

# Organizational Analysis of State Supported Wildfire Mitigation Efforts in Colorado

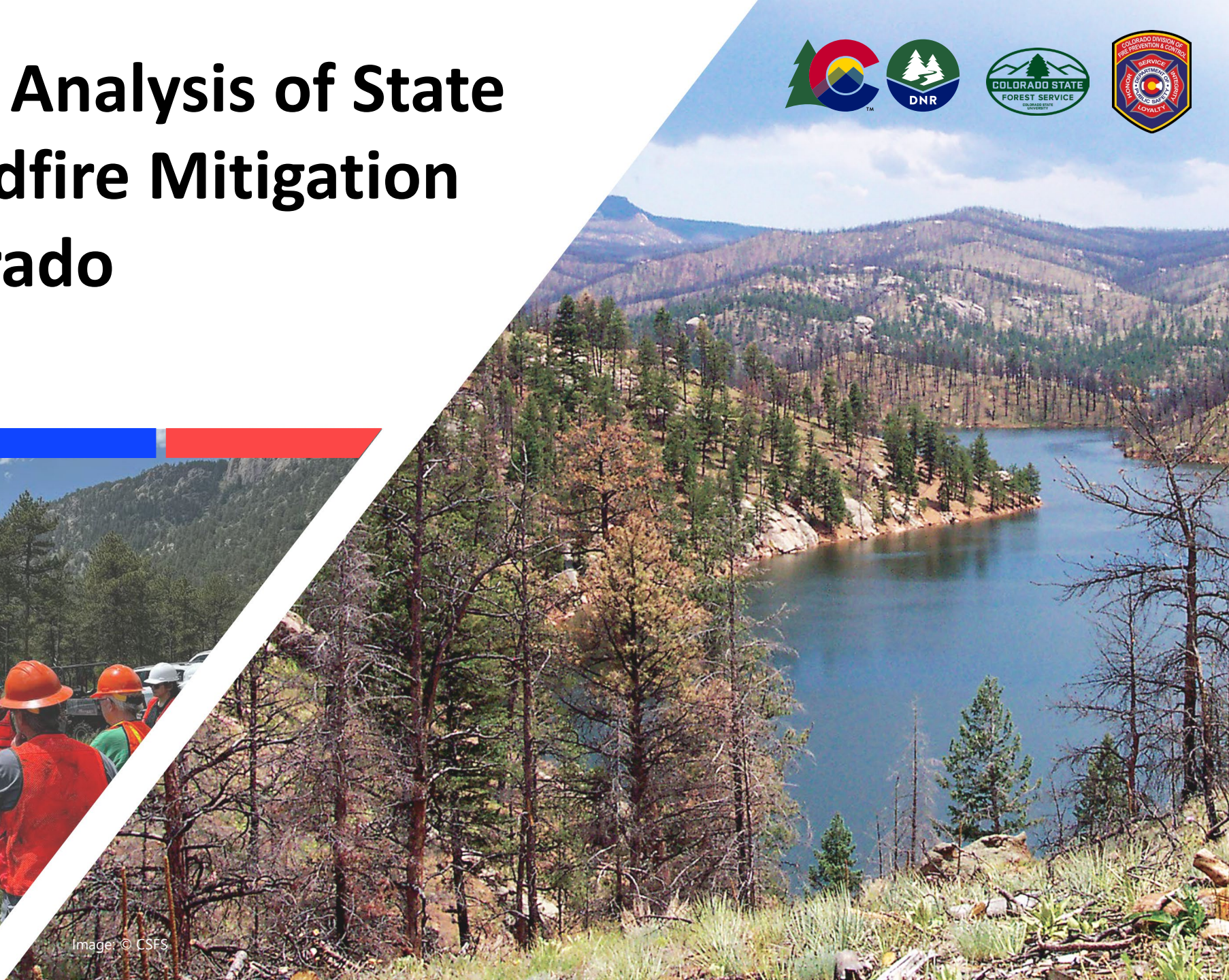
SB21-258



December 2023

Image: © DNR

Image: © CSFS





# Letter from the Directors

---

Dear All,

In recent years, Colorado has experienced increasing numbers of large, high severity wildfires and alarming levels of forest mortality from insects and disease. This has led to increased attention and interest in the State of Colorado's wildfire risk mitigation efforts from members of the public, nonprofit organizations, and federal, state and local elected officials.

Colorado state government has rapidly escalated wildfire mitigation efforts. The rapid nature of these responses may have resulted in redundant efforts or gaps and the state's response to wildfire mitigation may benefit from evaluation. For the past several months, the Department of Natural Resources, Colorado State Forest Service and Division of Fire Prevention and Control have partnered with Arup on an organizational analysis of wildfire mitigation efforts as part of Colorado Senate Bill 21-258. This analysis employed an evidence-based and collaborative approach to understand wildfire mitigation efforts in Colorado today for the purpose of identifying future opportunities for greater efficiency and effectiveness.

We thank agency staff and external stakeholders who participated in interviews and surveys to inform this final report. Your open and honest participation in this process is incredibly important to us. The findings presented here provide a high-level summary of key challenges internal teams and external partners face when working with DNR, the CSFS, and DFPC in wildfire mitigation efforts. They also document valuable opportunities that form the foundation for short, medium, and long-term recommendations.

Agency leadership is committed to developing a more collective strategy on wildfire mitigation in Colorado moving forward, as recommended by this analysis. We look forward to continuing our partnerships and pursuing even better wildfire mitigation outcomes for Colorado's people and forests.

Kind regards,



Dan Gibbs,  
Executive Director,  
Department of Natural  
Resources



Matthew McCombs,  
State Forester & Director,  
Colorado State Forest  
Service



Michael Morgan,  
Director, Division of Fire  
Prevention & Control

# Contents

---

01

## **Introduction**

Purpose  
Context  
Agencies  
Next Steps

02

## **Approach**

Overview  
Framework  
Process

03

## **Findings**

Overview  
Strategy  
Skills & Capabilities  
Resources  
Ways of Working  
Performance Monitoring

04

## **Recommendations**

Overview  
Recommendations

# Report at a Glance



## Introduction

Over the past two decades, Colorado has experienced an increasing number of large, high-severity wildfires. In response, wildfire mitigation efforts have grown rapidly across the state.

