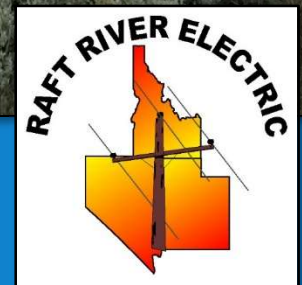


SWCA

# Raft River Rural Electric Cooperative Wildland Fire Protection Plan

JULY 2020



PREPARED FOR

**Raft River Rural Electric Cooperative**

PREPARED BY

**SWCA Environmental Consultants**



# **RAFT RIVER RURAL ELECTRIC COOPERATIVE WILDLAND FIRE PROTECTION PLAN**

Prepared for

**Raft River Rural Electric Cooperative**

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# 1 INTRODUCTION

Raft River Rural Electric Cooperative (RREC) is an electrical distribution cooperative that was formed on January 17, 1939. RREC serves areas in southern Idaho, northwestern Utah, and northeastern Nevada, supplying service to over 5,000 electric meters, with lines spanning 2,400 miles (Figure 1). Because of the rural nature of the cooperative, there are only 2 meters for every mile of line, presenting a unique set of challenges, both operationally and economically.

As a cooperative, RREC is owned by those served, so revenue is reported as margins that members own, which incentivizes the organization to be as efficient as possible, collecting only enough in rates to cover power costs and distribution expenses, with the goal of keeping rates as low as possible, yet maintaining and building adequate infrastructure to provide reliable and affordable electrical service.

**Table 1. Raft River Rural Electric Cooperative Utah Service Area Statistics**

County/State	Area	Miles of Transmission	Miles of overhead distribution	Miles of underground distribution	Substations	Number of members
Box Elder County	Approximately 2300 square miles	80 miles of 138 KV Transmission	500 miles of Distribution	0	3	739 meters

## 1.1 Organization of the Wildland Fire Protection Plan

The Plan includes the following sections:

Section 2: Overview of Wildland Fire Protection Plan

Section 3: Objectives of the Wildland Fire Protection 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: Supplementary mapping and Interagency Fuel Treatment Decision Support Mapping.

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

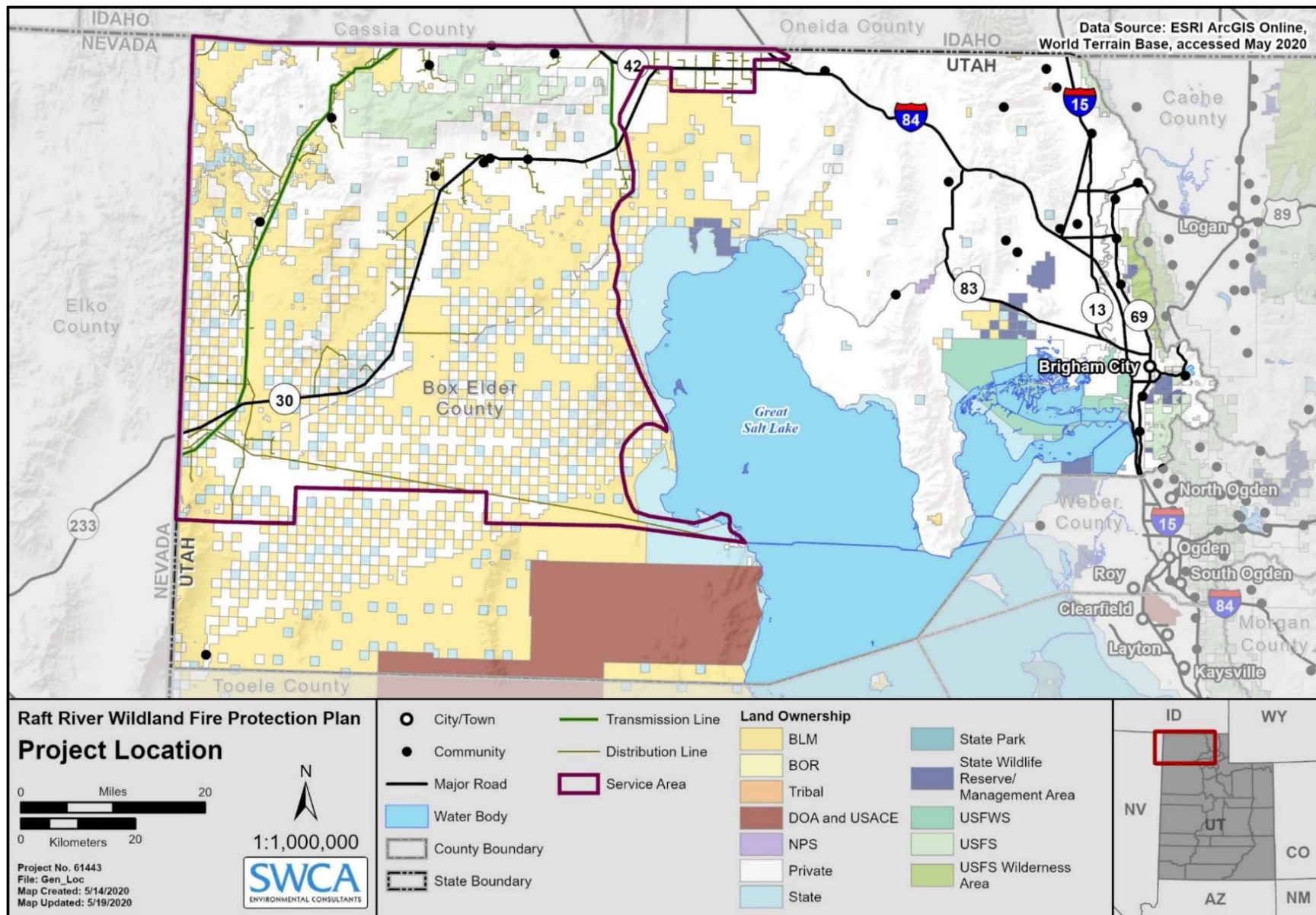


Figure 1. General project location, showing Raft River Rural Electric Cooperative’s infrastructure, service area, and land ownership.



## **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.<sup>1</sup>

### **2.2 Purpose of the Wildfire Mitigation Plan**

This Wildland Fire Protection Plan (Plan) describes the range of activities that RREC is taking or considering to mitigate the threat of power-line ignited wildfire, including the protocols and procedures that RREC would undertake, as well as industry best practices. The Plan complies with the requirements outlined under House Bill 66 to prepare a draft wildland fire protection plan by June 1, 2020, and every 3 years thereafter. 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 RREC Board of Directors on May 27, 2020.

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**

The 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 covers Box Elder County. Within the County are numerous Communities at Risk (CAR) from wildfire, which are referenced in the Utah Division of Natural Resources (DNR) Utah Wildfire Risk Assessment Portal (UWRAP)<sup>2</sup> and which may have specific wildfire mitigation measures proposed under municipal and county planning documents.

#### **2.3.1 Box Elder County**

It is estimated that Box Elder County has a population of approximately 9,429 people as of 2017, the majority of which live in cities and towns (DNR 2019). Fire response for the entire Northern Utah region 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 Bureau of Land Management (BLM), U.S. Forest Service (USFS), and the Utah Division of Forestry, Fire and State Lands (UDFFSL). The NUIFC is responsible for dispatch and coordination for approximately 14 million acres of land that average 500 fires per year (SWCA Environmental Consultants [SWCA] 2007).<sup>3</sup>

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

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

<sup>3</sup> Northern Utah Regional Wildfire Protection Plan: <https://digitallibrary.utah.gov/awweb/awarchive?item=31610>

In 2019, Box Elder County developed a Community Wildfire Protection Plan (CWPP) to empower local governments and citizens to enhance community safety and resilience to wildfire. Utilities are identified as a protected value that is at risk to wildfires. More generally, the plan assesses past efforts and future goals related to increased community wildfire protection. In the past, outreach and education on wildfire issues, along with first responder trainings and fuel reduction activities, have been strong. County goals include continued outreach and first responder trainings and increased firebreak maintenance and fuel reduction activities (Box Elder County 2019).

The small community of Grouse Creek is in the northwest corner of Box Elder County and has, as of 2016, approximately 120 residents. In 2016, Grouse Creek developed a CWPP that identifies, among others, these priority projects: creation and maintenance of a fuel break around Grouse Creek, fuels reduction within the community and on adjacent public lands, improved emergency communications systems, and public outreach and education (Grouse Creek Community 2016). The Box Elder County and Grouse Creek CWPPs are not available online. However, the 2007 Northern Utah Regional Wildfire Protection Plan (RWPP) is available online and covers Box Elder County along with Cache, Davis, Morgan, Rich, Salt Lake, Summit, Tooele, Utah, Wasatch, and Weber Counties.

### **2.3.2 Forestry, Fire and State Lands**

In 2015, the Bear River Region developed a pre-disaster mitigation plan to identify hazards and solutions to reduce hazard risk to communities.<sup>4</sup> Plan goals include improved emergency communication and protection of emergency response capabilities. The Box Elder County portion of the plan asserts that Box Elder County is susceptible to a moderate to high risk of wildfire, especially in the wildland-urban interface and in areas adjacent to grassy and shrubby vegetation types. Utility companies are invited to be involved in planning processes for future plan updates (Bear River Association of Governments 2015).

### **2.3.3 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 2005, the BLM issued a finding of no significant impact (FONSI) in response to an Environmental Assessment (EA) regarding the Utah Land Use Plan Amendment for Fire and Fuels Management. This amendment outlined changes to wildland fire management performed by the Salt Lake field office. Overall goals of wildfire management under these documents include firefighter and public safety, collaborative risk reduction in the WUI, and allowing fire to function in its ecological role where appropriate (BLM 2005).

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<sup>4</sup> Bear River Pre-Disaster Mitigation Plan: <http://brag.utah.gov/pre-disaster-mitigation-plan-draft-2015/>

### 2.3.4 U.S. Forest Service

The Sawtooth National Forest is broken up into several fire management units (FMUs), with the Raft River FMU falling in Box Elder County. In 2012, the Sawtooth National Forest developed a forest plan to steer natural resource management activities and ensure sustainable ecosystem use and resilient watersheds.<sup>5</sup> The plan considers actions to reduce conflict in areas where wildfires could cross management area boundaries outside of the National Forest. Additionally, fuel reduction treatments are prioritized in the wildland-urban interface (USFS 2012). In 2014, the Sawtooth National Forest developed a Fire Management Plan to guide fire management activities and establish desired future conditions.<sup>6</sup> This plan aims to maintain or enhance desired conditions to be consistent with the Forest Plan. The Fire Plan recognizes that utility corridors are a potential source of wildfire and objectives include collaboration with stakeholders in the planning process (USFS 2014).

Federal agencies routinely develop fuel treatment planning to address hazardous fuels within their jurisdiction. RREC could work with the BLM and USFS to look for opportunities to treat fuels in and around the RREC 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 RREC service area.

## 2.4 Roles and Responsibilities

### 2.4.1 Company Structure

Table 2 below 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	Heath Higley	Carl Boden, Terry Hutchison, Mike Christensen
System Hardening	Heath Higley	Carl Boden, Terry Hutchison, Mike Christensen
Enhanced Inspections	Carl Boden	Line Foreman, Mike Christensen
Situational Awareness	Carl Boden	All Lineman,
Reclosing and De-energization	Heath Higley	Richard Hall, Dallan Spencer
Public Safety and Notification	Heath Higley	Mandi Hitt
Vegetation Management	Carl Boden	Terry Hutchison, Mike Christensen
Wildfire Response and Recovery	Heath Higley	Carl Boden Terry Hutchison, Mike Christensen

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<sup>5</sup> Sawtooth National Forest Plan: <https://www.fs.usda.gov/detail/sawtooth/landmanagement/planning/?cid=stelprdb5391896>

<sup>6</sup> Sawtooth National Forest Fire Plan: <https://winapps.umn.edu/winapps/media2/wilderness/toolboxes/documents/fire/sawtooth%20nf%20fire%20mgmt%20plan%202014.pdf>

## **2.4.2 Coordination with Outside Entities**

Figure 1 outlines the land ownership within the RREC 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.

### **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).<sup>7</sup>

### **2.4.2.3 FEDERAL**

Fire response on all National Forest System Lands administered by the Sawtooth National Forest is coordinated through the South Central Idaho Interagency Dispatch Center (SIIDC). The SIIDC dispatches fire-fighting resources to fires on federal and state lands in south central Idaho. Various other federal and state agencies cooperate with the SIIDC to respond to these fires. There are 11,869,323 total acres under protection of the SIIDC (South Central Idaho Interagency Dispatch Center 2020).

## **3 OBJECTIVES OF THE WILDFIRE MITIGATION PLAN**

RREC's overarching goal is to provide safe, reliable, and economic electric service to its members. In order to meet this goal, RREC 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.

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<sup>7</sup> Utah State Hazard Mitigation Plan: <https://hazards.utah.gov/wp-content/uploads/Utah-State-Hazard-Mitigation-Plan-2019.pdf>

### **3.1 Minimizing Sources of Ignition**

The goal of this Plan is to assess and minimize the probability that the RREC 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 RREC members.

### **3.2 Resiliency of the Electric System**

An additional goal of this Plan is to ensure long-term resilience of the RREC electric grid. Through implementing this Plan, RREC 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 RREC service. These are described in more detail in Section 4.

- **Vegetation Management** – Measures to control vegetation near overhead transmission 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 RREC 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. Includes public warnings and notifications in the interest of public safety.

### **3.4 Identifying Unnecessary or Ineffective Actions**

This Plan should be revised every 3 years. As part of that revision process, RREC 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, RREC should also update mitigation strategies through review of industry best practices.

## 4 WILDFIRE RISK ANALYSIS

The wildfire risk analysis process utilizes the DNR UWRAP. The purpose of the wildfire risk analysis is to identify areas within the RREC Utah 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. 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; 1,385 wildfires burned almost 650,000 total acres. This total includes the largest wildfire in Utah's history, the Milford Flat fire, which destroyed nearly 364,000 acres (Utah Division of Emergency Management 2019).

Box Elder County experienced 1,086 fires between 1973 and 2005. Most of these fires were wildland fires that occurred in the eastern portions of the county. From 2006 to 2019, Box Elder County has experienced 39 fires, approximately 18 of which have been over 1,000 acres (Monitoring Trends in Burn Severity [MTBS] interagency database<sup>8</sup>; SWCA 2007; Box Elder County 2019).

Figure 2 illustrates the moderate fire occurrence history within the RREC service area. Many of these fires were located in close proximity to RREC infrastructure, likely because the lines are often collocated with highways, which tend to be an ignition source for wildfires. Regional wildfire planning documents suggest that at least 12% of fires in this region of the state 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, RREC could be a partner in these public education efforts.



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<sup>8</sup> MTBS: <https://www.mtbs.gov/>

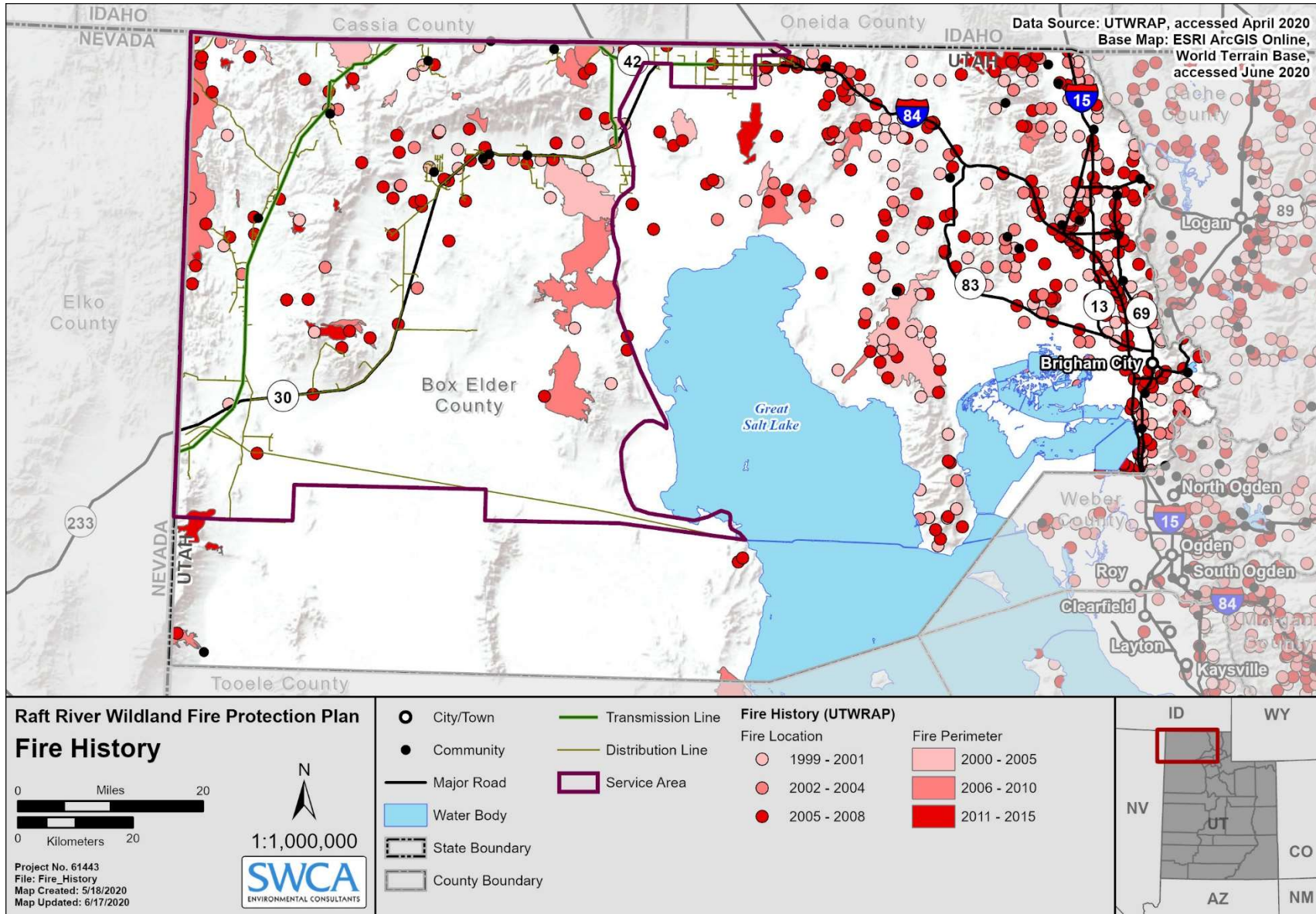


Figure 2. Fire occurrence history within the RREC service area.

