Town of New Castle
450 W. Main Street
PO Box 90
New Castle, CO 81647

Administration Department
Phone: (970) 984-2311
Fax: (970) 984-2716
www.newcastlecolorado.org

Agenda

New Castle Town Council Work Session

Tuesday, September 3, 2024, 6:15 PM

Virtual Meetings are subject to internet and technical capabilities.

Virtual Meetings are subject to internet and technical capabilities.

If you prefer to telephone in:
Please call: 1-346-248-7799
Meeting ID: 709 658 8400
Follow the prompts as directed. Be sure to set your phone to mute until called on

Update Presentation – Middle Colorado Watershed Council – Paula Stepp

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Memorandum

To: Mayor & Council

From: David Reynolds

Re: Council Workshop: Update from Paula Stepp regarding Colorado River Wildfire Collaborative

Date: 09/03/24

Purpose:

The purpose of this Council Workshop is to allow time for Paula Stepp to review the work that is being done by the recently formed Colorado Rover Wildfire Collaborative.

Working as the Executive Director of the Middle Colorado Watershed Council, Paula has pulled together a local collaborative that includes area fire districts, local municipalities, the local forest service and others for the purpose of addressing pre and post wildfire concerns in our region. Paula has been successful in obtaining grant funding for risk studies and is now working actively to develop the next steps for the collaborative.

MIDDLE COLORADO WATERSHED COUNCIL

ANNUAL UPDATE

New Castle Town Council/ September 2024

Paula Stepp *(MCWC) – Annual Update, Wildfire Collaborative*
Bill Hoblitzell *(Lotic) – Best Practices Gravel Pit Restoration*
Christina Pearson *(SGM) - WRAP*

MIDDLE COLORADO WATERSHED PROJECT UPDATES

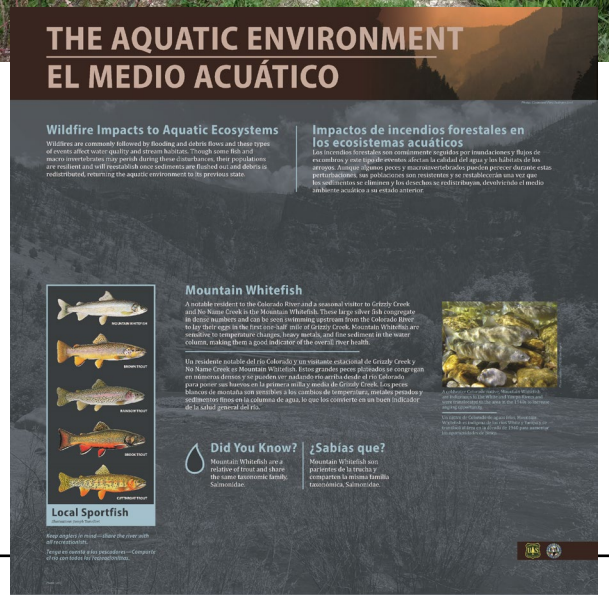
2024-2025 Project Highlights and 2025 Support
Colorado River Wildfire Collaborative
Post-fire Risk and Susceptibility WRAP

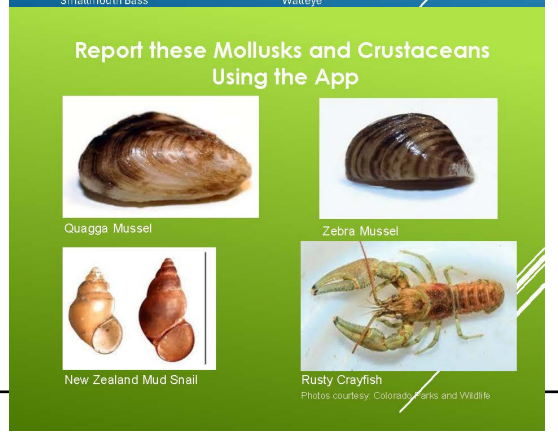
Best Practices Gravel Pit Restoration

Wildfire Ready Action Plan: Post-Fire Risk and Susceptibility Analysis

2024 – 2025 MCWC PRIMARY PROJECTS

- Colorado River Wildfire Collaborative
- Wildfire Ready Action Plan Risk and Susceptibility Assessment
- Roan Creek Fish Barrier and Infrastructure Project
- Silt Preserve Water Rights
- Glenwood Canyon Sign Replacement
- Best Practices Gravel Pit Restoration
- CPW Non-Native Fish Species Reporting App
- River Watch Expanded to Grand Valley High School and Parachute Creek
- Best Practices for Utilizing Fluvial Hazard Zones in Floodplain Management



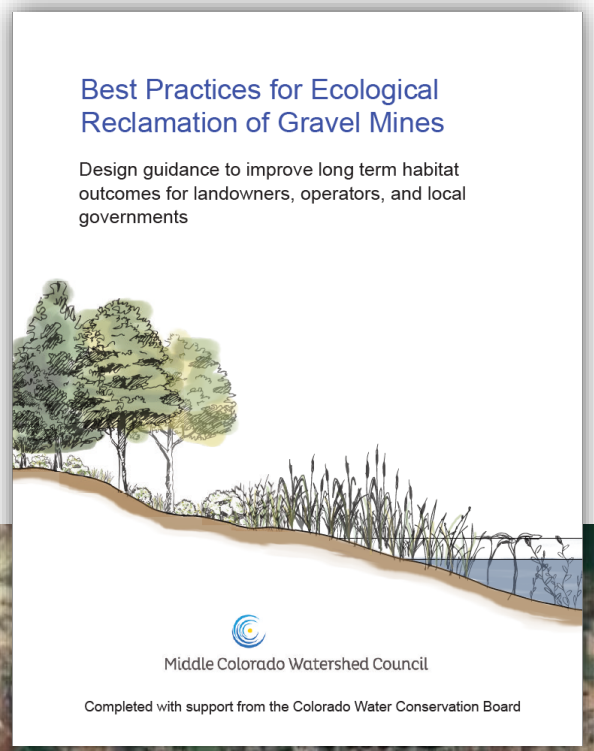


MCWC Annual Support Request to the Town of New Castle

2025 Annual Support to Sustain MCWC Project Work – $2,500

BEST PRACTICES GRAVEL PIT RESTORATION

Why did we do this and who is it for?



IWMP Actions WQR12, AQ9

"develop a set of best practices that could be used by counties and local government when reviewing and permitting future gravel operations."

2023 Gravel Pit BMP Guide

A cookbook of optional design and policy practices to improve post-reclamation ecological function at current operations, as well as promote restoration at older sites.

Middle Colorado Watershed Council

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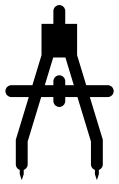
BEST PRACTICES GRAVEL PIT RESTORATION

Findings

- Aggregate is a base resource for the local economy but over time continued river-corridor mining is a race-to-the-bottom for natural habitat health and function
- Tradeoffs between the present/future need for recoverable resource ($) and long term viability of functional habitat phase are difficult social questions, science can't answer.
- Current state-level reclamation requirements do not produce good long term aquatic and riparian habitats.