The urgency and complexity of this work often requires multiple agencies, partners, and individuals to come together to solve this challenge in unprecedented ways. In 2021, the Colorado legislature directed the Department of Natural Resources (DNR), Colorado State Forest Services (CSFS), and the Division of Fire Prevention and Control (DFPC) through SB21-258, "to conduct an assessment of wildfire mitigation efforts undertaken or supported by the state to determine the most efficient and effective organizational structure for those efforts."

### Wildfire Mitigation Definition

Wildfire mitigation efforts are defined for this assessment as follows: On-the-ground activities intended to reduce the potential for unwanted impacts caused by wildfires, including: traditional vegetation management activities such as prescribed fires, hazardous fuels treatments, and mechanical fuels treatments; forest management activities; and post-fire watershed recovery.



## DNR *Department of Natural Resources*

**Mission:** DNR works to develop, preserve and enhance the state's natural resources for the benefit and enjoyment of current and future citizens and visitors.



## CSFS *Colorado State Forest Service*

**Mission:** CSFS works to achieve stewardship of Colorado's diverse forest environments for the benefit of present and future generations.



## DFPC *Division of Fire Prevention and Control*

**Mission:** DFPC works to serve and safeguard the people and protect the property, resources, environment, and quality of life in Colorado.



# Report at a Glance



## Approach

**This assessment employs an evidence-based and collaborative approach to understand wildfire mitigation efforts today for the purposes of identifying future opportunities for greater efficiency and effectiveness.**

The review was conducted in 3 distinct phases over a period of nine months in partnership with DNR, CSFS, and DFPC. Arup received input from 79 diverse stakeholders to gain a comprehensive perspective of the structure, programs, and performance of mitigation efforts today. Participants were selected and confirmed by all three participating agencies to offer insights across expertise and function.

Quantitative and qualitative data was collected through a series of activities: tabletop review of relevant documentation, individual and group interviews, and surveys. This data was mapped across an organizational review framework to identify key findings and inform future recommendations.

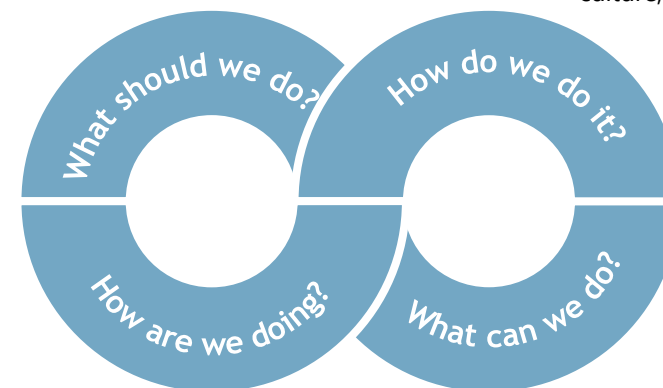
## Organizational Review Framework

### Strategy

Exploring vision, purpose, values, and goals

### Ways of Working

Examining organizational structure, processes, culture, and engagement



### Performance Monitoring

Reviewing how performance is tracked and how this data shapes future efforts and continuous improvement

### Skills & Capabilities & Resources

Understanding organizations' abilities from a workforce, funding, and technology perspective

# Report at a Glance



## Findings

**The findings present a high-level summary of key challenges internal teams and external partners face when working with DNR, CSFS, and DFPC in wildfire mitigation efforts. They also document critical opportunities that form the foundation for recommendations.**

Findings are based on an in-depth tabletop review of relevant documentation and an extensive period of stakeholder engagement. Insights from these activities were mapped across five organizational dimensions: strategy, skills & capabilities, resources, ways of working, and performance monitoring. The outcome is a comprehensive current state assessment that identifies specific pinch points that may be addressed to improve overall outcomes.



### Strategy

Multiple strategies developed by each agency are driving wildfire mitigation efforts today. In the future, there are several perceived benefits of defining a collective statewide approach.



### Skills & Capabilities

Internal teams and external partners have confidence in the collective skills and capabilities of DNR, CSFS, and DFPC.



### Resources

Capacity is the most frequently cited challenge in wildfire mitigation efforts, highlighting a focus on future needs in funding and workforce.



### Ways of Working

Perspectives vary about how agencies should work together, ranging from better coordination to more meaningful collaboration, and many saw opportunity to take a more integrated approach to strategic decisions.



### Performance Monitoring

Defining and evaluating the effectiveness of mitigation efforts is both complex and challenging, but it is an important capability to continue to build.



