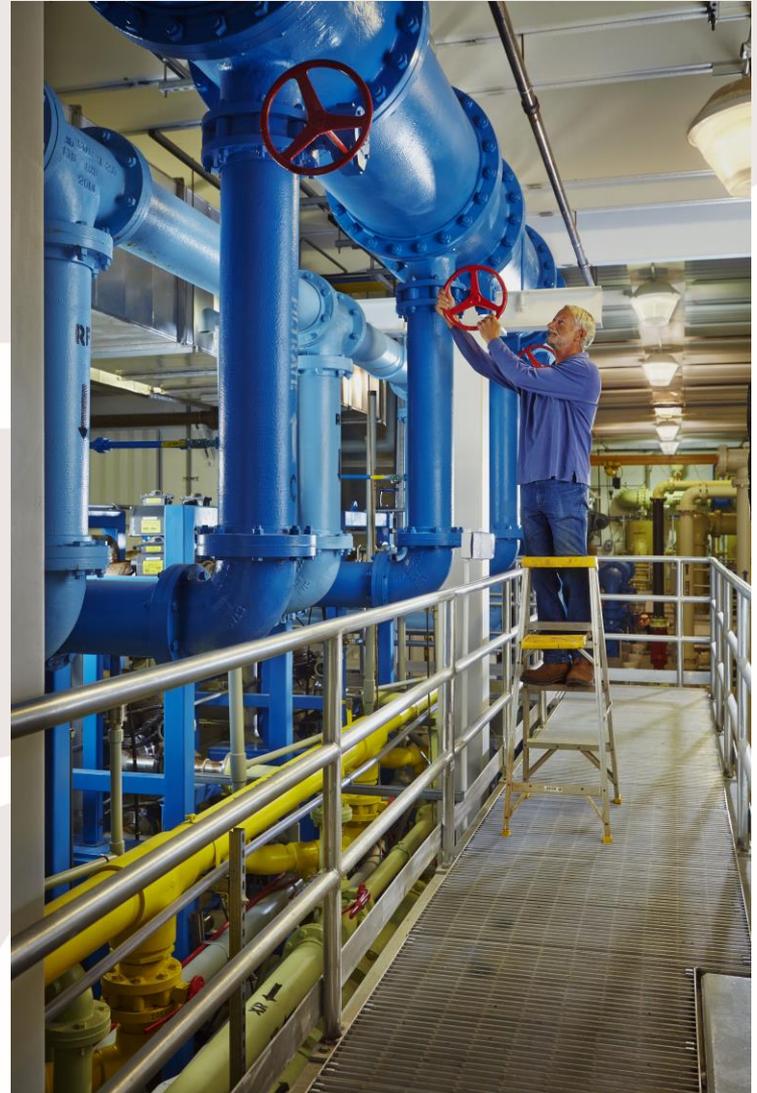


# Priority: Local Economy

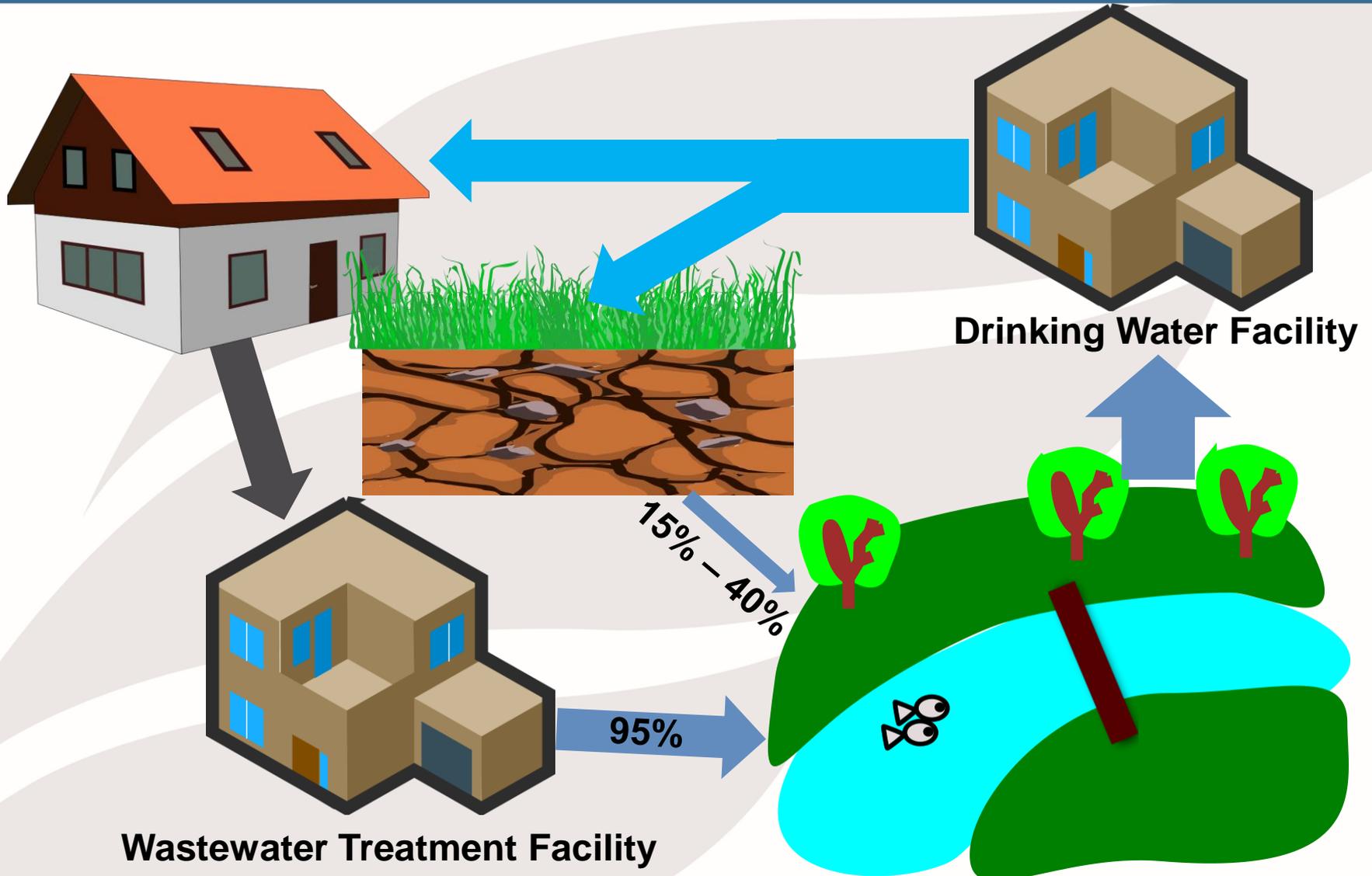
**STREAMFLOWS, AQUATIC HEALTH, TOURISM, RECREATION**