- County-level permitting has greatly improved in Garfield County, but scientific guidance suggests reclamation outcomes (habitat values at a site) can still be much better than current reclamation produces

- Improved restoration at old / legacy mine ponds is a ripe avenue to explore, but needs solutions to logistical / feasibility issues like sourcing clean fill and incentivizing work
- Conserving the remaining good habitats is likely cheaper and more effective in protecting river corridors than even the best post-mining reclamation design.

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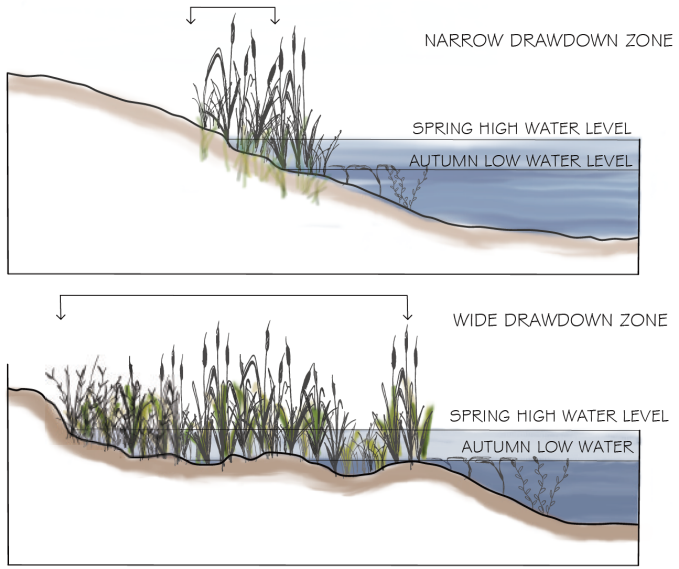
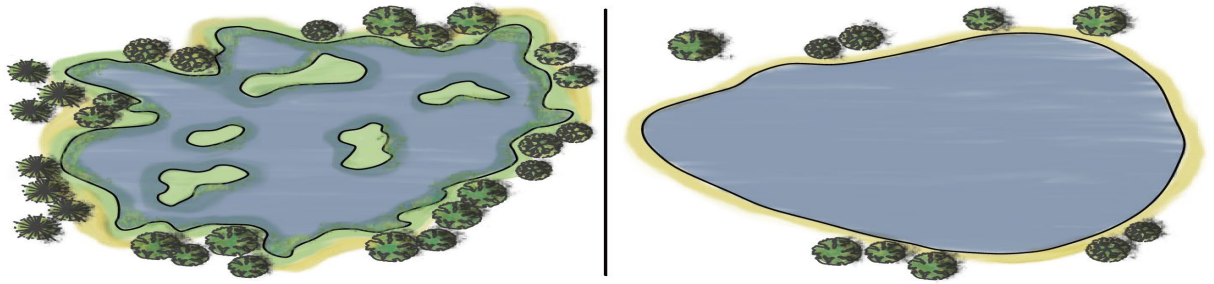
BEST PRACTICES GRAVEL PIT RESTORATION

Big-Picture Highlights and Recs

- Working on improving existing legacy pits is potentially low hanging fruit
- Creating or/finding incentives for landowners to participate and sourcing clean sediment/fill can help achieve this
- Continuing to improve new permits/designs as they arrive is the proactive route for the future.
- Reducing slopes and increasing bank complexity to promote the maximum possible amount of riparian water/land fringe is the basic goal underlying designs; *deep, open water === useless barren area*





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POST-GRIZZLY CREEK FIRE RAIN GAGES AND WATER QUALITY

History and Progress

The Grizzly Creek and Pine Gulch fires in 2020 and post-fire debris flow and flooding have impacted county communities for the last four years. MCWC received funding for post-fire water quality and weather monitoring.

MCWC and stakeholders are addressing whether to continue monitoring post-fire activity after 2024.

Seven rain gages were placed in Glenwood Canyon. Two of those sites could be retained at the end and west end of the canyon for around $10,000 each.

The additional water quality monitoring over the last four years has influenced water treatment plant operations decisions. New USGS water quality monitoring gages were located at Silt and Rulison. Current consideration is whether to continue the gage at the Rulison site to measures temperature and turbidity.

Middle Colorado Watershed Council

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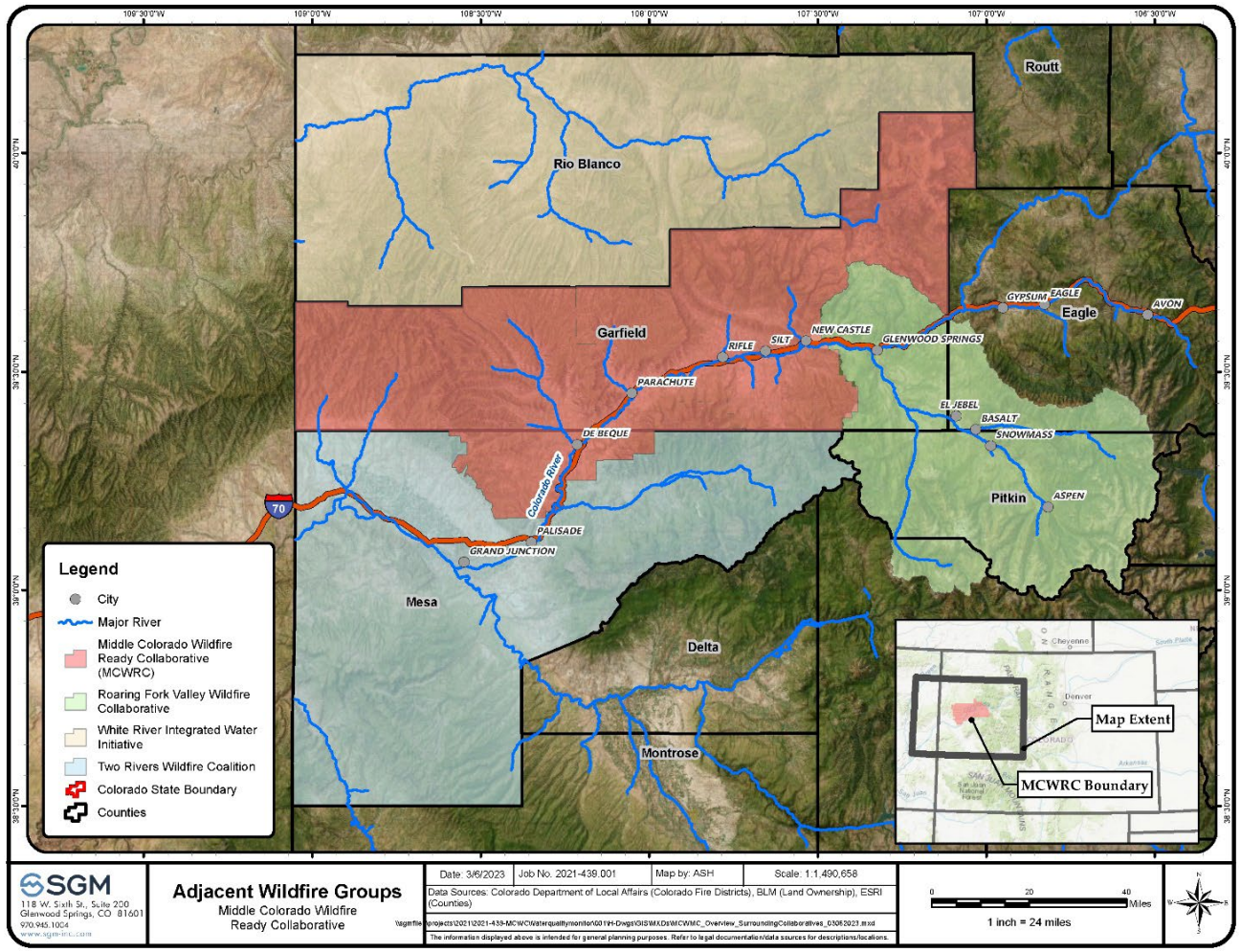
COLORADO RIVER WILDFIRE COLLABORATION