## 4.2 Vegetation Communities

The RREC service area falls mostly within the Central Basin and Range and Northern Basin and Range ecoregions. The Central Basin and Range ecoregion is characterized by wide desert valleys bordered by parallel mountain ranges generally oriented north–south. Areas lower than approximately 5,200 feet elevation were once inundated by Pleistocene Lake Bonneville. Extensive playas occur and are nearly flat, clayey, and salty. In general, this ecoregion is dry and lacks extensive, dense forests (Woods et al. 2001).

Common low-intensity, short-duration burns of sagebrush and desert shrubs occur during summer thunderstorms. Often, there is insufficient understory to carry fires, or they are suppressed. Cheatgrass and other introduced annuals not only out-compete native bunchgrasses, but have also altered the ecoregion's fire regime; in areas that previously burned approximately every 30 to 70 years, the introduction of cheatgrass has increased fire-return intervals to less than 10 years.

The Northern Basin and Range ecoregion occurs adjacent to the Central Basin and Range in the high northwestern portion of Box Elder County. The ecoregion consists of arid tablelands, intermontane basins, dissected lava plains, and widely scattered low mountains, largely covered with sagebrush steppe vegetation. Elevation ranges from 4,000 to 7,200 feet (Omernik 1987).

Disturbance regimes include short-duration and low-intensity brush fires, which occur due to summer thunderstorms. Other land disturbance is associated with water and wind erosion, mining, and livestock grazing with limited farming (USFS n.d.).

The RREC service area is made up primarily of desert shrub, mid-elevation sagebrush grassland, pinyon juniper, and mountain shrub and oak communities (Figure 3). As aforementioned, of notable concern throughout the 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.



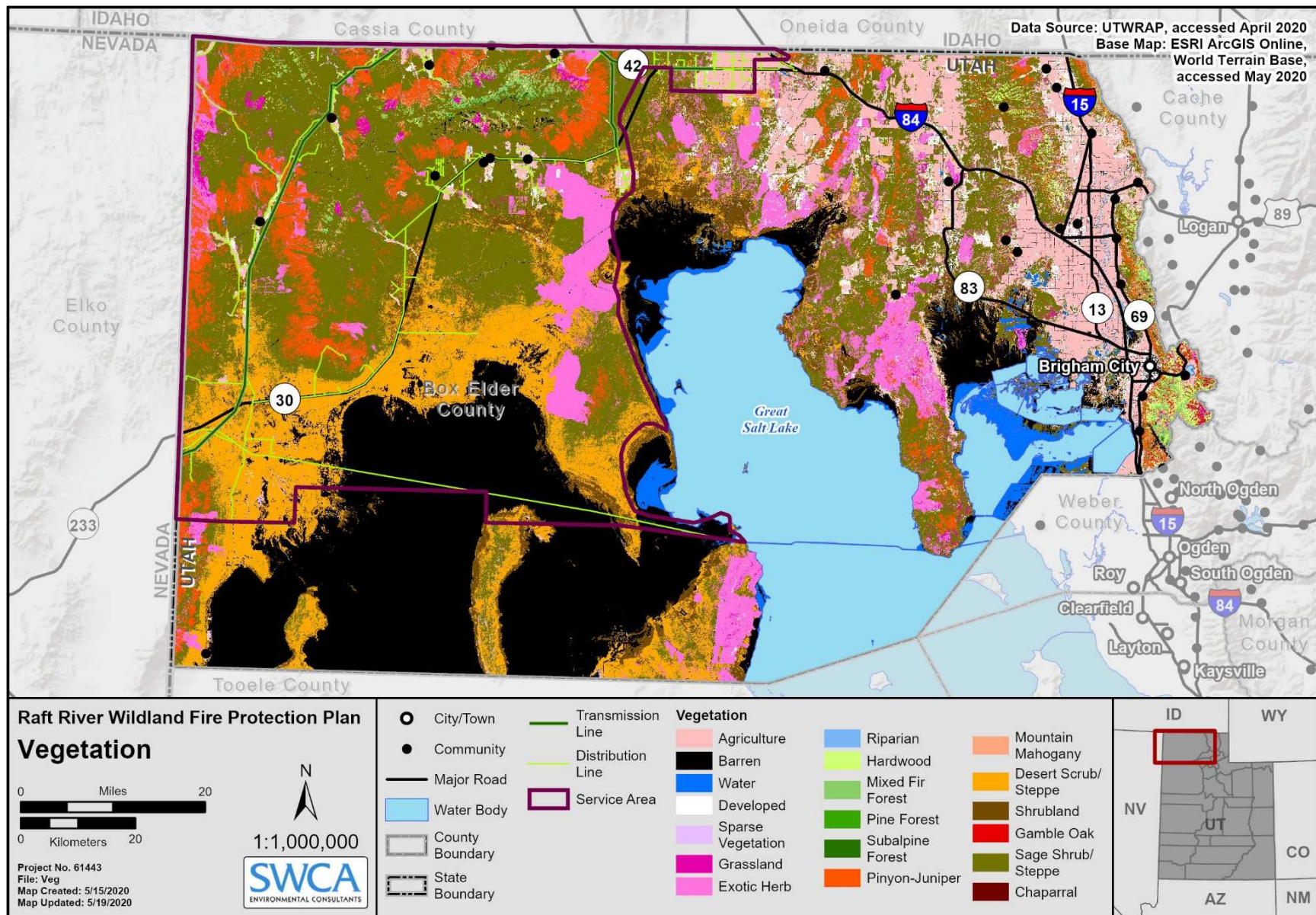


Figure 3. Vegetation classification from UWRAP.

The RREC infrastructure is located primarily in areas of gamble oak (33.7%) and mountain mahogany (20.7%) (Table 3). Fire frequency for mountain shrub and oak species ranges from 25 to 100 years. Return intervals vary widely depending on elevation, aspect, site moisture, and associated woodland type. Most species re-sprout after low- to moderate-severity fires. Sprouting mountain shrubs are generally fire-tolerant and generally recover completely following a fire.

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

Value		Acres	Percent
1	Agriculture	1,999.30	1.315
2	Barren	23,373.19	15.374
3	Water	16,647.28	10.950
4	Developed	740.84	0.487
5	Sparse Vegetation	8,355.40	5.496
6	Grassland	587.61	0.386
7	Exotic Herb	250.76	0.165
8	Riparian	5,307.34	3.491
9	Hardwood	311.46	0.205
10	Mixed Fir Forest	78.14	0.051
12	Subalpine Forest	5,466.98	3.596
13	Pinyon-Juniper	85.34	0.056
14	Mountain Mahogany	31,452.19	20.687
15	Desert Scrub/Steppe	6,183.49	4.067
16	Shrubland	9.10	0.006
17	Gamble Oak	51,186.96	33.668

### 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
- (GS) Grass-Shrub
- (SH) Shrub
- (TU) Timber-Understory
- (TL) Timber Litter
- (SB) Slash-Blowdown

The dominant fuel models that occur within the RREC line buffer (a 0.25-mile buffer on either side of the line) are shown in Table 4 and Figure 4. This data 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 is now available outside of the UWRAP platform. Under direction of UDFSL, this analysis is based on the UWRAP fuel data in order to allow comparison between plans, but RREC will consider utilizing more

recent fuel data during subsequent updates to the plan; 2016 fuel data is presented in Appendix A, Map A-2.

**Table 4. Scott and Burgan Fuel Model Composition within the 0.25-mile Corridor for RREC Lines**

<b>Value</b>		<b>Acres</b>	<b>Percent</b>
91	NB1	2,646.62	1.762
93	NB2	24,562.70	16.352
98	NB3	654.60	0.436
99	NB9	14,027.65	9.339
101	GR1	10,834.74	7.213
102	GR2	3,497.77	2.329
121	GS1	33,388.06	22.227
122	GS2	8,531.53	5.680
141	SH1	14,787.25	9.844
142	SH2	15,161.86	10.094
145	SH5	21,380.10	14.233
147	SH7	325.96	0.217
161	TU1	290.04	0.193
165	TU5	0.48	0.000
181	TL1	1.33	0.001
183	TL3	106.44	0.071
186	TL6	14.90	0.010

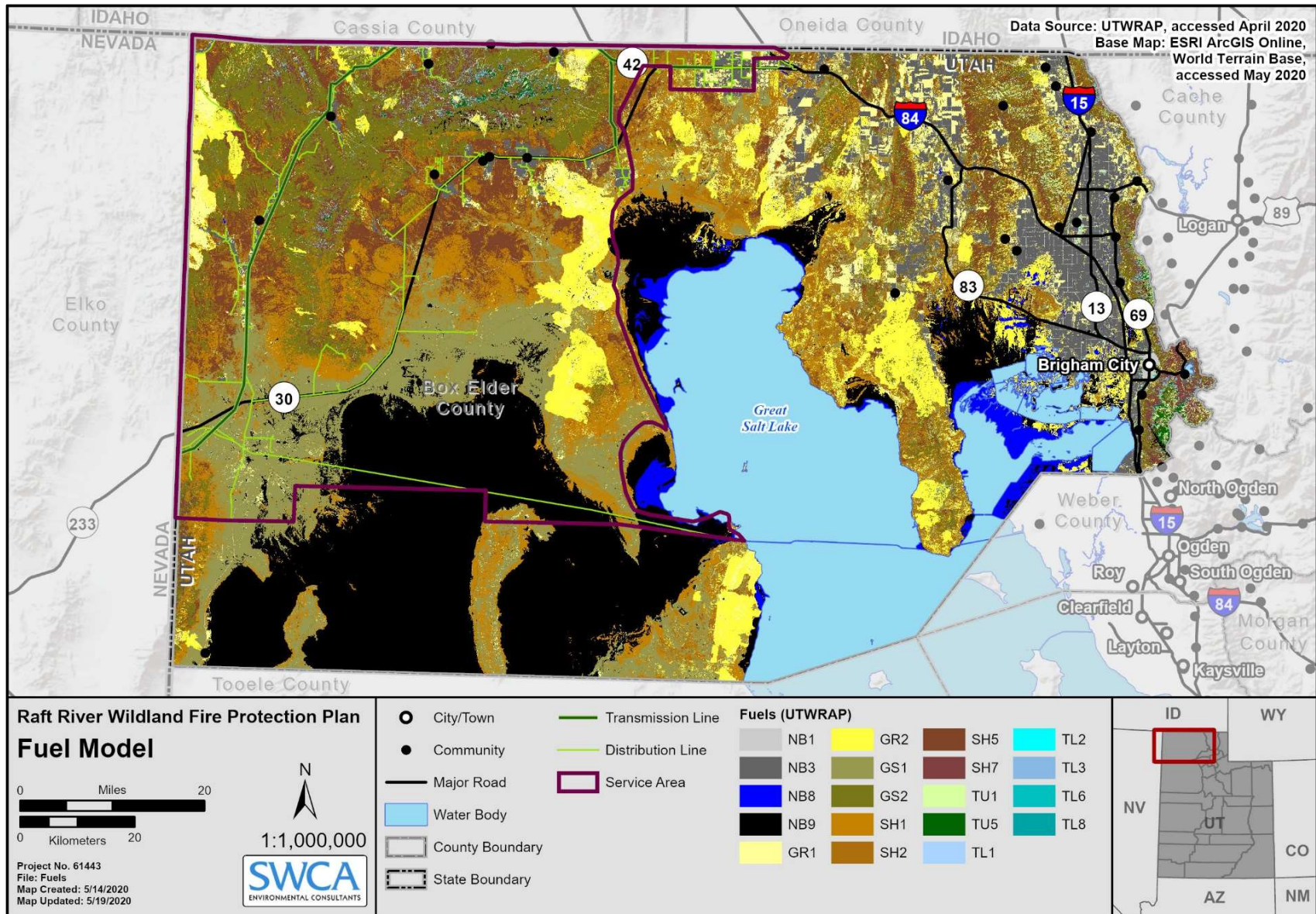


Figure 4. Fuel model classification for the RREC service area from UWRAP.

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

**Table 5. Fuel Model Descriptions**

<b>1. Nearly pure grass and/or forb type (Grass)</b>	
i.	<b>GR1:</b> Grass is short, patchy, and possibly heavily grazed. Spread rate moderate (5–20 chains/hour); flame length low (1–4 feet); fine fuel load (0.40 ton/acre).
ii.	<b>GR2:</b> 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).
<b>2. Mixture of grass and shrub, up to about 50% shrub cover (Grass-Shrub)</b>	
i.	<b>GS1:</b> 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.	<b>GS2:</b> 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).
<b>3. Shrubs cover at least 50% of the site; grass sparse to non-existent (Shrub)</b>	
i.	<b>SH1:</b> 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.	<b>SH2:</b> 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.	<b>SH5:</b> 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.	<b>SH7:</b> 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).
<b>4. Grass or shrubs mixed with litter from forest canopy (Timber-Understory)</b>	
i.	<b>TU1:</b> 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).
<b>5. Insufficient wildland fuel to carry wildland fire under any condition (Non-burnable)</b>	
i.	<b>NB1:</b> Urban or suburban development; insufficient wildland fuel to carry wildland fire.
ii.	<b>NB2:</b> Snow/ice.
iii.	<b>NB3:</b> Agricultural field, maintained in non-burnable condition.
iv.	<b>NB9:</b> Bare ground.

## 4.3 Topography

Box Elder County's topography is diverse. Located in the northwest corner of Utah, Box Elder County encompasses approximately 5,614 square miles (3,592,960 acres), extending from the west spur of the Wasatch Mountains north to the Idaho border and westward to the Nevada border. The county includes parts of the Great Salt Lake and the Great Salt Lake Desert, as well as the lower course and deltas of the Bear River, the Malad River Valley, and the Promontory Mountains. Box Elder County is part of the

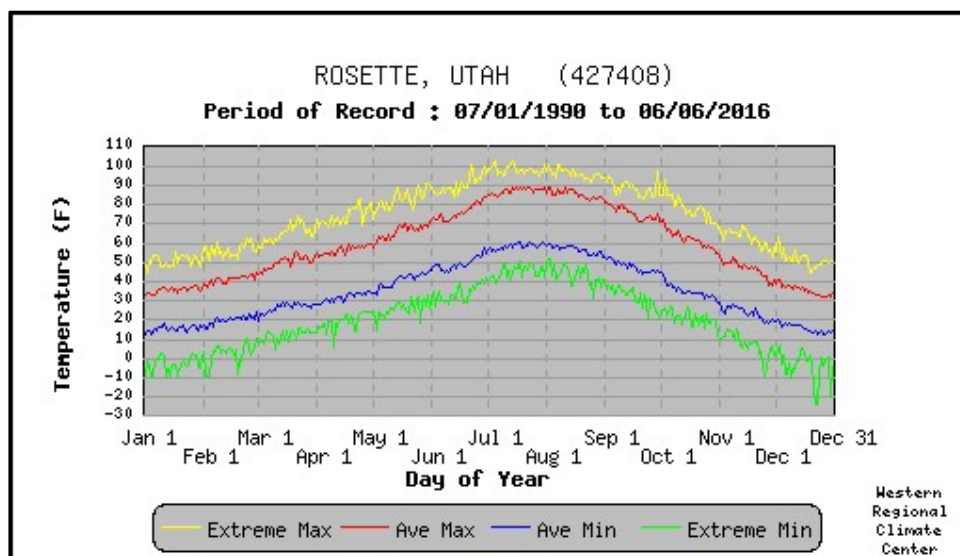
Central Basin and Range ecoregion and fully encompasses the Northern Basin and Range ecoregion in Utah. The county contains fertile farmlands, accounting for the large area of land (43%) used for agriculture (mostly livestock, hay, grain, alfalfa, fruit, garden crops, and sugar beets), as well as significant wetlands at the mouth of the Bear River (SWCA 2007).

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 RREC service area that would influence fire behavior and spread. The steepest areas in the service area are in the northwesternmost portions, where there is a relatively small mountain range contributing to complex topography. Mountains create complex topography with steep slopes and varying slope aspects. The rest of the service area is relatively flat, with low-lying agricultural valleys, urban areas, and salt flats. Some smaller mountains and hills are dispersed in the salt flats. Flat areas are not topographically complex, with little variation in slope aspect and fewer changes in slope steepness.

## 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 80s and 90s from June through August (Figures 5 and 6). 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 in during July and increases slightly in August and September as a result of monsoon rain patterns. Vegetation management and other wildfire mitigation measures should be completed prior to peak fire season (May–October).



**Figure 5. Daily temperature extremes and averages for Rosette, Utah.**

Source: Western Regional Climate Center (2020).

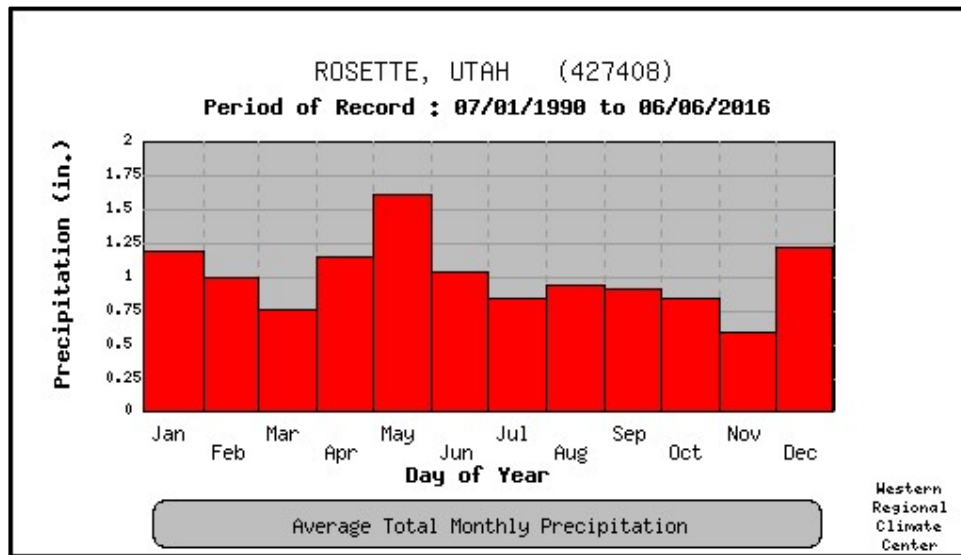


Figure 6. Monthly average precipitation for Rosette, Utah.

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 RREC service area. This analysis assists RREC in identifying areas that are 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, RREC can also consider 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, RREC can 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 RREC to focus mitigation measures, this analysis focuses on the following data layers in UWRAP: aggregated 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. Combination of Wildfire Threat and Wildfire Effects.

### 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 (Utah Department of Natural Resources, 2020). For the service area, the Aggregate Value Impact categories within the service boundary are shown in Figure 7.

Because a large portion of the RREC 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 some 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 RREC infrastructure/0.5 mile corridor. While just over 80% 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 RREC lines.

