Babylon Fire Burned Area Summary

Burned Area Report

Fire Background

The Babylon Fire started on June 26, 2026, in the Abajo Mountains about 25 miles southwest of Monticello, Utah. The fire expanded rapidly during the first week, driven by a combination of low humidity, dry vegetation and strong winds. As of August 1, 2026, the fire had burned roughly 108,876 acres, nearly all of which is NFS land.

By July 25th, it reached 95% containment and now totals 108,876 acres. Record-low winter snowpack, severe drought, and unusually hot, windy early-season weather contributed to the rapid spread through drought-stressed vegetation and trees.

The Burned Area Emergency Response (BAER) program is designed to identify and manage potential risks to resources on National Forest System lands and reduce these threats through appropriate emergency measures to protect human life and safety, property, and critical natural or cultural resources. BAER is an emergency program, designed to identify stabilization work that involves time critical activities to be implemented as soon as possible ahead of future damaging events.

Photo 1. BAER team members field verifying soil burn severity.

A BAER assessment team began field reconnaissance of the burned area on July 20, 2026 for soil burn severity and hydrologic response. The field assessment for all resources was completed on July 28. The Forest Service BAER team worked closely with San Juan County, the city of Monticello, the State of Utah, the National Weather Service, and other partners to coordinate response efforts.

The team developed soil burn severity (SBS) maps to document the degree to which the fires had changed soil properties. Using the SBS map, physical scientists can estimate erosion potential, changes to runoff and flood flows, and increased geologic hazards. Elevated watershed responses, like flash floods and debris flows, are expected to occur until natural vegetation is re-established across the area. The field evaluations and modeling results produced by the BAER team are used to determine relative increases in post-fire risk to different Forest Service BAER critical values and inform recommendations to address these increased risks while the area recovers.

Soils

Soil burn severity is not an assessment of vegetation consumption, but rather an evaluation of canopy loss, changes in soil structure and infiltration capacity, remaining vegetation, duff, or ash, and soil color, all of which may indicate relative degrees of soil heating.

The final soil burn severity maps were

developed with ESRI ArcGIS software using satellite-imagery-derived Burned Area Reflectance Classification (BARC) and field survey data. Field work included assessment of ash characteristics, ground cover, root condition, soil structure, soil water-repellency, and vegetation burn severity as described in the Field Guide for Mapping Post-fire Soil Burn Severity (Parsons et al. 2010). Developed areas (both urban and rural) were not mapped for soil burn severity. This method has been developed for wildland vegetation and landscapes and therefore is not appropriate for describing effects of fire on developed lands and burned structures. As such, these areas were not visited or evaluated by the BAER team.

High burn severity is characterized by a complete consumption of organic material with the surface layers of the soil resulting in a change to single-grain structure. Fine roots are commonly charred or consumed 3-5 cm deep. The highest-severity areas often have a loose, dusty appearance, and no longer have any cohesion or soil strength. Generally, there will be less destruction of soil organic matter, roots, and structure in an area mapped as moderate compared to high. In areas mapped as Moderate SBS, soil structure, roots, and litter layer may remain intact beneath a thin ash layer. Low SBS results in very little alteration of soil organic matter and little or no change in soil structural stability.

Mapped and validated SBS for the burned area is High (5%), Moderate (51%), Low (33%), and Very Low/Unburned (12%; see map on Page 7). The more severe a fire's effects are on the soil, the more likely those soils will erode in subsequent rainstorms. Elevated post-fire erosion and subsequent soil deposition can cause damage to roads, trails, campgrounds, and other structures while burned areas recover, especially when the infrastructure is located in large drainages with large quantities of Moderate and High SBS and steep slopes.

Geology

The team identified the geologic conditions and processes that have shaped and altered the landscape. The team also assessed the impacts from the fire on watershed conditions and processes that could affect downstream critical values. Rock types and characteristics, geomorphic processes, and distribution of geologic hazards help predict how watersheds will respond to and be impacted by future storms.

The geology on the Monticello Ranger District on the Manti – La Sal National Forest sits atop the southeastern portion of the broader Colorado Plateau. It contains a contrast of sedimentary canyon country and intrusive igneous mountain cores. The sedimentary layers dominate the district and can be observed in the plateaus, high benches, deep gorges and canyon walls. These layers range from Pennsylvanian to Quaternary age. The western half of the burn area (Elk Ridge) contains strata that are gently folded by several broad anticlines and synclines. The eastern half of the burn area (Abajo Mountains) contains two major extensional fault systems that cut near the range: the northeast-trending Shay graben on the northwest flank and the east-trending Verdure graben on the south flank.