History and Progress

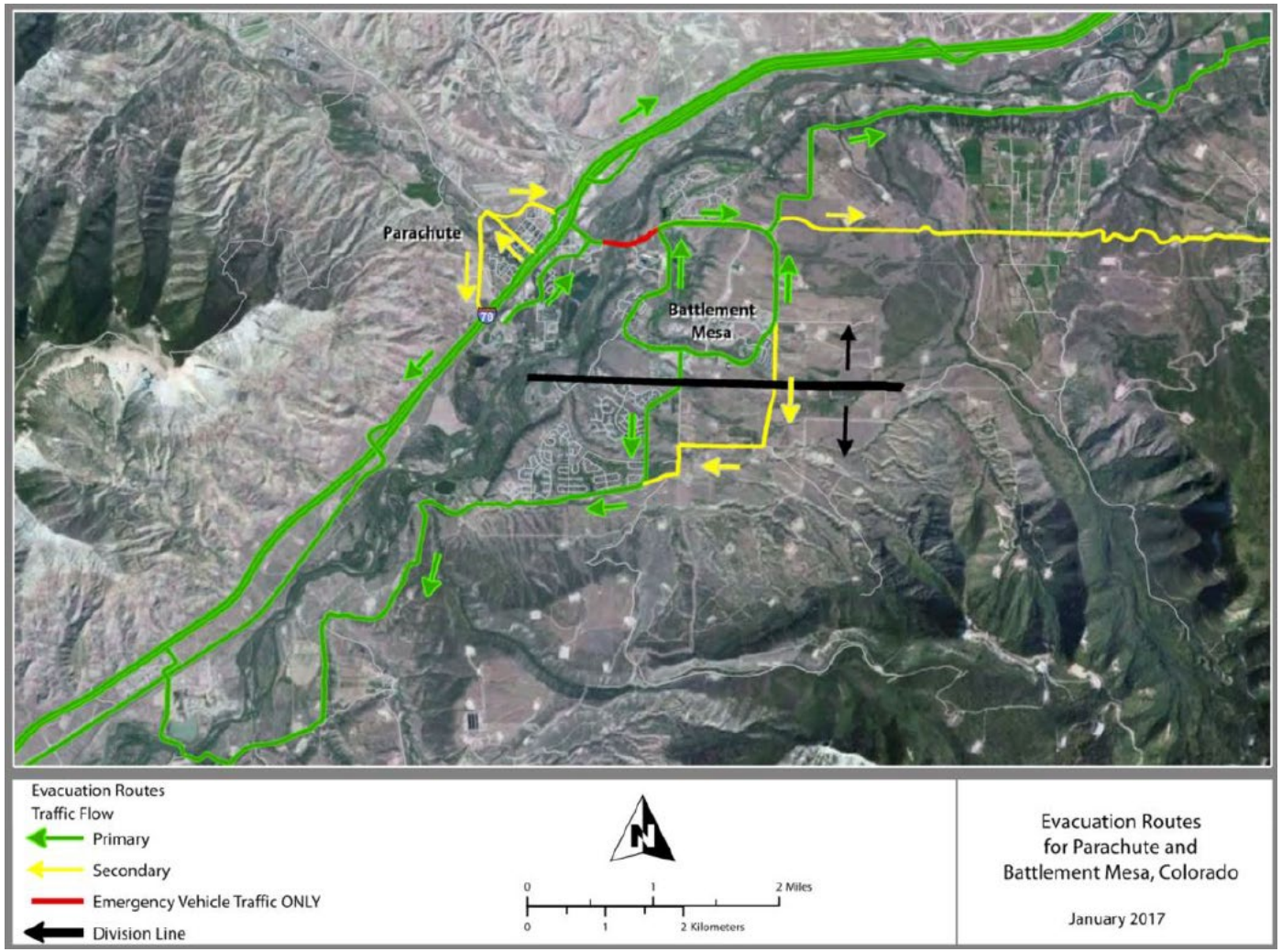
November 2022 – Initial Stakeholder Meeting
September 2023 –CWCB Wildfire Ready Action Plan grant awarded for risk and susceptibility analysis for Elk Creek, Rifle Creek and Battlement Mesa drainages
March 2024 – fully executed wildfire collaborative Memorandum of Understanding
Summer 2024 – Planning for 501-3C development, cross-jurisdictional projects, and hiring a collaboration coordinator
Wildfire collaborative meetings second Tuesday of every month at 1 pm

Colorado River Wildfire Collaborative 2025 Stakeholders Budget

GOAL: Hire coordinator that will provide project management, write grants for projects and sustainability, and set up community outreach programs.
Create a 501-3C



WILDFIRE READY CWPP



Garfield County CWPP Evacuation Plans for Parachute and Battlement Mesa

Pre-Wildfire Planning and Procedures

- Prepare emergency kit and family communications plan
- Pursue household mitigation
  - Contact fire districts to conduct home assessments
- Sign up for emergency alert systems
  - GarCo911
  - Reachwell app
- Identify evacuation routes based on home location
- Neighborhood Ambassador Program.
  Encourage and motivate residents to take action to reduce that risk