# Report at a Glance

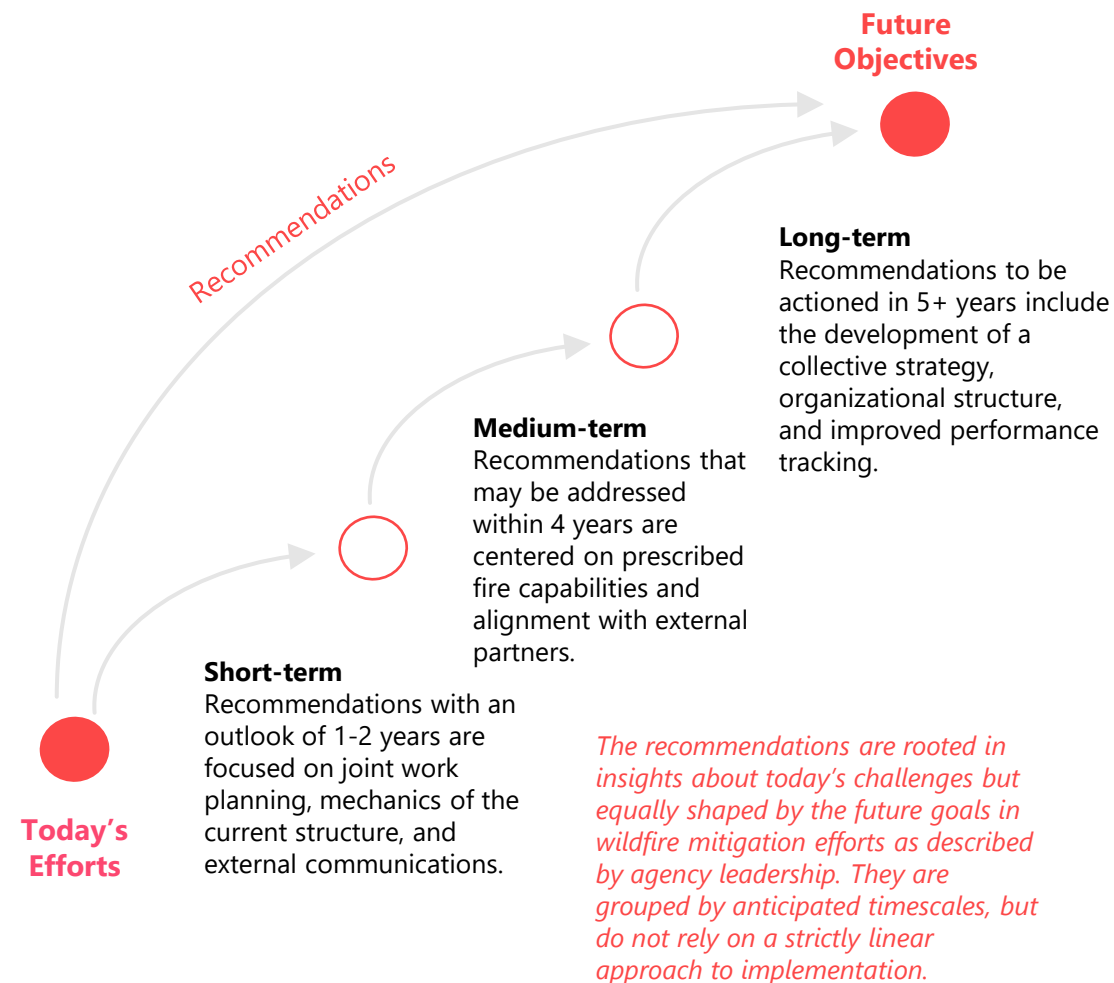


## Recommendations

**Recommendations were developed based on key findings from the current state assessment. They identify specific opportunities for consideration by the state as it works to mitigate the threat of wildfires.**

Through a series of workshops, leaders from DNR, CSFS, and DFPC reviewed the information from earlier phases and co-developed this set of recommendations with Arup. These recommendations were selected specifically because of their potential to offer meaningful impact on the effectiveness of statewide mitigation efforts.

The recommendations are designed to be both ambitious and actionable. However, they do not represent definitive solutions. Wildfire mitigation is an incredibly complex and urgent challenge that demands collective action across state agencies, partners in federal, tribal and local government, nonprofits, and industry, as well as private individuals across the state. Thus, these recommendations and their associated timescales are a starting point for state leadership to continue to evaluate and decide what opportunities will bring the greatest benefit to Colorado.



# Acknowledgements

---

## Authors:

Elsie Dedecker, Arup  
Jane Goslett, Arup  
Mackenzie Hill, Arup  
Dylan Tanasijevich, Arup  
Paul Lee, Arup

## Subject Matter Experts:

David Shew, Wildfire DefenseWorks  
Tom Welle, Wildfire Preparedness Services

## Project Leadership:

Dan Gibbs, DNR – Executive Director  
Matt McCombs, CSFS – State Forester/Director  
Mike Morgan, DFPC – Director  
Tim Mauck, DNR - Deputy Director  
Kristin Garrison, CSFS – Associate Director  
Vaughn Jones, DFPC – Section Chief  
Angela Boag, DNR – Assistant Director

**This Assessment benefited immensely from the perspectives and feedback of the following individuals and organizations. Thank you to all stakeholders who participated.**

DNR staff	Fire Adapted Colorado
CSFS staff	Grand Fire Department
DFPC staff	Grand Junction Fire Department
Boulder Mountain Fire	Grand Valley Rural Power Lines, Inc.
Boulder Watershed Collective	Gunnison County Electric Association
Bureau of Land Management	Gunnison County Emergency Management
Castle Rock Fire and Rescue Department	Jefferson County
City of Lone Tree	Jefferson County Open Space
Coalitions & Collaboratives, Inc.	Larimer County
Colorado Association of Conservation Districts	Moffat County Sheriffs
Colorado Department of Corrections	Mountain Parks Electric, Inc.
Colorado Division of Homeland Security and Emergency Management	National Wild Turkey Foundation
Colorado Forest Restoration Institute	Poudre Valley REA
Colorado Professional Fire Fighters	Rocky Ford Fire Department
Colorado Springs Utilities	Rocky Mountain Research Station
Conejos County OEM	South Fork Fire Rescue
Denver Water	The Nature Conservancy
Douglas County Government	US Forest Service
Elizabeth Fire Protection District	Vail Fire and Emergency Services
Elk Creek Fire Protection District	West Metro Fire Rescue
Estes Valley Watershed Coalition	Wildfire Adapted Partnership
	White River Electric Association



A background image showing several small green seedlings with thin, needle-like leaves growing in black plastic pots. The image is overlaid with a semi-transparent green filter.

# 01

## Introduction

---



## Purpose

**Over the past two decades, Colorado has experienced an increasing number of large, high-severity wildfires. In response, wildfire mitigation efforts have grown rapidly across the state.**

The urgency and complexity of this work often requires multiple agencies, partners, and individuals to come together to solve this challenge in unprecedented ways. In 2021, the Colorado legislature directed the Department of Natural Resources (DNR), Colorado State Forest Services (CSFS), and the Division of Fire Prevention and Control (DFPC) through SB21-258, “to conduct an assessment of wildfire mitigation efforts undertaken or supported by the state to determine the most efficient and effective organizational structure for those efforts.”

This assessment aims to better understand the current state of wildfire mitigation efforts across three Colorado state agencies: DNR, CSFS, and DFPC. Engaging a range of stakeholders working across the state, the assessment delivers a comprehensive review of efforts today and identifies opportunities for greater effectiveness and efficiency in the future.



USDA



## Wildfire Mitigation

**Wildfire mitigation is defined as the actions taken to prevent or reduce the cause, impact, and consequences of a wildfire event. Throughout the assessment, mitigation was contextualized within the disaster cycle to highlight the interconnected nature of these activities.**

The three participating agencies further defined the scope of mitigation efforts to be reviewed as part of this assessment as follows:

On-the-ground activities intended to reduce the potential for unwanted impacts caused by wildfires, including:

- Traditional vegetation management activities such as prescribed fires, hazardous fuels treatments, and mechanical fuels treatments;
- Forest management activities; and
- Post-fire watershed recovery.\*

*\*It is important to note that this assessment excludes review of mitigation efforts in the built environment as this topic is being addressed by the Wildfire Resiliency Code Board. Several stakeholders expressed concern that this will result in an incomplete analysis of statewide wildfire mitigation efforts.*



Image: FEMA Disaster Cycle



## Agencies

**DNR, CSFS, and DFPC all play a critical role in mitigating impacts from Colorado's wildfires. This assessment examines the structure, programs, and performance of wildfire mitigation efforts across the three agencies.**

DNR, CSFS, and DFPC work with many partners across the state to deliver wildfire mitigation efforts. It was important to all three agencies that their partners at non-profits, industry, as well as in federal, state, and local government be engaged in this assessment to provide insight into statewide mitigation efforts.

