

U.S. National Park Service

Black Canyon of the Gunnison National Park and Curecanti National Recreation Area Draft Fire Management Plan

2024



This Fire Management Plan was prepared by:
NPS Dinosaur National Monument, Fire and Aviation Management
with input from
NPS Black Canyon of the Gunnison National Park and NPS Curecanti National
Recreation Area
and
NPS Intermountain Region, Fire and Aviation Management

Recommended by: _____

Michael Guarino, Fire Management Officer,
Northwest Colorado Fire Management Zone

Recommended by: _____

Jeremy Lusher, Regional Fire Management Officer,
NPS/DOI Regions 6, 7, & 8

Recommended by: _____

Brinnen Carter, Integrated Resource Manager,
Black Canyon of the Gunnison NP and Curecanti NRA

Recommended by: _____

Ryan Rees, LE Ranger/BLCA & CURE Fire Coordinator,
Black Canyon of the Gunnison NP and Curecanti NRA

Approved by: _____

Stuart West, Superintendent,
Black Canyon of the Gunnison NP and Curecanti NRA

Table of Contents

EXECUTIVE SUMMARY	2
1.0 INTRODUCTION, LAND MANAGEMENT PLANNING, and COMMUNICATION	3
1.1 Program Organization	6
1.2 Fire Management Actions	6
1.3 Environmental Compliance	6
1.4 Park Unit/Resource Management Planning	7
1.5 Collaborative Planning.....	7
1.6 Communication and Education	8
2.0 WILDLAND FIRE PROGRAM MANAGEMENT GOALS AND OBJECTIVES	9
2.1 Goals and Objectives	9
3.0 WILDLAND FIRE OPERATIONAL GUIDANCE.....	11
3.1 Management of Wildfires	11
3.1.1 Wildfire Response Planning.....	14
3.1.2 Wildland Fire Decision Support System (WFDSS).....	15
3.2 Fuels Treatments.....	17
3.3 Preparedness.....	21
3.4 Post-Fire Programs and Response.....	23
3.5 Air Quality/Smoke Management.....	24
3.5.1 Air Quality Issues	24
3.5.2 Smoke Management Activities	25
3.6 Data and Records Management.....	26
4.0 PROGRAM MONITORING AND EVALUATION.....	27
4.1 Monitoring.....	27
4.2 Research	28
4.3 Climate Change.....	29
4.4 Evaluations, Reviews, and Updates.....	31
NWCG GLOSSARY	31
REFERENCES CITED.....	32
USEFUL WEB LINKS.....	34
APPENDICES	35

EXECUTIVE SUMMARY

The Black Canyon of the Gunnison National Park (Black Canyon) and Curecanti National Recreation Area (Curecanti) are in southwestern Colorado and are administered together by a single Superintendent and leadership team. Black Canyon was established as a National Monument in 1933 and designated a National Park in 1999 and is approximately 31,000 acres. The NPS administers U.S. Bureau of Reclamation (USBR) lands within Curecanti per a 1965 Memorandum of Understanding between the USBR and NPS to provide a variety of recreational opportunities to visitors and is approximately 44,000 acres in size.

This fire management plan is being revised in 2025 to conform with current policies, including compliance with the 2014 DOI Fire Management Plan framework. It is supported by a 2025 Environmental Assessment (EA) and corresponding Finding of No Significant Impact (FONSI). It outlines the goals and objectives of the Black Canyon and Curecanti Fire Management Program and provides operational guidance for risk management, prescribed fire, mechanical treatment, information, preparedness activities, and monitoring.

All wildfires originating in Black Canyon and Curecanti will receive an initial response and management strategy that is aligned with national policy and the goals and objectives defined in this plan. The parks are divided into a total of three fire management units (FMU). Each fire response will be dictated by the goals and objectives of this plan, FMU strategic objectives, and the fire's potential benefits and threats. The full spectrum of wildfire response strategies will be employed, dependent on which FMU the fire is burning in. Examples include but are not limited to initial attack for full perimeter control to monitoring a portion of a wildfire burning over time and space, or a combination of strategies. Planned fuels treatments will include prescribed fire, manual treatments, and mechanical treatments. These fuels treatments are aimed at achieving fuels reduction, creating and maintaining desired landscapes, resource objectives, or other site-specific objectives.

1.0 INTRODUCTION, LAND MANAGEMENT PLANNING, and COMMUNICATION

As part of its mission, the National Park Service Wildland Fire Program manages wildland fire to protect the public, park communities, and infrastructure, conserve natural and cultural resources, and maintain and restore natural ecosystem processes ([NPS Wildland Fire Strategic Plan 2020-2024, NPS 2020](#)). Each park unit with burnable vegetation must have an approved Fire Management Plan (FMP) that will address the need for adequate funding and staffing to support the fire management program ([Directors Order #18, Wildland Fire Management, NPS 2008](#)). To align with the DOI FMP Framework, the NPS developed fire management planning guidance which considers fire program complexity and efficient and effective planning direction (see [Reference Manual \(RM\) - 18, Chapter 4, Fire Management Plans](#)). The Black Canyon and Curecanti FMP is a strategic plan that defines a program of work to manage wildland fire, (includes prescribed fire and wildfire), and non-fire fuels treatments, and is based on directions contained in existing park unit planning documents. This FMP provides for fire personnel and public safety and includes strategies for managing wildland fires, addresses values to be protected, and is consistent with Black Canyon and Curecanti resource management objectives and environmental laws and regulations such as the [National Environmental Policy Act \(NEPA\)](#), National and State Historic Preservation Acts, the Endangered Species Act, the Clean Air Act, and the Wilderness Act.

Black Canyon and Curecanti are in southwestern Colorado, administered by a single Superintendent, share staff, and are next to each other along the river and reservoir corridor. Black Canyon is approximately 15 miles east of Montrose, and Curecanti is approximately five miles west of Gunnison. Black Canyon was established as a National Monument in 1933 and designated a National Park in 1999 to preserve the gorges, scenic values, natural and cultural resources, and integrity of lands that are part of the Gunnison River Basin. Roughly one half of Black Canyon's approximate 31,000 acres are designated as wilderness and managed as part of the National Wilderness Preservation System. The NPS administers U.S. Bureau of Reclamation (USBR) lands within Curecanti per a 1965 Memorandum of Understanding between the USBR and NPS to provide a variety of recreational opportunities to visitors, conserve the scenery, natural, historic, and archeological resources, and is 44,000 acres in size (see Figures 1 and 2 below). Additionally, several rivers and creeks within BLCA and CURE are either eligible or suitable to be designated as wild and scenic rivers and are therefore managed with full protection of the Wild and Scenic Rivers Act.

U.S. National Forest Service (USFS) lands, Bureau of Land Management (BLM) lands, and Colorado Parks and Wildlife (CWP) lands, as well as substantial amounts of private land surround Black Canyon and Curecanti, which requires extensive collaboration. The Northwest Colorado Zone Fire Management Officer (FMO) determines program requirements to implement land-use decisions through the FMP to meet land management objectives. The FMO is responsible for developing, maintaining, and annually evaluating the FMP to ensure accuracy and validity by completing an annual review ([Interagency Standards for Fire and Fire Aviation Operations \(Red Book\), Chapter 3, NPS Program Organization and Responsibilities](#)).

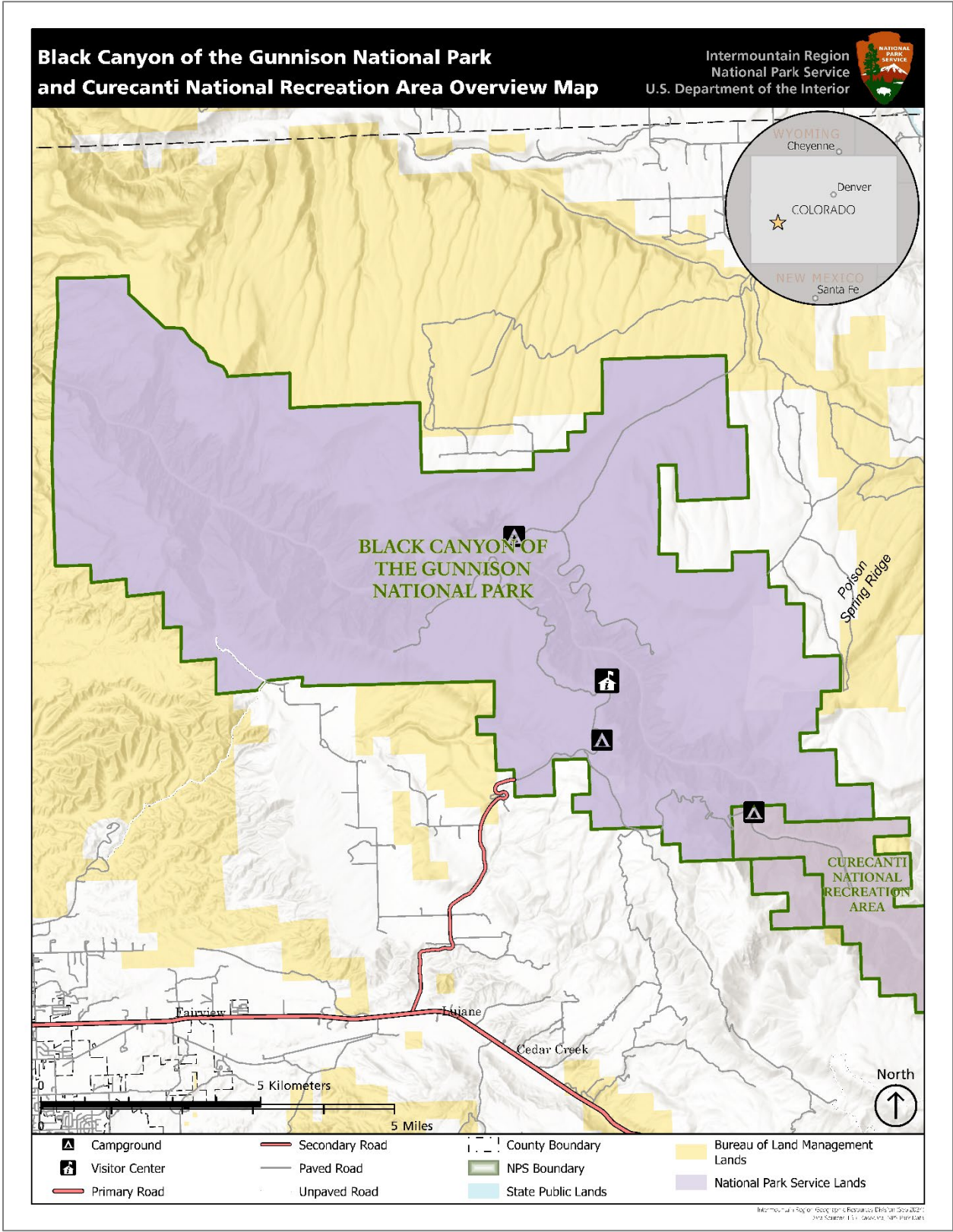


Figure 1: Overview map of Black Canyon of the Gunnison National Park.

