



2020 Wildfires Watershed Restoration

Lessons Learned from the East Troublesome and Cameron Peak Fires

AFTER THE FLAMES

April 17, 2024

Sean Chambers
Director of Water & Sewer Utilities,
City of Greeley



Esther Vincent
Environmental Services Director,
Northern Water

Todd Boldt
Assistant State Conservationist –
Water Resources, NRCS





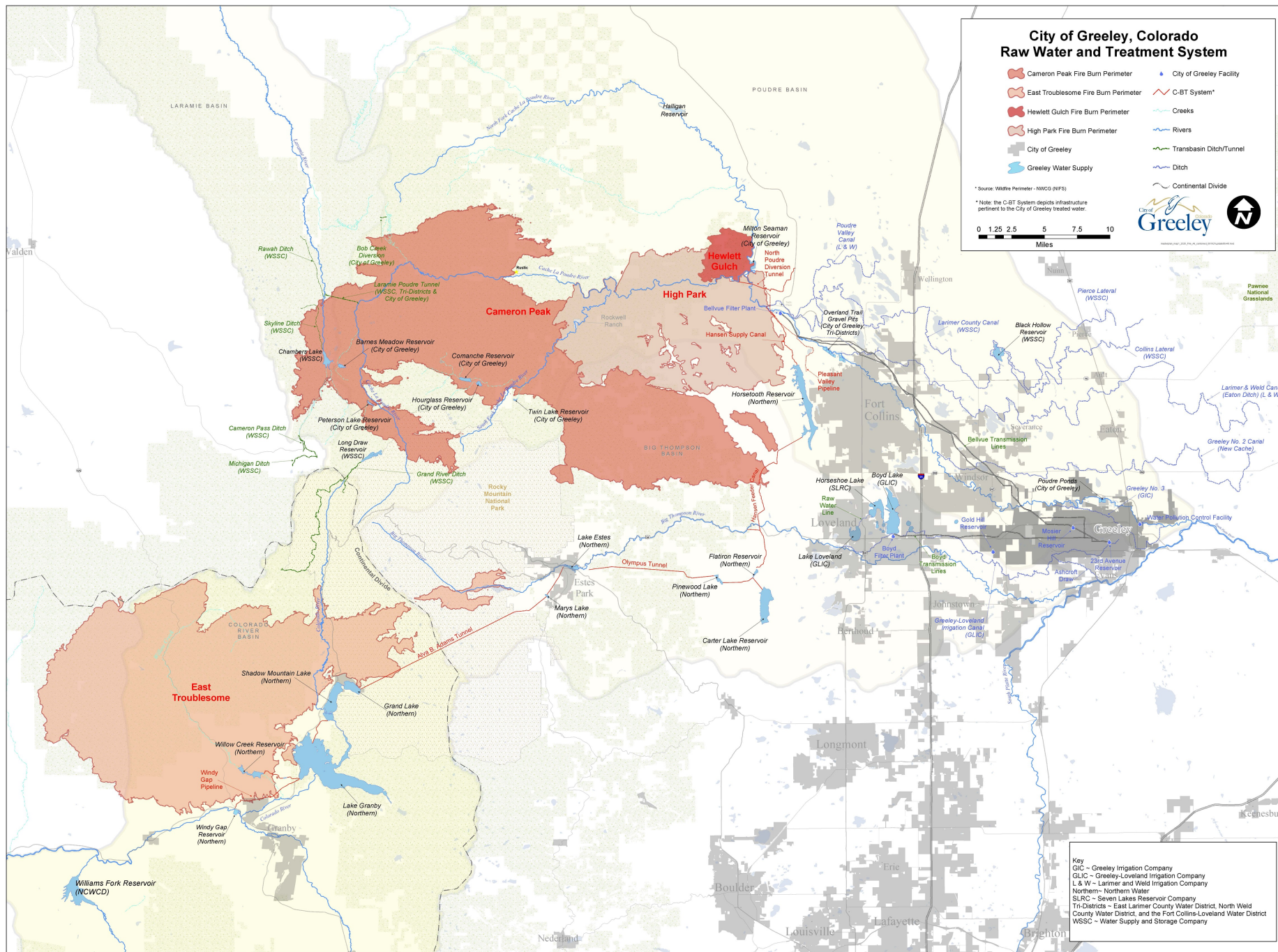
East Troublesome & Cameron Peak

The Fires

The Impacts

The Work





**Chambers Lake
(Cameron Peak Fire)**





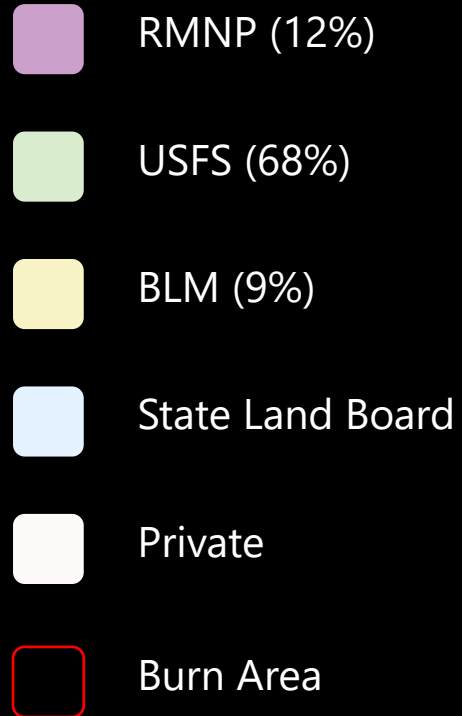
East Troublesome Fire



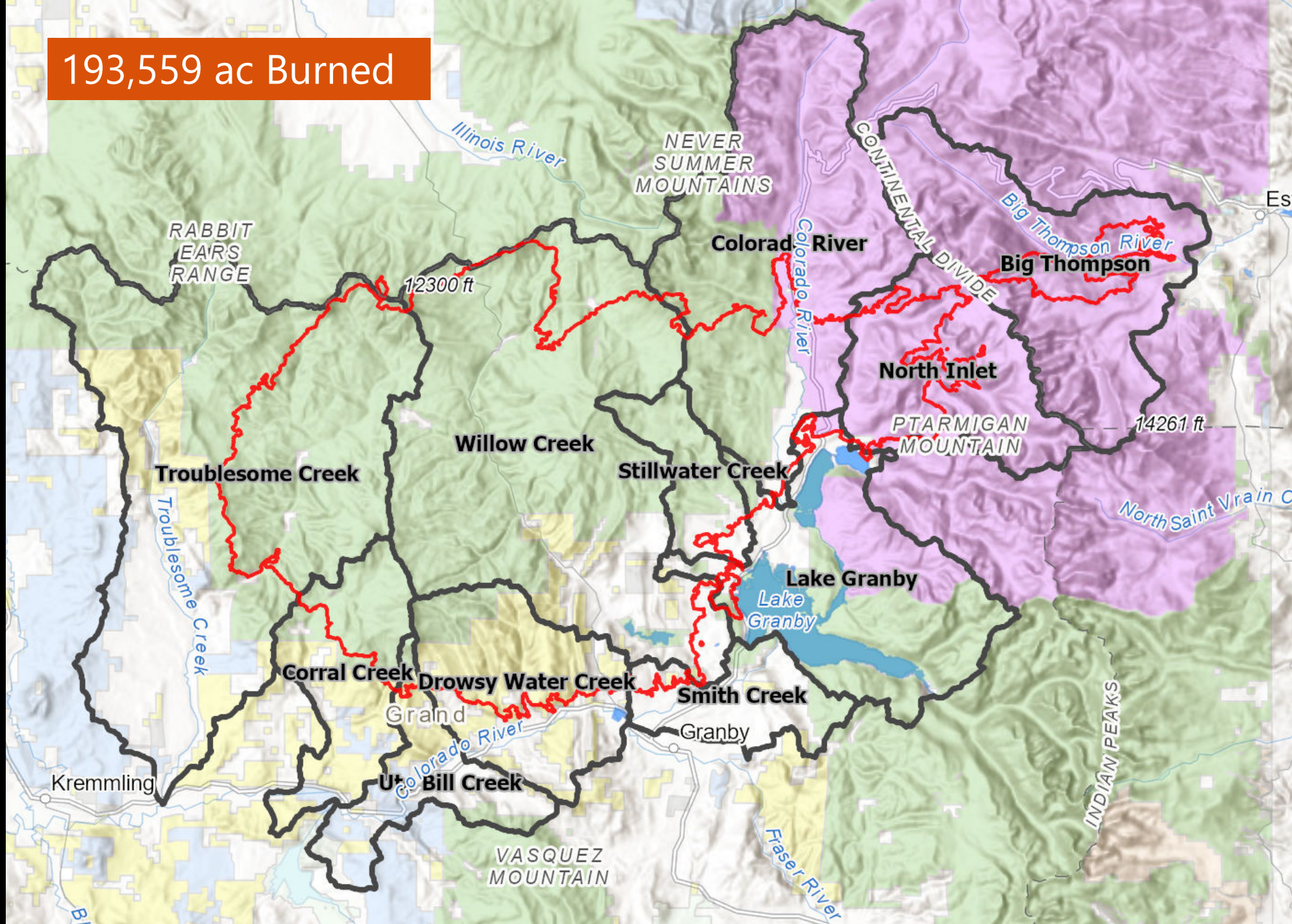
PRIVATE LAND
19,757 ac (10%)

FEDERAL LAND
168,908 ac (90%)

Land Ownership



193,559 ac Burned



PRIVATE LAND
27,867 ac (13%)

FEDERAL LAND
181,046 ac (87%)