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

Reclassified Value		Acres	Percent
1	Low	86,848.40	80.177
2		1,735.60	1.602
3		99.70	0.092
4		29.80	0.028
5		43.60	0.040
6		6.70	0.006
7	Medium	1,465.70	1.353
8		10,566.50	9.755
9		1,066.10	0.984
10		3,146.50	2.905
11		208.70	0.193
12		2,705.50	2.498
13		327.80	0.303
14		69.20	0.064
15	Extreme	0.70	0.001



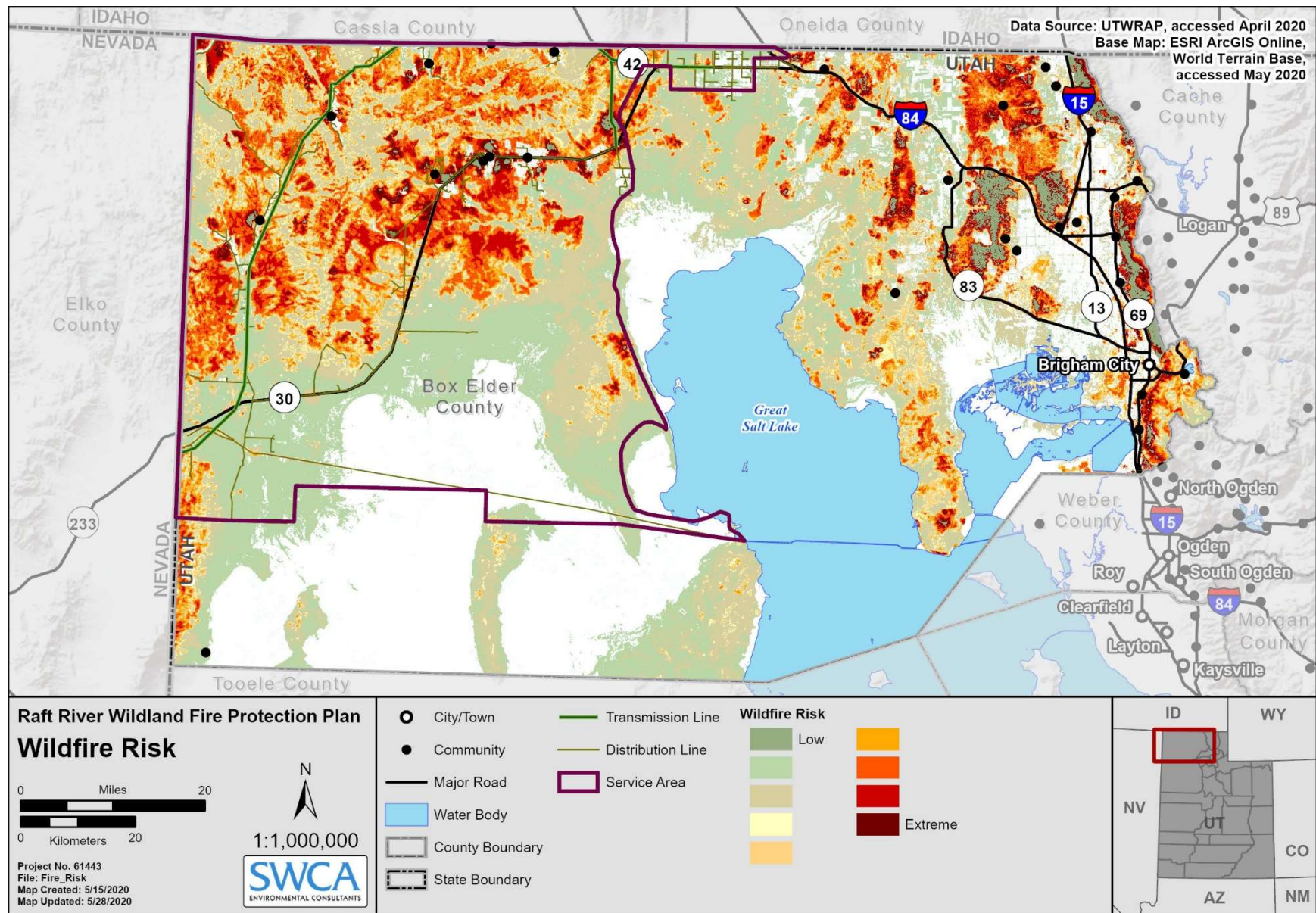


Figure 7. Aggregate Value Impacts for the RREC service area from UWRAP.

## 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 (Utah Department of Natural Resources, 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 (Utah Department of Natural Resources, 2020).

Figure 8 illustrates the wildfire threat from UWRAP for the service area. The majority (94%) of the RREC infrastructure (based on a 0.25 mile buffer around RREC infrastructure/0.5 mile corridor) is projected to be at low wildfire threat (Table 7). Approximately 100 acres of the corridor are projected to be at medium threat.

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

Reclassified Value		Acres	Percent
1	Low	102,250.64	94.396
2		3,773.53	3.484
3		1,397.34	1.290
4		600.56	0.554
5		192.21	0.177
6		65.16	0.060
7	Medium	41.04	0.038
8		0.00	0.000
9		0.00	0.000
10		0.00	0.000
11		0.00	0.000
12		0.00	0.000
13		0.00	0.000
14		0.00	0.000
15	Extreme	0.00	0.000

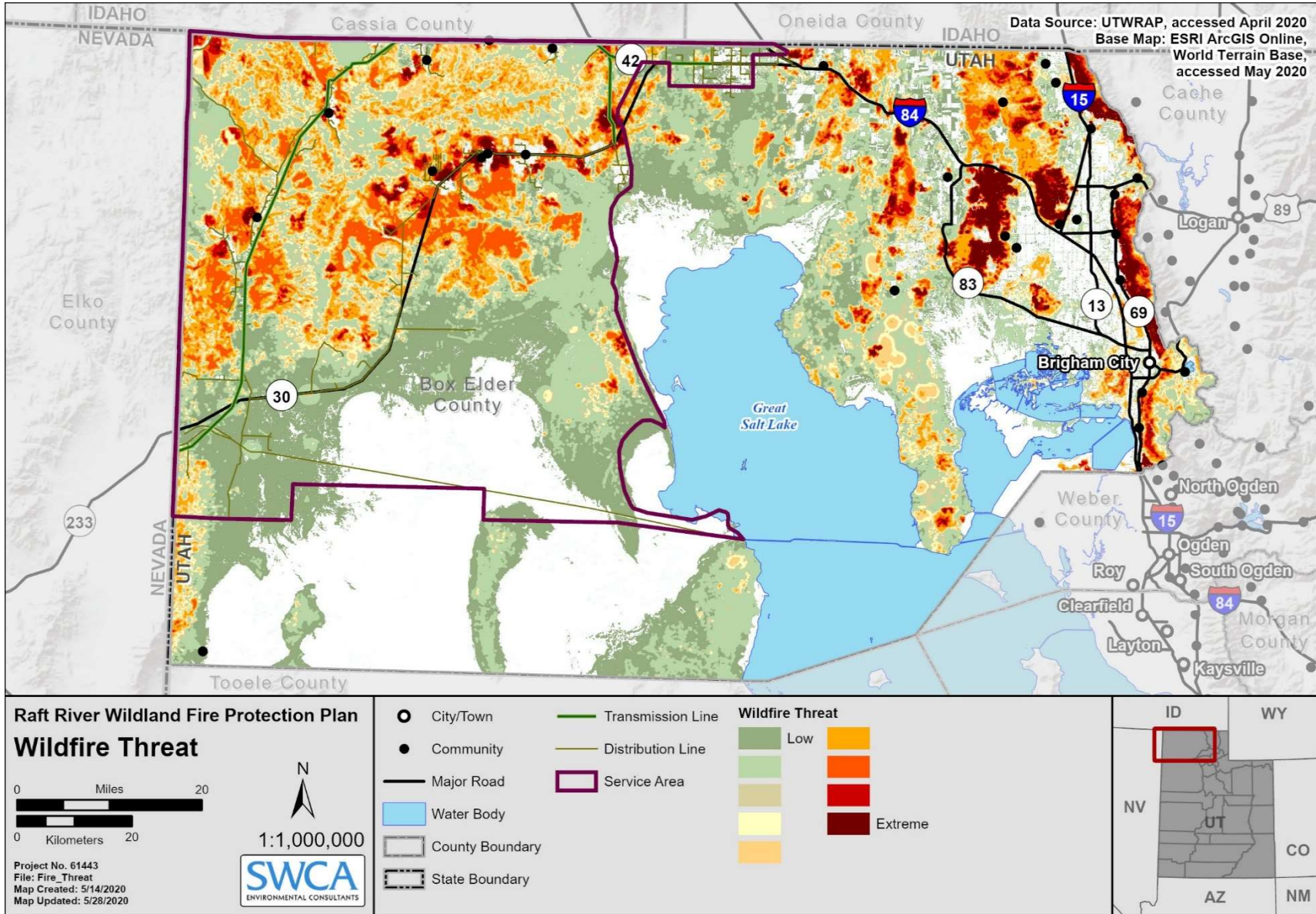


Figure 8. Fire threat for the RREC service area from UWRAP.

### 4.6.3 Wildfire Risk

The wildfire risk data in UWRAP represents 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. The UWRAP risk map layer (Figure 9) 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 9 illustrates the wildfire risk throughout the RREC service area. The majority (~97%) of the RREC infrastructure (based on a 0.25-mile buffer around RREC infrastructure/0.5-mile corridor) is projected to be at low wildfire risk (Table 8). Approximately 300 acres are rated as medium or higher wildfire risk. These are the areas where RREC should focus mitigation measures.

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

Reclassified Value		Acres	Percent
1	Low	104,872.36	96.817
2		1,770.93	1.635
3		515.61	0.476
4		358.50	0.331
5		311.57	0.288
6		153.01	0.141
7	Medium	91.63	0.085
8		80.95	0.075
9		69.83	0.064
10		31.58	0.029
11		9.12	0.008
12		11.79	0.011
13		11.12	0.010
14		12.01	0.011
15	Extreme	20.46	0.019

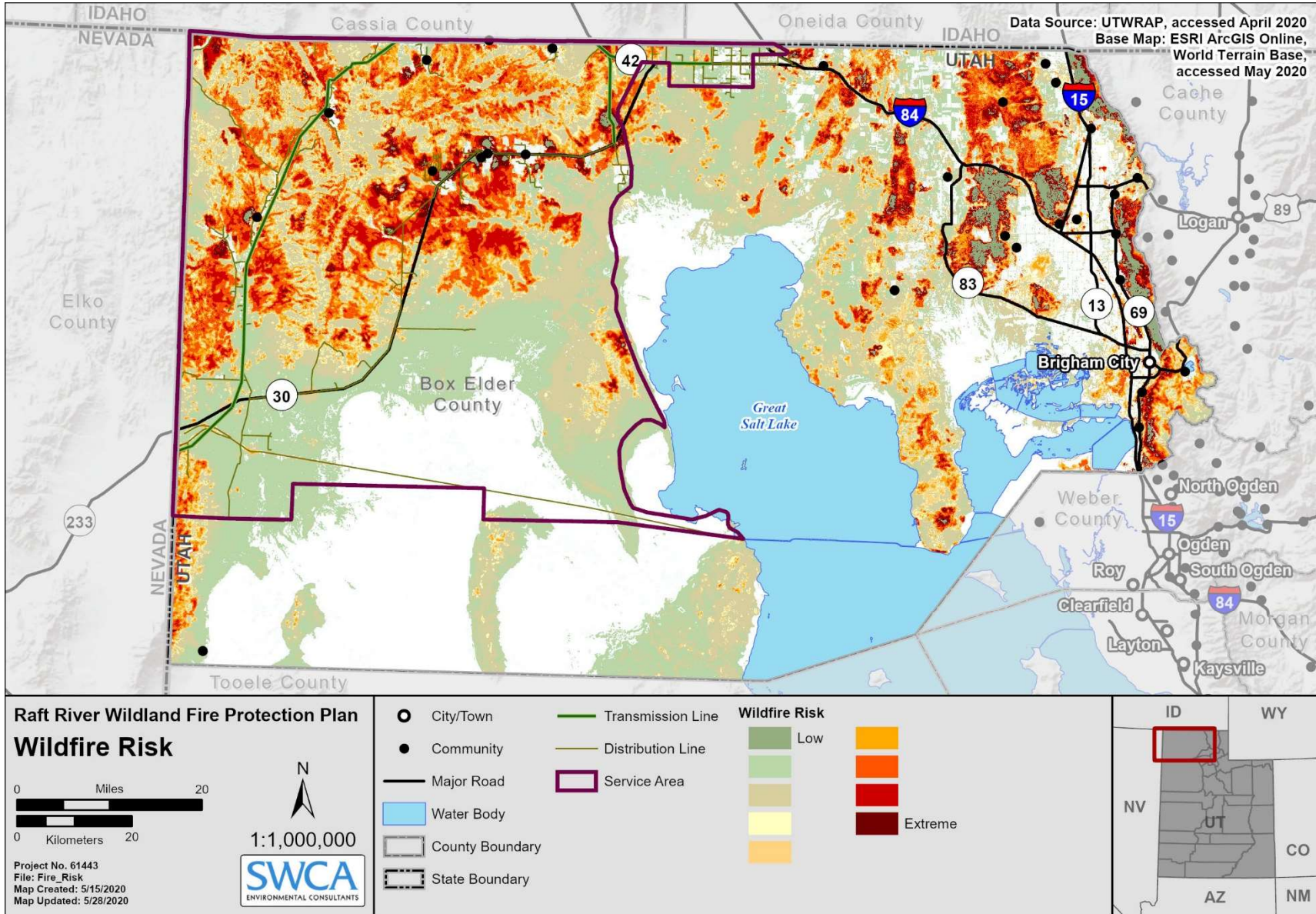


Figure 9. Wildfire risk for the RREC service area from UWRAP.

## 4.7 Risk Assessment and Action Plan

The goal of the wildfire risk assessment presented in Figure 9 is to identify sections of the RREC 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 RREC 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. RREC will ground truth priority sections prior to proceeding with Plan implementation.

RREC 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 help identify potential repair needs throughout the service area, as well as guiding crew scheduling and evaluation of labor resources. Transmission and distribution lines will be patrolled by pickup, ATV, and, in some circumstances, foot. New distribution powerline construction is built to specifications for raptor protection. Poles equipped with devices have a facility ID number and are easily detected on RREC map products.

The aim of the inspection program is to ensure long-term safe and effective operation of the electric system and informed maintenance. Specific objectives are to:

- A. Identify maintenance actions, particularly those that require immediate attention.
- B. Develop an implementation schedule of corrective actions.
- C. Schedule labor and develop budgets.
- D. Identify and initiate ongoing maintenance programs.

#### 5.1.1 Inspection Schedule

Distribution facilities including underground lines will be inspected on 3-year intervals, using systematic visual and drone inspections standards. RREC personnel will also inspect secondary service equipment at intervals to identify needed replacement or maintenance actions. Line inspection, maintenance and patrol logs will be maintained. Scheduled pole testing and sterilant scatters will be completed during patrols, as needed.

For transmission facilities, intervals between systematic visual and drone inspections should not exceed 1 year. This also includes updating of line inspection, patrol, and maintenance logs.

#### 5.1.2 Documentation

RREC will maintain all inspection and maintenance records for future reference.

### **5.1.3 On-site Repair**

During the inspection process, RREC operations personnel will implement repairs, as feasible. The Line Superintendent will schedule any additional repairs through a service order.

### **5.1.4 Responsibility**

All ongoing maintenance and inspection programs are the responsibility of the Line Superintendent.

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

## **5.2 Vegetation Management Protocols**

The RREC Operations Manager is responsible for coordinating activities to identify and remove vegetation that approaches high-voltage distribution and transmission lines.

- Trees are trimmed to prevent contact with power line structures if not able to be removed completely from the hazardous area. Trees that are able to be removed from the ROW are cut down with chainsaws, hauled away, and in most cases, shredded with a tree shredder attached to an excavator. 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 in the next 2 years.
- RREC continually reduces fire risk by using motorized equipment in highly vegetated areas by walking or always having a fire extinguisher or other method of fire suppression available.
- RREC 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. RREC shall seek to trim/remove vegetation and/or trees that in the Cooperative's opinion present an immediate hazard, danger, or substantial risk to the Cooperative's system, employees, or public safety. In addition, RREC shall seek to trim/remove vegetation that could present a hazard before the next inspection. In drought-prone areas where tree growth is stunted, growth can rebound when drought conditions abate. RREC will consider the fact that growth rates can be nonlinear when establishing inspections frequency.
- RREC defines a hazardous tree as a tree that is "dead, severely damaged, or may present reasonable risks to RREC lines and facilities." RREC may opt to remove a landowner's hazardous tree based on an assessment of public health and safety. A hazardous tree shall be removed or pruned in accordance with this policy to mitigate safety hazards.
- RREC will strive to remove all trees (hazardous or not) that are growing beneath lines in the public ROW or RREC ROW. Trees that can be reasonably removed from a private ROW will be removed with the landowner's permission. RREC will endeavor to remove all trees while they are small and before they pose a hazard to the line. Brush and vegetation will be removed during periodic tree trimming.
- RREC has no affirmative duty to remove trees outside the RREC ROWs. With a written request from a landowner, RREC may assist the landowner with the removal of a hazardous tree outside the ROW at no cost to the landowner, as long as RREC has identified the tree as a hazardous tree.

- The landowner is responsible for the removal of branches and other debris following vegetation and tree removal, in or outside of the ROW. All stumps shall be cut to ground level. Complete stump removal is the responsibility of the landowner.
- RREC will maintain and control vegetation and trees on all RREC property, including substations and fenced boundaries.
- Any structure with a facility ID number that has an attached device (e.g., transformers, fuses, capacitor banks, regulator banks, underground take-offs) are treated with herbicides to manage vegetation around its base. Every structure on the 138-kV transmission line is also numbered and is treated with herbicides to manage vegetation around its base.
- RREC shall encourage members to report trees that are potential hazards, in and outside the ROW, that may become a threat to public safety and/or the system's reliability.
- RREC will annually budget an amount sufficient to secure the services of an independent tree contractor to assist the cooperative with its vegetation management program, including tree removal when authorized, tree trimming, and application of herbicide within the ROW.
- The activities of the vegetation management program will be documented and maintained annually by the Operations Manager.
- RREC will monitor the growth of vegetation during inspections. Potential growth rates can be monitored using the Utah State University Tree Browser.<sup>9</sup>
- In the event of a fire, in an effort to protect RREC poles, other forms of vegetation management include clearing around poles using backhoes and excavators. Hard-to-reach areas are also accessed by foot and cleared with shovels, axes, and weed-eaters. This would be the case for tangent poles that are in distribution lines that do not contain any devices.

### **5.2.1 Inspection Standards**

RREC will perform periodic inspections of its distribution and transmission lines to monitor the growth of vegetation. The intent is to ensure that all distribution lines are inspected every 3 years and all transmission lines are inspected every year. The Cooperative 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 requirement of a vegetation inspection as well as a general maintenance inspection.

