

CITIZENS' WATER ADVISORY COMMITTEE (CWAC) AGENDA

January 12, 2021, 6:00 p.m.

Webex Link:

<https://auroragov.webex.com/auroragov/j.php?MTID=mb6a4a1234d6eea1b4a595ec0950c539e>

Public Participation through call in number (listen only)

1-720-650-7664

Access code: 146 834 1694

Members: Janet Marlow-Chair, Tom Coker-Vice Chair, Angie Binder, Jay Campbell, Richard Eason, William Gondrez, David Patterson

- | | | | |
|-----|--|--|-----------|
| 1. | Elections – 2021 Chair and Vice-Chair | Chair | 6:00 p.m. |
| 2. | Approval of Minutes – November 10, 2020 | Chair | 6:05 p.m. |
| 3. | Introductions/Public Invited to be Heard | Chair | 6:10 p.m. |
| 4. | New/Old Business | Chair | 6:15 p.m. |
| 5. | Communications Update | Greg Baker | 6:20 p.m. |
| 6. | Service Line Warranties | Marshall Brown/
Brian Davis, HomeServeUSA | 6:25 p.m. |
| 7. | Watersheds/Forest Health | Mike McHugh/
Mary Dawson | 6:45 p.m. |
| 8. | Discuss CWAC Quarterly Report to WPC in
January | Chair | 7:20p.m. |
| 9. | 2021 Volunteer Agreements | Greg Baker | 7:25 p.m. |
| 10. | Review/Verification of 2020 Attendance Records | Greg Baker | 7:30 p.m. |
| 11. | Review Follow-Up Questions Generated at this Meeting | Chair | 7:35 p.m. |
| 12. | Confirm Next Meeting – Tuesday, February 9, 2021 | Chair | 7:40 p.m. |
| 13. | Adjourn | Chair | 7:45 p.m. |

CITIZENS' WATER ADVISORY COMMITTEE (CWAC) MINUTES

November 10, 2020, 6:00 p.m.

Webex

Public Participation through call in number (listen only)

1-720-650-7664

Access code: 146 311 7675

Members Present: Janet Marlow (Chair), Tom Coker (Vice-Chair), Jay Campbell, Richard Eason, David Patterson, Angie Binder, William Gondrez

Absent: None.

Staff Present: Marshall Brown, Greg Baker, Jo Ann Giddings, Sherry Scaggiari, Dan Gallen, Natalie Brower-Kirton, Elizabeth Roberts, Gail Thrasher, Greg Hansen, Sonya Gonzalez, Jessica Roode

Visitors Present: None.

The meeting was called to order at 6:01 p.m.

1. Approval of Minutes – September 8, 2020

The September 8, 2020 minutes were approved.

2. Introductions/Public Invited to be Heard

None.

3. New/Old Business

None.

4. Communications Update

G. Baker stated, the Homestake Reservoir pilot project is still pending the State Engineer's final report, but that he hopes to receive it by the end of the month. He also advised that while there has been increased news coverage of water lately, it has not impacted Aurora.

5. Quarterly Financial Report

J. Giddings reviewed the quarterly financial report, summarizing that revenues are up due to increased water usage and collected development fees. While expenses are a bit behind at

present, they are within normal margins. In addition, water connection and tap fee revenues that have been collected through the third quarter have almost reached total revenue of last year.

J. Giddings also stated, that in an effort to assist customers who have been affected by COVID-19 in any way possible, an application for financial assistance has been submitted for Coronavirus Aid, Relief, and Economic Security (CARES) funds. The billing and customer service group has also looked at resuming shut-offs for non-payment in the future, but they are working with customers to assist them through the current situation by providing several different payment options.

6. COVID Testing in Wastewater

S. Scaggiari presented an overview of the Wastewater-Based Epidemiology (WBE) sampling for COVID-19 being conducted at Aurora's Sand Creek Water Reuse facility.

Per S. Scaggiari, Aurora Water is working in conjunction with the Colorado Department of Public Health and Environment (CDPHE), Arapahoe County and other state wastewater facilities and epidemiologists to sample and report on SARS-CoV-2 Ribonucleic acid (RNA) concentrations in wastewater influent. Pooled samples are collected by the Aurora Water Quality Control Lab at the Sand Creek Reuse facility and then sent to a laboratory. Colorado State University's lab is handling the samples for the CDPHE with any overflow testing taking place at Metro State University. GT Molecular is handling the samples for Arapahoe County.

Approximately sixty percent of Colorado's population is represented by participants in the study.

Aurora Water is currently drawing one sample, twice weekly for CDPHE's use and one sample weekly for Arapahoe County (Addendum: Per S. Scaggiari, as of November 30, 2020, Aurora Water is currently taking twice weekly samples for Arapahoe County). Accumulated charted data sets represent a trend of RNA concentrations not a specific number of cases. Between October 4 – October 29 concentrations of SARS-CoV-2 RNA has doubled over that time.

Wastewater-Based Epidemiology (WBE) sampling has been utilized several times in the past to assist with infectious disease detection for programs such as the Global Polio Eradication Initiative and studies which investigate opioid use in communities. In the case of COVID-19 detection, WBE is being used to complement current infectious disease surveillance systems, by functioning as an early warning system for disease outbreaks on a community level. In most instances, a person's body begins to shed the virus a couple of days prior to someone showing symptoms of the disease. By testing and charting the virus' RNA concentrations within the samples, CDPHE and other agencies may be able to receive early indicators of where possible community outbreaks may be taking place.

Funding for the testing came from the Coronavirus Aid, Relief, and Economic Security (CARES) Act via the CDPHE and Arapahoe County.

J. Marlow asked, when did Aurora Water begin testing samples? S. Scaggiari responded that testing began approximately around the end of July/beginning of August (Addendum: Per S.

Scaggiari, as of November 30, 2020, she confirmed Aurora Water began testing in mid-August).

R. Eason asked, will testing be continued for projects beyond the COVID-19? S. Scaggiari stated that she did not foresee testing continuing beyond the current project without further evaluations of the possible benefits continued testing would provide Aurora versus the cost prohibitive aspects of the testing itself.

7. Godfrey Ditch Project

D. Gallen presented an overview of the Godfrey Ditch Project which is located near Greeley, Colorado and due west of La Salle, Colorado.

Per D. Gallen, the river diversion project was initially completed in 1870 when the Section No. 3 Ditch Company built a ditch to divert water from the South Platte River for agriculture, dairy and milling purposes. There are two recorded appropriation dates for the system, one on March 10, 1870 and one on March 15, 1873, which totaled fifty-seven cubic feet per second (cfs) of water. In 1910 the ditch was damaged by flooding, at which point it was rebuilt by the re-named Godfrey Ditch Company. Extending approximately four miles in length, the Godfrey Ditch irrigated up to 2,000 acres of land at its peak.

As of November 2020, Aurora owns eighty-three of one hundred and sixty shares or approximately fifty-two percent of the Godfrey Ditch.

In 2013 there were significant floods in the area which caused the Godfrey Ditch river diversion to be essentially washed out. Following the floods, the Federal Emergency Management Agency (FEMA) declared the region a disaster zone which opened up funding for recovery efforts. On behalf of and with the support of the Godfrey Ditch Diversion board, the Middle South Platte River Alliance (MSPRA) requested funding through FEMA to rebuild the diversion structure. The funding obtained totaled \$2.4 million dollars in federal funding to rebuild the system. Between 2013 and the present day, MSPRA has transferred the grant to the Coalition of the Poudre River Watershed (CPRW). CPRW is now working with the Godfrey Ditch Diversion board to implement the construction project.

The scope of the project includes the following: removing the existing diversion structure, constructing a new diversion structure with fish and boater passage, restoring the natural floodplain contours, partially remove an existing berm to reconnect with the floodplain, grading portions of the South Platte River channel and conducting stabilization work, and revegetate the construction footprint, while removing weeds and phreatophytes. The time line for the project was broken down into three phases. Phase 1 was completed between June 1st-July 15th and dealt with fish passage and the riffle structures. Phase 2's time frame was established as July 15th-September 15th and focused upon the diversion and riffle structures. Phase 3 extends from September 15th-December 1st and deals with plugging the old ditch, creating the new ditch and revegetating the area.

Currently, the project is in the process of installing Obermeyer bladder gates and a sand gate at

the diversion and first riffle point on the South Platte River. The purpose of the bladder gates is to allow for safe and efficient operations of the river diversion. Resulting in increased safety for company staff and negate the need to move large pieces of equipment into the river.

A. Binder asked, how many shares does Aurora currently holds of the Godfrey Ditch and what was the percentage of the ditch that Aurora owns? D. Gallen advised that Aurora owns eighty-three of one hundred and sixty shares or approximately fifty-two percent of the Godfrey Ditch. The benefits gained from Aurora being a shareholder stem from the system's strategic location and its senior water rights, which reflect a more consistent yield versus some junior rights.

J. Marlow asked, what amount of water is currently being delivered by the system? D. Gallen provided that the ditch has an appropriated rate of fifty-seven cfs, that amount of water received from that amount depends upon how many shares the individual owns. Aurora's eighty-three shares represent approximately 29.6 cfs. Based on engineering he current consumptive use estimate of these shares are approximately eight hundred acre feet of water. This volume of water should service about 2,000 households. The numbers will be finalized in a future Change of Use Water Court case proceeding.

R. Eason asked, what ultimately will the City of Aurora do with the water from the system? D. Gallen advised that the city is currently in the process of conducting a couple of studies: the North Campus Master Plan and the Lower South Platte Master Plan. These studies are in the process of evaluating how the Godfrey Ditch shares, in conjunction with other shares that are owned by Aurora, can be utilized and accessed in the most efficient ways by the city.

8. Environmental Education & Outreach Annual Report

N. Brower-Kirton reviewed the 2019-2020 Environmental Education & Outreach Annual Report for the department.

This year, due to COVID-19, the education department needed to adapt to various restrictions in place that impacted their in-person programs. Current Aurora Water Education and Outreach programing includes: youth education, continuing education for teachers and education materials for the general public. Since its beginning in 1994, the water education program has seen a marked increase in engagement with youth via their programing, from five hundred students reached with thirty presentations during the 1994-1995 school year to 17,480 students reached with 397 presentations. And even with the various restrictions in place due to the pandemic, the team was able to maintain similar outreach numbers that were achieved during the prior year by reaching over 17,000 students.

