

SWCA

Moon Lake Electric Association Wildland Fire Protection Plan

JUNE 2020



PREPARED FOR

Moon Lake Electric Association

PREPARED BY

SWCA Environmental Consultants

MOON LAKE ELECTRIC ASSOCIATION WILDLAND FIRE PROTECTION PLAN

Prepared for

Moon Lake Electric Association
800 West Highway 40
Roosevelt, Utah 84066
Attn: Manager of Operations

Prepared by

Victoria Amato, M.S., Anne Russell, B.S. and Arianna Porter, M.S.

SWCA Environmental Consultants
257 E 200, S Suite
Salt Lake City, Utah 84111
(801) 322-4307
www.swca.com

SWCA Project No. 61037

June 2020

CONTENTS

1	Introduction	1
1.1	Organization of the Wildfire Mitigation Plan.....	3
2	Overview.....	3
2.1	Policy Statement	3
2.2	Purpose of the Wildfire Mitigation Plan.....	3
2.3	Existing Wildfire Planning Efforts within the Service Area	4
2.3.1	Duchesne County	4
2.3.2	Uintah County	5
2.3.3	Wasatch County	5
2.3.4	Daggett County	6
2.3.5	Bureau of Land Management.....	6
2.3.6	U.S. Forest Service	7
2.4	Roles and Responsibilities	7
2.4.1	Company Structure	7
2.4.2	Coordination with Outside Entities.....	8
3	Objectives of the Wildfire Mitigation Plan	9
3.1	Minimizing Sources of Ignition.....	10
3.2	Resiliency of the Electric System	10
3.3	Wildfire Prevention Strategies and Protocols.....	10
3.4	Identifying Unnecessary or Ineffective Actions	11
4	Wildfire Risk Analysis	11
4.1	Fire History.....	11
4.2	Vegetation Communities	14
4.2.1	Fuels.....	16
4.3	Topography.....	19
4.4	Weather.....	20
4.5	Fire Behavior	21
4.6	Analysis Approach	22
4.6.1	Aggregate Value Impacts.....	22
4.6.2	Wildfire Threat	25
4.6.3	Wildfire Risk.....	27
4.7	Risk Assessment and Action Plan	29
5	Wildfire Prevention Strategies and Protocols.....	29
5.1	Inspection Procedures	29
5.1.1	Inspection Schedule	29
5.1.2	Documentation.....	30
5.1.3	On-site Repair	30
5.1.4	Responsibility	30
5.2	Vegetation Management Protocols.....	31
5.2.1	Procedure	31
5.2.2	Inspection Standards	32
5.2.3	Clearance Standards.....	32
5.2.4	Responsibility	32
5.2.5	Raptor Protocols	33

5.3	Modifications and Upgrades to Infrastructure	33
5.3.1	System Improvements.....	33
5.4	De-energizing Protocols	33
5.5	Restoring Service.....	33
6	Community Outreach and Education	34
6.1	Public Safety and Notification.....	34
7	Integration with Applicable Plans	35
8	Literature Cited.....	37

Appendices

- Appendix A. Supporting Documents and Mapping
- Appendix B. Detailed Mapping of High-Risk Segments

Figures

Figure 1. General project location, showing MLEA’s infrastructure, service area, and land ownership.....	2
Figure 2. MLEA crews repairing structures damaged during the Dollar Ridge fire of 2018.	11
Figure 3. Fire occurrence history within the MLEA service area.....	13
Figure 4. Vegetation classification from UWRAP.	15
Figure 5. MLEA line in Current Creek during Dollar Ridge fire	17
Figure 6. Fuel model classification for the MLEA service area from UWRAP.	18
Figure 7. Daily temperature extremes and averages for Duchesne, Utah.....	21
Figure 8. Monthly average precipitation for Duchesne, Utah.....	21
Figure 9. Aggregate Value Impacts for the MLEA service area from UWRAP.....	24
Figure 10. Wildfire threat for the MLEA service area from UWRAP.....	26
Figure 11. 3 Pole Structure damaged on Dollar Ridge fire of 2018.....	27
Figure 12. Wildfire risk for the MLEA service area from UWRAP. Note distribution lines are removed in this figure to facilitate viewing of the risk layer.	28
Figure 13. System upgrades on 69 kV switch.....	30

Tables

Table 1. MLEA Service Area Statistics	1
Table 2. Strategy Leads.....	7
Table 3. Vegetation Community Classification within the 0.5-mile Corridor for MLEA Lines	16
Table 4. Scott and Burgan Fuel Model Composition within the 0.25-mile corridor for MLEA Lines.....	17
Table 5. Fuel Model Descriptions.....	19
Table 6. Acres within Various Aggregate Value Impact Categories for the 0.25-mile Buffer around MLEA Infrastructure/0.5-mile Corridor	22
Table 7. Wildfire Threat within a 0.25-mile Buffer around MLEA Infrastructure/0.5-mile Corridor	25
Table 8. Wildfire Risk within a 0.25-mile Buffer around MLEA Infrastructure/0.5-mile Corridor.....	27
Table 9. Contact Information from Agency Representatives with Jurisdiction within the MLEA Service Area.....	35

1 INTRODUCTION

Moon Lake Electric Association (MLEA) had its inception when Mr. S.K. Daniels of Altamont and some of his neighbors got together and wrote to the Rural Electrification Administration asking for loan funds to start a cooperative to provide central station electric service to the communities of Altonah, Bluebell, Mt. Emmons, and their neighbors. The company was first named the Altonah-Bluebell-Mt. Emmons Rural Electrification Association, but this title was too long, so it was changed to Moon Lake Electric Association, Inc. The name comes from the Federal Reclamation Project in the vicinity, which serves the general area with irrigation water.

The first membership meeting was held on October 6, 1938. Mr. S.K. Daniels was elected president.

MLEA first purchased power from Uintah Power & Light Company (an investor-owned utility), then installed a hydro unit on the Yellowstone River in 1941. Additional units were added as MLEA grew, and a 550-kW diesel-generating plant was installed at Leeton, Utah (between Lapoint and Neola) and later moved to Altamont. Growth continued, and the Rangely Power & Light Company was purchased in 1951. In 1961, MLEA purchased the stock of the Uintah Power & Light Company, operating it as a separate utility until 1971, when the two companies merged.

In October 1980, MLEA became one of six members of Deseret Generation & Transmission Cooperative, which was created to provide a long-term, reliable, and affordable power supply for the State’s rural electric association.

MLEA serves Duchesne, Daggett, Uintah, and Wasatch Counties in Utah, and Moffat, Rio Blanco and Garfield Counties in Colorado (Figure 1) and has grown to such an extent that it is one of the larger cooperatives in kilowatt-hour sales of the approximately 900 cooperatives in America. Headquartered in Roosevelt, Utah, as of May 1, 2020, it had 87 employees serving over 20,000 accounts (Table 1).

MLEA prides itself in being the “people utility” where “open membership,” “democratic involvement,” “member participation,” and a “concern for community” are its guiding principles.

Table 1. MLEA Service Area Statistics

County	Service Area	Miles of Transmission	Miles of Overhead Distribution	Miles of Underground Distribution	Substations	Number of Members
Duchesne, Daggett, Uintah, Wasatch counties in UT; Moffat, Rio Blanco, Garfield counties in CO.	7,337-square-mile service territory	346	3,411	305	41	20,783 meters and 12,283 members

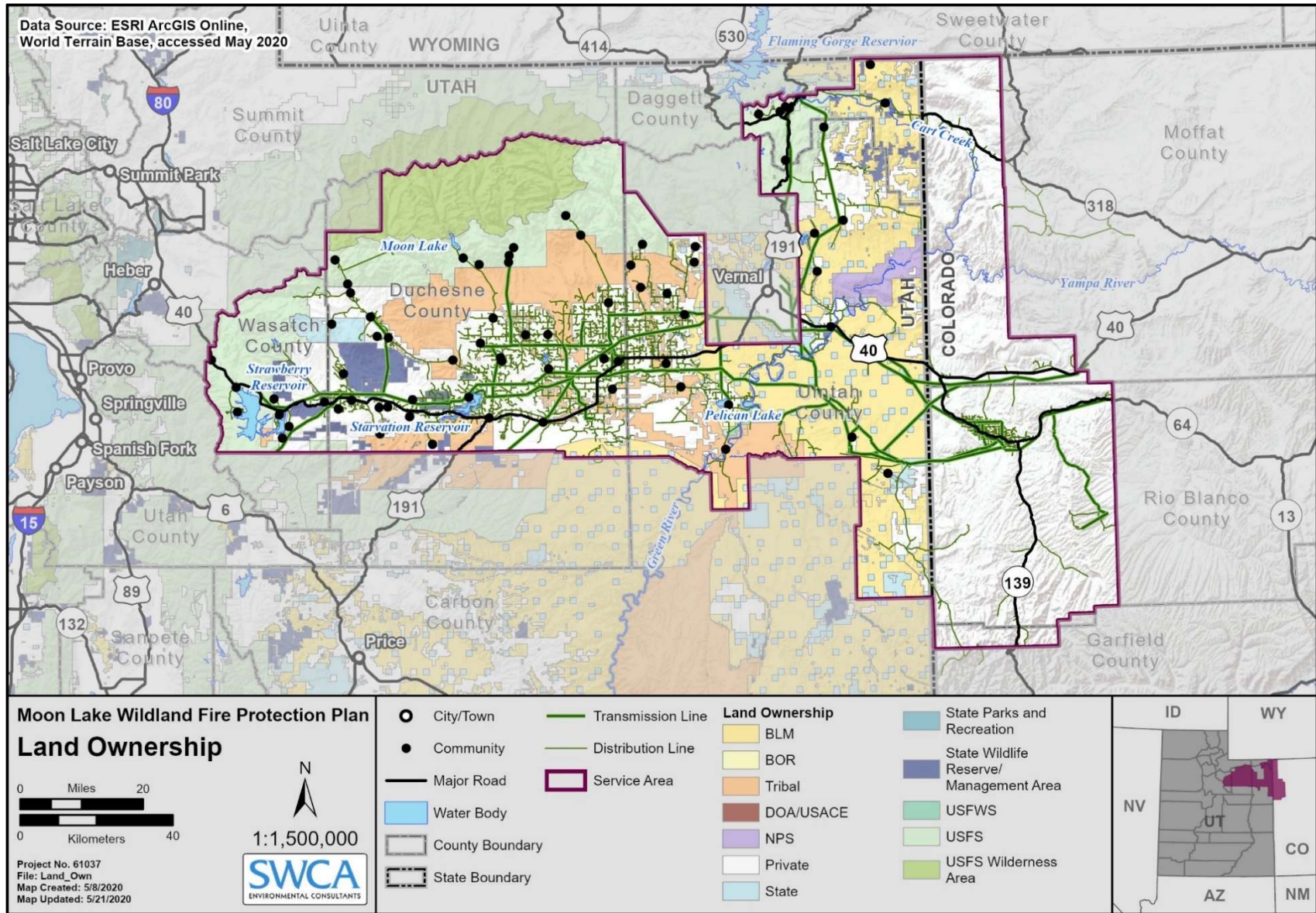


Figure 1. General project location, showing MLEA’s infrastructure, service area, and land ownership.

1.1 Organization of the Wildfire Mitigation Plan

The Plan includes the following sections:

Section 2: Overview

Section 3: Objectives of the Wildfire Mitigation Plan

Section 4: Wildfire Risk Analysis

Section 5: Wildfire Prevention Strategies and Protocols

Section 6: Community Outreach and Education

Section 7: Integration with Applicable Plans

Appendix A: Supporting documents and mapping

Appendix B: Detailed mapping of high-risk segments and action plan

2 OVERVIEW

2.1 Policy Statement

Given recent increases in wildfire frequency and severity throughout Utah, on March 28, 2020, the Governor signed House Bill 66, Wildland Fire Planning and Cost Recovery, a law that grants the Public Service Commission rulemaking authority to enact rules establishing procedures for the review and approval of wildland fire protection plans. The law requires qualified utility and electric cooperatives to prepare and submit for approval a wildland fire protection plan in accordance with the requirements outlined in the Bill.¹

2.2 Purpose of the Wildfire Mitigation Plan

This Wildland Fire Protection Plan (Plan) describes the range of activities that MLEA is taking or considering to mitigate the threat of power-line ignited wildfire, including the protocols and procedures that MLEA would undertake, as well as industry best practices. The Plan complies with the requirements outlined under House Bill 66 to prepare a wildland fire protection plan by June 1, 2020, and every 3 years thereafter. Although House Bill 66 applies only to the MLEA service area within Utah, this Plan also includes some supplementary mapping to accommodate MLEA lines that extend into Rio Blanco and Moffat Counties in western Colorado (Appendix A). Protocols and procedures described in Section 5 apply to the entire MLEA service area (inclusive of Colorado).

The final plan has been reviewed by all pertinent agencies including a third-party review by subject matter experts. The plan was duly adopted by the MLEA Board of Directors on May 28, 2020.

¹ Utah House Bill 66: <https://le.utah.gov/~2020/bills/static/HB0066.html>

All sections of the plan will be reviewed and revised on an annual basis and the findings will be presented to the Board of Directors. The Plan will be fully revised every 3 years, which will include a revised risk analysis and development of plan recommendations to incorporate new technology and industry best practices.

2.3 Existing Wildfire Planning Efforts within the Service Area

This Plan is designed to align with wildfire mitigation goals identified in other existing land management plans already in place in the service area. The service area incorporates portions of Duchesne, Uintah, Wasatch, and Daggett Counties. Within each county are numerous Communities at Risk (CARs) from wildfire, which are referenced in the Utah Division of Natural Resources (DNR) Utah Wildfire Risk Assessment Portal (UWRAP)² and which may have specific wildfire mitigation measures proposed under municipal and county planning documents.

2.3.1 Duchesne County

It is estimated that Duchesne County has a population of approximately 21,727 people as of 2018, the majority of which live in the cities and towns. Duchesne County has a total of seven fire departments, located in Altamont, Duchesne, Fruitland, Myton, Neola, Roosevelt, and Tabiona. The fire departments in Fruitland, Tabiona, and Neola are county-operated, and others are city fire departments on contract with Duchesne County. The county has approximately 95 volunteer firefighters and one fire marshal. Fires not occurring on Bureau of Land management (BLM), U.S. Forest Service (USFS), or Bureau of Indian Affairs (BIA) lands are fought using these local resources. The State Fire Warden, associated with the Utah Division of Forestry, Fire and State Lands (UDFFSL), is currently overseeing fire response in the county, as well as providing wildland fire training to volunteers. When a fire exceeds the capability of these local and area resources, additional resources are solicited through the Uintah Basin Interagency Fire Center (SWCA Environmental Consultants [SWCA] 2007a).

In 2020, Duchesne County developed a Community Wildfire Protection Plan (CWPP) to support the implementation of prevention, preparedness, and mitigation actions proven to reduce the risk and cost of wildland fire. In this plan, utilities are identified as a community value which could be impacted by wildfire and the plan calls for adequate planning to minimize any utility downtime in the event of a wildfire. Specifically, Goal A in this plan is “to decrease fuels around key areas within and around communities to reduce wildfire intensity and impact.” As part of achieving this goal, management action A-9 is to maintain clear zones for utility corridors and infrastructure, with the plan holding Duchesne County, utility companies, and utility operators responsible for these actions. Similarly, Goal B is to work with state, federal, and tribal agencies to decrease fuels on adjacent public land to reduce wildfire intensity and impact. Management action B-11 is the same as management action A-9. Additionally, protecting the MLEA substation near Mt. Tabby Springs is a priority listed in this CWPP (Rural Community Consultants 2020).

There are several other community fire plans that fall within the County boundary, including Mt Tabby Springs (2014), Fruitland (2013), Argyle Canyon (2013), and Neola (2003).

The Duchesne County CWPP is not available online, but Duchesne County is covered under the 2007 Uintah Basin Regional Wildfire Protection Plan (RWPP), which is available at the link below.³ This

² Utah DNR Wildfire Risk Assessment Portal: <https://wildfirerisk.utah.gov/>

³ Uintah Basin Regional Wildfire Protection Plan: <https://digitallibrary.utah.gov/awweb/awarchive?type=file&item=31611>

regional plan was created to address issues in the region pertaining to increasing size and severity of wildfires over the last century and increased development in the wildland-urban interface and covers Daggett, Duchesne, and Uintah Counties.

2.3.2 Uintah County

As of 2017, Uintah County is home to 35,150 people (Rural Community Consultants 2018). Uintah County has one full-time fire chief, zero full-time firefighters, and approximately 88 volunteer firefighters among six fire departments in Vernal, Jensen, Naples, LaPoint, Tridell, and Avalon. In areas not managed by the BLM, USFS, National Park Service (NPS), or BIA, fire protection and hazardous materials response is provided by these local resources. The State Fire Warden, associated with the UDFFSL, is currently overseeing fire response in the county, as well as providing wildland fire training to volunteers. When a fire exceeds the capability of these local and area resources, additional resources are solicited through the Uintah Basin Interagency Fire Center (SWCA 2007a).

In 2018, Uintah County developed a CWPP to assess the community's level of risk and use targeted management actions to mitigate the potential damage of future fires. The CWPP does not make specific recommendations for treatments related to utility line mitigations. However, as part of CWPP development, Uintah County conducted a stakeholder survey, which found that community concerns included aboveground utilities using poles made of wood and the potential for downed power lines starting or exacerbating wildfires. Because transmission lines have been identified as an at-risk value and a potential contributor to wildfire, this CWPP includes maps of MLEA transmission lines (Rural Community Consultants 2018).

The Uintah County CWPP is available on the Uintah County website.⁴ Uintah County is also covered under the aforementioned 2007 Uintah Basin RWPP. Additionally, there is one community fire plan that falls within the County boundary, the Dry Fork Canyon CWPP (Rural Community Consultants 2018).

2.3.3 Wasatch County

As of 2019, Wasatch County has 32,106 residents, more than half of whom live in cities and towns. Fire response for the Northern Utah region, including Wasatch County, is coordinated through the Northern Utah Interagency Fire Center (NUIFC), in cooperation with the Eastern Great Basin Coordination Center. The NUIFC is a cooperative effort among the BLM, USFS, and the UDFFSL. The NUIFC is responsible for dispatch and coordination for approximately 14 million acres of land that average 500 fires per year (SWCA 2007b).

In 2019, Wasatch County began developing a CWPP. The plan's objectives include empowering local government and citizens to address the safety and resilience of any identified values at risk, characterizing wildfire threat in Wasatch County, identifying risk reduction strategies for community infrastructure, and promoting stakeholder collaboration. The CWPP does not make specific recommendations for treatments related to utility line mitigations. However, utilities are identified as a protected value (Wasatch County, 2020).

The Wasatch County CWPP is not available online; however, Wasatch County is covered under the 2007 Northern Utah RWPP (available at the link below),⁵ which was created to address increasing wildfire size and severity in combination with increased development in the wildland-urban interface. This plan covers Box Elder, Cache, Davis, Morgan, Rich, Salt Lake, Summit, Tooele, Utah, Wasatch, and Weber Counties.

⁴ <http://uintahfire.com/index.php>

⁵ Northern Utah Regional Wildfire Protection Plan: <https://digitallibrary.utah.gov/awweb/awarchive?item=31610>

In 2009, Wasatch County created a summarization of their emergency operations plan. In the event of an emergency, utilities are directed to coordinate mutual aid agreements with other utility providers and coordinate utility recovery with public power companies and the department of public works. This summary is available online⁶ (Wasatch County 2009).

In 2017, the Mountainland Association of Governments (covering Summit, Utah, and Wasatch Counties) developed a hazard mitigation plan, available at the link below.⁷ The plan's purpose is to help grow hazard awareness and identify measures to reduce vulnerability and risk in each county. Potential wildfire mitigation strategies identified in the plan include creating defensible space around powerlines and replacing flammable vegetation (Mountainland Association of Governments 2017).

2.3.4 Daggett County

Daggett County is one of the least populated counties in the state, which is attributable to its mountainous landscape and remote location. Daggett County has two fire departments: one in Dutch John that covers the east side of the county, and the Manila Fire Department, which covers the west side of the county. The county has no paid, full-time fire fighters and no official fire warden. Daggett County does not have an official Fire Warden, that position is shared with Uintah County. When a fire exceeds the capability of local and area resources, additional resources are solicited through the Uintah Basin Interagency Fire Center. Under a local agreement with Sweetwater County in Wyoming, Daggett County firefighters are also first responders to fires within Sweetwater County.

Daggett County has not completed a County CWPP, and therefore, the 2007 Uintah Basin RWPP is the most recent wildfire planning document for the county. The Uintah Basin RWPP identifies approximately 64 miles of power and gas lines in Daggett County as at risk (Uintah Basin Association of Governments 2004).

2.3.5 Bureau of Land Management

In 2020, the BLM issued an instruction memorandum to establish policies regarding routine operation and maintenance activities on electric utilities' rights-of-way (ROW) to reduce wildfire risk. This memorandum establishes that the ROW holders have the authority to conduct operation and maintenance activities and that they must do everything reasonable to reduce wildfire risk within or in the immediate vicinity of their ROW. Furthermore, ROW holders must comply with any requirements to control or prevent property damage and protect public health and safety. Unless in direct conflict with applicable laws and regulations, the BLM requests to be notified within 30 days of maintenance completion (BLM 2020).

In 2018, the BLM Vernal Field Office in the Green River District developed a Fire Management Plan to describe fire management strategies created to protect BLM values against wildfire and to describe tools used to meet natural resource objectives. The Vernal Field Office covers portions of Daggett, Duchesne, and Uintah Counties. Fire management objectives outlined in the plan include management of noxious weeds and insect infestations with fire or mechanically, biologically, or chemically. Although the plan does not make direct mention of utilities, MLEA could work with the BLM to develop vegetation management protocols.

⁶ Wasatch County Emergency Operations Plan Summarization: <https://www.wasatch.utah.gov/Portals/0/PublicWorks/Pdfs/Emergency/EM%20Plan%20Suimmarization%20wasatch%20county.pdf>

⁷ Mountainland Association of Governments Hazard Mitigation Plan: <https://mountainland.org/hazards>

2.3.6 U.S. Forest Service

The Ashley National Forest’s (NF) fire management plan (FMP) is a spatial plan contained in the Wildland Fire Decision Support System (WFDSS). The FMP is informed by the forest management plan and the Utah Fire Amendment, which applies to all forests in the state of Utah. The FMP allows for a wide range of management responses, from management for resource benefit to full suppression. It also allows for various hazardous fuels management tools including prescribed fire and mechanical management. The Ashley National Forest Plan is currently under review and will include similar allowances for management responses and hazardous fuels management tools.

Fuel management projects are developed and prioritized by evaluating hazards at risk and condition class. When evaluating critical areas, protection of highly valued resource areas (HVRAs), including natural and human-made features, will be accounted for. The forest will collaborate on these efforts with state, county, federal, and utility partners. Currently, the Ashley NF identifies priority areas using a process through Shared Stewardship with the State of Utah. The forest is seeking to increase the number of acres treated per year.

Federal agencies routinely develop fuel treatment planning to address hazardous fuels within their jurisdiction. MLEA could work with the BLM and USFS to look for opportunities to treat fuels in and around the MLEA right-of-way (ROW) to help mitigate wildfire risk in areas projected to have high or extreme fire behavior. See Appendix A, Figure A-1 for an example of fuel treatments that are occurring or are ongoing in the MLEA service area.

2.4 Roles and Responsibilities

2.4.1 Company Structure

Table 2 outlines the proposed assignments for implementation of the Plan. These assignments are subject to change.

Table 2. Strategy Leads

Strategy	Lead Personnel	Key Technical Personnel
Operational Practices	Line Superintendent	Curtis Miles
	Manager of Operations	Robert Uresk
System Hardening	Line Superintendent	Curtis Miles
	Manager of Operations	Robert Uresk
	Manager of Engineering	Pat Corun
Enhanced Inspections	Line Superintendent	Curtis Miles
	Manager of Operations	Robert Uresk
Situational Awareness	Human Resources	Yankton Johnson
Reclosing and De-energization	Line Superintendent	Curtis Miles
	Manager of Operations	Robert Uresk
Public Safety and Notification	Human Resources	Yankton Johnson
Vegetation Management	Line Superintendent	Curtis Miles
	Manager of Operations	Robert Uresk
Wildfire Response and Recovery	Line Superintendent	Curtis Miles
	Manager of Operations	Robert Uresk

2.4.2 Coordination with Outside Entities

Figure 1 outlines the land ownership within the MLEA service area. Contact information for all entities within the service area is provided in Section 7.

2.4.2.1 COUNTY

All counties in the state of Utah are affected by Utah Code Section 65A-8-6 (House Bill 146 [HB 146], which was passed by the Utah Legislature in the 2004 General Session and took effect in March of 2006).

Utah Code Section 65A-8-6 requires that counties meet eligibility requirements to enter into a cooperative agreement with the UDFFSL for wildfire protection. The Code states that counties shall

- adopt a wildland fire ordinance based on minimum standards established by the division (UDFFSL);
- require that the county fire department or equivalent private provider under contract with the county meet minimum standards for wildland training, certification, and wildland fire suppression equipment based on nationally accepted standards as specified by the division (UDFFSL); and
- file with the division (UDFFSL) a budget for fire suppression costs.

Each of these eligibility requirements must be met before UDFFSL may enter into a cooperative agreement for wildfire protection with any county.

All cities and counties need to be in compliance with the NIMS (National Incident Management System) and the NRS (National Response Plan) in order to receive funding from the Department of Homeland Security.

2.4.2.1.1 Tri-County Region (Duchesne, Daggett, and Uintah Counties)

The tri-county area, made up of Duchesne, Daggett, and Uintah Counties, takes a unified approach to emergency management. Duchesne and Daggett Counties follow procedures analogous to those described below for Uintah County.

The Uintah County Emergency Operations Plan describes firefighting operations under emergency support function (ESF) 4. ESF 4 actions are those taken by local fire departments; mutual aid assistance from neighboring jurisdictions; and, in some cases, state, federal, and private industry resources and technical expertise to control and suppress fires that threaten to become major emergencies. Mutual aid compact agreements between local governments will be followed through established and recognized firefighting standards and methods. Coordination with local, state, federal, and private companies is accomplished under the Incident Command System element of the NIMS Command and Management component of the National Response Framework. A representative from each agency will report to the Incident Command Post or emergency operations center where information can be gathered and disseminated. Each representative will be part of a Unified Command system.

2.4.2.1.2 Wasatch

The Wasatch County Emergency Operations Plan (Wasatch County 2009) is summarized on the County Emergency Management webpage.⁸ The plan outlines in general terms how Wasatch County will prepare for, respond to, recover from, and mitigate an emergency or disaster. The basic plan follows the same guidelines in the plans developed by the State of Utah and the federal government. The County Emergency Management Director provides policy direction and coordinates response efforts with the County Manager and County Council. Coordination related to power supply during an emergency or disaster is led by the Public Works Director, who will coordinate mutual aid agreements and recovery with utility providers throughout the county. The County Fire Chief is responsible for coordinating all fire and hazardous materials activities.