### **5.2.2 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, modifications, and upgrades to infrastructure.

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<sup>9</sup> Utah State University Tree Browser: [www.treebrowser.org](http://www.treebrowser.org)



## 5.3 System improvements

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

- Provide additional access roads along power line ROW and maintain standards.
- Ensure vegetation clearances around transmission structure poles, with a minimum radius of 10 feet.
- Adopt alternative technologies for system improvements. This could include live-feed camera technology, wire-break sensing, and arc detection technology.

### 5.3.1 Powerline Construction Procedures

When new powerline construction or replacement occurs during high fire risk, special precautions are put into place. Fire extinguishers are verified and readily accessible. Backhoes are readily available. Wheeled water tanks with pumps are also close by in case of emergencies. Caution is always the top priority when traveling across dry, high vegetation areas with motorized vehicles. In cases where there is an extremely high risk, walking and hand tools are the best option to complete the job if possible.

### 5.3.2 Raptor Management

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

### 5.3.3 System Improvement Schedule

RREC is considering the following system improvements and schedule (Table 9). Priority is given to those improvements that would meet program objectives in the most expeditious and economical way.

**Table 9. System Improvement Schedule**

Item Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sterilize around all structures with devices on distribution lines			X								
Drone patrolling				X							
Replace porcelain cutouts					X						
Replace knox insulators						X					

## **5.4 De-energizing Protocols**

As the power within this rural area is predominately a radial feed, shutting down the entire feed is not an option for the Cooperative. The distribution of electrical power to pumps that provide water for livestock, crops, and fire suppression is of the utmost importance. RREC also has members who are dependent on electricity to power their oxygen machines and other types of devices that offer life support. Through a thorough analysis, RREC has balanced the risk of fire with these provisions and has determined that maintaining electric supply to members outweighs the potential wildfire risk.

During extremely high-risk fire conditions (heavy winds and prolonged periods of low humidity) in very sensitive areas (those outlined in Appendix B), the automatic line recloser could be placed in non-reclose mode to further reduce wildfire risk. While this is not a procedure that RREC prefers to employ, it is an option under extreme conditions.

## **5.5 Restoring Service**

During normal line operation when the power flow is interrupted, the line recloser will try to re-energize. If the fault is temporary and can clear, the power will be restored. If the fault does not clear, the line will remain de-energized. When the power flow is interrupted under high-risk fire conditions, crews respond and will not attempt to manually reclose any line protection devices without first inspecting the section of line to be re-energized. Once the problem is identified and resolved, the crews will re-energize the line manually in order to reduce the risk of starting a fire.

RREC will work closely with the incident commander in the event that a hold order is placed on the line. RREC will coordinate as needed with an emphasis on stressing the importance of always treating lines as energized.

RREC's transmission systems should always be considered energized.

In the event of a wildfire impacting the RREC service area, RREC 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, RREC may also engage contractors on an as needed basis. RREC would follow 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:** RREC 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. RREC will work with the local agency in charge of the fire before accessing the burn area.

**Planning:** Following initial assessment, RREC 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:** RREC 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 RREC as soon as the area is safe to access. Initial effort will be focused on replacing lines and restoring any damaged circuits.

**Restore:** RREC 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, the RREC Emergency Response Plan, critical areas first 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.

## **6 COMMUNITY OUTREACH AND EDUCATION**

RREC provided the draft document for stakeholder review from June 17 to June 24, 2020 (stakeholders are listed in Table 10). Stakeholders were asked to provide comments on the draft to ensure that protocols and procedures in the Plan are aligned with existing procedures for emergency management, wildfire mitigation, and wildfire response within their jurisdictions.

RREC provided the draft document for public review on the Cooperative's website from June 25 to July 5, 2020. No comments were received from the public during this time.

### **6.1 Public Safety and Notification**

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

- Coordination prior to fire season with county emergency managers and fire staff to determine fire season outlook and potential red-flag periods.
- Coordination during emergencies or large-scale outages with county emergency managers and fire staff in conjunction with agency dispatch.
- Development of communication protocols with county health departments for emergency notifications to vulnerable members (i.e., medical facilities, schools, etc.).
- Expansion of social media reach across the service area.
- Development of a web-based map for the public to see current outages and estimated restoration.

Additional public outreach options that could be employed in conjunction with county or local emergency managers include:

- Utilizing local radio and television media to broadcast public service messages.
- Compiling and disseminating information to members regarding community wildfire preparedness, evacuation, and vigilance before and during fire season (UDFFSL Wildfire

Preparedness Literature;<sup>10</sup> Ready, Set, Go;<sup>11</sup> Firewise;<sup>12</sup> Fire Adapted Communities<sup>13</sup>). Working with state and government officials to provide a consistent public message to members regarding wildfire preparedness.

## 7 INTEGRATION WITH APPLICABLE PLANS

RREC engages closely with the County Emergency Manager and attends the Utah Department of Public Safety Uintah Basin Infrastructure Resilience Council (IRC). During wildland fire events, RREC works in full coordination with 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 10. The contact information presented below will be reviewed and updated on an annual basis.

**Table 10. RREC and Agency Contact List**

Name	Entity	Phone	Email
Carl Boden	Line Superintendent	208-645-2926 208-312-1168	cboden@rrelectric.com
Heath Higley	Operations Manager	208-645-2913 208-312-1015	hhigley@rrelectric.com
Blain Hamp	UDFFSL	435-752-8701	blainhamp@utah.gov
Dustin Richards	UDFFSL	435-890-2071	dustinrichards@utah.gov
Brad Johnson	Box Elder County		bradjjohnson@utah.gov
Corey Barton	Box Elder County		cbarton@boxeldercounty.org
Robert Farrell	BLM		rfarrell@blm.gov
Dick Dutcher	USFS	208-677-8293	dick.dutcher@usda.gov
Matt Ginder	USFS	208-677-8301	mginder@fs.fed.us
Eric Valdez	BLM	801-977-4335	evaldez@blm.gov

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<sup>10</sup> UDFFSL: <https://ffsl.utah.gov/fire/wildfire-community-preparedness/>

<sup>11</sup> Ready, Set, Go: [https://www.wildlandfirersg.org/s/?language=en\\_US](https://www.wildlandfirersg.org/s/?language=en_US)

<sup>12</sup> Firewise: <https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA/Firewise-USA-Resources/Firewise-USA-sites>

<sup>13</sup> Fire Adapted Communities: <https://fireadapted.org/>

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## **APPENDIX A**

### **UWRAP and Interagency Fuel Treatment Decision Support System (IFTDSS) Supplemental Mapping**





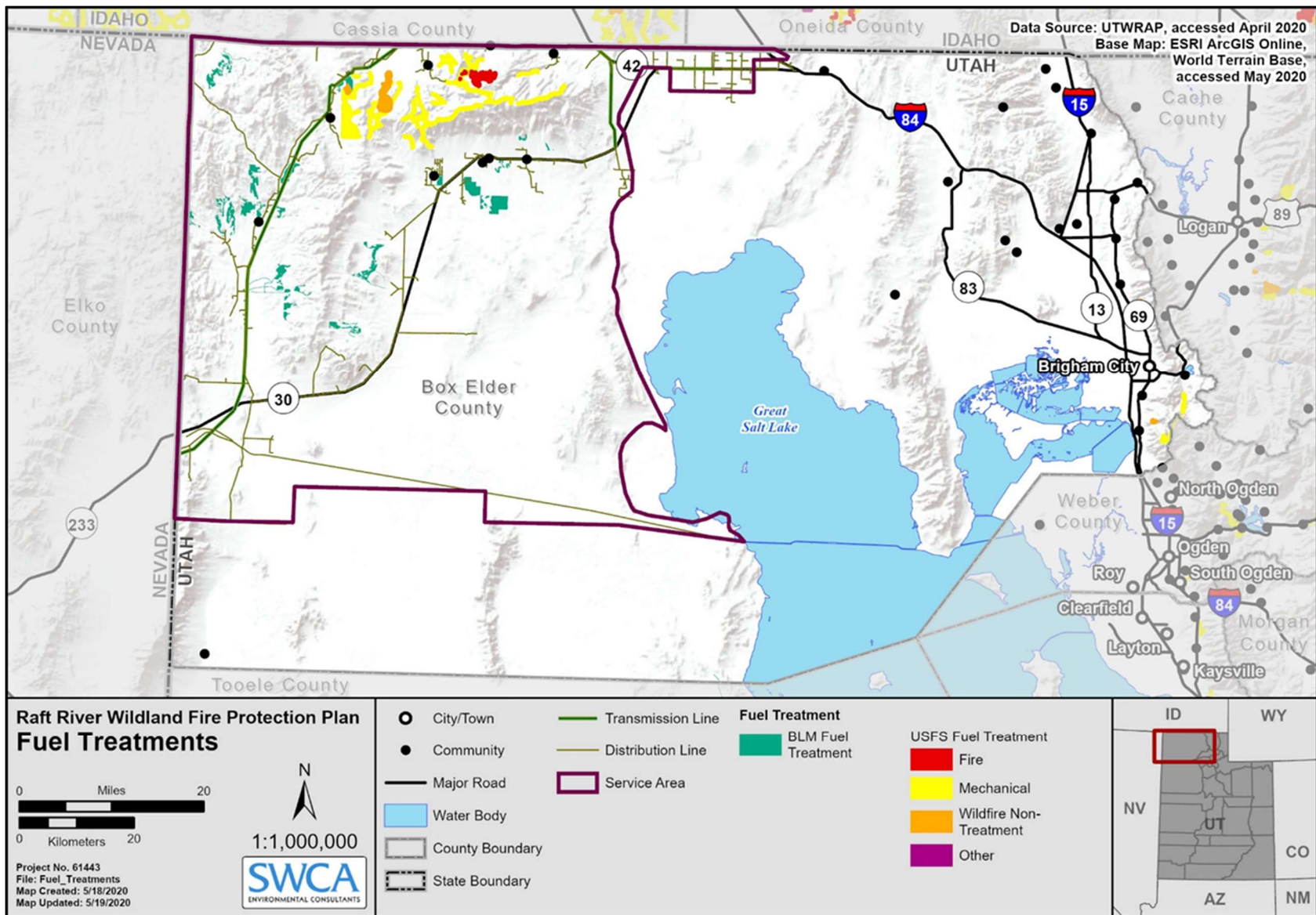


Figure A-1. Fuel treatment locations, as provided by the USFS and BLM. Whenever possible, RREC will work with federal agencies to design fuel treatments to contribute to wildfire mitigation around RREC infrastructure.

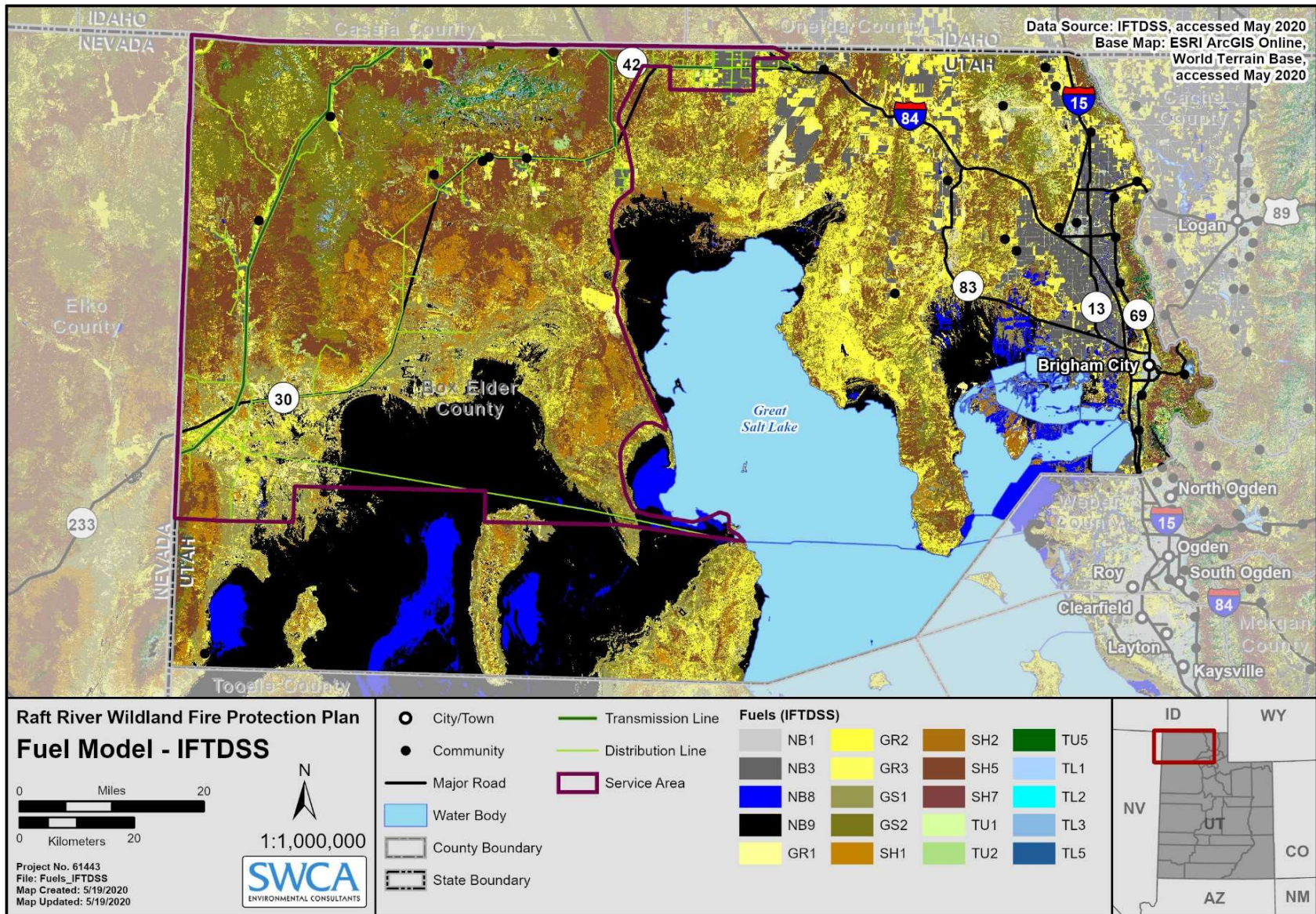


Figure A-2. Updated fuel model data for the RREC service area, utilizing 2016 LANDFIRE Scott and Burgan Fuel data. Future revisions of the Plan should consider incorporating this new data, contingent on revisions to UWRAP.

## **APPENDIX B**

### **Detailed Mapping of High-Risk Segments with Action Plan**



**Table B-1. Description of High-Risk Line Segments with Action Plan-**

Map ID	Feeder	Description	Wildfire Risk Analysis Segment Indicator and Description	Mitigation Strategy	Priority (L, M, H)
B-1	T30-1	Area A-1 is located in the southern portion of the RREC service area, close to the Tecoma Substation and adjacent to the Nevada-Utah border.	<b>A-1</b> represents a segment of distribution line that is located on BLM and private lands, south of Highway 30. The line is located in grass-shrub fuels, which could experience flame lengths of 20-30 ft and have the potential to transmit rapidly spreading fires (~55 ft/min). The line is located in an area with varied slopes which may channel winds, increasing fire spread. The line is close to the highway and the Union Pacific railroad, which may be more prone to human ignitions from passing motorists and sparks from trains  This is a single-phase overhead line composed of wood poles that was installed in the early 1960's.	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and Utah Department of Transportation [UDOT])</li> <li>• More frequent vegetation inspections.</li> </ul>	Moderate- due to the large area of elevated risk adjacent to the line that could transmit fire to/from the line.
	T-30	Area A-2 is located in the southern portion of the RREC service area, close to the Tecoma Substation and adjacent to the Nevada-Utah border.	<b>A-2</b> represents a segment of distribution line that is located on BLM and private lands, south of Highway 30 and immediately adjacent to the railroad. The line is located in grass-shrub fuels, which could experience flame lengths of 20-30 ft and have the potential to transmit rapidly spreading fires (~55ft/min). The line is located in an area with varied slopes which may channel winds, increasing fire spread. The line is close to the highway and the Union Pacific railroad, which may be more prone to human ignitions from passing motorists and sparks from trains.  This is a three-phase overhead distribution line that was rebuilt in the early 2000's, with wood poles.	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT).</li> <li>• More frequent vegetation inspections.</li> <li>• Work with Union Pacific to ensure they maintain their ROW.</li> </ul>	Moderate- due to the large area of elevated risk adjacent to the line that could transmit fire to/from the line.
	T-30	Area A-3 is located in the southern portion of the RREC service area, close to the Tecoma Substation and adjacent to the Nevada-Utah border.	<b>A-3</b> represents a segment of distribution line that is located on BLM and private lands, south of Highway 30 and immediately adjacent to the Union Pacific railroad. The line is located in grass-shrub fuels, which could experience flame lengths of 20-30 ft and have the potential to transmit rapidly spreading fires (~55ft/min). The line is located in an area with varied slopes which may channel winds, increasing fire spread. The line is close to the highway and the Union Pacific railroad, which may be more prone to human ignitions from passing motorists and sparks from trains.  There is a single-phase overhead distribution line that was constructed in 2010. There is also portions of the 138 KV "H" structure overhead Transmission line that is critical to Wendover, Nevada built in 1984. All lines constructed with wood poles.	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>• More frequent vegetation inspections.</li> <li>• Work with Union Pacific to ensure they maintain their ROW.</li> </ul>	Moderate- due to the large area of elevated risk adjacent to the line that could transmit fire to/from the line.