During Spring 2020, modifications to the education and outreach programing were made to accommodate the shifting restrictions that has accompanied the pandemic. In person presentations for all audiences modified in a number of ways: some were recorded as WebEx based programs which could be accessed at any time, others were conducted virtually via multi-media platforms and where in-person attendees were participating, social distancing rules were applied along with a reduction in the number of persons allowed to attend a single event.

N. Brower-Kirton also highlighted Aurora Water's role in assisting in the Statewide Water Education Action Plan (SWEAP). Participation stems from the, "Outreach, Education and Public Engagement," goals of the Colorado Water Plan (CWP) through the State. People from across the state were gathered together to discuss what exactly is water education, what should be done in order to meet the goals outlined in the CWP. Aurora Water was a core collaborator in the creation of the plan and in 2020 Aurora Water endorsed the plan.

9. 2020 Application & Interview Process

G. Baker provided a reminder that the Committee will be focusing on application reviews and interviews at the next meeting. As with prior years, there are three seats open on the Citizens' Water Advisory Committee every year that either need to be extended or filled.

Per requirements from the Council, the CWAC members must interview for all vacancies, including reappointments. Traditionally interviews are held on the Committee's normal meeting day in December. This year the interviews will be conducted virtually on the WebEx platform. Currently, there are three submitted applications, including that of A. Binder. G. Baker has recently posted about the CWAC vacancies on NextDoor which means additional applications may be incoming.

In the past, the committee has conducted fifteen to twenty minute interviews which allows for seven to eight interviews to be completed in the evening. The Committee is permitted to review and vet the applications, select members for interviews and ask additional questions. The Committee does not have to interview everyone who has applied.

R. Eason asked, if he had been appointed to a one-year term last year? G. Baker advised he will confirm if that was the case and contact the committee members before the next meeting.

10. Reminder – Chair/Vice-Chair Election in January

G. Baker provided a reminder that the Chair and Vice-Chair elections will take place on the first committee meeting of the year in January 2021.

11. Review Tentative 2021 Meeting Dates/Times

G. Baker advises that the list of proposed meeting dates can be located at the end of today's packet. He confirmed that the second Tuesday of the month still works for all committee members.

12. Review Follow-Up Questions Generated at this Meeting

J. Marlow asked if there were any follow up questions that needed to be addressed? There were

none.

G. Baker reminded everyone that J. Marlow requested for a presentation on wildfires and their effect on the watershed. He also asked for the committee to provide ideas for possible upcoming presentations to be made for future meetings.

13. Adjourn

The meeting was adjourned at 7:21 p.m.

Janet Marlow, Chair
Citizens' Water Advisory Committee

Submitted by Jessica Roode
Administrative Specialist, Aurora Water

Adopted: _____



CITIES STRONG TOGETHER

Service Line Warranty Program Overview
City of Aurora, CO
January 2021



NLC Service Line
Warranty Program

Why is the program endorsed by National League of Cities?

- The **National League of Cities** is dedicated to building better communities
- The **NLC** created the Savings and Solutions Program in order to aid member cities with this initiative
- The issue of Aging Infrastructure in Older Cities
- Education and Awareness of Service Line Responsibilities
- Select Group of Companies- **NLC Service Line Program**, CVS/Caremark Prescription Drug Program, Polco, and NLC Community Showcase Video Program



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Why Participate?

- Program will provide a guaranteed payment of approximately \$125,000 that will be used to fund a low-income assistance fund for city homeowners
- Program will provide approximately \$100,000 to \$125,000 per year in additional low-income funding based on household participation
- An NLC “Cares Fund” will also be set aside for disadvantaged homeowners in the city who experience service line issues

Updated program statistics

- Over 1,000 cities and utilities participating in U.S. and Canada
- Over 1.7 million repairs worth \$500 million in past 3 years
- NLC Service Line Program completes a job every 27 seconds for our customers



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NLC Service Line
Warranty Program

Examples of Local Government Participation

Charlotte, NC	Arlington, TX	Midland, TX
Los Angeles, CA	San Diego, CA	Phoenix, AZ
Tulsa, OK	Las Vegas, NV	Arlington, TX
Atlanta, GA	Mesa, AZ	Tucson, AZ
Kansas City, MO	Salt Lake City, UT	Odessa, TX
Madison, WI	North Las Vegas, NV	Fort Lauderdale, FL
Newark, NJ	Louisville, KY	Lewisville, TX
Baltimore, MD	Stillwater, OK	Santa Fe, NM



Challenges for Homeowners

Lateral lines are subjected to the same elements as public lines

- ground shifting, fluctuating temperatures, tree root penetration, corrosion and more

Out of sight, out of mind

- water and sewer lines located outside, usually underground

Failed lines waste thousands of gallons of water

- and present an environmental hazard

Common homeowner misconceptions

- the City is responsible for maintenance of the water and sewer lines on their property
- repairs are covered by their homeowner's policy

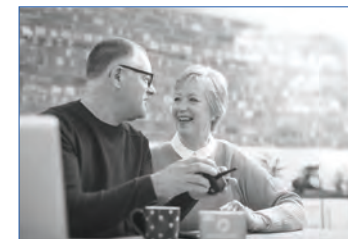


Homeowners are unprepared and expect solutions from the city

78% of homeowners surveyed believe the utility provider should educate them on repairs and preventative measures

59% of homeowners surveyed have had a home repair emergency in the past year

40% 4 out of 10 Americans can't afford a \$400 emergency expense (and would have to sell something or take out a loan to cover it).*



2017 IPSOS Survey of HomeServe policyholders and non-policyholders
**Federal Reserve Report on the Economic Well-Being of U.S. Households in 2017*

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**NLC Service Line
Warranty Program**

Our service and what it covers



SEWER LATERAL COVERAGE



WATER LINE COVERAGE



IN-HOME PLUMBING COVERAGE

- Exterior water and sewer – up to \$8,500 coverage **per incident** for repair/replacement of leaking, clogged or broken lines from the point of utility connection to the home exterior
- Approximately \$5 per month for Water Line Warranty
- Approximately \$7 per month for Sewer Line Warranty
- No annual or lifetime limits, deductibles, service fees, forms or paperwork
- 24/7/365 availability
- Repairs made only by licensed, local area contractors

Core features that deliver peace of mind



Toll-free emergency number members can call 24 hours a day, 365 days a year



Locally-based, fully-licensed, qualified and vetted contractors dispatched to the customer's emergency



No deductibles, no call-out fees or forms to fill in at the completion of the job



Quality control measures to ensure exceptional customer experience



Guaranteed repairs



No pre-inspection before joining

Solution for municipalities and residents

- Offers optional low-cost protection against potentially expensive water and sewer line repairs
- Educates residents about their responsibility for these lines
- Turnkey program – provides marketing, billing, claims, customer service
- No cost to cities to participate, revenue share available



Partner Testimonials

"The City has benefited because it's a good service we offer people. I signed up myself."

John Sharp, Former Mayor, City of Kansas City, MO

"This partnership has exceeded all expectations. They provided the City with a dedicated team that has been quick to respond to all of our questions and has gone above and beyond regarding our marketing materials. They also executed an exceptional training course on the program to our customer service staff."

Shonte Eldridge, Chief of Special Projects, City of Baltimore, MD

"The Service Line Warranty Program helps both Phoenix residents and the city government. Revenue from the program goes to core city services like police, fire, parks, libraries and senior centers."

Jon Brodsky, Program Manager, Fit Phoenix & former Public Information Officer

"After four years of program participation (and over \$1 million spent by the NLC Program on Atlanta homeowner repairs), we continue to receive compliments from our constituents on our sharing this opportunity with them. Many have signed up and for those who have had to use the service; we have not received any complaints."

Felicia Moore, Council President, City of Atlanta, GA



NLC Service Line Warranty Program

Re-Cap of Program Highlights

- **Over half a BILLION dollars** spent on homeowner repairs/replacements in past three years by NLC-SLWP
- **Over 1,000 U.S. Cities Participating**
- **Free education/awareness** and innovative options for homeowners to mitigate risk of service line failures
- Allows citizens to **future-proof** their **lateral line risk**
- Automatically replaces **lead lines** whenever they are discovered during **any** repair or replacement



NLC Service Line
Warranty Program

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NLC NATIONAL LEAGUE OF CITIES
CITIES STRONG TOGETHER

For more information contact...

Brian Davis
Senior Director, Business Development
(214) 476-3430
Brian.Davis@homeserveusa.com



NLC Service Line Warranty Program

MEMORANDUM



City of Aurora

Worth Discovering • auroragov.org

To: Citizens' Water Advisory Committee

Through: Marshall P. Brown, General Manager, Aurora Water
Alex Davis, Deputy Director, Water Resources
Rich Vidmar, Manager of Integrated Basin & Ecosystems, Aurora Water
Greg Baker, Manager of Public Relations, Aurora Water *GB*
Natalie Browser-Kirton, Environmental Education & Outreach Program Manager, Aurora Water

From: Mike McHugh, Ecosystems Services, Aurora Water
Mary Dawson, Sr. Environmental Education & Outreach Specialist, Aurora Water

Date: January 12, 2021

Subject: Watersheds - Source Water Protection, Forest Health Planning and Education & Outreach Efforts

Purpose:

A watershed is a land area that channels rainfall and snowmelt to creeks, streams, and rivers and eventually to outflow points such as reservoirs. Because they are a natural partitioning of the land surface, watersheds have been used extensively to study and report on environmental conditions. Aurora Water's raw water system is composed of high elevation mountain watersheds as well as watersheds within the Front Range urban corridor. Challenges to our watersheds include fire, drought, infestations, urban stormwater runoff and local development. In response to these challenges, watershed management and public education programs have been established both within Aurora Water and through collaborations with our watershed partners.

The goal of watershed management and education projects is to sustain and enhance watershed functions that affect resources and communities within the watershed boundary. Staff will update CWAC on the source water protection/management plan of the utility and present the overall accomplishments of our watershed programs and partnerships.