2.4.2.2 STATE

Wildfires that occur on state and private lands outside city limits are managed by the UDFFSL, and fire suppression efforts are coordinated through county fire wardens, who work with federal agencies and local fire departments (Utah Division of Emergency Management 2019).⁹

2.4.2.3 FEDERAL

As mentioned previously, fire response for portions of the northern Utah region is coordinated through the NUIFC, in cooperation with the Great Basin Coordination Center. The NUIFC is a cooperative effort among the BLM, USFS, and the UDFFSL. The NUIFC creates initial response plans called “run cards” to define fire response within geographic areas. These run cards are created based on fire weather, management objectives, fuel conditions, and response resource availability. The NUIFC also creates a Mobilization Plan that guides multi-agency fire response (NUIFC 2018).¹⁰ Wasatch County uses the NUIFC to coordinate fire response, while Duchesne, Uintah, and Daggett county use the Uintah Basin Interagency Fire Center (UBIFC). The UBIFC is the dispatch center for the state and federal agencies in the Uintah Basin. The UBIFC also is managed by the Great Basin Coordination Center.

The BLM Vernal Field Office is part of the Uintah Basin Interagency Cooperators Committee and the Uintah Basin Fuels Committee. Fire Management Officers from the Ashley National Forest, Dinosaur National Monument, BIA, State of Utah, and the BLM form the committee. The committees collaborate on fire education, prevention, and response (BLM 2018).

3 OBJECTIVES OF THE WILDFIRE MITIGATION PLAN

MLEA’s overarching goal is to provide safe, reliable, and economic electric service to its members. In order to meet this goal, MLEA routinely constructs, operates, and maintains its electrical lines and equipment in a manner that minimizes the risk of catastrophic wildfire posed by its electrical lines and equipment. The following outlines the objectives for wildfire mitigation identified in this document.

⁸ Wasatch County Emergency Operations Plan Summary: <https://www.wasatch.utah.gov/Portals/0/PublicWorks/Pdfs/Emergency/EM%20Plan%20Suimmarization%20wasatch%20county.pdf>

⁹ Utah State Hazard Mitigation Plan: <https://hazards.utah.gov/wp-content/uploads/Utah-State-Hazard-Mitigation-Plan-2019.pdf>

¹⁰ Northern Utah Interagency Fire Danger Operating Plan: <https://gacc.nifc.gov/gbcc/dispatch/ut-nuc/management/management.html>

3.1 Minimizing Sources of Ignition

The goal of this Plan is to assess and minimize the probability that the MLEA transmission and distribution system may contribute to or be the origin of a wildfire ignition. In addition, the plan identifies measures to be taken to protect the system from wildfire damage to secure service for MLEA members.

3.2 Resiliency of the Electric System

An additional goal of this Plan is to ensure long-term resilience of the MLEA electric grid. Through implementing this Plan, MLEA will be able to assess industry best practices and technologies that are designed to be implemented to reduce the potential for a service interruption and improve and facilitate restoration of service.

3.3 Wildfire Prevention Strategies and Protocols

This Plan details a number of wildfire prevention strategies and protocols that are designed to prevent and/or mitigate the threat of wildfire to system infrastructure and to communities who depend on MLEA service. These are described in more detail in Section 5.

- **Vegetation Management** – Measures to control vegetation near overhead transmission and distribution lines and clearance specifications, as well as hazardous fuels information to reduce potential wildfire spread.
- **Enhanced Inspections** – Assessment and diagnostic activities and mitigating actions. Inspections would focus on ensuring all infrastructure is in working condition and that vegetation clearance specifications are maintained.
- **Situation Awareness** – Methods to improve system awareness and environmental conditions.
- **Operational Practices** – Mitigating actions that are taken on a day-to-day basis to reduce wildfire risks. These actions prepare MLEA for high-risk periods, associated with heavy winds and dry conditions.
- **System Hardening** – Technical and system upgrades aimed at reducing potential contact between infrastructure and fuel sources and making the system more resilient to wildfire and other natural disasters.
- **Procedures for De-energization and Reclosing** – Conditions under which lines may be de-energized to reduce wildfire risk or protect people and/or equipment during a wildfire incident, and the conditions for restoring service after the risk has abated.
- **Wildfire Response and Recovery** – Procedures for wildfire response in order to formalize protocols in the event of an ignition.
- **Public Safety and Notification** – Measures for engaging the community in identifying and reducing wildfire risk. These include public warnings and notifications in the interest of public safety.

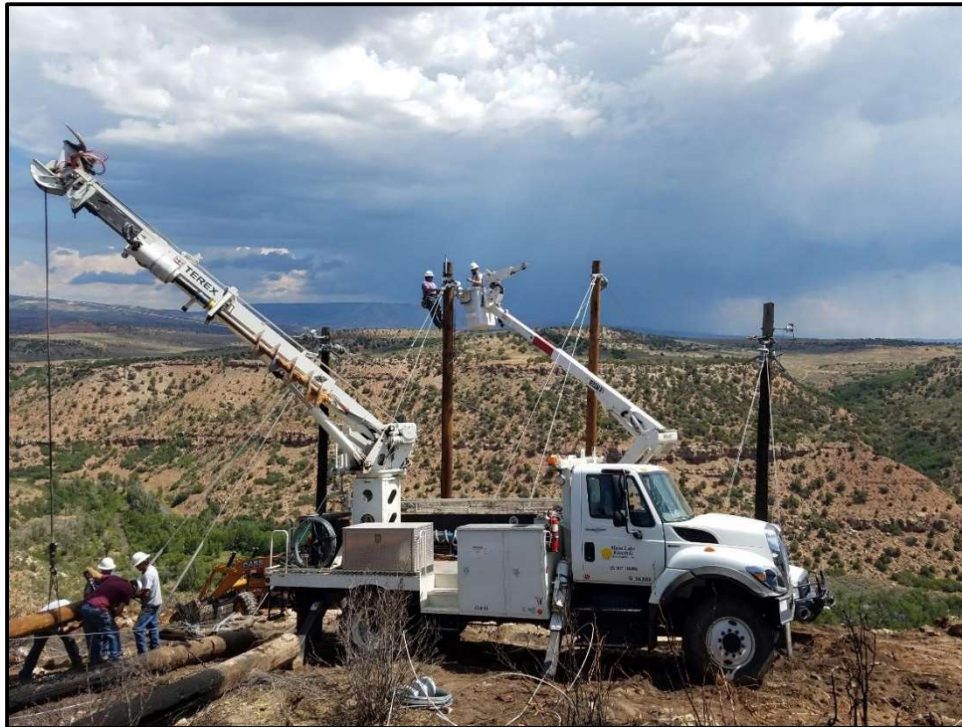


Figure 2. MLEA crews repairing structures damaged during the Dollar Ridge fire of 2018.

3.4 Identifying Unnecessary or Ineffective Actions

This Plan should be revised every 3 years. As part of that revision process, MLEA would monitor the effectiveness of the wildfire mitigation strategies within this document to assess the merits of the modifications and to implement adaptive management to improve future results. During the annual review process, MLEA should also update mitigation strategies through review of industry best practices.

4 WILDFIRE RISK ANALYSIS

The wildfire risk analysis process utilizes the DNR UWRAP, in conjunction with supplementary fire modeling, to include areas of the MLEA service areas that fall outside of the Utah state line.

The purpose of the wildfire risk analysis is to identify areas within the MLEA service area that are particularly susceptible to high intensity, severe wildfire behavior, so as to develop mitigation measures for preventing utility-related ignitions and to improve system resilience to outside wildfire threat.

4.1 Fire History

While firefighters suppress 95% of Utah wildfires on initial attack, adverse weather and topography, heavy fuel loads, and urban development can create catastrophic wildfire conditions in the state (Utah Division of Emergency Management 2019). The three largest fires in Utah have occurred since 2007, each burning more than 70,000 acres. 2007 saw the greatest number of acres burned in a single year since 2000. That year, 1,385 wildfires burned almost 650,000 total acres, including the largest wildfire in Utah's history, the Milford Flat fire, which destroyed nearly 364,000 acres.

From 2005 to 2015, the Vernal Field Office fire program has recorded 367 fires on BLM-administered land, an average of 34 fires per year. In the same time period, the BLM Green River District engine resources responded to 189 additional fires, or 18 fires per year on non-BLM-administered land. The BLM, including dispatch, aided with an additional 529 fires on non-BLM-administered land during these 10 years, which amounts to an additional 49 fires per year. Combined, these fires burned 39,562.2 acres total (3,597 acres per year) on BLM-administered land in the Green River District–Vernal Field Office. During this time period, the largest wildfire was the Wolf Den Fire in 2012. The Wolf Den Fire burned approximately 20,049 acres. The most significant drivers of these fires were drought, low live fuel moistures, and extreme weather (BLM 2018).

The Uintah Basin historically has had a high percentage of multiple fires days (estimates as high as 45%), which exhausts local resources. This means that during fire season, if a fire is reported, 45% of the time there will be two or more fires reported on the same day (BLM 2018).

Figure 3 illustrates the high fire occurrence history within the Utah portion of the MLEA service area (fire history for the Colorado section of the service area is provided in Appendix A). Many of these fires were located in close proximity to MLEA infrastructure. The greatest concentration of fires are around urban areas close to Roosevelt, Bluebell, Altamont, Altonah, Mountain Home, and Talmage. According to the Duchesne County CWPP, 30% of fires in this area are a result of human ignitions, highlighting a need for greater public education and outreach for reducing fire ignitions. As a utility provider throughout this area, MLEA could be a partner in these public education efforts.

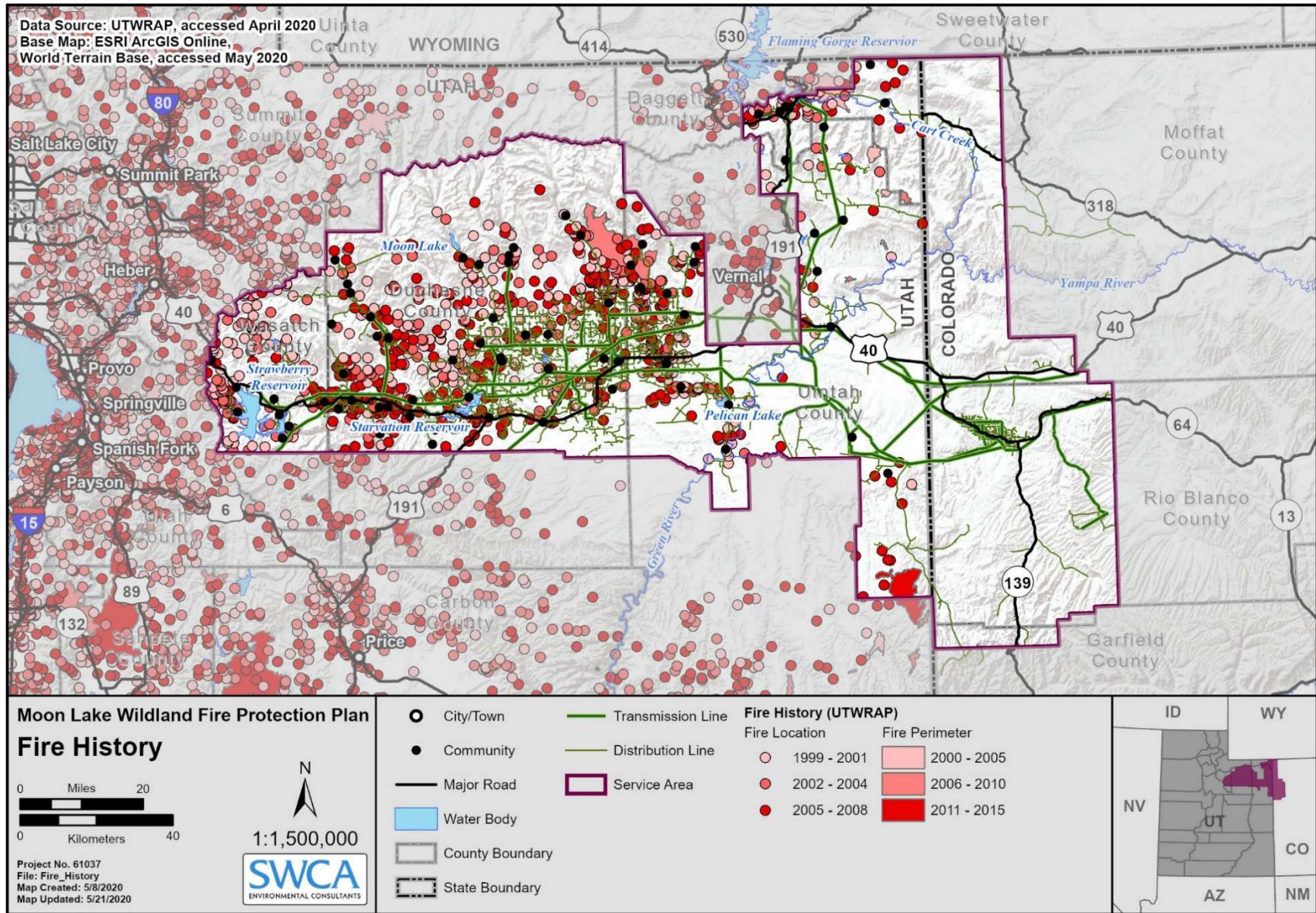


Figure 3. Fire occurrence history within the MLEA service area.

4.2 Vegetation Communities

The MLEA service area falls mostly within the Colorado Plateau and Wasatch and Uintah Mountains ecoregions. The Colorado Plateau lies between the Great Basin to the west and the Rocky Mountains to the east. The flora and fauna of the region include elements of each of these provinces in addition to endemic species that have evolved in areas of relative isolation atop the Plateau.

Wildfires were once common occurrences throughout the grasslands and forests of the Colorado Plateau. These regular wildfires helped maintain an open forest structure in the region's middle-elevation forests by preventing tree encroachment into mountain meadows and grasslands. In some areas, regular wildfires led to replacement of forested land with grassland or savannah. Fire suppression has disturbed this natural occurrence, and like other ecoregions, pinyon-juniper woodlands, ponderosa pine forests, and drier mixed conifer forests of the Colorado Plateau have shifted from a fire regime of frequent, surface fires to one of stand-replacing, high-intensity fires (Grahame and Sisk 2002).

The Wasatch and Uintah Mountain ecoregion is a block of high montane habitat stretching from southeastern Idaho and southwestern Wyoming to isolated ranges of the Colorado Plateau in southern Utah. It is composed of high, glaciated mountains, dissected plateaus, foothills, and intervening valleys. The ecoregion encompasses two different mountain ranges; the Wasatch, a major north-south range; and the Uinta, one of few major east-west ranges in the United States (World Wildlife Fund 2001).

Continued grazing and 50 years of attempted fire exclusion, combined with favorable climatic conditions, have allowed juniper expansion to go unchecked (Ferry et al. 1995). Decreases in fire frequency are also seriously affecting ponderosa pine forests. Historically, the ponderosa pine ecosystem had frequent, low-intensity, surface fires that perpetuated park-like stands with grassy undergrowth (Barrett 1980, as cited in Ferry et al. 1995). In recent years, however, humans have attempted to exclude fire on these sites, resulting in ponderosa pine forests that are overstocked and subject to severe stand-destroying fires (Mutch et al. 1993, as cited in Ferry et al. 1995). Long-term fire suppression has also resulted in a loss of aspen.

Of notable concern in the MLEA service area is Cheatgrass (*Bromus tectorum*), a highly competitive invasive grass species from Eurasia. Cheatgrass has altered native plant community structure and promotes wildfire by increasing the risk of shorter fire return intervals (Bishop et al. 2019). As cheatgrass continues to spread throughout the west, new threats are placed on communities and infrastructure.

The MLEA service area is made up primarily of desert shrub, mid-elevation sagebrush grassland, and pinyon-juniper communities.

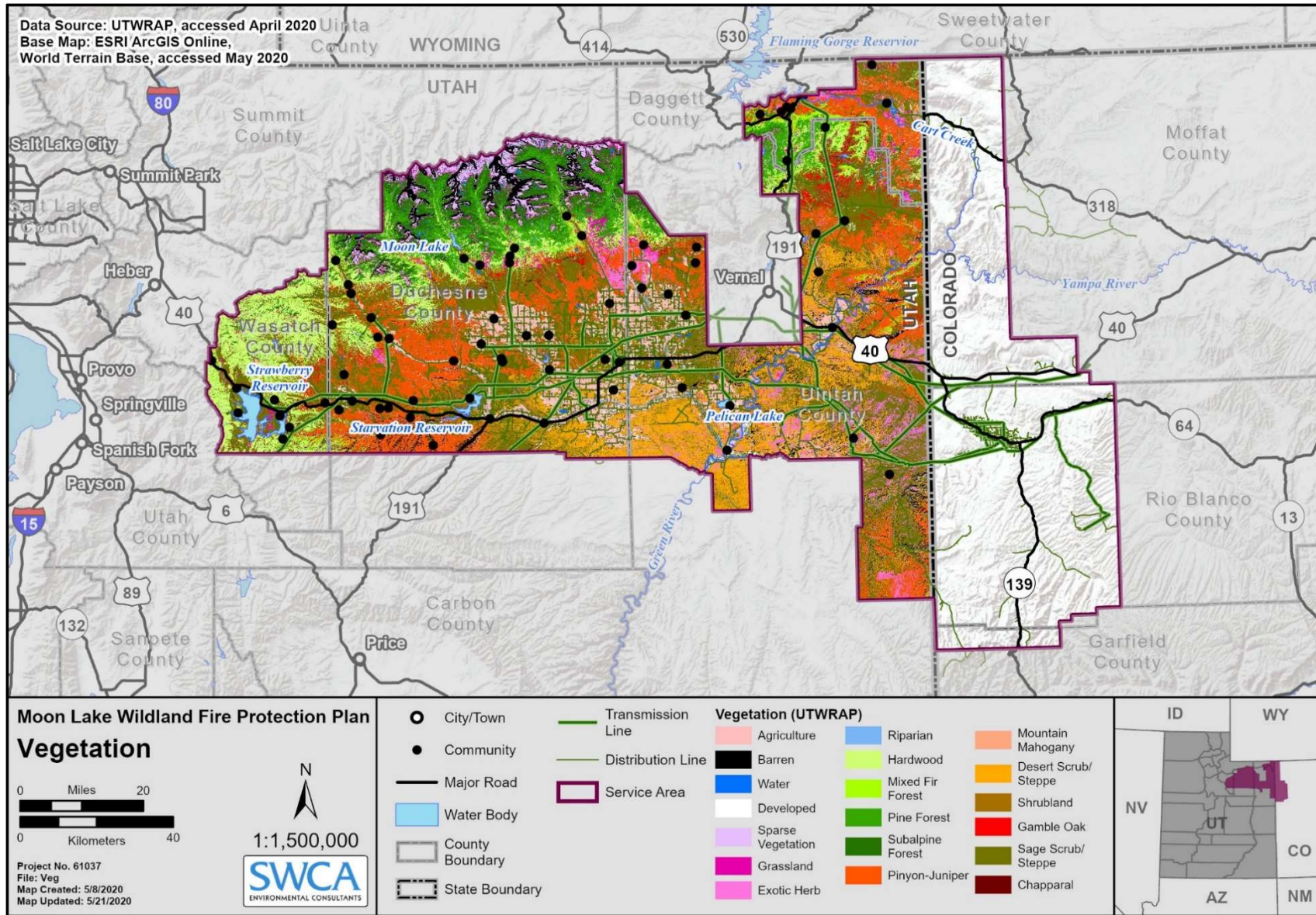


Figure 4. Vegetation classification from UWRAP.

The MLEA infrastructure is located primarily in areas of sage shrub/steppe (30.2%) (Table 3). Fire frequency in this vegetation community varies, depending on sagebrush species and subspecies, but is considered to be between 10 and 110 years depending on precipitation, elevation, species, and associated vegetation (SWCA 2007a). Fire behavior in sage shrub/steppe depends upon the condition of the stand. In areas where there is continuous vegetation with thick interlocking tree-shrub crowns, there is greater potential for high-intensity fire, with rapid rates of spread. If shrub fuel is interspersed with dry, fine grass fuels, rates of spread are also high, as grass transmits flames between woody shrubby vegetation that burns with high intensity. In areas where drought, grazing, habitat fragmentation, and vegetation treatments like prescribed fire and mechanical thinning have occurred, wildfire is more likely to be patchy as the fine fuel matrix is removed and canopies are more separated (Bukowski and Baker 2013). In these areas, rates of spread are lower and fire fighters are able to more easily suppress and contain a fire.

Table 3. Vegetation Community Classification within the 0.5-mile Corridor for MLEA Lines

Value		Acres	Percent
1	Agriculture	159,112.67	22.387
2	Barren	28,504.94	4.011
3	Water	8,403.97	1.182
4	Developed	41,365.82	5.820
5	Sparse Vegetation	7,503.10	1.056
6	Grassland	6,187.52	0.871
7	Exotic Herb	23,928.80	3.367
8	Riparian	11,262.77	1.585
9	Hardwood	16,577.29	2.332
10	Mixed Fir Forest	3,887.78	0.547
11	Pine Forest	3,622.10	0.510
12	Subalpine Forest	1,367.38	0.192
13	Pinyon-Juniper	89,004.24	12.523
14	Mountain Mahogany	608.53	0.086
15	Desert Scrub/Steppe	72,585.79	10.213
16	Shrubland	11,916.31	1.677
17	Gamble Oak	9932.21	1.397
18	Sage Shrub/Steppe	214,489.30	30.178
19	Chaparral	487.80	0.069

4.2.1 Fuels

The fuels in the planning area are classified using Scott and Burgan’s (2005) Standard Fire Behavior Fuel Model classification system. This classification system is based on the Rothermel surface fire spread equations, and each vegetation and litter type is broken down into 40 fuel models.

The general classification of fuels is by fire-carrying fuel type (Scott and Burgan 2005):

- (NB) Non-burnable
- (GR) Grass
- (TU) Timber-Understory
- (TL) Timber Litter

(GS) Grass-Shrub
(SH) Shrub

(SB) Slash-Blowdown

The dominant fuel models that occur within the MLEA line buffer (a 0.25-mile buffer on either side of the line) are shown in Table 4 and Figure 6. This figure is based on data obtained from UWRAP. It is important to note that this data was captured and classified by LANDFIRE in 2008 and more recent fuel data are now available outside of the UWRAP platform. Under direction of UDFPSL, this analysis is based on the UWRAP fuel data in order to allow comparison between plans, but MLEA will consider utilizing more recent fuel data during subsequent updates to the plan; 2016 fuel data for the Utah and Colorado portions of the MLEA service areas are presented in Appendix A, Map A-2.

Table 4. Scott and Burgan Fuel Model Composition within the 0.25-mile corridor for MLEA Lines

Value		Acres	Percent
91	NB1	19,774.59	2.782
93	NB2	85,458.98	12.021
98	NB3	5,936.08	0.835
99	NB9	10,807.37	1.520
101	GR1	143,468.92	20.180
102	GR2	28,579.64	4.020
121	GS1	104,616.85	14.715
122	GS2	185,849.26	26.142
141	SH1	58,920.00	8.288
142	SH2	7,923.94	1.115
145	SH5	25,180.84	3.542
147	SH7	2,719.17	0.382
161	TU1	11,264.55	1.584
162	TU2	36.23	0.005
165	TU5	5,074.51	0.714
181	TL1	525.71	0.074
182	TL2	1.56	0.000
183	TL3	13237.74	1.862
184	TL4	2.03	0.000
185	TL5	170.30	0.024
186	TL6	557.73	0.078
188	TL8	824.25	0.116

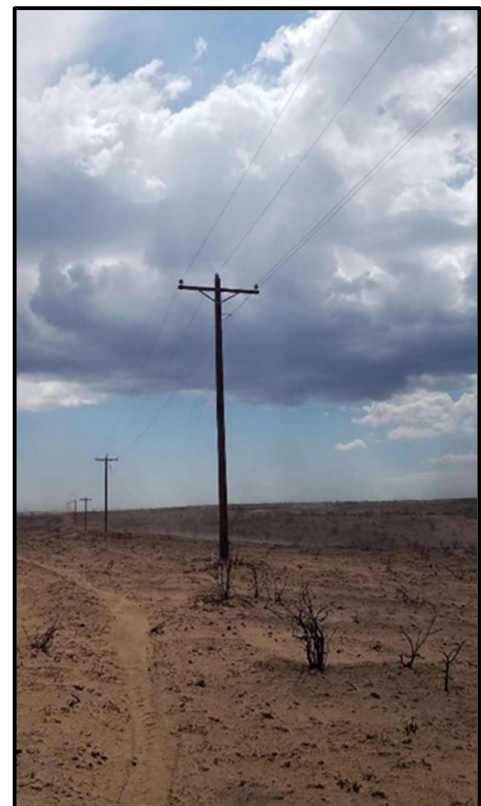


Figure 5. MLEA line in Current Creek during Dollar Ridge fire

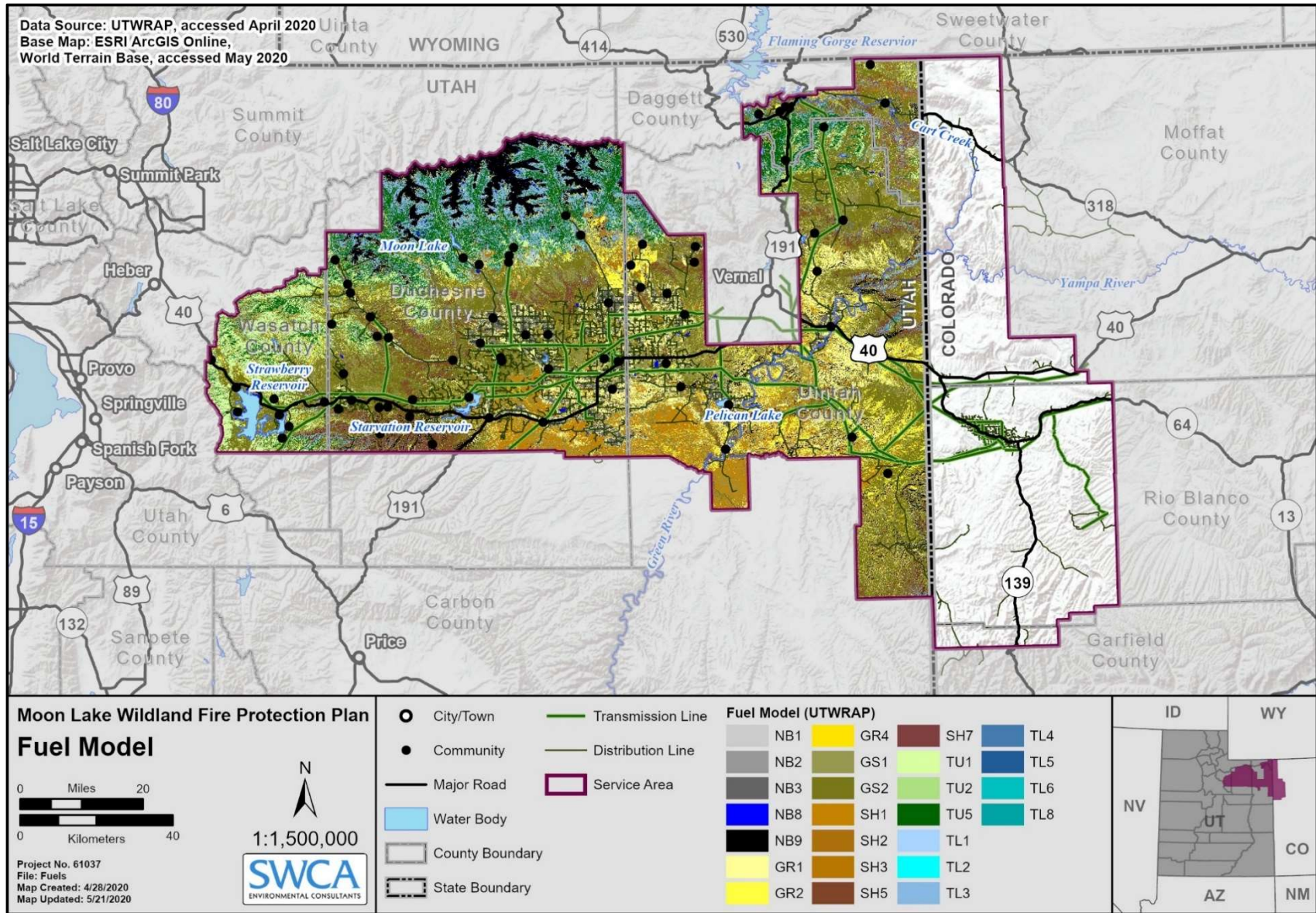


Figure 6. Fuel model classification for the MLEA service area from UWRAP.

