



Fact Sheet: Utah-Specific Roadless Rule Not Needed and Likely Damaging

Background. Governor Herbert in early 2019 will petition the US Department of Agriculture (USDA) to weaken or remove current protections to National Forest Roadless Areas within Utah. Specifically, the Governor wants the USDA to exempt national forests within Utah from the national [Roadless Area Conservation Rule](#) (Roadless Rule) and replace it with a Utah-specific regulation. Utah asserts that current management direction for Roadless Areas is impeding forest management leading to unhealthy forests and unnatural wildfire. Revoking the Roadless Area Conservation Rule and reinstating timber production in Roadless Areas is a [high priority policy objective](#) for Governor Herbert.¹ There are four million roadless acres on National Forests in Utah.

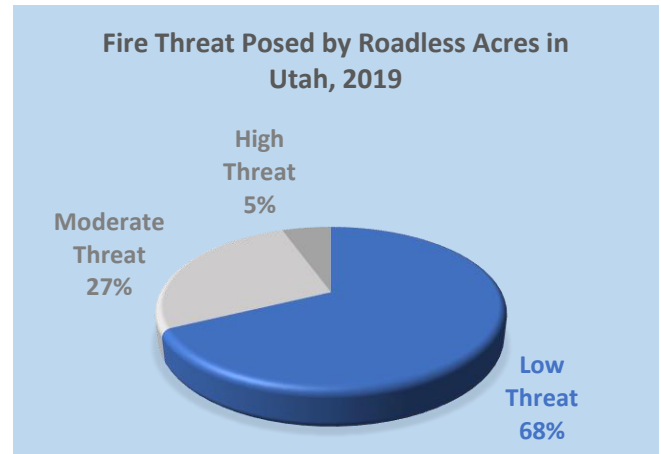
The US Forest Service currently manages Roadless Areas to preserve natural character and backcountry recreation. The Roadless Rule restricts road construction and logging, although the prohibitions are not absolute; the Forest Service can build roads and cut trees in specific situations (e.g., enhance public safety, access private property rights, and restore ecological conditions). The Roadless Rule does not restrict use of the land for grazing, wildlife habitat, or watershed conservation. A wide array of recreational pursuits is allowed in Roadless Areas including hunting, fishing, biking, hiking, skiing, and off-roading.

The Facts.ⁱⁱ Based on careful scrutiny of the literature and data, we did not find evidence supporting Utah's assertions that the Roadless Rule is resulting in unhealthy forests or disproportionate wildfire threat to communities. We found instead that Roadless Areas have healthier forests that are less at risk for wildfire than other places, and that Roadless Areas have cleaner water and healthier streams than roaded landscapes. Roadless Areas pose less wildfire threat to communities than other lands, and property and lives are protected best from wildfire when communities employ "[FireWise](#)" practices and community planning. Finally, we found that the Roadless Rule provides ample flexibility to managers, allowing them to cut timber if doing so restores natural ecological conditions and fire regimes.

FACT: Roadless Forests are not where fires are burning or likely to burn in Utah.

- ✓ Out of over 21,000 fires that occurred in Utah between 2000 and 2015, 75% started outside of National Forest lands and less than 10% originated in Roadless Areas.

- ✓ Nearly 90% of the acres (2,200,000 acres) burned between 2003 and 2018 were located outside of Roadless Areas.
- ✓ According to Utah’s own fire data, only 5% of Roadless Areas pose a high threat for fire. And almost all of these high-threat acres (94%) are accessible for fire mitigation or suppression (within ½ mile of an existing road).