All participating internal agency staff and external partners supported and informed the assessment in a multitude of ways including submitting documentation, participating in interviews and survey, and collaborating with agency leadership.



**DNR** *Department of Natural Resources*

**Mission:** DNR works to develop, preserve and enhance the state's natural resources for the benefit and enjoyment of current and future citizens and visitors.

DNR provides policy direction relating to the management of Colorado's natural resources. DNR and Colorado State University cooperate in the state's efforts to improve the management and health of Colorado's forests, and CSFS provides staff to the DNR's Division of Forestry. DNR may propose legislative decision items that serve the mutually agreed-upon agendas of DNR and CSFS.

**Divisions:** Division of Reclamation, Mining & Safety, Colorado Energy & Carbon Management Commission, Colorado Parks and Wildlife, Colorado State Land Board, Colorado Water Conservation Board, Colorado Division of Water Resources, and the Division of Forestry\*.

*\*The Division of Forestry is staffed by CSFS and overseen by a joint administrative relationship with the Board of Governors of Colorado State University through the Warner College of Natural Resources at Colorado State University and the Colorado Department of Natural Resources.*





## Agencies



**CSFS** *Colorado State Forest Service*

**Mission:** CSFS works to achieve stewardship of Colorado's diverse forest environments for the benefit of present and future generations.

CSFS provides technical forestry assistance, wildfire mitigation expertise and outreach and education to help landowners, communities, and partners achieve their forest management goals. The CSFS is a service and outreach agency of the Warner College of Natural Resources at CSU. Headquartered in Fort Collins, the agency provides staffing for the Division of Forestry within DNR.

CSFS fulfills its statutory obligations by statewide service in fire prevention, fire ecology, natural resource management, risk assessment, planning, and fuels mitigation. Examples include providing professional forestry services in stewardship and mitigation planning to landowners and communities; increasing awareness of fire's role in ecosystem health and resilience; informing decision makers of wildfire threat and risk; and administering and implementing science-based best management practices to protect forested landscapes and watersheds from the damaging effects of unwanted wildfire.

CSFS houses substantial forestry and wildfire mitigation expertise and experience and cooperates with all Colorado agencies that need and request the aid and assistance of a trained forester.



**DFPC** *Division of Fire Prevention and Control*

**Mission:** DFPC works to serve and safeguard the people and protect the property, resources, environment, and quality of life in Colorado.

DFPC is responsible for the administration, delivery and management of fire services and programs for the state, including: fire prevention and code enforcement; wildfire preparedness, response, suppression, coordination, and management; firefighter training and certification; public information and education; and technical assistance to local governments.

DFPC's powers and responsibilities include maintaining firefighter certification programs, establishing fire codes and standards, establishing guidelines for the use of prescribed fire, and providing fire-related policy advice to the Governor and the General Assembly.

## Next Steps

Throughout the assessment, all three agencies worked collaboratively with a shared commitment to conducting a robust review with actionable outcomes. This report presents potential opportunities for consideration by state leadership.

This assessment analyzes the current state of wildfire mitigation as a means of developing insights into how efforts might progress to meet future objectives. This analysis is presented in two parts: findings and recommendations.

The **Findings** section of this report is a high-level summary of wildfire mitigation efforts today. These findings are based on review of quantitative and qualitative data collected from an extensive stakeholder engagement process and tabletop review of agency documentation. This data is mapped into an organizational review framework to create a robust baseline understanding of statewide efforts in wildfire mitigation. The findings are the foundation for the recommendations.

The **Recommendations** section identifies a range of *potential* actions to make wildfire mitigation efforts more efficient and effective. These recommendations were co-developed with agency leadership following completion of the current state review. These recommendations are not binding and represent options for state leadership to consider how best to move forward.





# 02 Approach

---



## Overview

**This assessment employs an evidence-based and collaborative approach to understand wildfire mitigation efforts today for the purposes of identifying future opportunities for greater efficiency and effectiveness.**

The review was conducted in 3 distinct phases over a period of nine months in partnership with DNR, CSFS, and DFPC. Arup received input from 79 diverse stakeholders to gain a comprehensive perspective of the structure, programs, and performance of mitigation efforts today. Participants were selected and confirmed by all three participating agencies to offer insights across expertise and function.

Quantitative and qualitative data was collected through a series of activities: tabletop review of relevant documentation, individual and group interviews, and surveys. This data was mapped across an organizational review framework to identify key findings and inform future recommendations.

Agency leadership participated in regular meetings and a series of workshops to provide input and guidance throughout the process. In the final phase, leadership participated in workshops and meetings to co-develop recommendations within this report.



© DNR



# Framework

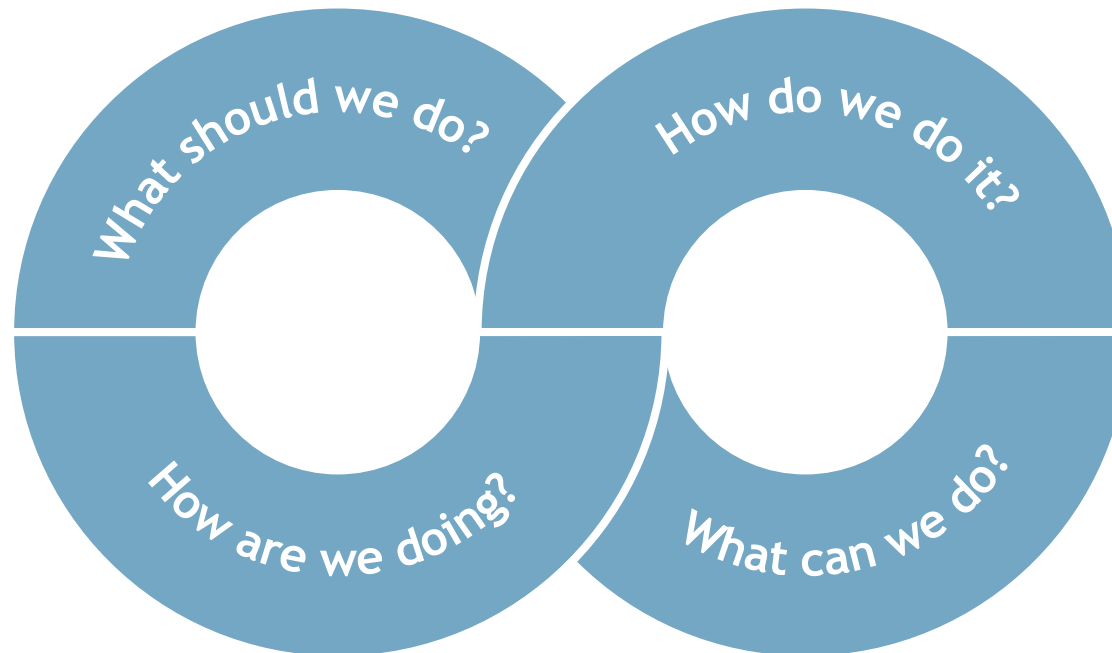
The approach is designed to develop a robust understanding of the current state in relation to the agencies' future objectives. It is a comprehensive review of today's efforts across different organizational dimensions to identify opportunities for greater efficiency and effectiveness.