The fuels that would contribute to fire behavior within the MLEA service area are described below in Table 5.

Table 5. Fuel Model Descriptions

1. Nearly pure grass and/or forb type (Grass)	
i.	GR1: Grass is short, patchy, and possibly heavily grazed. Spread rate is moderate (5–20 chains/hour); flame length low (1–4 feet); fine fuel load (0.40 ton/acre).
ii.	GR2: Moderately coarse continuous grass, average depth about 1 foot. Spread rate high (20–50 chains/hour); flame length moderate (4–8 feet); fine fuel load (1.10 tons/acre).
2. Mixture of grass and shrub, up to about 50% shrub cover (Grass-Shrub)	
i.	GS1: Shrubs are about 1-foot high, low grass load. Spread rate moderate (5–20 chains/hour); flame length low (1–4 feet); fine fuel load (1.35 tons/acre).
ii.	GS2: Shrubs are 1–3 feet high, moderate grass load. Spread rate high (20–50 chains/hour); flame length moderate (4–8 feet); fine fuel load (2.1 tons/acre).
3. Shrubs cover at least 50% of the site; grass sparse to non-existent (Shrub)	
i.	SH1: Low fuel load, depth about 1 foot, some grass fuels present. Spread rate very low (0–2 chains/hour); flame length very low (0–1 feet).
ii.	SH2: Moderate fuel load (higher than SH1), depth about 1 foot, no grass fuels present. Spread rate low (2–5 chains/hour); flame length low (1–4 feet); fine fuel load (5.2 tons/acre).
iii.	SH5: Heavy shrub load. Fuel bed depth 4–6 feet. Spread rate very high (50–150 chains/hour), flame length very high (12–25 feet).
iv.	SH7: Very heavy shrub load, possibly with pine overstory. Fuel bed depth 4–6 feet. Spread rate high (20–50 chains/hour); flame length very high (12–25 feet).
4. Grass or shrubs mixed with litter from forest canopy (Timber-Understory)	
i.	TU1: Fuel bed is low load of grass and/or shrub with litter. Spread rate low (2–5 chains/hour); flame length low (1–4 feet); fine fuel load (1.3 tons/acre).
5. Dead and downed woody fuel (litter) beneath a forest canopy (Timber Litter)	
i.	TL3: Moderate load. Spread rate very slow (0–2 chains/hour); flame length low (1–4 foot); fine fuel load (0.5 ton/acre).
6. Insufficient wildland fuel to carry wildland fire under any condition (Non-burnable)	
i.	NB1: Urban or suburban development; insufficient wildland fuel to carry wildland fire.
ii.	NB3: Agricultural field, maintained in non-burnable condition.
iii.	NB8: Open water.

4.3 Topography

The topography in the MLEA service area is diverse. The landscape includes the east–west-trending Uinta Mountains, the tallest of which is Kings Peak, the highest point in Utah at 13,528 feet. Much of the land area in Wasatch County lies above 7,500 feet, where summers are cool and winters are very cold with a large degree of variation from place to place. Also significant to the landscape are the Flaming

Gorge Reservoir and the Green River. The southern portion of the service area includes landscape features that are typical of the Uintah Basin and Colorado Plateau: hilly to gently rolling areas. Land use in the region is primarily livestock grazing and agriculture, power generation, oil and gas development, and recreation.

Topography is important in determining fire behavior. Steepness of slope, aspect (direction the slope faces), elevation, and landscape features can all affect fuels, local weather (by channeling winds and affecting local temperatures), and rate of spread of wildfire. There are some steep slopes throughout the MLEA service area that would influence fire behavior and spread. In the northernmost portion of the service area, the Uintah mountain range presents complex topography, with numerous steep slopes at varying aspects. South of the Uintah range, the topography is more consistent. Water features contribute to canyons with steep slopes and a consistent landscape of terraces and benches at moderate slopes.

The cities and towns in the MLEA service area are the least topographically complex, consisting of generally flat regions. In the eastern and southeastern portions of the service area, rivers and streams contributing to Strawberry Reservoir shape to a topographically complex landscape with moderately steep slopes. Finally, the western portion of the service area is relatively complex with multiple areas influenced by rivers and their tributaries, cutting steeper cliffs, hills, and mountain ranges into the landscape. Mitigation measures should be focused in areas of more complex topography that may contribute to increased fire behavior. Access to these areas may be a limiting factor for mitigation measures.

4.4 Weather

Of the three fire behavior components, weather is the most likely to fluctuate. Accurately predicting fire weather remains a challenge for forecasters. As winds and rising temperatures dry fuels in the spring and summer, conditions can deteriorate rapidly, creating an environment that is susceptible to wildland fire. Fine fuels (grass and leaf litter) can cure rapidly, making them highly flammable in as little as 1 hour following light precipitation. Low live fuel moistures of shrubs and trees can significantly contribute to fire behavior in the form of crowning and torching. With a high wind, grass fires can spread rapidly, engulfing infrastructure and communities, often with limited warning for evacuation.

The driest temperatures in the region occur during May through September, with temperatures reaching into the high 90s and low 100s from June through August (Figures 7 and 8). These dry conditions would elevate fire behavior during this period, as vegetation dries and becomes more available for combustion. The average monthly precipitation is low during June and increases slowly in July through October, as a result of monsoon rain patterns. Vegetation management and other wildfire mitigation measures should be completed prior to peak fire season (May–October). MLEA endeavors to comply with this whenever possible.

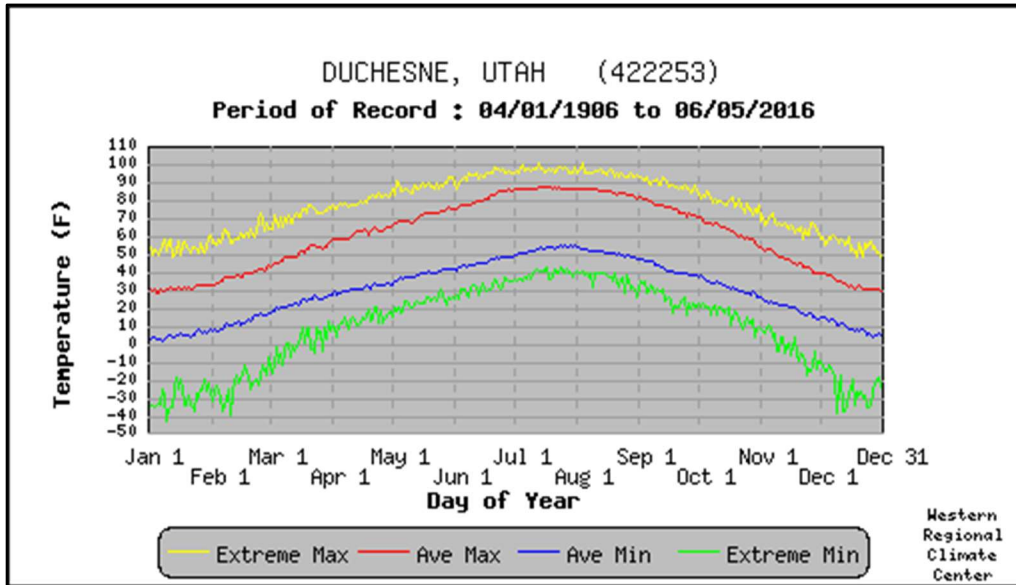


Figure 7. Daily temperature extremes and averages for Duchesne, Utah.

Source: Western Regional Climate Center (2020).

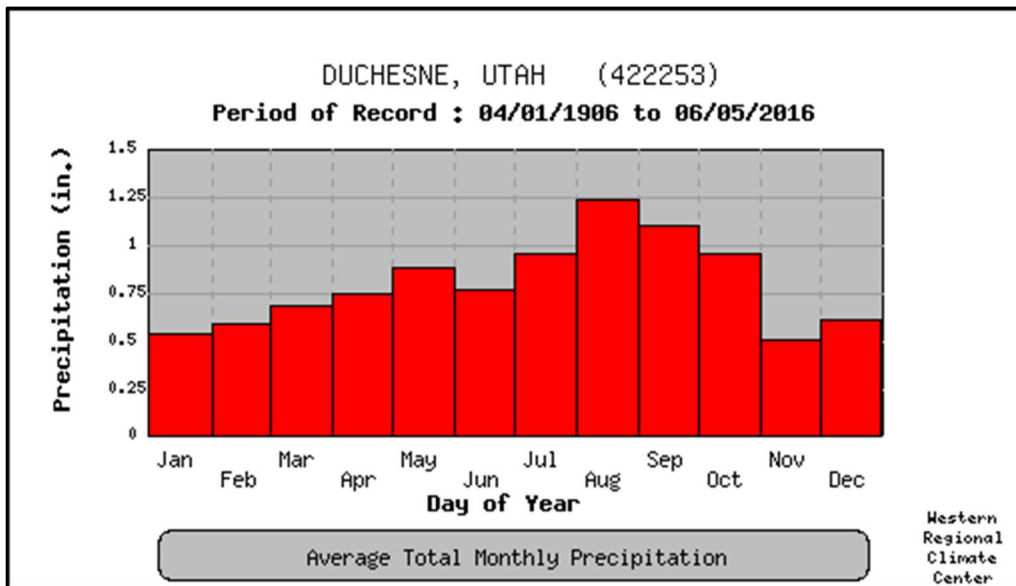


Figure 8. Monthly average precipitation for Duchesne, Utah.

Source: Western Regional Climate Center (2020).

4.5 Fire Behavior

This Plan utilizes UWRAP map products to support analysis of fire behavior and risk within the MLEA service area. This analysis assists MLEA in identifying areas most prone to wildfire in order to create a plan to prioritize vegetation management actions to mitigate potential fire effects. In areas predicted to have the highest fire behavior, MLEA can also prioritize infrastructure improvements that ensure resilience of the grid. Furthermore, in areas where fire behavior is expected to be high, as a result of fuels, topography, weather, and past fire occurrence, MLEA will work with the community to identify actions

that communities can take to mitigate against potential ignitions and to alert the community to prepare in the event of a wildfire event.

4.6 Analysis Approach

In order to assess wildfire risk in the service area and provide priority areas for MLEA to focus mitigation measures, this analysis focuses on the following data layers in UWRAP: fire effects (shown as aggregate values), wildfire threat, and wildfire risk. These layers are defined in the following way and described in more detail below:

- **Wildfire Threat:** Potential fire behavior based on fire occurrence, landscape, effectiveness of fire suppression resources
- **Fire Effects:** Adverse impacts by a wildfire based on the impacts to identified values (i.e., infrastructure, property, natural assets, drinking water, etc.).
- **Wildfire Risk:** The possibility of loss or harm occurring from a wildfire. This represents a combination of wildfire threat and fire effects.

UWRAP data are only available for the Utah portion of the MLEA service area; therefore, these data products support only that portion. Additional fire behavior modelling was performed for the Colorado section of the service area and is provided in Appendix A.

4.6.1 Aggregate Value Impacts

The Aggregate Value Impacts is an overall rating based on the Wildland Development Areas (WUI), Forest Assets, Riparian Assets, Drinking Water Importance Areas, and Infrastructure Response Function scores. The individual Value Impacted categories are based on a scale of 1 to 9 and were derived for each of the values impacted using Response Function scores (UWRAP 2020). For the service area the Aggregate Value Impact categories within the service boundary are shown in Figure 9.

Because a large portion of the MLEA lines are located in areas with higher population density, or in association with existing human-made infrastructure (i.e., along highways), it is not surprising that most of the lines fall in areas identified as having high impact potential from wildfire. Table 6 shows the breakdown of acres associated with various categories of aggregated value within a 0.25-mile buffer around MLEA infrastructure/0.5-mile corridor. While over 90% of the corridor is classed as low aggregate value, the remaining area is categorized as having medium to high impact. This means that there is a heavy concentration of values that are at risk adjacent to some lines, further highlighting the need for mitigation measures across many portions of the MLEA lines.

Table 6. Acres within Various Aggregate Value Impact Categories for the 0.25-mile Buffer around MLEA Infrastructure/0.5-mile Corridor

Reclassified Value	Acres	Percent
1 High	21.35	0.004
2	14.90	0.003
3	151.01	0.026
4 Medium	919.18	0.156
5	6,011.58	1.021
6	14,648.11	2.487

Reclassified Value	Acres	Percent
7	22,164.90	3.763
8	11,926.89	2.025
9 Low	533,095.33	90.516

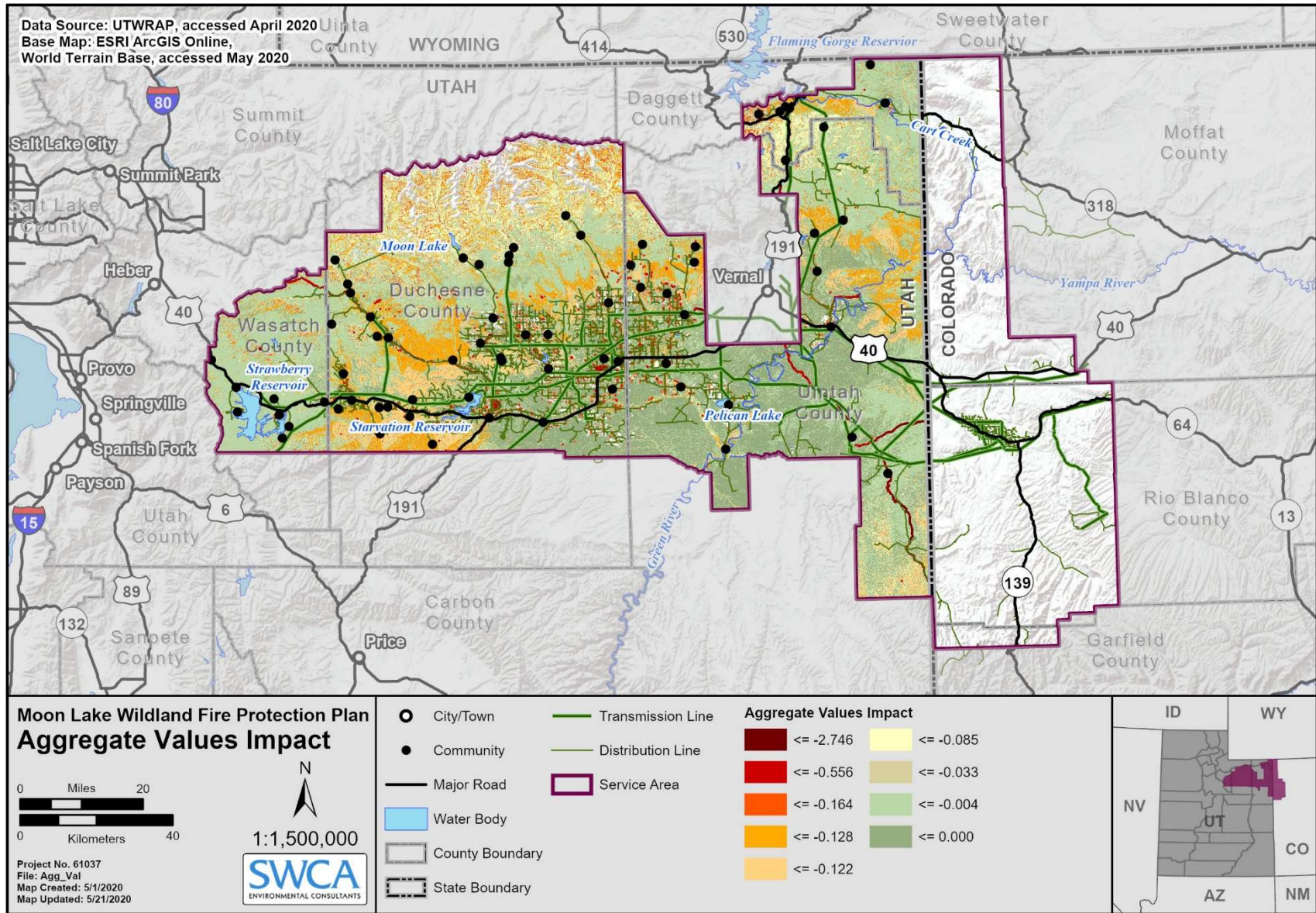


Figure 9. Aggregate Value Impacts for the MLEA service area from UWRAP.

4.6.2 Wildfire Threat

The Fire Threat Index (FTI) in UWRAP is derived from historical fire occurrence, landscape characteristics including surface fuels, percentile weather derived from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science to develop resultant fire behavior (UWRAP 2020).

FTI combines the probability of an acre igniting (Fire Occurrence), the expected final fire size based on rate of spread in four weather percentile categories and the effectiveness of fire suppression resources (UWRAP 2020).

Table 7 and Figure 10 illustrate the wildfire threat from UWRAP for the service area. The majority (>95%) of the MLEA infrastructure (based on a 0.25-mile buffer around MLEA infrastructure/0.5-mile corridor) is projected to be at low wildfire threat (see Table 7). Over 1,450 acres of the corridor are projected to be at medium to high threat.

Table 7. Wildfire Threat within a 0.25-mile Buffer around MLEA Infrastructure/0.5-mile Corridor

Reclassified Value		Acres	Percent
1	Low	56,1624.37	95.360
2		19,736.41	3.351
3		4,478.70	0.760
4		1,672.67	0.284
5		920.10	0.156
6	Medium	416.47	0.071
7		81.62	0.014
8		9.76	0.002
9		8.96	0.002
10	High	4.21	0.001

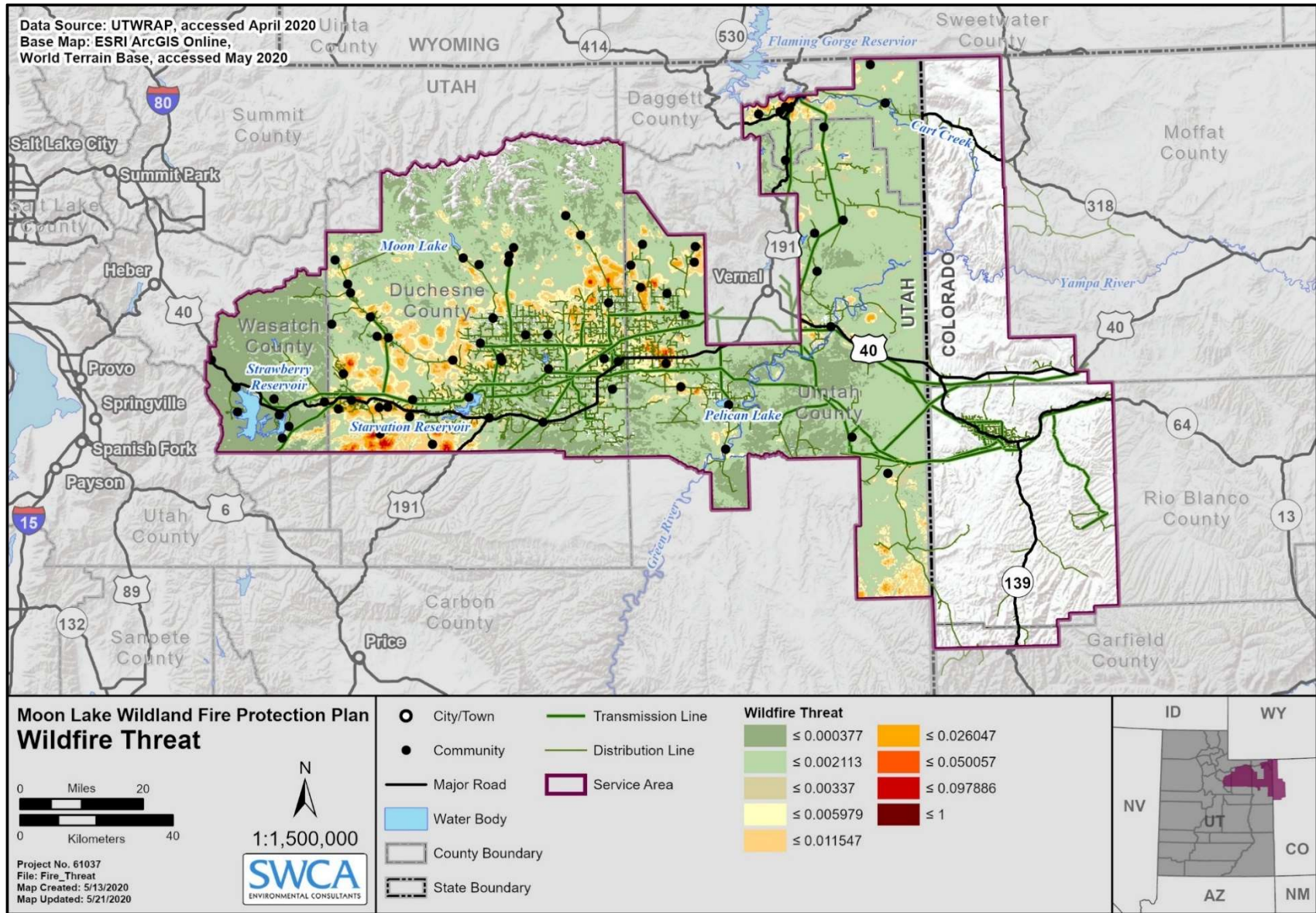


Figure 10. Wildfire threat for the MLEA service area from UWRAP.

4.6.3 Wildfire Risk

The wildfire risk data in UWRAP represent the possibility of loss or harm occurring from a wildfire. The metric identifies areas with the greatest potential impacts from a wildfire considering the likelihood of an area burning and the impacts to values and assets aggregated together (Appendix A). The UWRAP risk map layer (Figure 12) is a combination of the aggregate values and wildfire threat layers presented above and is used in this Plan to identify priority areas for mitigation treatments.

Figure 12 illustrates the wildfire risk throughout the MLEA service area. The majority (~99%) of the MLEA infrastructure (based on a 0.25-mile buffer around MLEA infrastructure/0.5-mile corridor) is projected to be at low wildfire risk (Table 8). Over 530 acres are rated with a wildfire risk of medium or higher. These are the areas where MLEA should focus mitigation measures.

Table 8. Wildfire Risk within a 0.25-mile Buffer around MLEA Infrastructure/0.5-mile Corridor

Reclassified Value		Acres	Percent
1	Low	58,2290.14	98.869
2		4,409.94	0.749
3		1,299.38	0.221
4		422.95	0.072
5	Medium	228.62	0.039
6		133.66	0.023
7		96.52	0.016
8		63.60	0.011
9	High	7.56	0.001
10		0.89	0.000



Figure 11. 3 Pole Structure damaged on Dollar Ridge fire of 2018.

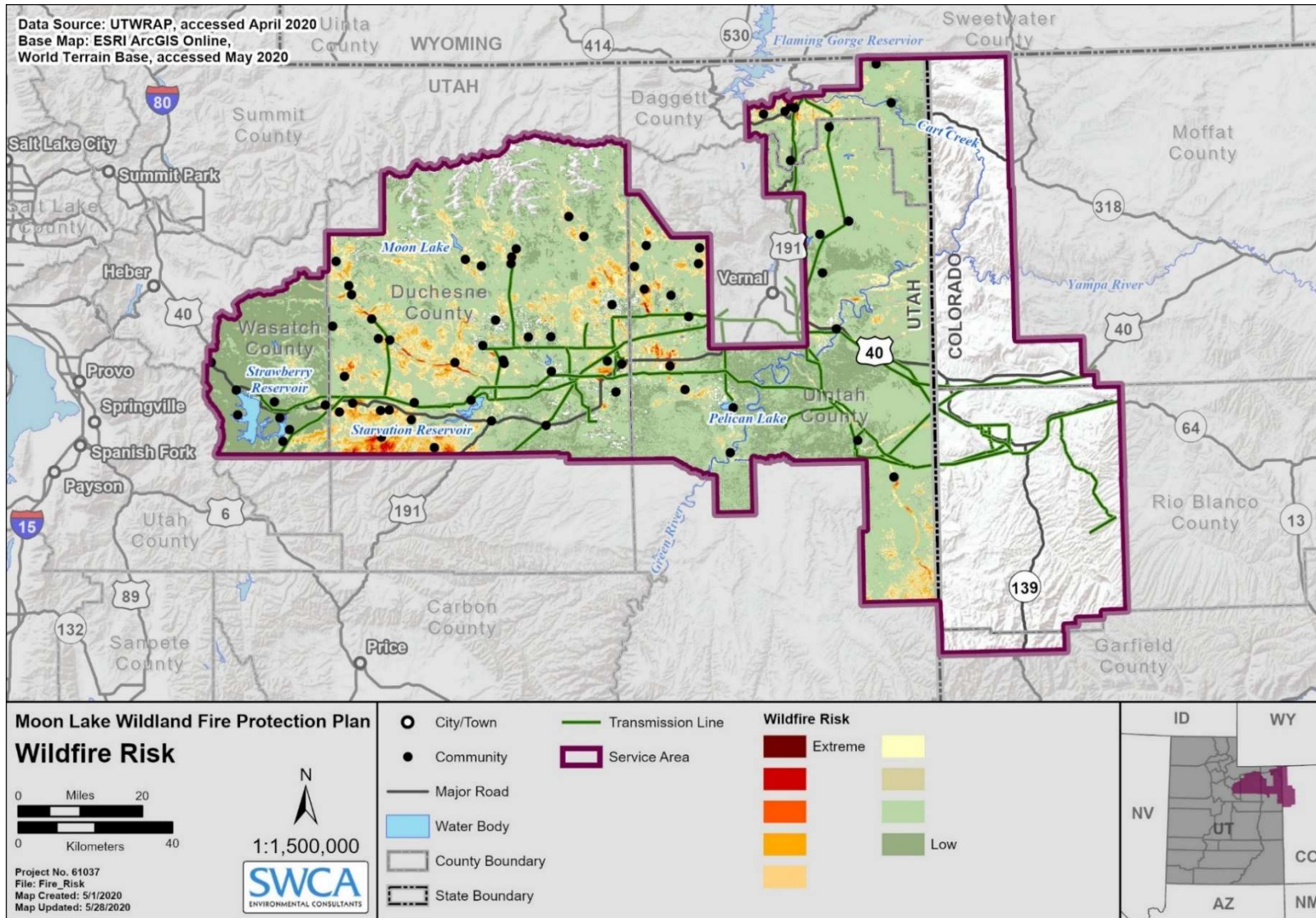


Figure 12. Wildfire risk for the MLEA service area from UWRAP. Note distribution lines are removed in this figure to facilitate viewing of the risk layer.