The USGS Debris Flow Model shows where debris flow is likely to occur for a range of rainfall intensities. These results show that light rainfall can trigger debris flow in the highest fire impacted drainages. While in other drainages it will take heavier rainfall intensity to trigger a debris flow of a similar magnitude. Areas of importance that show the highest possibility of debris flow in the burn area are as listed: Horse Mountain drainage, North Cottonwood Creek drainage, Cottonwood Creek drainage, Davis Canyon drainage and Steven's Canyon drainage. These regions exhibit moderate-to-severe pyrogenic degradation, rendering the destabilized terrain highly susceptible to low-threshold pluvial triggering of debris flows. (see map on Page 8).

Hydrology

Patchy, summer monsoon rainfall fell within the forest and burned area perimeter during the field assessment and this produced observable watershed responses in the burned area. There was an initial flush of ash, coupled with rill and gully erosion on hillslopes. Increased surface runoff delivered ash and sediment-laden flows into channelized drainages.

Post-fire hydrologic events will likely continue intermittently for 5–10 years, with impacts dissipating over time as vegetation re-establishes, ground cover reduces erosion and increases surface roughness, and infiltration improves.

The team's rapid hydrologic assessment observed increased flows and high turbidity due to the postfire environment, which may impact water-quality (elevated levels of ash, fine sediment, nutrients and dissolved organic carbon). These processes will attenuate over time and should recover to pre-fire conditions over the next several years.

Photo 2. Ash, sediment, and debris flushed and transported during and after rain events outside the burned area.

Critical Values

The first critical value BAER teams assess is always human life and safety on National Forest System lands. During and after heavy rainstorms, Forest Service employees and visitors to National Forest System Lands could be threatened by floodwaters and debris flows. The BAER team recommends general warning signs and communications to travelers on any National Forest System roads and trails within or directly adjacent to the fire, and closure of areas with administrative and physical closure devices to protect human life and safety.

There is risk of exposure to elevated levels of concentrated arsenic due to the exposure of old mine sites and stabilization treatments are recommended to reduce the risk of erosion and arsenic mobilization at those sites. In addition to specific treatments, the BAER team recommends the removal of "danger trees" (fire- killed trees) in areas where crews will be working to implement identified treatments.

Photo 3. BAER team member assessing recently deposited material outside of the fire perimeter.

Roads and Bridges

Roads in and downstream of burned areas are at risk of damage due to post-fire conditions. The most likely threat due to the fires is clogging of culverts, bridges, and other in-channel infrastructure from the higher levels of floatable debris (especially burned

trees) in burned watersheds. Once blocked by debris, road drainage structures no longer function and the stream flows over the road, often causing considerable damage and limiting access. Various measures can reduce this risk, including protecting culvert inlets with debris racks, removing large floatable debris from channels upstream of structures before floods, and making heavy equipment available and readily mobilized during storm events to keep structures clear of debris.

Debris flows are less likely than debris-laden flood flows, but they pose a greater threat to roads when they do occur and are difficult to mitigate.

Critical values addressed in the BAER report include Forest Service System Roads and related drainage features. Treatments for the protection of these roads include storm proofing, rolling and armored dips, critical dips, debris racks, armoring and riprap at culverts, and storm inspection and response.

Recreation

The area within the burn perimeter of the Babylon fire is a popular area for backcountry, dispersed recreation as there are few developed recreation sites in the area. The area contains a portion of the Dark Canyon Wilderness, which is popular for hiking, backpacking and horse riding. The area also contains portion of the Bears Ears National Monument that is popular for visiting cultural resources and backcountry recreation. OHV touring occurs on roads and motorized trails in the area. Dispersed camping occurs within the area as well along the roads. Within the Babylon Fire, there are approximately 65 miles of trails within the burn area. These trails include a wide range of trail types including single track motorized, motorized open to all vehicles, horse and foot trails. The team proposes an approach that involves storm inspection and response, trail drainage stabilization, and physical closures. Storm inspection and response involves the physical scouting of trails in the burned area following storm events and conducting maintenance on the trail drainage features to make sure they are functioning properly. Planning based on these scouting reports will reduce further loss and degradation of trail tread and structural features while minimizing erosion and avoiding costly future reconstruction efforts. Physical closure would involve gates at key entry points for motorized recreation. These gates would be installed on the motorized trails to close the trails until vegetation is established and stabilizes the surrounding soils.