## Strategy

Exploring vision, purpose, values, and goals

## Performance Monitoring

Reviewing how performance is tracked and how this data shapes future efforts and continuous improvement



## Ways of Working

Examining organizational structure, processes, culture, and engagement

## Skills & Capabilities & Resources

Understanding organizations' abilities from a workforce, funding, and technology perspective

# Framework

Organizational dimensions reviewed within the framework include strategy, skills & capabilities, resources, ways of working, and performance monitoring.

## What should we do?



**Strategy:** A review of how vision, purpose, and future goals are driving today's efforts. Strategy is defined as a plan of action designed to achieve a long-term or overall aim. It is a specific and coherent response to—and approach for overcoming—the obstacles to progress.

## How do we do it?



**Ways of Working:** The section covers the formal and informal ways that stakeholders work together in wildfire mitigation across the state. Topics reviewed include decision-making, roles & responsibilities, and culture.

## What can we do?



**Skills & Capabilities:** A look at what agencies and teams can achieve today and where there are opportunities for growth. Skills refers to the tactical knowledge or expertise to achieve specific outcomes. Capabilities refers to the ability to achieve a specific objective or outcome through the combination of processes, tools, skills, and behaviors.



**Resources:** An examination of the resources that enable mitigation efforts to occur successfully. This includes a review of how state funding and the budget process supports wildfire mitigation. It also looks how to support and develop the workforce to meet future challenges.

## How are we doing ?



**Performance Monitoring:** Analysis of how efficiency and effectiveness are evaluated today and how this might be improved to support strategic objectives moving forward. Performance monitoring in this report refers to the measurement of performance over time against strategic goals and KPIs.



# Process

Arup's final assessment involved a three-phase process.

## Phase 1: Document Review

Arup performed an in-depth tabletop review of documents and data shared by DNR, CSFS, and DFPC, employing a framework designed to present objective insights into the structure, programs, and performance. This work was supported by DNR, CSFS, and DFPC internal staff.

Information was mapped to key themes (identified by agency leadership) to develop preliminary insights into the current state of mitigation efforts.

**321** Documents reviewed

**3** Interviews with DNR, CSFS, and DFPC leadership

**2** Workshops with agency leadership

## Phase 2: Stakeholder Engagement

Arup partnered with the agencies to conduct a robust stakeholder engagement exercise. Agencies identified members from their staff and co-developed a list of external partners to gain a holistic and diverse perspective of wildfire mitigation efforts across the state.

Insights were plotted across key themes to complete the comprehensive current state assessment.

**79** stakeholders, both internal and external

**47** Interviews

**23** Survey responses

## Phase 3: Final Assessment

Building on findings for the current state assessment, Arup developed final insights and recommendations for the state. This was highly collaborative to ensure that the final recommendations were both ambitious and actionable based on the findings from earlier phases.

Arup also conducted high-level research into other western states on key findings to potentially inform what follows from the Recommendations.

**3** Interviews with DNR, CSFS, and DFPC leadership

**2** Workshops with agency leadership



The background of the slide is a high-angle aerial photograph of a mountainous landscape. In the foreground, a large, calm lake is nestled between forested hillsides. The middle ground shows rolling hills covered in dense evergreen forests. In the far background, a range of rugged mountains is visible, with their peaks partially covered in snow under a clear sky. The entire image has a blue color overlay.

# 03 Findings

---



## Overview

**The findings present a high-level summary of key challenges internal teams and external partners face when working with DNR, CSFS, and DFPC in wildfire mitigation efforts. They also document critical opportunities that form the foundation for recommendations.**

Findings are based on an in-depth tabletop review of relevant documentation and an extensive period of stakeholder engagement. Insights from these activities were mapped across five organizational dimensions: strategy, skills & capabilities, resources, ways of working, and performance monitoring. The outcome is a comprehensive current state assessment that identifies specific pain points that may be addressed to improve overall outcomes.



© DFPC



## Strategy

*Multiple strategies developed by each agency are driving wildfire mitigation efforts today. In the future, there are several perceived benefits of defining a statewide approach.*

### **Wildfire mitigation efforts are currently guided by strategy defined at the agency-level.**

Interviews across the three agencies described wildfire mitigation as guided by strategy set at the agency-level rather than an overarching statewide approach. Many attributed this to each agency having a distinct mission. Several individuals acknowledged current leadership are working to facilitate greater cross-agency coordination. Many believe a more formalized strategy is an opportunity to strengthen overall wildfire mitigation efforts and outcomes.

### **Prioritization was the most frequently identified reason for developing a collective strategy.**

Recognizing that each agency plays a role in wildfire mitigation efforts, it was described that effectiveness and efficiency was diminished by differing and/or conflicting priorities set by each agency. Teams highlighted the need for common goals to set statewide priorities. As the state seeks to strengthen mitigation efforts, prioritization is a key opportunity for the future.

### **External partners see value in building a more collective statewide approach.**

Partners do not see a collective strategy for mitigation efforts across the state today. They shared a similar view to internal stakeholders that greater clarity in strategic approach and objectives would help coordinate actions of the many stakeholders playing a role in mitigation. Partners noted greater alignment and transparency around prioritization would enable more effective partnerships by allowing them to understand how and where to engage state agencies.



Strategic opportunities identified by internal stakeholders

**Internal stakeholders from DNR, CSFS, and DFPC identified future strategic goals that could enable greater effectiveness.**

The strategic goals and outcomes described by internal stakeholders were classified into seven themes. These themes help to define areas where mitigation efforts could become more efficient and effective for the future.