4.7 Risk Assessment and Action Plan

The goal of the wildfire risk assessment presented in Figure 12 is to identify sections of the MLEA service area that are at elevated risk for wildfire. Appendix B shows this same data set spatially zoomed to show details associated with high-risk segments of the MLEA lines. Table B-1 in Appendix B describes those high-risk segments with associated mitigation measures that could be applied to mitigate that risk. A priority scale from low to high is applied across all high-risk segments to facilitate implementation based on the intensity of the risk. The risk assessment is based on desktop analysis. MLEA will ground truth priority sections prior to proceeding with Plan implementation.

MLEA can use Table B-1 as an action plan for implementing mitigation measures as this Plan is implemented. The table can be revised during annual reviews and 3-year updates to show progress toward mitigation goals.

5 WILDFIRE PREVENTION STRATEGIES AND PROTOCOLS

5.1 Inspection Procedures

Line inspections provide a continuing picture of system repair needs, crew scheduling and evaluations of manpower needs. This procedure provides criteria for electric system operation and maintenance inspections. MLEA follows and complies with Rural Utilities Service (RUS), National Rural Electric Cooperative Association (NRECA) and Rural Electric Safety Achievement Program (RESAP) standards for operation, maintenance, vegetation management and inspections.

The aim of MLEA's inspection program is to give assurance that resources are being responsibly used and that the electric system is being operated and maintained adequately. Specific objectives are to:

- A. Identifying items that may be in need of immediate attention.
- B. Plan corrective action when needed, and a time schedule for implementation.
- C. Budget funds and manpower for the needed work.
- D. Initiate ongoing programs as necessary to avoid or minimize the need for "catch-up" programs in the future.

5.1.1 *Inspection Schedule*

For all distribution facilities, including those underground, 2-year intervals between systematic visual and drone inspections will be the standard. In addition to primary voltage equipment and line inspections, MLEA personnel may also inspect secondary service equipment at intervals as experience has shown to be necessary. This also includes updating of line inspections and maintenance logs.

For transmission facilities, intervals between systematic visual and/or drone inspections should not exceed 2 years. This also includes updating of line inspections and maintenance logs.

It is recognized that inspections may be performed in a separate operation or while performing other duties, as desired (to meet National Electrical Safety Code [NESC 214- Inspection of Lines]).



Figure 13. System upgrades on 69 kV switch

5.1.2 Documentation

All inspection and maintenance records are to be placed in MLEA’s electronic mapping database, or electronically scanned for future reference when possible.

5.1.3 On-site Repair

Operations personnel, under the supervision of the Line Crew Foreman, are to make repairs during the inspection process whenever feasible. Should repairs require scheduling work at a later date, the Line Superintendent will coordinate these efforts through a maintenance order.

5.1.4 Responsibility

The Line Superintendent is responsible for ongoing maintenance and inspection programs, including recordkeeping of inspections to ensure the highest quality of service provided to consumers.

The Operations Manager is responsible for reviewing records involving maintenance and inspection reports. From these reports, an annual summary is to be provided to MLEA’s General Manager/CEO as a key indicator to the Board of Directors.

5.2 Vegetation Management Protocols

To eliminate or reduce outages and to ensure the safety of landowners, employees, and the public, MLEA will locate and remove vegetation that has the potential to come into contact with high-voltage distribution and transmission lines.

5.2.1 Procedure

- A. The Operations Manager in Utah will coordinate activities to identify and remove vegetation that approaches high-voltage distribution and transmission lines. Tree trimming procedures are included in Appendix A.
- B. MLEA will seek required government permits or applicable authorization for vegetation and tree removal or trimming, including but not limited to, federal, state, municipal, and tribal laws, ordinances, rules, and regulations. MLEA shall seek to trim/remove vegetation and/or trees that in MLEA's opinion present an immediate hazard, danger, or substantial risk to MLEA's system, employees or public safety.
- C. A "hazardous tree" is a tree that is dead, severely damaged, or may present reasonable risks to MLEA's lines and facilities. A hazardous tree may be in MLEA's ROW, a public ROW, or on private property. For the safety of the public and/or all involved, MLEA may opt to remove a landowner's hazardous tree or remove the line from service to allow the landowner to safely remove the hazardous tree. A hazardous tree shall be removed or pruned in accordance with this Policy to mitigate safety hazards.
- D. MLEA will strive to remove trees, whether hazardous or not, growing beneath MLEA's lines in a public ROW or its own ROW. Trees that can be reasonably removed from private ROW, with the landowner's permission, shall be removed. A special effort shall be made to remove young trees in ROW while they are small and before they become a hazard to the power line. Vegetation trimming should be employed to avoid contact as well as proximity, and to ensure that the tree will not grow to within a hazardous distance before the next inspection (arc distance), resulting in an arc fault. Vegetation clearance will be based on inspection frequency, for example, removing all vegetation that is close enough to cause a fault or could cause a fault before the next scheduled inspection. Brush and other vegetation will be removed during regular tree trimming procedures. For "dangerous" or "hazardous" vegetation along power lines and outside of the MLEA ROW on federal, BLM, or other public property where permission to provide maintenance is not provided:
 - a. An email will be sent to the agency owner requesting removal or trimming
 - i. Email will include coordinates of the vegetation
 - ii. Request for the agency to properly address or resolve the vegetation
 - iii. Or, request for permit for MLEA to remove hazard trees
 - b. Documentation will be kept showing these requests
- E. MLEA has no affirmative duty to remove trees outside its ROW. With a written request from a landowner, MLEA may assist the landowner with the removal of a hazardous tree outside the ROW at no cost to the landowner, as long as MLEA has identified the tree as a hazardous tree.
- F. Removal of branches and other debris from vegetation and tree removal in or outside the ROW or easement is the sole responsibility of the landowner unless otherwise agreed upon in writing. Stumps shall be cut as close to ground level as possible. Complete removal of a stump is the responsibility of the landowner.

- G. MLEA will control vegetation and trees in a 10-foot perimeter around its property, including the fenced boundaries and within a substation, to ensure the safety of its landowners, employees, and public while maintaining the reliability and integrity of MLEA's facilities. Inspections are completed annually, and weeds are controlled using herbicide.
- H. MLEA will control vegetation and trees in a 10-foot perimeter around 69KV switches.
- I. MLEA will have a communication program for the public to notify MLEA of trees in and around its power lines. The Cooperative will encourage members to report trees that are potential hazards, in and outside the ROW, which may become a threat to public safety and/or the system's reliability.
- J. MLEA will annually budget an amount sufficient to secure the services of an independent tree contractor to assist the Association with its vegetation management program, including tree removal when authorized, tree trimming, and application of herbicide within the ROW.
- K. The Operations Manager will complete detailed reports regarding the activities of the Vegetation Management Program. An annual summary report will be submitted to the General Manager/CEO as a key indicator to the Board of Directors in March of each year.
- L. MLEA's Tree Replacement Program will provide its consumers with financial incentives to remove or replace trees that interfere with high-voltage lines.
- M. MLEA will monitor vegetation growth to identify potential problems. It is anticipated that 2 feet per year is the maximum growth rate of trees within the service corridors. If growth rates exceed this amount, more frequent inspections may become necessary.

5.2.2 Inspection Standards

MLEA will perform periodic inspections of its distribution and transmission lines to monitor the growth of trees and other vegetation. The intent is to ensure that all distribution lines and transmission lines are inspected every 2 years. MLEA will devote the necessary resources to remove any vegetation that has the potential of interfering with its lines.

These inspections will include both drone and visual line patrols, as well as vehicle patrols, and will fulfill the requirements of vegetation and general maintenance inspections.

5.2.3 Clearance Standards

The following are minimum clearance distances that MLEA will maintain between energized conductors and vegetation. Clearance distances may vary depending on the span of the line and obtained ROW:

Distribution Voltage: 6 feet

Transmission: 15 feet

5.2.4 Responsibility

The Line Superintendent is responsible for the ongoing vegetation management, including record keeping of tree trimming to ensure the safety of landowners, employees, and the public.

The Operations Manager is responsible for reviewing records involving vegetation management. From these records, an annual summary is to be provided to the MLEA's General Manager/CEO as a key indicator to the Board of Directors.

5.2.5 Raptor Protocols

All new power lines are constructed for raptor protection, accomplished by having wider spacing between phase-to-phase and phase-to-ground. Line hoses, plastic bird caps, and bird guards are used in specifically potential problem areas. In cases where nesting continues to be a problem, nests are moved and additional structures may be constructed away from the powerline to prevent contact.

5.3 Modifications and Upgrades to Infrastructure

5.3.1 System Improvements

MLEA's infrastructure is designed, constructed, and maintained to meet or exceed relevant federal, state, or industry standards. In addition, MLEA monitors and follows as appropriate the National Electric Safety Code. In addition to adhering to all standards, MLEA will consider some or all of the following system hardening solutions:

- Provide additional access roads along power line ROW and maintain standards.
- Complete pole testing, with a goal of 7% per year. MLEA shall follow industry standard of testing poles every 10 years. .
- Install reclosers with ground fault detection in high risk areas.
- Change substation reclosers to electronic reclosers to enhance information gathering.

5.4 De-energizing Protocols

In the event of wildfire, MLEA provides personnel to work directly with incident command and attends all incident meetings to provide input and coordination between fire operations and MLEA system operation. If during a fire a distribution or transmission line is requested to be removed from service for the safety of firefighting personnel, MLEA will work closely with incident command using industry clearance and safety procedures for any line outages to ensure the safe operation of fire crews and equipment.

MLEA considered as an option putting reclosers and circuit breakers in high risk areas on non-reclose settings to ensure that the power would go off and stay off in the case of any short circuit during the windy, hot, dry summer months. However, due to the radial nature inherent in the rural distribution and transmission lines of rural electric cooperative service territories, that action would put whole communities out of service for prolonged periods of time.

Operations crews will not replace and re-energize blown fuses until they have driven the line downstream from the fuse to ensure that there are no conductors on the ground or among any dry vegetation and thus avoid starting a wildland fire. Also, after any line recloser locks out, the line crew will try the recloser only once before driving the length of the circuit for the same reasons.

5.5 Restoring Service

In the event of a wildfire impacting the MLEA service area, MLEA will staff up its operations department to coordinate activities to restore service. Restoration of power will be coordinated with County, municipal fire, and public works departments, in coordination with the incident commander in charge of the wildfire operations. In the event additional resources are needed, MLEA may also engage contractors

on an as-needed basis. MLEA would adhere to the following steps during the restoration of electrical service:

Emergency Declaration: Fire declaration would be made by the county or municipality with jurisdiction.

Inspection and Assessment: MLEA staff will patrol and record any damage to lines resulting from wildfire. The inspection will include assessing infrastructure repairs, removing debris, and assessing safety hazards. MLEA will work with the local agency in charge of the fire, before accessing the burn area. Operations crews will not replace and re-energize blown fuses until they have driven the line downstream from the fuse to ensure that there are no conductors on the ground or among any dry vegetation and thus avoid starting a wildland fire. Also, after any line recloser locks out, the line crew will try the recloser only once before driving the length of the circuit for the same reasons.

Planning: Following initial assessment, MLEA engineers and managers will meet to discuss the extent of any damage and develop a plan of work to restore service. Line segments and infrastructure that support the most critical infrastructure needs will be prioritized.

Mobilize: MLEA will coordinate the crews and materials needed to rebuild infrastructure and restore service. Contractors may be employed, as needed.

Rebuild: Any repairs and rebuilding will be undertaken by MLEA as soon as the area is safe to access. Initial effort will be focused on replacing lines and restoring any damaged circuits.

Restore: MLEA or contract crews will restore electric services to homes and businesses as soon as possible after the wildfire.

Restoration of services will be prioritized depending on the specific incident and available resources:

- Public and worker safety
- Life support and other critical members
- Critical infrastructure, including county and municipal facilities, Sheriff's department, police and fire departments, other infrastructure (water, sewage, gas, communications), and incident command sites.
- Major commercial activities/accounts
- Reduce the total number of members affected
- Reduce the length of time members have been without power
- Restoration of power to transmission lines would have priority over distribution lines

6 COMMUNITY OUTREACH AND EDUCATION

6.1 Public Safety and Notification

The following are actions that MLEA currently employs and/or would consider adopting in order to improve public safety and notifications:

- Coordinating prior to fire season with county emergency managers and fire staff to determine fire season outlook and potential red-flag periods.

- Coordinating during emergencies or large-scale outages with county emergency managers and fire staff in conjunction with agency dispatch.
- Expanding social media reach across the service area.
- Developing a web-based map for the public to see current outages and estimated restoration.
- Utilizing local radio and television media to broadcast public service messages.
- MLEA will work with state and local government officials to provide a consistent public message to members regarding wildfire preparedness.

MLEA posted the draft document on the website for the week of June 8, 2020. The cooperative also provided an opportunity for public review of the draft document at a public meeting on June 15. Other than MLEA employees, no members of the public attended the meeting. No comments were received from the public during the review period, either at the meeting, or through social media, the website, or mail.

MLEA also provided the draft document for stakeholder review for the week of June 8, 2020 (stakeholders are listed in Table 9.) Stakeholders were asked to provide comments on the draft to ensure that protocols and procedures were aligned with existing procedures for emergency management, wildfire mitigation, and wildfire response within their jurisdictions.

7 INTEGRATION WITH APPLICABLE PLANS

MLEA engages closely with the County Emergency Managers and attends the Utah Department of Public Safety “Uintah Basin Infrastructure Resilience Council” (IRC). During wildland fire events, MLEA works in full coordination with the Utah Department of Public Safety and well as agency incident command for the wildland event.

Section 2.3 outlines existing wildfire planning documents for entities within the service area. The contacts for these entities, in addition to important contact information for agency staff who may need to be contacted in the event of a wildfire, are included in Table 9. The contact information presented below will be reviewed and updated on an annual basis.

Table 9. Contact Information from Agency Representatives with Jurisdiction within the MLEA Service Area

Name	Entity	Phone	Email
Mike Lefler	Duchesne County (Emergency Manager)	435-822-2417	mlefler@duchesne.utah.gov
Jeremy Raymond	Uintah County (Emergency Manager)	435-828-6541	uintahfire@ubtanet.com
Jeremy Hales	Wasatch County (Emergency Manager)	435-671-6025	jhales@wasatch.utah.gov
Erik Bailey	Daggett County Sheriff's Office	435-784-3255	ebailey@daggettcountry.org
Mike Erickson	Utah Division of Forestry, Fire, and State Lands (Forestry Area Manager)	435-671-9170	mikeeriksson@uttah.gov
Chris Deets	BLM–Utah (Fire Management Officer)	435-630-5929	cadeets@blm.gov
Landon Smith	BLM–Colorado (Fire Management Officer)	970-326-7653	lwsmith@blm.gov
Patrick Ahrensbrak	BLM- Realty Specialist	435-781-4400	pahrnsbrak@blm.gov
Chris Secakuku	BIA (Fire Manager)	435-401-0673	christopher.secakuku@bia.gov

Name	Entity	Phone	Email
Jeff Peterson	Utah Rural Electric Cooperative (Statewide Manager)	801-885-6494	jpeterson@utahcooperatives.org
Luke Trout	BLM–Colorado	970-878-6025	ltrout@blm.gov
Stacey Burke	BLM–Colorado	(970) 878-3827	sburke@blm.gov
Joseph Flores	USFS-Ashely National Forest	435-781-5109	joseph.flores@usda.gov

8 LITERATURE CITED

- BLM. 2018. Green River District Fire Management Plan. On File at BLM office.
- BLM. 2020. Routine Operations and Maintenance to Reduce Fire Risk on Utility Rights-of-Way. Available at: <https://www.blm.gov/policy/im-2020-005>.
- Bishop Tara B. B.; Munson, Seth; Gill, Richard A.; Belnap, Jayne; Petersen, Steven L.; St. Clair, Samuel B. 2019. Spatiotemporal patterns of cheatgrass invasion in Colorado Plateau National Parks. *Landscape Ecology*. 43:925-941.
- Bukowski, Beth E., and William L. Baker. 2013. Historical fire regimes, reconstructed from land-survey data, led to complexity and fluctuation in sagebrush landscapes. *Ecological Applications*. 23(3): 546-564.
- Gerry, Gardner W. Ferry Clark, Robert G., Mutch, Robert W., Leenhouts, Willard P. and G. Thomas Zimmerman (Ferry et al.). 1995. Altered Fire Regimes Within Fire-adapted Ecosystems. Available at: <http://biology.usgs.gov/s+t/noframe/m1197htm>.
- Grahame, John D. and Thomas D. Sisk, ed. 2002. Canyons, cultures and environmental change: An introduction to the land use history of the Colorado Plateau. <http://www.cpluhna.nau.edu/>.
- NUIFC. 2018. Northern Utah Interagency Fire Danger Operating Plan.
- Mountainland Association of Governments. 2017. Mountainland Pre-Disaster Hazard Mitigation Plan.
- Ferry, Gardner W. Ferry Clark, Robert G., Mutch, Robert W., Leenhouts, Willard P. and G. Thomas Zimmerman (Ferry et al.). 1995. Altered Fire Regimes Within Fireadapted Ecosystems. Available at: <http://biology.usgs.gov/s+t/noframe/m1197.htm>. Rural Community Consultants. 2020. Duchesne County Emergency Management Community Wildfire Preparedness Plan.
- Rural Community Consultants. 2018. Uintah County Community Wildfire Preparedness Plan.
- Scott, J.H and Burgan R.E. 2005. Standard fire behavior fuel models: a comprehensive set for use with Rothermel's surface fire spread model. USDA Forest Service, Rocky Mountain Research station.
- SWCA, 2007a. Uintah Basin Regional Wildfire Protection Plan.
- SWCA, 2007b. Northern Utah Regional Wildfire Protection Plan.
- Utah Division of Emergency Management 2019. Utah State Hazard Mitigation Plan. Available at: <https://hazards.utah.gov/wp-content/uploads/Utah-State-Hazard-Mitigation-Plan-2019.pdf>
- UWRAP 2020. Utah Department of Natural Resources, Wildfire Risk Assessment Portal. Oregon Department of Forestry. Available at: <https://wildfirerisk.utah.gov/About>
- Wasatch County 2020. Wasatch County Community Wildfire Protection Plan.
- World Wildlife Fund. 2001. Terrestrial ecoregions of North America: A Conservation Assessment. Wasatch and Uinta montane forests. Island Press. Available at: http://www.worldwildlife.org/wildworld/profiles/terrestrial/na/na0530_full.html

APPENDIX A

Supporting Documents and Mapping

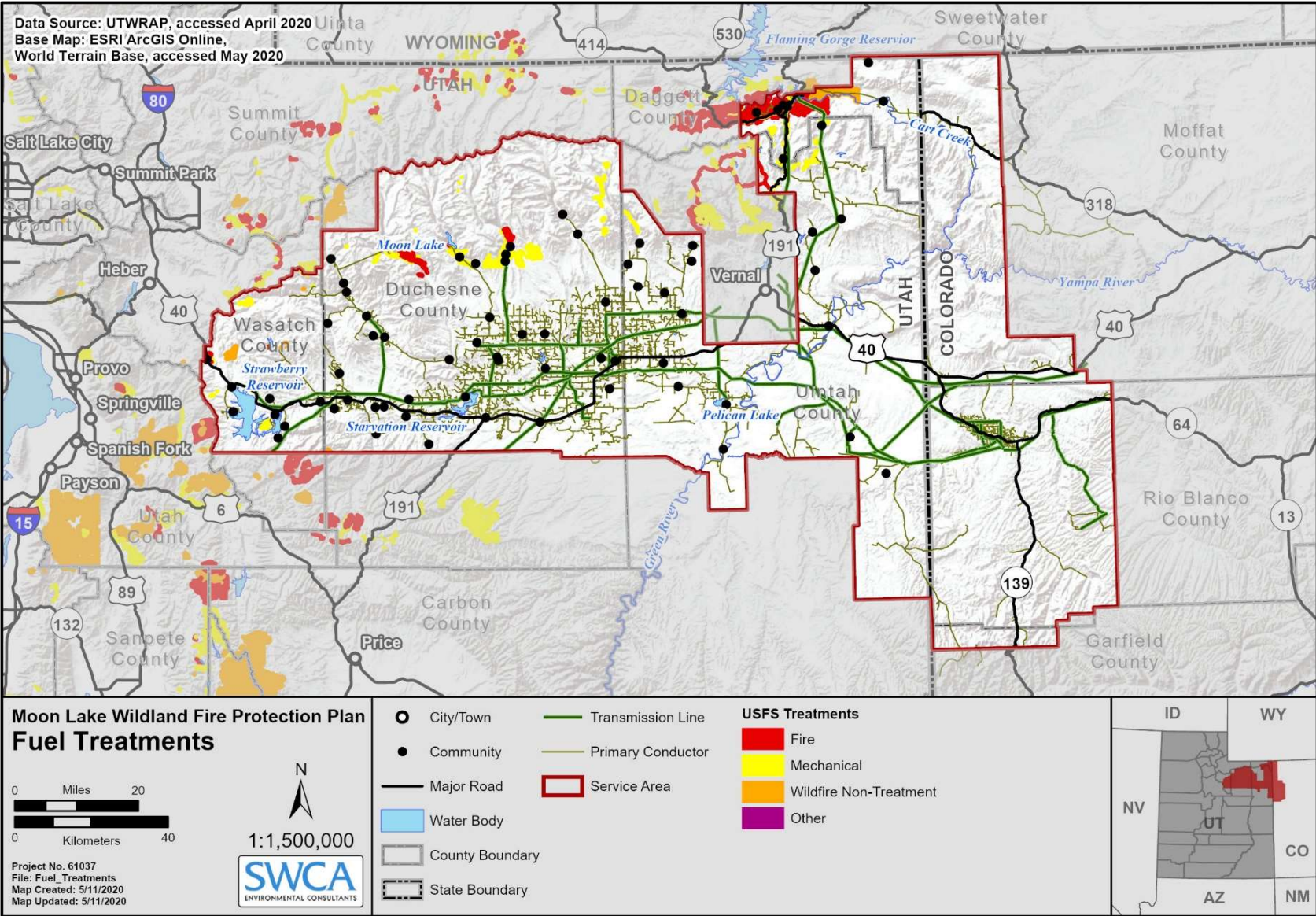


Figure A-1. Fuel treatment locations.

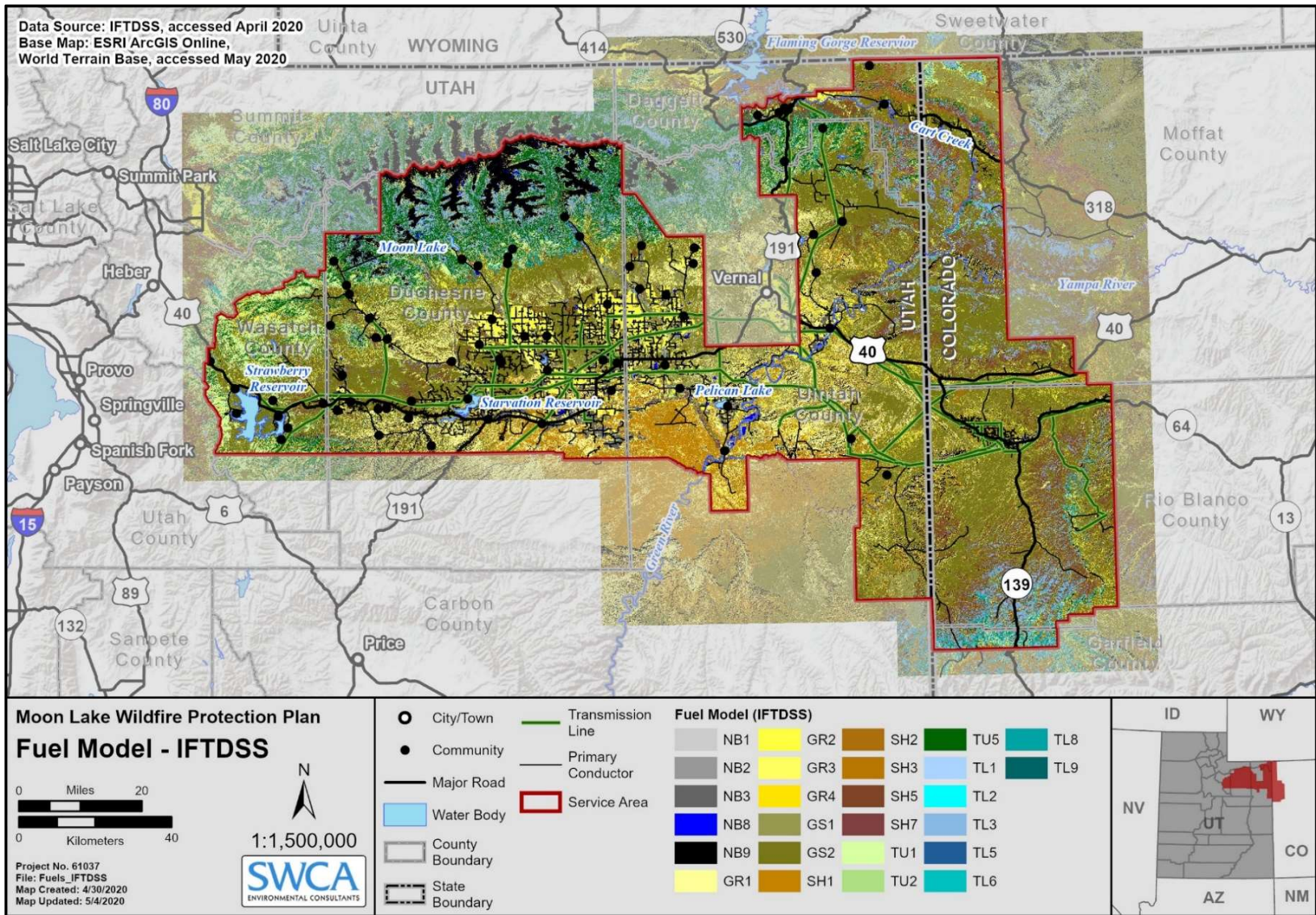


Figure A-2. Updated fuel model data for the MLEA service area, utilizing 2016 LANDFIRE Scott and Burgan Fuel data. Future revisions of the Plan should consider incorporating this new data, contingent on revisions to UWRAP.

Note that the dominant fuel types in the Colorado service area are grass-shrub fuels, with some timber fuels at higher elevations.