208,913 ac Burned

Land Ownership



RMNP



USFS



BLM



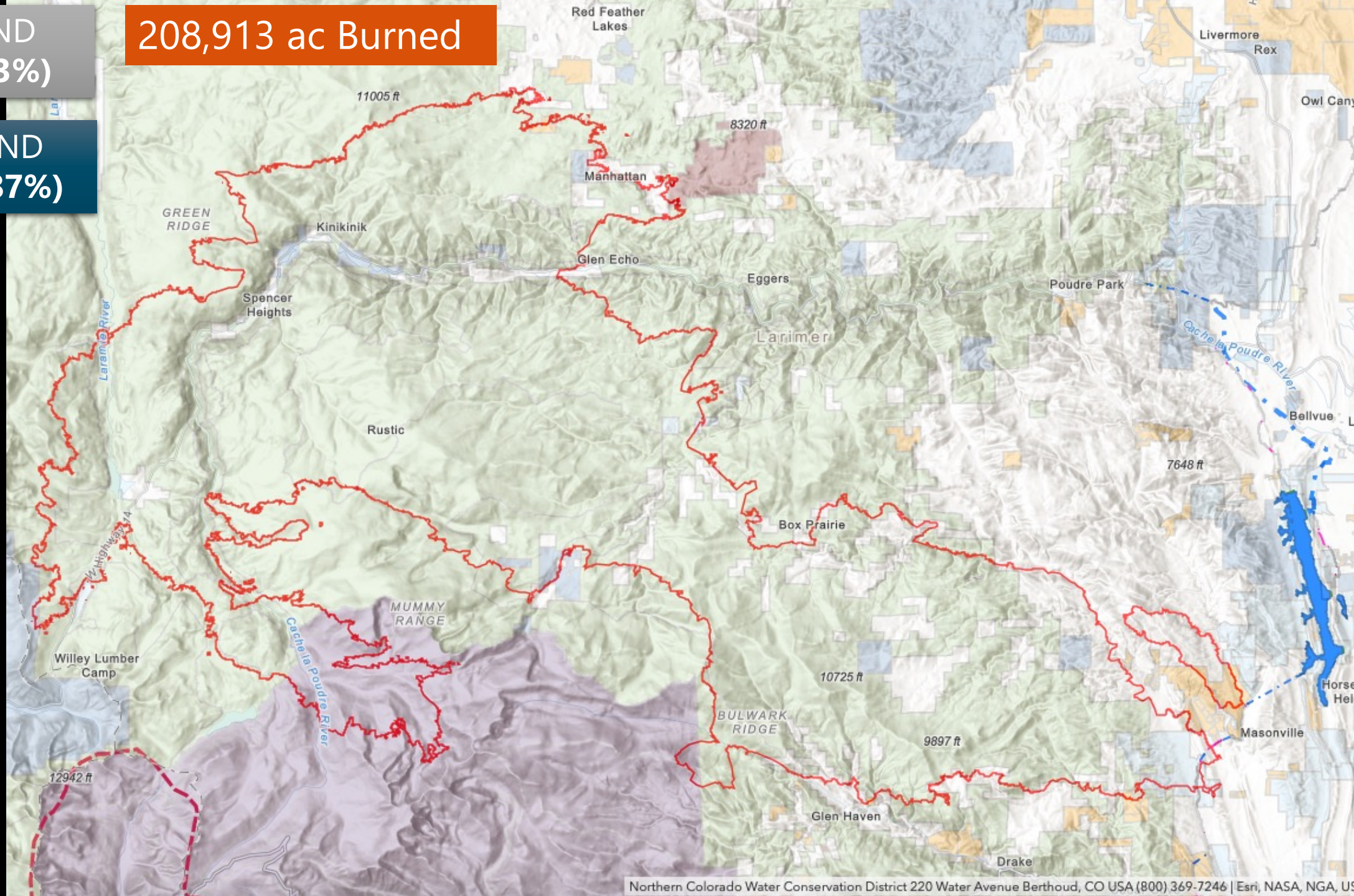
State Land
Board



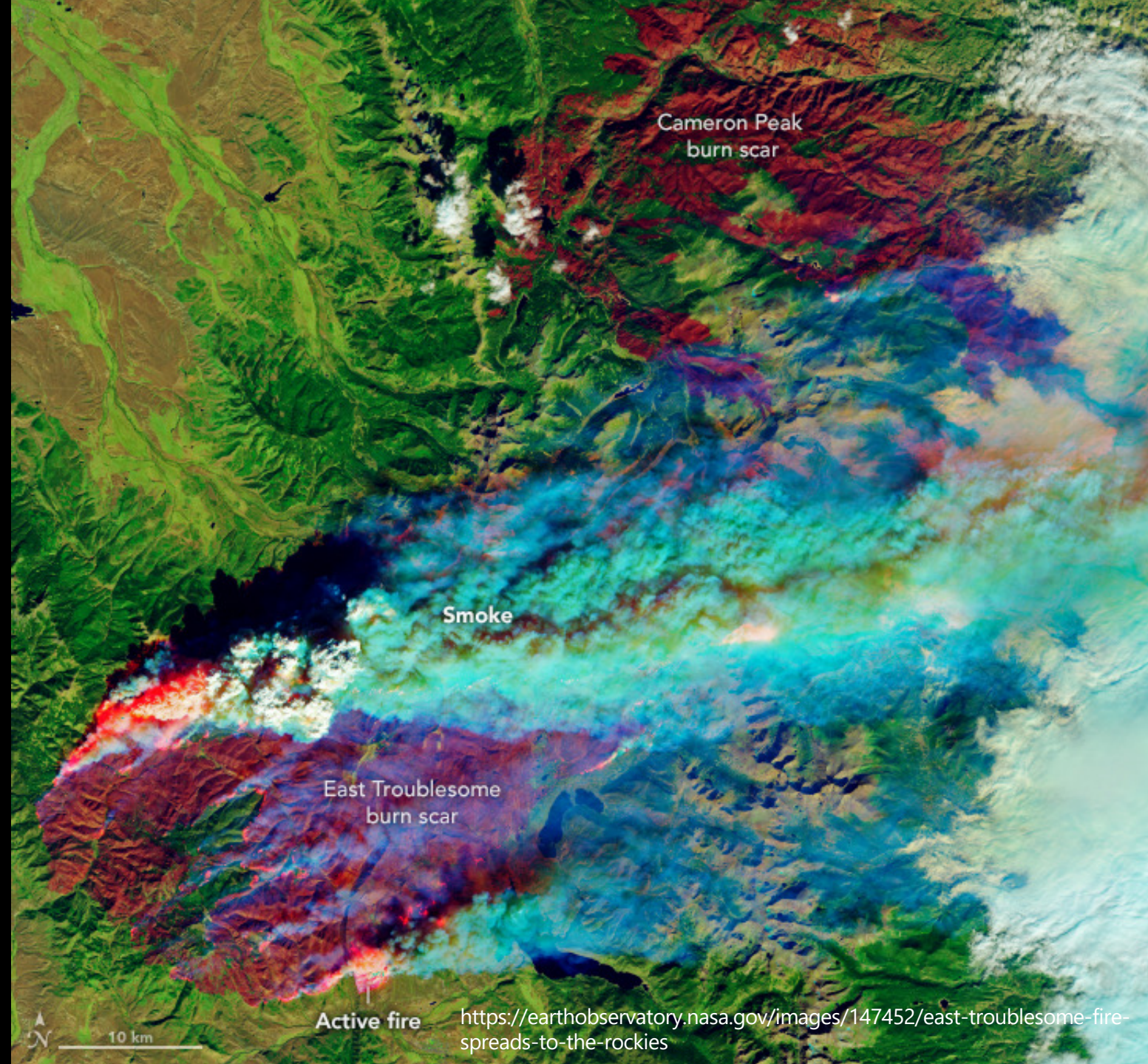
Private



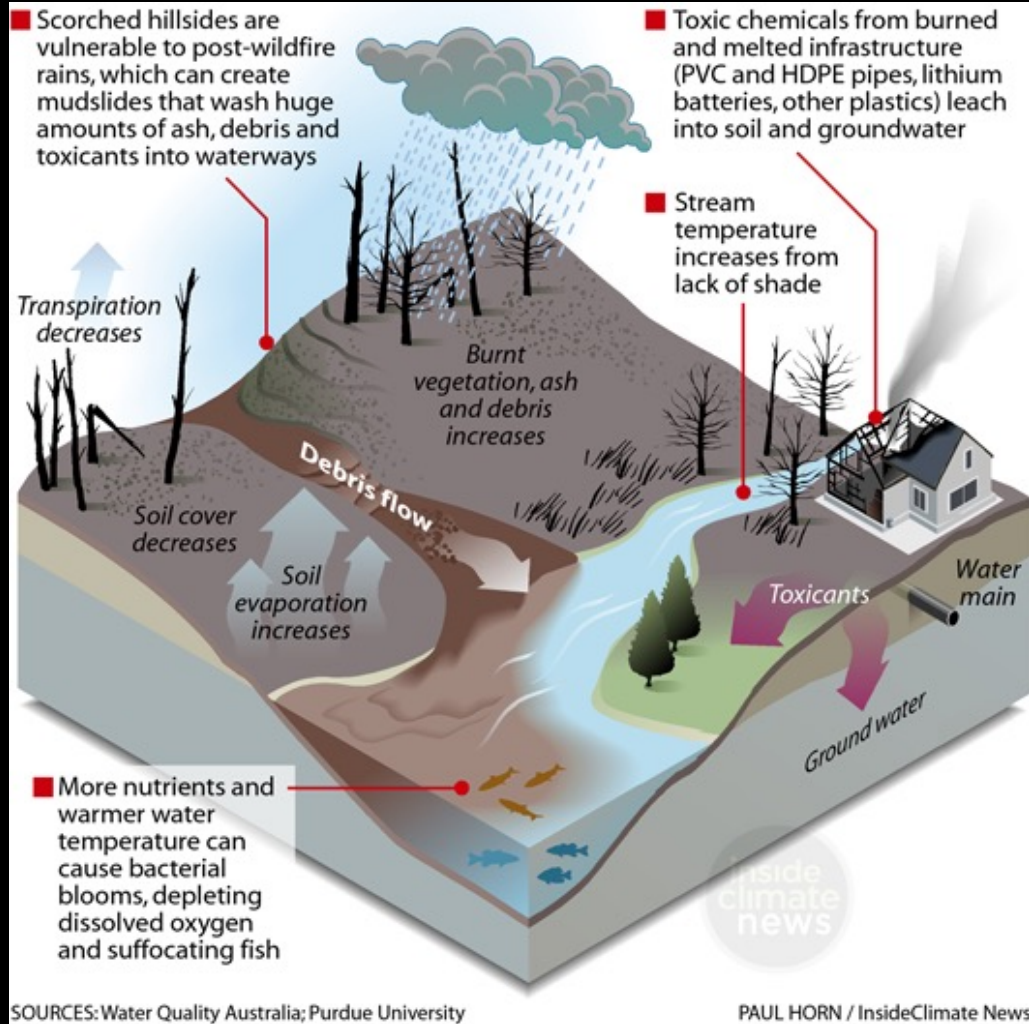
Burn Area



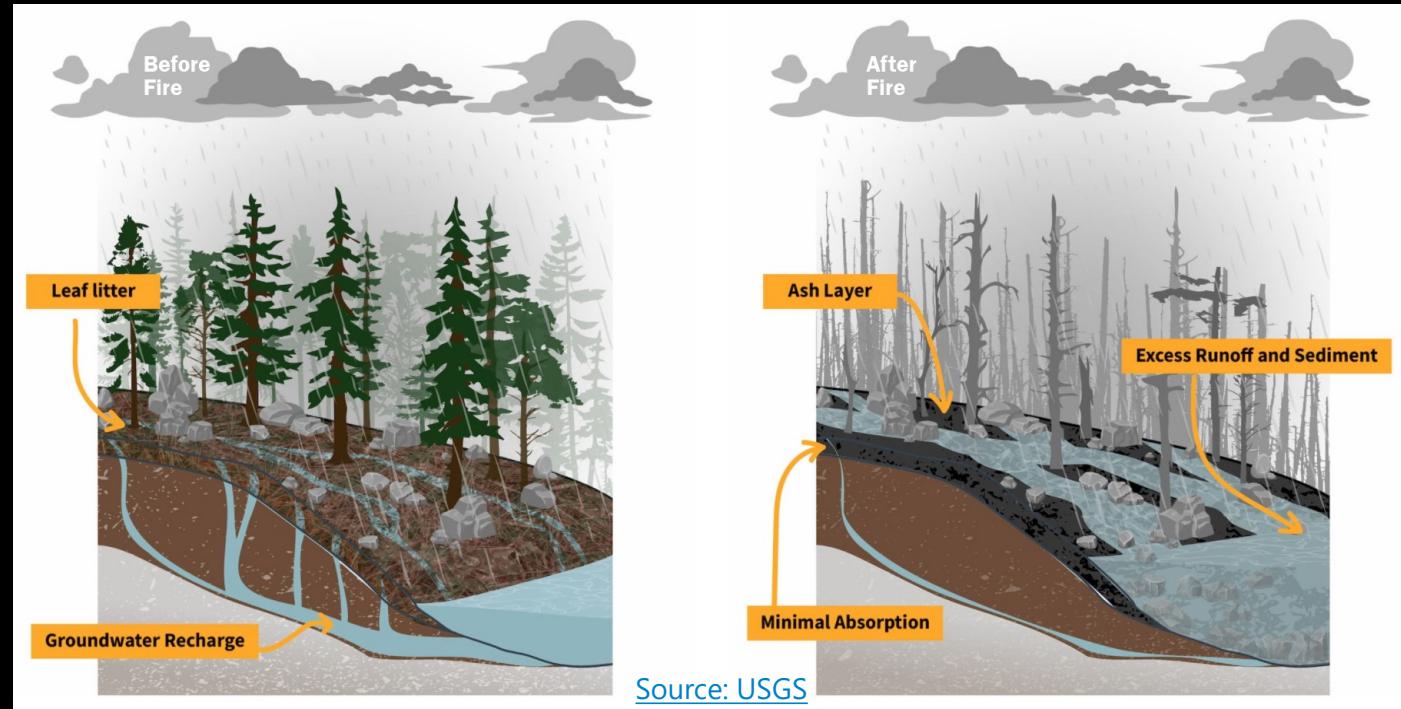
East Troublesome and Cameron Peak Wildfire Impacts



Water Quality Impacts



Flood After Fire





**North
Inlet**



**Grand
Lake
Beach**



July 20, 2021

Loss of Life and Property

Black Hollow





Another Black Hollow



Post-Fire Watershed Protection