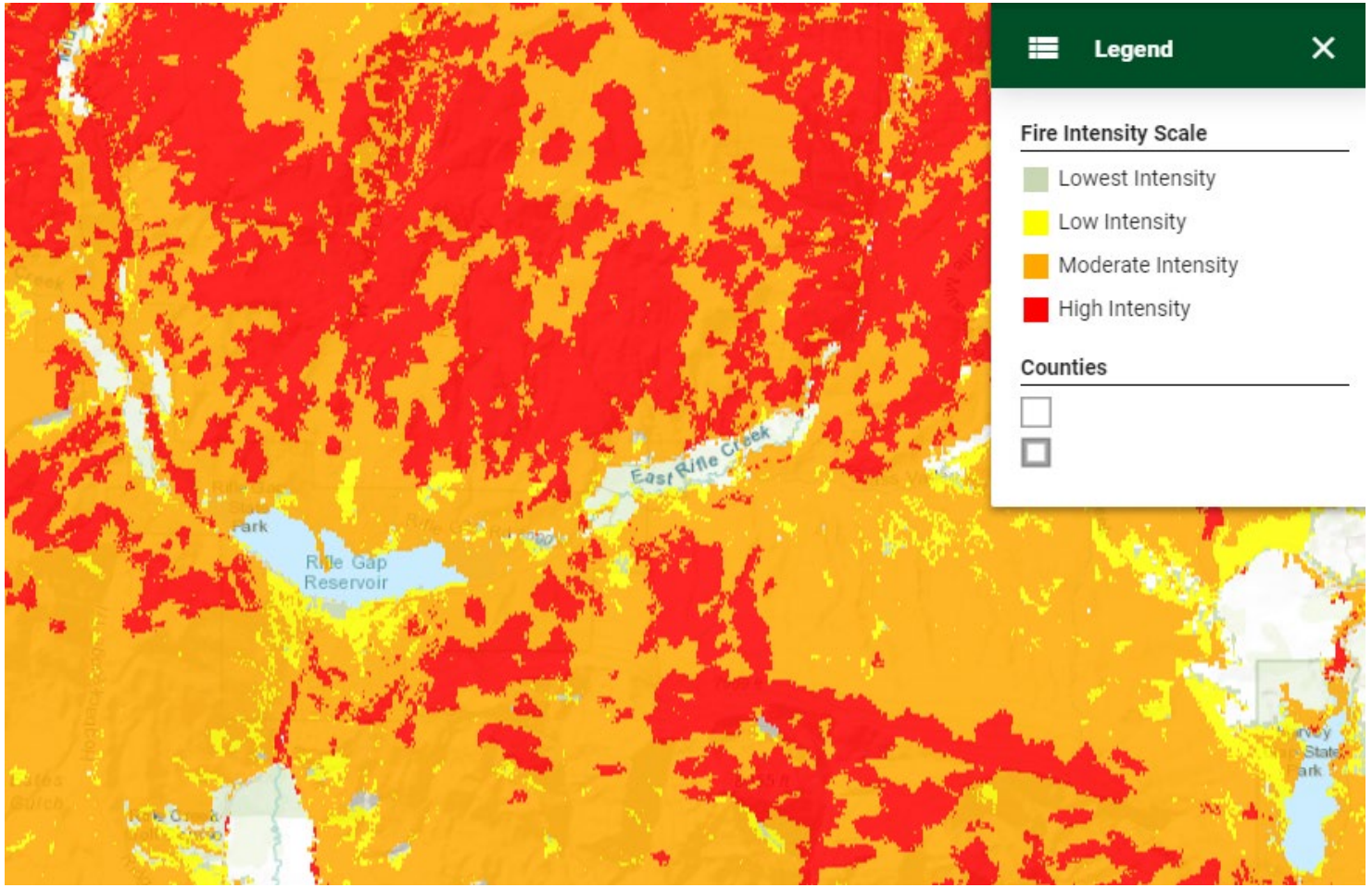
PRE-WILDFIRE MITIGATION

Benefits

- Suppression
- Forest Health
- Fuels Reduction
- Watershed Protection
- Wildlife Habitat
- Community Safety
- Critical Infrastructure
- Access: Roads, Culverts, Bridges
- Agriculture Protection

Wildfire Mitigation Cross-Jurisdictional Programs to Create Defensible Space

- Mastication
- Prescribed Burns
- Hand Tool Work
- Create Fuel Breaks
- Thinning to Reduce Flammable Vegetation



Colorado Forest Atlas https://coloradoforestatlas.org

CWCB: WILDFIRE READY WATERSHEDS

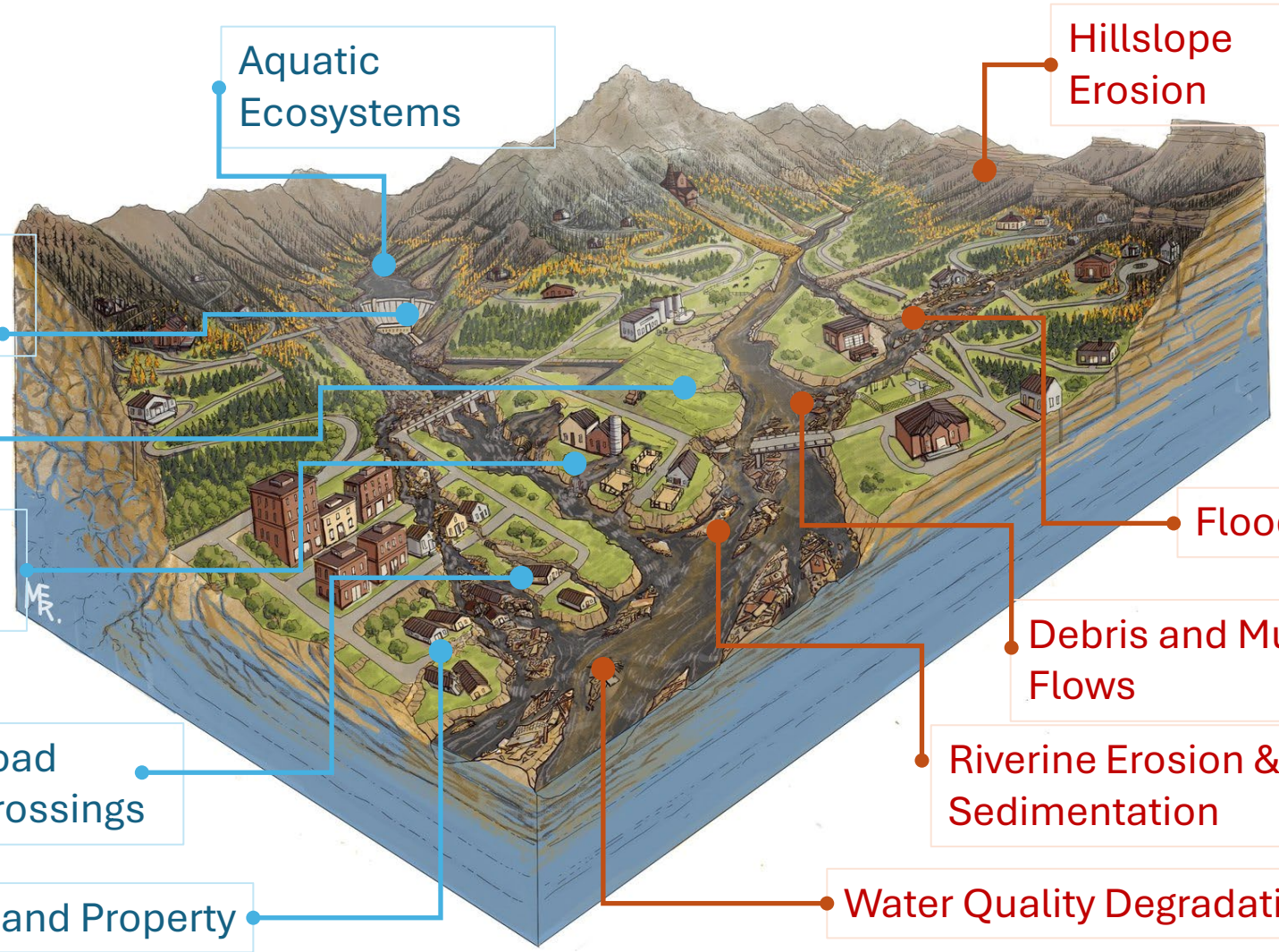
Mission: Assess the susceptibility of Colorado's water resources, communities, and critical infrastructure to post-wildfire impacts and advance a framework for communities to plan and implement mitigation strategies to minimize these impacts – *before wildfires occur*.