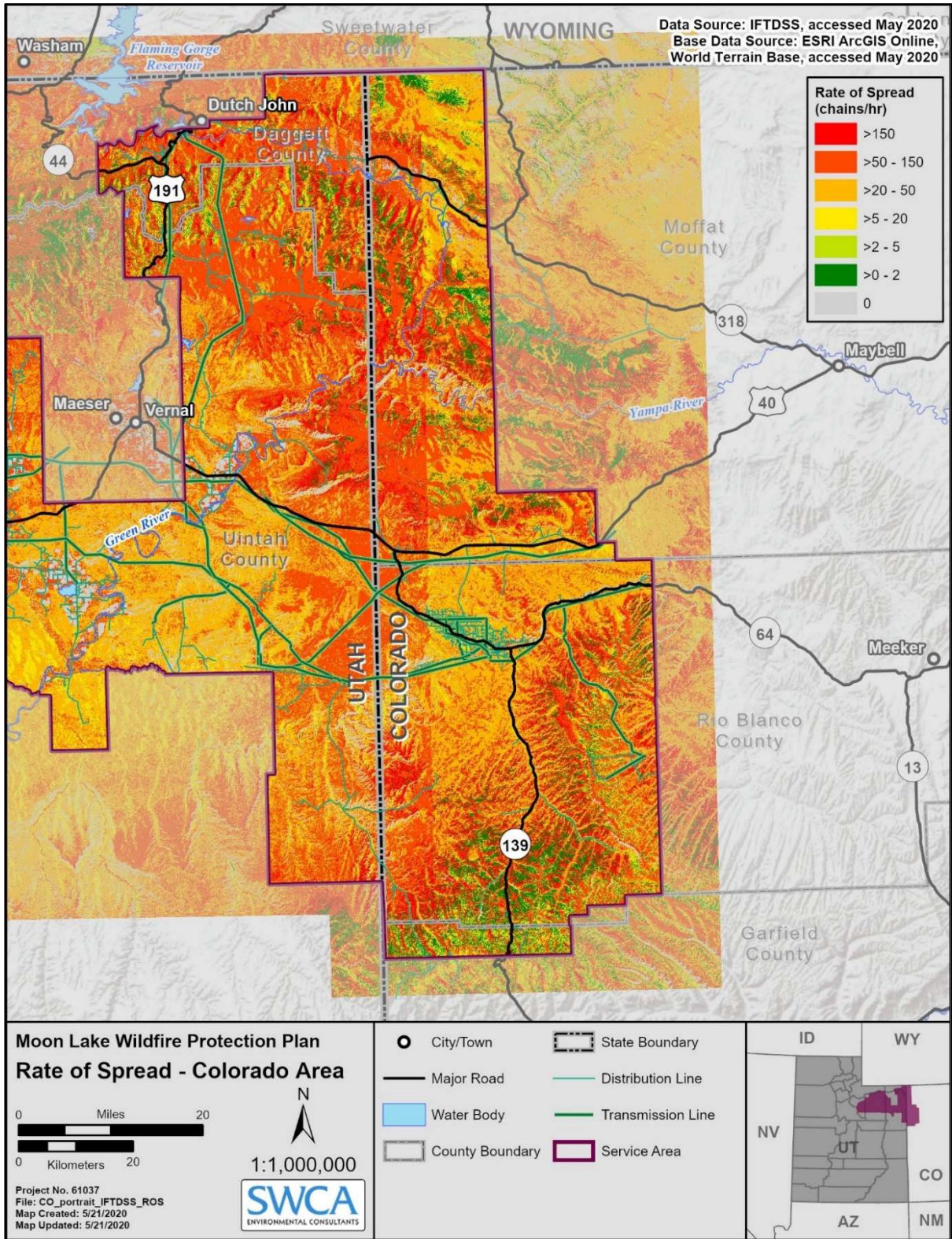


Figure A-3. Fire behavior model showing projected rates of fire spread within MLEA service area in Colorado.

Note that most electric lines are in areas of rapid rates of spread (>20 chains/hour), so mitigation measures that address vegetation management and increased inspections should be employed as proposed for similar Utah service areas in Appendix B.

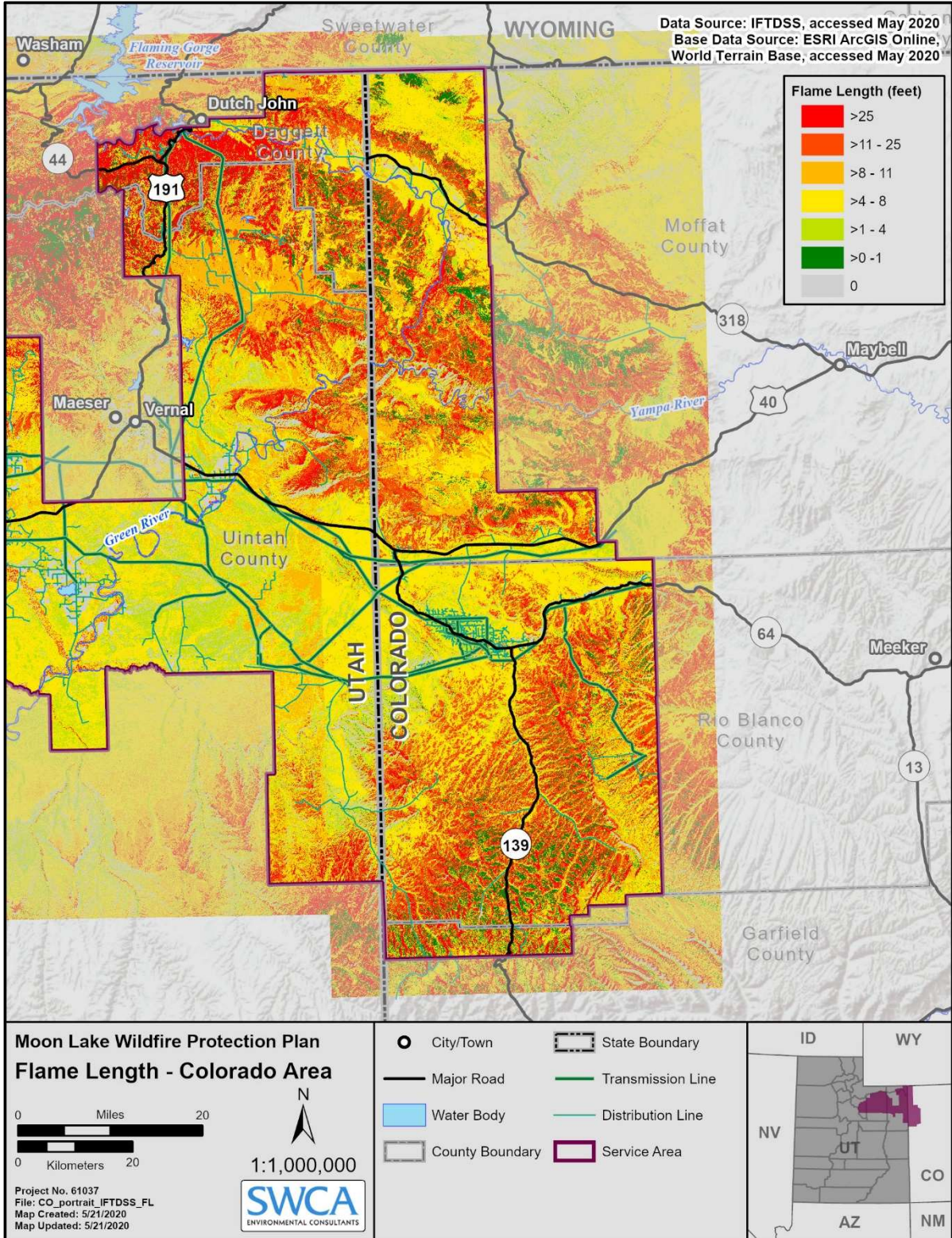


Figure A-4. Fire behavior model showing projected flame lengths within MLEA service area in Colorado.

Note that most electric lines are in areas projected to experience flame lengths over 4 feet, with some areas over 25 feet. Mitigation measures that address vegetation management and increased inspections should be employed as proposed for similar Utah service areas in Appendix B.

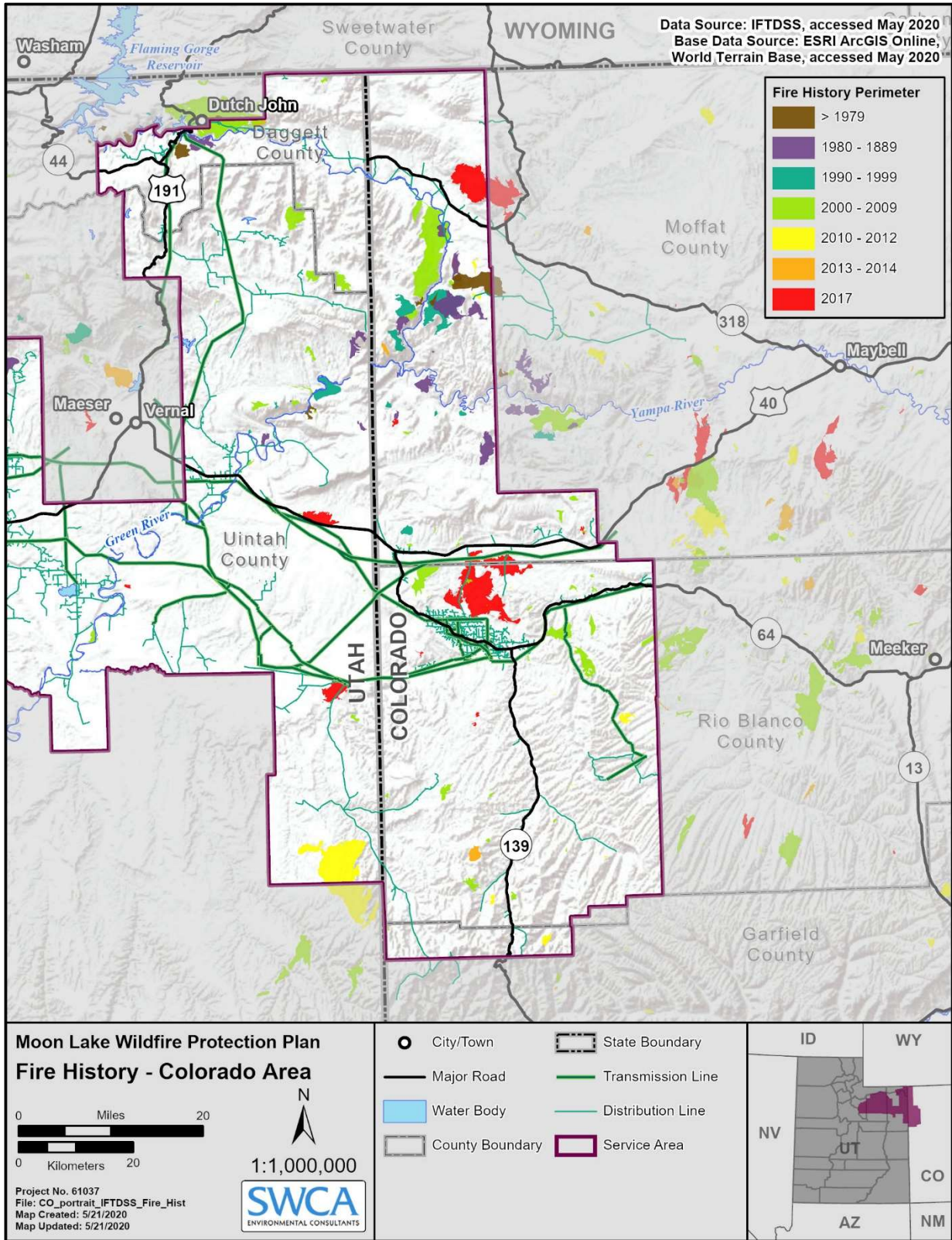


Figure A-5. Fire history within MLEA service area in Colorado.

Note that there have been some large fires adjacent to the MLEA electric lines, suggesting high ignition potential. As in the Utah service area, many of the fires are located close to urban areas, due to increased human ignitions. Mitigation measures that address vegetation management, public outreach regarding fire prevention and increased inspections should be employed as proposed for similar Utah service areas in Appendix B.

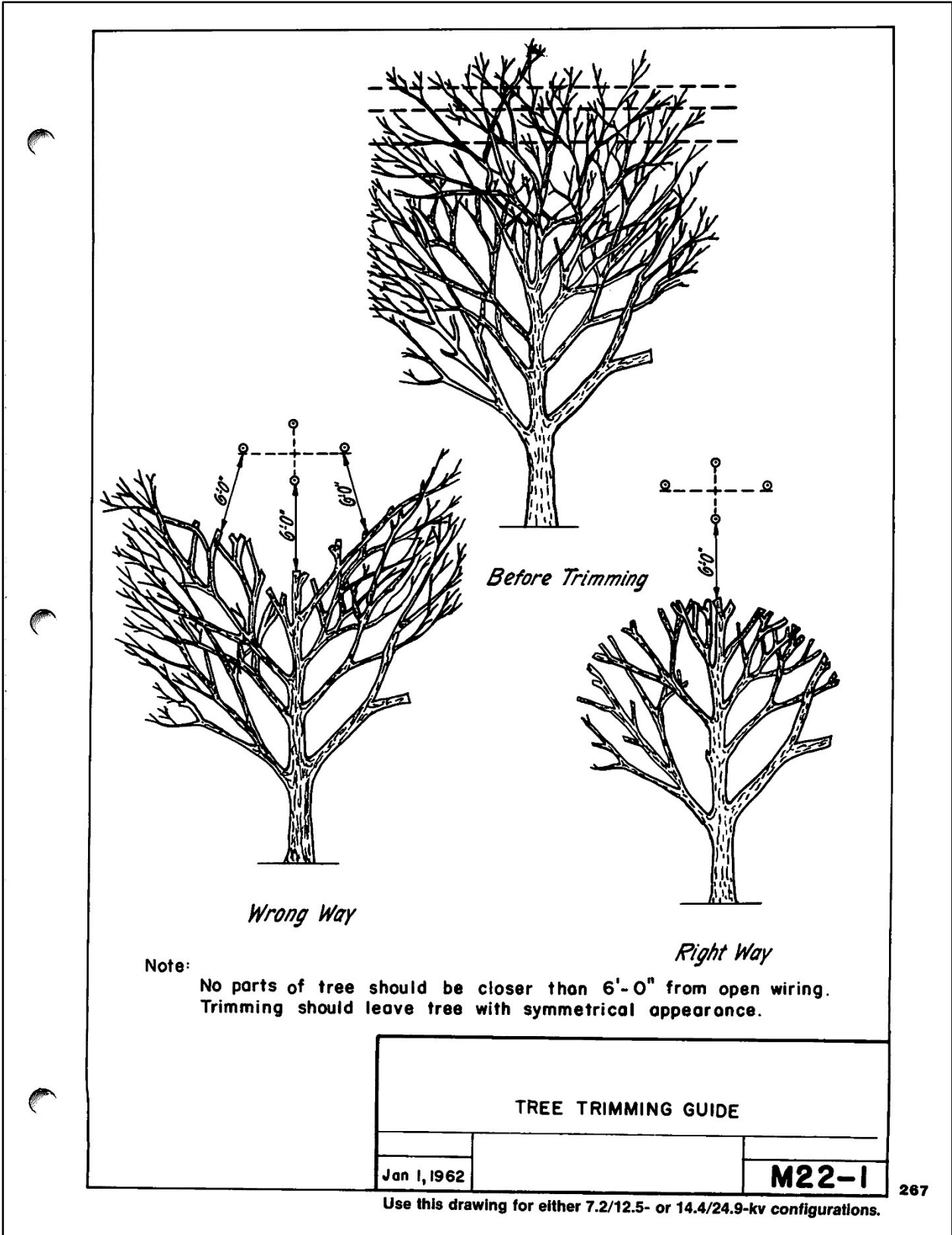


Figure A-6a. Tree Trimming Procedures (1 of 2).

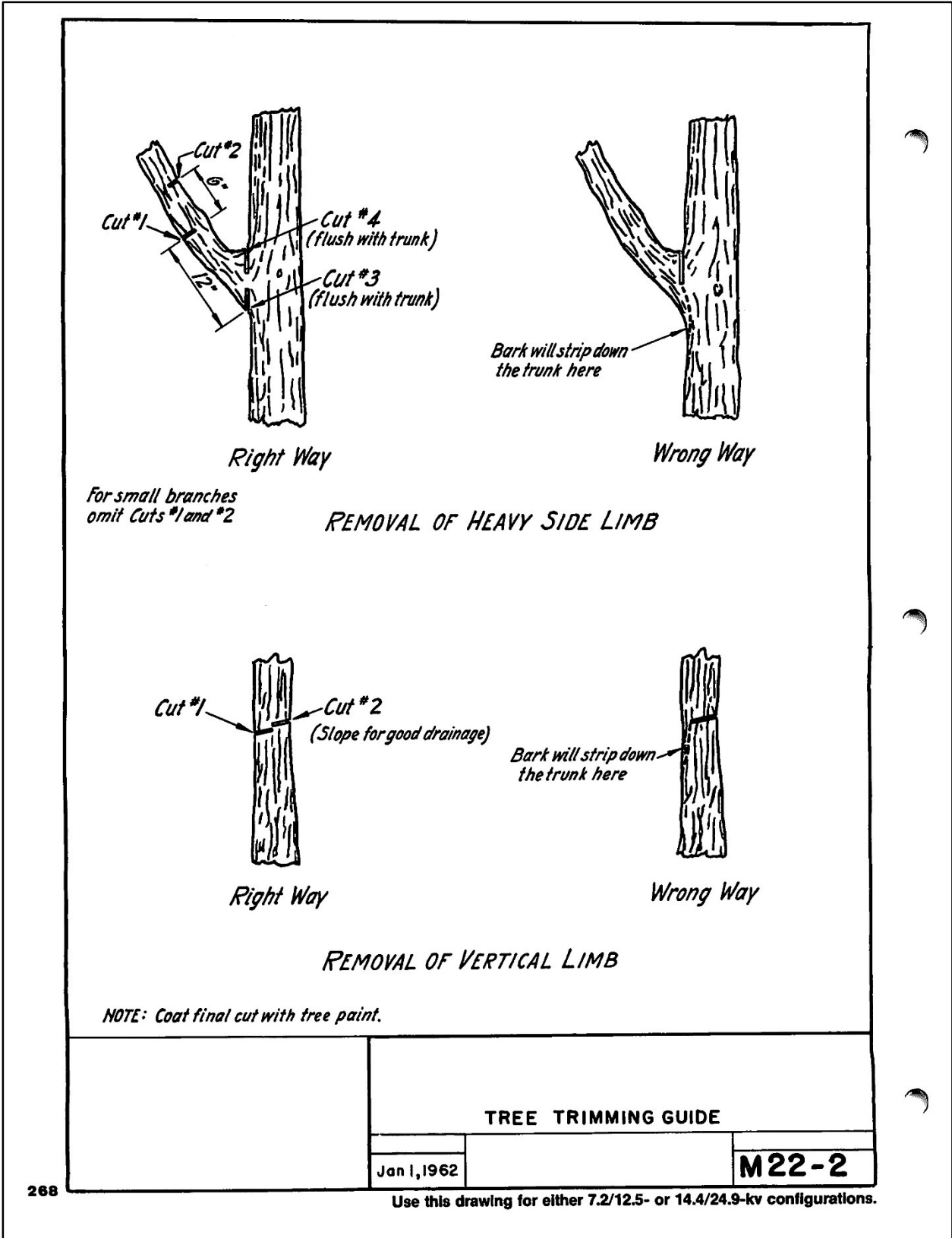


Figure A-6b. Tree Trimming Procedures (2 of 2).

APPENDIX B

Detailed Mapping of High-Risk Segments

Table B-1. Description of high-risk segments of the MLEA line

Map ID	Feeder	Description	Wildfire Risk Analysis and Line Description	Mitigation Strategy	Priority (L, M, H)
Map 1	15-03	Area A-1 is located ~ 1 mile west of Stockmore on Highway 35.	<p>A-1 represents a segment of distribution line that is located south of Highway 35, in an area of riparian vegetation grading to timber-litter on adjacent slopes (south of the road). These fuels could experience extreme rates of spread and flame lengths in excess of 30 feet. The area of greatest concern is approximately 1 mile west of the intersection of Highway 35 and Forest Road (FR) 144 and the Stockmore Ranger Station. The section is bordered on both sides by steep terrain, which may channel winds, increasing fire spread. The line is adjacent to the highway and therefore may be more prone to human ignitions from passing motorists.</p> <p>This segment is composed of a single-phase distribution line that serves mostly seasonal cabins and CUP. Line was constructed around 1970 with wooden poles and #4 ACSR wire. The recloser that protects this line is on pole #D14404</p>	<ul style="list-style-type: none"> • Fire prevention signage on the highway (work with the County and UDOT) • 2 year vegetation inspections 	High- due to the location along the highway and potential for ignitions
		Area A-2 is located alongside FR 144, approximately 3 miles north of the Stockmore Ranger Station.	<p>A-2 represents a segment of distribution line that is located on USFS land in an area of shrub and timber understory fuels, which could experience extreme flame lengths in excess of 30 feet. The line passes through steep terrain, with slopes in excess of 75%. These terrain features would facilitate more extreme fire behavior. There is a high probability of crown fire in this fuel type, which could consume wooden poles and high mortality in pine forest stands, increasing a risk of hazardous trees. The line is in an area of low infrastructure assets, but high forest and recreational values.</p> <p>This segment is composed of three-phase and single-phase distribution line that feeds Defa's Dude ranch and CUP and seasonal cabins through the tunnel to Rock Creek. The distribution line was constructed around 1960 with wooden poles and #4 ACSR wire. The recloser that protects this line is on pole #D14574</p>	<ul style="list-style-type: none"> • Consider wider ROW clearance due to potential for extreme flame lengths • 2 year vegetation inspections 	Moderate- due to the remote location and low density of values at risk
Map 2	22-01	Area B-1 is located on the east side of the Yellowstone River in the Yellowstone Canyon.	<p>B-1 represents a segment of transmission line that is located on USFS and private land. The adjacent fuels are a mixture of grass shrub and timber litter fuels. These fuels could experience high to extreme flame lengths in excess of 30 feet. The transmission line falls within an area of steep terrain, with slopes up to 75%. These terrain features would facilitate more extreme fire behavior. There is a high probability of crown fire in this fuel type, which could consume wooden poles and high mortality in pine forest stands, increasing a risk of hazardous trees. The line is in an area of low infrastructure assets, but high forest and recreational values.</p> <p>This segment is composed of a transmission line, substation, and a single-phase distribution line that feeds seasonal cabins. The transmission line was constructed around 1950 with wooden poles with #2 ACSR; the distribution line was constructed around 1940 with wooden poles with some #6 cu wire and #4 ACSR. The distribution line is scheduled to be replaced in 2022. The recloser for the distribution line is located at the Yellowstone substation. The breaker for the transmission line is located at pole #D00273 in Boneta.</p>	<ul style="list-style-type: none"> • Consider wider ROW clearance due to potential for extreme flame lengths • 2 year vegetation inspections 	Moderate- due to the remote location and low density of values at risk

Map ID	Feeder	Description	Wildfire Risk Analysis and Line Description	Mitigation Strategy	Priority (L, M, H)
Map 3	15-03	C-1 is similar to A-1	C-1 – same as described for A-1 above.	<ul style="list-style-type: none"> • Fire prevention signage on the highway (work with the County and UDOT) • 2 year vegetation inspections 	High- due to the location along the highway and potential for ignitions
		C-2 is located on Highway 35 south of Stockmore and approximately 1 mile north of Hanna.	<p>C-2 represents a section of the transmission line that is located on private land. The fuels within this section are primarily grass and shrub based. These fuels could experience extreme rates of spread (>55 feet/minute) and extreme flames lengths in excess of 30 feet. The line falls in varied topography with some extreme slopes (<75%). There is a high probability of rapid fire spread in these fuel types, which could prevent fire suppression activities. The line is in an area of medium to high infrastructure assets, emphasizing the need to mitigate wildfire potential around this section.</p> <p>This segment is composed of three-phase and single-phase distribution line that is the main feeder for West and North Fork of Duchesne and year-round residential homes. The main feeder was constructed in 1960 with wooden poles and 4/0 ACSR wire. The recloser for the distribution line is located in the Hanna sub-feeder 3 recloser.</p>	<ul style="list-style-type: none"> • 2 year vegetation inspections 	High- due to the density of values at risk adjacent to the line
	15-03	C-3 is located on Highway 35, <1 mile south of Hanna.	<p>C-3 represents a section of the transmission line that is located on private and a small section of tribal lands. The fuels within this section are a mixture of grass, shrubs, and timber fuels. These fuels could experience moderate to extreme rates of spread and some high flame lengths (20–30 feet). The line falls in an area of low to high infrastructure assets. Areas of highest value should be prioritized for mitigation (for example, areas adjacent to homes and structures).</p> <p>This segment is composed of transmission line and single-phase distribution line. The transmission line feeds the Hanna substation and Chevron pump station, and the single-phase distribution line feeds year-round residential homes. The transmission line was constructed in 1970 with wooden poles and 1/0 ACSR wire. The distribution line was constructed in 1970 with wooden poles and #4 ACSR. The breaker for the transmission line is located in Duchesne sub-breaker 6950 the recloser for the distribution line is located in the Hanna sub-feeder 2 recloser.</p>	<ul style="list-style-type: none"> • Fire prevention signage on the highway (work with the County and UDOT) • 2 year vegetation inspections 	High- due to the density of values at risk adjacent to the line

Map ID	Feeder	Description	Wildfire Risk Analysis and Line Description	Mitigation Strategy	Priority (L, M, H)
	Transmission and 41-02	C-4 is located southwest of Tabiona, on the west side of the transmission line.	<p>C-4 represents a section of the transmission line that is located on private lands. The fuels within this section are a mixture of grass, shrubs, and small amounts of timber fuels. These fuels could experience moderate to extreme rates of spread and some high flame lengths (20–30 feet). The line falls in an area of low to high infrastructure assets; areas of highest value should be prioritized for mitigation, (for example, areas adjacent to homes and structures).</p> <p>This segment is composed of 69 kV transmission line three-phase distribution line. The transmission line feeds the Tabiona and Hanna substations and Chevron pump station. The distribution lines feed MountTabby Springs with seasonal and year-round residential homes. The Transmission line was constructed in 1970 with wooden poles and 1/0 ACSR wire. The distribution line was constructed in 1970 with wooden poles and #4 ACSR. The breaker for the transmission line is located in Duchesne sub-breaker 6950; the recloser for the distribution line is located on pole D15395.</p>	<ul style="list-style-type: none"> • Fire prevention signage on the highway (work with the County and UDOT) • 2 year vegetation inspections 	High- due to the density of values at risk adjacent to the line
	41-02	C-5 is located on Highway 35, 1 mile southeast of the Tabiona Substation.	<p>C-5 represents a section of distribution line on private land along Highway 35. The fuels within this section are a mixture of grass, shrubs and small amounts of timber fuels. These fuels could experience moderate to extreme rates of spread and some high flame lengths (20–30 feet). The line falls in an area of low to high infrastructure assets; areas of highest value should be prioritized for mitigation (for example, areas adjacent to homes and structures).</p> <p>This segment is composed of three-phase distribution line that feeds year-round residential homes and some irrigation services. The line was rebuilt in 2000 with wooden poles and 1/0 ACSR wire. The recloser for this line is on pole D20334.</p>	<ul style="list-style-type: none"> • Fire prevention signage on the highway (work with the County and UDOT) • 2 year vegetation inspections 	High- due to the density of values at risk adjacent to the line
Map 4	26-01	D-1 is located in the Bandanna Ranch area of Fruitland.	<p>D-1 represents a section of distribution line that is located on private land and a State Wildlife Reserve/Management Area. The fuels within this section are a mixture of grass, shrubs, and small amounts of timber fuels associated with riparian areas. These fuels could experience moderate to extreme rates of spread and some extreme flame lengths (>30 feet). The line falls in an area of low to high aggregate value impacts assets; areas of highest value should be prioritized for mitigation (for example, areas adjacent to homes and structures).</p> <p>This segment is composed of single-phase distribution that feeds Bandana Ranch, which serves both recreational and year-round residents. The main trunk of this line was built in 1980 with wooden poles and #4 ACSR wire. The recloser for this line is located on pole D12360.</p>	<ul style="list-style-type: none"> • 2 year vegetation inspections 	High- due to the expansive areas designated at high risk and the adjacent high density of values at risk