# Priority: Reliability



# Outdoor water efficiency

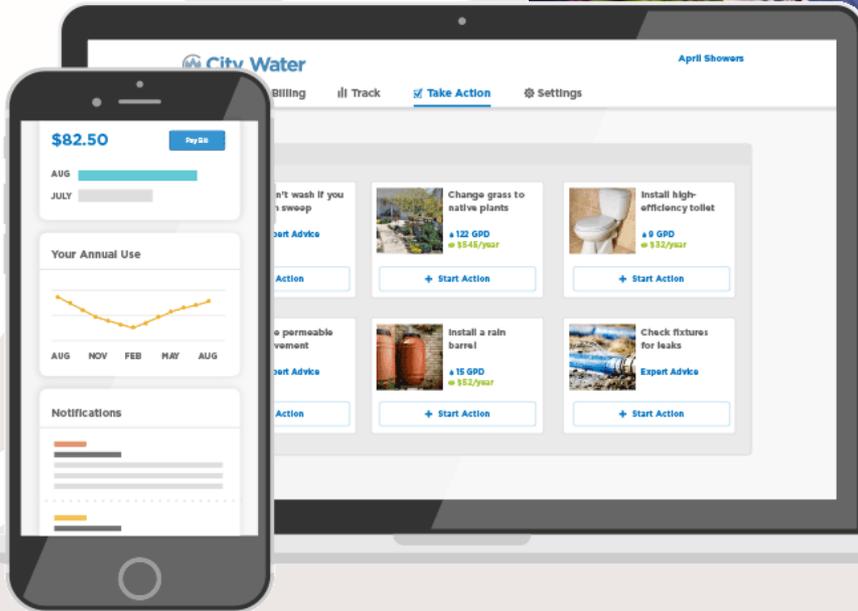
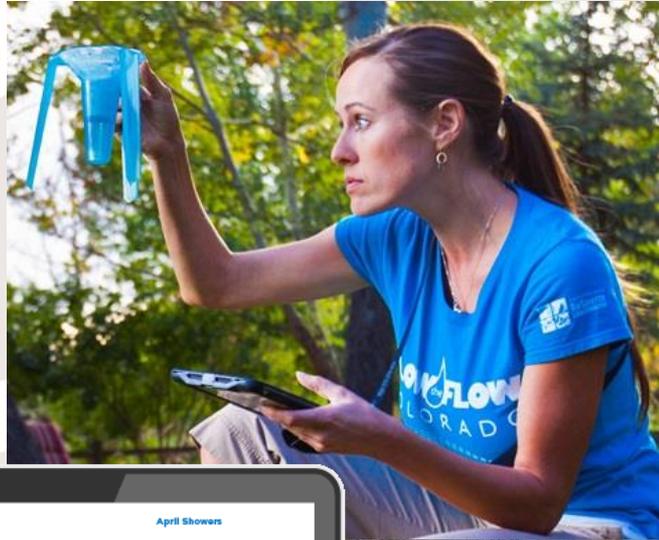