Action Required:

No action at this time is required. This presentation is purely informative in nature.

cc: File copy

Watershed Health: Key to Providing Clean Water to the City of Aurora

Michael F. McHugh, P.G.

Senior Water Resources Project Manager

Aurora Water



Aurora Water Mission Statement

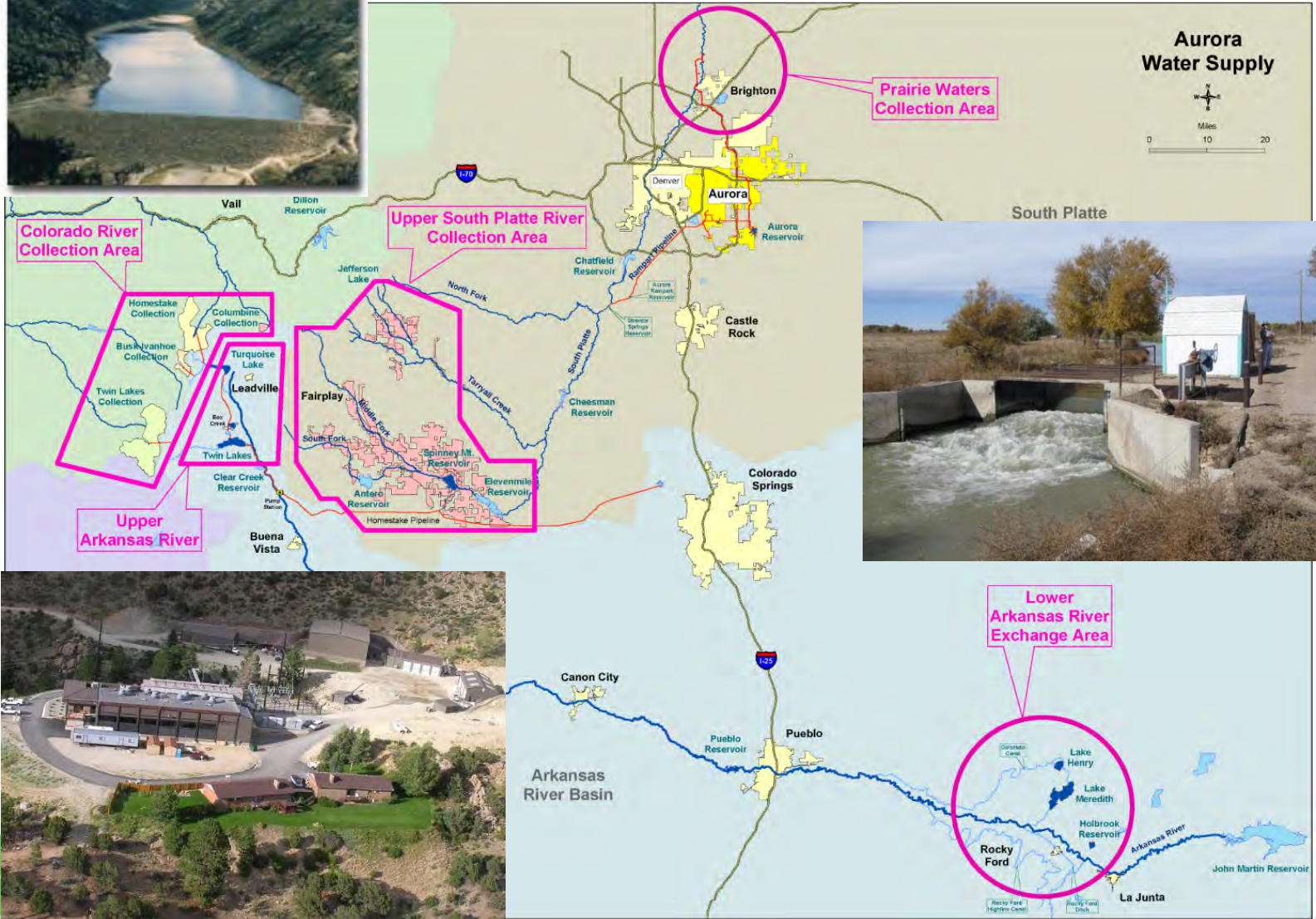
Enhance and protect the quality of life for Aurora citizens by providing safe, dependable and sustainable water, sewer and stormwater services, today and in the future.



Introduction: Why Invest in Healthy Headwaters?

- We cannot afford not to invest!
- The cost of suppression, let alone recovery, is a fraction of the cost of mitigation.





Types of Water Rights and Affect on Water Quality

Direct Flow Water

- Water from these Water Rights belong to Aurora
- The water flows directly into our intakes at Strontia Springs or is pumped back to Binney Treatment Plant.

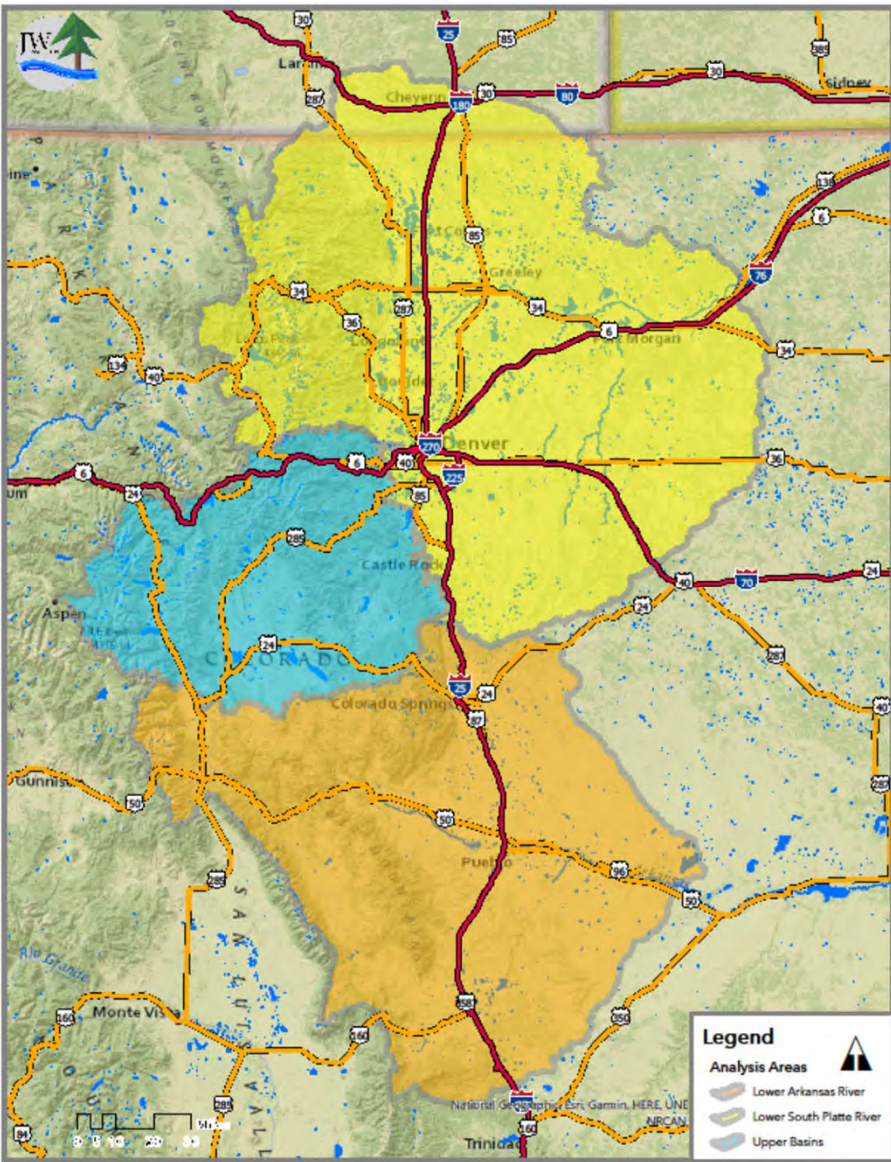
Commingled Water

- Water from another entities water rights commingles with Aurora's Water at Shared Facilities such as Denver Water Rights that mix with ours in the South Platte River and Strontia Springs Reservoir

Water that we use by Exchange

- This is water that we trade with others





Aurora's Full Extent of Watersheds in Three River Basins

- South Platte
- Arkansas
- Colorado



Why Invest in Healthy Headwaters?

Our water supply headwaters occur in three national forests

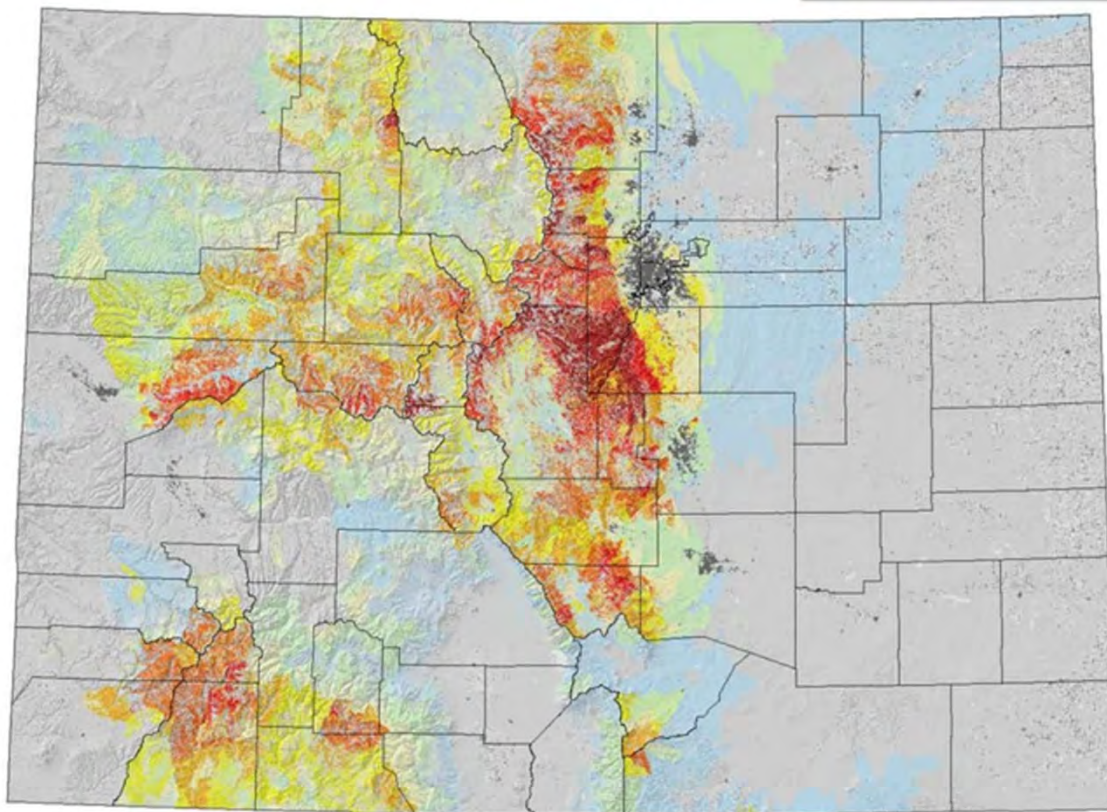
- Pike-San Isabel National Forest
- Arapahoe-Roosevelt National Forest
- White River National Forests