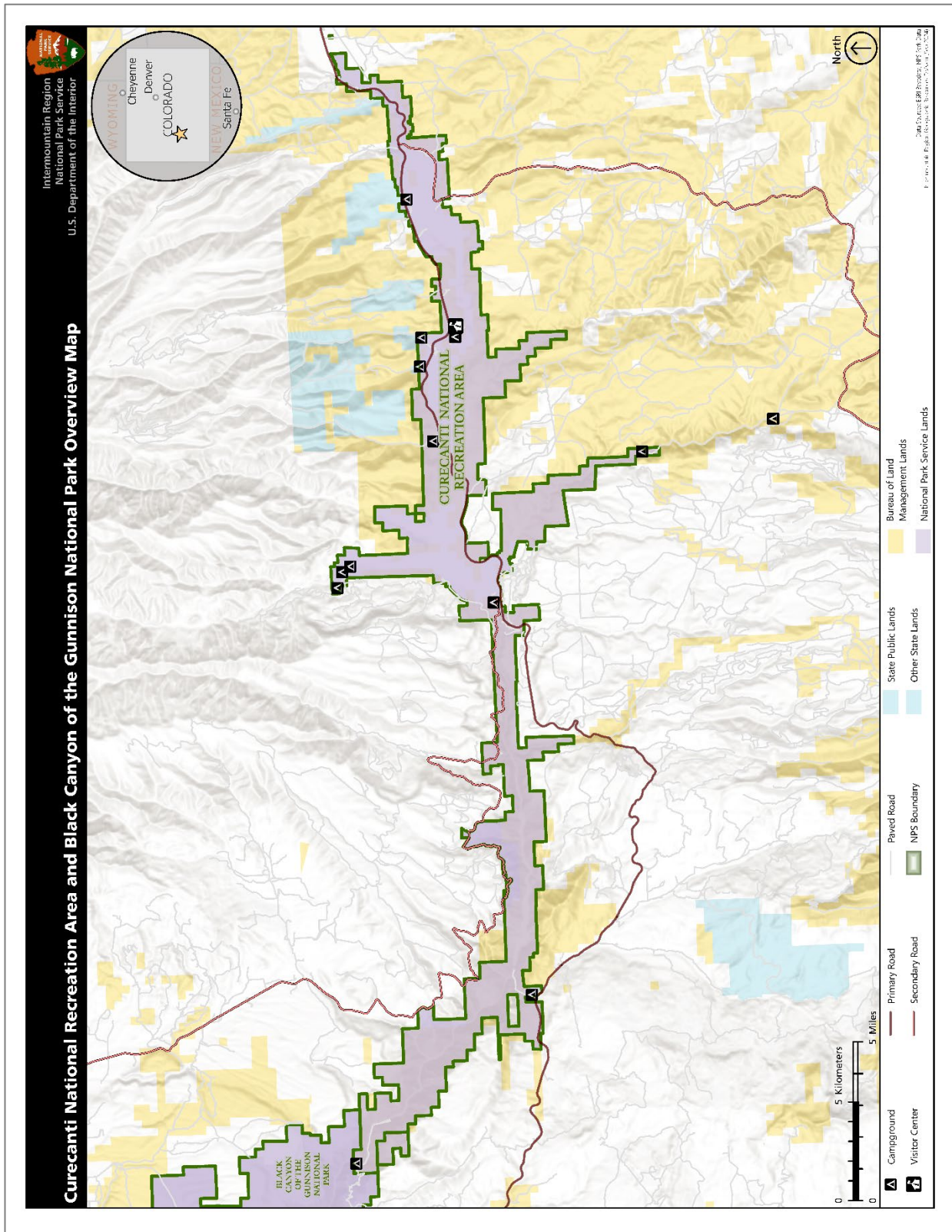


Figure 2: Overview map of Curecanti National Recreation Area.

1.1 Program Organization

Black Canyon and Curecanti are part of the NPS Northwest Colorado Fire Management Zone, and do not have a stand-alone fire management organization. This Zone includes Dinosaur National Monument, Colorado National Monument, Black Canyon, and Curecanti. An inter-park agreement between the Superintendents of each park unit outlines roles, responsibilities, coordination, and funding (see Appendix B). All fire staff for the Northwest Colorado Fire Management Zone are located at Dinosaur National Monument, including the Fire Management Officer. There is a Black Canyon and Curecanti employee assigned by the Superintendent to be the Fire Coordinator for the parks.

The Colorado Front Range Fire Ecology program, based out of Rocky Mountain National Park, provides Fire Ecology and monitoring to all NPS units within the Northwest Colorado Fire Management Zone. The Colorado Fire Business Zone also supports Black Canyon and Curecanti, along with an IMR North Zone Fire GIS and Fire Planner.

1.2 Fire Management Actions

Black Canyon and Curecanti are divided into three Fire Management Units (FMU): Wilderness, Habitat, and Conditional FMUs. Initial response strategies for all wildfires originating in Black Canyon and Curecanti will be based on risk assessments, policy, and goals and objectives defined in this plan for each FMU. The full range of management actions are available. Black Canyon and Curecanti may manage wildfires for resource benefit and protection objectives, based on FMU, time of year, values to be protected, and weather conditions. Initial action on human-caused wildfires will be to suppress the fire. All identified strategies and tactics will be considered available to meet designated incident objectives. All wildfire responses will be coordinated with local partners, especially when there is potential for the fire to spread beyond NPS boundaries. Additionally, the parks will use prescribed fire, manual, mechanical, herbicide, and grazing fuels treatments to reduce fuels, improve landscape conditions, or for research purposes.

1.3 Environmental Compliance

The following impact analysis documents were completed for this fire management plan as required by the National Environmental Policy Act. They are in [Planning, Environment & Public Comment \(PEPC\)](#) under project ID 124131.

- Black Canyon of the Gunnison National Park and Curecanti National Recreation Area Fire Management Plan Environmental Assessment (EA) was prepared for this FMP. The corresponding Finding of No Significant Impact (FONSI) was signed on **date**.
- Biological Assessment (BA) was sent to USFWS on **date**. The following species were analyzed in the BA: monarch butterfly, Gunnison sage-grouse, yellow-billed cuckoo, Mexican spotted owl, grey wolf, Canada lynx.
- NHPA compliance - a reply letter was received from the Colorado State Historic Preservation Office (SHPO) on December 12, 2024. It stated the SHPO did not have

any questions or comments on the FMP EA at this time and they looked forward to future consultation on proposed undertakings.

1.4 Park Unit/Resource Management Planning

Park planning documents support this FMP, such as the 1997 General Management Plan, 2013 Foundation Document, 2016 Integrated Pest Management Plan, 2021 Resource Stewardship Plan, and the 2022 Wilderness and Backcountry Management Plan for Black Canyon and Curecanti.

- 1997 General Management Plan identifies perpetuating native plant life as part of the ecosystem and mentions using prescribed fire to mimic natural fire effects in certain areas.
- 2013 Foundation Document identifies updating the fire management plan as a planning need for the park. It also discusses wildfire's role in wilderness and non-native plant species, fire regimes, and fire danger.
- 2016 Integrated Pest Management Plan discusses prescribed fire's role as a cultural control for non-native species and how non-native species can alter fire regimes.
- 2021 Resource Stewardship Plan (not in PEPC) is a spreadsheet for Black Canyon and Curecanti resource managers that includes resource management concerns; strategies or specific projects to deal with the concerns; and ongoing status of projects. Several identified needs pertain to wildfires and fuels treatments, such as preparing a map of cultural concerns specific to fire management, developing mitigation measures for fire related to sensitive and non-native vegetation, and incorporating climate change into wildfire and fuels treatments.
- The 2022 Wilderness and Backcountry Management Plan discusses how natural-caused wildfires can enhance wilderness character.

1.5 Collaborative Planning

Black Canyon and Curecanti are within the Montrose Interagency Fire Dispatch Zone. Montrose Interagency Fire is a collaboration of the Uncompahgre and Gunnison Bureau of Land Management (BLM) field offices, the Grand Mesa/Uncompahgre/Gunnison National Forest, Black Canyon and Curecanti, the Colorado Division of Fire Prevention and Control (DFPC) and six local counties – including Montrose and Gunnison which surround the parks.

Interagency coordination is an integral aspect of wildland fire management in the Northwest Colorado Fire Management Zone due to the approximate 175 miles between Dinosaur National Monument where fire management staff are located and Black Canyon and Curecanti. Wildfire initial response and Duty Officer responsibility are delegated to the BLM.

Black Canyon and Curecanti have the following agreements and interagency operating plans to facilitate cross boundary multi-agency fire management planning. These plans, agreements, and delegations are in Appendices A and C.