Map ID	Feeder	Description	Wildfire Risk Analysis Segment Indicator and Description	Mitigation Strategy	Priority (L, M, H)
T30-2 (Garrett line) T30-3 (Railroad line)		Area A-4 is located in the southern portion of the RREC service area, in close proximity to the Union Pacific Railroad.	<b>A-4</b> represents a segment of distribution line that is located on BLM and private lands, approximately 4 miles south of Highway 30 and immediately adjacent to the Union Pacific railroad. The line is located in grass-shrub fuels, which could experience flame lengths of 20-30 ft and have the potential to transmit rapidly spreading fires (~55ft/min). The line is located in a flat area which would slow fire spread. The proximity to the Union Pacific railroad, may increase ignition potential from passing trains. There is a history of high fire occurrence at this location  There is overhead single phase line built in 2003 that follows the tracks that serves the railroad services, (T30-3) and an overhead single phase line that goes south 14 miles (T30-2) that was built in 1997. There is also three phase overhead line that goes north to Highway 30 that was rebuilt in 2010 (T-30) All lines are constructed with wood poles.	<ul style="list-style-type: none"> <li>Work with Union Pacific to ensure they maintain their ROW.</li> </ul>	Low- due to the relatively low risk adjacent to the segment.
T30-4 K20-1-1-1		Area A-5 is located in the southern portion of the RREC service area, along Highway 30, approximately 12 miles east of the state line.	<b>A-5</b> represents a segment of distribution line that is located on BLM, State Trust and private lands. The line is located in grass fuels, which could experience moderate rates of spread. The risk in this segment is associated with high fire occurrence at this location, with numerous previous fires, suggesting high ignition potential from the highway.  This is an overhead three phase line (T30-4) constructed in the early 1970's with wooden poles. The three-phase line is met with a single-phase line fed from the north referred to as feeder K20-1-1-1, also constructed with wood poles in 1990.	<ul style="list-style-type: none"> <li>Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>More frequent vegetation inspections.</li> </ul>	Low- due to the relatively low risk adjacent to the segment.
B-2	G20-2	B-1 is located less than a mile from the Nevada border, north of Highway 30.	<b>B-1</b> represents a segment of distribution line that is located on BLM and private lands. The line is located in grass-shrub fuels, which could experience 20-30ft flame lengths, and extreme rates of spread (> 50 ft/min). The highest risk areas within this segment are associated with steep grades, that may elevate fire behavior.  This line is difficult to access on the west end as it covers steep slopes. It is a combination of three-phase line on the east end (G20) and single-phase overhead lines on the west end (G20-2), all built with wooden poles in the mid 1980's. There are minimal values in close proximity to the segment.	<ul style="list-style-type: none"> <li>More frequent vegetation inspections.</li> </ul>	Moderate- due to the large area of elevated risk adjacent to the line that could transmit fire to/from the line.

Map ID	Feeder	Description	Wildfire Risk Analysis Segment Indicator and Description	Mitigation Strategy	Priority (L, M, H)
G20		B-2 is located approximately 6 miles east of the Nevada border, north of Highway 30.	<p><b>B-2</b> represents a segment of distribution line that is located on BLM and private lands. The line is located in grass-shrub fuels, which could experience 20-30ft flame lengths, and extreme rates of spread (&gt; 50 ft/min). The highest risk areas within this segment are associated with steep grades, that may elevate fire behavior. The segment is rated as having moderate suppression difficulty. There are minimal values in close proximity to the segment.</p> <p>This segment is three phase overhead distribution line constructed in 2012 to 2014. There is also 138 KV "H" structure transmission line in parallel, built in 1984, all with wood poles.</p>	<ul style="list-style-type: none"> <li>• More frequent vegetation inspections.</li> </ul>	Low- due to the relatively low risk adjacent to the segment.
G20		B-3 is located approximately 6 miles east of the Nevada border, and 7-8 miles due north of Highway 30.	<p><b>B-3</b> represents a segment of distribution line that is located on BLM and private lands. The line is located in grass-shrub fuels, which could experience 20-30ft flame lengths, and extreme rates of spread (&gt; 50 ft/min). The highest risk areas within this segment are associated with steep grades, that may elevate fire behavior.</p> <p>This segment is three phase overhead distribution line constructed in 2012 to 2014. There is also 138 KV transmission line constructed with "H" structures in parallel, built in 1984, all with wood poles.</p>	<ul style="list-style-type: none"> <li>• More frequent vegetation inspections.</li> </ul>	Moderate- due to the large area of elevated risk east and north of the line that could transmit fire to/from the line.
G30-1		B-4 is located approximately 5 miles east of the Nevada border, and 10 miles due north of Highway 30.	<p><b>B-4</b> represents a segment of distribution line that is located on BLM and private lands. The line is located in grass-shrub fuels, which could experience 20-30ft flame lengths, and extreme rates of spread (&gt; 50 ft/min). The segment is rated as having moderate suppression difficulty.</p> <p>This is single phase overhead distribution line that is currently being rebuilt so structures have 2020 vintage wood poles.</p>	<ul style="list-style-type: none"> <li>• More frequent vegetation inspections.</li> </ul>	High- due to the large area of elevated risk surrounding the line.
T30-4 (Air Force site)		B-5 is located approximately 5 miles north of Highway 30.	<p><b>B-5</b> represents a segment of distribution line that is located on BLM and private lands. The line is located in grass-shrub fuels, which could experience 20-30ft flame lengths, and extreme rates of spread (&gt; 50 ft/min). The segment is rated as having moderate suppression difficulty. The segment has a history of higher fire occurrence; due to its remote location this is likely due to lightning fires.</p> <p>This is an overhead three-phase distribution line built in 1985 using wood poles. The last section of line is three-phase underground 2.8 miles in length.</p>	<ul style="list-style-type: none"> <li>• More frequent vegetation inspections.</li> </ul>	High- due to the large area of elevated risk surrounding the line.

Map ID	Feeder	Description	Wildfire Risk Analysis Segment Indicator and Description	Mitigation Strategy	Priority (L, M, H)
B-3	G30	C-1, C-2, C-3 is located surrounding the Grouse Creek Substation	Segments <b>C-1</b> , <b>C-2</b> and <b>C-3</b> are located on BLM and private lands. The lines are located within some areas of thick sage brush shrub. These fuels could experience 20-30ft flame lengths and extreme rates of spread (> 50ft/min). The lines are located in areas of moderate suppression difficulty. The greatest risk occurs in areas of steep slope, from 50-75%.  This is three-phase distribution line built in the 1950's. The portion of line in C-3 was constructed in 2001, all using wood poles.	<ul style="list-style-type: none"> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance.</li> </ul>	High- due to the large area of elevated risk surrounding the line and proximity to the Grouse Creek Substation.
	G30	C-4 is located immediately south of the Grouse Creek Substation	Segments <b>C-4</b> are located on BLM and private lands. The lines are located within some areas of thick sage brush shrub. These fuels could experience 20-30ft flame lengths and extreme rates of spread (> 50ft/min). The lines are located in areas of moderate suppression difficulty.  This segment of line is a three-phase overhead distribution line that was constructed in 1984 with wood poles. There is also a 138 KV transmission line "H" structure line also constructed with wood poles in 1984.	<ul style="list-style-type: none"> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance.</li> </ul>	High- due to the large area of elevated risk surrounding the line and proximity to the Grouse Creek Substation.
	G10	C-5 and C-6 is located north of the Grouse Creek Substation	Segments <b>C-5</b> and <b>C-6</b> are located on BLM and private lands. The lines are located within some areas of thick sage brush shrub. These fuels could experience 20-30ft flame lengths and extreme rates of spread (> 50ft/min). The lines are located in areas of moderate suppression difficulty. The segments are located in an area of moderate aggregated values.  The C-5 segment is a three-phase overhead powerline constructed with wood poles in 1951. The line in segment C-6 is a 138KV "H" structure transmission line constructed in 1984 with wood poles.	<ul style="list-style-type: none"> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance.</li> </ul>	High- due to the large area of elevated risk surrounding the line and proximity to the Grouse Creek Substation.
B-4	G10	D-1 and D-2 are located along Grouse Creek	Segments <b>D-1</b> and <b>D-2</b> are located on BLM and private lands. The lines are located in grass and shrub fuels that could experience 20-30ft flame lengths and extreme rates of spread (> 50ft/min). The lines run adjacent to the creek, which could channel winds and move fire upslope.  The line in segment D-1 is a 138KV "H" structure transmission line constructed in 1984 with wood poles. The D-2 segment is a three-phase overhead powerline constructed with wood poles in 1951.	<ul style="list-style-type: none"> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance.</li> </ul>	Moderate- due to the low density of values at risk, but large area of elevated risk adjacent to the segments.



Map ID	Feeder	Description	Wildfire Risk Analysis Segment Indicator and Description	Mitigation Strategy	Priority (L, M, H)
G10-1		D-3 is located between Kimbell Creek and Cotton Thomas Road	<p>Segment <b>D-3</b> represents a section of distribution line that is located on BLM and private lands. The line is located in grass-shrub fuels, which could experience 20-30ft flame lengths, and extreme rates of spread (&gt; 50 ft/min). The segment is rated as having moderate suppression difficulty. The segment has a history of higher fire occurrence; due to its remote location this is likely due to lightning fires.</p> <p>The D-3 segment is a single-phase overhead powerline constructed with wood poles in 1970.</p>	<ul style="list-style-type: none"> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance.</li> </ul>	Moderate- due to the low density of values at risk, but large area of elevated risk adjacent to the segment.
B10-2		D-4 and D-5 is located east and west of Grouse Creek	<p>Segments <b>D-4</b> and <b>D-5</b> represent sections of a distribution line that are located on BLM, State Trust land and private lands. The line is located in grass-shrub fuels, which could experience 20-30ft flame lengths, and extreme rates of spread (&gt; 50 ft/min). The segment is rated as having moderate suppression difficulty.</p> <p>D-4 is a three-phase overhead distribution line built with wood poles in the 1950's (B10-2). D-5 is a 138KV "H" structure transmission line constructed in 1984 with wood poles.</p>	<ul style="list-style-type: none"> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance.</li> </ul>	Moderate- due to the low density of values at risk, but large area of elevated risk adjacent to the segments.
B10-2		D-6 is located on the east side of Grouse Creek	<p>Segment <b>D-6</b> represents a section of distribution line that is located on BLM, and private land. The line is located in grass-shrub fuels, transitioning to dense taller shrubs, which could experience 20-30ft flame lengths, and extreme rates of spread (&gt; 50 ft/min). The segment is rated as having moderate suppression difficulty. The greatest risk is associated with areas with steep grade, which may elevate fire behavior.</p> <p>This segment is a 5 mile span of buried single-phase underground distribution line.</p>	<ul style="list-style-type: none"> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance.</li> </ul>	Moderate- due to the low density of values at risk, but large area of elevated risk adjacent to the segment.
B10-2		D-7 is located adjacent to Valley Lynn Road, immediately adjacent to Lynn	<p>Segment <b>D-7</b> represents a section of distribution line that is located on private land. The line is located in grass-shrub fuels, which could experience 20-30ft flame lengths, and extreme rates of spread (&gt; 50 ft/min). The segment is rated as having moderate suppression difficulty. There are values at risk located adjacent to the line, making up the community of Lynn.</p> <p>The overhead three-phase distribution power line transitions to single phase overhead distribution line, all built using wood poles in the 1950's.</p>	<ul style="list-style-type: none"> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance.</li> </ul>	High- due to the proximity to values at risk, and elevated risk adjacent to the segment.

Map ID	Feeder	Description	Wildfire Risk Analysis Segment Indicator and Description	Mitigation Strategy	Priority (L, M, H)
B-5	G10-1	E-1 is located in the north east corner of the RREC service area, adjacent to the Nevada state line.	Segment <b>E-1</b> represents a section of distribution line that is located on BLM and private land. The line is located in grass-shrub fuels, which could experience 20-30ft flame lengths, and extreme rates of spread (> 50 ft/min). The highest risk is associated with steep grades that may elevate fire behavior. The area may be difficult to access due to a lack of roads.  This is a single-phase overhead distribution line that was built in 1970 using wood poles	<ul style="list-style-type: none"> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance.</li> <li>• Utilize drone technology for line inspections.</li> </ul>	Moderate- due to the low density of values at risk, but large area of elevated risk that follows the line corridor.
	G10-1-2	E-2 is located at the intersect of the Utah, Idaho and Nevada state lines.	Segment <b>E-2</b> represents a section of distribution line that is located on BLM, State Trust lands and private land. The line is located in grass-shrub fuels, which could experience 20-30ft flame lengths, and extreme rates of spread (> 50 ft/min). The area may be difficult to access due to a lack of roads. The area has been prone to relatively high fire occurrence. Due to the remote nature, these fires are likely primarily from lightning ignition.  This is a single-phase overhead distribution line that was built in 1970 using wood poles.	<ul style="list-style-type: none"> <li>• Consider wider ROW clearance.</li> <li>• Utilize drone technology for line inspections.</li> </ul>	Moderate- due to the low density of values at risk, but large area of elevated risk that follows the line corridor.
	B10-2	E-3 and E-4 are located north of Lynn	Segments <b>E-3</b> and <b>E-4</b> represent sections of a distribution line that are located on BLM, and private lands. The line is located in grass-shrub fuels, which could experience 20-30ft flame lengths, and extreme rates of spread (> 50 ft/min). The area has been prone to relatively high fire occurrence. Due to the location adjacent to the community of Lynn, these fires are likely primarily from human causes.  The segment in E-3 is a three-phase distribution line constructed in the 1950's with wood poles. The segment in E-4 is also a three-phase distribution line constructed with wood poles but rebuilt in 2002.	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance.</li> </ul>	High- due to the proximity to values at risk, and elevated risk adjacent to the segment.
	B10-1-5	E-5 is located approximately 5 miles north of Lynn	Segment <b>E-5</b> represents a section of distribution line that is located on private land. The line is located within a swath of thick shrub fuels, which could experience 20-30ft flame lengths, and extreme rates of spread (> 50 ft/min). The area may be difficult to access due to a lack of roads. The area is at some distance from values at risk, at least within the UT section of the line.  This segment is a single-phase distribution line that was built in 2000 with wooden poles.	<ul style="list-style-type: none"> <li>• Consider wider ROW clearance.</li> <li>• Utilize drone technology for line inspections and veg inspections.</li> </ul>	High- due to the elevated risk adjacent to the segment, continuing to Lynn.

Map ID	Feeder	Description	Wildfire Risk Analysis Segment Indicator and Description	Mitigation Strategy	Priority (L, M, H)
B-6	B10-2	F-1 and F-2 are located approximately 6 miles west of Yost.	Segments <b>F-1</b> and <b>F-2</b> represent sections of a distribution line that are located on BLM, and private lands. The line is located in grass-shrub fuels, which could experience 20-30ft flame lengths, and extreme rates of spread (> 50 ft/min). The lines are adjacent to Lynn Almo Road so are easily accessed.  The Segment in F-1 is a single-phase distribution line constructed in 2003 with wood poles. The segment in F-2 is a three-phase distribution line built in 2002 with wood poles. There is also a 138 KV transmission line with "H" structures.	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance</li> </ul>	Moderate- due to the low density of values at risk and easy access, but large area of elevated risk that follows the line corridor.
	B10-2-1 B10-4	F-3 and F-4 are located west and east of Yost.  F-5 is located along the Idaho border, 6-7 miles east of Yost.	Segments <b>F-3</b> , <b>F-4</b> and <b>F-5</b> represent sections of a distribution line that are located primarily on private lands adjacent to more developed areas. The lines are located in grass-shrub fuels which could experience 20-30ft flame lengths, and extreme rates of spread (> 50 ft/min), interfacing with agricultural and urban lands. There is a high density of values at risk adjacent to these segments of line due to the more urban developed nature. This area has been prone to high fire occurrence, likely resulting from human ignitions.  The lines in F-3 and F-4 (B10-2-1) are all single-phase distribution lines, mostly rebuilt in the years between 1994 and 1998. These lines are all built with wood poles. The segment in F-5 (B10-4) is a single-phase distribution line constructed with wood poles in 1996.	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance</li> </ul>	High- due to the elevated risk adjacent to values at risk.
B-7	K20-1-1-1	G-1, G-2, G-3 and G-4 are located in close proximity to Highway 30, in the middle of the RREC service area.	Segments <b>G-1</b> thru <b>G-4</b> represent segments of line that occur collocated or adjacent to State Highway 30. These segments occur in grass and shrub fuels which could experience 20-30ft flame lengths, and extreme rates of spread (> 50 ft/min). There is relatively high density of historic fire occurrence along these sections of line, likely as a result of the collocation with the Highway and ignitions from passing motorists.  These segments are all single-phase distribution lines built in the 1960's with wood poles. G-1 is an underground segment that spans 8.2 miles to the east.	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance</li> </ul>	High- due to the elevated risk adjacent to values at risk and potential heavier ignitions associated with the highway.

Map ID	Feeder	Description	Wildfire Risk Analysis Segment Indicator and Description	Mitigation Strategy	Priority (L, M, H)
B-8	K20-1-1	H-1 is located off of feeder 20-06 on the west side of Highway 30 south of Dove Creek.  H-2 is located along the feeder, close to Highway 30.	Segment <b>H-1</b> and <b>H-2</b> represent sections of distribution line that are located on BLM and private land. The line is located within a swath of thick shrub fuels, grass fuels and some agricultural lands. The shrub fuels could experience 20-30ft flame lengths, and extreme rates of spread (> 50 ft/min). The area is easily accessed via roads. The high fire risk is related to a history of previous fire occurrence, which is likely attributed to human ignition.  This segment is a single-phase distribution line built in the 1970's with wood poles.	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance</li> </ul>	High- due to the elevated risk adjacent to values at risk in adjacent Dove Creek.
	K20-1-2	H-3 is located west of Dove Creek	Segment <b>H-3</b> represents a section of distribution line that is located primarily on private land. The line is located within a mix of shrub and grass fuels. The shrub fuels could experience 20-30ft flame lengths, and extreme rates of spread (> 50 ft/min). The area is easily accessed via roads. The high fire risk is related to a history of previous fire occurrence, which is likely attributed to human ignition, as well as the density of values at risk in the area.  This is single-phase distribution line constructed in 1985 with wood poles.	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance</li> </ul>	High- due to the elevated risk adjacent to values at risk in adjacent Dove Creek.
	K20-1	H-4 is located east and southeast of Dove Creek	Segment <b>H-4</b> represents a section of distribution line that is located primarily on private land, with some BLM land. The line is located within a mix of shrub and grass fuels, with some agricultural lands. These fuels could experience 20-30ft flame lengths, and extreme rates of spread (> 50 ft/min). The area is easily accessed via roads. The high fire risk is related to a history of previous fire occurrence, which is likely attributed to human ignition, as well as the density of values at risk in the area.  The northern half of H-4 is a three-phase distribution line rebuilt in 1998 with wood poles. The southern half is also three phase distribution line built in the early 1960's.	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance</li> </ul>	High- due to the elevated risk adjacent to values at risk in adjacent Dove Creek.