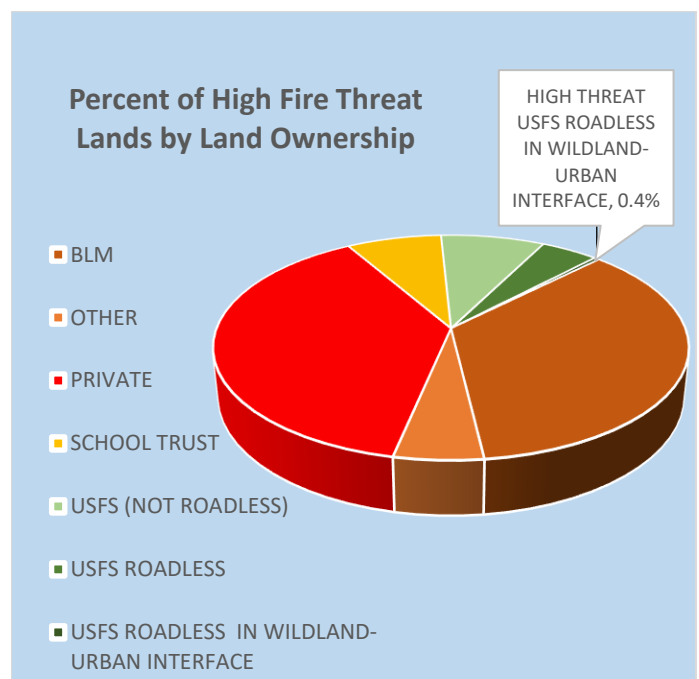
FACT: Putting roads in Roadless Areas will increase fire risk, not lessen it.

Fires start considerably more often near roads than farther in the backcountry.ⁱⁱⁱ Human-caused ignitions from sources such as vehicle sparks, cigarettes, campfires, etc. are much more likely to occur next to a road. Between 2000 and 2015, Utah fire data shows that for every fire that started within a Roadless Area, four fires started along a road.

FACT: Roadless areas are part of the wildfire solution. Roadless (and Wilderness) lands often can help moderate extreme fire and promote natural “healthy” fire on the landscape. This is because forest managers can allow fires to burn in these backcountry locations to improve forest structural diversity, reduce intensity of future fires, and create natural fuel breaks -- all necessary elements to living safely with fire in our forests.^{iv}

FACT: The way to prevent loss of life and property from wildfires is to make communities fire-safe.

- ✓ Reducing the flammability of structures, creating defensible space immediately around structures, and community planning are critical factors in preventing damage to homes from wildfires, especially compared to other actions like harvesting timber further away from homes.^v
- ✓ In Utah, there are 884,000 acres located within the Wildland-Urban Interface (the zone within and adjacent to communities); over 90% of these are outside of Roadless Areas.
- ✓ Utah has assigned fire threat levels to vegetated lands. Of the high threat lands within the Wildland-Urban Interface, less than 0.5% are within roadless areas. Further, looking across Utah, 36% of the high threat places are on private lands while only 5%



intersect roadless areas (and 13% intersect National Forests).

- ✓ To protect homes and communities, Utah and the Forest Service should focus on the high threat lands within the Wildland-Urban Interface. These are not Forest Service Roadless Areas.

FACT: Roadless lands have cleaner water and healthier streams than roaded forests and are important water sources for communities.^{vi}

- ✓ Roding and developing roadless areas incurs significant costs associated with declining water quality and availability.^{vii}
- ✓ In Utah, 83% of Roadless Acres (3,330,370 acres) overlap watersheds that provide drinking water to downstream communities.^{viii} For example, significant portions of watersheds that supply drinking water to Salt Lake City, Provo, and other communities along the Wasatch Front are currently protected by the Roadless Rule. That's drinking water for more than 1.8 million Utahns.

FACT: Most Roadless Areas within Utah don't need logging and the small percentage that might benefit from thinning can be treated under the current Roadless Rule.