Our forested lands provide important Ecosystem Services that ensure the production and storage of clean water and regulate and control the timing of runoff





Colorado Wildfire Risk Assessment 2017
DRINKING WATER RISK



Drinking Water
Risk was
weighted
36.4%



AURORA
WATER

What has Happened to our National Forests?

The forests themselves have deteriorated over time!

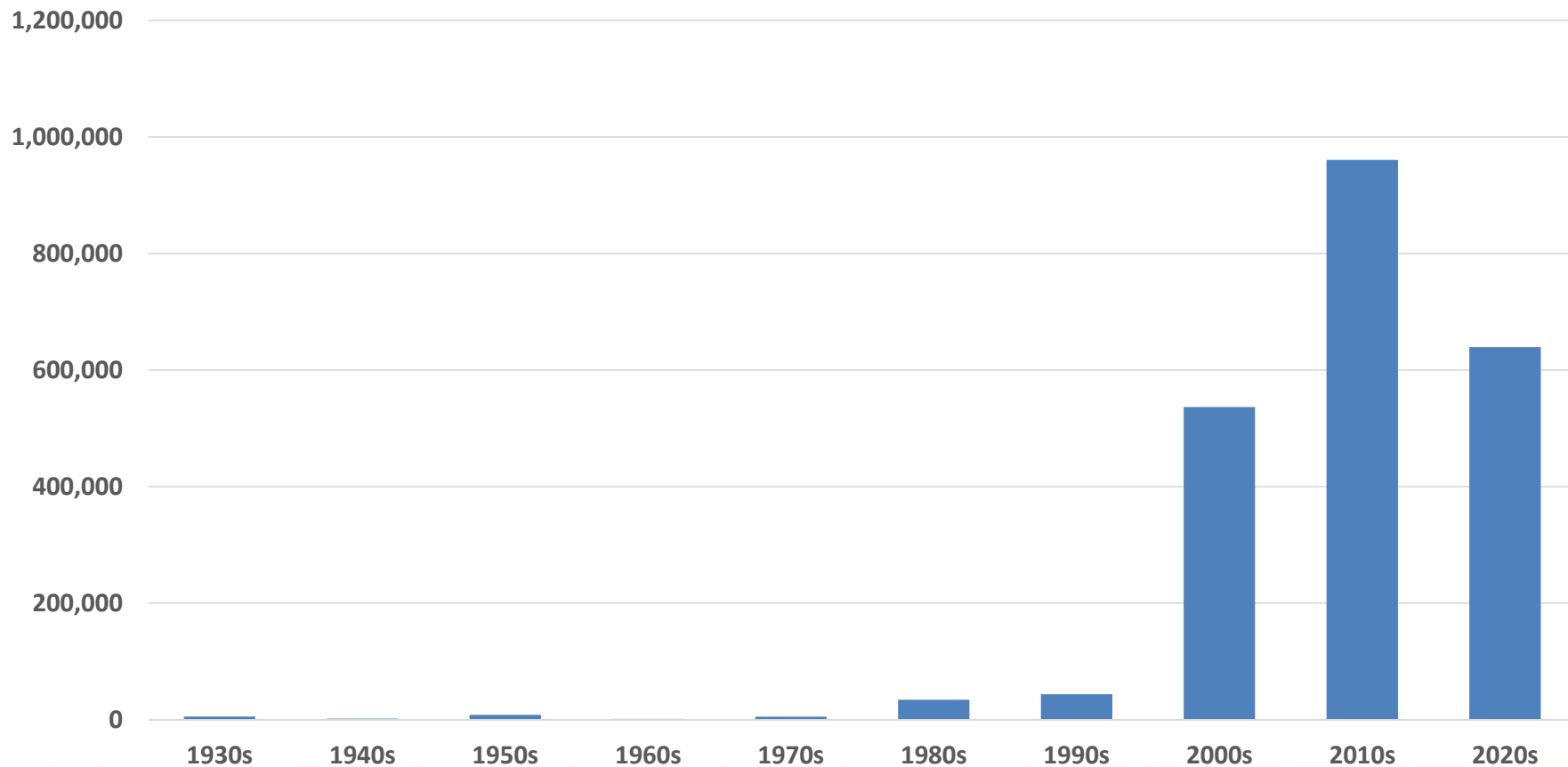
Aggressive fire suppression has allowed an unhealthy amount of fuels to accumulate. Insects and disease have taken a large toll in Colorado (and all over the west). Our Forests have been loved to death!

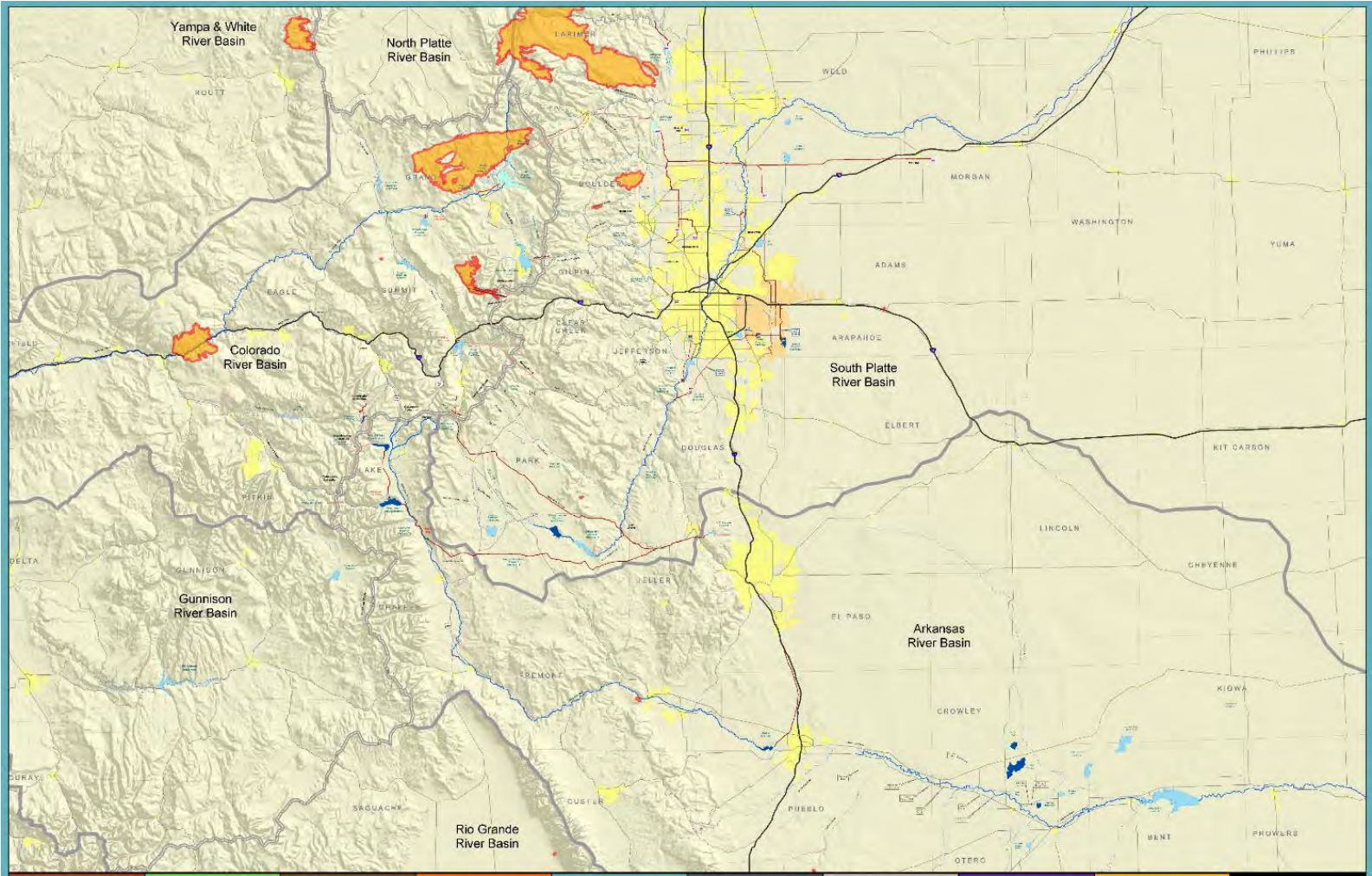
U.S. Forest Service budgets are not up enough to adequately manage the stresses:

- Staffing issues
- Fire suppression costs
- Recovery costs
- Little funding left over for basic programs and pre-fire mitigation



AREA (acres) Burned by Colorado Wildfire by Decade

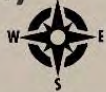




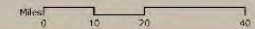
Front Range Raw Water Supply

Aurora Water
 GIS@auroragov.org | 303-739-7370 | www.auroragov.org
 15151 E. Alameda Pkwy, Aurora, CO 80012 USA
 October 22, 2020

Aurora is Worth Discovering!