WILDFIRE READY ACTION PLAN (WRAP)

The Colorado Water Conservation Board created the Wildfire Ready Watersheds Program to implement Senate Bill 21-240.

Impacts to water supplies, infrastructure, and human life can linger for many years after the firefighting crews head home.

The Wildfire Ready Watersheds Program provides guidance to help predict where and what post-fire impacts will be felt in local communities.



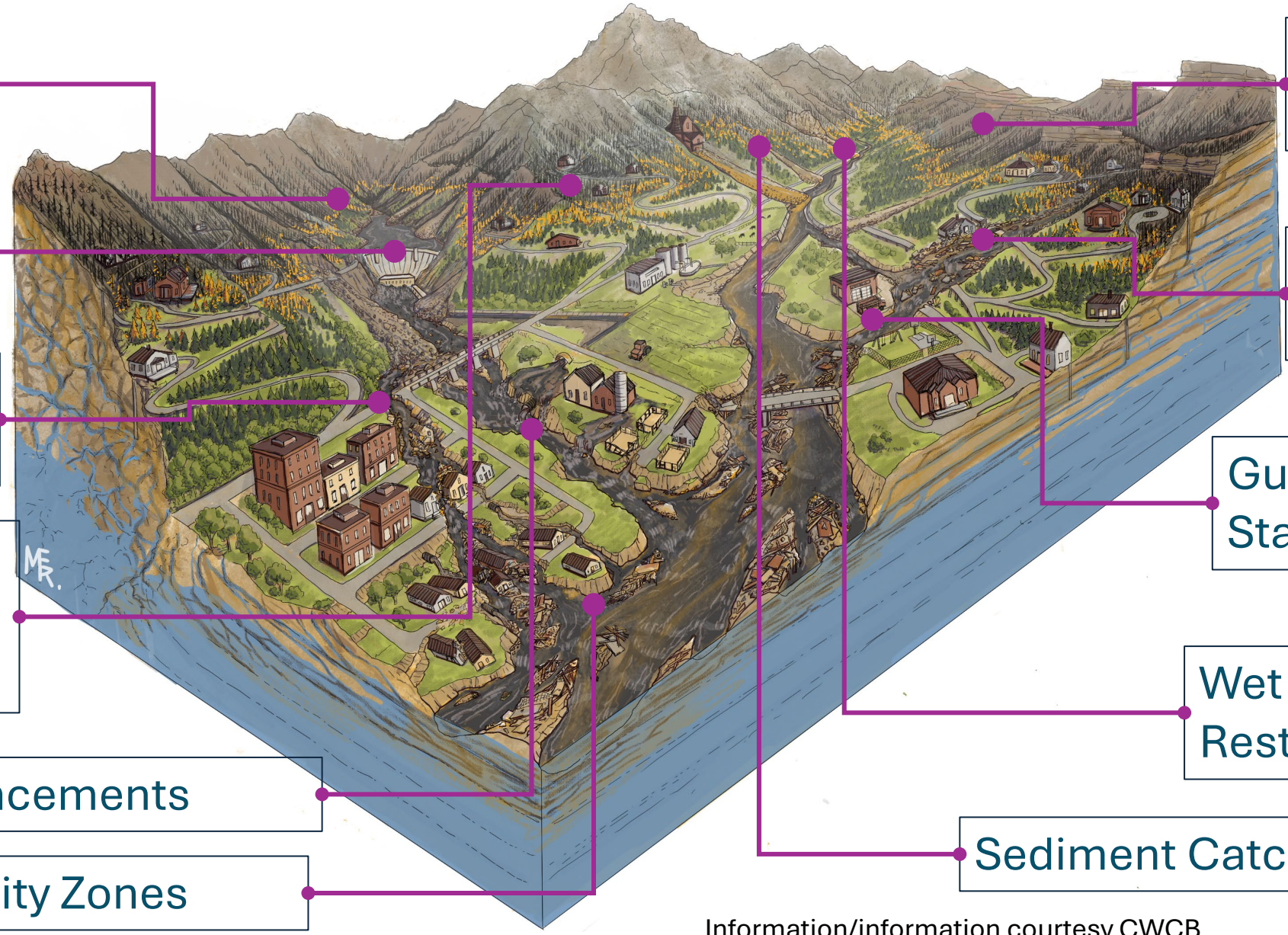
Images/information courtesy Colorado Water Conservation Board (CWCB)

COMMUNITY WILDFIRE PROTECTION PLAN (CWPP)

How do a CWPP and a WRAP work together?

CWPP	WRAP
Focuses on wildfire (prevention and mitigation)	Focuses on post-fire (mitigation)
VARs susceptible to wildfire	VARs susceptible to post-fire hazards
Wildland Urban Interface (WUI)	County-wide focus
Fire mitigation project identification	Post-fire hazard mitigation project identification
Emphasizes communication and collaborations	Emphasizes communication and collaboration
Fire-related warning systems	Storm event related warning systems

WRAP PRE- AND POST-WILDFIRE MITIGATION ACTIVITIES



- Prescribed Fire
- Warning Systems
- Infrastructure Upgrades
- Mulching, Seeding, Hillslope Control
- Ecological Enhancements
- Fluvial Opportunity Zones
- Forest Thinning
- Flood Protection
- Gully Stabilization
- Wet Meadow Restoration
- Sediment Catchment

Information/information courtesy CWCB

WRAP StoryMap

Middle Colorado Watershed Council | Wildfire Ready Action Plan (WRAP)

Wildfire Ready Action Plan (WRAP)