Map ID	Feeder	Description	Wildfire Risk Analysis Segment Indicator and Description	Mitigation Strategy	Priority (L, M, H)
B-9	K20-1	I-1 is located east and northeast of Dove Creek	<p>Segments <b>I-1</b> thru <b>I-5</b> represent sections of distribution line that are located primarily on private land. These sections of line are located within a mix of shrub and grass fuels, with some agricultural lands. These fuels could experience 20-30ft flame lengths, and extreme rates of spread (&gt; 50 ft/min). The area is easily accessed via Highway 30. The high fire risk is related to a history of previous fire occurrence, which is likely attributed to human ignition, as well as the density of values at risk in the area.</p> <p>There are segments of three phase and single-phase lines all using wood pole construction varying in age from 1960 to segments that are currently under construction currently.</p>	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance</li> </ul>	High- due to the elevated risk adjacent to values at risk in adjacent Dove Creek, Cedar Hill and Park Valley.
	K20-1	I-2 is located north of Cedar Hill.			
	K20-2	I-3, I-4 and I-5 are located adjacent and south of the Park Valley community			
	K20	I-5			
B-10	K20	J-1,	<p>Segments <b>J-1</b> thru <b>J-4</b> represent sections of distribution line/transmission line that are located primarily on private land, with some State Trust land and small areas of BLM. These sections of line are located within a mix of shrub and grass fuels, with some agricultural lands. These fuels could experience 20-30ft flame lengths, and extreme rates of spread (&gt; 50 ft/min). The area is easily accessed via Highway 30 and other surface streets. The high fire risk is related to a history of heavy previous fire occurrence, which is likely attributed to human ignition, as well as the density of values at risk in the area. The high risk sections are in close proximity to the Kelton Substation.</p> <p>J-1 and J-4 are three-phase distribution lines. J-1 was re-constructed in 1990, while J-4 segment was replaced in 2012. Both lines using wood poles. The segments in J-2 and J-3 are all 138 KV "H" structure transmission lines.</p>	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance</li> <li>• Encourage more frequent roadside thinning on Highway 30 adjacent to the substation, in conjunction with the County/UTDOT</li> <li>• Implement defensible space around the Kelton substation and control for fine fuels, especially cheat grass.</li> <li>• Increase inspections during fire season.</li> </ul>	High- due to the elevated risk adjacent to values at risk in adjacent Park Valley and the Kelton Substation.
	138 KV Trans.	J-2, J-3			
	K30	J-4 are located clustered around the Kelton Substation and adjacent to Highway 30.			

Map ID	Feeder	Description	Wildfire Risk Analysis Segment Indicator and Description	Mitigation Strategy	Priority (L, M, H)
B-11	B20-2-1	K-1 is located south of Clear Creek, adjacent to the Idaho state line.	Segment <b>K-1</b> represents a section of distribution line that is located primarily on private land. The line is located within a mix of agricultural lands, with grass and shrub interface. The shrub fuels could experience 20-30ft flame lengths, and extreme rates of spread (> 50 ft/min). The area is easily accessed via roads. The high fire risk is related to a density of values at risk in the area.  This is a single-phase distribution line built in 2002 with wood poles	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance</li> </ul>	High- due to the elevated risk adjacent to values at risk in adjacent Clear Creek.
	138 KV Trans. Line	K-2, K-4, K-5, K-6, K-7, K-8 are located along the transmission line corridor and adjacent to W Highway 30 and Highway 42.	Segments <b>K-2, K-4, K-5, K-6, K-7, K-8</b> represent areas adjacent to the transmission line, often collocated with Highway 30 and Highway 42. These sections are comprised of a shrub and grass fuel mix, interfacing with urban and agricultural fuels. The greatest fire behavior is associated with the shrub fuels which are particularly dense and continuous through segments K-2 and K-4. The risk in the area is also elevated due to a history of fire occurrence, particularly around K-4 and K-8. This is likely attributed to human ignitions, due to the close proximity of a number of communities and the road network. The area is easily accessed.  138 KV "H" structure design with wood poles constructed in 1982.	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance</li> <li>• Implement defensible space around the Curlew substation and control for fine fuels, especially cheat grass</li> </ul>	High- due to the elevated risk adjacent to values at risk and proximity to the Highway.
	B30-2-2	K-3 is located close to Highway 42 and the Idaho state line.	Segment <b>K-3</b> represents a section of distribution line that is located primarily on private land. The line is located within a mix of agricultural lands, with grass and shrub interface. The shrub fuels could experience 20-30ft flame lengths, and extreme rates of spread (> 50 ft/min). The area is easily accessed via roads. The high fire risk is related to a density of values at risk in the area and an area of previous fire occurrence.  The most Northern section of this line is 1.5 miles of single-phase underground distribution, then the Southern section is single phase overhead replaced in 2015, With wood poles.	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance</li> </ul>	High- due to the elevated risk adjacent to values at risk in adjacent Clear Creek and Highway 42.

Map ID	Feeder	Description	Wildfire Risk Analysis Segment Indicator and Description	Mitigation Strategy	Priority (L, M, H)
B-12	C40	L-1, L-2 and L-3 are located east of the Curley Substation, west of Snowville and in close proximity to Interstate 84.	<p>Segments <b>L-1</b>, <b>L-2</b> and <b>L-3</b> represent sections of distribution line on private land adjacent to the interstate. These segments fall in an area comprised primarily of agricultural and grassland fuels. These fuels could experience moderate rates of spread (22-32 ft/min) and moderate flame lengths (4-8 ft). The area is easily accessed via roads. The high fire risk is related to a density of values at risk in the area and an area of previous fire occurrence, particularly around N-3.</p> <p>These are three phase overhead distribution lines built with wood poles in 2000.</p>	<ul style="list-style-type: none"> <li>• Fire prevention signage on the highway (would need to be installed by the County and UDOT)</li> <li>• More frequent vegetation inspections.</li> <li>• Consider wider ROW clearance</li> <li>• Encourage greater roadside thinning in conjunction with the County/UTDOT</li> </ul>	High- due to the elevated risk adjacent to values at risk in adjacent Snowville and Interstate 84.

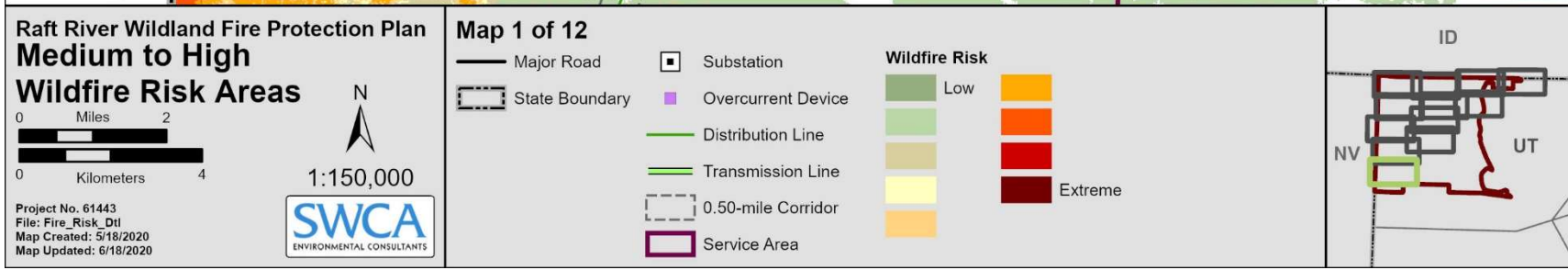
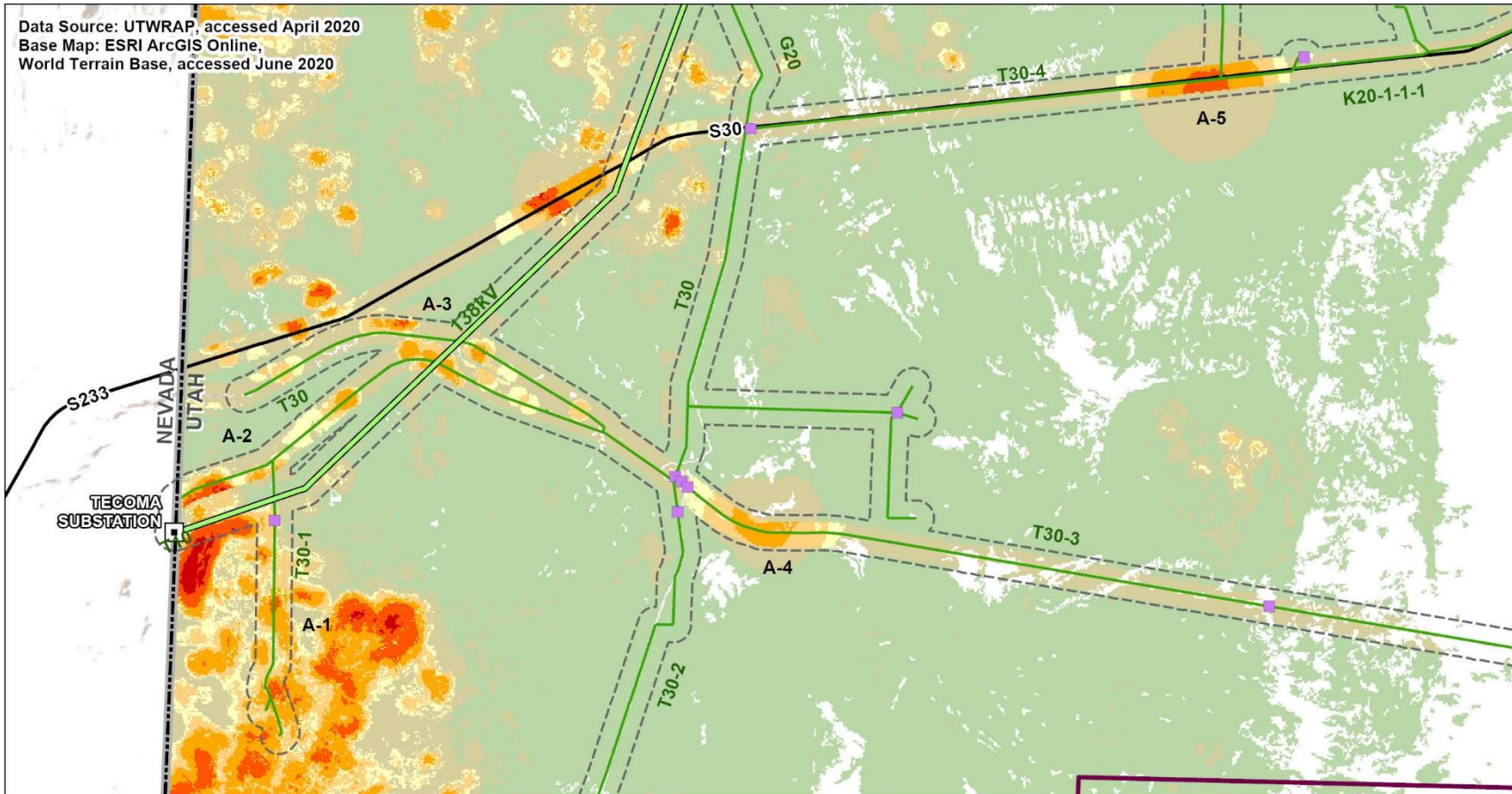


Figure B-1. Medium to high wildfire risk areas (map 1 of 12).



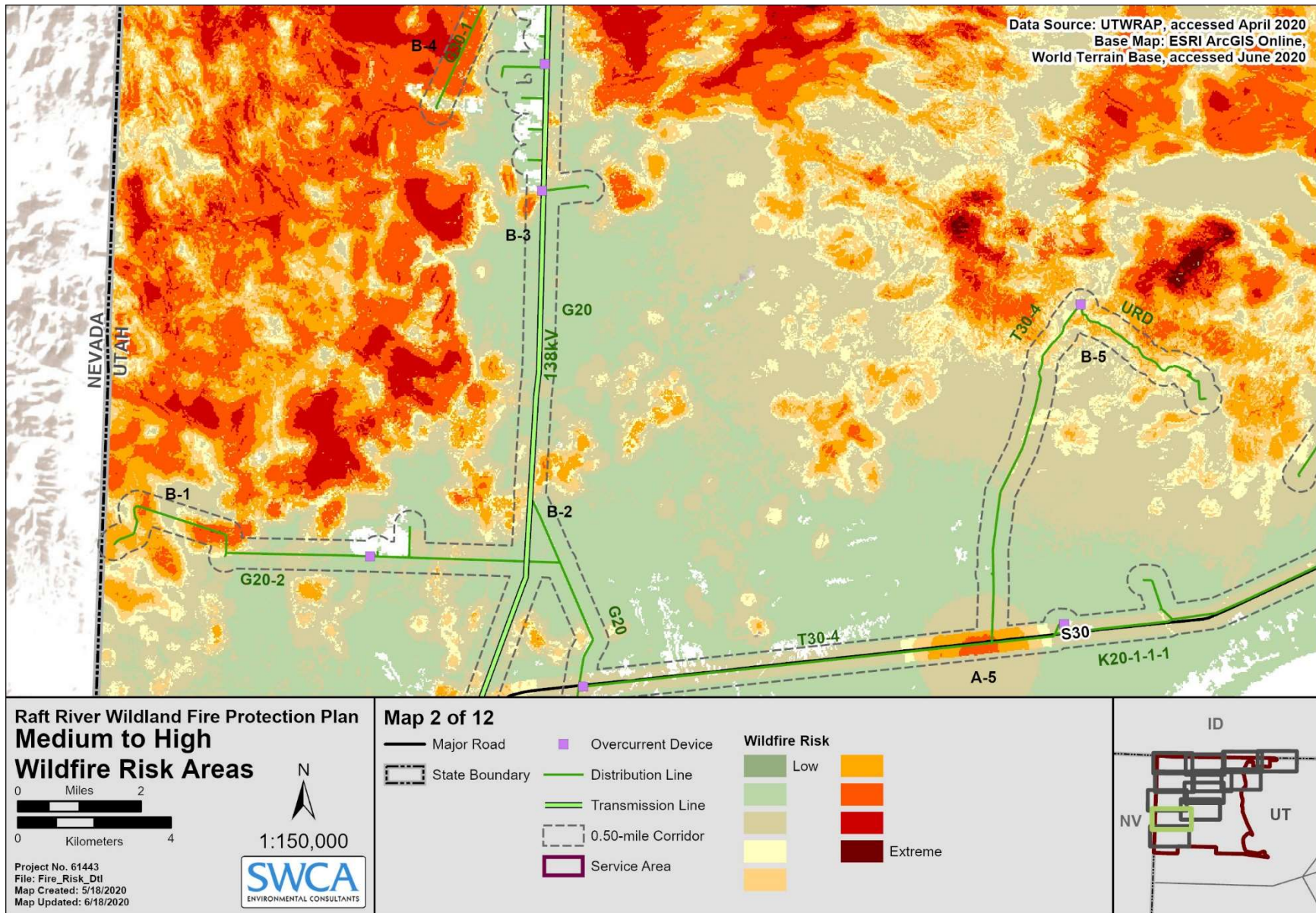
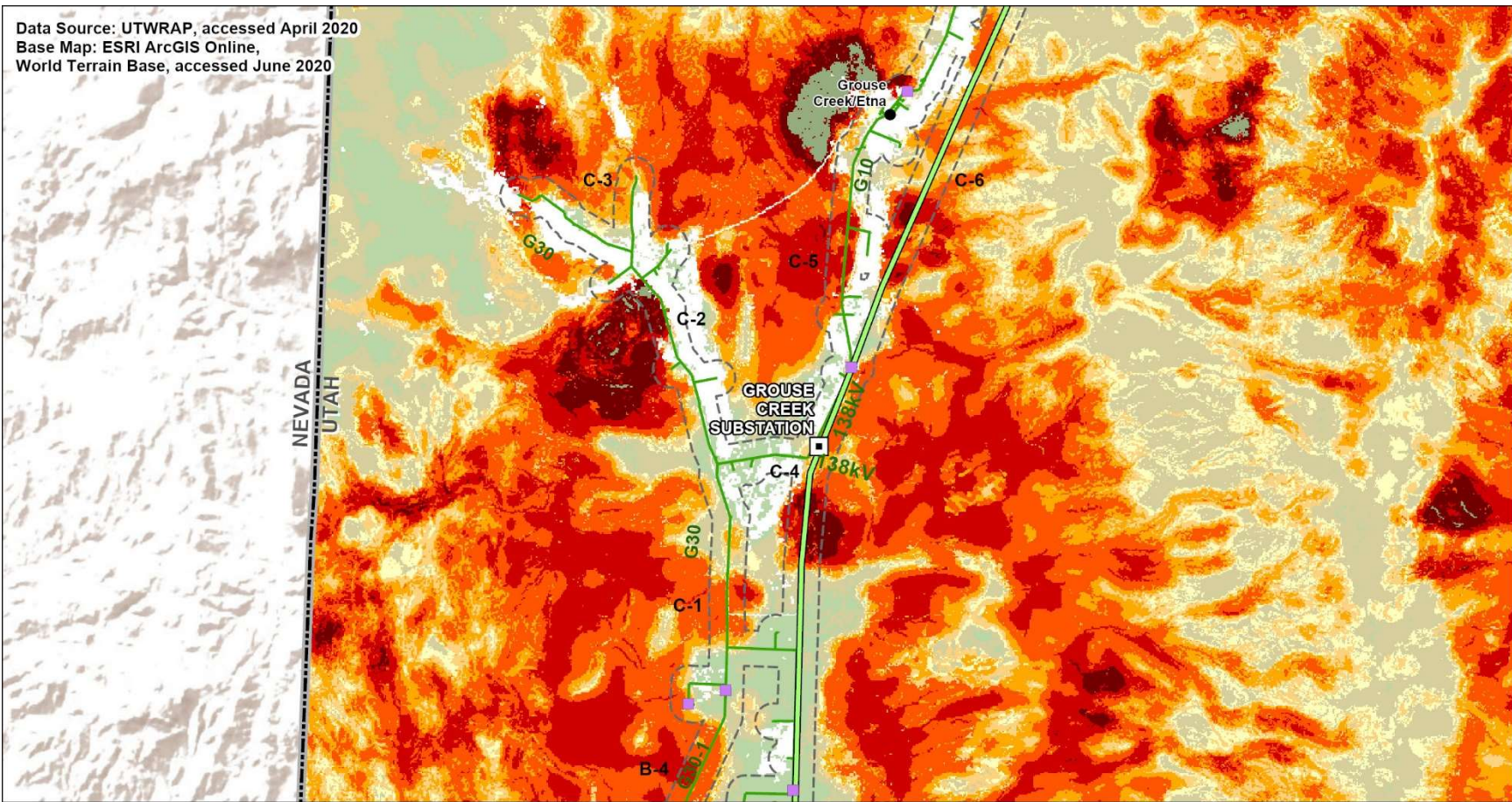


Figure B-2. Medium to high wildfire risk areas (map 2 of 12).



Data Source: UTWRAP, accessed April 2020  
 Base Map: ESRI ArcGIS Online,  
 World Terrain Base, accessed June 2020

**Raft River Wildland Fire Protection Plan**  
**Medium to High**  
**Wildfire Risk Areas**

0 Miles 2  
 0 Kilometers 4

N

1:150,000

Project No. 61443  
 File: Fire\_Risk\_Dtl  
 Map Created: 5/18/2020  
 Map Updated: 6/18/2020

**Map 3 of 12**

- Community
- Substation
- ▭ State Boundary
- Overcurrent Device
- Distribution Line
- Transmission Line
- ▭ 0.50-mile Corridor
- ▭ Service Area

**Wildfire Risk**

- Low
- Extreme

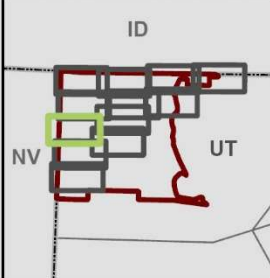


Figure B-3. Medium to high wildfire risk areas (map 3 of 12).