# Water Use Regulations



DAY	ADDRESSES THAT MAY WATER	TIMES
<b>Monday – NO OUTDOOR WATER USE</b>		
<b>Tuesday</b>	<b>Odd</b>	<b>Before 10am or After 4pm – (MIDNIGHT TO 10AM OR 4PM TO MIDNIGHT)</b>
<b>Wednesday</b>	<b>Even</b>	
<b>Thursday</b>	<b>Odd</b>	
<b>Friday</b>	<b>Even</b>	
<b>Saturday</b>	<b>Odd</b>	
<b>Sunday</b>	<b>Even</b>	

# Water management



## Local & Region

A2 | Tuesday, July 24, 2018 | The Vail Daily

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Vol. XXXVII, Issue 300	

# LOCAL STREAMS RUNNING LOW

*Water district customers asked to limit outdoor watering*

By Scott N. Miller  
smiller@vaildaily.com

**EAGLE COUNTY** — As significant rain continues to avoid the Vail Valley, local streams are running low and slow, weeks before the usual low-flow times of late summer and fall. Those low flows mean water users need to make some changes.

The Eagle River Water & Sanitation District — which serves water users from East Vail to Edwards — is asking its customers to cut back on outdoor water use to help maintain water in local streams. While most indoor water is returned to local streams, far less irrigation water makes it back.

In a memo to the district's elected board, communications and public affairs manager Diane Johnson wrote that streamflows measured on Gore Creek, the Eagle River near Minturn and the Eagle River at Avon are all running significantly below seasonal norms.

As of July 22:

- Gore Creek was running at 36 cubic feet per second, 38 percent of the normal flow.
- The Eagle River near Minturn was running at 49 cfs, 43 percent of normal.
- The river at Avon was running at 108 cfs, 36 percent of normal.

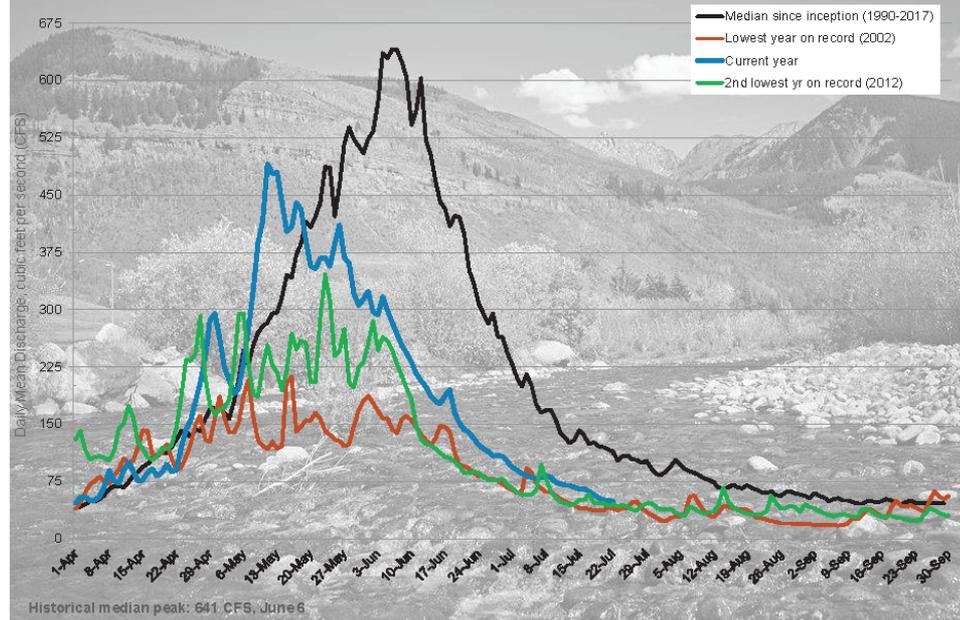
Those readings are among the lowest on record. Only the drought years of 2002 and 2012 showed lower streamflows from April 1 to July 22. Even in those drought years, the graph lines show the occasional bump, when rainfall temporarily boosted streamflows.

This year, those bumps haven't developed.

THE MISSING MONSOON

### USGS station: Eagle River near Minturn

07/22/2018 streamflow: 48.6 CFS, 43% of normal



▲ Previous low-flow years had little bumps in streamflows, thanks to monsoonal summer rains. Those rains haven't come yet this summer.