Colorado River Wildfire Collaborative

Draft

SGM

WRAP Story Map

Middle Colorado Watershed Council

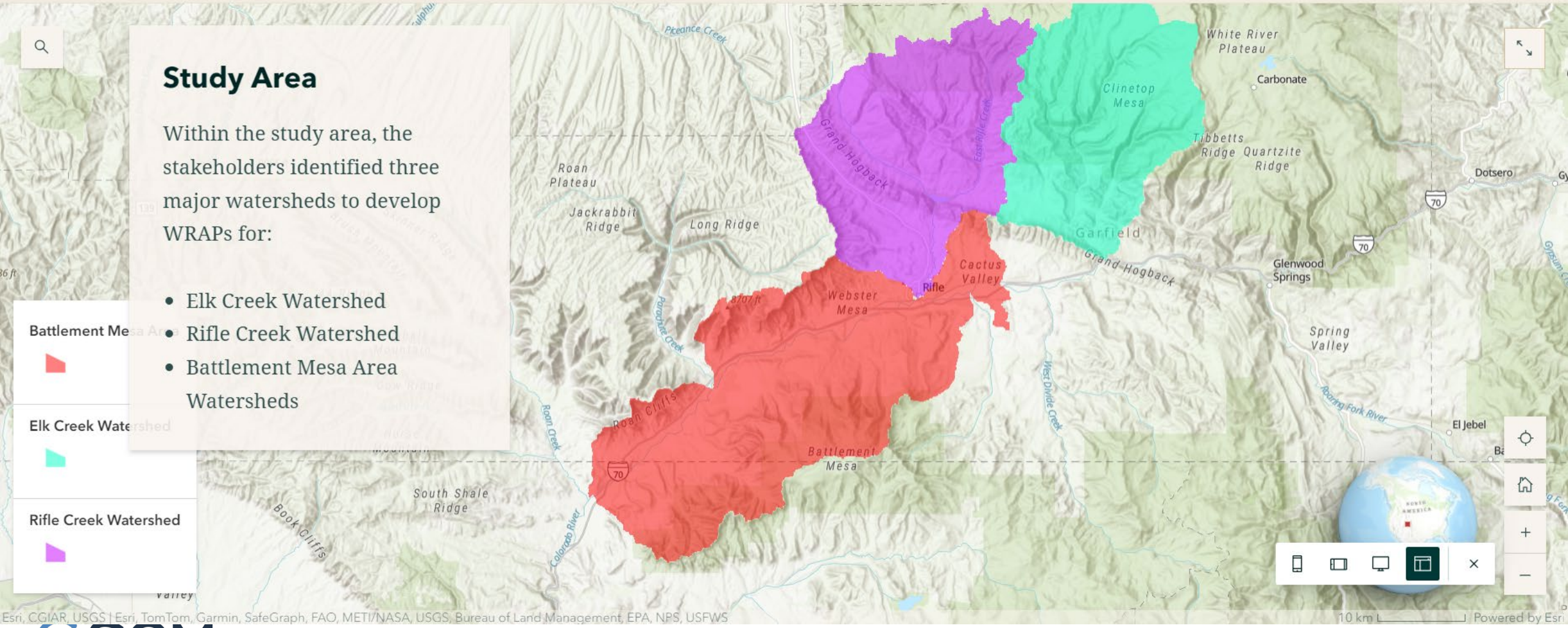
Wildfire Ready Action Plan (WRAP)

Introduction | Elk Creek | Rifle Creek | Battlement Mesa Area

Study Area

Within the study area, the stakeholders identified three major watersheds to develop WRAPs for:

- Elk Creek Watershed
- Rifle Creek Watershed
- Battlement Mesa Area Watersheds



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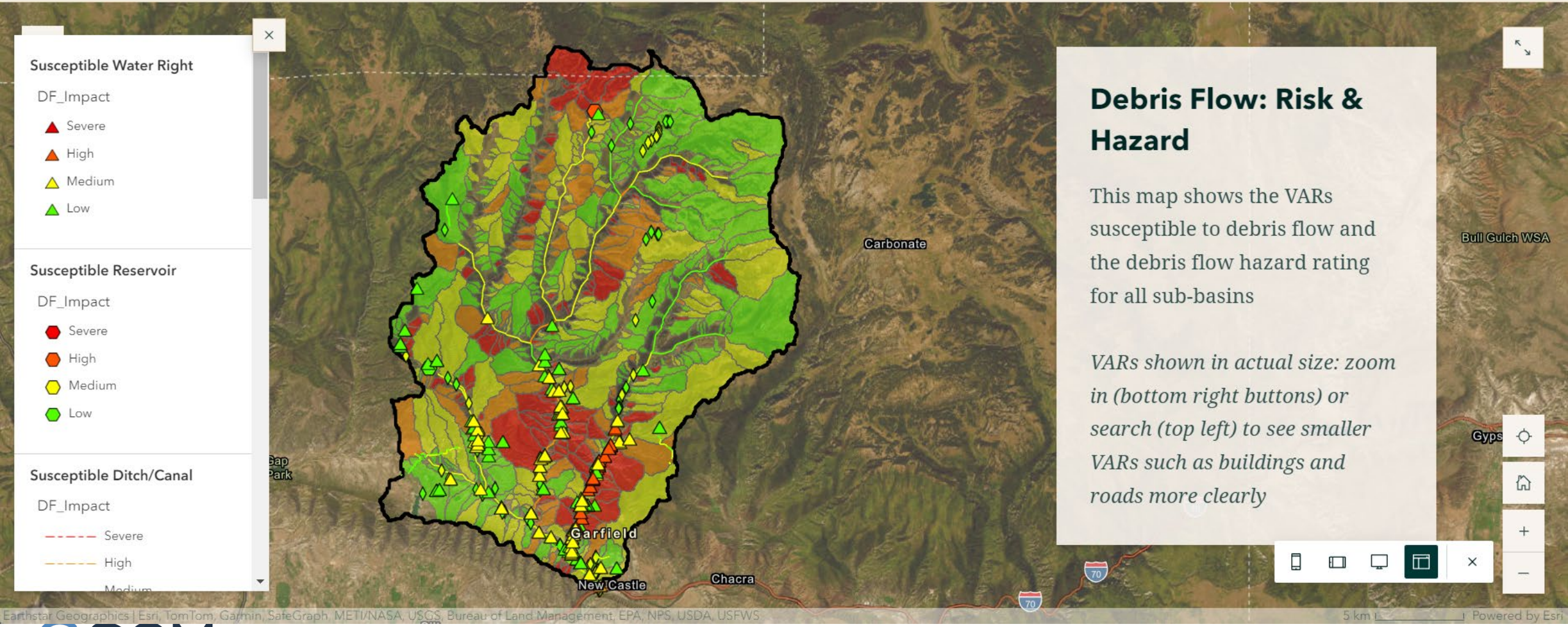
WRAP StoryMap

Middle Colorado Watershed Council

Wildfire Ready Action Plan (WRAP)

Introduction | Elk Creek | Rifle Creek | Battlement Mesa Area



Debris Flow: Risk & Hazard

This map shows the VARs susceptible to debris flow and the debris flow hazard rating for all sub-basins

VARs shown in actual size: zoom in (bottom right buttons) or search (top left) to see smaller VARs such as buildings and roads more clearly