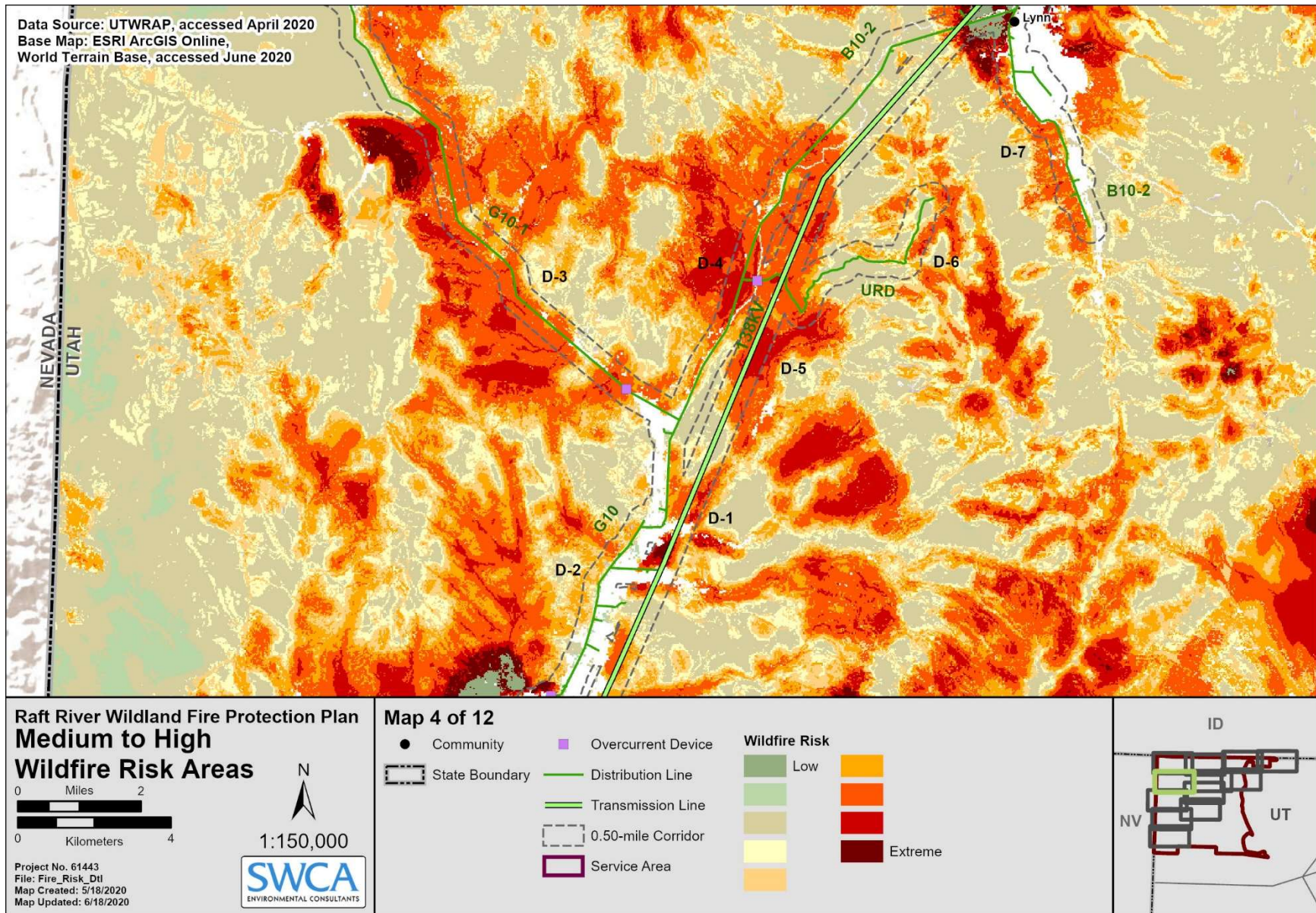


Figure B-4. Medium to high wildfire risk areas (map 4 of 12).

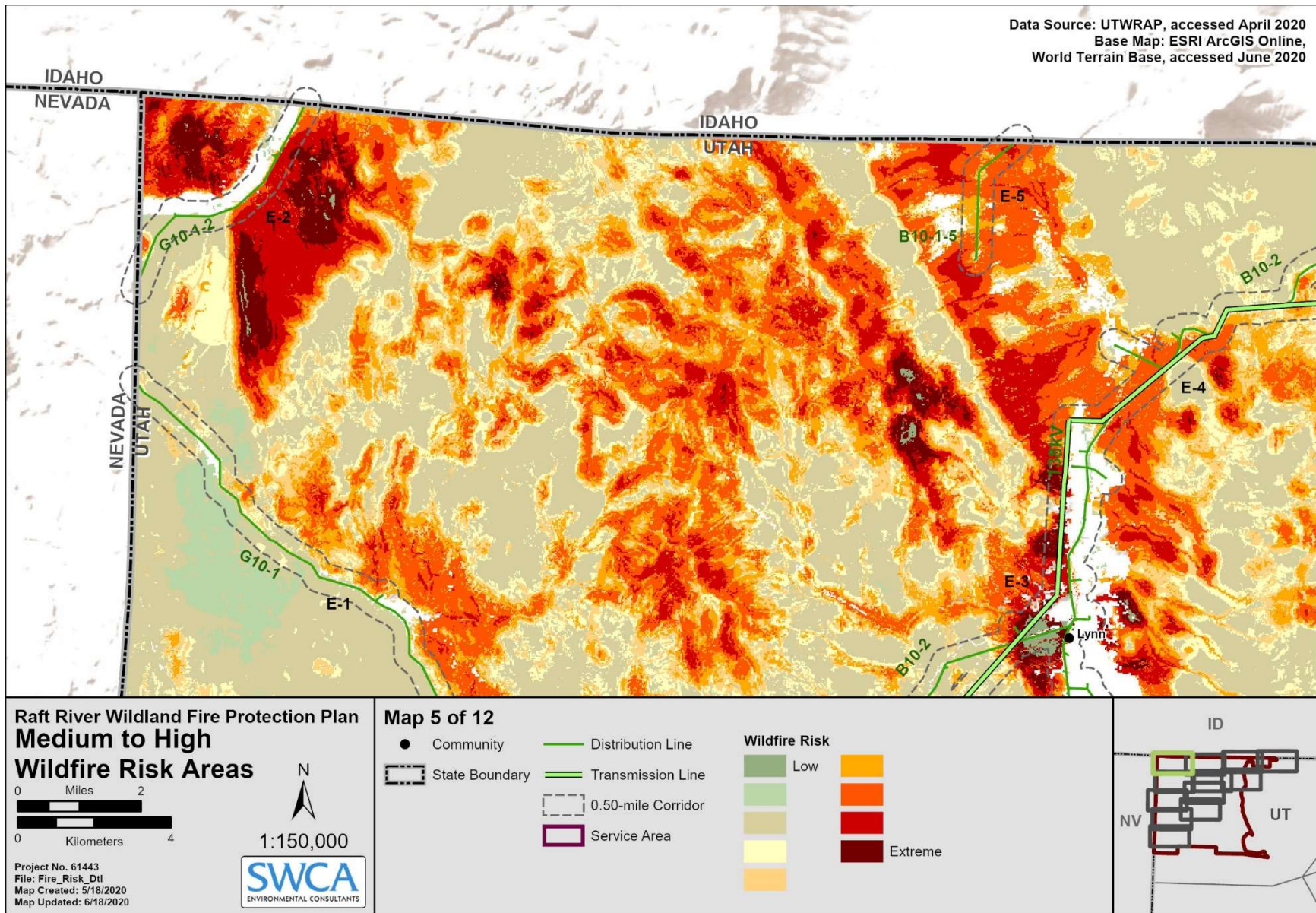


Figure B-5. Medium to high wildfire risk areas (map 5 of 12).

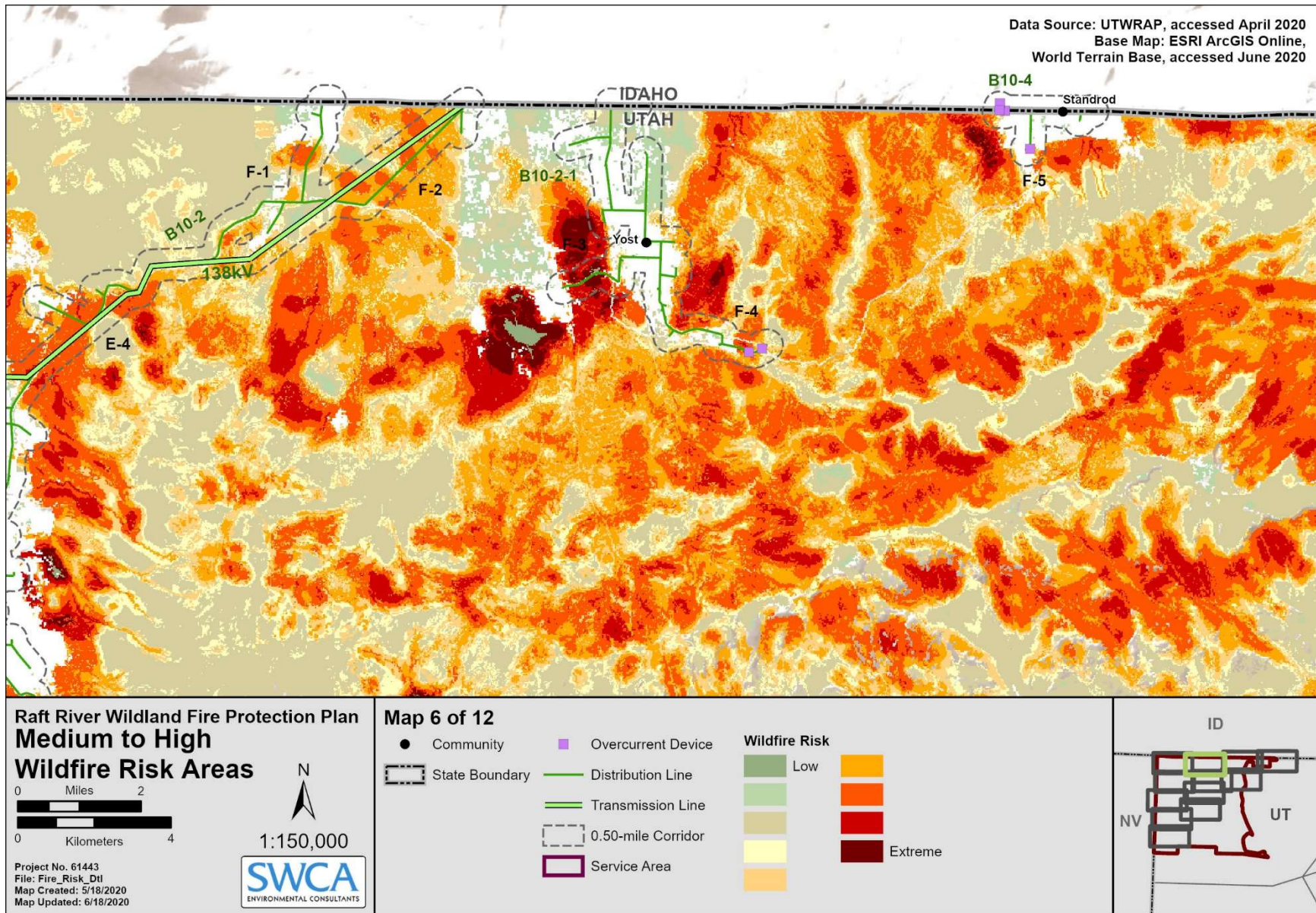
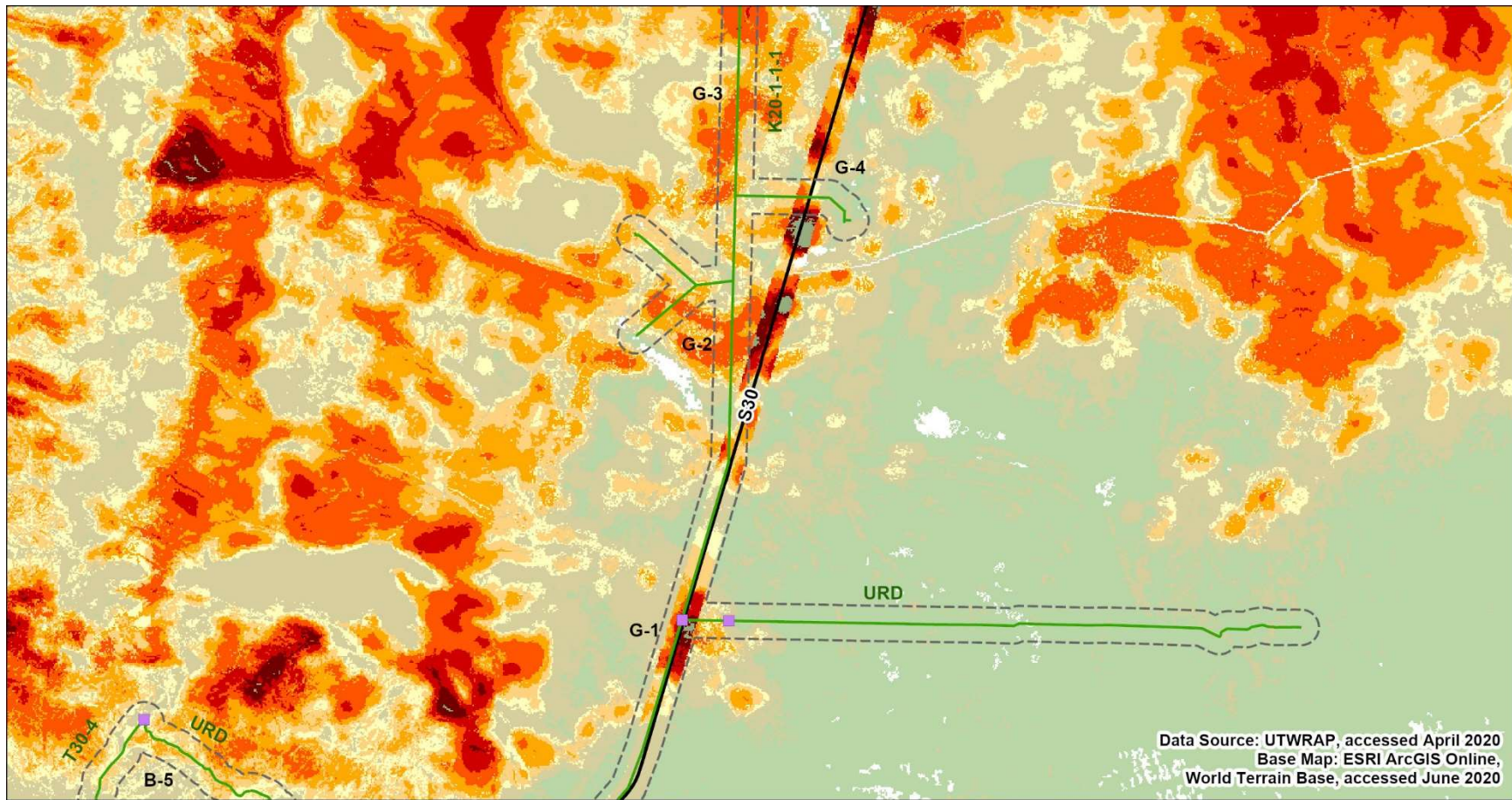


Figure B-6. Medium to high wildfire risk areas (map 6 of 12).



Data Source: UTWRAP, accessed April 2020  
 Base Map: ESRI ArcGIS Online,  
 World Terrain Base, accessed June 2020

**Raft River Wildland Fire Protection Plan**  
**Medium to High**  
**Wildfire Risk Areas**

0 Miles 2  
 0 Kilometers 4

1:150,000

Project No. 61443  
 File: Fire\_Risk\_Dtl  
 Map Created: 5/18/2020  
 Map Updated: 6/18/2020

**Map 7 of 12**

- Major Road
- Overcurrent Device
- Distribution Line
- 0.50-mile Corridor
- Service Area

**Wildfire Risk**

- Low
- Extreme

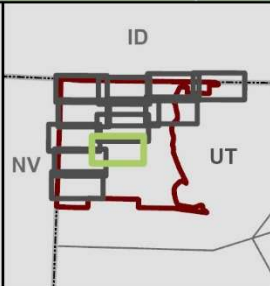
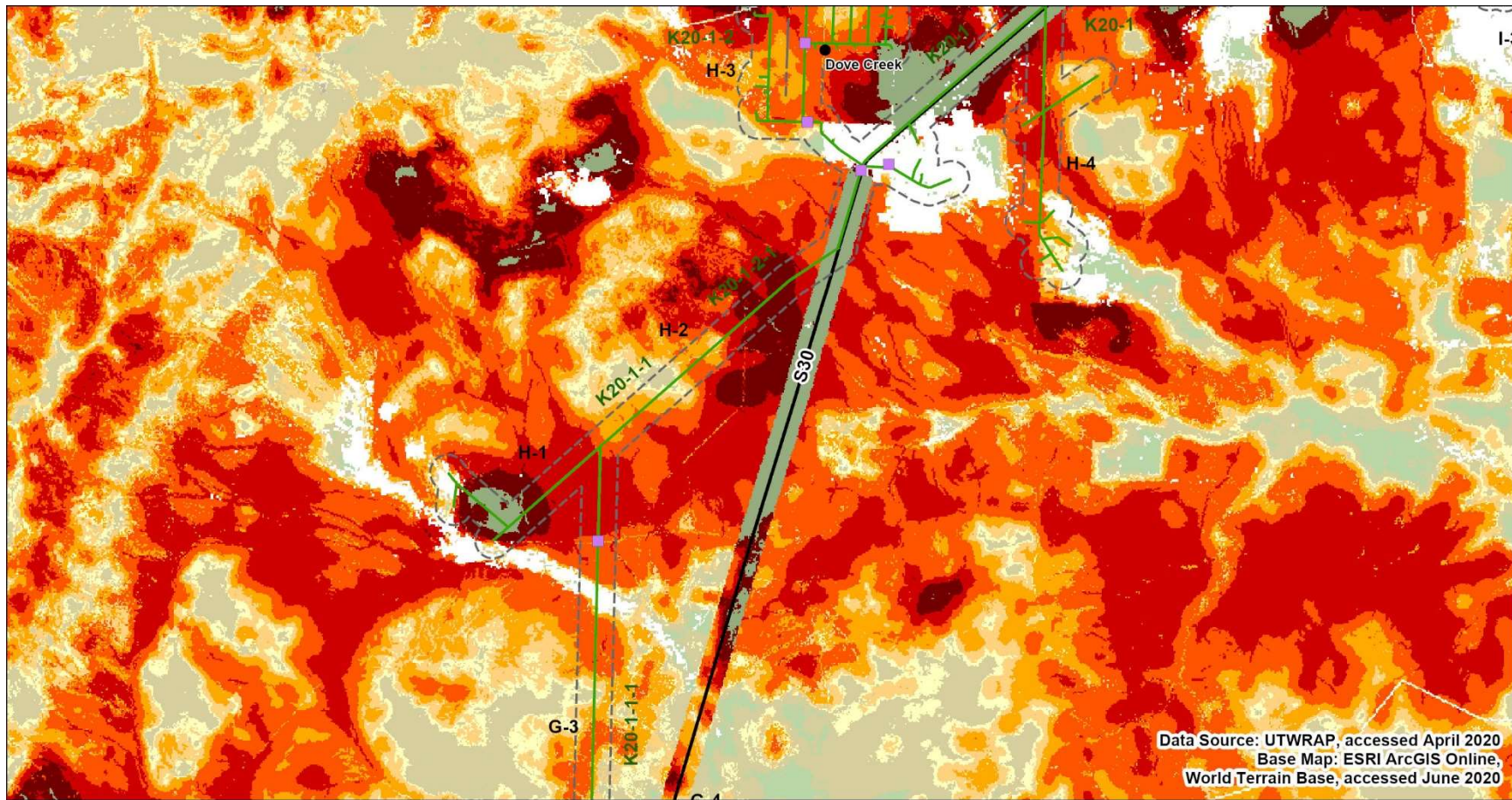


Figure B-7. Medium to high wildfire risk areas (map 7 of 12).