• Power	- NCWCD WTP	Canal
• Water Treatment Plant	• HQ	— Mine/Tunnel
• Potable Water	• Pump Station	— Pipe
• Reclaimed Water	• Wildfire Areas	— Tunnel



AURORA WATER

Planning for Wildfire

Pre-fire mitigation

- Need to increase pace and scale

Suppression

- Most costly elements-reactive

Recovery

- Seldom fully funded, USFS funds on USFS property only



Hydrologic Watershed Functions

There are three (3) fundamental hydrologic watershed functions:

- Collection – Water from rainfall, snowmelt, and storage that becomes runoff is collected.
- Storage – Water in various amounts and over differing periods of time is retained.
- Discharge – Water is released as runoff.



Ecological Watershed Functions

There are two (2) ecological watershed functions:

- Media – The watershed contains diverse sites and pathways where chemical reactions take place.
- Habitat – The biological elements, e.g., the flora and fauna that constitute the various ecosystems.



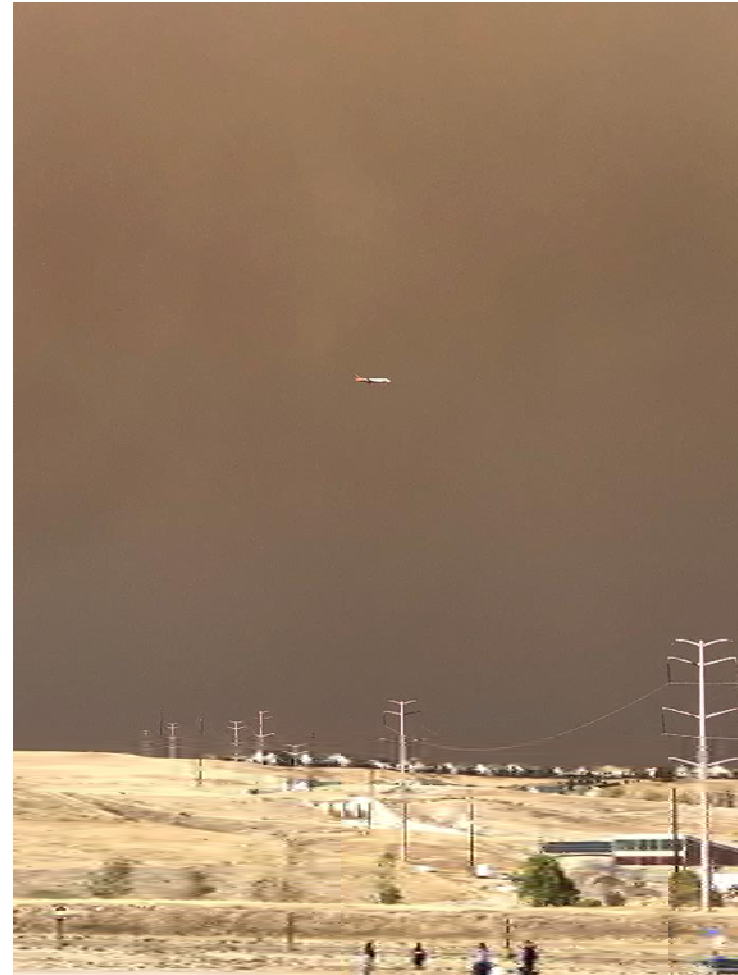


*Angry Smokey Sunsets
Common along the
Front Range
(October 17, 2020)*



We Need to Shift the Paradigm from Suppression to Prevention

Slurry bomber returning to Jefferson County Airport as smoke from the Left Hand Canyon Fire threatens Arvada
(October 18, 2020)



Coordinated Implementation across Land Boundaries

Rocky Mountain Restoration Initiative (RMRI)

- Collaborate across public and private partners to increase focus, scale, and pace of forest restoration in Southwest Colorado, Colorado Front Range

Collaborative Forest Landscape Restoration Program (CFLRP)

- Conduct forest restoration on **federal** lands in San Juan National Forest
- Capitalize on benefits of treating entire landscape – not just federal or private lands

Southwest Wildfire Impact Fund (SWIF)

- Support planning efforts
- Utilize treatment manager to coordinate contractors
- Provide centralized coordination with property owners
- Focus on **private** lands



Barriers to Increasing Pace and Scale

There is an economic and ecological need to increase the pace and scale of forest health treatments in Southwest Colorado.

Specific barriers include:

Funding

Annual budgets and appropriations provide limited available short-term funding.

Expertise & Capacity

There are constraints around forestry expertise and workforce capacity needed to execute more treatments.

Coordination

The region lacks a coordinated approach to work across boundaries, particularly on private lands.





Cameron Peak Fire viewed from Fort Collins





West Fork Complex Fire



AURORA
WATER



What is The True Cost of Wildfires?

- Loss of facilities (catastrophic Loss).
- Lost of the ecosystems services the forests provide.
- Reduction of storage due to siltation.
- Disruption of the hydrologic cycle, (e.g. changes in the timing of runoff).
- There may be a need to lease of replacement water sources or have extreme curtailments.
- Increased treatment costs – short term/long term.
- Taste and odor issues could result in loss of reputation and customer good will.



Wildfire Events Trigger Aurora's Involvement

- 1996 Buffalo Peak fire and debris flow
- 1997 Pine Bark Beetle begins to overwhelm Colorado forests – 2 million acres lost
- 2002 Hayman fire becomes largest fire in Colorado
- 2007 Pinchot report lays out threats to the Front Range water supply
- 2020 Record Fire season Colorado and the west



Fire Raging in the WUI--Nederland



What Has Aurora Done to Remedy this Situation?

- 2005 – Aurora Water became an active member of the Front Range Roundtable.
- 2007 – Aurora dedicated staff to participate in the Watershed-Wildfire Work Group.
- 2008 – Aurora Water began budgeting for wildfire protection in the operations budget.
- 2009 – the City of Aurora became a member of the Healthy Headwaters Leadership Team.
- 2010 – Aurora negotiated a memorandum of understanding with the U.S. Forest Service.
 - That same year Aurora pledged \$250,000 over two years to restore the Trail Creek drainage which was suppling large amounts of sediment to Strontia Springs Reservoir from the Hayman Fire. This funding was matched by the National Forest Foundation.



How does Aurora Fund our Watershed Activities

- Aurora Water includes watershed protection and restoration in the operations budget.
- Work collaboratively with willing partners to match contributions with cash or in-kind donations.
- Outreach and education to expand the public's understanding of forest health issues.



Organizations and Partners

- Federal agencies
- State agencies
- Counties
- Local governments
- Special districts
- Fire districts
- Homeowners associations
- Special interests
- Non-profits



Related Activities

- Legislation tracking
- Lobbying
- Educating
- Water tours
- Outreach



Aurora's Partners in Forest Health

Aurora has over 50 Collaborative Partners:

- Partners in Funding.
- Partners in Research
- Partners in Policy
- Partners in Outreach



What Does the Future Hold

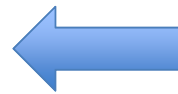
- Double down on our collaborative efforts.
- Continue to work with the state legislature and congress.
- Commit to help increase the pace and scale of pre-fire mitigation.
- Assist in efforts to further post fire recovery.



Camp Creek Debris Flow from Hayman Fire



Blown out Creek



*Boulder of Doom
(Geologist for scale)*





*Ranger Station and Cabin West Entrance to
Rocky Mountain National Park – East Troublesome Fire*



But for two decades we have failed....

"Americans must decide- - We can remove some of the trees and lower the risk of catastrophic fire; or we can do nothing and watch them burn. I think the choice is obvious - - In a good part of the West—where forests are overgrown—we must return forests to the way they were historically, then get fire back into the ecosystem when it's safe."

Forest Service Chief Dale Bosworth (2001-2007)





Contacts/More Information

Michael F. McHugh

mmchugh@auroragov.org

720.381.8866 cell

303.739.7006 office

<https://www.colorado.gov/pacific/cdphe/post-fire-playbook>



AURORA
WATER

Facts, Fire and the Future

A healthy watershed is a healthy water supply, and what we can do as citizens to keep it that way.

Mary Dawson, Sr. Environmental Education & Outreach Specialist, Aurora Water



WATER IS A PRECIOUS RESOURCE IN AURORA.



**WE TEACH
KIDS TO MAKE
THE MOST OF
EVERY DROP.**

SCHOOL PRESENTATIONS

For fall of 2020, we are offering our presentations virtually. Presentations can be done synchronously or asynchronously. Please submit a presentation request form and indicate your preference for a meeting platform.

EARLY CHILDHOOD AND ELEMENTARY

Sunny Takes a Walk on the Water Side Puppet Show (Preschool – Kindergarten)

Take a walk with Sunny as he explores the Aurora Reservoir while learning to conserve water and prevent water pollution. Sunny will meet many friends along the way who will teach him and your students about the water that we drink and use.

30-minute program, can be presented to up to four classes at a time

If I Was a Fish (Preschool – Grade 1) [We know this isn't grammatically correct, but we didn't write the song.]

What would you need if you were a fish? Clean water! Explore the importance of this natural resource through movement and songs like "We Need Water to Survive," "If I Was a Fish" and "The Water Cycle." Learn about the water cycle, where we get our water and how kids can help protect it.

30-minute program, can be presented to up to four classes at a time

Storytime with Aurora Water (Preschool – Grade 2)

Aurora Water educators read stories about water, relate them to water in Aurora and answer questions.

30-minute program, can be presented to up to four classes at a time

Water Heroes (Grades 1 – 3)

It takes a lot of interesting people with cool jobs to provide water to Aurora. Learn about the people in our community who bring water to your faucet. During this presentation, students dress up in costumes and act out the water supply process.

40-minute program, can be presented to up to four classes at a time

Water & Weather (Grade 2)

What does our weather have to do with our water? Everything! Learn fun facts about the water cycle, where your drinking water comes from and how we measure snow.

30-minute program, can be presented to two classes at a time

Conservation Capers (Grades 3 – 4)

Students learn more about the source of their water, water conservation techniques and how to do a home water assessment.