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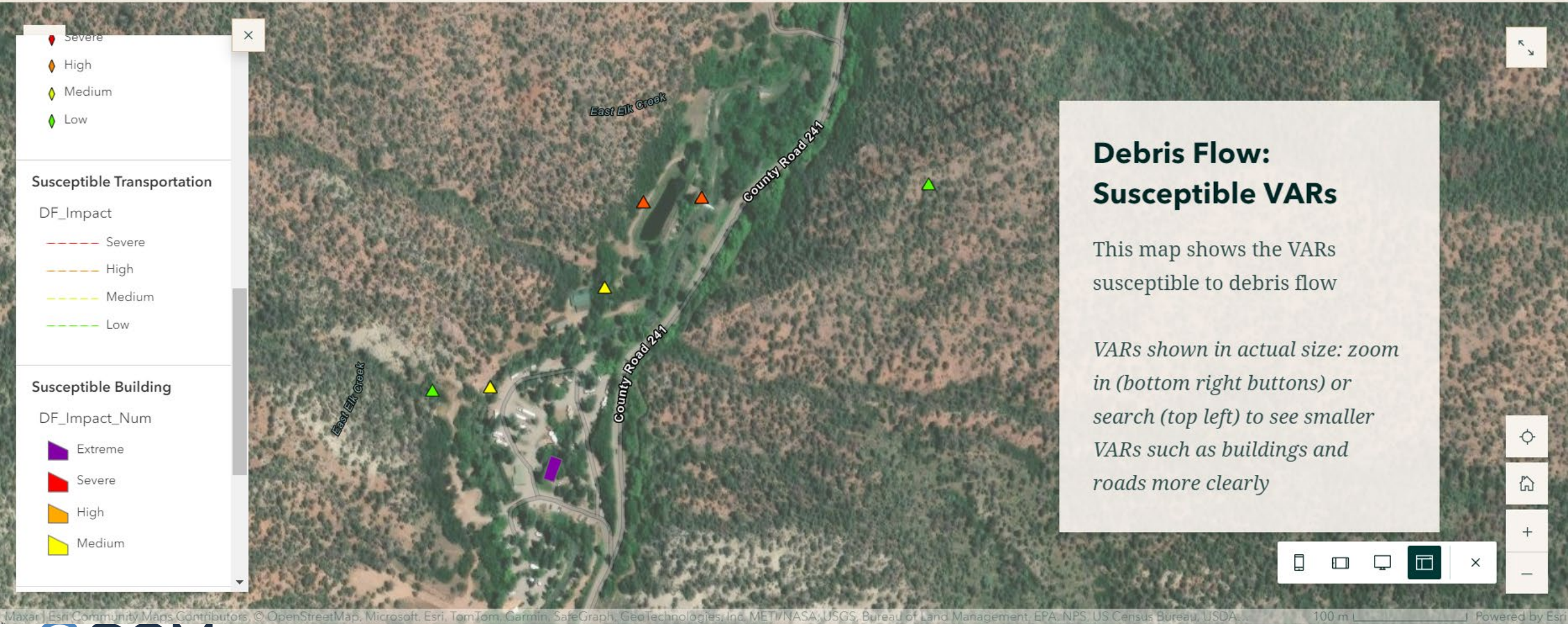
WRAP StoryMap

Middle Colorado Watershed Council

Wildfire Ready Action Plan (WRAP)

Introduction | Elk Creek | Rifle Creek | Battlement Mesa Area



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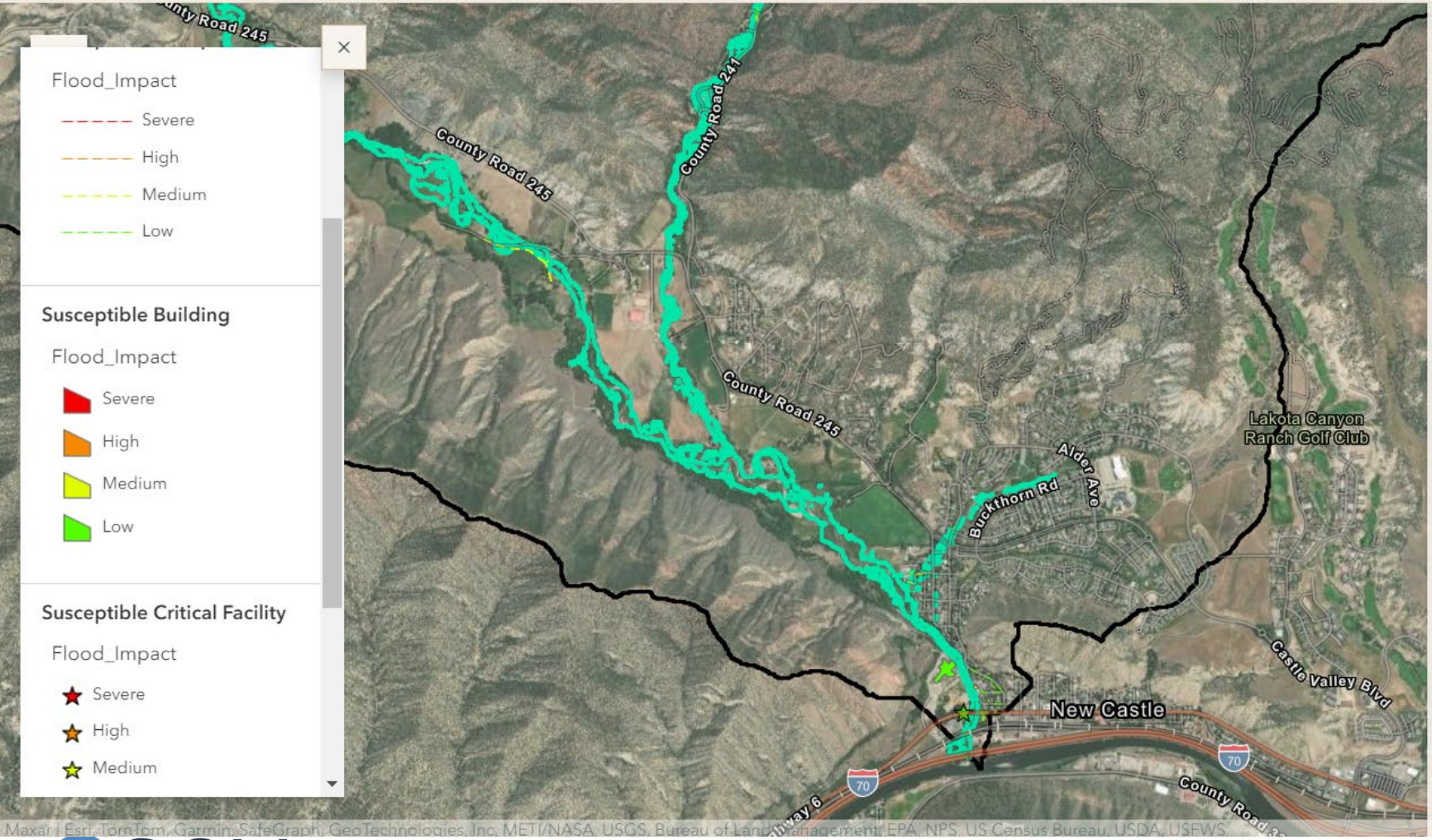
WRAP StoryMap

Middle Colorado Watershed Council

Wildfire Ready Action Plan (WRAP)

Introduction | Elk Creek | Rifle Creek | Battlement Mesa Area



The following maps show the increase in flood inundation post-fire for various storm events:

- 5-yr Storm Hazard Increase
- 10-yr Storm Hazard Increase
- 25-yr Storm Hazard Increase

VARs shown in actual size: zoom in (bottom right buttons) or search (top left) to s… VARs such as buildings and