**Raft River Wildland Fire Protection Plan**  
**Medium to High**  
**Wildfire Risk Areas**

0 Miles 2  
 0 Kilometers 4

N  
 1:150,000

Project No. 61443  
 File: Fire\_Risk\_Dtl  
 Map Created: 5/18/2020  
 Map Updated: 6/18/2020

**Map 8 of 12**

- Community
- Major Road
- Overcurrent Device
- Distribution Line
- - - 0.50-mile Corridor
- ▭ Service Area

**Wildfire Risk**

	Low		Extreme

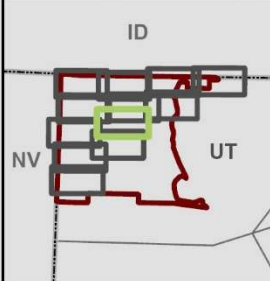


Figure B-8. Medium to high wildfire risk areas (map 8 of 12).

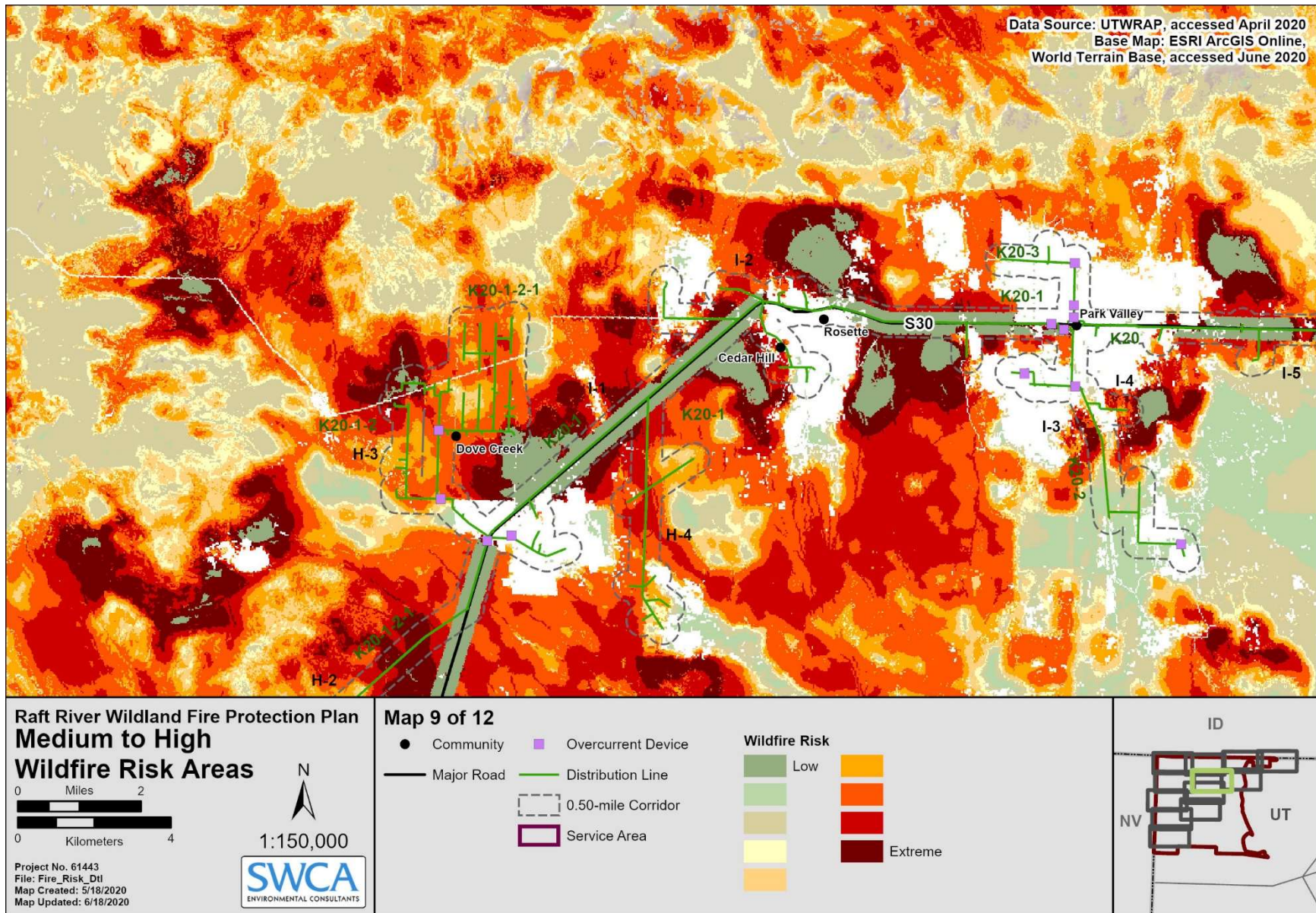
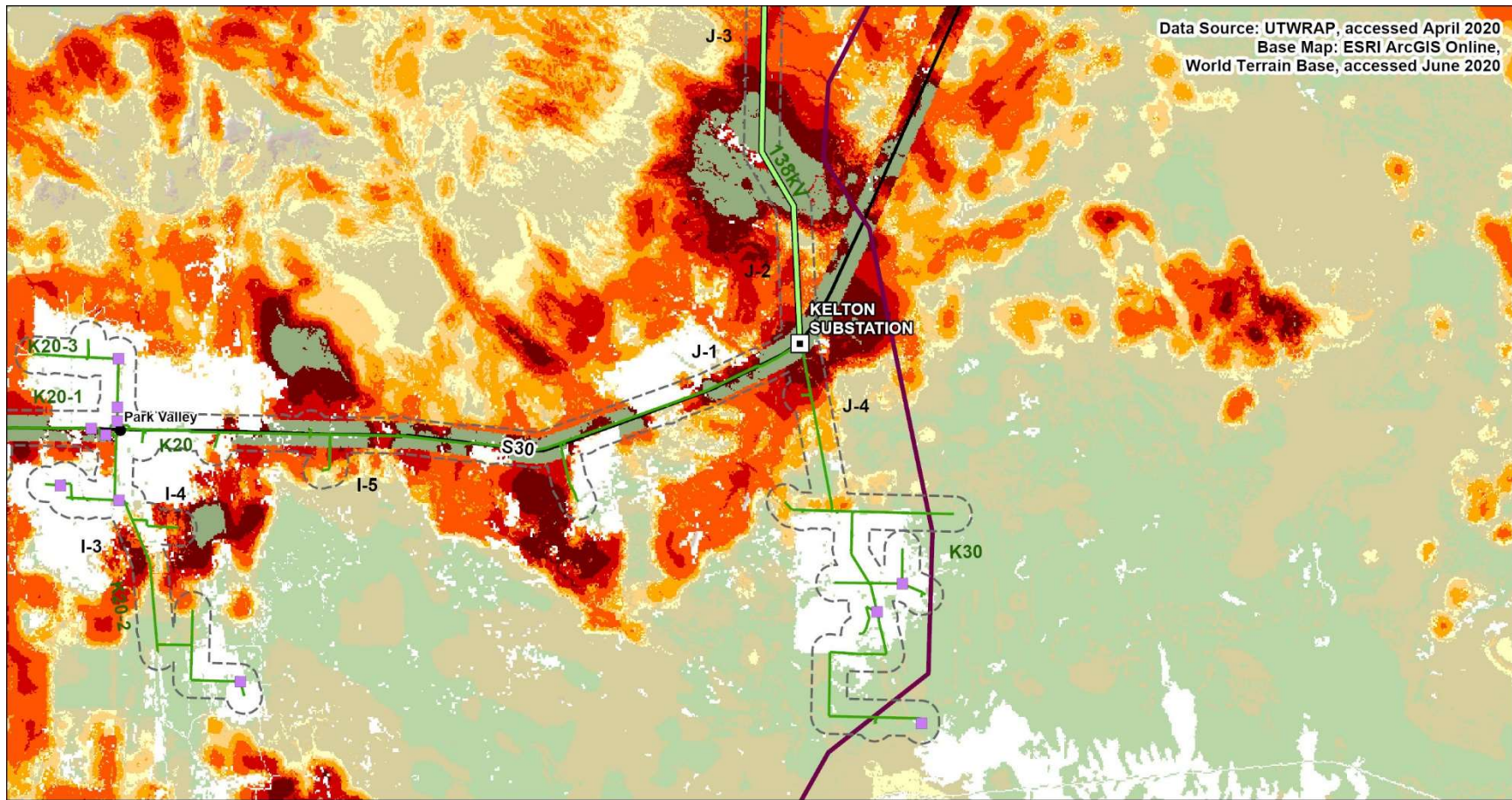


Figure B-9. Medium to high wildfire risk areas (map 9 of 12).





Data Source: UTRAP, accessed April 2020  
 Base Map: ESRI ArcGIS Online,  
 World Terrain Base, accessed June 2020

**Raft River Wildland Fire Protection Plan**  
**Medium to High**  
**Wildfire Risk Areas**

0 Miles 2  
 0 Kilometers 4

N  
 1:150,000

Project No. 61443  
 File: Fire\_Risk\_Dtl  
 Map Created: 5/18/2020  
 Map Updated: 6/18/2020

**Map 10 of 12**

- Community
- Major Road
- Substation
- Overcurrent Device
- Distribution Line
- Transmission Line
- - - 0.50-mile Corridor
- Service Area

**Wildfire Risk**

- Low
- Extreme

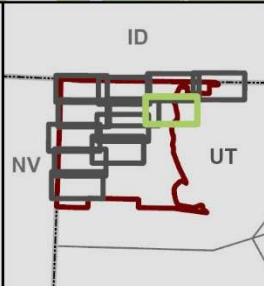


Figure B-10. Medium to high wildfire risk areas (map 10 of 12).

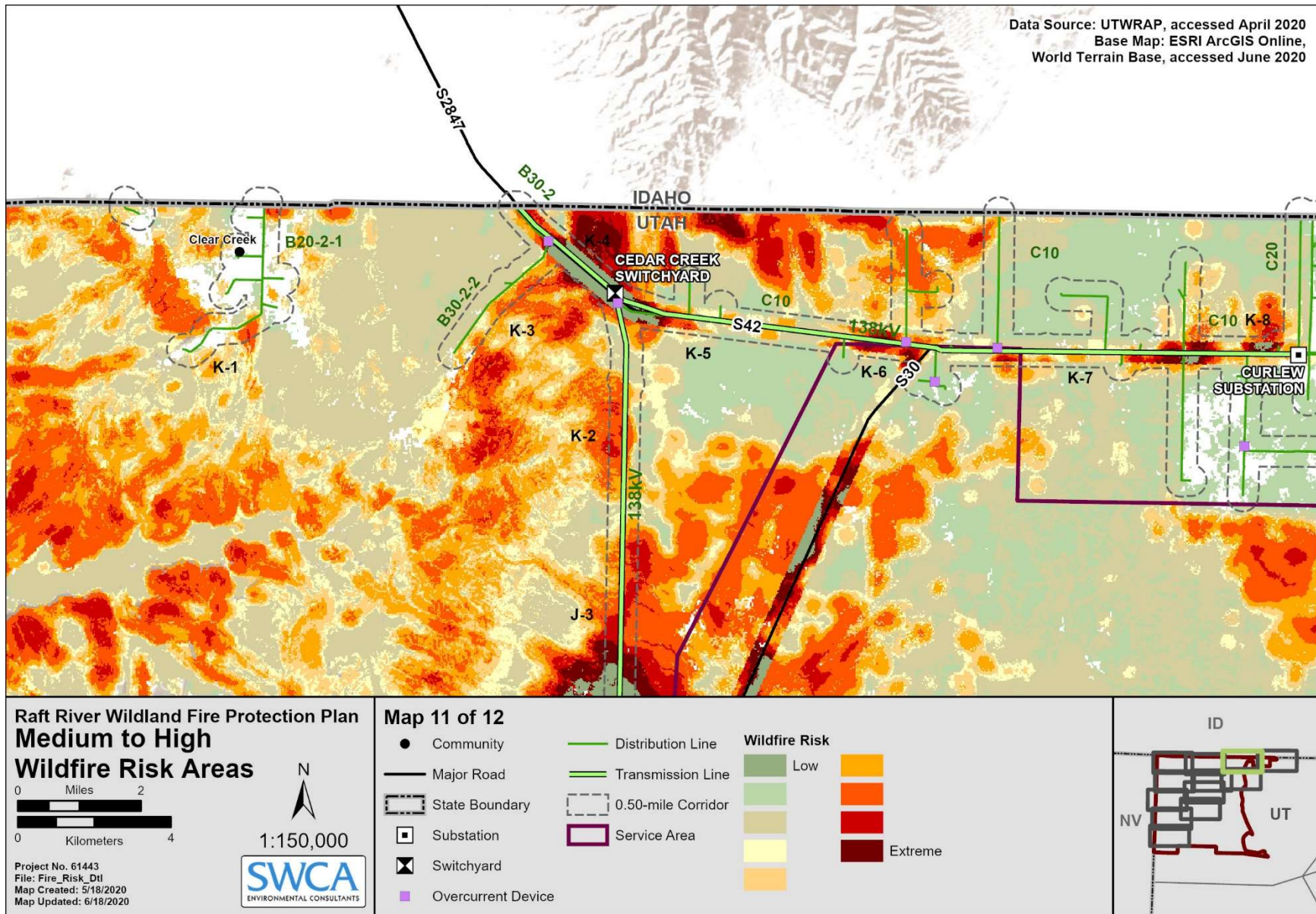


Figure B-11. Medium to high wildfire risk areas (map 11 of 12).

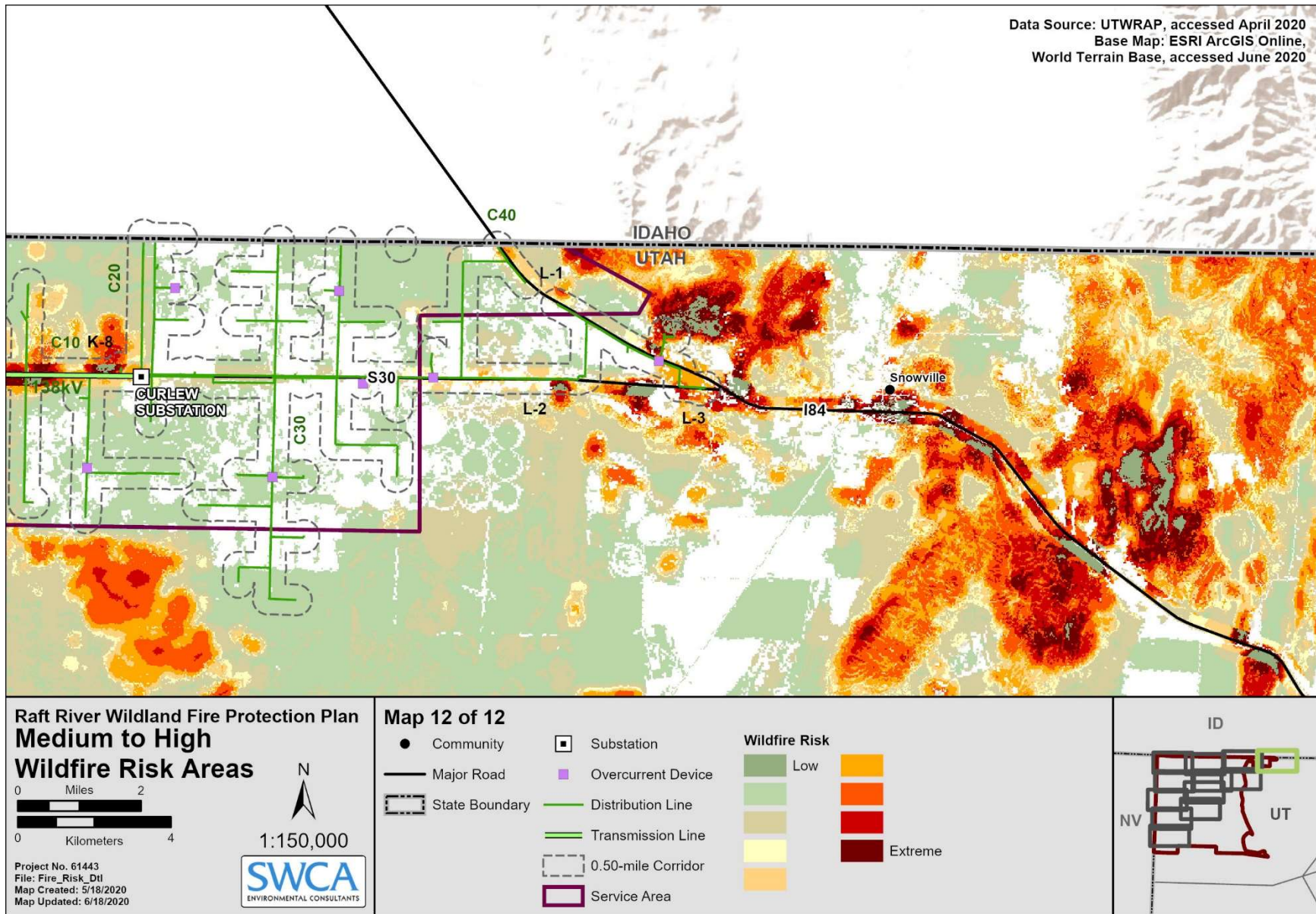


Figure B-12. Medium to high wildfire risk areas (map 12 of 12).