- ✓ In general, because they are remote and have not been logged in the past, Roadless Areas are among the least human-altered landscapes in our national forests. As a result, Roadless Areas are the most likely to exhibit natural fire regimes that are ecologically beneficial – and hence the least likely to require human intervention.^{ix}
- ✓ Most Roadless Areas (>70%) are either not forested (shrublands, grasslands, or unvegetated) or are high-elevation, subalpine forests that, because of their ecology, do not benefit from thinning and instead need natural fire to be healthy.
- ✓ Less than 10% of Utah's Roadless Areas are covered with the kind of "lower montane" forest that may be suitable for thinning for restoration or fuel reduction. Appropriate types of treatments in these areas are clearly allowed by the Roadless Rule already. The Forest Service can, for instance, cut small diameter timber (ladder fuels) or set prescribed burns in low elevation forests where fire suppression has resulted in uncharacteristically thick undergrowth.
- ✓ The Forest Service has successfully conducted numerous fuel reduction and restoration projects in Roadless Areas under the Roadless Rule.
 - In 2017-18, according to Governor Herbert's office, the Forest Service proposed 23 projects in Roadless Areas in Utah that involved timber harvest or road construction. All 23 were approved. Some were substantial – e.g., the 19,010-acre [Canyon Project](#) on the Manti-La Sal in 2017 involved thinning, removing, and selling beetle-stressed spruce, and the 65,563-acre (27,094 in Roadless Areas) [Phase I Pinyon/Juniper project](#) on the Uinta-Wasatch Cache (2018) involved removing pinyon and juniper trees to restore habitats, increase diversity, and reduce fire risk.
 - The Trump Administration recently removed the requirement for Washington Office approval of exceptions to the Roadless Rule, further streamlining projects that involve timber cutting and road building in roadless areas.^x

FACT: Revoking the Roadless Area Conservation Rule in Utah is a bad deal for taxpayers.

- ✓ The Forest Service estimates that it will cost over \$6.6 million to respond to the Governor’s petition and complete the rulemaking.^{xi}
- ✓ These funds could be spent on tackling the substantial queue of “shovel-ready” forest treatment projects in Utah that are waiting for funding. According to the Forest Service, it has [1.3 million acres of forest management projects ready to go](#) across national forests in Utah but lacks the estimated \$340 million needed to implement them.^{xii} Revoking the national roadless rule to facilitate more vegetation treatments will not expedite the queued-up projects.

Conclusion. Utah should invest in making communities fire safe and not waste millions of taxpayers dollars to “unprotect” the state’s roadless forests that are integral to its water supplies, wildlife habitat and outdoor recreation economy.

Citations

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ⁱ See "Policy Objectives for Federal Land Management: The State of Utah's Policy Objectives to Achieve Balanced Management of Federal Lands." November 30, 2016. Pages 9-10. Available at https://www.grandcanyontrust.org/sites/default/files/resources/Utah_Wildlands_PLPCO_Utah_Policy_Objectives_for_Land_Management_11-30-16.pdf. (Last viewed, December 12, 2018).

ⁱⁱ Unless otherwise noted, data and methods are detailed in Attachment 1.

ⁱⁱⁱ See [Ricotta et al 2018](#).

^{iv} See [Aplet and Miller 2015](#).

^v See [Headwaters Economics 2019](#), [Calkin 2014](#), [Schoennagel et al. 2016](#), and [Cohen 1999](#).

^{vi} See [Anderson et al 2012](#) and [DellaSala et al 2011](#).

^{vii} See [DellaSala et al 2011](#).

^{viii} Denoted in the U.S. Environmental Protection Agency's Drinking Water Mapping Application to Protect Source Waters. Mapping application and data available at <https://geopub.epa.gov/DWWidgetApp/>.

^{ix} See [USDA 2000 at 3-73](#), [Crist et al 2015](#), and [Hann et al 2003](#).

^x See October 24, 2018 memo from Chief Christiansen to staff entitled *Approval of Exceptions to the 2001 Roadless Rule*.

^{xi} *Cost Estimate for Utah Roadless Rule Staffing FY19*. Received via Freedom of Information Act request, December 2018.

^{xii} Source: *\$340 million in Utah wildfire prevention projects in limbo*. Michael Locklear. KUTV. Nov. 19, 2018. Available at: <https://kutv.com/news/local/340-million-in-utah-wildfire-prevention-projects-in-limbo>. Last viewed Nov. 28, 2018.