**Monitoring Performance**

Can we reinforce collective goals through a shared approach to performance monitoring?



**Outreach**

How can we better engage with our partners and align efforts?



**Unified Approach**

Can we take a more collective and strategic approach to our work?



**Workforce**

Are there ways to grow our capacity and better support our teams?



**Landscape Scale**

How do we improve the scope and scale of projects for greater impact?



**Funding**

Are there ways to ensure funds are sufficient and available to support diverse efforts across the state?



**Prescribed Fire & Utilization**

How can prescribed fire be used safely and effectively in Colorado?  
Are there other biomass utilization alternatives to be explored?



## Skills & Capabilities

*Internal teams and external partners have confidence in the collective skills and capabilities of DNR, CSFS, and DFPC by both internal teams and external partners.*

### Each agency has distinctive primary capabilities in wildfire mitigation efforts.

- **DNR:** Relationships with state government; access to funding & ability to advocate for legislative priorities; ecological expertise; and Post-fire watershed recovery
- **CSFS:** Forest management services; fuels treatments (planning and implementation); wildfire risk reduction outreach and education; applied science; extensive network of relationships with partners, communities, homeowners; and grant program development and administration
- **DFPC:** Wildfire management and suppression experience and qualifications; wildfire intelligence and decision support; and fuels treatments (Prescribed Fire)

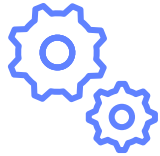
### Internal teams view the primary capabilities of each agency as complementary and strong.

The primary capabilities of each agency in wildfire mitigation were clearly articulated by internal stakeholders and confirmed by internal stakeholders of the other two agencies. They indicated a strong confidence in the collective ability of the agencies' teams in wildfire mitigation. There is opportunity to find greater alignment between each agency's primary capabilities and the role they play in overall statewide mitigation efforts.

### Knowledge of each agency's skills and capabilities vary among external partners.

External partners' familiarity of agency skills and capabilities varied based on their existing working relationships with DNR, CSFS, and DFPC. For those with direct working relationships, they identified each agency's primary capabilities and felt confident in their understanding. For partners who described more passive relationships with the agencies, they were less confident in their understanding and identified this as a limiting factor for leveraging agency capabilities in their own work.





## Resources

*Capacity is the most frequently cited challenge in wildfire mitigation efforts, highlighting a focus on future needs in funding and workforce.*

### **A collective view of the entire funding landscape (federal, state, local, private etc.) for wildfire mitigation is developing.**

Funding for wildfire mitigation efforts has substantially increased statewide since 2020. Stakeholders described challenges in understanding the full landscape of current available resources. By building a stronger collective awareness of overall funding, resources could potentially be combined or considered in new ways to unlock greater value for mitigation efforts across the state.

### **Sustainable funding is a key success factor for wildfire mitigation programs.**

Internal stakeholders spoke about the transformative impact that consistent and sustainable funding has on wildfire mitigation programs. It was identified as a critical enabler for agencies' ability to plan and improve programs year to year. Recent funding for Forest Restoration and Wildfire Risk Mitigation (FRWRM) was described by many as transformative. Other programs/projects similarly benefiting from consistent funding to drive success include the Forest Atlas and Colorado Strategic Wildfire Action Plan (COSWAP).

### **Workforce capacity, especially in implementation, is a challenge across wildfire mitigation efforts.**

As recent funding has increased, there is greater emphasis on existing challenges in workforce capacity. The teams with the skills and availability to carry out much of this work have not necessarily increased relative to efforts required. Key concerns include:

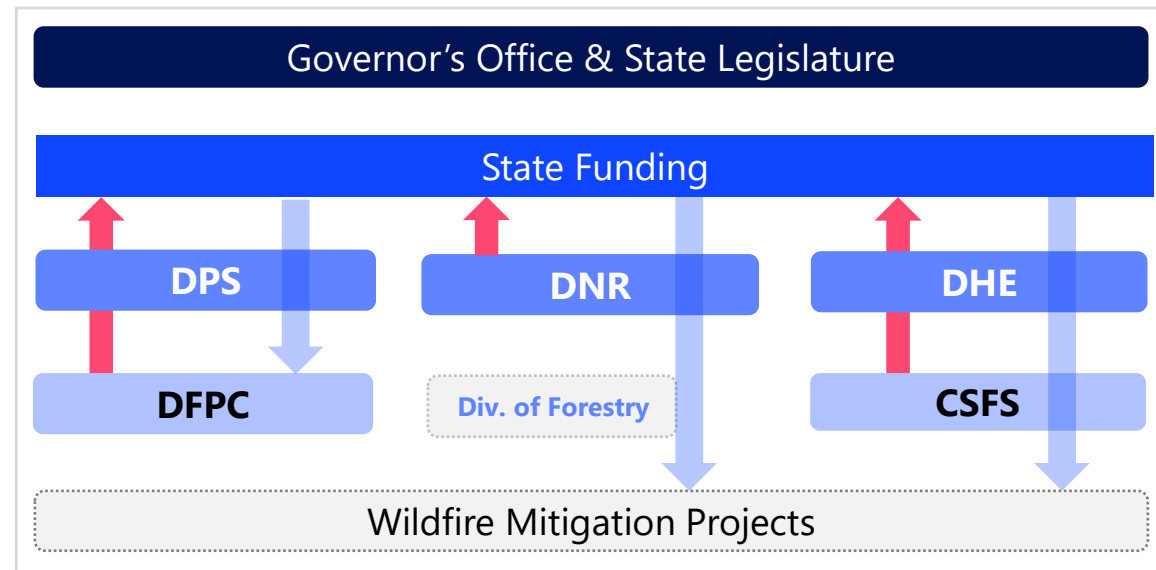
- DFPC teams spoke about limited capacity for prescribed fire and other mitigation efforts.
- CSFS described challenges hiring foresters and natural resource managers in some regions.
- Limited pool of available contractors to complete implementation projects.

## Challenges aligning the budget process with mitigation priorities exist within the current structure.



The state budget process, particularly the mechanisms by which mitigation efforts can be prioritized, present opportunities for greater efficiency and effectiveness. All three agencies have unique challenges:

- Wildfire mitigation efforts are well aligned with DNR's mission, but the current structure limits their ability to advocate for these efforts. An interagency MOU allows DNR's Division of Forestry to advocate for CSFS' mutual priorities, but it is unknown what the opportunities and limitations are as it relates to the DNR budget process and performance planning.
- How CSFS priorities can be advocated for through the Department of Higher Education (DHE) has not been explored and remains unknown.
- DFPC budget was described as fully aligned with priorities in suppression. As mitigation efforts increase, there is a need for prioritization of resources to support their role in prescribed fire.