Map ID	Feeder	Description	Wildfire Risk Analysis and Line Description	Mitigation Strategy	Priority (L, M, H)
	26-01	D-2 is located north of Fruitland, close to Highway 40.	<p>D-2 represents a section of distribution line that is located on private lands within and adjacent to the community of Fruitland. The fuels within this section are a mixture of grass and shrub. These fuels could experience moderate to extreme rates of spread and some extreme flame lengths (>30 feet). The line falls in an area of high aggregate value impacts assets; areas of highest value should be prioritized for mitigation (for example, areas adjacent to homes and structures). The high risk in the area is attributable to a heavy fire occurrence density, likely due to human ignitions associated with the proximity to the highway and urban development.</p> <p>This segment of line is composed of three-phase/single-phase distribution line along Highway 40 east and west of the Fruitland area. This line also takes in the surrounding residential and seasonal services and lines including Orange Mountain and Current Creek. The main trunk of these lines was rebuilt in 2000 out of wooden poles. The line to the east is constructed of 4/0 ACSR wire, and the line to the west is 1/0 ACSR wire. The recloser for the lines to the west is in the Fruitland substation, feeder 4. The lines to the east are protected by Fruitland Feeder #2 to Red Creek and the rest from by Rabbit Gulch Feeder #2.</p>	<ul style="list-style-type: none"> • Fire prevention signage on the highway (work with the County and UDOT) • 2 year vegetation inspections • Work with the County and UTDOT to encourage increased and more frequent maintenance of the roadside ROW on Highway 40 	High- due to the previous high fire occurrence and the density of values at risk
Map 5	41-02	E-1 is located by Rock Creek Ranch, along W Highway 35.	<p>E-1 represents a section of distribution line that is located on tribal and private lands. The risk continues along the length of the line, connecting with segment C-5 from Map 3. The fuels within this section are primarily shrubs interspersed with grasses. These fuels could experience extreme rates of spread and extreme flame lengths (>30 feet). The line falls in an area of high aggregate value impacts assets; areas of highest value should be prioritized for mitigation (for example areas adjacent to homes and structures). The high risk in the area is also attributable to a heavy fire occurrence density, likely due to human ignitions associated with the proximity to the highway.</p> <p>This segment of line consists of three phase distribution line constructed of wooden poles built in 2000 and 1/0 ACSR wire. The west side is fed from the Tabiona substation feeder #2 with protection from recloser D20334. The east side is fed from Duchesne Feeder #6.</p>	<ul style="list-style-type: none"> • Fire prevention signage on the highway (work with the County and UDOT) • 2 year vegetation inspections. • Work with the County and UTDOT to encourage increased and more frequent maintenance of the roadside ROW on W Highway 35 	High- due to the previous high fire occurrence and the density of values at risk

Map ID	Feeder	Description	Wildfire Risk Analysis and Line Description	Mitigation Strategy	Priority (L, M, H)
	13-03	E-2 is located along the west side of W SR-87 and the west side of the transmission line.	<p>E-2 represents a section of transmission line that is located on private lands. The risk extends along the line from 1 mile north of Talmage north for approximately 6 miles. The fuels within this section are primarily shrubs interspersed with grasses. These fuels could experience extreme rates of spread and high flame lengths (20–30 feet). The line falls in an area of high aggregate value impacts assets, mostly as a result of the transmission line corridor. The high risk in the area is also attributable to a heavy fire occurrence density, likely due to human ignitions associated with the proximity to the highway.</p> <p>This segment of line consists of transmission and distribution lines north of Duchesne and south of Talmage along Highway 87. The transmission line was constructed in 1960 with 2/0 ACSR wire and wooden poles. The distribution lines were built in 1970 with 1/0 wire. The south section of line is fed from Duchesne Feeder #3 breaker 7072. The north section is fed from Talmage Feeder #3. The recloser is on pole D16669</p>	<ul style="list-style-type: none"> • 2 year vegetation inspections. • Work with the County and UTDOT to encourage increased and more frequent maintenance of the roadside ROW on SR-87 	High- due to the previous high fire occurrence and the density of values at risk
	25-02	E-3 is located near in the community of Mountain Home.	<p>E-3 represents a section of distribution line that is located on private lands. These are small patches of risk. The fuels within this section are a mixture of agricultural, shrub, and grass. These fuels could experience moderate rates of spread and flame lengths. The risk associated with this section is mostly attributed to the high density of aggregated values as well as a history of fire occurrence, likely due to human ignitions associated with the proximity to residential areas.</p> <p>This segment of line consists of three-phase distribution lines made of wooden poles and 4/0 ACSR wire rebuilt in 2000. This line feeds residential homes in the Mountain Home area. The east side recloser is the Feeder #2 recloser in the Altamont substation. The west side recloser is the Feeder #4 recloser in the Talmage substation.</p>	<ul style="list-style-type: none"> • Fire prevention signage on the highway (work with the County and UDOT) • 2 year vegetation inspections 	High- due to the density of values at risk
Map 6	28-03	F-1 is northeast of Strawberry Pinnacles.	<p>F-1 represents a section of distribution line that is located on private lands, adjacent to tribal lands. The fuels within this section are a mixture of grass, shrub, and timber. Adjacent terrain is steep, and under these terrain conditions, these fuels could experience extreme rates of spread and flame lengths, in excess of 30 feet. The risk associated with this section is also attributed to the high density of aggregated values as well as a history of fire occurrence.</p> <p>This segment of line is composed of three-phase/single-phase distribution line with 1/0 ACSR wire with wooden poles constructed in the 1950s. The east side is fed from Rabbit Gulch Feeder #3 with the recloser located on pole D09204. The north and west sides are fed from Fruitland Feeder #2 with the recloser located on pole D13335.</p>	<ul style="list-style-type: none"> • 2 year vegetation inspections. • Consider wider ROW clearance 	High- due to the extreme risk and extreme fire behavior potential

Map ID	Feeder	Description	Wildfire Risk Analysis and Line Description	Mitigation Strategy	Priority (L, M, H)
Map 7	28-02	G-1 is located north of Pinyon Ridge and south of Highway 40.	<p>G-1 represents a section of distribution line that is located on private lands. The fuels within this section are a mixture of grass and shrub, which could experience extreme rates of spread and flame lengths in excess of 30 feet. The risk associated with this section is also attributed to the high density of aggregated values as well as a history of fire occurrence.</p> <p>This segment is composed of single-phase distribution line with wooden poles. It was constructed in the early 1980s of #4 ACSR wire. The recloser for this line is located on pole D21279. This line feeds the Pinyon Ridge subdivision.</p>	<ul style="list-style-type: none"> • 2 year vegetation inspections. • Consider wider ROW clearance • Fire prevention signage on the highway (work with the County and UDOT) 	High- due to the extreme risk and density of values at risk
	13-05 and 13-02	G-2 and G-3 are located east and west of Duchesne along Highway 40.	<p>G-2 and G-3 represent sections of distribution line that are located on private and tribal lands. The fuels within these sections are a mixture of agriculture, grass, and shrub, which could experience moderate rates of spread and moderate flame lengths (4–8 feet). The risk associated with these sections is primarily attributed to the high density of aggregated values, as well as a history of fire occurrence.</p> <p>G-2 is composed of three-phase distribution line along Highway 40 west of Duchesne. It was constructed in the 1960s with #4 ACSR wire with wooden poles. The recloser for this line is located on pole #D17368.</p> <p>G-3 is composed of three-phase distribution line along Highway 40 east of Duchesne with wooden poles. his feeds the Duchesne Mini-Ranches and Ovintiv Oilfield Services. It was constructed in 2010 with 4/0 ACSR wire. The recloser for this line is on pole D24652.</p>	<ul style="list-style-type: none"> • Consider wider ROW clearance • Fire prevention signage on the highway (work with the County and UDOT) 	High- due to the extreme risk and density of values at risk
	28-03	<p>G-4 is located north of Lake Canyon, approximately 6 miles south west of Duchesne.</p> <p>G-5 is located south west of G4.</p>	<p>G-4 and G-5 represent sections of distribution line that are located on tribal lands. The fuels within these sections are a mixture of shrub and timber which could experience extreme rates of spread and flame lengths in excess of 30ft. The risk associated with these sections is also attributed to a history of high fire occurrence.</p> <p>G-4 represents a section of line owned by Finley Resources. It is fed from Rabbit Gulch Feeder #3 and is protected by the recloser on pole #D25925.</p> <p>G-5 is composed of single-phase distribution line with wooden poles and #4 ACSR wire. The line was built in the 1990s and serves mainly seasonal accounts. The recloser for this line is on pole D09208.</p>	<ul style="list-style-type: none"> • 2 year vegetation inspections. • Consider wider ROW clearance 	Moderate- due to the remote location and low density of values at risk
Map 8	18-03	H-1 is located north of the Uintah Summer Home Tract.	<p>H-1 represents a section of distribution line that is located on USFS land. The fuels within this section are a mixture of timber, some of which could experience rapid rates of spread, and moderate (8 feet) to extreme flame lengths (>30 feet). The area is characterized by some steep terrain, which can elevate fire behavior under extreme conditions. The section has low aggregated values but high occurrence of historic fires.</p> <p>The segment is composed of #4 ACSR wire with wooden poles. It was constructed in 1960. The recloser is located on pole R09774 in the Uintah Hydro.</p>	<ul style="list-style-type: none"> • 2 year vegetation inspections. • Monitor heavy timber volume. 	Moderate- due to the remote location and low density of values at risk

Map ID	Feeder	Description	Wildfire Risk Analysis and Line Description	Mitigation Strategy	Priority (L, M, H)
	18-03	H-2 is located close to the Duchesne-Uintah county line, near Neola.	<p>H-2 represents a section of distribution line that is located on tribal land. The fuels within this section are mostly grass and shrub, some of which could experience rapid rates of spread and moderate (8 feet) to extreme flame lengths (>30 feet). The high risk associated with this section is attributed primarily to a concentration of high aggregated values and high occurrence of historic fires (e.g., the Neola North Fire).</p> <p>The segment is composed of 1/0 ACSR with wooden poles. This line was rebuilt in the 1990s. Many poles were replaced in 2007 after the Neola North wildfire. The recloser is on pole R10024.</p>	<ul style="list-style-type: none"> • 2 year vegetation inspections. • Consider wider ROW clearance 	High- due to the high risk and density of values at risk
	10-03	H-3 is located in the Farm Creek community.	<p>H-3 represents a section of distribution line that is located on tribal and private land. The fuels within this section are mostly grass and shrub, some of which could experience rapid rates of spread and moderate (8 feet) to extreme (>30 feet) flame lengths. The high risk associated with this section is attributed primarily to a concentration of high aggregated values and high occurrence of historic fires.</p> <p>The segment is composed of #4 ACSR with wooden poles. It was rebuilt in 2007 after the Neola North Fire. The recloser is on pole R08326 fed from Lapoint Feeder #3.</p>	<ul style="list-style-type: none"> • 2 year vegetation inspections. • Consider wider ROW clearance 	High- due to the high risk and density of values at risk
	38-02	H-4 and H-5 are located around Deep Creek	<p>H-4 and H-5 represent sections of distribution line that are located on tribal land and private land, respectively. The fuels within these sections are a mixture of grass and shrub, which could experience extreme rates of spread (55 feet/minute) and flame lengths in excess of 30 feet. The risk associated with these sections is also attributed to high density of aggregated values and high fire occurrence density, likely due to human ignitions associated with residential areas.</p> <p>H-4 is composed of #4 ACSR with wooden poles. It was built in the 1950s. The recloser is on pole R03978 fed from Great Lakes Feeder # 2.</p> <p>H-5 is composed of #4 ACSR with wooden poles. It was built in the 1950s. The recloser is on pole R03840 fed from Great Lakes Feeder # 2.</p>	<ul style="list-style-type: none"> • Fire prevention signage on the highway (work with tribal government) • 2 year vegetation inspections. • Consider wider ROW clearance 	High- due to the high risk and density of values at risk
Map 9	18-03	I-1 is located on the north side of Neola, in Duchesne County.	<p>I-1 represents a section of distribution line that is located on tribal land. The fuels within this section are mostly grass and shrub, some of which could experience extreme rates of spread (55 feet/minute) and moderate flame lengths (8 feet). The high risk associated with this section is attributed primarily to high occurrence of historic fires.</p> <p>The segment is composed of 1/0 and #4 ACSR wire with wooden poles. Lines were built in the 1970s and 1980s. The southeast recloser is on pole R23854, and the north recloser is on pole R10024.</p>	<ul style="list-style-type: none"> • Fire prevention signage on the highway (work with tribal government) • 2 year vegetation inspections. • Consider wider ROW clearance 	High- due to the history of high fire occurrence and density of values at risk

Map ID	Feeder	Description	Wildfire Risk Analysis and Line Description	Mitigation Strategy	Priority (L, M, H)
10-03		I-2 includes the town of Whiterocks as well as the area immediately south and east	<p>I-2 represents a section of distribution line that is located on tribal land. The fuels within this section are mostly grass and shrub, with some timber. These fuels could experience extreme rates of spread (55 feet/minute) and moderate to high flame lengths (20–30 feet). The high risk associated with this section is attributed primarily to a high occurrence of historic fires and density of aggregated values.</p> <p>The segment is mainly composed of 1/0 ACRS wire with wooden poles. The trunk lines were built in the late 1970s. Recloser protection is from the Lapoint Feeder #3 substation recloser.</p>	<ul style="list-style-type: none"> • Fire prevention signage on the highway (work with tribal government) • 2 year vegetation inspections. • Consider wider ROW clearance 	High- due to the history of high fire occurrence and density of values at risk
10-03		I-3 is located south of White Rocks	<p>I-3 represents a section of distribution line that is located on tribal and private land. The fuels within this section are mostly grass and shrub. These fuels could experience extreme rates of spread (55 feet/minute) and moderate to high flame lengths (20–30 feet). The high risk associated with this section is attributed primarily to high occurrence of historic fires and density of aggregated values.</p> <p>The segment is composed of 4/0 ACSR wire with wooden poles. This line was rebuilt in 1991. Recloser protection is from the Lapoint Feeder #3 substation recloser.</p>	<ul style="list-style-type: none"> • Fire prevention signage on the highway (work with tribal government) • 2 year vegetation inspections. • Consider wider ROW clearance 	High- due to the history of high fire occurrence and density of values at risk

Map ID	Feeder	Description	Wildfire Risk Analysis and Line Description	Mitigation Strategy	Priority (L, M, H)																								
	Various	I-4 through I-12	<p>I-4 through I-12 represents sections of distribution and transmission line located on tribal and private land, interior from the wildland urban interface, and with an agricultural and residential makeup. The fuels within these sections are a mixture of agricultural, grass, shrub, and timber. Much of the high risk associated with these sections is attributed to high density of aggregated values.</p> <p>The distribution line segments are composed predominantly of 1/0 ACSR and #4 ACSR wire with wooden poles. These lines were built after 1970.</p> <p>The transmission segment south of the Monarch substation is composed of 477 ACSR wire with wooden poles. Breaker #7045 out of Cove Substation.</p> <p>The transmission segment south and east of the Neola substation is composed of 2/0 ACSR wire and wooden poles. Breaker #7047 out of Cove Substation.</p> <p>The transmission segment east of the Lapoint substation is composed of 2/0 ACSR wire and wooden poles. Breaker # 7047 out of Cove Substation.</p>	<ul style="list-style-type: none"> • Fire prevention signage and literature campaigns (work with tribal government) • Focus on mitigating vegetation in segments adjacent to distribution lines 	High- due to the density of values at risk																								
			<table border="1"> <thead> <tr> <th>Map Segment</th> <th>Recloser</th> <th>Map Segment</th> <th>Recloser</th> </tr> </thead> <tbody> <tr> <td>I-4</td> <td>Neola Sub-feeders 1, 3, and 4</td> <td>I-9</td> <td>Lapoint Feeder 1</td> </tr> <tr> <td>I-5</td> <td>Neola Feeder 1</td> <td>I-10</td> <td>Lapoint Feeder 4</td> </tr> <tr> <td>I-6</td> <td>Monarch Feeder 4</td> <td>I-11</td> <td>Lapoint Feeder 4 Ft. Duchesne Feeder 4</td> </tr> <tr> <td>I-7</td> <td>Monarch Feeder 2</td> <td>I-12</td> <td>Great Lakes Feeder 4</td> </tr> <tr> <td>I-8</td> <td>Dry Gulch 2</td> <td></td> <td></td> </tr> </tbody> </table>	Map Segment	Recloser	Map Segment	Recloser	I-4	Neola Sub-feeders 1, 3, and 4	I-9	Lapoint Feeder 1	I-5	Neola Feeder 1	I-10	Lapoint Feeder 4	I-6	Monarch Feeder 4	I-11	Lapoint Feeder 4 Ft. Duchesne Feeder 4	I-7	Monarch Feeder 2	I-12	Great Lakes Feeder 4	I-8	Dry Gulch 2				
Map Segment	Recloser	Map Segment	Recloser																										
I-4	Neola Sub-feeders 1, 3, and 4	I-9	Lapoint Feeder 1																										
I-5	Neola Feeder 1	I-10	Lapoint Feeder 4																										
I-6	Monarch Feeder 4	I-11	Lapoint Feeder 4 Ft. Duchesne Feeder 4																										
I-7	Monarch Feeder 2	I-12	Great Lakes Feeder 4																										
I-8	Dry Gulch 2																												

Map ID	Feeder	Description	Wildfire Risk Analysis and Line Description	Mitigation Strategy	Priority (L, M, H)
Map 10	2-01, 18-01	J-1 is located north of Roosevelt	<p>J-1 represents a section of transmission line that is located on private land. The fuels within this section are a mixture of agricultural, grass, shrub, and timber. Much of the high risk associated with the section is attributed to high density of aggregated values and high fire occurrence.</p> <p>This segment of line consists of a transmission line built in the 1990s, with an under-build of distribution. These lines feed out of the Roosevelt substation with recloser on the distribution, and a breaker on the transmission. There is another line that is three-phase with single phase on the end which feeds out of the Neola sub-feeder. The single-phase line was built in 2000, and the three-phase line was built in the 1980s with some newer poles mixed in. The three-phase line has 477 ACSR conductor with a 4/0 neutral. The single-phase line has #4 ACSR phase and neutral. All of these lines are surrounded by irrigated land on one side and highway on the other side.</p>	<ul style="list-style-type: none"> • Fire prevention signage and literature campaigns (work with tribal government/County) • Consider wider ROW clearance 	High- due to the density of values at risk
	2-06	J-2 is located in Roosevelt	<p>J-2 represents a section of distribution line that is located within Roosevelt on private land. The fuels within this section are a mixture of agricultural, grass, shrub, and timber. Much of the high risk associated with the section is attributed to a high density of aggregated values and high fire occurrence.</p> <p>This segment of line is along and north of U.S. Highway 40 just outside of Roosevelt. This distribution line is fed from the Roosevelt substation, and protected by a recloser. This area has different sizes of conductor ranging from 336 ACSR to 1/0. This line was built in the 1970s, a lot of these poles changed have been changed out to newer poles. This segment is surrounded by business, residential, and some commercial buildings.</p>	<ul style="list-style-type: none"> • Fire prevention signage and literature campaigns (work with tribal government/County) • More frequent inspections 	High- due to the density of values at risk
	2-06, 11-04	J-3 is located along U.S. Highway 40, approximately 4.5 miles from Roosevelt	<p>J-3 represents a section of distribution line that is located on private land. The fuels within this section are a mixture of agricultural, grass, shrub, and timber. Much of the high risk associated with the section is attributed to high density of aggregated values and high fire occurrence.</p> <p>This segment is also along U.S. Highway 40 also. There is a 345kv transmission line that crosses in this area which is Deseret G & T. There are two distribution lines at this area; one, which feeds from the Roosevelt substation, was rebuilt in 2010 using wood pole structures and 477 ACSR conductor and 4/0 neutral conductor. The other line feeds from the Ioka substation using wood pole structures; other than a small portion at this given segment, most of the line has been rebuilt. This portion was built in the 1980s and is not scheduled to be rebuilt at this time. This segment has some irrigated land nearby and some land that is not developed.</p>	<ul style="list-style-type: none"> • Fire prevention signage and literature campaigns (work with tribal government/County) • 2 year inspections 	High- due to the density of values at risk

Map ID	Feeder	Description	Wildfire Risk Analysis and Line Description	Mitigation Strategy	Priority (L, M, H)
39-02		J-4 is along US highway 40, just on the outskirts of Myton.	<p>J-4 represents a section of distribution line that is located on private and tribal land. The fuels within this section are a mixture of agricultural, grass, and light shrub. Much of the high risk associated with the section is attributed to high density of aggregated values and high fire occurrence.</p> <p>This segment of line was built in 1970s with some poles that have been changed. This line was built using wood structures with 1/0 ACSR conductors and #4 neutral.</p>	<ul style="list-style-type: none"> • Fire prevention signage and literature campaigns (work with tribal government/County) • 2 year inspections 	High- due to the density of values at risk
45-01		J-5 is located north of Highway 40, north of Fort Duchesne	<p>J-5 represents a section of distribution line that is located on private and tribal land. The fuels within this section are a mixture of agricultural, grass, and light shrub. Much of the high risk associated with the section is attributed to high density of aggregated values and an extremely high fire occurrence.</p> <p>The segment is composed of #4 ACSR with wooden poles. This line was built in the 1960s. The recloser is on pole R06503.</p>	<ul style="list-style-type: none"> • Fire prevention signage and literature campaigns (work with tribal government/County) • 2 year inspections 	High- due to the density of values at risk
?		J-6 and J-8 are adjacent to Highway 40, east and west of Fort Duchesne	<p>J-6 and J-8 represent sections of distribution line that are located on tribal and private land. The fuels within these sections are a mixture of agricultural, grass, shrub, and timber. Much of the high risk associated with these sections is attributed to high density of aggregated values, as well as heavy fire occurrence, particularly associated with J8.</p> <p>J-6 is composed of 4/0 ACSR wire with wooden poles built in the 1960s. The recloser protection for J-6 is on pole R20357 from Roosevelt Feeder #2.</p> <p>J-8 is composed of #2 ACSR wire with wooden poles built in the 1960s. The recloser protection for J-8 is from Ft. Duchesne Feeder #1.</p>	<ul style="list-style-type: none"> • Fire prevention signage and literature campaigns (work with tribal government/County) • 2 year inspections 	High- due to the density of values at risk
45-03		J-7 is located in and around Fort Duchesne	<p>J-7 represents a cluster of distribution line that is located on tribal land. The fuels within this section are a mixture of agricultural, grass, and light shrub. Much of the high risk associated with the section is attributed to high density of aggregated values and an extremely high fire occurrence.</p> <p>These lines are composed of mainly 4/0 ACSR wire with wooden poles. Lines were built in the 1980s. Recloser protection is from Ft. Duchesne Feeder #1.</p>	<ul style="list-style-type: none"> • Fire prevention signage and literature campaigns (work with tribal government/County) • 2 year inspections 	High- due to the density of values at risk and extreme risk throughout the community
45-03		J-9 is located south of Fort Duchesne on S 7500 E just south of the 345-kV line.	<p>J-9 represents a distribution line that is located on tribal and private land. The fuels within this section are a mixture of agricultural, grass and light shrub. Much of the high risk associated with the section is attributed to high density of aggregated values and a high fire occurrence history.</p> <p>The segment is composed of 4/0 ACSR wire with wooden poles. It was built in the mid-1980s. Recloser protection is from Ft. Duchesne Feeder #3.</p>	<ul style="list-style-type: none"> • Fire prevention signage and literature campaigns (work with tribal government/County) • 2 year inspections 	High- due to the density of values at risk

Map ID	Feeder	Description	Wildfire Risk Analysis and Line Description	Mitigation Strategy	Priority (L, M, H)
	45-03 and 9-03	J-10 and J-11 are located south of Fort Duchesne and close to Randlett	<p>J-10 and J-11 represent sections of distribution line that are located on tribal and private land. The fuels within these sections are a mixture of agricultural, grass, shrub, and timber. Much of the high risk associated with these sections is attributed to high density of aggregated values, as well as heavy fire occurrence, particularly associated with J-11.</p> <p>J-10 is composed of 4/0 ACSR wire with wooden poles. It was rebuilt in 2000. Recloser protection is from Ft. Duchesne Feeder #3.</p> <p>J-11 is composed of 4/0 ACSR wire with wooden poles. It was rebuilt in 2000. Recloser protection on the west side is from Ft. Duchesne Feeder #3. Recloser protection on the east side is from Leota Feeder #3.</p>	<ul style="list-style-type: none"> • Fire prevention signage and literature campaigns (work with tribal government/County) • 2 year inspections 	High- due to the density of values at risk and historic high fire occurrence.
Map 11	138-kV transmission	K-1 is located in association with the Flaming Gorge Lodge/Campground area and vicinity	<p>K-1 represents a section of transmission line that is located within the National Recreation Area. The fuels within the section are a mixture of grass, shrub, and timber. These fuels have the potential to generate extreme wildfire spread (>55 feet/minute) and extreme flame lengths in excess of 30 feet. Much of the high risk associated with this section is also due to the high density of aggregated values, as well as heavy fire occurrence.</p> <p>This segment is a three-phase distribution line that was constructed in the 1960s with wooden poles. The conductor is 1/0 phase with #4 neutral. This line is not scheduled for replacement. The substation feeding these lines is operated and owned by WAPA. WAPA leaves their breaker on non-reclosing permanently. This section of line crosses the national forest and private lands; it feeds some seasonal recreation dwellings, commercial facilities, and homes.</p>	<ul style="list-style-type: none"> • Fire prevention signage and literature campaigns (work with National Recreation Area/County) • 2 year inspections • Consider wider ROW 	High- due to the potential extreme fire behavior and density of values at risk.
Map 12	8-01	L-1 is located west of Jenson, along Highway 40.	<p>L-1 represents a section of distribution line that is located on private land alongside Highway 40. The fuels within the section are a mixture of grass, shrub, and agricultural land. Some of these fuels have the potential to generate moderate and high (33–44 feet/minute) wildfire spread and high flame lengths (20–30 feet). Much of the high risk associated with this section is also due to the high density of aggregated values, as well as some very heavy historic fire occurrence.</p> <p>This segment of line is a three-phase distribution line constructed in the 1960s using wood pole structures, with 4/0 phase conductors and a 1/0 neutral. This line is fed out of the Vernal substation, breaker #61. This line is not scheduled for replacement at this time. This line feeds residential and irrigation loads. This line has some brush, with some surrounding farmland.</p>	<ul style="list-style-type: none"> • 2 year inspections • Consider wider ROW 	High- due to the high density of values at risk and heavy fire occurrence density