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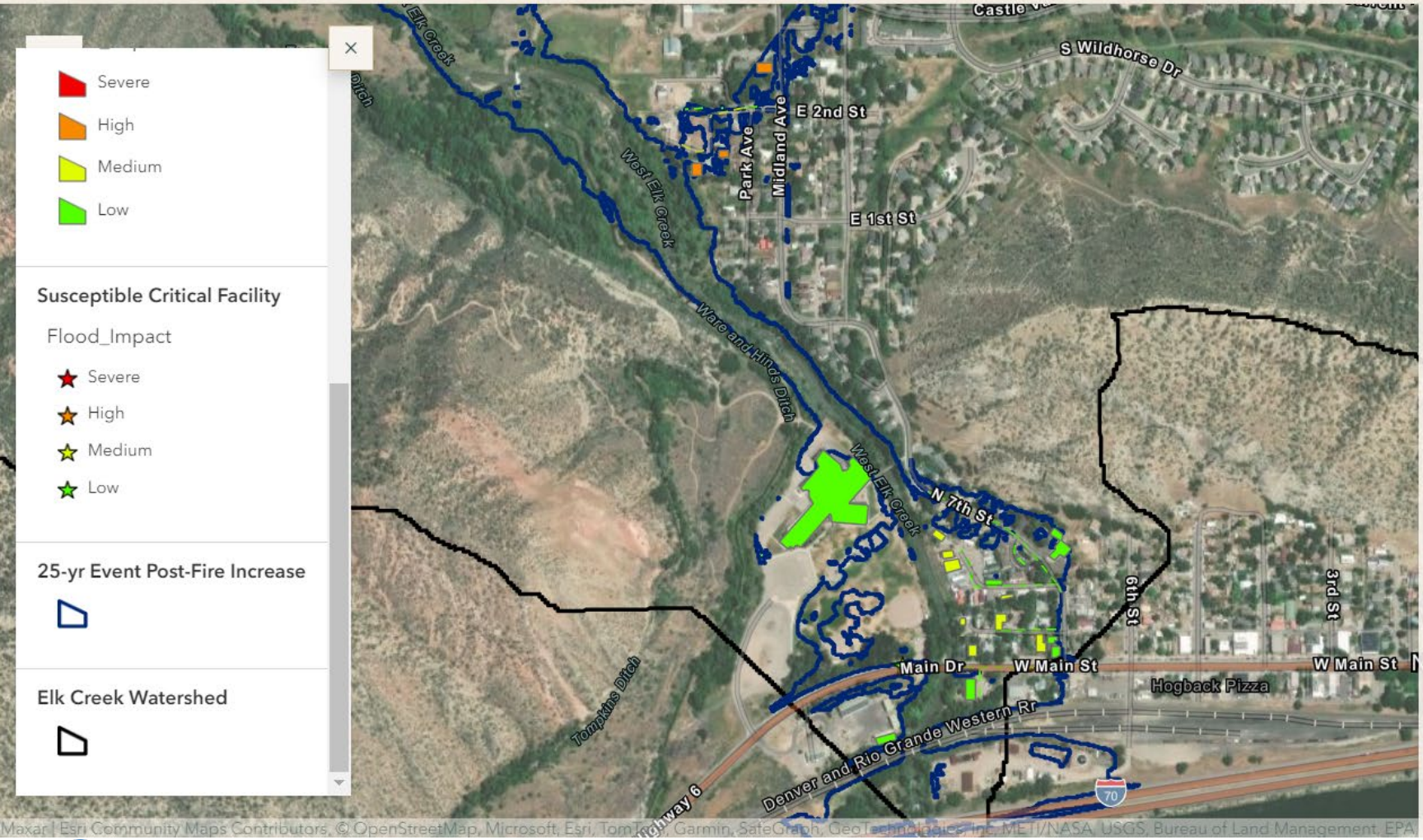
WRAP StoryMap

Middle Colorado Watershed Council

Wildfire Ready Action Plan (WRAP)



storm post-fire

The following maps show the increase in flood inundation post-fire for various storm events:

5-yr Storm Hazard Increase

10-yr Storm Hazard Increase

25-yr Storm Hazard Increase

VARs shown in actual size; zoom in (bottom right but search (top left) to see smaller

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IDENTIFYING A PROJECT

As mentioned previously, the first line of defense against loss of life will always be flood risk communication and employment of a local alert system to provide advanced notice of post-fire hazards to property owners and residents. Preemptively addressing stream stability and erosion risks associated with flood and debris flow hazards could also help to mitigate risk and prevent loss of life and property. This could mean employing pre-fire streambank stabilization strategies, such as bank armoring, at eligible locations where hydraulic impact in high flow is likely to exacerbate erosion of streambanks. In a post-fire mitigation scenario, temporary diversion barriers (e.g., Hesco barriers or sandbags, k-rails) could serve a similar purpose of protecting at-risk properties and neighborhoods from significant flooding and erosion.

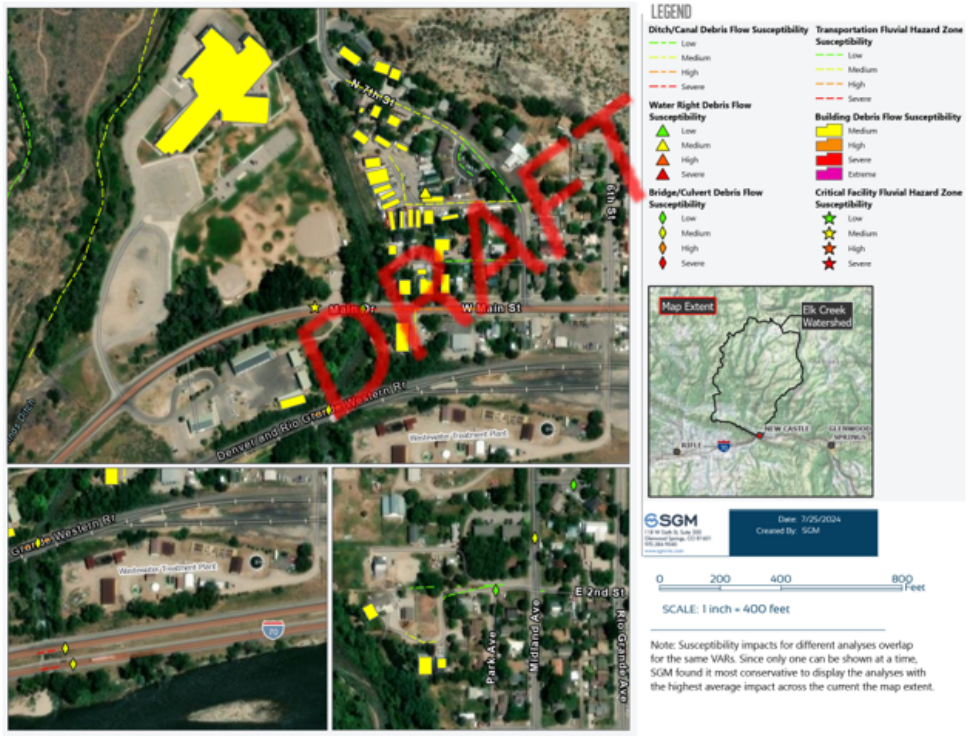

Figure 9-7. Overview of VARs in Town of New Castle Municipal Boundary. Note that impact score map symbology is intended only as a visual aid to identify some of the VARs highlighted in the study. Refer to source material for an accurate account of VAR impact scoring.

The post-fire risks posed to water infrastructure include increases in sediment yield and moderate

Project identification by area

- General project identification
- Projects specific to VAR type
- Pre- vs. Post- Fire projects

SGM

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