# Vail Daily

BRINGING COMMUNITIES TOGETHER  
TUESDAY, 8 • 14 • 18 | VAILDAILY.COM | FREE



## Fire restrictions continue

Scant rain last week did little to ease hot, dry summer. **A3**

## Extreme water users face fines, shut-offs

Outdoor watering aggravates already-low streamflows

By **Scott N. Miller**  
smiller@vaildaily.com



MAX PHANNENSTIEL | SPECIAL TO THE DAILY

**The Eagle River at Avon is flowing at nearly historic lows. In an effort to preserve streamflows by cutting back on outdoor watering, the Eagle River Water & Sanitation District sent letters to its most extreme users requiring cutbacks. Users can be fined, or disconnected, if they don't comply.**

### BY THE NUMBERS

**42 percent:** Percentage of normal streamflow in Gore Creek on Sunday, Aug. 12.

**42 percent:** Percentage of normal streamflow in the Eagle River at Minturn on Aug. 12.

**38 percent:** Percentage of normal streamflow in the Eagle River at Avon on Aug. 12.

Source: Eagle River Water & Sanitation District

EAGLE COUNTY — Even with streamflows in the upper Eagle River Valley hovering near historic lows, some Eagle River Water & Sanitation District customers are still using large amounts of water for irrigation. Now, they have to cut back.

District officials on Monday, Aug. 13, sent several hundred letters to customers using thousands of gallons of water per week, mostly for outdoor watering.

Those letters inform those users they must immediately reduce their use below 10,000 gallons per week per “single family equivalent” or face fines and possible disconnection of their water service.

One single family equivalent will serve a home up to 3,000 square feet. A number of homes in the valley are billed for more than one single family equivalent. That means some customers are using 20,000 gallons per week — or more.

The district has a five-tiered billing system, with tiers coming in 10,000-gallon-per-month increments. Customers in the upper tiers pay more for their service. Monday's letters were sent to people in the highest tier, meaning those people use 40,000 gallons per month or more.

The average residential customer uses about 7,000 gallons per month, according

### HighLife



Before there was the spoken word, there was scatting; now kept alive by a few jazz musicians. FOR THE FULL STORY, SEE PAGE B1.

### DROUGHT WATCH

**WATERING DAY**  
Odd addresses  
erwsd.org

**STREAM FLOWS**  
Gore Creek: 42 percent\*  
Eagle River: 38 percent\*  
\*of normal

**DROUGHT INTENSITY**  
Severe

**FIRE RESTRICTIONS**  
Stage 2: No campfires  
www.eaglecounty.us

**STAY INFORMED**  
Subscribe to EC Alert at  
ecalert.org

Information provided by the  
Eagle River Water & Sanitation District



MAX PHANNENSTIEL | SPECIAL TO THE DAILY

Gore Creek flows at 19 cubic feet per second through East Vail on Monday, Aug. 13. Fire danger has been elevated all summer, partly due to a lack of precipitation the past eight months. Both nearby and distant fires across the Western United States have contributed to smoky skies and reduced air quality.

### WEATHER

**RHYANNA STRICKER**  
Red Hill Elementary School  
Mostly cloudy  
High 77; low 48 — Weather, B8



### COLORADO

Congressman Jared Polis says gun ranges are safer than the alternative. FOR THE FULL STORY, SEE PAGE A14.