40-minute program, can be presented to one class at a time

WATER is a precious resource in Aurora. We teach kids to make the most of every drop.

Water – Keep it Clean! (Grades 3 – 5)

How much water is on earth? What is a watershed? Take a look at a watershed model to understand how kids can help protect the environment and our water from non-point and point-source pollution.

40-minute program, can be presented to one class at a time

Aurora's Water History (Grade 4)

Students learn how water played an important role in the history of Aurora.

40-minute program, can be presented to one class at a time

Water in the Ol' West Assembly (Grade 4)

Take a journey back in time to the cattle drives. Calamity Jane and Barb Wire share a chuck-wagon full of treasures and tell the tale of water use in the Ol' West.

40-minute program, can be presented to a minimum of three classes at a time

We All Live Downstream (Grades 5 – 6)

We all live in a watershed. Learn about the watersheds where your water comes from and how to protect them from pollution.

50-minute program, can be presented to up to two classes at a time

MIDDLE SCHOOL

Conservation Challenge – Rebate Game (Grades 6 – 8)

Learn about the source of your water and form teams who compete to save the most water in the Conservation Challenge game.

30 to 45-minute presentation, can be presented to two classes at a time

The Facts Behind the Faucet (Grades 6 – 8)

We turn on the tap, drink it, bathe in it and flush it. Students learn about global water issues, our water system from source to tap and how they can be the most efficient water users.

40 to 60-minute program, can be presented to up to six classes at a time

HIGH SCHOOL

Aurora's Water Supply + Careers in Water (Grades 9 – 12)

Learn about Aurora's water system and the types of careers involved in the water industry.

30 to 45-minute program, can be presented to up to two classes at a time

Muck Up-Clean Up (Grades 9 – 12)

Students use critical thinking to predict how water becomes polluted. By simulating the contamination of water by various kinds of chemicals commonly found at hazardous waste sites, students are introduced to current information on the cleanup techniques being used.

50-minute program, can be presented to one class at a time

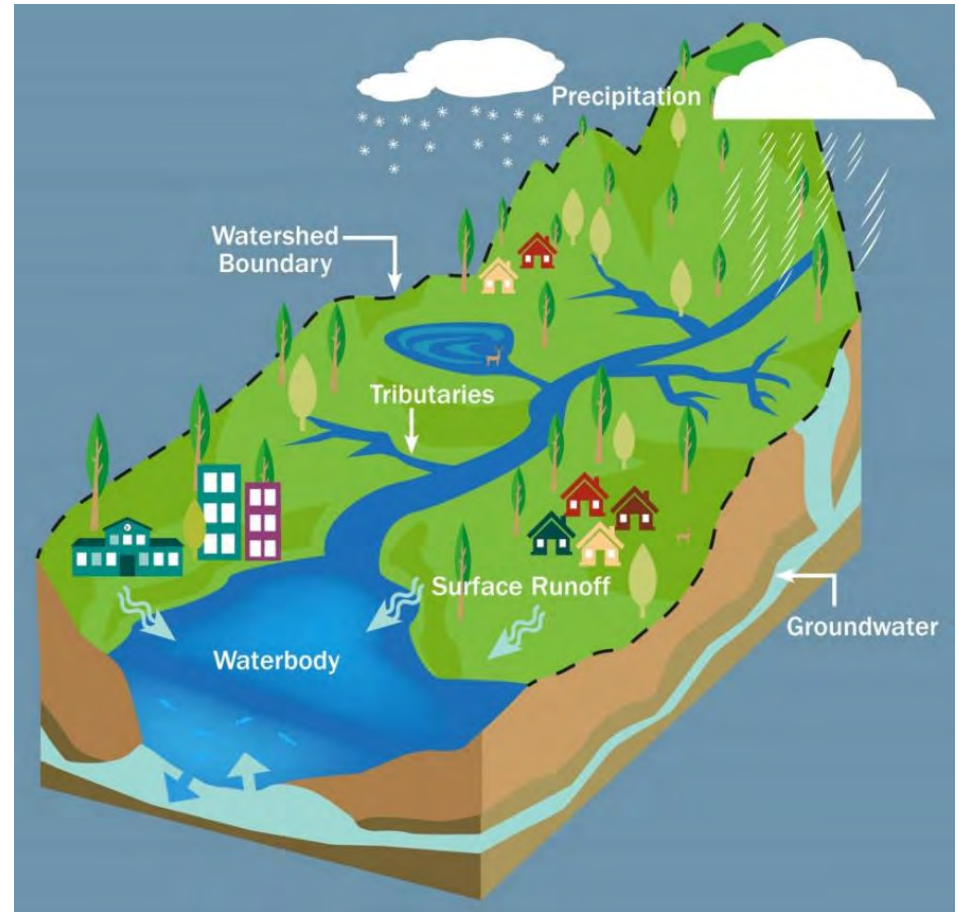
Climate Change and Water (Grades 10 – 12)

Discover climate change science and the social, economic and environmental effects it has on our water.

45-minute program, can be presented to up to three classes at a time

What Is A Watershed?

- A watershed is a land area that channels rainfall and snowmelt to creeks, streams, and rivers and eventually to outflow points such as reservoirs.

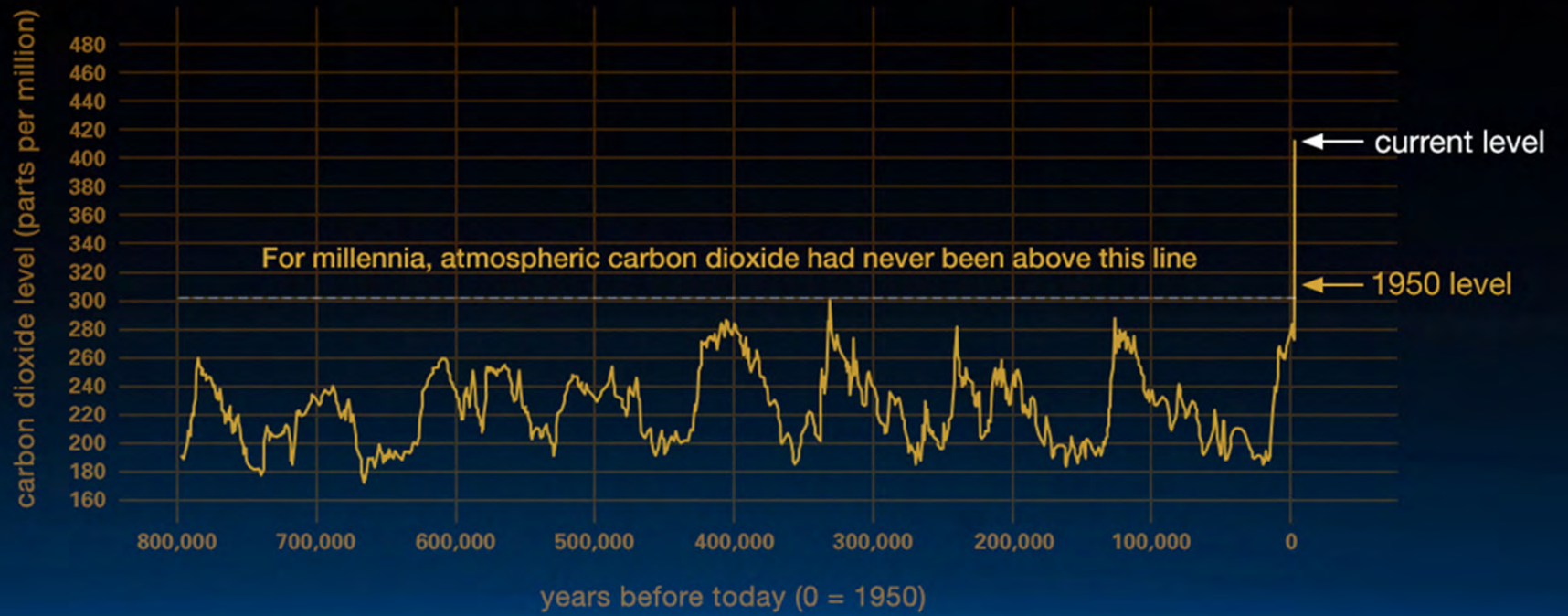




Watershed in Your Hand

Forests to Faucets

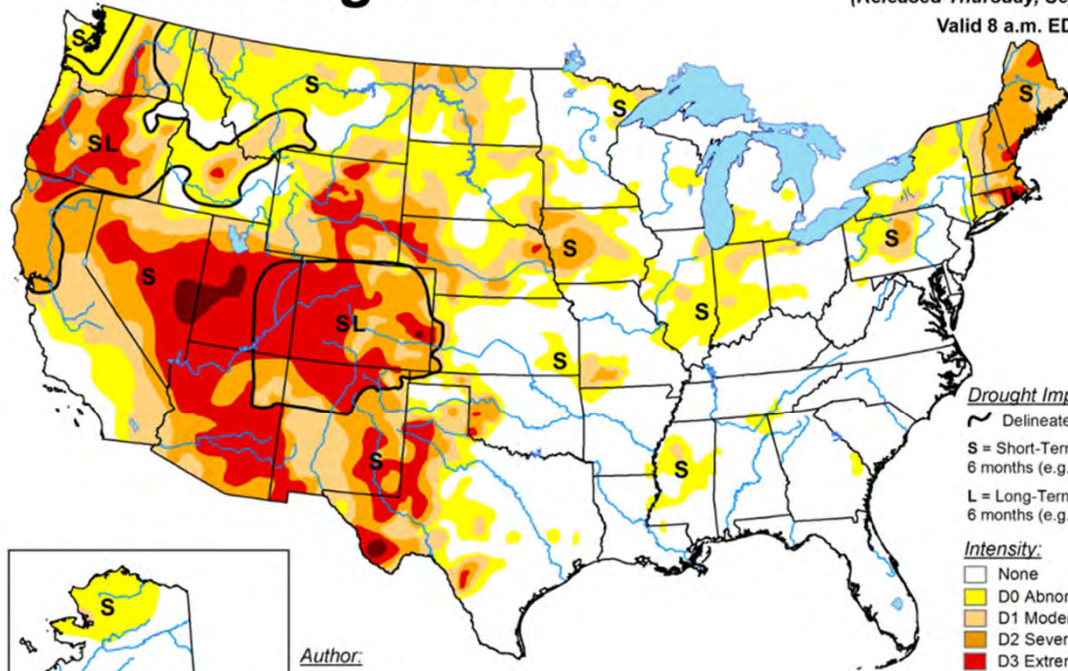




climate.nasa.gov

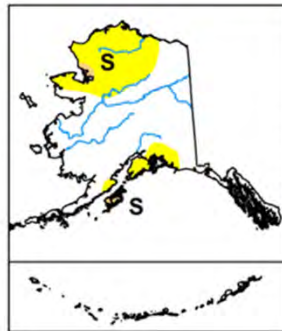
U.S. Drought Monitor

September 22, 2020
 (Released Thursday, Sep. 24, 2020)
 Valid 8 a.m. EDT

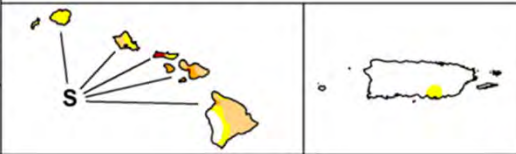


Drought Impact Types:
 ~ Delineates dominant impacts
 S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
 L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:
 None
 D0 Abnormally Dry
 D1 Moderate Drought
 D2 Severe Drought
 D3 Extreme Drought
 D4 Exceptional Drought