Photo 4. Evidence of increased erosion on the Horse Pasture trail.

Botany

Invasive plants adversely affect native plant communities through allelopathy (suppression of growth of a native plant by release of a toxin from a nearby invasive plant) and direct competition for water and resources. Over time, native plant diversity decreases as invasive plants expand, reducing habitat for native plant species and wildlife. Shifts from diverse native plant communities to non-native invasive plant dominance could alter future fire behavior, intensity, extent, and season of burning.

Current infestations are primarily located along

roads and trails throughout the burned area, with interior areas being largely absent of noxious plants. There has been extensive effort to eradicate invasives within the Dark Canyon Wilderness. However, the newly burned area creates conditions for invasive species to outcompete native plants and once established, the harm caused to Natural wilderness characters is expected to be widespread, long term and likely irreversible. The team recommends a treatment of Early Detection, Rapid Response (EDRR) to monitor for noxious weed infestation and expansion in mechanical suppression activity and burned areas prone to new noxious weed suppression activity and burned areas prone to new noxious weed infestations.

Cultural Resources

The most typical post-fire threats to cultural sites are physical threats such as erosion or damage from (now dead) falling trees. In some cases, newly exposed artifacts are threatened by human damaging activities such as looting or vandalism. Cultural resources were evaluated by the team and treatments proposed as necessary to protect these values from post-fire threats.

Anticipated Vegetation Recovery

Post-fire recovery varies greatly based on climate, vegetation types and burn severity. It is typical for recovery to take between 3-5 years but can take up to 10 years for reestablishment of ground cover. The persistence of drought in the years following wildfires also delay the recovery time frame.

Within the Babylon Fire area, in low SBS areas, it may take at least one growing season until native vegetation can reestablish and compete with invasive plants. In moderate to high SBS areas, vegetation recovery is expected to take longer and will vary based on pre-fire vegetation community and location within the fire perimeter. Riparian communities are already recovering and may fully recover within 1 to 3 years. Upland communities with Gambel oak and aspen components will begin to recover herbaceous and woody cover in 1 to 3 years as both those species resprout quickly after fire. Conifer woodlands and upland shrublands will begin to recover their herbaceous cover in 1 to 3 years with woody components taking longer to return, up to 20 years.

Non-Forest Service Values

Since fire effects know no administrative boundaries, additional threats exist for assets not owned or managed by the Forest Service. Post-fire emergency response is a shared responsibility. There are several Federal, State, and local agencies that have emergency response responsibilities or authorities in the post-fire environment. The BAER team and local unit BAER Coordinator has engaged with interagency partners to facilitate consideration of off-Forest values covered through other programs with the relevant responsible entities.

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Conclusion

There are multiple phases of post-fire actions after a wildfire, covering suppression repair through long-term recovery. BAER is the rapid assessment

of burned watersheds by a BAER team to identify imminent post-wildfire threats to human life and safety, property, and critical natural or cultural resources on National Forest System lands and take immediate actions to implement emergency stabilization measures before the first major storms. The BAER team has identified imminent threats to critical values based on a rapid assessment of the area burned by the Babylon Fire. The assessment was conducted using the best available methods to analyze the potential for damage from post-fire threats, including flooding and debris flows.

Although multiple monsoonal storms have occurred resulting in increased channel flows and sediment-laden runoff the findings provide the information needed to prepare and protect National Forest System critical values against further post-fire threats. Elevated watershed responses will likely continue to occur and threaten BAER critical values intermittently for 5–10 years, or until vegetative cover returns. The recommended BAER treatments in this report are not yet approved or funded. Because of the emergency nature of BAER, initial requests for funding of proposed BAER treatments are supposed to be submitted by the Forest Supervisor to the Regional Office within 7 days of total containment of the fire. The Regional Forester's approval authority for individual BAER projects is limited. Approval for BAER projects exceeding this limit is forwarded onto the Washington Office.

BAER treatments cannot prevent all the potential flooding or soil erosion impacts, especially after a wildfire-changed landscape. It is important for the public to stay informed and prepared for potentially dramatic increased run-off events. The Forest Service will continue to provide information and participate in interagency efforts to address threats to public and private values resulting from the Babylon Fire.