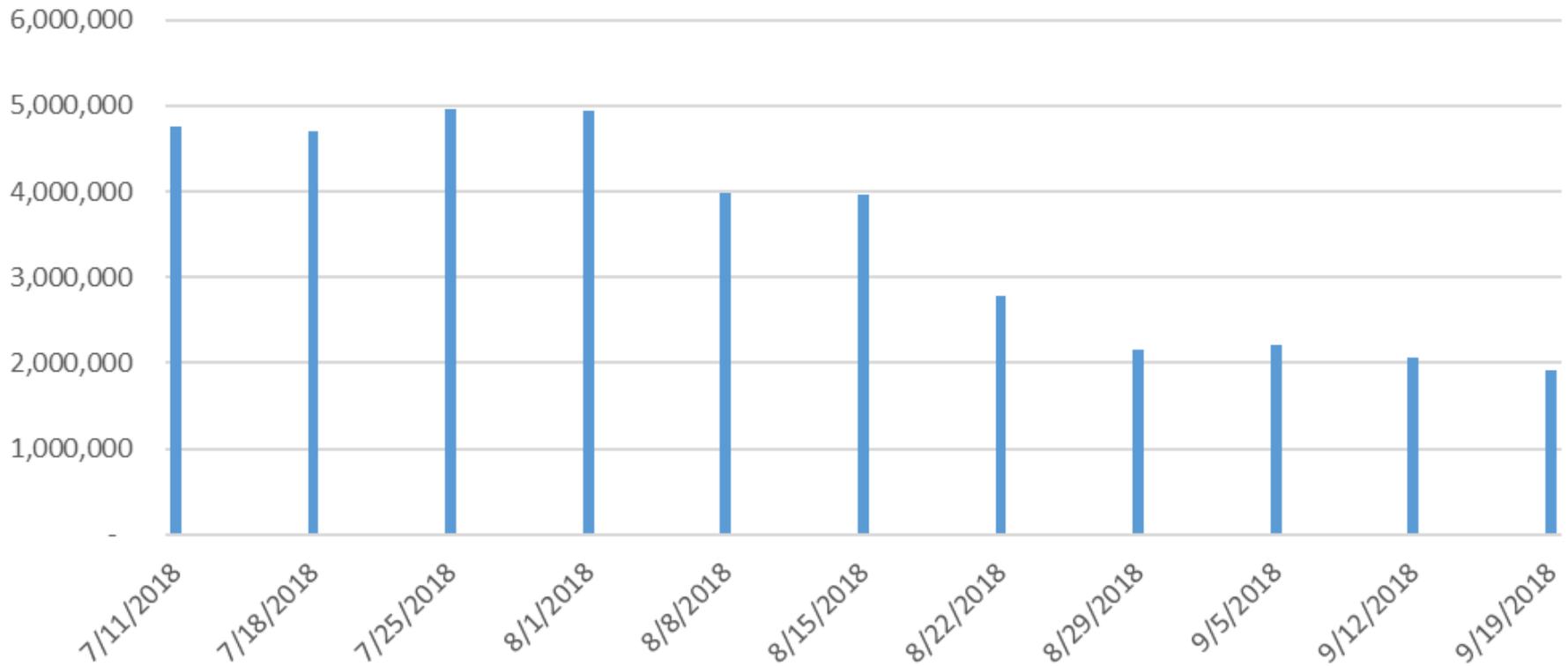


### LOCAL & REGION

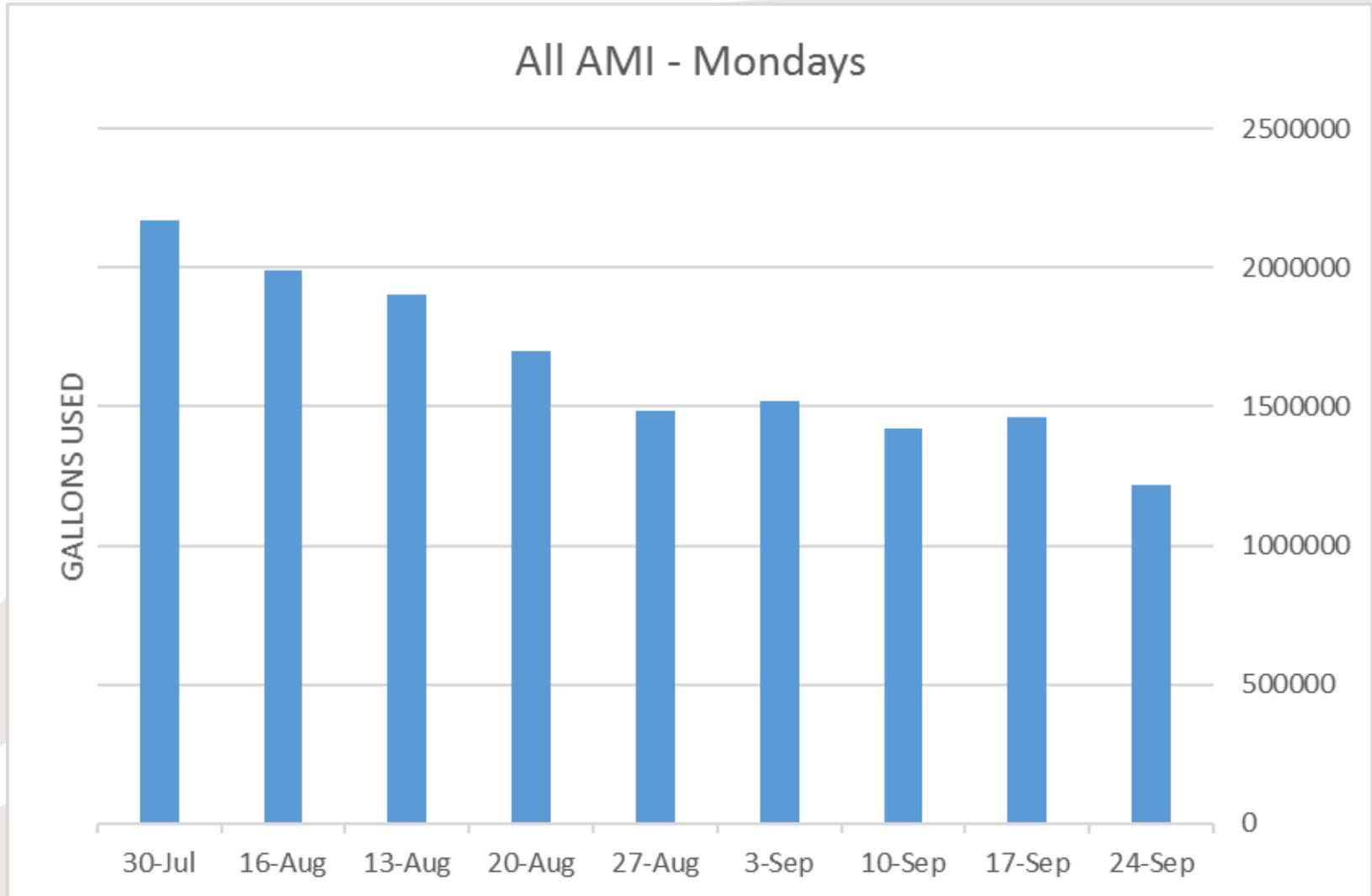
Local adventurer Steve Boyd is remembered by friends and family as “a man of many stories.” FOR THE FULL STORY, SEE PAGE A2.