Author:
 Brad Rippey
 U.S. Department of Agriculture



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>



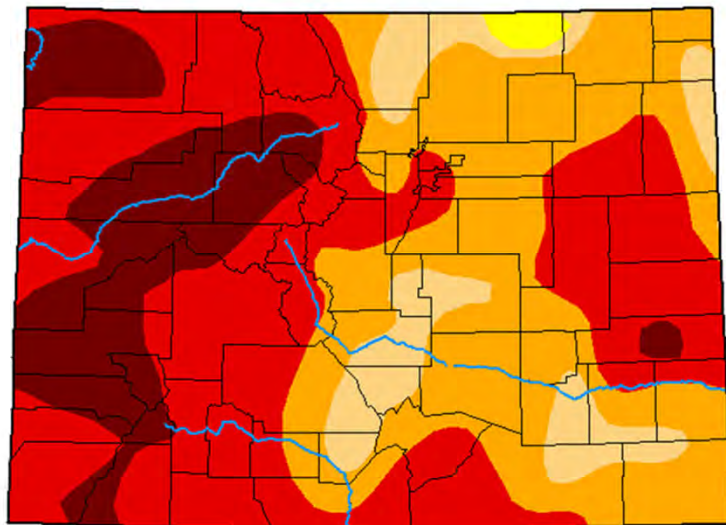
droughtmonitor.unl.edu



AURORA
 WATER

U.S. Drought Monitor Colorado

October 6, 2020
(Released Thursday, Oct. 8, 2020)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	99.30	90.39	59.23	16.72
Last Week <i>09-29-2020</i>	0.00	100.00	99.29	89.35	52.88	2.64
3 Months Ago <i>07-07-2020</i>	15.67	84.33	69.18	55.41	34.07	0.00
Start of Calendar Year <i>12-31-2019</i>	31.72	68.28	51.19	20.11	0.00	0.00
Start of Water Year <i>09-29-2020</i>	0.00	100.00	99.29	89.35	52.88	2.64
One Year Ago <i>10-08-2019</i>	25.48	74.52	37.01	11.23	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Brian Fuchs
National Drought Mitigation Center



droughtmonitor.unl.edu

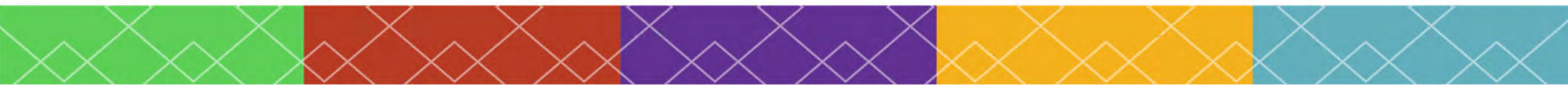
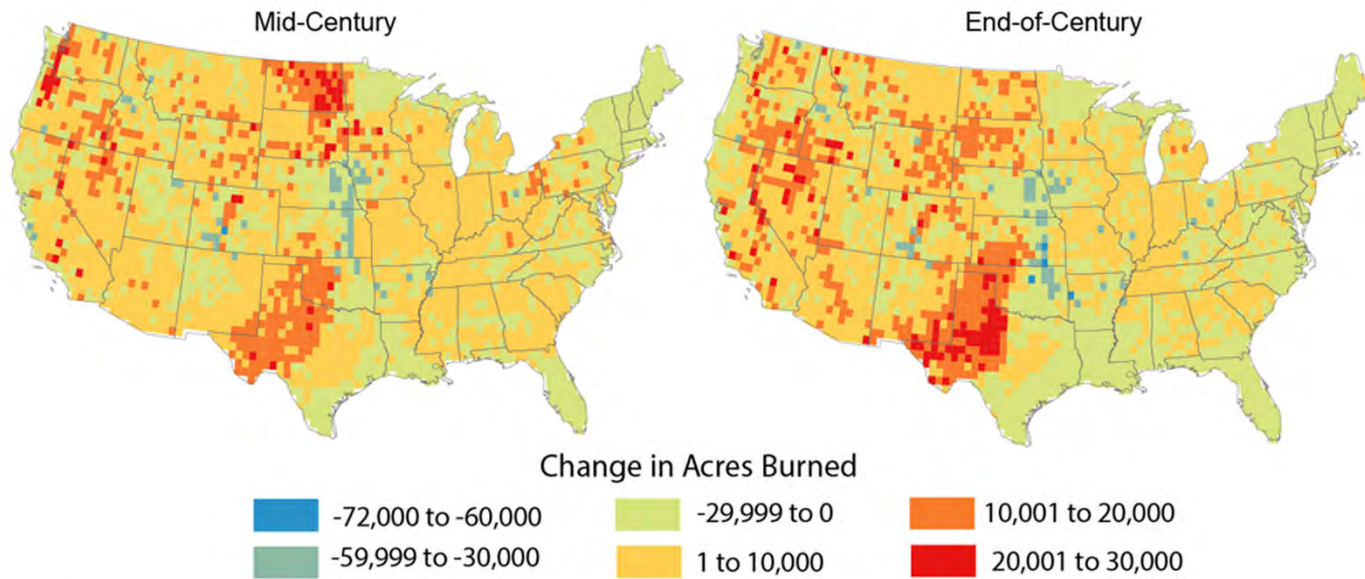


Figure 1. Projected Impact of Unmitigated Climate Change on Wildfire Activity

Change in average annual acres burned under the Reference scenario by mid-century (2035-2064) and end of century (2085-2114) compared to the historic baseline (2000-2009) using the IGSM-CAM climate model. Acres burned include all vegetation types and are calculated at a cell resolution of 0.5° x 0.5°.



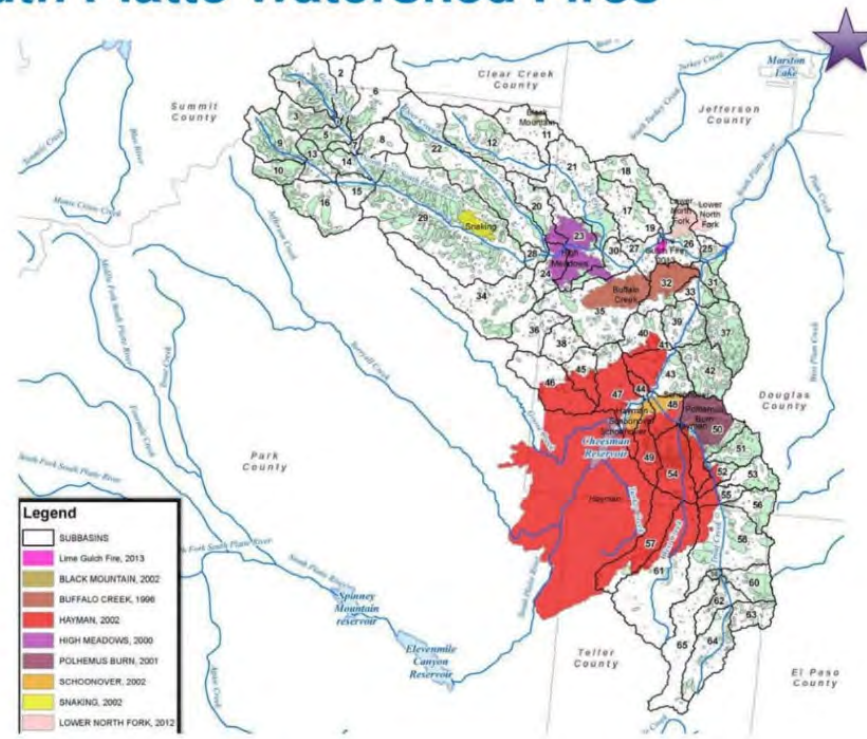
For more information, visit EPA's "Climate Change in the United States: Benefits of Global Action" at www.epa.gov/cira.



AURORA
WATER

The Effects of Forest Fire

South Platte Watershed Fires



Water Quality



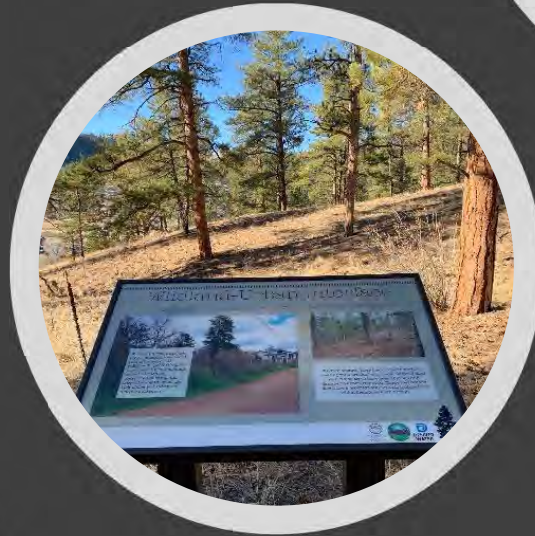
- Turbidity
- TOC (Total Organic Carbon)
- Chromium
- Copper
- Lead
- Phosphorus/Nitrogen (Nutrients)
- Manganese
- Sediment



Water Quality Monitoring



Trumbull Experimental Forest



Future Programming Goals

- “Citizens’ Water Academy”
- Partnering With Established Environmental Organizations for Diversity/Inclusive Environmental Education Programming
- Trumbull Forest and Buffalo Peaks
- Trail Creek Restoration Site





of these young, valuable forests
in the late 20th century,
to realize the important
forest health.