Map ID	Feeder	Description	Wildfire Risk Analysis and Line Description	Mitigation Strategy	Priority (L, M, H)
	44-01	L-2 is located along Highway 40, approximately 4 miles east of Jensen	<p>L-2 represents a section of transmission line that is located on BLM and State Trust lands alongside Highway 40. The fuels within the section are primarily grass. Some of these fuels have the potential to generate moderate and high (33–44 ft/minute) wildfire spread and high flame lengths (20–30 feet). Much of the high risk associated with this section is also due to the high density of aggregated values, as well as some very heavy historic fire occurrence.</p> <p>This segment of line is a 69-kV transmission line that runs between the Jensen sub in Utah and subs in Colorado. This line was built in the 1950s using wood poles for the structures and has 2/0 ACSR conductor for the phases. This transmission line is scheduled for rebuild in 2020. This line is surrounded by sagebrush and grease wood brush. This line is fed out of the Jensen substation with recloser protecting the line.</p>	<ul style="list-style-type: none"> 2 year inspections Consider wider ROW 	High- due to the high density of values at risk and heavy fire occurrence density.
	56-02	L-2 is located 5 miles southeast of Jensen along U.S. Highway 40	<p>This segment of line is a single-phase distribution line with 1/0 phase and 1/0 neutral; it was constructed using wood poles. The line was built in around 2010. The load for this line is minimal feeding cathodic stations for pipelines. This line is fed from the Mapco substation approximately 7.3 miles away. This line is protected with a 25-4H recloser at the Mapco substation. This line is surrounded by sagebrush, greasewood brush, and some grassy vegetation.</p>		
Map 13	5-02	M-1 is located in a remote location in the southern portion of the MLEA service area	<p>M-1 represents a section of distribution line that is located on BLM and State Trust lands. The fuels within the section are a primarily grass with shrub intermixed. Some of these fuels have the potential to generate moderate and high (33-44 feet/minute) wildfire spread and high flame lengths (20–30 feet). Much of the high risk associated with this section is due to high historic fire occurrence. Due to the remote nature of the area and steep terrain, these are likely lightning-caused fires.</p> <p>The segment is a three-phase distribution line built in the 1980s with #4 ACSR phases and neutral. This line was built using wood poles. This section of line has very little load on it, serving a cell tower. This line is surrounded sagebrush, greasewoods, and some juniper trees. This line is fed from the Bonanza sub.</p>	<ul style="list-style-type: none"> Consider frequent drone inspections 	Low- due to the remote nature and low density of values at risk
	5-02	M-2 is located approximately 2 miles from the Colorado border, in the southern portion of the MLEA service area	<p>M-2 represents a section of distribution line that is located on BLM and State Trust lands. The fuels within the section are a primarily grass, sagebrush, greasewood, and some juniper trees. Some of these fuels have the potential to generate moderate and high (33–44 feet/min) wildfire spread and high flame lengths (20–30 feet). The greatest risk is associated with areas of steep terrain. Much of the high risk associated with this section is due to high historic fire occurrence and aggregate values associated with Dragon Road.</p> <p>The segment is a three-phase distribution line that was built in the 1960s with wood pole structures and 1/0 phase ACSR conductor with #4 neutral. This segment of line feeds a compressor station, a few residences, and cathodic stations. This line has had poles replaced, as testing has indicated the need to do so.</p>	<ul style="list-style-type: none"> Consider frequent drone inspections 	Low- due to the remote nature and low density of values at risk

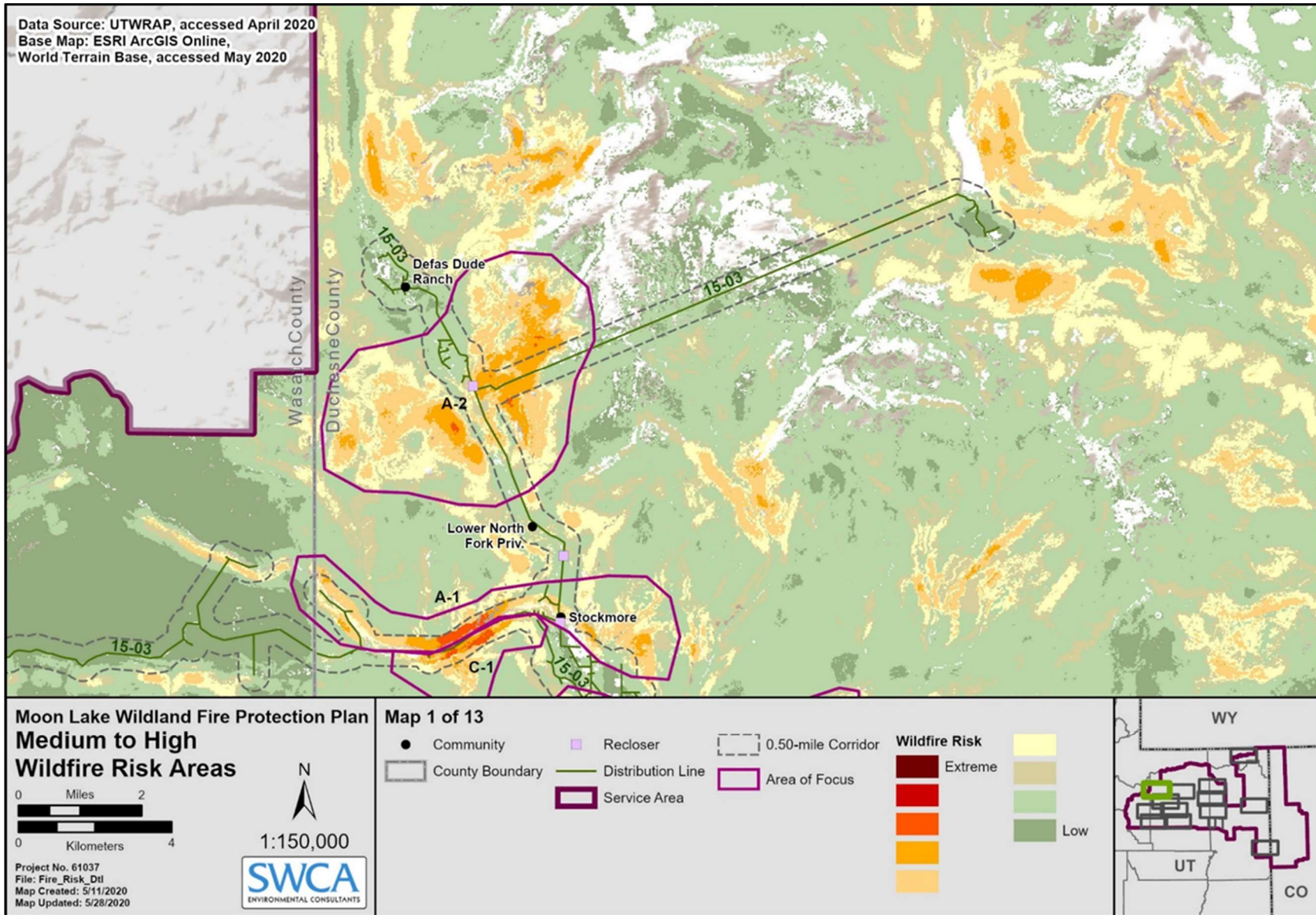


Figure B-1. Medium to high wildfire risk areas (map 1 of 13).

Note: Area of Focus polygons delineate areas of high and extreme risk on the landscape. MLEA focus for mitigation measures is within the 0.50-mile corridor, within Area of Focus polygons.

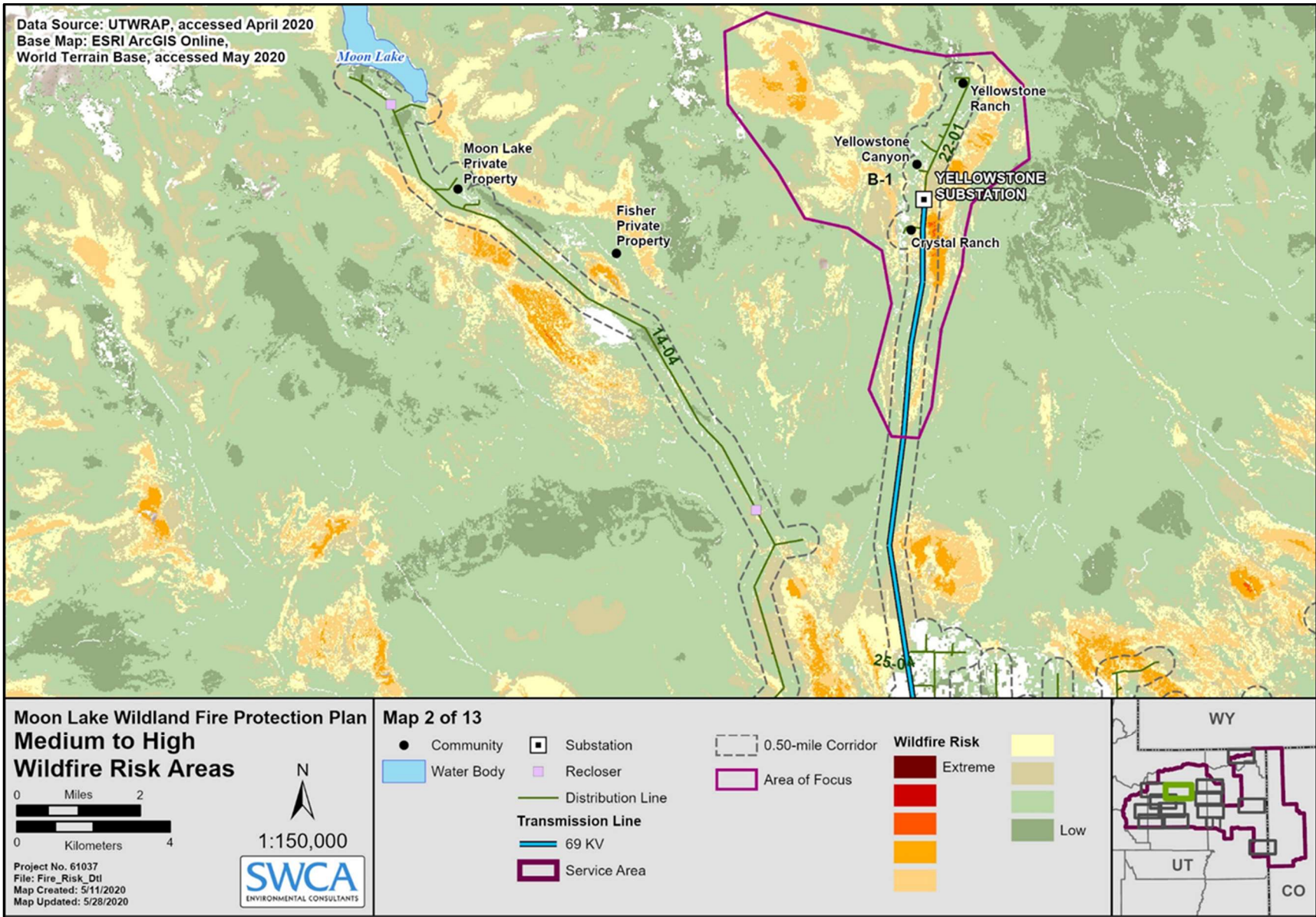


Figure B-2. Medium to high wildfire risk areas (map 2 of 13).

Note: Area of Focus polygons delineate areas of high and extreme risk on the landscape. MLEA focus for mitigation measures is within the 0.50-mile corridor, within Area of Focus polygons.

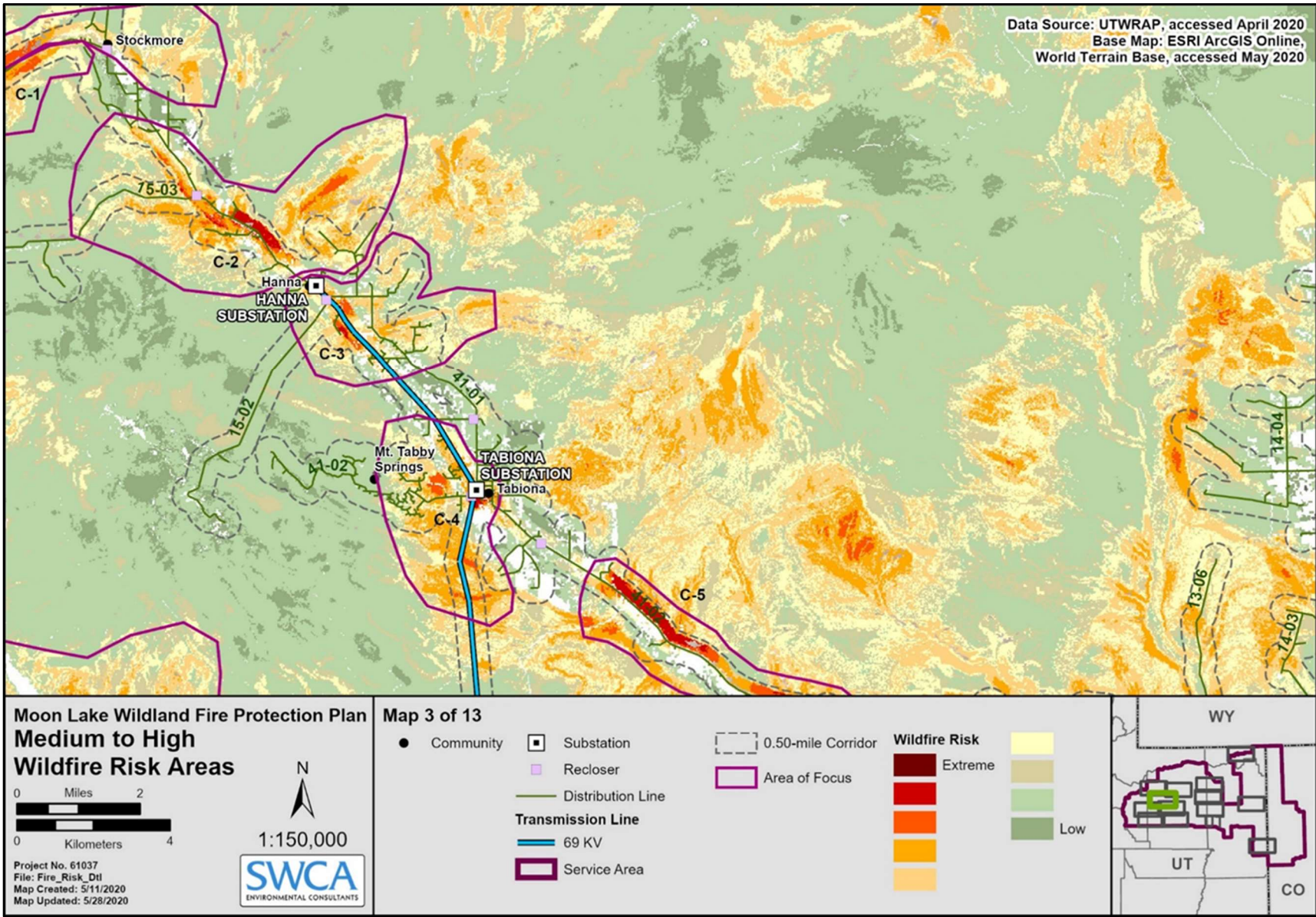


Figure B-3. Medium to high wildfire risk areas (map 3 of 13).

Note: Area of Focus polygons delineate areas of high and extreme risk on the landscape. MLEA focus for mitigation measures is within the 0.50-mile corridor, within Area of Focus polygons.

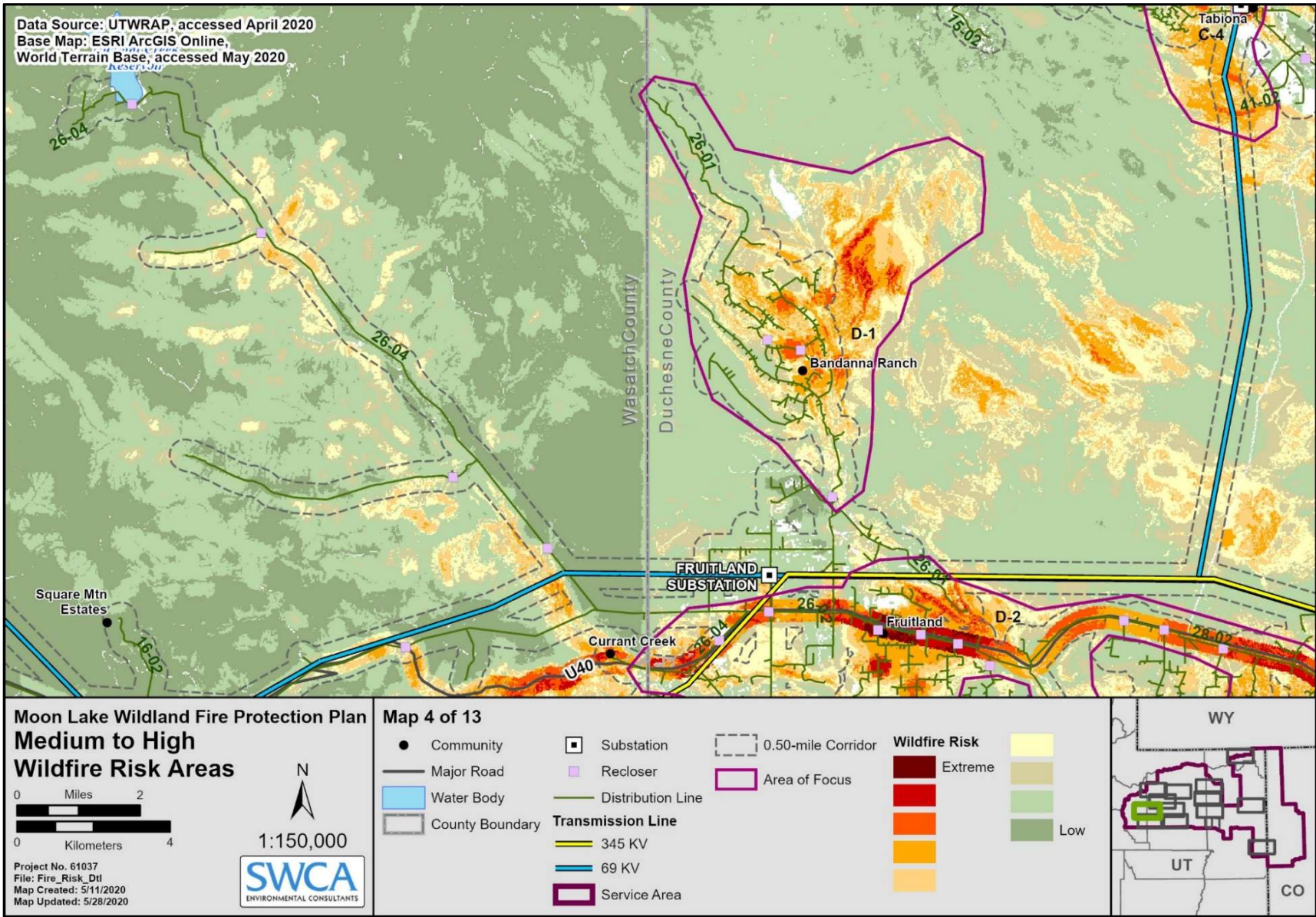


Figure B-4. Medium to high wildfire risk areas (map 4 of 13).

Note: Area of Focus polygons delineate areas of high and extreme risk on the landscape. MLEA focus for mitigation measures is within the 0.50-mile corridor, within Area of Focus polygons.

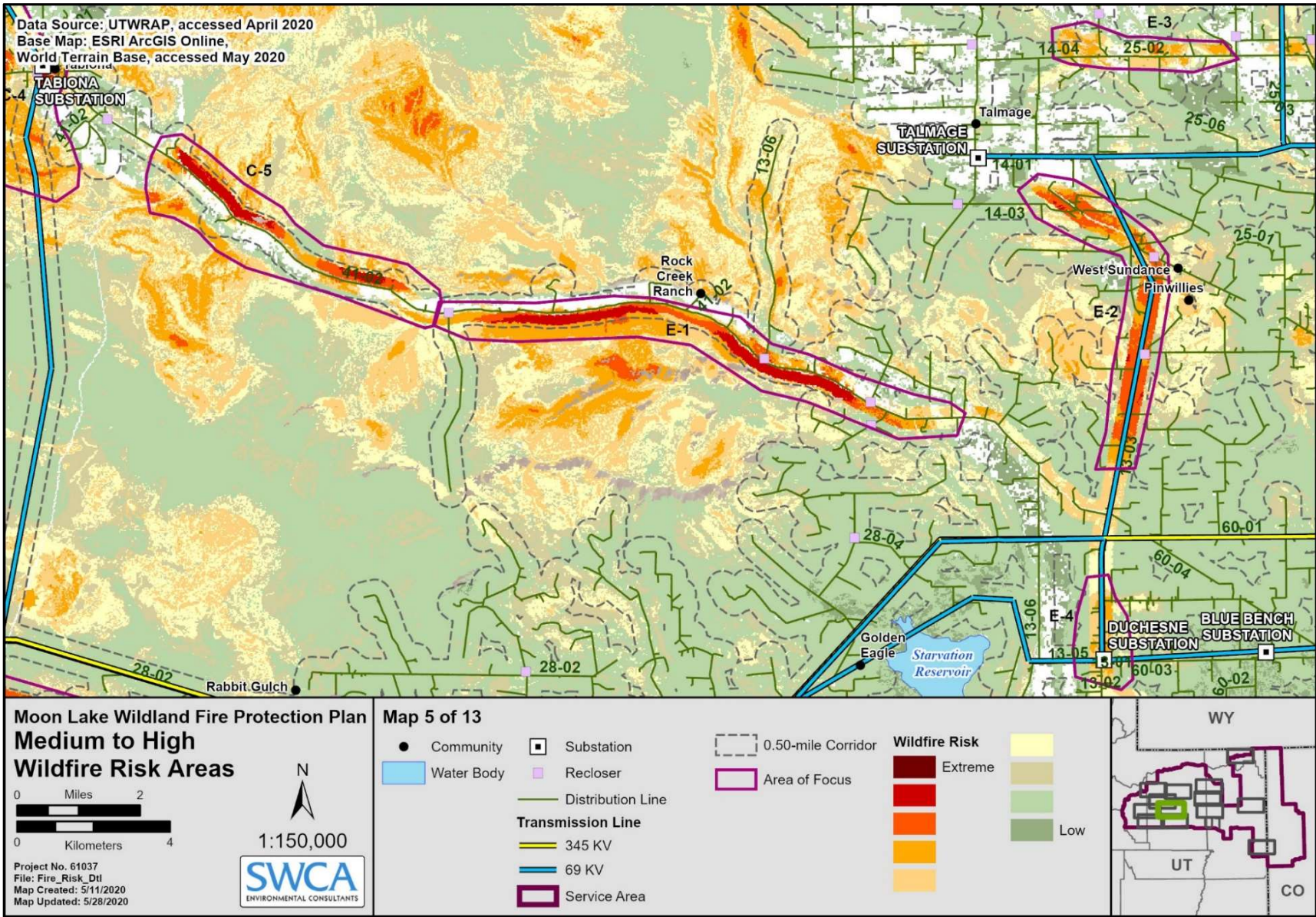


Figure B-5. Medium to high wildfire risk areas (map 5 of 13).

Note: Area of Focus polygons delineate areas of high and extreme risk on the landscape. MLEA focus for mitigation measures is within the 0.50-mile corridor, within Area of Focus polygons.

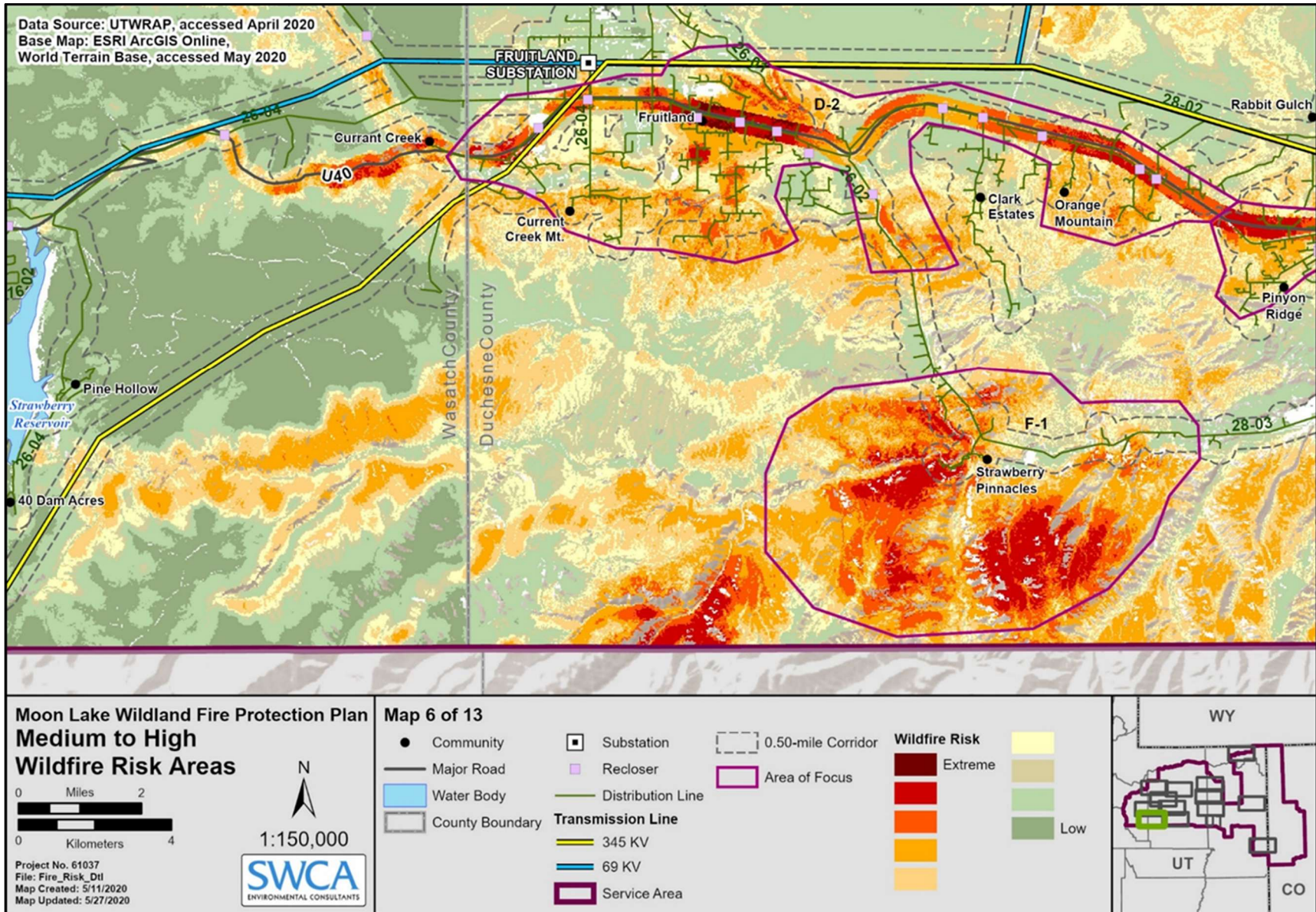


Figure B-6. Medium to high wildfire risk areas (map 6 of 13).

Note: Area of Focus polygons delineate areas of high and extreme risk on the landscape. MLEA focus for mitigation measures is within the 0.50-mile corridor, within Area of Focus polygons.