The Forest Service will continue to work towards long-term recovery and restoration of the burned area in coordination with efforts to rebuild and restore the communities affected. A vegetation burn severity map, or mortality map, may be produced as a part of the recovery efforts to help other scientists, such as wildlife biologists, botanists, and silviculturists understand what to expect from this changed landscape for wildlife habitat, invasive weeds, timber salvage, and reforestation needs.

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References:

Parson, Annette; Robichaud, Peter R.; Lewis, Sarah A.; Napper, Carolyn; Clark, Jess T. 2010. Field guide for mapping post-fire soil burn severity. Gen. Tech. Rep. RMRS-GTR-243. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 49 p. (https://www.fs.usda.gov/rm/pubs/rmrs_gtr243.pdf)

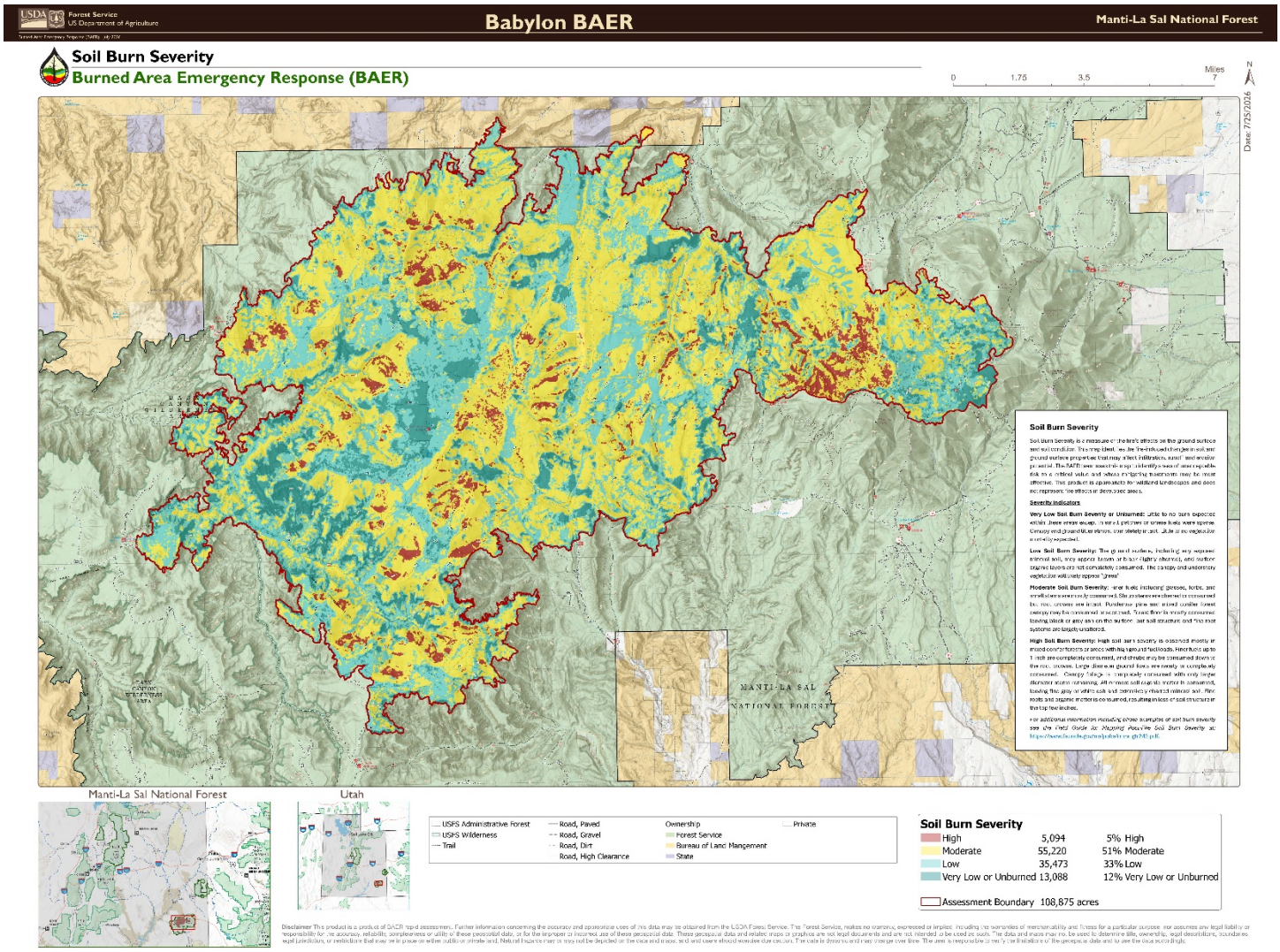

Figure 1, The soil burn severity (SBS) map for the 2026 Babylon Fire.