Partner Successes

- CUSP (Coalition for the Upper South Platte)
 - Trumbull Experimental Forest





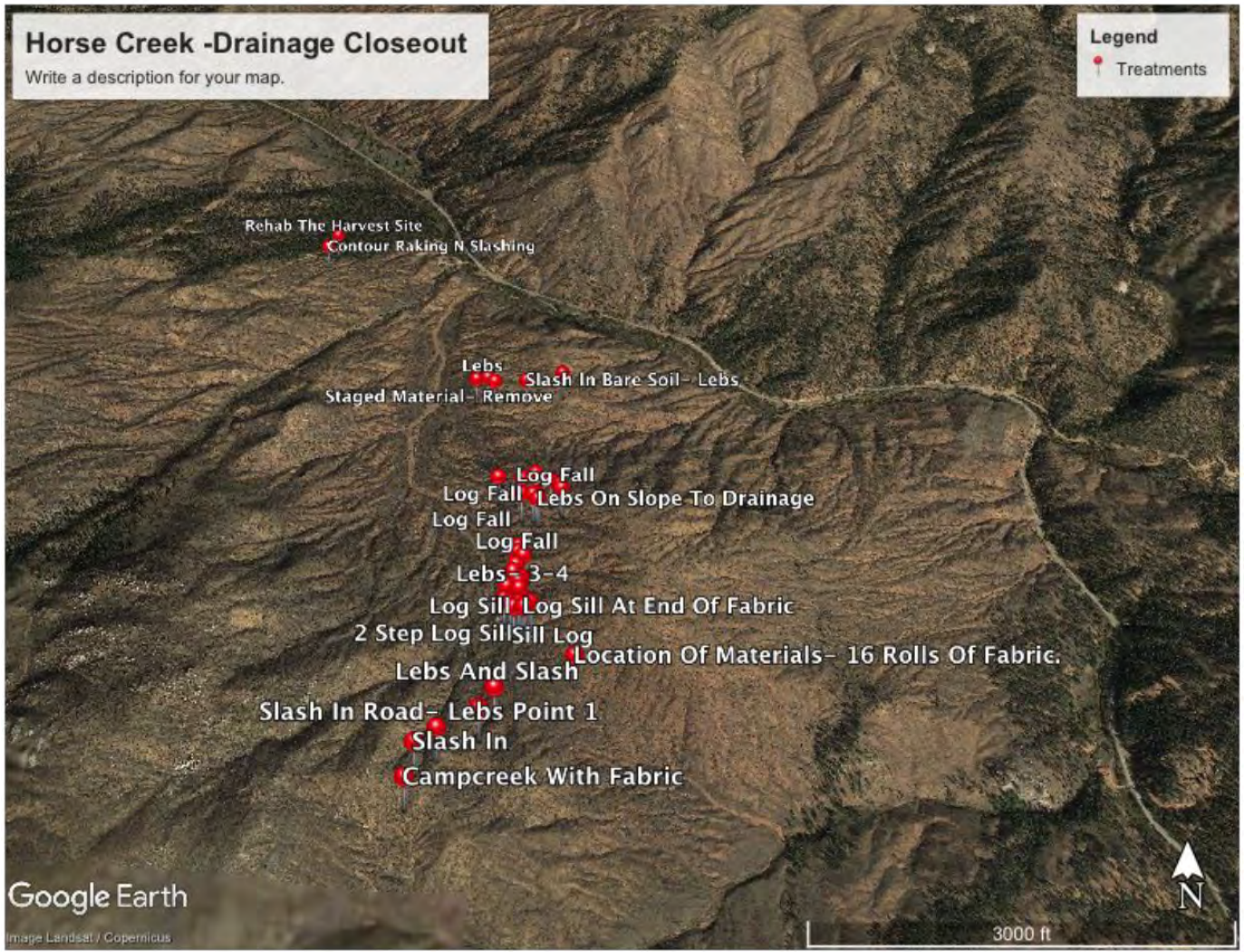
Partner Successes

- CUSP (Coalition for the Upper South Platte)
– Horse Creek Restoration)



Partner Successes

- CUSP (Coalition for the Upper South Platte)
 - Horse Creek Restoration (Before and After)





Partner Successes

- CUSP (Coalition for the Upper South Platte)
– Trail Creek Restoration)



Partner Successes

- CUSP (Coalition for the Upper South Platte)
– Trail Creek Restoration)



Partner Successes

- CUSP (Coalition for the Upper South Platte)
 - Trail Creek Restoration (After)

Partner Successes



- CoCo (Coalitions and Collaboratives)
 - *Mentoring* placed-based collaborative organizations and providing financial, technical, and staff support.
 - *Engaging and educating* local, regional and national leaders on some of the most pressing conservation issues of our time.
 - *Recognizing* that passionate and engaged people are the source of action for restoration projects. We support these people and help to increase the capacity of the groups they work with. More importantly, we share and celebrate *their* successes in making positive, sustainable change in their communities and restoring the lands we all depend on...



Questions?



VOLUNTEER AGREEMENT
This is a Release of Liability
Please read carefully before signing

I, _____, the undersigned volunteer for the City of Aurora,
(Name of the Volunteer)

understands that I am not an employee, agent or contractor for the City of Aurora.

I further understand that the City of Aurora will not provide me with any pay, compensation, monetary or otherwise, insurance, workers' compensation or any other benefit to which an employee may be entitled.

In exchange for the opportunity to participate as a volunteer I hereby release the City of Aurora, its employees, elected and appointed officials and any other representatives of the City of Aurora from any and all liability for any injury to me or damage to my property which may result from my participation in the capacity of a volunteer on behalf of the City of Aurora. This release shall be binding on me and any other persons making claim through me or on my behalf.

If I should be injured as a result of my volunteer activity and while in the course and scope of my volunteer activity, the City of Aurora agrees to pay up to \$1,000 for reasonable and necessary medical treatment of such injury. The payment for such medical treatment is by agreement and not pursuant to the Workers' Compensation Act nor should such payment be construed as an admission of liability on the part of the City of Aurora.

I hereby acknowledge that I have read, understood, and voluntarily agreed to the foregoing waiver and release agreement. This agreement supersedes any previous volunteer agreement entered by me with the City of Aurora.

Signature _____ Date _____

PARENTAL RELEASE

(Required if Volunteer is Under the Age of 18 years)

In addition to the above waiver and release, I, the undersigned parent/guardian of the above named volunteer who is under the age of 18 years, do for myself, for the other parent of the child and for and on behalf of my child volunteer hereby release and discharge the City of Aurora, its employees, elected or appointed officials and agents or representatives from and against any and all liability, claims or demands for bodily injury to the above named child or for damage to the property of the above named child as well as expenses including attorney's fees and court costs and any and all other liabilities of any nature whatsoever which may be incurred by the child volunteer or which may arise from the child volunteer's activities on behalf of the City of Aurora as stated above.

Notwithstanding the foregoing, the City of Aurora agrees to pay up to \$1,000 for reasonable and necessary medical treatment of any injury to a minor volunteer who is injured while in the course and scope of his or her volunteer activities on behalf of the City of Aurora. The payment for medical treatment is by agreement and is not pursuant to the Workers' Compensation Act nor should such payment be construed as an admission of liability on the part of the City of Aurora.

This agreement supersedes any previous volunteer agreement signed by me on behalf of my minor child with the City of Aurora.

Signature of parent or guardian if volunteer is under 18 years of age:

Parent/Guardian Signature _____ Date _____

Parent/Guardian Name (Please Print) _____

Street Address _____

City, State, Zip Code _____ Phone Number _____

CITIZENS' WATER ADVISORY COMMITTEE (CWAC) - ATTENDANCE RECORD

CWAC - 2020	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Janet Marlow - Chair	1	1	N/A	1	1	1	1	1	1	N/A	1	N/A	9/9
Tom Coker - Vice-Chair	1	1	N/A	1	1	1	A	1	1	N/A	1	N/A	7/9
Angie Binder	1	1	N/A	1	1	1	1	1	1	N/A	1	N/A	9/9
Jay Campbell - Comm. Rate Payor Member	1	1	N/A	1	1	1	1	1	1	N/A	1	N/A	9/9
Richard Eason	N/M	N/M	N/A	1	1	1	1	1	1	N/A	1	N/A	7/7
David Patterson	N/M	N/M	N/A	1	1	1	1	1	1	N/A	1	N/A	7/7
William Gondrez	N/M	N/M	N/A	1	1	1	1	1	1	N/A	1	N/A	7/7
Don Langley	1	1	N/A	1	1	1	N/M	N/M	N/M	N/M	N/M	N/M	5/5
Tom Tobiasen	A	1	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	1/2
Susan Turnquist	A	1	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	1/2

1 = PRESENT

A = ABSENT-Excused

U = ABSENT-Unexcused

N/A = NO MEETING

N/M = EITHER NO LONGER A MEMBER or NOT YET A MEMBER

N/Q = No Quorum, Meeting Cancelled

T = Teleconference (or Skype)

*** = Not a formal meeting (orientation, new member applicant interviews, etc.)**

NOTE: Notation in **RED** indicates Member did not RSVP when required
(required for quorum & food ordering purposes)

Months highlighted in **GRAY** were not regular public meetings

STAFF LIASON: Greg Baker, Manager of Aurora Water Public Relations

SUPPORT STAFF: Sandy Moore, Administrative Specialist, Aurora Water, Jessica Roode, Administrative Specialist