Phase I

Emergency Watershed Protection Program (NRCS)

- Private Lands
- USFS Land (Pilot)

Life & Property Protection & Mulching



Phase II

Federal Lands: BLM & USFS

- Cooperative Agreement
- Participating Agreement

Mulching



Phase III

USFS

- Participating Agreement

Watershed Restoration



Phase IV

USFS

- Restoration (ctd) (NFF/TU)
- Revegetation (AF)

EWP Overview



Objective

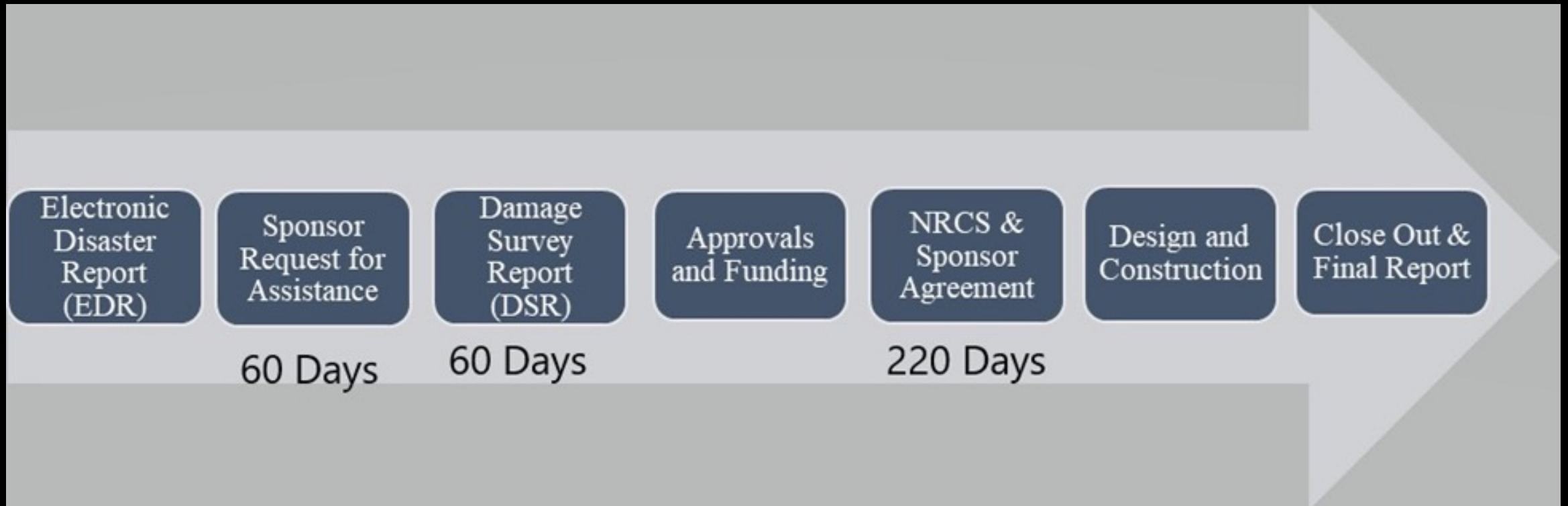
Provide assistance on private lands to relieve imminent hazards to life & property created by a natural occurrence that causes a sudden impairment of a watershed.



Primary Goals

Reduce erosion, sedimentation and threat of damage from future flooding.

Generalized EWP Implementation Process



EWP works through a Sponsor



A project sponsor is a unit of State or local government, or a State agency, or a Native American Tribe or Tribal organization.



Sponsor needs to have the 3 C's: Capacity, Capability & Commitment



Sponsor doesn't have to be an EWP expert. NRCS will guide through the process.