# Water meter analytics

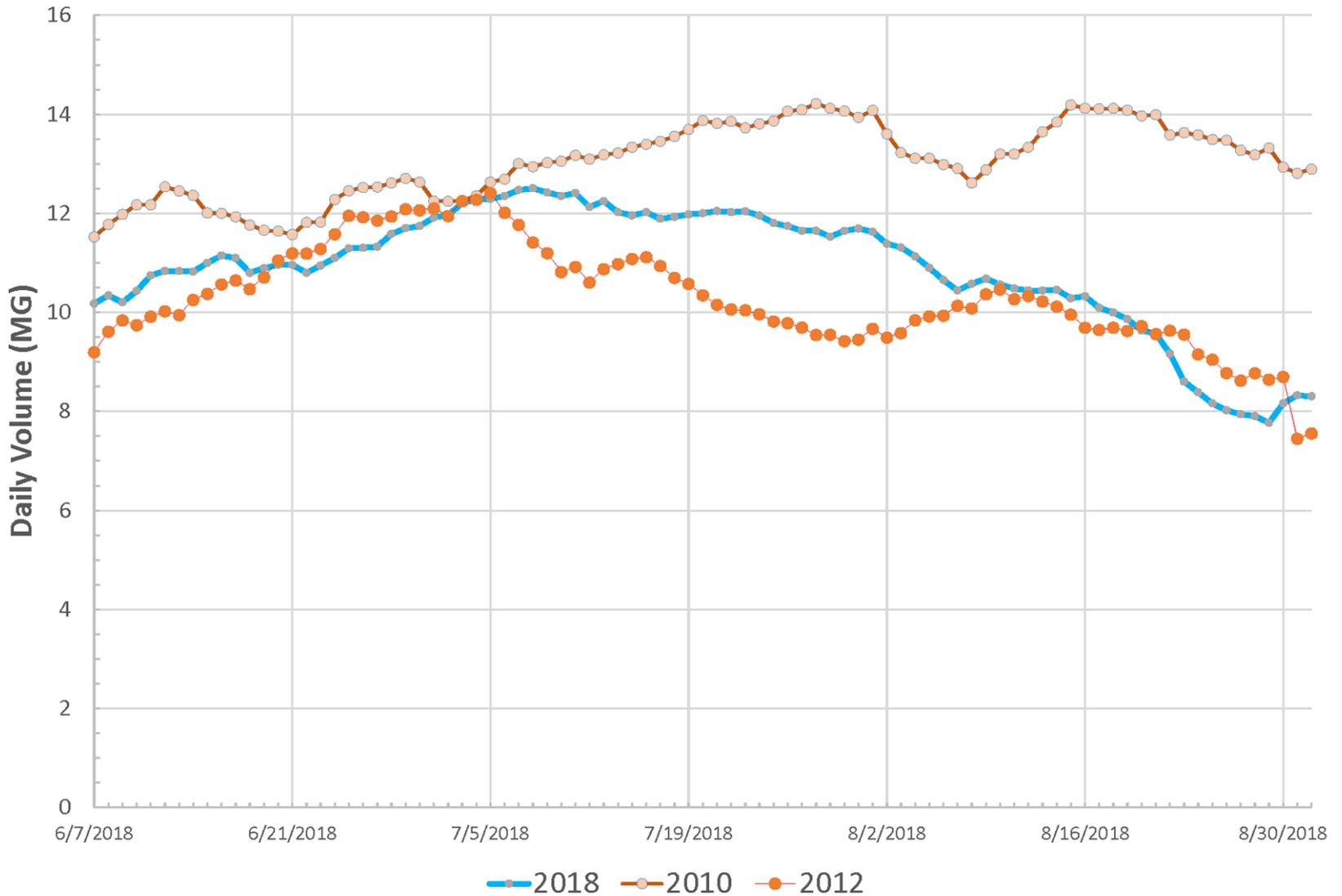
Total Weekly Excessive User Use



# Water meter analytics

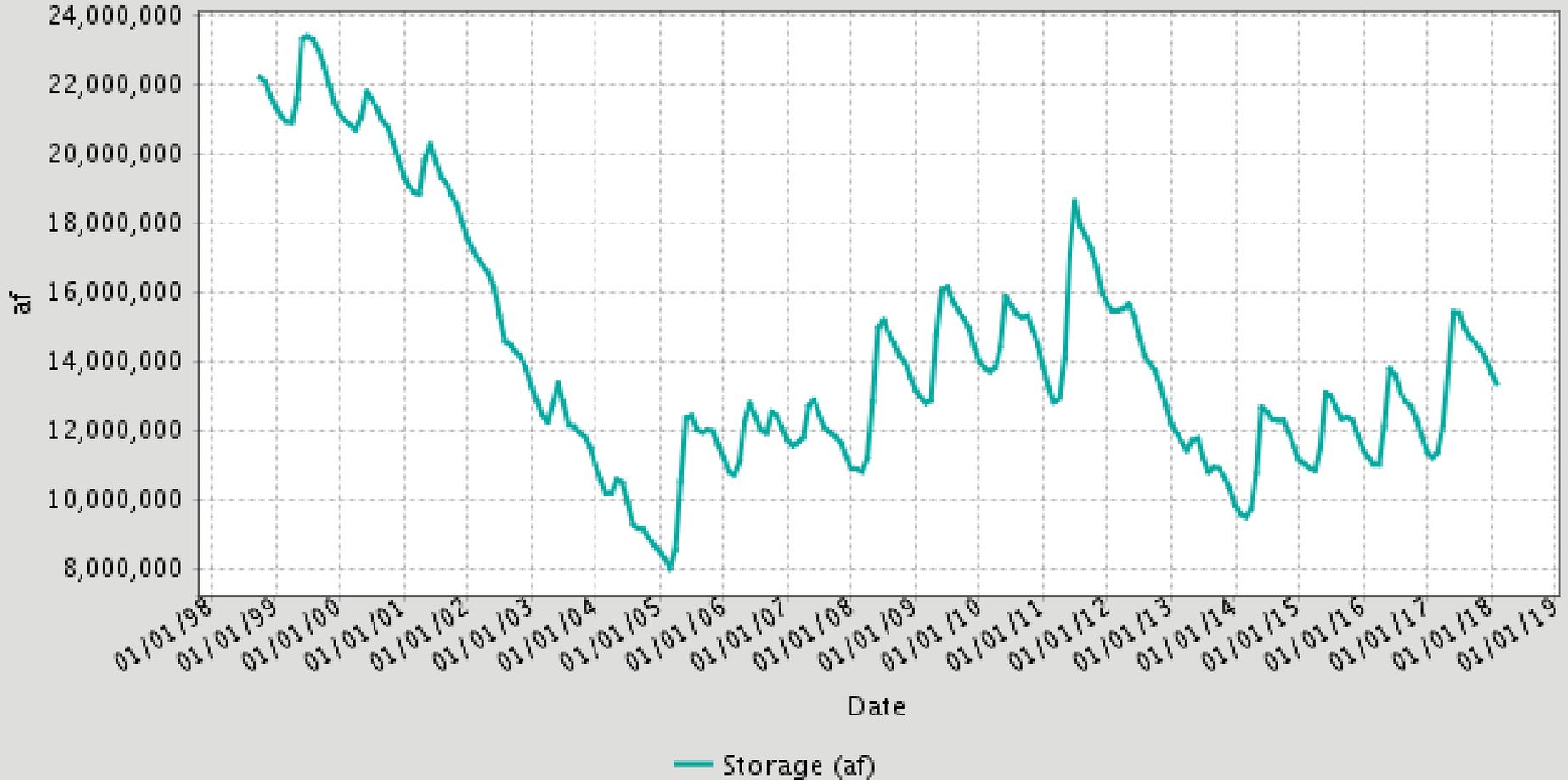


# Daily water production: June-Aug



# Lake Powell storage: 1999 - 2018

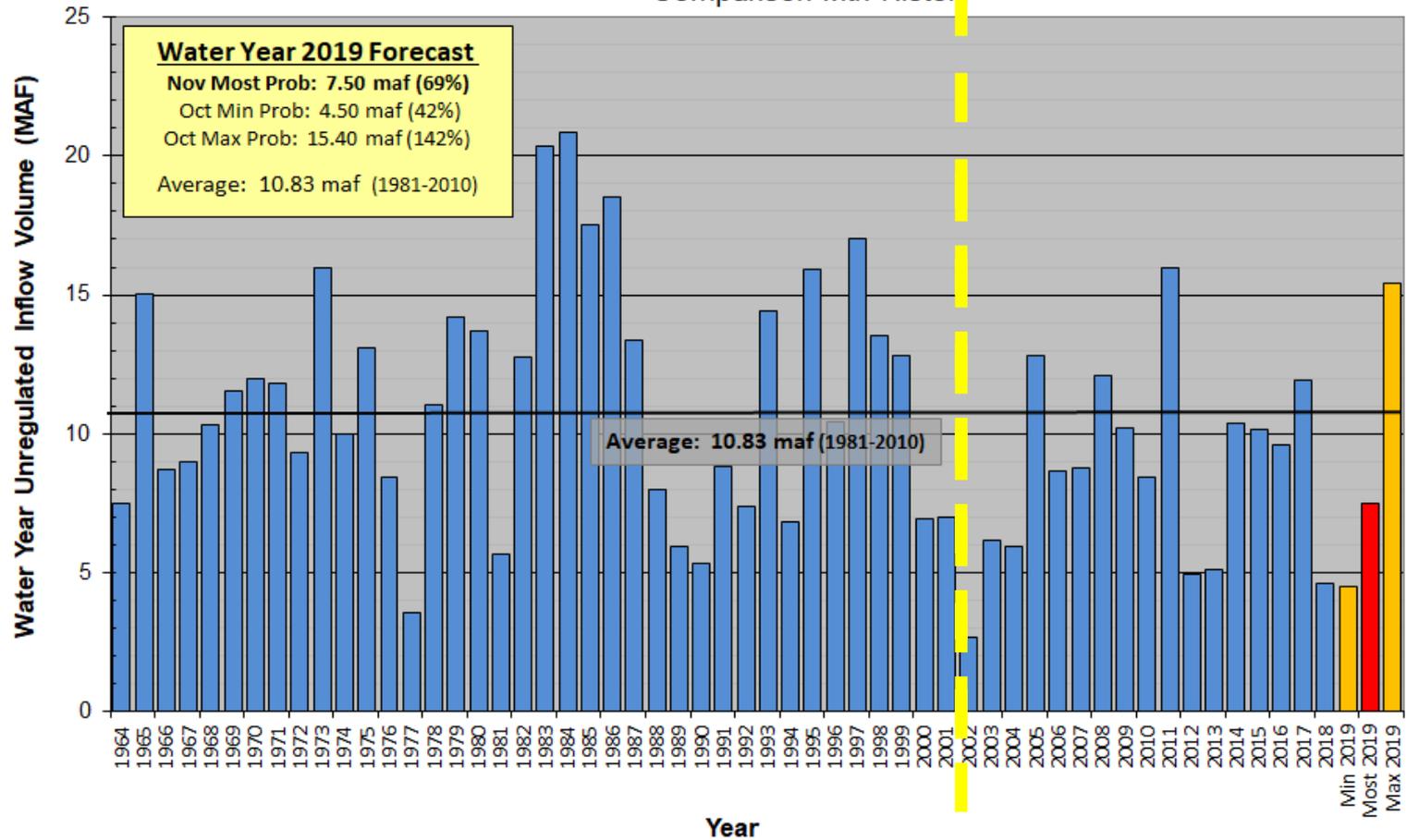
## LAKE POWELL - Monthly Data



# Lake Powell Inflow

## (Water Year 2019 Forecast)

**Lake Powell Unregulated Inflow**  
**Water Year 2019 Forecast** (issued November 1)  
Comparison with History





# How you can help

- ❑ Choose the right plants ahead of time
- ❑ Upgrade to more efficient equipment
- ❑ Sign up for a **FREE** irrigation system consultation





## CONTACT INFO

### **Customer Service:**

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970-476-7480

### **Communications & Public Affairs:**

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djohnson@erwsd.org

Amy Vogt

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Twitter: @VailCOwater



## 2019 Meeting Dates

- March 11<sup>th</sup>, 2019
- June 17<sup>th</sup>, 2019
- September 30<sup>th</sup>, 2019
- December 9<sup>th</sup>, 2019

That's a wrap!

Next meeting: March 11<sup>th</sup>, 2019



#BeBetterTogether