### State Budget & Funding for Mitigation Efforts\*



\*This is a conceptual diagram depicting the mechanisms by which Agencies can engage with the state budget and legislative process today. It also depicts how state funds are directed to support projects. It reflects funding related to only wildfire mitigation within the scope of this assessment.

-  Path for inclusion of wildfire mitigation in budgetary or legislative priorities
-  Path for state funding of wildfire mitigation projects

DPS: Department of Public Safety, DHE: Department of Higher Education



## Ways of Working

*Perspectives vary about how agencies should work together, ranging from better coordination to more meaningful collaboration, and many saw opportunity to improve key decisions.*

### **A historically siloed approach to mitigation is attributed to a range of factors but is slowly evolving.**

DNR, CSFS, and DFPC leaders are building closer working relationships across efforts, but much of this work still occurs in agency siloes. Reasons for siloes are attributed to:

- separate agencies with distinct missions, strategies, and priorities
- unique skills and capabilities enabling different functions
- cultural tendency to do things as they've been done
- lack of capacity (time or resources) to collaborate more closely

### **Collaboration during key decisions in strategy and planning could improve mitigation outcomes.**

Individuals from across the three agencies described opportunities for more informed and collaborative decision-making—emphasizing the need for a greater awareness of the interconnected nature of mitigation activities. Many believed relevant perspectives or capabilities of their agency or team were not always adequately factored into key decisions that would later impact their work. Key decisions identified were focused on strategic work planning and detailed project planning.

### **External stakeholders understood agencies' roles and responsibilities, but many are still learning DNR's evolving role.**

Many partners confidently described the roles and responsibilities of CSFS and DFPC, but acknowledged some confusion with DNR's role in wildfire mitigation. The COSWAP program was identified as an anomaly within the established state agency roles and responsibilities. Many clarified this confusion was not a critique of the program itself or DNR's capabilities in mitigation, but rather highlighted an overarching need for greater coordination by state agencies.





## Performance Monitoring

*Defining and evaluating the effectiveness of mitigation efforts is both complex and challenging, but it is an important capability to continue to build.*

### Stakeholders want to expand the use of traditional metrics to measure impact in new ways.

Stakeholders are thinking about ways to better understand the effectiveness of mitigation efforts. Many explained that the complexity of this work, which often relies on a fire event to measure impact, makes it challenging to monitor success. Today, there are two primary ways in which overall effectiveness is measured: acres treated and program spending. While both metrics have meaning, stakeholders believe there is opportunity to expand on these metrics to measure impact in different and more meaningful ways.

### Performance is evaluated primarily at the programmatic and not yet defined at the state-level.

Many internal stakeholders saw opportunity in trying to establish ways of defining and measuring the effectiveness of overall efforts to promote greater coordination or collaboration across agencies' collective priorities. They explained that shared metrics aligned with statewide goals would help to align their work across efforts.

### External partners see value in a transparent statewide approach to performance monitoring.

External stakeholders acknowledged the difficulty of measuring mitigation effectiveness, but identified several ways a shared approach would benefit their work and collaborations with the state agencies. Statewide performance monitoring would offer greater clarity in the goals and priorities of state agencies that could help partners better align their efforts. It could also promote the development of shared databases and tools.



An aerial photograph of a forested area with a house and a barn. The house is a two-story structure with a gabled roof, and the barn is a large, single-story building with a gambrel roof. Both are surrounded by dense evergreen trees. The entire image has a reddish-orange color cast.

# 04 Recommendations

---



## Overview

**Recommendations were developed based on key findings from the current state assessment. They identify specific opportunities for action by the state to consider as it works to protect against the threat of wildfires.**

Through a series of workshops, leaders from DNR, CSFS, and DFPC reviewed the details from earlier phases and co-developed this set of recommendations with Arup. These recommendations were selected specifically because of their potential to offer meaningful impact on the effectiveness of statewide mitigation efforts.

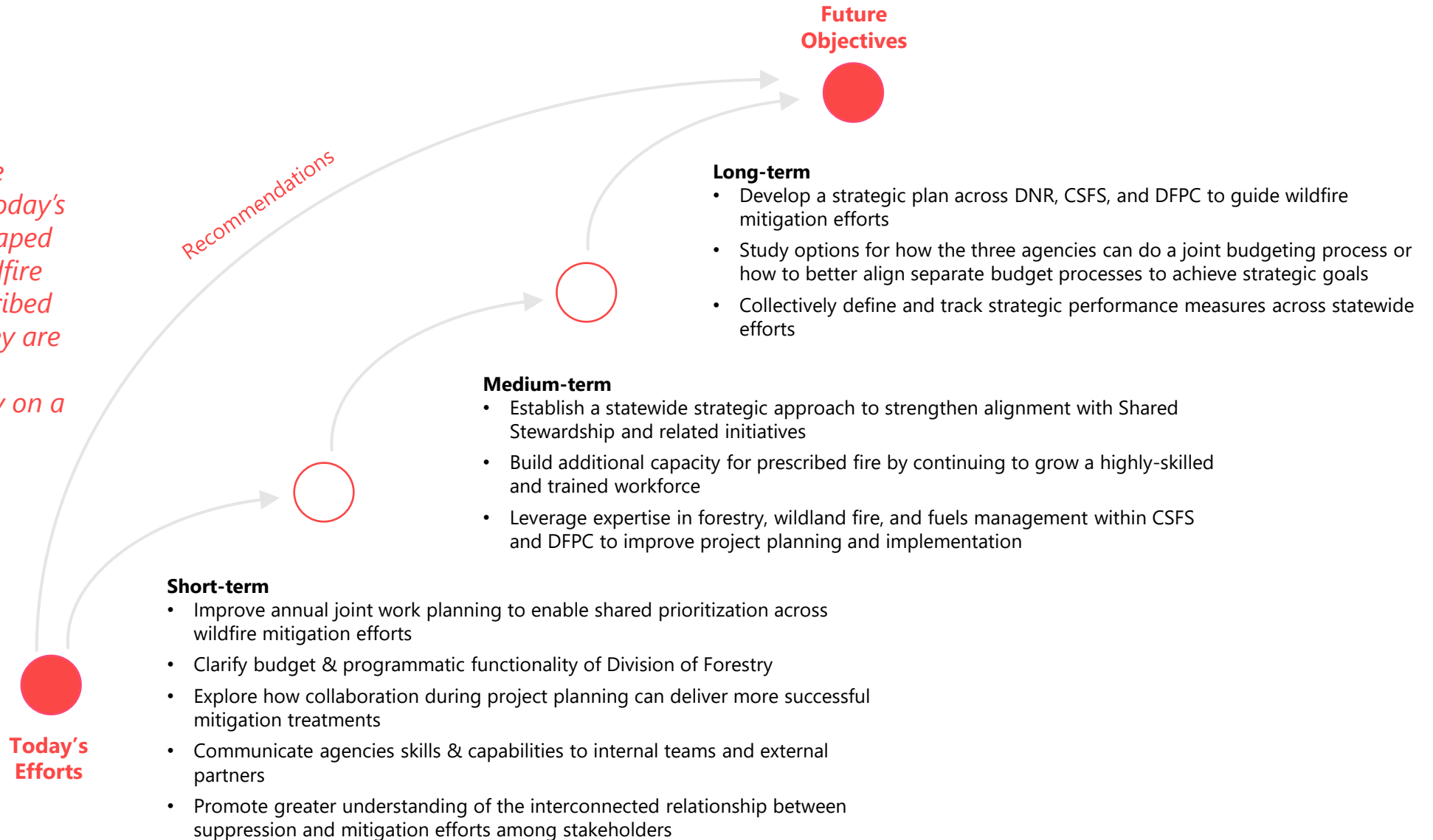
The recommendations are designed to be both ambitious and actionable. However, they do not represent definitive solutions. Wildfire mitigation is an incredibly complex and urgent challenge that demands collective action across state agencies, partners in government, nonprofits, and industry, as well as private individuals across the state. Thus, these recommendations and their associated timescales are a starting point for state leadership to continue to evaluate and decide what opportunities will bring the greatest benefit to Colorado.