Sponsor Responsibilities

1

Obtain necessary
landowner
permissions.

HEAVY LIFT

2

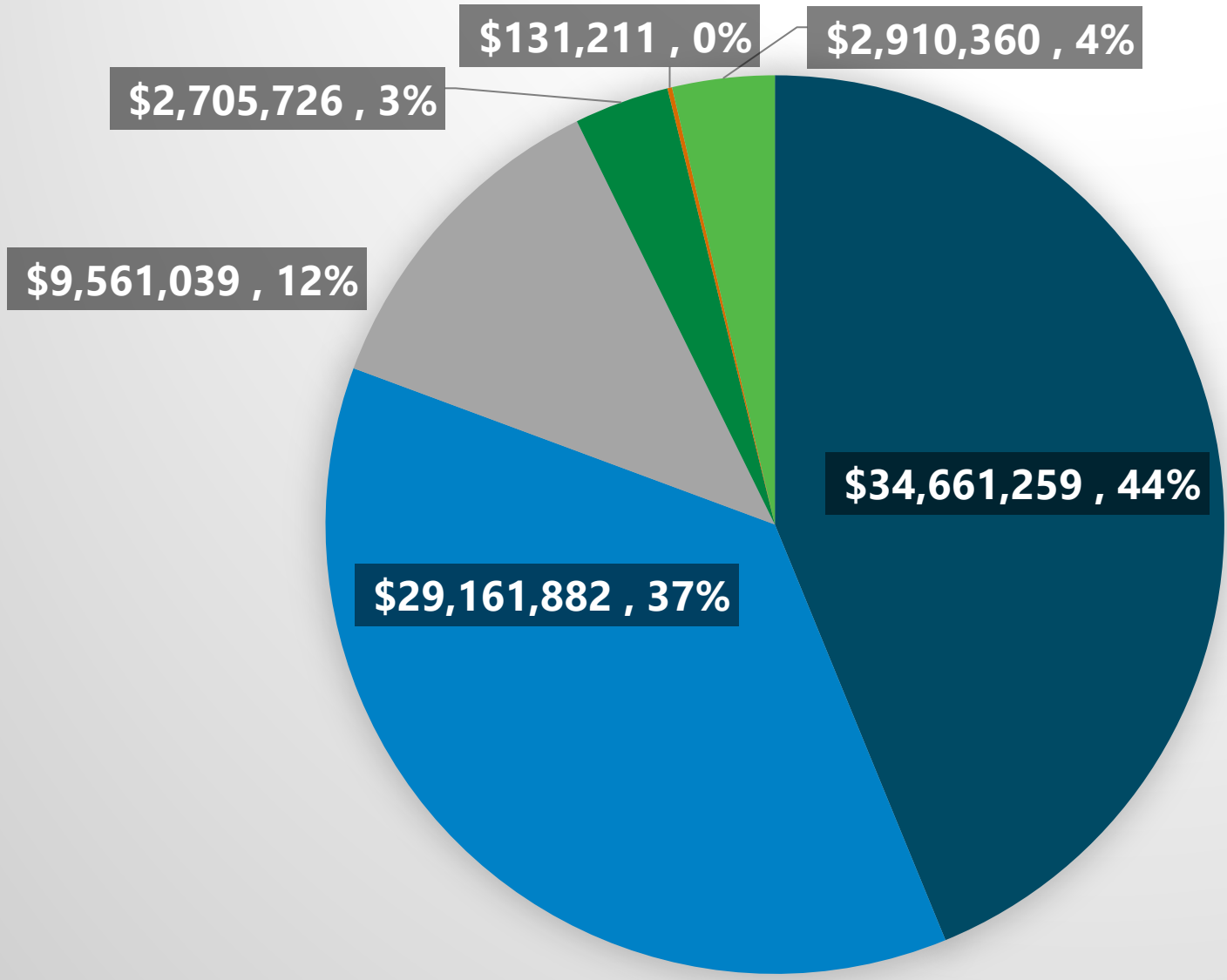
Obtain required
permits.

3

Ensure operation and
maintenance (O&M)
of installed
emergency
measures.

East Troublesome Fire Watershed Restoration

Cost to-date (January 2024)



