

Fire Environment Watch

Alignment NW MN Blow Down Fuels and Drought

Issued 10/03/2025 Valid till 11/20/2025

Subject: Alignment of jackpot areas of heavy fuels, abnormal long-term dryness, and peak fall fire-season conditions.

Discussion: The northern half of Minnesota has experienced drier-than-normal conditions over the past year. Despite a wetter pattern during late summer, dryness persists following an abnormally hot and dry early fall. Portions of northern Minnesota are experiencing moderate drought, including areas with heavy downed fuels from last summer's blowdown events. The dry conditions at the peak of the fall fire season will likely create distinct periods of **above-normal** fire potential when aligned with any combination of warmth, wind and dryness. The general concern will persist until fuel conditions significantly improve or sustained snow cover occurs.

Difference from Normal Conditions:

- Modeled fire behavior estimates show an expected **2 - 4 times** increase in fire behavior from pre-blowdown conditions.
- Red needles and fine dead woody fuels may lead to increased intensity and rates of spread beyond modeled estimates.
- Fuels conditions have changed in the blowdown areas from predominantly timber fuels to 1/3 to 2/3 slash fuels.
- The 3-month & 12-month precipitation totals were both 50-70% of normal. August was 25-50% of normal. Half of the area in September received 75-100% of normal, but still, areas remain 50-75% of normal
- The Drought Monitor indicates abnormally dry to moderate drought conditions are expanding.
- Typically, about 2 - 3 peak burning periods (single or multi-day alignment of fuels and weather) occur during the fall fire season, between October 1 and November 20. Based on forecast conditions, this year may produce 4 - 8 periods due to an active weather pattern.

Firefighter and Public Concerns:

- The majority of the blowdown occurred in proximity to heavily populated areas, and fires within the wildland urban interface (WUI) are a significant concern.
- Long-term exposure to high levels of heat may result in increased damage to structures and infrastructure where fires occur.
- Pockets of extremely heavy fuel loading will increase fire behavior, ground resource travel time, suppression difficulty, response urgency, and hazardous working conditions on fire lines.
- Subsurface fire potential exists with the long-term dry conditions. Expect longer, hotter and deeper burning to increase suppression workload and resistance to control.
- Long-term dryness may result in burned debris piles retaining heat and leading to unintended wildfires when fire danger increases.

Mitigation Measures:

- **Public Awareness** – Increase messaging as short-term weather conditions align with long-term fuel and drought concerns.
- **Preparedness** – Increase staffing and availability of heavy equipment suited to working in heavy slash fuels.
- **Restrictions** – Limit burning permits for debris burning when conditions warrant.

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Area of Concern: Wind damaged trees were observed along the U.S. Highway 2 corridor ranging west of the City of Bemidji to east of the City of Cass Lake, including portions of the Leach Lake Reservation, and the Chippewa National Forest.

Figure 1 Location of Wind Damaged Fuels and Areas of Interest Used in Change from Normal Analysis