©DNR

# Overview

*The recommendations are rooted in insights about today's challenges but equally shaped by the future goals in wildfire mitigation efforts as described by agency leadership. They are grouped by anticipated timescales, but do not rely on a strictly linear approach to implementation.*





## Recommendations | Short-Term

*These are potential opportunities identified from the Findings that could be considered 'short-term', meaning potentially completed within 1-2 years.*

-  **Improve annual joint work planning to enable shared prioritization across wildfire mitigation efforts**

DNR, CSFS, and DFPC should consider how to collectively approach yearly planning to ensure strategic alignment across efforts.
-  **Clarify budget & programmatic functionality of Division of Forestry**

DNR and CSFS need to examine how the Division of Forestry can engage in the DNR's budget process. The two agencies could also study the potential programmatic functionality of the Division of Forestry within DNR as it exists today.
-  **Explore how collaboration during project planning can deliver more successful mitigation treatments**

DNR, CSFS, and DFPC should work together to consider how implementation teams are and can be engaged earlier in the project lifecycle to determine and ensure successful completion.
-  **Communicate agencies' skills & capabilities to internal teams and external partners**

All three agencies have unique skills and capabilities within mitigation efforts. It would be beneficial to communicate these abilities broadly to enable deeper engagement across teams and partners.
-  **Promote greater understanding of the interconnected relationship between suppression and mitigation efforts among stakeholders**

Suppression and mitigation activities are not mutually exclusive. Agencies can promote greater awareness of this relationship to strengthen statewide efforts.

## Recommendations | Medium-Term

*These are potential opportunities identified from the Findings that could be considered 'medium-term', meaning potentially completed within 3-4 years.*



### **Establish a statewide strategic approach to strengthen alignment with Shared Stewardship and related initiatives**

DNR, CSFS, and DFPC should explore how a more collective strategic approach to planning and implementation with federal partners will enable greater success.



### **Build additional capacity for prescribed fire by continuing to grow a highly-skilled and trained workforce**

The capacity of teams working in prescribed fire was identified as a challenge in today's efforts. The agencies need to identify how to build capacity as it continues to study the appropriate application of prescribed fire throughout the state.



### **Leverage expertise in forestry, wildfire fire, and fuels management within CSFS and DFPC to improve project planning and implementation**

Continue to expand wildland fire knowledge, skills, and experience within CSFS and expand the understanding of wildfire risk reduction and forestry concepts within DFPC.

## Recommendations | Long-Term

*These are potential opportunities identified from the Findings that could be considered 'long-term', meaning potentially completed within 5+ years.*



### **Develop a strategic plan across DNR, CSFS, and DFPC to guide wildfire mitigation efforts**

The agencies would benefit from creating a collective strategy to help identify actionable goals, incorporate the regular review of MOUs, and define outcomes to inform how performance will be tracked across statewide efforts.



### **Study options for how the three agencies can do a joint budgeting process or how to better align separate budget processes to achieve strategic goals**

There is an opportunity to find greater alignment between the state budget process and the strategic priorities of wildfire mitigation. DNR, CSFS, and DFPC can consider how to create a collective approach to funding that is informed by their shared priorities and will increase access to critical wildfire mitigation resources. For all agencies, this may be a way to provide more sustained and/or flexible funding for programs. For DFPC, this may enable specific funding for wildfire mitigation efforts.



### **Collectively define and track strategic performance measures across statewide efforts**

To reinforce a more collective and coordinated approach to wildfire mitigation, the agencies should collectively define performance measures that align with their strategic priorities. This is an opportunity to expand beyond traditional metrics and employ the use of outcome-based measures that better reflect impact across the state. Once established, regular and consistent communication on progress across efforts will support broader understanding of statewide wildfire mitigation efforts. The agencies should also explore the implementation of shared platforms to consolidate and streamline statewide tracking of performance.

# Disclaimer

---

*This report was prepared by Arup on behalf of the Department of Natural Resources, Colorado State Forest Service, and the Division of Fire Prevention and Control in connection with the SB21-258 Organizational Assessment in 2023. It takes into account our client's particular instructions and requirements and addresses their priorities at the time. Findings are time-sensitive and relevant only to current conditions at the time of writing. In preparing this report we have relied on information provided by others, and we do not accept responsibility for the content, including the accuracy and completeness, of such information. We emphasize that any recommendations are based upon interpretations or assessments of available information at the time of writing. This report was not intended for, and should not be relied on by, any third party and no responsibility is undertaken to any third party in relation to it.*





# SB21-258 Organizational Analysis

December 2023