- Colorado Cooperative Agreement

- It documents commitment to fire management assistance and cooperation. This agreement is valid for a five-year period.
- Montrose County Operating Plan (Appendix C)
 - It creates standard operating procedures and responsibilities to implement cooperative wildland fire protection on all lands within Montrose County. This plan is reviewed annually and valid for five years unless updates are needed.
- Gunnison County Operating Plan (Appendix C)
 - It creates standard operating procedures and responsibilities to implement cooperative wildfire protection on all lands within Gunnison County. This plan is reviewed annually and valid for five years unless updates are needed.
- Delta County Operation Plan (Appendix C)
 - This plan sets standard operating procedures, agreed upon procedures, and responsibilities to implement cooperative wildfire protection on all lands within Rio Blanco County. Although the NPS is not a signatory on this plan, the parks work closely with this county due to the proximity of the county.
- Montrose Interagency Coordinating Group Dispatch Zone Board Charter (Appendix C)
 - The board works to further interagency cooperation, communications, and coordination within the sphere of influence of the Montrose Interagency Dispatch Center and its neighboring Dispatch Centers.
- Montrose Interagency Dispatch Center Manager Delegation of Authority (Appendix A)
 - It lists the roles and responsibilities of the Montrose Dispatch Center Manager.
- Montrose BLM Duty Officer Delegation of Authority (Appendix A)
 - It lists the roles and responsibilities of the Montrose BLM Duty Officer for Black Canyon and Curecanti.

1.6 Communication and Education

Providing prompt and accurate information related to fire management activities is a key strategy for gaining public support and educating park staff, visitors, stakeholders, and partners for wildfire, prescribed fire, non-fire fuels management, fire prevention, and aviation programs. Black Canyon and Curecanti will strive to be inclusive in all fire prevention and incident information efforts by employing strategies and tactics that will reach the entire community, to include non-English speaking, deaf or hard of hearing, and other significant populations.

As with all NPS activities, the presence of an informed public can go far in providing support for the fire management program at Black Canyon and Curecanti. The following are best management practices the parks follow to foster its goals.

- A concerted effort will be made to make the public aware of fire prevention messages, fire danger adjective rating when they are very high or extreme, fire bans or restrictions, and the presence of on-going fires.

- Fire management messages will be introduced into interpretive programs where appropriate.
- Park staff will take part in fire prevention activities in the community.
- Visitors will be informed of regulations about campfires on NPS lands.
- The local media will be informed of fire prevention concerns through news releases. Media access to fire scenes will be facilitated when it is safe to do so. When interest is warranted, a staff member will be designated as the contact person for all information requests. Any media access to fires will be granted per the [Red book, Chapter 7, Safety and Risk Management](#). The Superintendent's Office may issue press releases about fire restrictions, closures, special precautions, and prescribed fires to newspapers, radio, and television stations.

The Chief of Interpretation and Education, or other designated staff member, when necessary, will function as PIO, and provide for effective communication between park personnel, the public, and the media. The fire management program will be incorporated into the parks' overall interpretive program when possible and appropriate. A PIO may be ordered from outside of the parks during higher preparedness levels or during periods of high fire activity.

More information can be found in [RM -18, Chapter 20, Communication and Education](#). NPS Regional Fire Communication and Education Specialists are available to assist fire programs with fire prevention and education materials and support.

2.0 WILDLAND FIRE PROGRAM MANAGEMENT GOALS AND OBJECTIVES

Black Canyon and Curecanti's programmatic wildland fire management goals and objectives encompass risk management, wildfire, prescribed fire, fuels management, science, climate change response, and collaboration. They provide program direction aligned with monument planning documents, are consistent with associated NEPA, and are forward looking for future climate scenarios.

2.1 Goals and Objectives

Goal 1

Minimize risk to employees, responders, and the public during every fire management activity.

Goal 1 Objectives:

- Apply the most current risk management processes and strategic approaches in all decision making.
- Evaluate risks and ensure risk-based decisions are made at the appropriate level.
- Utilize Operational Leadership concepts to ensure the necessary steps are taken to understand the potential risks, severity, probability, and exposure of actions before engaging in wildland fire management.

Goal 2

Minimize adverse fire effects and impacts to highly valued resources and assets within and surrounding the parks.

Goal 2 Objectives:

- Use resource specialists on planned and unplanned fires to ensure highly valued resources and assets are identified and adverse impacts are reduced.
- Implement a wildfire prevention program to minimize human-caused fires.
- Identify, map, assess risk and impacts, and prioritize potential strategies for highly valued resources and assets.
- Reduce fire risk near and adjacent to infrastructure, private properties, and sensitive natural and cultural resources by prioritizing fuels treatments based on site specific information and an adaptive management process.
- Develop postfire rehabilitation plans using climate adapted strategies.

Goal 3

Foster and maintain a wildland fire management program that aligns with the parks' core purposes and promotes values of shared stewardship and collaboration.

Goal 3 Objectives:

- Coordinate with park divisions in wildfire response and fuels treatment planning to maximize program effectiveness.
- Respond to and manage all wildfires with interdisciplinary and interagency coordination.
- Cultivate and maintain external relationships through collaboration, communication, and coordination by fostering stewardship understanding and support among staff, stakeholders, partners, public, and Indigenous tribes.
- Maintain a wildland fire program that increases workforce capacity, creates budget efficiencies, and enhances communication.

Goal 4

Promote ecological and social conditions that create, maintain, or restore fire-resilient landscapes.

Goal 4 Objectives:

- Use current science to guide an adaptive and innovative fire management program in uncertain climate futures.
- Use wildfires in wilderness to provide opportunities to promote ecological integrity and preserve wilderness character.
- Use fuels treatments to create desired effects and manage fuel accumulations to meet resource objectives based on the best available science.
- Monitor, evaluate, and adjust fuel treatments to employ adaptive management techniques.

- Educate and communicate the intent and purpose of wildfire response and fuels treatments to the public, stakeholders, and employees.

3.0 WILDLAND FIRE OPERATIONAL GUIDANCE

3.1 Management of Wildfires

Each wildfire response in Black Canyon and Curecanti will be dictated by programmatic goals and objectives, FMU strategic objectives, and the fire's potential benefits and threats. Wildfires will be managed to enhance high value resource and asset protection, diminish the risk and consequence of severe wildfire, and sustain ecosystems. The parks are divided into three FMUs: Wilderness FMU, Habitat FMU, and Conditional FMU (see Figures 3 and 4 below). These FMUs assist managers to formulate response strategies and tactics by defining specific goals and objectives.

The Wilderness FMU is composed of all designated wilderness within Black Canyon, except for areas above the canyon rim which are also designated as sage-grouse critical habitat. Wilderness areas that are critical sage-grouse habitat above the canyon rim are included in the Habitat FMU. Strategic objectives in this FMU focus on allowing wildfire to continue its ecological role, preserve natural and cultural resources, reduce negative human impacts, and to reduce negative impacts of wilderness character qualities.

The Habitat FMU is composed of all occupied and unoccupied critical sage-grouse habitat within Black Canyon and Curecanti above the canyon rim. Strategic objectives in this FMU will focus on the health and perpetuation of Gunnison sage-grouse habitat. Most often, wildfires in this FMU will be suppressed to the smallest size possible, however low severity fire may provide ecosystem benefits.

The Conditional FMU includes all areas not designated as wilderness or sage-grouse critical habitat. Strategic objectives of this FMU will emphasize primarily the protection of high value resources and assets and then ecological benefits.

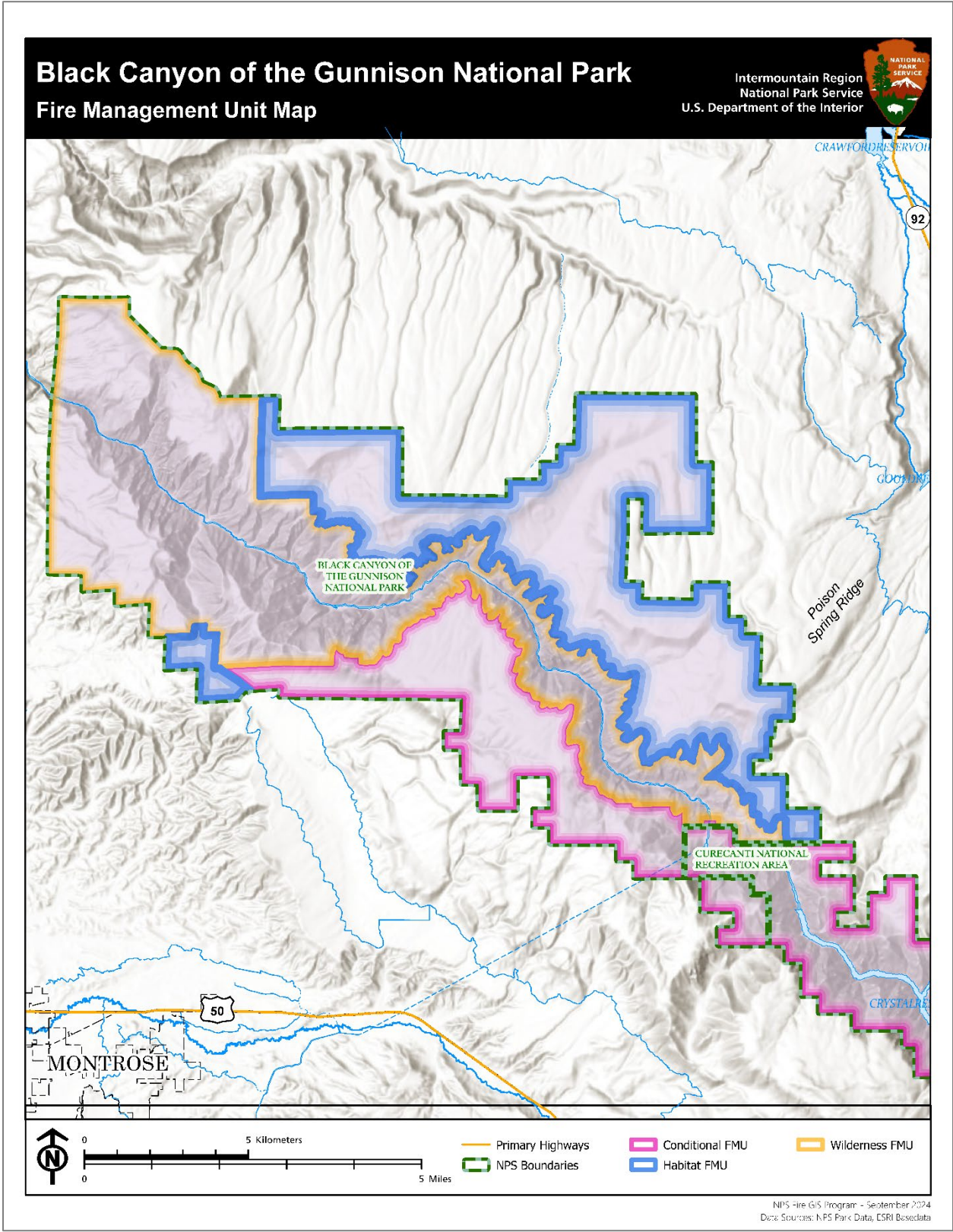


Figure 3: Map of Fire Management Units in Black Canyon of the Gunnison National Park.