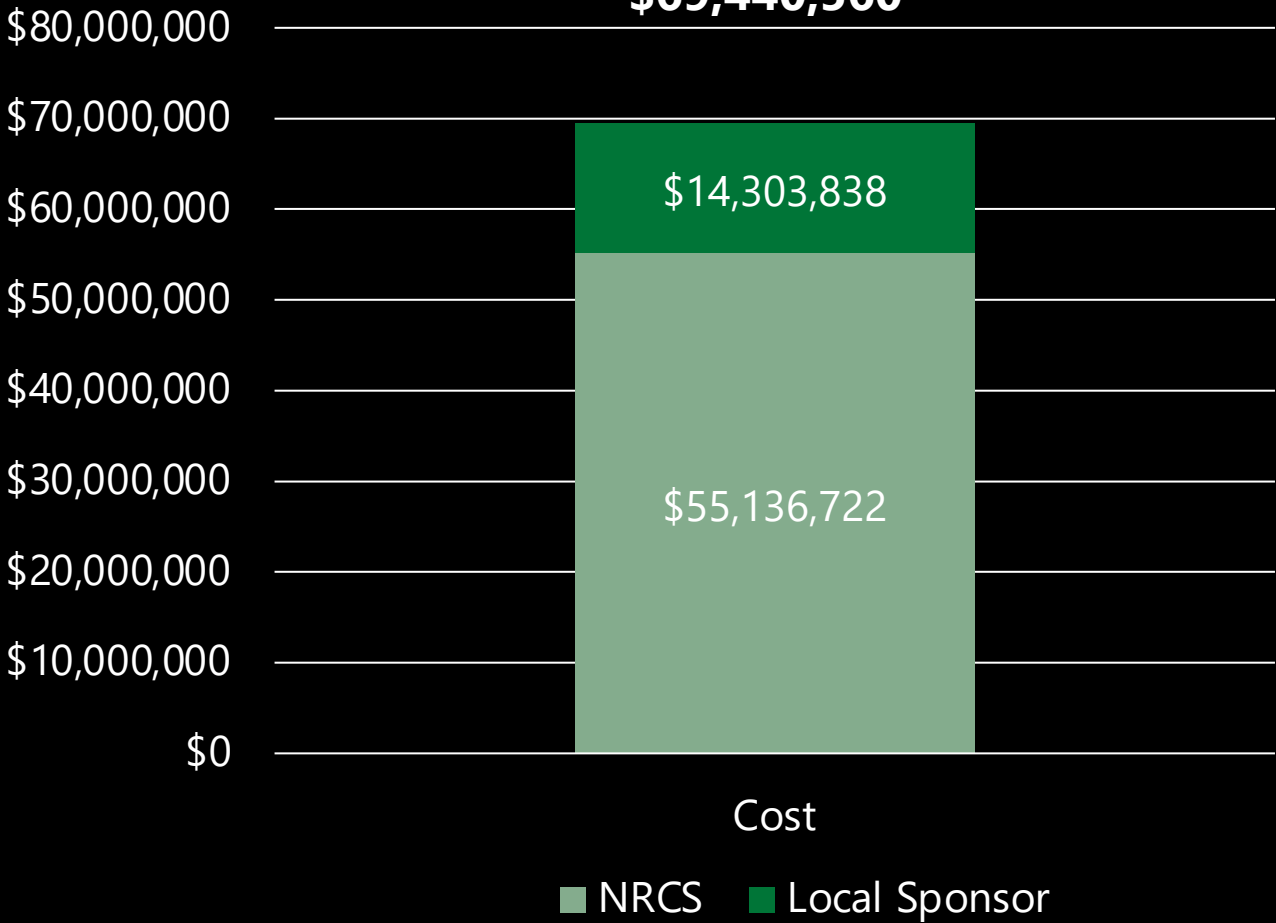
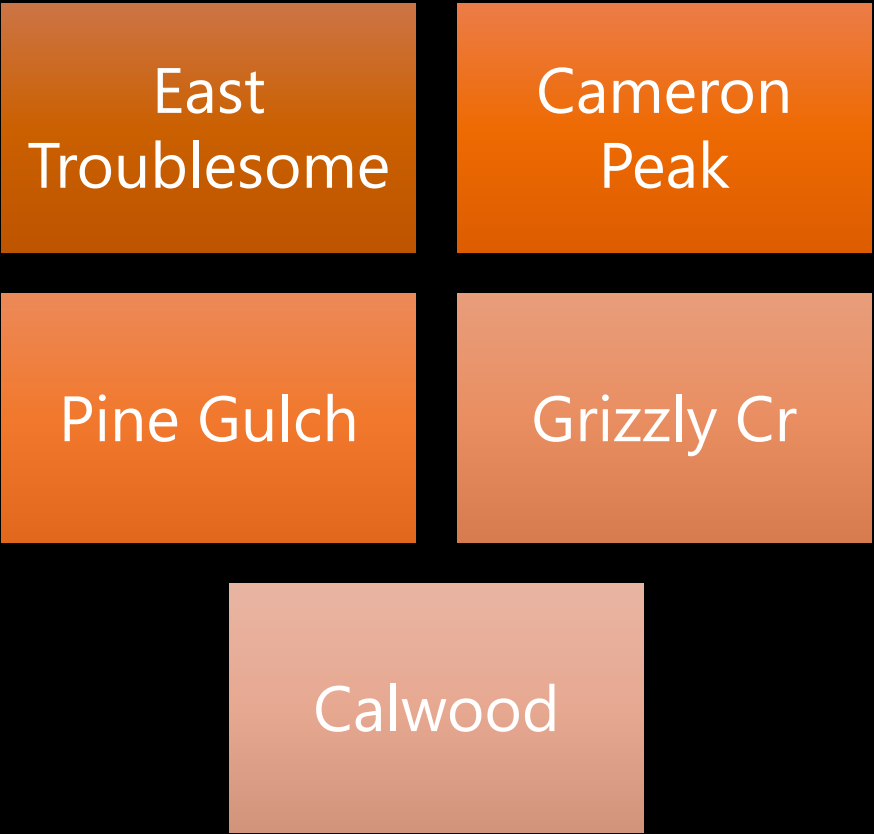
TOTAL
~\$79,000,000

- USFS
- NRCS EWP
- CWCB
- BLM

2020 Wildfires EWP Costs



TOTAL (To Date)
\$69,440,560



Wildfire Watershed Restoration Process Improvement Workgroup (WWRPI)

Technical
Process
Policy



Lessons learned

Background



2020 Wildfire – After Action Report



Identify areas for improvement regarding postfire watershed recovery
May 2021 – Jan 2023



Focus groups: Policy, Collaboration & Process, Technical



Report Dissemination



Report Card



Stakeholders (33)

| | | | | | | |
|------------------|-------------------------|----------------------------|--------------------------|---------------------|--------------|--|
| City of Greeley | Colorado Dept of Ag | BLM | Freemyer and Associates | CFRI | CWCB | DNR (BAER) |
| CSU Water Center | JW Associates | Northern Water | CDOT | COCO | CUSP | Arkansas River Watershed Collaborative |
| CSCB | Kogovsek and Associates | DHSEM | NRCS | CPRW | Grand County | USFS |
| Enginuity | USGS | Colorado Geological Survey | City of Fort Collins | Brandeberry-McKenna | MPCD | DNR |
| | NPS | Larimer County | Mile High Flood District | CRWCD | CSFS | |

Policy Focus Group Take Aways

Liability associated
with implementing
watershed
restoration projects

Making better use
of the BAER
Program

Sustainably funded
Postfire Watershed
Restoration

Working across
jurisdictional
boundaries



Process Focus Group Take Aways

Managing outreach and
engagement with
Private Landowners

Need for Understanding
of Agency and
Stakeholder Roles in
Postfire Watershed
Recovery