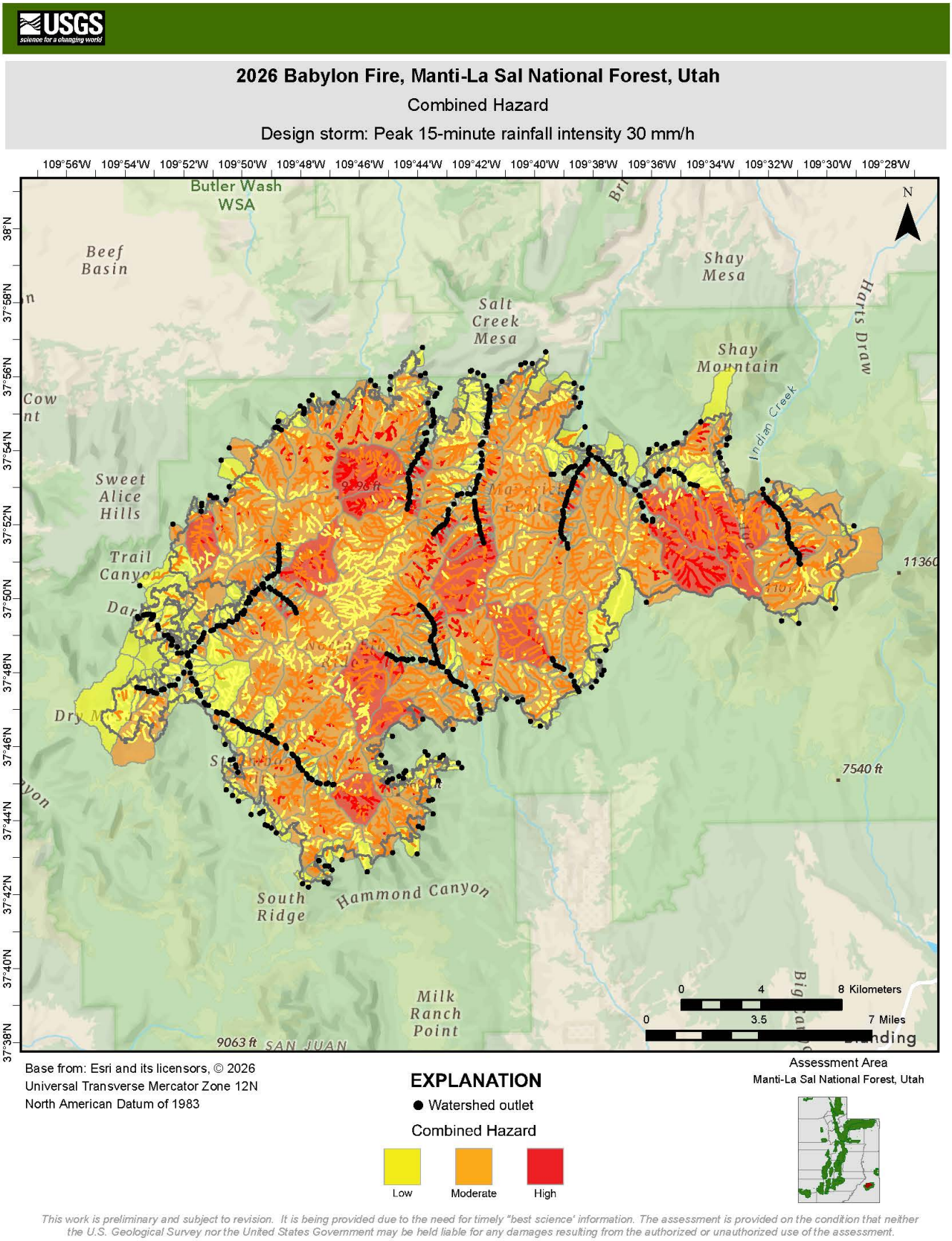

Figure 2. The combined hazard of a 15-minute rainfall intensity storm of causing a debris flow during the first year after the 2026 Babylon Fire. Map was produced by the USGS, Landslide Hazards Program.