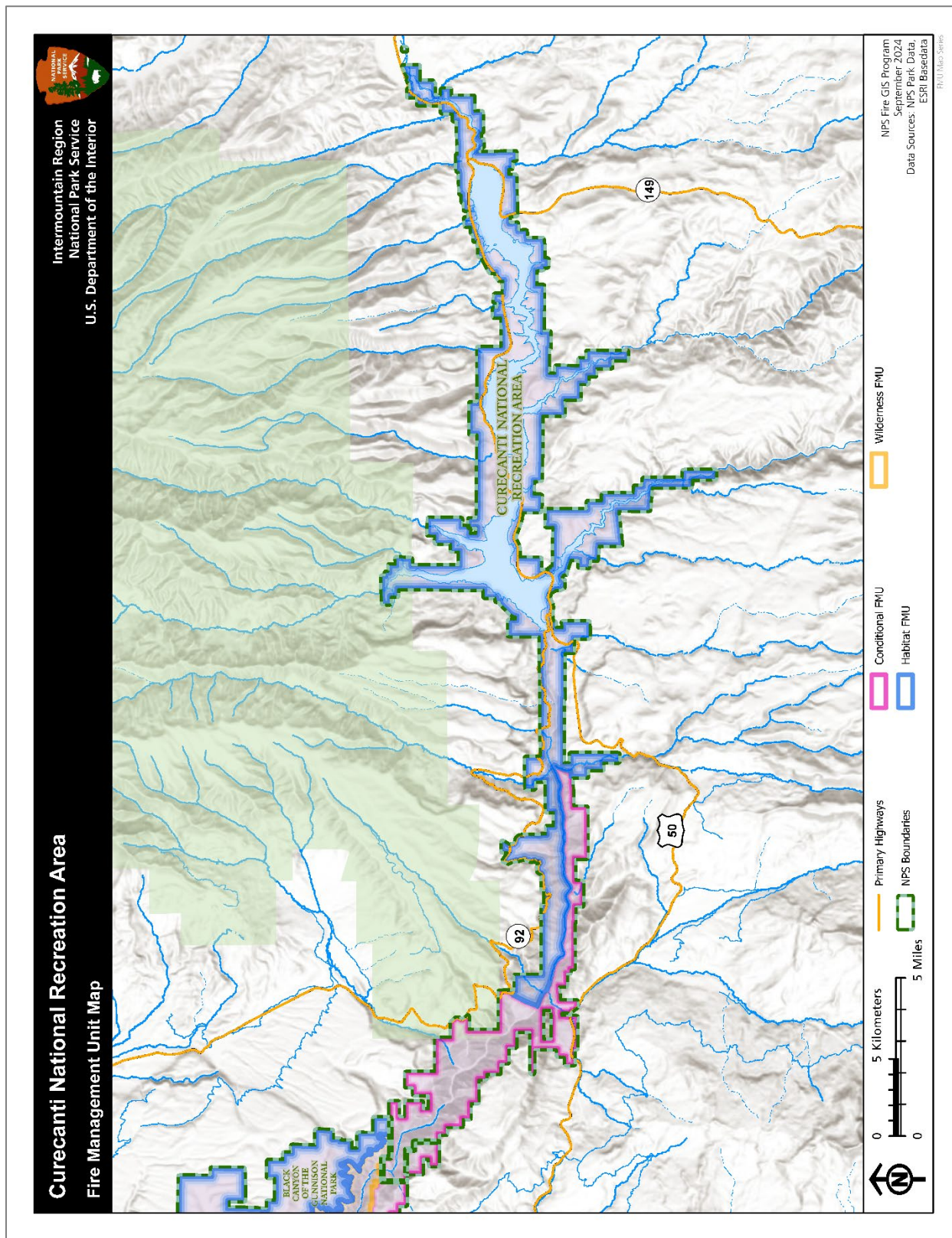


Figure 4: Map of Fire Management Units in Curecanti National Recreation Area.

3.1.1 Wildfire Response Planning

Expected Fire Behavior

Wildfires in Black Canyon and Curecanti typically occur June through September, and approximately 50 percent of wildfires over the last several decades were lightning-caused. Most fires (95 percent) historically have been suppressed due to proximity to high value resources and assets, while most of the remaining five percent of fires not suppressed self-extinguished before a management action was taken.

In general, prevailing winds affecting fire spread are from the south and southwest. Upslope, up valley winds and lake winds on Blue Mesa Reservoir in Curecanti are also dominant factors influencing fire behavior in the parks.

Vegetation and fuel patterns in Black Canyon and Curecanti have been altered due to grazing, recreation, and lack of fire over the past 60-80 years. Forest fuels have become denser and are expected to support large, stand replaces fires. The following fuel models are present within the park units.

- Fuel Model 2, GS1 or GS2, grass and sage
- Fuel Model 10, TL8, ponderosa pine
- Fuel Model 6, SH2 or SH5, pinyon and juniper
- Fuel Model 5, SH5 or SH7, oak brush
- Fuel Model 9, TL2 or TL6, aspen

Large fire growth at Black Canyon and Curecanti can be expected to occur generally when the Energy Release Component (ERC) is higher than 88, which typically happens during June and July. Wind speed greater than 10 miles per hour in gambel oak and pinyon-juniper, or gambel oak live fuel moistures less than 95 percent are also indicative of rapid fire spread. Local weather thresholds, based on the pocket card, for increased fire behavior are 20' wind speed over 15 miles per hour, relative humidity less than 15%, and temperature over 90°F.

Initial Response Procedures

When a wildfire is reported at Black Canyon or Curecanti, Montrose Interagency Dispatch will send the closest resources based on the location and the day's dispatch level per the Montrose Initial Response Plan. They will also contact the BLM Duty Officer and the NPS Northwest Colorado Zone FMO or DO. The first arriving resource will become the Incident Commander and will provide a fire size up. The BLM Duty Officer or NPS Northwest Colorado Zone FMO will contact the NPS Agency Administrator and the NPS Fire Coordinator. More information can be found in the Black Canyon and Curecanti Initial Response Plan in Appendix D4.

Transition to Extended Response

When a fire exceeds initial response, the BLM Duty Officer, NPS Northwest Colorado Zone FMO/AFMO/DO, Black Canyon/Curecanti Superintendent, Fire Coordinator, and other BLCA/CURE staff requested by the Superintendent will discuss additional fire management strategies needed. Once extended attack fire management strategies are determined, the following will happen.

- Montrose Dispatch will be notified the fire is moving into extended response.
- A Wildland Fire Decision Support System (WFDSS) decision will be developed and published by the NPS Agency Administrator (AA). More information on WFDSS is located below in the WFDSS section.
- A Delegation of Authority will be signed for the Incident Commander. An example can be found in Appendix A.
- The Northwest Colorado Zone DO will notify the NPS Intermountain Regional Duty Officer of the situation.
- The Black Canyon/Curecanti Interpretation Division and NPS Regional Fire PIOs may be notified to release fire updates. Other staff notifications will occur dependent on the location and values at risk.

Minimum Impact Strategy and Tactics (MIST)

MIST is the policy of the National Park Service. Agency-wide Minimum Impact Strategy and Tactics (MIST) are described in [RM - 18, Chapter 2, Managing Wildland Fire, Exhibit 1](#). MIST will be used on all fires within Black Canyon and Curecanti, and can reduce the degree of long-term impacts associated with wildfire response tactics. Any specific MIST for Black Canyon and Curecanti will also be included in a Resource Advisor Guide.

3.1.2 Wildland Fire Decision Support System (WFDSS)

The Wildland Fire Decision Support System ([WFDSS](#)) will be used to document the risk assessment, organizational needs, management objectives and strategies if a wildfire escapes initial attack, exceeds initial response, or if the management objectives contain elements of protection and resource benefit. WFDSS is currently the agency approved decision documentation location for all federal agencies. Current direction on WFDSS about the NPS can be found in the [Red Book, Chapter 3 NPS Program Organization and Responsibilities and Chapter 11, Incident Management and Response](#). Intermountain Region has also developed [supplemental WFDSS guidance](#).

Strategic Objectives and Management Requirements

[Strategic Objectives \(SO\)](#) and [Management Requirements \(MR\)](#) are derived from local unit management plans, as well as related compliance and consultation documents. They provide the framework and limitations/challenges for wildfire response parkwide or for certain geographic areas such as FMUs. They are included in WFDSS to provide the foundation of the decision.

Parkwide Strategic Objectives (and where they originate from):

- Minimize risk to employees, fire personnel, and the public during every wildfire. (Programmatic Goal 1)
- Protect natural and cultural resources, infrastructure, and watersheds within and adjacent to the park from negative fire impacts. (Programmatic Goal 2)
- Use resource specialists/resource advisors if wildfires or associated response actions may adversely affect natural or cultural resources. (Programmatic Goal 2)
- Communicate proactively with adjacent land management agencies. (Programmatic Goal 3)

Strategic Objectives for the Wilderness FMU (and where they originated from):

- Manage wildfires in designated wilderness to preserve wilderness character and reduce negative human impacts within wilderness. (Programmatic Goal 4)
- Minimize use of helicopters over designated wilderness. (2025 EA)
- Allow wildfire to continue its ecological role whenever the potential for resource benefits exist and risk management allows.