Attachment 1: Utah Forest/Fire Analysis Data Sources & Methods

Burn Areas

- **Data**
 - **BLM**
 - Fire burn areas from 2003 - 2017
 - Fires GPS'd after the late 1990s and sourced from local fire support centers, then integrated into a statewide dataset. Fires less than 10 acres are not captured in this dataset.
 - Source: <https://catalog.data.gov/dataset/utah-blm-fire-occurrence-and-history-perimeter-fire-perimeter-fper-final-polygons>
 - **GEOMAC (Geospatial Multi-Agency Coordination)**
 - Fire burn areas for 2018
 - Hosted by USGS, GEOMAC applications display information on fire location from the Moderate Resolution Imaging Spectroradiometer (MODIS) fire detection data.
 - Source: <https://rmgsc.cr.usgs.gov/outgoing/GeoMAC/>
- **Methods & Results**
 - We imported GIS data on fire burn areas from BLM (for years 2003-2017) and GEOMAC (for 2018 fires) into ArcGIS, along with land ownership data, Utah IRAs, and wilderness. We subsequently calculated overlap acreage of the burn areas for roadless lands, national forests, and private lands for the years 2003-2018.
 - We found that approximately 16.5% (432,214 acres) of the burn areas from 2003-2018 occurred on private land, which is 103,000 acres greater than the amount of burn areas within IRAs. Roughly 22% of the burn areas in this timeframe occurred on National Forest land, with about 13% occurring on Utah IRAs.

Fire Occurrences

- **Data**
 - **USFS**
 - Represents fire occurrences from 2000 - 2015
 - FPA_FOD_4thedition is a point feature class that represents occurrence of wildfires in the United States from 1992 to 2015. This is the third update of a publication originally generated to support the national Fire Program Analysis (FPA) system. The wildfire records were acquired from the reporting systems of federal, state, and local fire organizations. The resulting product, referred to as the Fire Program Analysis fire-occurrence database (FPA FOD), includes 1.88 million geo-referenced wildfire records, representing a total of 140 million acres burned during the 24-year period.
 - Source: <https://data.fs.usda.gov/geodata/edw/datasets.php>
- **Methods & Results**

- We imported the USFS fire occurrence data into ArcGIS and extracted fires for the years 2000 – 2015. We then calculated the number of fire occurrences for roadless lands and national forests for the years 2000 – 2015, as well as the number of fires occurring outside of these lands for that time period.
- Out of over 21,000 fires from 2000 – 2015, less than 10% originated on IRAs and less than 3% occurred on designated wilderness. Additionally, just over 75% of wildfires started outside of National Forest lands.

Wildland Urban Interface (WUI)

- **Data**
 - **USFS**
 - ½ mile buffer of the 2010 USFS WUI, with non-wildland vegetation removed
 - Source: <https://www.nrs.fs.fed.us/pubs/48642>
 - **USGS**
 - USGS Gap Analysis Program (GAP) national land-cover data version 2 at 30-meter resolution (USGS 2011)
 - Source: US Geological Survey, Gap Analysis Program (GAP). (2011). *National Land Cover*, version 2, August 2011. <https://gapanalysis.usgs.gov/gaplandcover/>.
- **Methods & Results**
 - After buffering the USFS WUI by ½ mile, we removed non-wildland vegetation by erasing non-forested cover types identified through the USGS land-cover data. In addition to calculating the total acreage of lands within the WUI, non-wildland vegetation was removed to provide a more accurate calculation of the acreage is composed of wildland vegetation.
 - After removing non-wildland vegetation from the buffered WUI, we calculated that the WUI expands over 880,000 acres in Utah. While roughly 21% of the WUI occurs on National Forest land, less than 10% of the WUI is within Utah IRAs. The majority of the WUI is found on private land, with 61% of the total WUI area. Federal lands account for just over 30% of the WUI.