Resources and State
Guidance for Recovering
Communities

Seamless Transition from
Fire Suppression to
Watershed Recovery



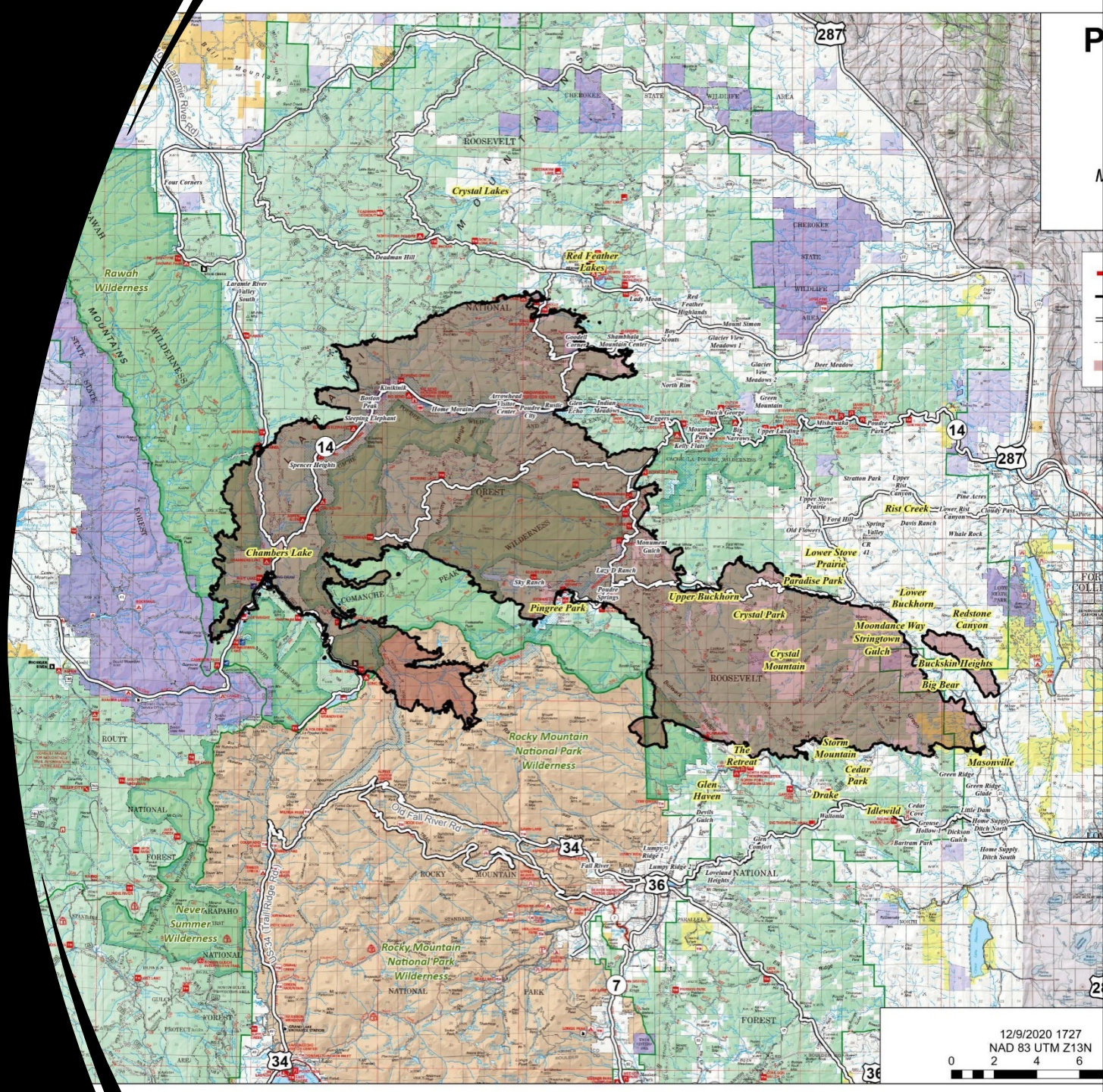
Technical Focus Group Take Aways

Coordination of
Assessments cross-
jurisdictionally

Standardizing GIS-
Based Technical
Platforms and Creating
Data Hubs

Coordination and
Standardization of Data
Collection, Modeling
and Assessments

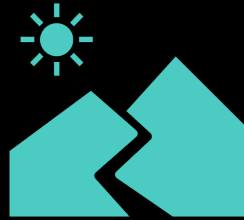
Geographic scope of
assessment to extend
downstream



Who Are The Recommendations For?



Some are aimed at legislators



Some are for everyone in Post-Fire Watershed Recovery



Others are for specific groups/agencies within Post-Fire Watershed Recovery

Other Challenges & Observations

Watershed
Restoration was
not a fit for FEMA

BAER program not
a resource beyond
assessment &
agency interests

EWP most
accessible resource
but only for private
lands

State Funding
critical for federal
match (25%)

Environmental
Permitting often
critical path

Capacity,
Commitment,
Capability

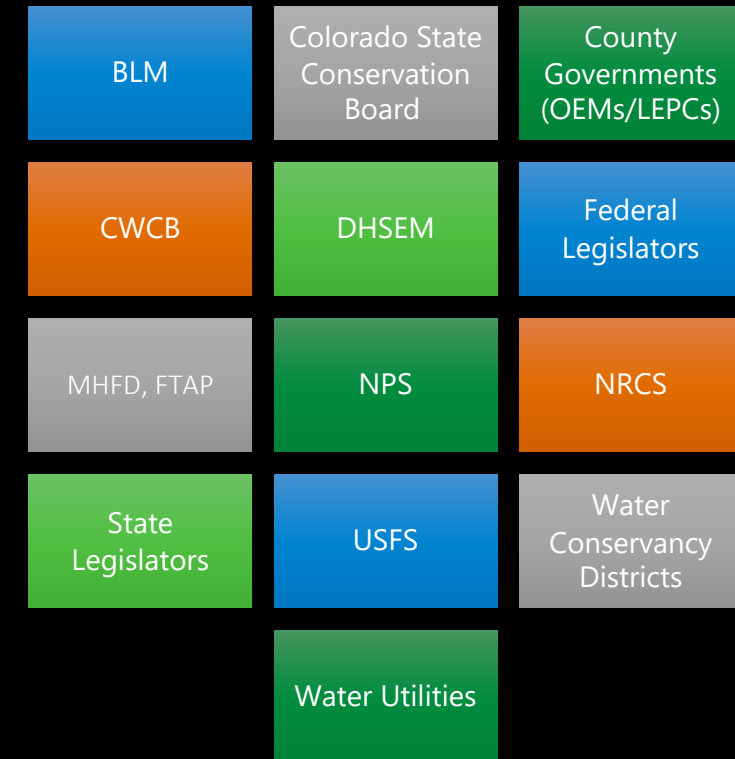


Lessons Learned Report

Recommendations

Successful implementation of recommendations requires ***support from the many local, state, and federal agencies and organizations*** that play a part in postfire watershed recovery

DISTRIBUTION



Progress Report

...as of April 2024



From Recommendations to Actions

NRCS/USFS
MOU & IAA

USFS EWP
Draft Bill

Wildfire Ready
Watersheds

Colorado Post
Fire Recovery
Play Book v2.0

Wildfire Crisis
Strategy

CoBAER



Making EWP Work for National Forests

MEMORANDUM OF UNDERSTANDING Between The United States Forest Service and The Natural Resources Conservation Service

1. PURPOSE

The purpose of this Memorandum of Understanding (MOU) is to establish a collaborative relationship between the Natural Resources Conservation Service (NRCS) and the United States Forest Service (FS) while carrying out watershed protection measures. The Agencies enter into this MOU to coordinate flooding and soil erosion protection for communities in proximity to National Forest System (NFS).

There are opportunities for the Agencies to cooperate under their respective authorities as well as to provide each other with needed services and technical expertise. Cooperative management and technical assistance efforts help to improve the delivery of watershed protection on NFS lands for the purpose of safeguarding lives and property on non-federal lands.

2. AUTHORITY

16 U.S.C. 2203 establishes that the Secretary of Agriculture is authorized to undertake emergency watershed protection measures, including the purchase of floodplain easements, for runoff retardation and soil-erosion prevention, in cooperation with landowners and land users, as the Secretary deems necessary to safeguard lives and property from floods, drought, or any other natural occurrence that has caused a sudden impairment of that watershed.

NRCS administers the Emergency Watershed Protection (EWP) Program in accordance with 7 CFR 624, and FS implements the EWP Program in accordance with 36 CFR 220.3. The Agencies agree that the responsibility for requesting funds from the U.S. Department of Agriculture for EWP stabilization work in accordance with Forest Service (FS) authority rests with the NRCS.

3. MUTUAL AGREEMENT

A. Coordination

- (1) The NRCS National EWP Program will host quarterly training or collaborative efforts necessary for the NRCS to meet the requirements, and deliver the training to the FS.
- (2) The applicable NRCS State Office will host quarterly training or collaborative efforts necessary for the NRCS to meet the requirements, and deliver the training to the FS.