Strategic Objectives for the Habitat FMU (and where they originated from):

- Manage wildfires for the health and perpetuation of sage-grouse habitat. (Programmatic Goals 2 and 4)

Strategic Objectives for the Conditional FMU (and where they originated from):

- Manage fire primarily for the protection of high value resources and assets and then ecological benefits. (Programmatic Goals 2 and 4)

Management Requirements (and where they came from):

- The Agency Administrator must approve the use of heavy equipment (bulldozers, graders, masticators, etc.) and driving off established roads for wildfire suppression purposes. (2025 EA)
- The Agency Administrator must approve the use of retardant within the park units unless there is an immediate threat to life and property. If retardant is used, it cannot be applied within 300' of bodies of water. (2025 EA)
- The Agency Administrator must approve the use of aircraft removing water from Gunnison River, Lake Fork of the Gunnison River, Blue Creek, Curecanti Creek, Coal Creek, and West Elk Creek unless there is an immediate threat to life and property. These waterways are managed as Wild and Scenic Rivers. (Section 7 (b) of Wild and Scenic Rivers Act).
- MIST will be used on all wildfire incidents. (2025 EA)

- Use ground protection when refueling equipment and stay at least 200' away from water sources when refueling. (2025 EA)
- All resource personnel, vehicles, and equipment will arrive at the fire with PPE, vehicles, tools, and equipment clean and free of invasive vegetation species and seeds. (2025 EA)
- Fire personnel will minimize line construction by taking advantage of water, natural barriers, rock outcrops, trails, roads, and streams. (2025 EA)
- Only limb along fire lines when necessary. (2025 EA)
- Use a resource advisor on wildfires. (2025 EA)
- Only use water from reservoirs within the park units to prevent the introduction of aquatic invasive species. (2025 EA)
- All helicopter water buckets must be clean and free of aquatic invasive species. (2025 EA)
- All helicopters and other fire suppression equipment will avoid a quarter mile buffer from May 1 – July 30 around the Neversink/Cooper Ranch area on the eastern side of Curecanti to protect a heron rookery. (2025 EA)
- Helicopters and other fire suppression equipment will avoid a quarter mile buffer March 1 – July 30 around the East Elk Creek Campground area to protect a bald eagle nest. If additional eagle nests are found to be occupied during yearly monitoring, those sites will be provided to fire personnel. (2025 EA)
- Complete suppression repair and post-fire rehabilitation as needed to reduce long term impacts. (2025 EA)
- A Minimum Requirement Analysis will be completed for all suppression actions within recommended wilderness. (2025 EA)

3.2 Fuels Treatments

Black Canyon and Curecanti will use prescribed fire, herbicide, manual, and mechanical fuels treatments to reduce fuels, improve landscape conditions, or for research purposes. Grazing may also be used as a management action for fuels reduction based on conditions and circumstances.

Fuels Management Goals and Objectives

Fuels reduction treatments increase the safety of fire personnel and the public, the likelihood of perseverance of infrastructure and resilient landscapes, and the opportunity for fire personnel to implement resource management objectives on wildfires. The parks' fuels management goals and objectives are to create defensible space around highly valued resources or assets, improve or maintain species habitat, or to reduce the risk of adverse effects from wildfire.

Fuels Treatments

Black Canyon and Curecanti will use fuels reduction projects (manual, mechanical, prescribed fire, herbicide, and/or grazing) throughout the parks. Manual treatments can include the use of powered hand tools such as chainsaws, weed trimmers, lawn mowers, and other small, powered equipment. Mechanical treatments can include wheeled or tracked implements such as brush hogs, masticators, tractors, chippers, etc. Prescribed fire can include broadcast or pile burning, herbicide would include the use of chemicals to reduce non-native vegetation, and grazing would include the use of domesticated animals, typically cows, to remove fuel such as grass.

General Fuels Management Planning and Implementation Procedures

Activities described in this programmatic Fire Management Plan will be planned and implemented in accordance with [RM 18, Chapter 7, Fuels Management, NWCG Standards for Prescribed Fire Planning and Implementation](#), and the [Red Book, Chapter 17, Fuels Management](#).

To implement its fuels management program collaboratively, safely, and effectively, Black Canyon and Curecanti will conduct comprehensive planning consistent with its strategic direction. The AFMO will take the lead for the initial planning of fuels projects and necessary compliance, with help from the FMO and Fire Ecologist. Fuels treatments may be planned and completed in all three FMUs, however, different types of treatments will be prioritized according to the FMU's strategic objectives.

Black Canyon and Curecanti use a Fire Interdisciplinary Team (IDT) to discuss and prioritize proposed fuels treatment projects. The Fire IDT will also review and provide input for treatment scopes of work; the Superintendent will have final signatory approval. The IDT consists of managers from disciplines including, but not limited to fire management, vegetation management, cultural resources, wilderness management, and wildlife.

Criteria for fire managers and the IDT to determine if an area should be treated may include the following:

- Create defensible space in the wildland urban interface.
- Reduce the potential of a wildfire originating within Black Canyon or Curecanti and negatively impacting areas outside of the parks.
- Seek opportunities to protect high value resources and assets.
- Enhance cultural landscapes and viewsheds.
- Increase opportunities to manage wildfire as an ecological process within the Wilderness or Conditional FMUs.
- Restore vegetation, habitat, and/or fire regimes.
- Maintain previously treated areas.

Once it is determined which areas need to be treated, planned fuels treatment projects will be prioritized by fire managers with input from the IDT. Examples of criteria which may be used to prioritize treatments are below.

- Fuel loading and defensible space characteristics.
- Degree of impact on natural and cultural resources.
- Proximity to past wildfires.
- Logical project sequence with other planned projects.
- Maintenance cycles for previously treated areas.
- Practicality of implementation and cost effectiveness of treatment.
- Coordination efforts with adjacent land managers and private landowners.
- NPSage initiative projects.
- Cost to complete resource surveys for treatment area.

A treatment scope of work will be completed for all fuels treatments and will include the project's goals and objectives, mitigation measures, and treatment specifications. The treatment scope of work will help the IDT determine the level of compliance needed for each project. Typically, this is a Memo to File or Categorical Exclusion, which includes some level of Section 106, and/or Section 7 compliance. If the treatment is in wilderness, RM-41 Guidelines for Evaluating Ecological Intervention Proposals in NPS Wilderness and Minimum Requirement Analysis (MRA), which will either fall under the programmatic MRA, or if necessary, a project specific MRA will be completed.

If it is determined prescribed fire is the best method to treat fuels or meet resource objectives, the most current [NWCG Standards for Prescribed Fire Planning and Implementation Guide](#) will be followed. Fire managers will develop all burn plans with input from the IDT and will be approved by the AA. Pile burns are considered a type of prescribed fire, therefore if a fuels treatment takes place and the preferred method of biomass disposal is through pile burns, an approved burn plan will be used for that phase of project implementation.

Black Canyon and Curecanti will use an adaptive management process to determine if project level goals and objectives are met. This process may include using monitoring data (See Section 4.1), observational data, or discussions with resource managers to determine if the treatment was successful. If it is determined changes need to be made, then data will be used to either alter the goals, objectives, tools, or prescription used for the next treatment.

Fuels Treatment Mitigations

Below is a list of mitigations and special measures that will be incorporated as applicable into individual fuels treatment plans. They originate in the 2024 FMP EA:

- Do not pile slash in riparian areas, wetlands, or ephemeral drainages.
- To reduce impacts to waterways and aquatic ecosystems projects will not be scheduled during spring runoff or times when rains are often heavy.

- Projects will not be scheduled during spawning periods especially in known spawning beds and would avoid riparian areas.
- Fuels treatments will be designed to avoid impacts to threatened, endangered, or sensitive plant and animal species.
- Where presence of any listed endangered or threatened species are expected, resource specialists will be consulted as to the need for surveys to determine species occupancy. If species are determined to be present, additional steps will be taken to reduce negative impacts.
- Pedestrian Class III archaeological surveys will be conducted and consultation with the Colorado State Historic Preservation Office (SHPO) and Tribes on the identification of properties and treatment options will occur as necessary before implementing any prescribed burns, manual, or mechanical treatments.
- Adverse impacts on eligible or potentially eligible cultural resources will be avoided during treatment layout and implementation, in coordination with a NPS archaeologist.
- Work will stop immediately if unknown or unsurveyed cultural or natural resources are located.
- Prior to treatments, existing park info on potential fossil localities and formations will be referenced to determine the sensitivity for the presence of paleontological resources. If there is potential for rare, unusual, or scientifically important fossils to be affected, BMPs will include surveying the area for fossils and avoiding treatment in any area where they are found.
- All fuels treatments will avoid a quarter mile buffer from May 1 – July 30 around the Neversink/Cooper Ranch area on the eastern side of Curecanti to protect a heron rookery.
- All fuels treatments will avoid a quarter mile buffer from March 1 – July 30 around the East Elk Creek Campground area to protect a bald eagle nest. If additional eagle nests are found to be occupied during yearly monitoring, those site locations will be provided to fire personnel.
- Landowners or agencies located adjacent to treatment areas will be contacted and a press release may be issued.
- Inform employees and visitors of treatments and any special safety warnings if a treatment may affect them or is visible to visitors.
- Personnel will arrive at the project area with PPE, vehicles, tools, and equipment clean and free of invasive vegetation species and seeds.
- All flagging will be removed at the end of the treatment.
- A programmatic Minimum Requirement Analysis will be completed for all planned fuel treatments within recommended wilderness.

Fuels Documentation and Project Tracking

The Interior Fuels and Post Fire Reporting System ([IFPRS](#)) is the current approved agency application for tracking and reporting estimated and completed accomplishments. All Department of the Interior agencies are required to annually submit and verify a three-year Estimated Program of Work (POW), which helps the Department formulate its annual budgetary proposals and make future funding requests to the President and Congress. Black Canyon and Curecanti also complete a required Multi-Year Treatment Plan, which is typically for five years, and can be found in Appendix E.