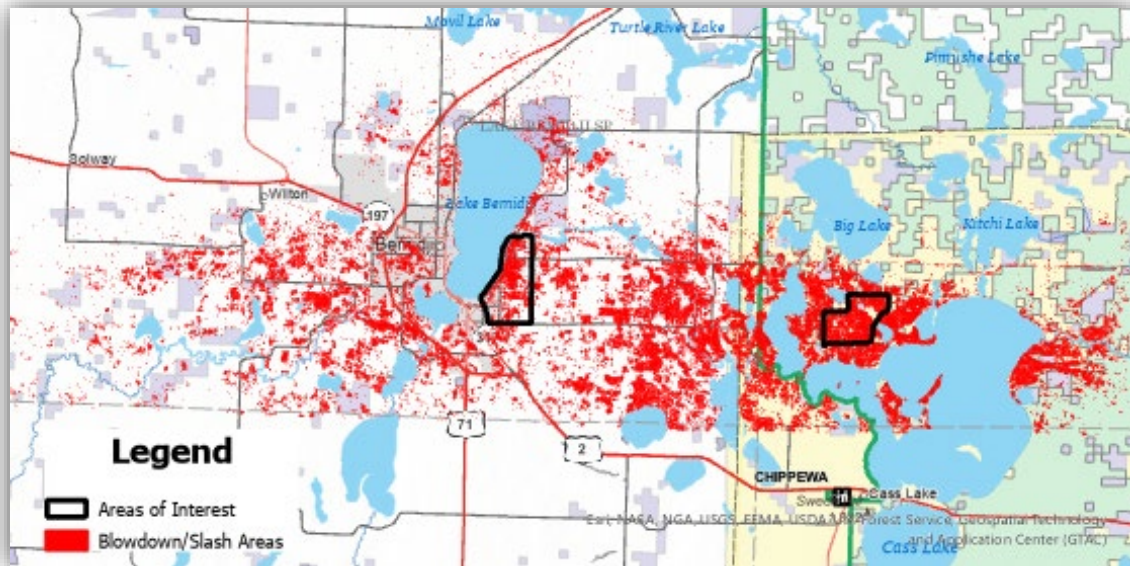
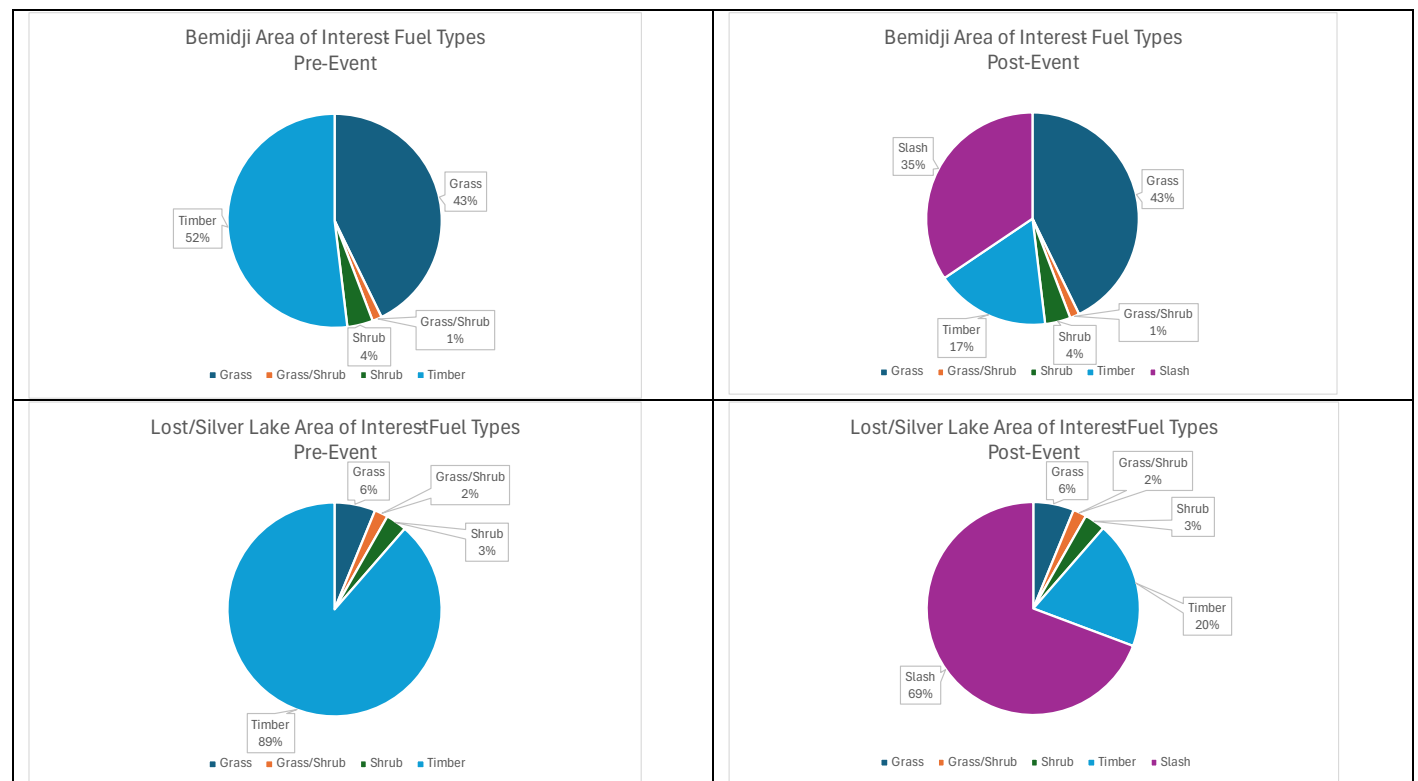


Figure 2 Change from Normal for Areas of Interest



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