To the Forest Service Program Manager, at the address specified in the MOU.
To NRCS's address shown in the MOU or such other address designated within the MOU.
Notices are effective when delivered in accordance with this provision, or on the effective date of the notice, whichever is later.

J. Authorized Representatives

By signature below, each party certifies that the individuals listed in this document as representatives of the individual parties are authorized to act in their respective areas for matters related to this MOU.

UNITED STATES FOREST SERVICE
By

RANDY MOORE
2023.03.21 09:14:59 -04'00'
Randy Moore
Chief, United States Forest Service

Date

NATURAL RESOURCES CONSERVATION SERVICE
By

Terry J. Cosby
Terry Cosby
Chief, Natural Resources Conservation Service
Digitally signed by Terry J. Cosby
Date: 2023.03.31 14:45:41 -04'00'
Date

Formalize collaboration

NRCS administers EWP Program and Funding

USFS can request funding from EWP Program

Coordination of

- site assessments
- outreach to sponsors and public
- program implementation

Distribution of responsibilities between private lands and National Forest

Interagency Agreement to exchange funding between agencies

Draft EWP Bill for National Forests

What?

To restore forest
health and related
resources

Scope

NFS land or the
watershed

Purpose

- Emergency watershed protection
- To safeguard lives, property and infrastructure

Allows funding of the
local sponsor to work
on NFS

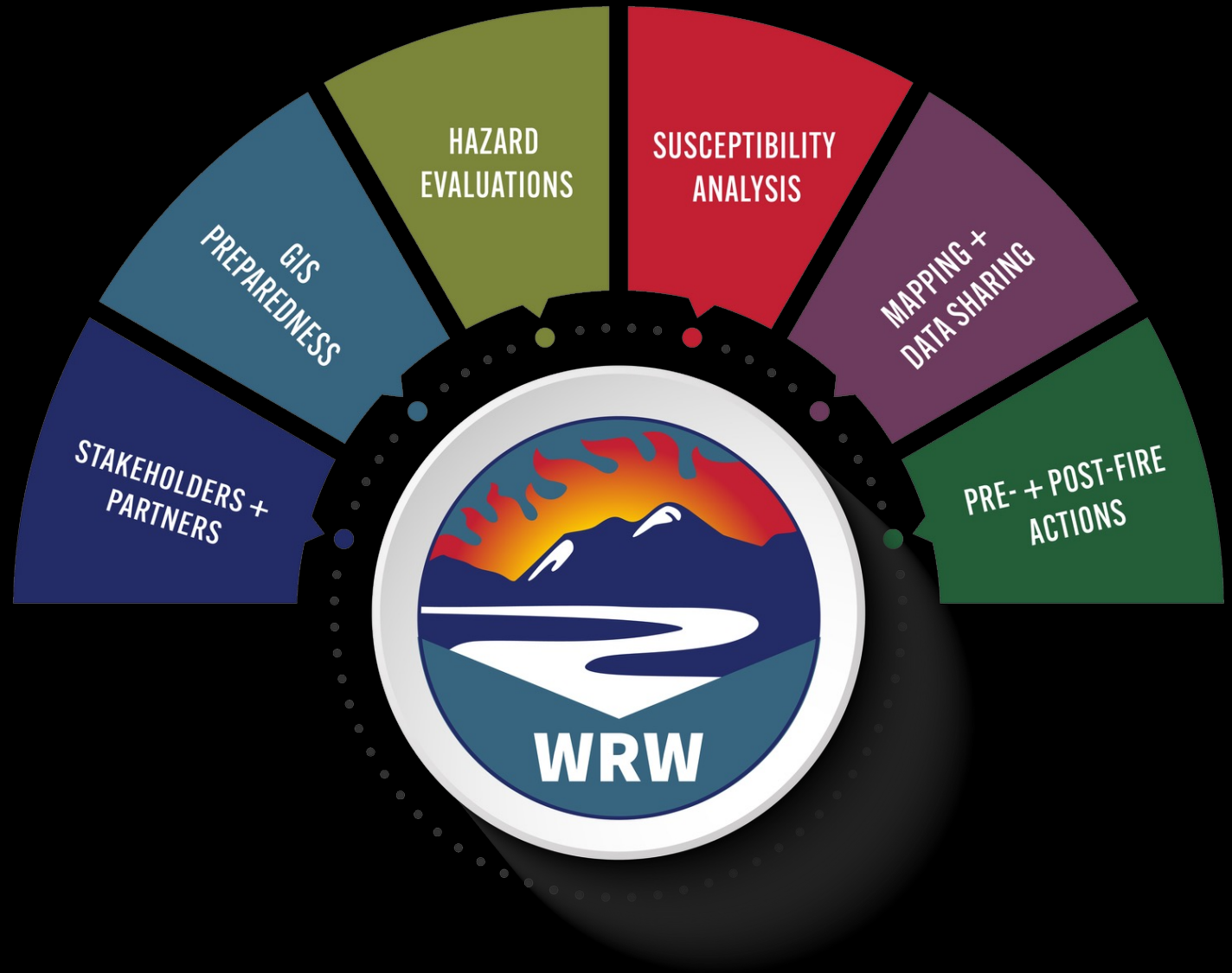
Waves match
requirements

Language to address
liability

NRCS coordinates
funds

Permitting:
Streamlined NEPA in
response to
emergency

Wildfire Ready Watersheds



Colorado Post-Fire Recovery Playbook (2021)



Colorado Post-Fire Recovery Playbook

Guidance for Counties, Tribes,
Municipalities, and Water Providers

February 2021



USFS Wildfire Crisis Strategy



Forest Service
U.S. DEPARTMENT OF AGRICULTURE

FS-1187a | January 2022

WILDFIRE CRISIS strategy



CONFRONTING THE WILDFIRE CRISIS

A Strategy for Protecting Communities and
Improving Resilience in America's Forests

CoBAER

DHSEM/WAAG
Coordinator

DNR Point of
Contact

DNR CoBAER
Team Lead

CDA Ag Lead

CSFS Forest
Lead

DHSEM Grant
Coordination

CWCB
Watershed
Leads

DW Water
Infrastructure
Lead

CDPHE Water
Quality Lead

CGS Geology
Lead

HC Cultural &
Archaeologist
Lead

CDOT
Transportation
Lead

Federal coBAER Partners

Local coBAER Partners

NRCS/USFS/Soil Assessment

FEMA/FMAG Compliance Lead



POLICY

PROCESS & COLLABORATION

TECHNICAL



Report Card

Take Aways

**CALL
TO
ACTION**

Work in progress

Much more to do

Collectively re-engage in recommendations implementation

Advocacy need persists

Policy and institutional change requires alignment and persistent messaging

How to coordinate stakeholders' engagement?



Recognitions

Todd Boldt, NRCS

Katlin Miller, Middle Park Conservation District

Brian Craig, Northern Water

Kimberly Tekavec, Northern Water



Questions & Discussion

Todd Boldt
Sean Chambers
Esther Vincent

todd.boldt@usda.gov
sean.chambers@greeleygov.com
evincent@northernwater.org