Defensible Space

The NPS has adopted the [International Code Council's \(ICC's\) International Urban-Wildland Interface Code](#) (2021) through the parameters described in [Executive Order Wildland-Urban Interface Federal Risk Mitigation](#) (May 18, 2016). Contained in the ICC's code ([sections 603 and 604](#)) are descriptions of defensible space and maintenance requirements for wildland urban interface (WUI) areas. The basic application of these standards includes removing dead and dying plant material; mowing and irrigating grasses; thinning live woody vegetation; and pruning low branches. These treatments reduce the likelihood of a structure igniting during a wildfire incident and provide fire personnel with safe opportunities for effective wildfire tactics. Reference [RM - 18, Chapter 7, Fuels Management](#) for additional information.

Defensible space doesn't just include structures and other infrastructure, it can include high value natural and cultural resources. The minimum distance to thin vegetation from a value (e.g., infrastructure, natural or cultural resource) is 30 feet. However, in some vegetation and terrain areas, such as those found at Black Canyon and Curecanti, additional distance is needed to ensure fire personnel safety while protecting a value during a wildfire.

Current information on NPS Structure Protection needs and risk assessment status of BLCA/CURE structures can be found at NPS Wildland Fire Risk Assessment (<https://wildfire-risk-assessments-nifc.hub.arcgis.com/>).

3.3 Preparedness

The Montrose Interagency Fire Danger Operating Plan (FDOP), Montrose Preparedness Plan, Montrose Staffing Plan, and Black Canyon and Curecanti Initial Response Plan are found in Appendices D of this FMP. Reference the [Red Book, Chapter 10, Preparedness](#) for preparedness planning requirements.

Preparedness Activities

The Northwest Colorado Fire Management Zone will conduct preparedness reviews on an annual basis using the approved NPS Preparedness Review Checklists. Other preparedness activities completed annually may include:

- Fire training for collateral duty park staff.

- Providing updates to the Montrose FDOP (Appendix D).
- A preseason meeting with all the Northwest Colorado Agency Administrators to discuss WFDSS, fire season outlook, preparedness reviews, etc.
- Review and sign (as needed) of all preparedness checklists, Delegations of Authority, the Inter-Park Agreement, Cooperative and Interagency Agreements, Initial Response Plan (Appendices A-D), and annual Fire Management Plan update within the required timeframe.

Coordination and Dispatching

The third-tier dispatch services for Black Canyon and Curecanti are provided by the Montrose Interagency Dispatch Center through a delegation of authority with the Dispatch Center Manager. This delegation gives the Montrose Dispatch Center Manager the authority to represent the USFS, NPS, BLM, and CO DFPC. The delegation is renewed annually, and can be found in Appendix A. In addition, there is a Montrose Interagency Coordinating Group Dispatch Zone Board, and the Zone's Charter to assist in coordination and communication among agencies. It can be found in Appendix C.

Duty Officer

Duty Officer (DO) coverage for Black Canyon and Curecanti is provided by the Colorado Southwest District BLM Fire Management Officer (BLM FMO) through a delegation of authority. This delegation gives the BLM FMO authority to make operational decisions for initial attack incidents based on this FMP, and coordinate with the NPS Northwest Colorado Zone FMO for preparedness planning, staffing levels, and fire restrictions. It also conveys the authority to delegate NPS DO responsibilities to another member of the SW Colorado District BLM fire staff as needed to ensure coverage. It is renewed annually and can be found in Appendix A.

Agency Administrator

The parks' Superintendent is by default the unit Agency Administrator. This authority can be delegated to other qualified senior staff. The Superintendent will ensure a delegation of authority is signed annually between the park AA and the Northwest Colorado FMO. The AA (or their delegate) is required to become fully qualified as an Agency Administrator (AADM) in the Incident Qualification and Certification System (IQCS), per agency policy, within two years if not already qualified. A memo is in place to designate alternative Northwest Colorado Fire Management Zone Superintendents as an acting AA in the absence of the Black Canyon and Curecanti Superintendent, and can be found in Appendix A.

Prevention

Prevention activities will consist of signs, pamphlets, and other educational materials posted at key locations (except in wilderness) about wildfire danger. The parks will also share prevention messages through interpreters, patrols, and other staff contacts during periods

of very high to extreme fire danger. Associated with prevention messages will be wildfire education and project awareness messages tailored for the public.

The first week of July is historically a high fire danger period in Black Canyon and Curecanti. During this week, the visiting public will be reminded of the 36 CFR regulations regarding the use of fireworks in the parks and the policy regarding campfires. Patrols will be alert to firework use and illegal campfires. Fire restrictions may be implemented at the Superintendent's discretion. Implementation will follow the Montrose Dispatch Fire Prevention Plan and the Montrose Interagency Operations Group's recommendations. Cooperating agencies will meet weekly throughout the fire season to discuss current and expected conditions and the need for fire restrictions. The Montrose Dispatch Fire Prevention Plan is an appendix of the Montrose FDOP and can be found in Appendix D.

Safety Program

The Black Canyon/Curecanti Superintendent is responsible for providing a documented occupational safety and health program ([Director's Order #50B](#)). The parks' safety plan is reviewed annually with Black Canyon and Curecanti personnel to discuss issues that could compromise safety and effectiveness during the upcoming season.

Job Hazard Analysis

The Fire Management Officer is required to ensure the completion of job hazard analysis (JHA) for fire and fire aviation activities, so mitigation measures are taken to reduce risk. [Red Book, Chapter 3, NPS Program Organization and Responsibilities](#). JHA's are shared via Teams with Black Canyon and Curecanti personnel that are collateral duty fire personnel.

3.4 Post-Fire Programs and Response

Black Canyon and Curecanti are responsible for taking prompt action after a wildfire to minimize threats to life or property, and to prevent unacceptable degradation of natural and cultural resources. Damages resulting from wildfires are addressed through four activities:

- **Suppression Repair:** This effort intends to repair suppression damages and is the responsibility of the Incident Commander. This activity is paid for with wildfire suppression funding.
- **Emergency Stabilization:** the intent is to protect life and property and critical resource values and is the responsibility of the Superintendent. This activity is paid for with Emergency Stabilization (ES) funding.
- **Rehabilitation:** the intent is to repair wildfire-damaged lands that are unlikely to recover naturally to management-approved conditions, or to repair or replace minor facilities damaged by wildfire. This activity is paid for from Burned Area Rehabilitation (BAR) funds.

- **Restoration:** the intent is to continue the rehabilitation efforts started in the BAR process beyond the time limitation set by the Department of Interior. This activity is paid for by regular (non-fire) program funds.

[RM - 18, Chapter 18, Post Wildfire Programs](#) and the [Red Book, Chapter 11, Incident Management and Response](#) provide direction on current processes and timeframes.

Seeding of native species in previously burned areas may be considered. Examples of when this tactic may be needed include sensitive areas subject to significant visitor use when closures would be impractical or areas where non-native species might be expected to dominate natural regeneration without the seeding of native species.

Rehabilitation by seeding of native species will be primarily of those species that occur in early seral stages after wildfire. In so far as practical, seed sources from near Black Canyon and Curecanti or from an area with a closely similar climate will be selected.

3.5 Air Quality/Smoke Management

The Clean Air Act is managed at the state level, and therefore Black Canyon and Curecanti must comply with Colorado state air quality regulations. The Colorado Department of Public Health and Environment (CDPHE) has been delegated the authority to establish regulatory procedures for the discharge of air pollutants produced by prescribed fire. The NPS is required to follow these regulatory procedures along with all applicable federal, state, interstate, and local air pollution control requirements, as specified by the Clean Air Act.

A smoke permit is required to do prescribed fires (broadcast and pile burns) within the state of Colorado and is issued through the Air Pollution Control Division within the CDPHE. CDPHE requires burners to fill out an online notification form and activity report daily, notify county smoke contacts, and submit an annual activity summary by March 1. There are also specific public communication requirements in Colorado before a prescribed fire may take place. More details can be found here: [Communicating Prescribed Fire in Colorado \(sharepoint.com\)](#). Additional Smoke Management information can be found in [RM 18, Chapter 9, Air Quality and Smoke Management](#).

3.5.1 Air Quality Issues

Black Canyon is designated as a Class I airshed, while Curecanti is designated as a Class II airshed by the Environmental Protection Agency (EPA). Presently, there are 10 Class I airsheds within 50 miles of Black Canyon and Curecanti, which are listed below.

- West Elk Wilderness, approximately 1 mile to the north, on the Grand Mesa, Uncompahgre, and Gunnison National Forests.
- Fossil Ridge Wilderness, approximately 25 miles to the west, on the Grand Mesa, Uncompahgre, and Gunnison National Forests.

- Raggeds Wilderness, approximately 35 miles to the north, on the Grand Mesa, Uncompahgre, and Gunnison National Forest and the White River National Forest.
- Maroon Bells – Snowmass Wilderness, approximately 45 miles to the northwest, on the White River National Forest and Grand Mesa, Uncompahgre, and Gunnison National Forests.
- Collegiate Peaks Wilderness, approximately 45 miles to the west northwest, on the Pike and San Isabel National Forests and the Grant Mesa, Uncompahgre, and Gunnison National Forests.
- Uncompahgre Wilderness, approximately 15 miles to the south, on the Grand Mesa, Uncompahgre, and Gunnison National Forests.
- Powderhorn Wilderness, approximately 20 miles to the south, on the Grand Mesa, Uncompahgre, and Gunnison National Forests.
- Mount Sneffels Wilderness, approximately 25 miles to the south, on the Grand Mesa, Uncompahgre, and Gunnison National Forests.
- La Garita Wilderness, approximately 30 miles to the south, on the Grand Mesa, Uncompahgre, and Gunnison National Forests and the Rio Grande National Forest.
- Lizard Head Wilderness, approximately 50 miles to the south, on the San Juan National Forest.

Additionally, all non-wilderness USFS lands are considered Class II airsheds by the EPA.

Smoke sensitive areas, as designated by the EPA, exist near Black Canyon and Curecanti, and are listed below.

- Highway 50 which runs five miles south of Black Canyon and directly through Curecanti.
- Highway 92 which runs a few miles east of Black Canyon and along the northern edge of Curecanti.
- Town of Crawford, approximately five miles to the north of Black Canyon.
- Town of Maher, approximately five miles to the east of Black Canyon.
- Town of Montrose, approximately seven miles to the southwest of Black Canyon.
- Town of Cimarron, approximately one mile south of Curecanti.
- Town of Gunnison, approximately four miles east of Curecanti.