Fire Occurrence Near Roads

- **Data**
 - **Utah Automated Geographic Reference Center**
 - Transportation.Roads is a multi-purpose statewide roads dataset for cartography and range based-address location
 - Source: <https://gis.utah.gov/utah-sgid-statewide-roads-data-layer-updates-10112018/>
- **Methods & Results**
 - We buffered all roads by 300 feet, then calculated the fire occurrences occurring within these 300-foot buffers using the USFS fire occurrence above for the years 2000 - 2015. We then compared the number of fires within this buffer to the number occurring within

IRAs across Utah for the same timeframe.

- More fires were found to occur within 300 feet of roads within Utah than within IRAs. Cumulatively for the years 2000 – 2015, areas within 300 feet of roads experiences 190% more fires than IRAs. Fire density was also higher within 300 feet of roads, with over double the fires per acre than Utah IRAs.

Wildfire Risk & Wildfire Threat

- **Data**
 - **Utah DNR's Wildfire Risk Assessment Portal**
 - Data representing the fire risk index and the fire threat index. Fire risk index is the possibility of loss or harm occurring from a wildfire while the fire threat index is the likelihood of an acre being burned.
 - Site: <https://utahwildfirerisk.utah.gov/Map/Public>
- **Methods & Results**
 - We imported the fire risk and fire threat indices into ArcGIS and calculated the mean for both indices across IRAs, wilderness, National Forest lands outside of IRAs and wilderness, as well as non-National Forest lands using Zonal Statistics.
 - Out of the four categories above (IRAs, wilderness, forest service lands outside of IRAs/wilderness, non-National Forest lands), IRAs displayed both the lowest mean wildfire risk and wildfire threat, with non-National Forest lands displaying the second lowest mean scores for both indices.

Slopes

- **Data**
 - **USGS**
 - Digital elevation model (DEM) representing elevation in Utah
 - Site: <https://catalog.data.gov/dataset/usgs-national-elevation-dataset-ned-1-meter-downloadable-data-collection-from-the-national-map->
- **Methods & Results**
 - We extracted slopes from the DEM for the entire state of Utah, then selected slopes over 35%, with mechanical treatment generally limited on slopes above this value on unstable soils (North et al. 2015). We then calculated the acreage of slopes >35% within IRAs and within National Forest lands outside of IRAs / wilderness. We then compared the proportion of lands on IRAs with slopes over 35% to those on National Forest lands outside of IRAs / wilderness.
 - We found a higher proportion of slopes >35% on IRAs than on National Forest lands outside or IRAs / wilderness. Specifically, we found that slopes over 35% covered approximately 38% of IRAs. On National Forest lands outside of IRAs and wilderness, slopes greater than 35% spanned approximately 19% of the total area, making IRAs mechanically more challenging to access than other National Forest lands.

- **Cited**

- North et al. 2015. Constraints on Mechanized Treatment Significantly Limit Mechanical Fuels Reduction Extent in the Sierra Nevada. *Journal of Forestry* 113:1, p. 40-48.

Vegetation Types within IRAs

- **Data**

- **USGS**

- USGS Gap Analysis Program (GAP) national land-cover data version 2 at 30-meter resolution (USGS 2011)
- Source: US Geological Survey, Gap Analysis Program (GAP). (2011). *National Land Cover*, version 2, August 2011. <https://gapanalysis.usgs.gov/gaplandcover/>.

- **Methods & Results**

- We imported the national land-cover data into ArcGIS and extracted cover types for all Utah IRAs. We then calculated the acreage for each cover type across IRAs, identifying how much forested land occurred within IRAs. We subsequently broke down the acreage of ecosystems across IRAs that depend on fire for healthy forest structure.
- We found that less than half of Utah IRAs are covered by forests of any kind (excluding pinyon-juniper woodland), with less than 10% covered by “lower montane” forests that may be suitable for restoration or fuel reduction. More than 75% of the forest on IRAs is composed of high-elevation, subalpine forest that is unsuitable for restoration but benefits from fire to achieve healthy forest structure.

If you have any questions about the analysis or data, please contact Phil Hartger at The Wilderness Society (phil_hartger@twc.org).