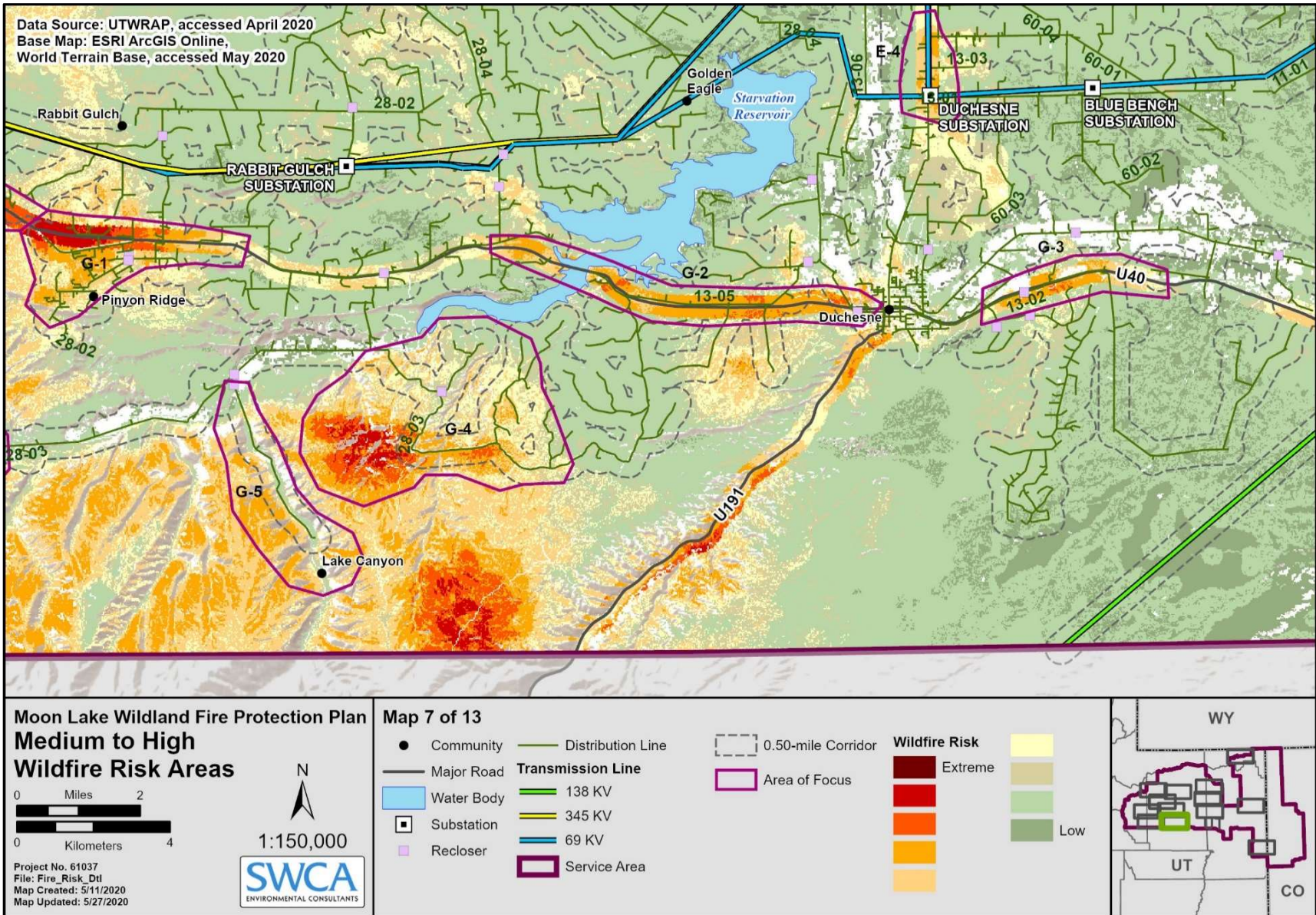


Figure B-7. Medium to high wildfire risk areas (map 7 of 13).

Note: Area of Focus polygons delineate areas of high and extreme risk on the landscape. MLEA focus for mitigation measures is within the 0.50-mile corridor, within Area of Focus polygons.

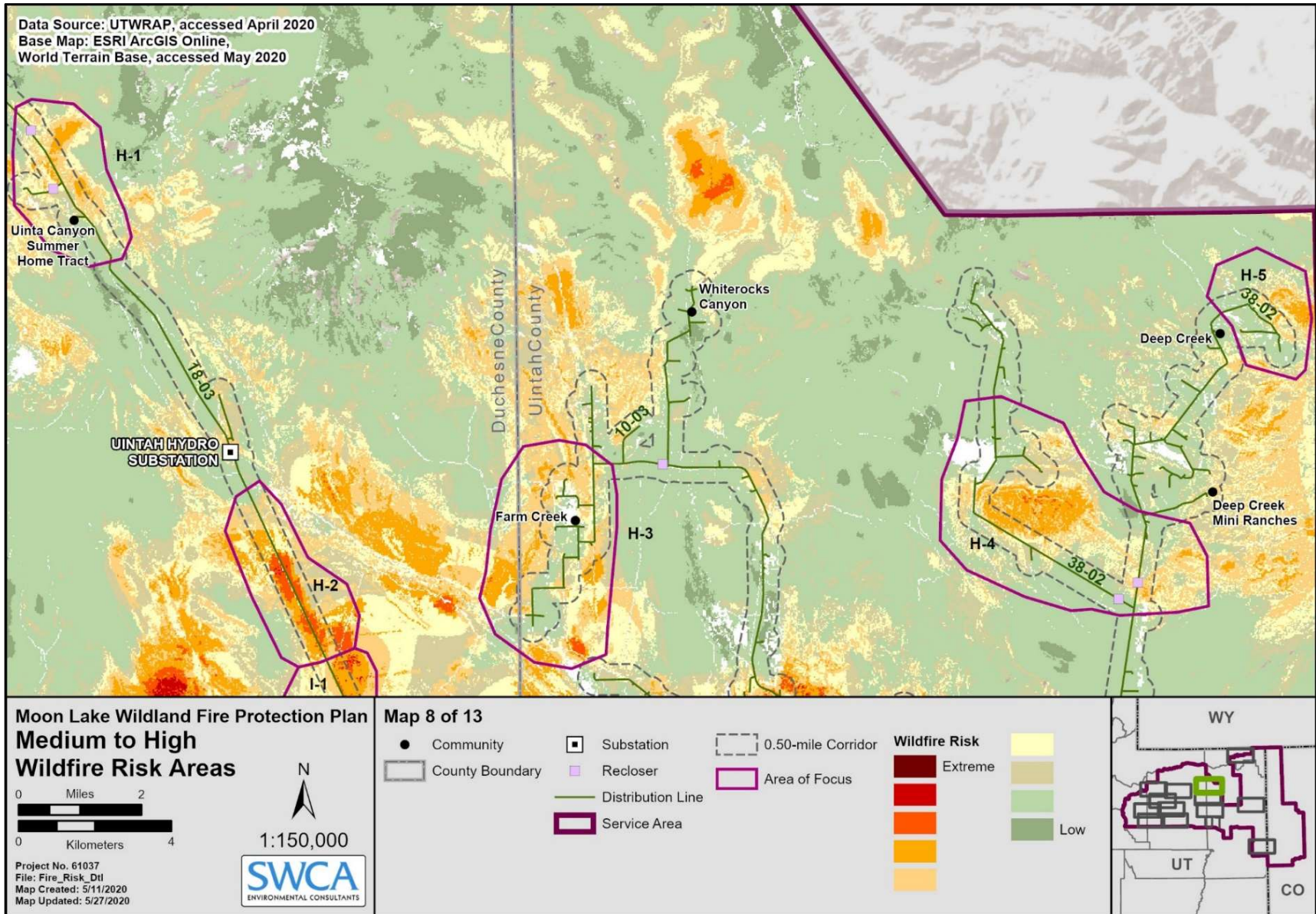


Figure B-8. Medium to high wildfire risk areas (map 8 or 13).

Note: Area of Focus polygons delineate areas of high and extreme risk on the landscape. MLEA focus for mitigation measures is within the 0.50-mile corridor, within Area of Focus polygons.

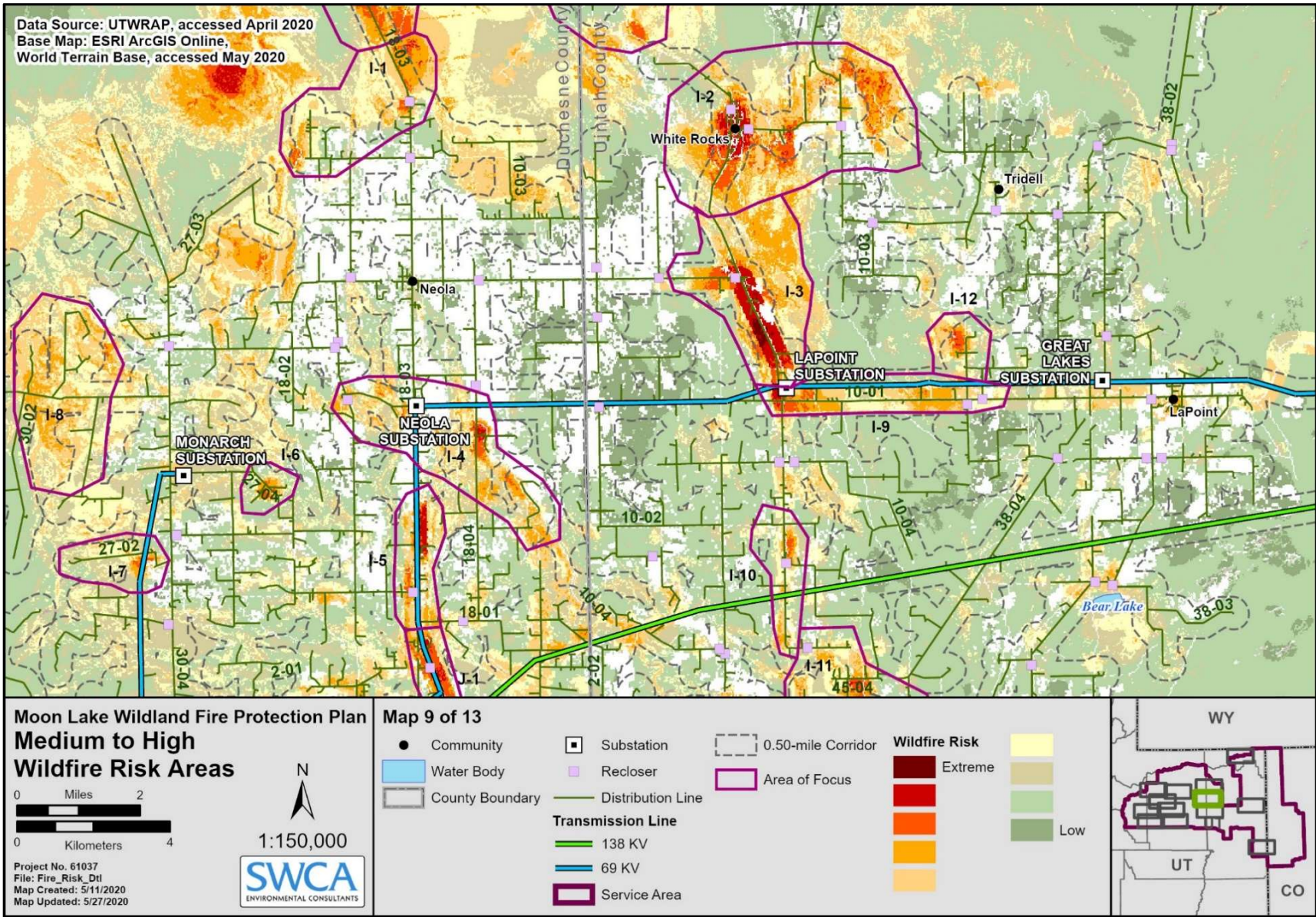


Figure B-9. Medium to high wildfire risk areas (map 9 or 13).

Note: Area of Focus polygons delineate areas of high and extreme risk on the landscape. MLEA focus for mitigation measures is within the 0.50-mile corridor, within Area of Focus polygons.

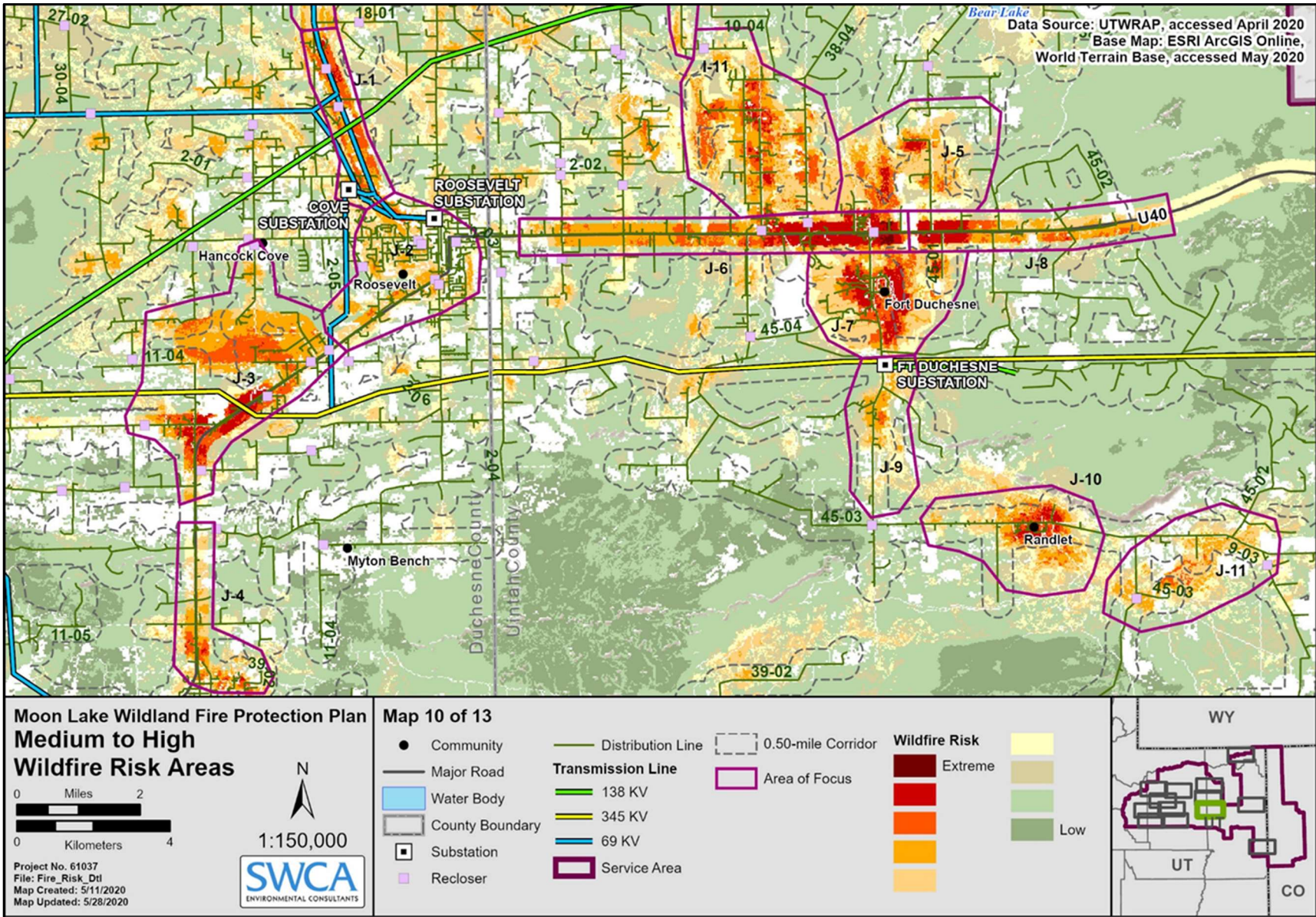


Figure B-10. Medium to high wildfire risk areas (map 10 of 13).

Note: Area of Focus polygons delineate areas of high and extreme risk on the landscape. MLEA focus for mitigation measures is within the 0.50-mile corridor, within Area of Focus polygons.

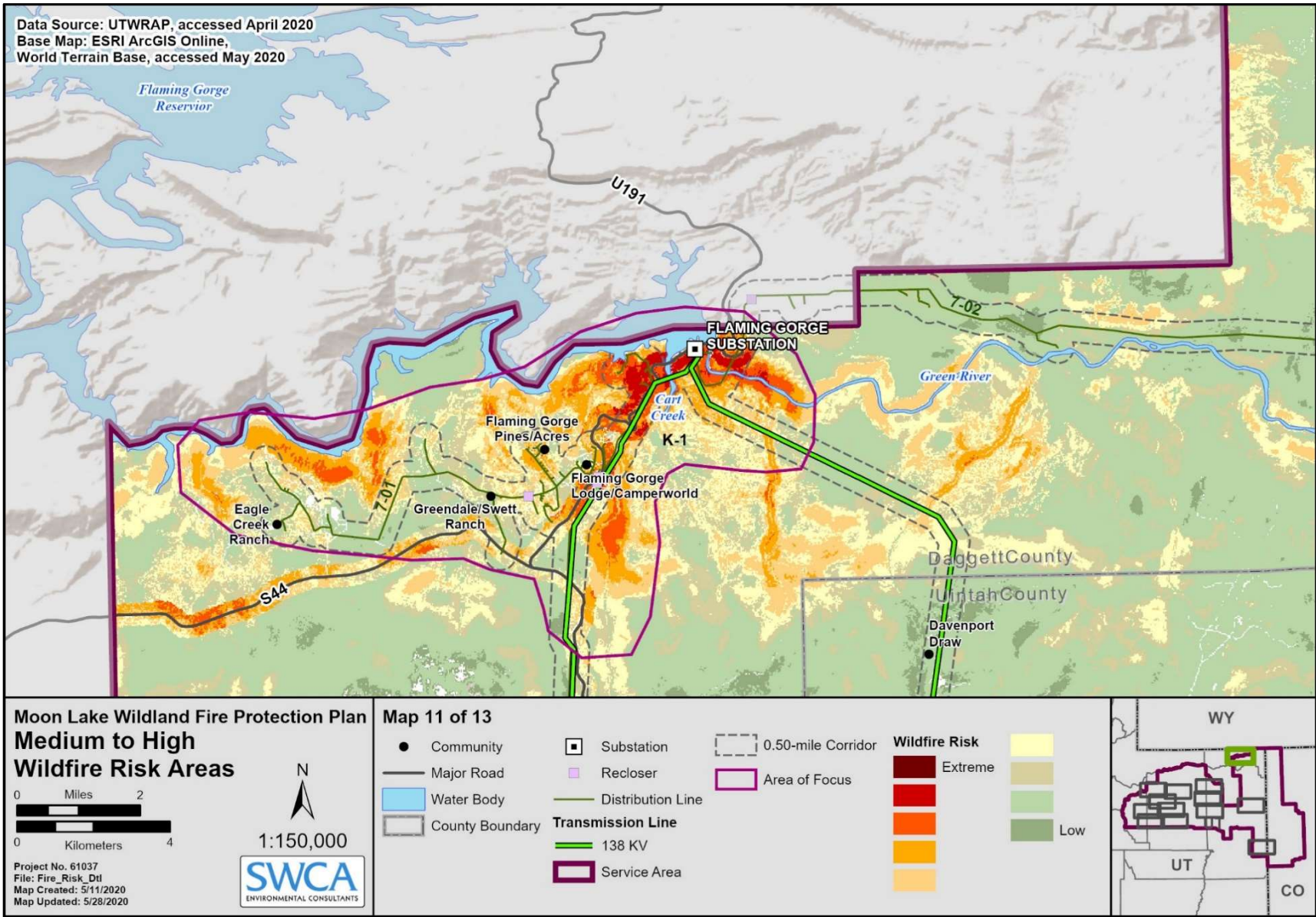


Figure B-11. Medium to high wildfire risk areas (map 11 of 13).

Note: Area of Focus polygons delineate areas of high and extreme risk on the landscape. MLEA focus for mitigation measures is within the 0.50-mile corridor, within Area of Focus polygons.

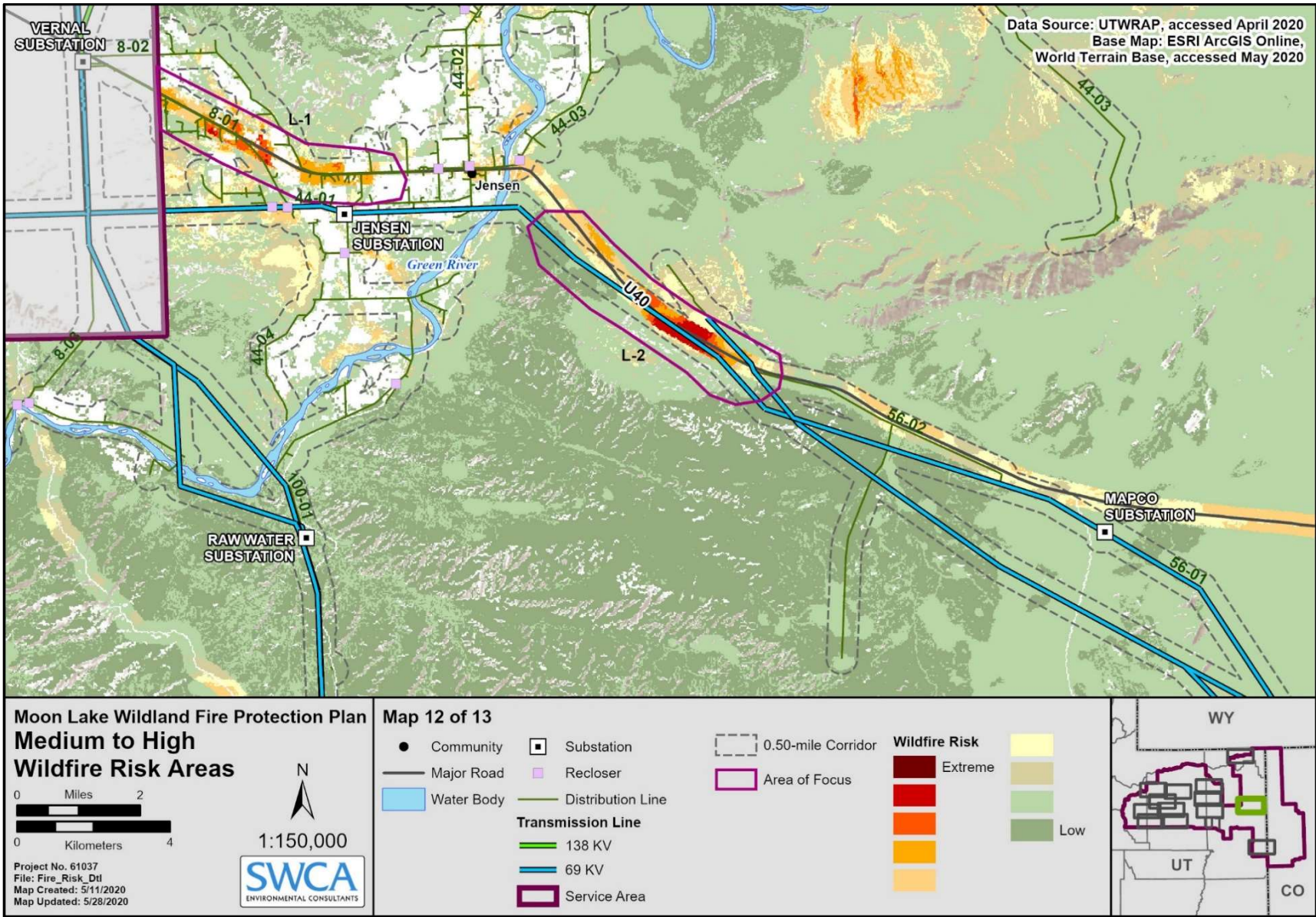


Figure B-12. Medium to high wildfire risk areas (map 12 of 13).

Note: Area of Focus polygons delineate areas of high and extreme risk on the landscape. MLEA focus for mitigation measures is within the 0.50-mile corridor, within Area of Focus polygons.

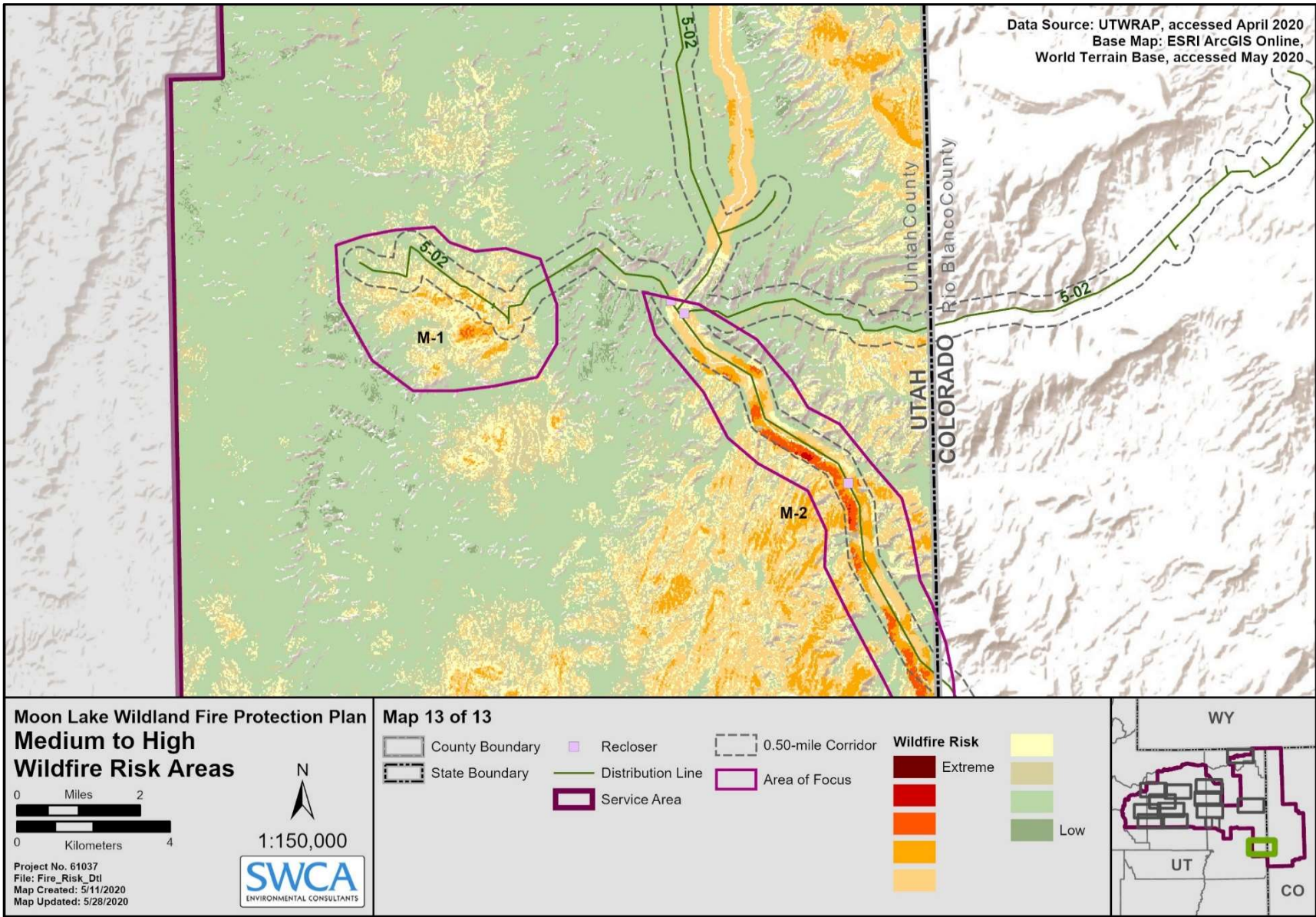


Figure B-13. Medium to high wildfire risk areas (map 13 of 13).

Note: Area of Focus polygons delineate areas of high and extreme risk on the landscape. MLEA focus for mitigation measures is within the 0.50-mile corridor, within Area of Focus polygons.