3.5.2 Smoke Management Activities

Black Canyon and Curecanti will manage the inevitable and necessary smoke events in a manner that avoids or lessens impacts to air quality and public health for any prescribed fire, including pile burning. The Air Pollution Control Division's prescribed burn permitting process is designed to ensure these values are protected. The

mitigation measures often outlined in the permits include but are not limited to the following.

- Burning under fair or better smoke dispersion.
- Terminating ignitions several hours before sunset.
- Burning under wind speed and wind direction constraints.
- Notifying employees, stakeholders, partners, and the public in advance.
- Limiting the volume of material ignited on any given day.
- Limiting the frequency of heavy ignitions within a one-week period.
- Monitoring smoke density and locations prior to dissipation.
- Planning methods to shut down or reduce smoke emission if it becomes problematic.
- Utilizing past smoke experiences to understand and tailor future emissions.

3.6 Data and Records Management

Considerable time and effort are dedicated to acquiring and managing fire program information and data. Information is used by the parks, regional, and national offices for a variety of purposes. Data and recordkeeping represent a significant investment and must be well managed to be readily available for use when needed and must be safeguarded from damage. Required reports, timeframes, and responsible individuals are outlined below.

Fire Reports

All wildfires must be supported by a fire report, which includes data about the incident, along with a geospatial fire occurrence location point. The authoritative storage location is in Interagency Fire Occurrence Reporting Modules ([InFORM](#)). Federal units are responsible to complete a fire report for all wildfires originating on their jurisdiction, and fire reports are required to be entered and certified within 10 days of the wildfire being declared out. Typically, BLM fire staff will enter most of the wildfire's data into InFORM based on their response and Incident Organizer, and then the NPS Northwest Colorado Fire Management Zone FMO will ensure the data are accurate and certify the fire report.

Wildfire and Prescribed Fire Perimeter Polygons

All wildfire and prescribed fire location data will also be stored in InFORM with the fire report. Wildfires greater than 10 acres in size are required to have a fire perimeter within InFORM.

All prescribed fire perimeters will also be stored in [IFPRS](#). See above section of Fire Reports for more information on responsibilities for wildfire and prescribed fire perimeter data.

Non-Fire Fuels Treatment Polygons

All non-fire fuels treatment polygons will be stored in [IFPRS](#) along with data about the treatment. Geospatial data are required. The Assistant Fire Management Officer is responsible for ensuring all fuels treatment (fire and non-fire) data and polygons are

entered into the application in accordance with regional guidelines. More information on fuels treatment data can be found above in Section 3.2 Fuels Treatments.

Incident Management Qualifications

Incident management qualifications, experience, and training will be entered into the Incident Qualifications Certification System (IQCS) by the Northwest Colorado Fire Zone AFMO or Zone Fire Business Assistant. A Delegation of Authority between the FMO, who is the certifying official, and Zone Fire Business Assistant is in place to be an account manager in IQCS. Completed taskbooks will be presented to the Montrose Dispatch Area Interagency Fire Qualifications Review Committee prior to certification. The FMO will certify all qualifications, position taskbooks, and qualification cards. IQCS generated qualification cards are issued annually to current park incident responders. The FMO or AFMO will initiate position taskbooks. Hard copies of qualification records are currently being kept in the Zone Fire Business Assistant's office, and existing electronic copies are stored on The Northwest Colorado Fire Management Zone's (Dinosaur National Monument's) network drive and within IQCS.

4.0 PROGRAM MONITORING AND EVALUATION

4.1 Monitoring

Monitoring is a fundamental NPS management activity supported by policy. It provides an avenue for evaluating whether management goals and objectives are being met and whether undesired effects are occurring. When goals and objectives are not being met, monitoring data can be used to facilitate management changes. This practice is part of the adaptive management cycle the parks use to improve land management practices, which is required under NPS Management Policies ([RM-18, Chapter 7, Fuels Management and Chapter 8, Monitoring](#)).

This FMP's programmatic goals and objectives (see Section 2.1) incorporate the need for monitoring within Black Canyon and Curecanti. Specifically, the following objectives under Goal 4 outline specific objectives related to monitoring.

- Use current science to guide an adaptive and innovative fire management program in uncertain climate futures.
- Use fuels treatments to create desired effects and manage fuel accumulations to meet resource objectives based on the best available science.
- Monitor, evaluate, and adjust fuel treatments to employ adaptive management techniques.

The fire ecology program at Rocky Mountain National Park is responsible for all fire ecology and monitoring duties for the Northwest Colorado and Colorado Front Range Fire Management Zones. The Fire Ecologist, Lead Fire Effects Monitor, and fire effects crew travel from their offices at Rocky Mountain National Park to collect data on treatments.

[Fire Monitoring Handbook \(FMH\)](#) protocols are used at Black Canyon and Curecanti.

Due to the distance of the fire ecology program from Black Canyon and Curecanti, along with no fire funded personnel at the parks, most of the Level 1 and Level 2 monitoring for wildfires is done by Montrose Dispatch, the BLM DO, and fire personnel responding to wildfires. For prescribed fire and non-fire fuel treatments, Level 1 and 2 monitoring will be completed by the NPS Northwest Colorado Zone AFMO. The following provides a brief description of the monitoring levels, activities, and who will complete them that will be used to monitor fire management activities.

Level 1: Environmental Monitoring

- Wildfires: yes, BLM DO and/or NPS personnel.
- Prescribed fire: yes, NPS NW CO Zone AFMO.
- Non-fire fuels treatment: yes, NPS NW CO Zone AFMO and/or NPS personnel.

Level 2: Fire Observations Monitoring

- Wildfires: yes, responding fire personnel.
- Prescribed fire: yes, NPS NW CO Zone AFMO.
- Non-fire fuels treatment: not applicable.

Level 3: Short Term (1-4 years) Change Monitoring

- Lightning-caused wildfire with resource benefit objectives: when feasible, fire effects crew.
- Prescribed fire: yes, fire effects crew.
- Non-fire fuel treatment: if objectives warrant, fire effects crew.

Level 4: Long Term (5+ years) Monitoring

- Lightning-caused wildfire with resource benefit objectives: when feasible, fire effects crew.
- Prescribed fire: yes, fire effects crew.
- Non-fire fuel treatment: if objectives warrant, fire effects crew.

All fuels treatments will have specific and measurable objectives and will employ adaptive management through some level of monitoring. All past year Northwest Colorado and Colorado Front Range Fire Management Zone Fire Ecology Annual reports, which may include data from Black Canyon, can be found on the [NPS Data Store](#).

4.2 Research

The NPS requires adaptive management to be an integral part of every fire management program. Research is an important part of the adaptive management cycle and can help formulate programmatic management goals and individual treatment specific objectives. The Rocky Mountain National Park Fire Ecologist is the liaison between the Northwest Colorado Fire Management Zone and the academic research community.

A research paper by Prevey et al. in 2024 outlines how non-native plant invasion after fire varies by climate, vegetation type, soil, and topography. The authors found climate to be the most influential predictor of non-native species invasion. Overall non-native vegetation cover was higher in burned versus unburned areas, and wildfires had the highest cover compared to prescribed burned or unburned areas. This research can help inform fire management operations in Black Canyon and Curecanti and stresses the importance of post wildfire rehabilitation efforts.

Research by Redmond et al. in 2023 discussed managing for resilience of pinyon-juniper ecosystems during an era of woodland contraction, which is currently happening at Black Canyon and Curecanti. Ips beetles and prolonged drought have reduced pinyon juniper stands in recent years, and this research discusses findings on how stands can become more resilient, particularly with climate change. While there is still a lot of uncertainty on how and if thinning these stands is beneficial for recruitment, it does state the importance of leaving young trees, snags, and some logs in the understory to promote growth for a diversity of other plant species. This research also helps inform fuels management treatments within the parks by outlining ways to promote new growth after fuels treatments in pinyon-juniper stands.

In 2024, Chambers et al. reviewed fuels treatment effects on fuels, fire behavior, and ecological resilience in sagebrush ecosystems in the Western United States. Their literature review found there are a lot of long term and short term tradeoffs between reducing fuels versus increasing understory herbaceous growth and fire behavior. This literature review will assist the parks greatly when planning fuels treatments and habitat improvement projects within Black Canyon and Curecanti.

Lastly, the [NPSage Initiative](#) was created to help restore sagebrush-steppe ecosystems and will help inform future wildfire and fuels treatments within the parks. The Northwest Colorado Fire Management Zone will continue to invest in research collaborations to inform wildland fire management program actions and objectives. A combination of research and monitoring will be needed to prepare for shifts in vegetation communities and fire regimes with a changing climate.

4.3 Climate Change

Climate change is affecting vegetation structure, composition, function, and ecosystem processes throughout the United States and within Black Canyon and Curecanti. It presents new challenges for managing wildfires as the fire environment changes with the climate. Predictions point toward increases in temperature, reduced snowpack, more severe drought, increase in area burned by wildfires, tree mortality, and biome shifts (Gonzalez 2020).

Along with increases in average temperature, more extreme climate events could occur, and should be planned for. These could be intense storms, flood events, or extended drought. An indirect result of climate change affecting fire management in Black Canyon and Curecanti is an increase in non-native cheatgrass cover and density, which not only alters fire regimes but outcompetes native vegetation and changes ecosystem functionality.

It's important for managers in Black Canyon and Curecanti to have an idea of how climate change may affect the program's goals. The following discussion outlines the four programmatic fire management goals, how climate may impact them, if each is still achievable with climate change, and what actions may be taken to resist, accept, or direct (Schuurman et al. 2020) climate change affects related to the programmatic goal.

Goal 1: The Black Canyon and Curecanti programmatic fire goal related to employee and public risk management must resist climate change. Future fire environments will increase physical and mental health risk. Longer and more severe fire seasons may require additional staff for an increased workload. The parks will strive to maintain an adequate collateral duty fire workforce in all aspects of the program including support positions. Employee wellness will be a core value of the organization. Public information and education about fire will need to keep pace with the amplified risk environment.

Goal 2: Protection of highly valued resources and assets will also become more challenging under projected fire environments. In preparation, fuels treatments will be designed using climate-informed risk assessments. Structures (including those that are culturally significant) can be made more fire resilient through the use of specialized construction materials. Natural resource protection will be facilitated by pre-identification of vulnerable locations and habitats such as non-native vegetation infestations. Planning for postfire emergency stabilization, recovery, and restoration will be important. This includes reducing the probability of invasive species colonization in burned areas through a variety of methods (e.g., herbicides, reseeding, pulling, etc.).

Goal 3: Climate change will challenge the Northwest Colorado Fire Management Zone at all levels, including relationships both internally and externally. Adaptive management and a forward-looking approach will be vital for the program's effectiveness, whether they are resisting, accepting, or directing change. Fire managers will need to be creative and collaborative in planning, fire response, and fuels management. Communication about climate adaptation with park stakeholders and local community leaders will need to be proactive and frequent.

Goal 4: For ecologically sound and resilient fire regimes, fire managers will need to be diligent in tracking the newest science in climate and fire relationships. Fire effects monitoring will be designed to track unforeseen changes. Since sagebrush and pinyon-juniper can take many decades to recover structure and function after a stand replacing fire,

maintaining these communities on the landscape will require the parks to take a directing approach to climate change. A combination of planned fuels treatments and fire response strategies will help to maintain fire resilience for all vegetation types in Black Canyon and Curecanti. Locations of sensitive plant communities, fire refugia, as well as areas where fire disturbance is desired will be needed for both planned and unplanned actions. The need for this will need to be communicated to stakeholders to obtain support.

4.4 Evaluations, Reviews, and Updates

Fire Program Review

The National Park Service has developed a Wildland Fire Program Review Guide that describes the program review framework. For more information reference [RM - 18, Chapter 16, Evaluations, Reviews, and Investigations](#). Reviews may be scheduled on a regular cycle, or requested by park, regional or national leadership.

The Intermountain Region conducts Annual Program Assessments that evaluate the health of a program across nine program areas. Findings and trends identified in these assessments assist regional managers in focusing their formal review schedule.

Wildland Fire Incident Review

All wildland fires and fire-related incidents will be reviewed in accordance with [RM - 18, Chapter 16, Evaluations, Reviews, and Investigations](#) and the [Red Book, Chapter 18, Reviews, and Investigations](#).

Annual Fire Management Plan Update

An annual review is required for this Fire Management Plan. The review process is described in [RM - 18, Chapter 4, Fire Management Plans](#). Any needed updates to this FMP such as new terminology, policy references, or changes to park specific information will be identified and made as part of this process. After review by Regional Fire Planners, a new cover sheet for the FMP will then be signed by the Fire Management Officer and the Park Superintendent.

This FMP's appendices will also be reviewed annually and replaced with current (signed, if applicable) documents as needed. Electronic copies of the FMP and required appendices with current ink or certified electronic signatures will be uploaded to the [NPS-IMRO-Annual Park Preparedness Docs Folder](#). Fire Management Plans that have not undergone annual updates within the specified timeframe are not considered current.

NWCG GLOSSARY

The National Wildfire Coordinating Group (NWCG) [Glossary of Wildland Fire](#) provides an extensive listing of approved terms and definitions used by the NWCG community. It contains terms commonly used by NWCG in the areas of wildland fire and incident management and is not intended to list all terms used by NWCG groups and member agencies. The NWCG has directed that all committee and subgroup

product glossaries be contained within the NWCG Glossary of Wildland Fire to maintain definition consistency and clarity among documents.

REFERENCES CITED

Abatzoglou, J. T., and Williams, A. P. 2016. Impact of anthropogenic climate change on wildfire across western US forests. *Proceedings of the National Academy of Sciences of the United States of America* 113:11770–11775.

Alder, J. R., Hostetler, S. W. 2024. USGS National Climate Change Viewer. US Geological Survey <https://doi.org/10.5066/F7W9575T>. Accessed on February 26, 2024.

Barbero, R., Abatzoglou, J. T., Larkin, N.K., Kolden, C. A., and Stocks, B. 2015. Climate change presents increased potential for very large fires in the contiguous United States. *International Journal of Wildland Fire* 24:892.

Chambers, J. C., Strand, E. K., Ellsworth, L. M., Tortorelli, C. M., Urza, A. K., Crist, M. R., Miller, R. F., Reeves, M. C., Short, K. C., Williams, C. L. 2024. Review of fuel treatment effects on fuels, fire behavior and ecological resilience in sagebrush (*Artemisia* spp.) ecosystems in the Western U.S. *Fire Ecology*. 20: 32.

Gonzalez, P. 2020. Human-caused climate change in United States national parks and solutions for the future. *Parks Stewardship Forum*, 36(2). <http://dx.doi.org/10.5070/P536248262> Retrieved from <https://escholarship.org/uc/item/9443s1kq>

Hegewisch, K. C. and Abatzoglou, J. T. 2024. ' Historical Climate Tracker' web tool. Climate Toolbox (<https://climatetoolbox.org/>) accessed on February 13, 2024.

National Park Service. 1993. Resource Management Plan, Black Canyon of the Gunnison National Monument and Curecanti National Recreation Area.

National Park Service. 1997. General Management Plan, Black Canyon of the Gunnison National Monument and Curecanti National Recreation Area.

Parks S. A., Abatzoglou, J. T. 2020. Warmer and drier fire seasons contribute to increases in area burned at high severity in Western US forests from 1985 to 2017. *Geophysical Research Letters*, 47, e2020GL089858. <https://doi.org/10.1029/2020GL089858>

Prevéy, J. S., Jarnevich, C. S., Pearse, I. S., Munson, S. M., Stevens, J. T., Barrett, K. J., Coop, J. D., Day, M. A., Firmage, D., Fornwalt, P. J., Haynes, K. M., Johnston, J. D., Kerns, B. K., Krawchuk, M. A., Miller, B. A., Nietupski, T. C., Roque, J., Springer, J. D., Stevens-Rumann, C. S., Stoddard, M. T., Tortorelli, C. M. 2024. Non-native plant invasion after fire in western USA varies by functional type and with climate. *Biological Invasions* 26, 1157–1179 (2024). <https://doi.org/10.1007/s10530-023-03235-9>

Redmond, M. D., Urza, A. K., Weisberg, P. J. 2023. Managing for Ecological Resilience of Pinyon–Juniper Ecosystems during an Era of Woodland Contraction. *Ecosphere* 14(5): e4505.

<https://doi.org/10.1002/ecs2.4505>

Schuurman, G. W., Hawkins-Hoffman C., Cole D. N., Lawrence, D. J., Morton J. M., Magness, D. R., Cravens A. E., Covington, S., O’Malley, R., and Fisichelli, N. A. 2020. Resist-accept-direct (RAD)— a framework for the 21st-century natural resource manager. Natural Resource Report NPS/NRSS/CCRP/NRR—2020/ 2213. National Park Service, Fort Collins, Colorado.

<https://doi.org/10.36967/nrr-2283597>.

DRAFT

USEFUL WEB LINKS

[Communicating Prescribed Fire in Colorado, IMRO Fire and Aviation](#)

[Directors Order #18: Wildland Fire Management; National Park Service](#)

[Directors Order #50B: Occupational Safety and Health Program; National Park Service](#)

[Executive Order Wildland-Urban Interface Federal Risk Mitigation](#)

[Fire Monitoring Handbook \(FMH\)](#)

[IFPRS, Interior's Fuels and Post-fire Reporting System](#)

[InFORM, Interagency Fire Occurrence Reporting Modules](#)

[Intermountain Regional Fire and Aviation SharePoint Site](#)

[International Code Council's \(ICC's\) International Urban-Wildland Interface Code](#)

[International Code Council's \(ICC's\) Sections 603 and 604](#)

[Red Book, Interagency Standards for Fire and Fire Aviation Operations, NFES 2724](#)

[Intermountain Region WFDSS Supplemental Guidance](#)

[National Cohesive Wildland Fire Management Strategy](#)

[National Environmental Policy Act \(NEPA\)](#)

[NPS Data Store](#)

[NPSage Initiative](#)

[NPS Wildland Fire Risk Assessment](#)

[NWCG Standards for Prescribed Fire Planning and Implementation, PMS 484](#)

[Planning, Environment, and Public Comment \(PEPC\); National Park Service](#)

[Wildfire Risk and Complexity Assessment \(RCA\)](#)

[Reference Manual #18 \(RM-18\): Wildland Fire Management; National Park Service](#)

[Wildland Fire Decision Support System \(WFDSS\)](#)

[Wildland Fire Decision Support System \(WFDSS\) Management Requirements](#)

[Wildland Fire Decision Support System \(WFDSS\) Strategic Objectives](#)

[Wildland Fire Strategic Plan 2020-2024](#)

APPENDICES

Appendix A1: FMO Delegation of Authority

Appendix A2: Montrose BLM Duty Officer Delegation of Authority

Appendix A3: Montrose ICT3, 4, and 5 Delegation of Authority

Appendix A4: NW Colorado WFDSS Delegation

Appendix A5: Montrose Interagency Dispatch Center Manager Delegation of Authority

Appendix B: Interpark Agreement between DINO, BLCA/CURE, and COLM

Appendix C1: Delta County Annual Operating Plan

Appendix C2: Gunnison County Annual Operating Plan

Appendix C3: Montrose County Annual Operating Plan

Appendix C4: Montrose Dispatch Executive Board Charter

Appendix D1.0: Montrose Interagency Dispatch Fire Danger Operating Plan

Appendix D1.1: Montrose Interagency Dispatch Fire Danger Operating Plan Biennial Review Checklist

Appendix D2: Montrose Interagency Dispatch Preparedness Plan

Appendix D3: Montrose Interagency Dispatch Staffing Plan

Appendix D4: BLCA/CURE Initial Response Plan

Appendix D5: Montrose FDRA Pocket Card

Appendix E: Multi-year Fuels Treatment Plan