

Incident Summary Page for the 100 Fires Project

Incident Name: Great Michigan Fire Somethings referred to as the Manistee Fire	Incident Date & Time: 10/08/1871
Incident Location: Michigan's Lower Peninsula	Incident Size: 2,000,000 acres (estimated)
Types of resources involved: Local fire brigades and civilians	# of Fatalities/injuries: 250 fatalities (some estimates are higher)
Reasons this fire was selected for the 100 Fires list: <ul style="list-style-type: none"> ➤ Fire is historically significant ➤ Civilian mass casualty event 	
Conditions leading up to the event:	
<p>The Great Michigan Fire began on the same day as the Peshtigo Fire and the Great Chicago Fire. Regional weather conditions were highly conducive to catastrophic wildfire due to strong winds and abnormally warm weather. Furthermore, the region's summer precipitation had been around one-quarter of historic norms. One Michigan resident recalled several weeks of <i>"uninterrupted drought"</i> preceding the fire, and one scholar estimates that the relative humidity in the area was 20-30% in the ten days preceding the fire, considerably below historic norms.</p> <p>The settlers' behaviors and attitudes with respect to logging and fire exacerbated the situation. Common logging practice was to clear-cut forests and to leave unwanted slash on the ground, where it was to be dried out and burned at a later date. Consequently, the Midwest was overburdened with curing and cured fuels throughout the summer and into the fall. Modern studies of fire scars on Michigan Red oaks indicate that the frequency and intensity of fires in the Midwest increased during nineteenth-century settlement as the regular, low-intensity burns practiced by Indians were replaced by the haphazard burning of clear-cut slash.</p> <p>Whether due to lack of concern, resources, or both, the settlers' fire management activities primarily consisted of point protection by members of the community on an on-call basis. The common belief that wildland fire was irrelevant until it threatened towns precluded the settlers from taking significant precautions. For example, dry creek beds within the city of Holland itself were filled with downed trees and slash at the time of the fire, which quickly became involved with flame and contributed to the fire's rapid spread. One such drainage was adjacent to a wooden church and a number of other buildings.</p> <p>Furthermore, many settlers did not see forest fires as a major concern, as they helped clear land for future settlement. In fact, even though both contemporary sources and modern retellings of the Michigan fires describe them as occurring between October 8 and October 10, one witness to the burning of Holland, Michigan, mentions offhand that the woods had been on fire <i>"for several days"</i> and had been fought when they threatened the city. Another survivor from Michigan's Thumb region believed the fire which eventually blew up on October 8 was the same one which had been burning since July, and recalled residents were already fighting nearby forest fires as early as October 6. By early October, conditions were ripe for a blowup, which occurred when a major cold front passed through the Great Plains and into the Midwest.</p>	
Brief description of the event:	
<p>The Great Michigan Fire was a collection of fires which occurred more or less simultaneously across the state from October 8 to October 10, 1871. Towns along the eastern shore of Lake Michigan were destroyed, while a separate fire known as the Port Huron Fire occurred concurrently in Michigan's Thumb. This latter fire is usually included in discussions of the Great Michigan Fire because it occurred at the same time and had similar effects.</p> <p>On the western side of the state, eyewitnesses reported that fire threatened the towns of Holland and Manistee throughout October 8, but were successfully managed throughout the day. However, a strong southwestern wind occurred shortly after midnight, overpowering local firefighting efforts with highly intense and fast-moving flames. The fire breached the plowed lines and destroyed each town. At least one fire tornado was reported.</p> <p>On Michigan's Thumb, the fire was also reported as increasing in intensity the night of October 8. Here, the area was more settled, and the fire moved fast enough to outrun residents who had tried to escape. Bucket brigades were ineffectual in the face of the cold front, and the increase in wind destroyed several towns in the span of a few minutes.</p> <p>The fires did not subside until fuel was exhausted or a hard rain fell, depending on the location.</p>	

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Fire behavior factors that were present during the event:

As in the case of the concurrent Peshtigo Fire, heavy fuel loading and an abnormally powerful cold front caused a number of existing fires to blow up, consuming much of the state. One Michigan newspaper noted both woods and marshes had burned, indicating the drought was severe enough to carry fire in wetter areas which are typically more resistant to burning. Another noted the fire spread faster than many livestock could run, and winds were powerful enough that unfinished bank documents were discovered 25 miles downwind from the bank in question.

Operational lessons available for learning from this incident:

Events during the Great Michigan Fire demonstrate the importance of prioritizing the protection of human life over fighting fire and defending property. Many fatalities on Michigan's Thumb occurred when residents, warned of the impending danger, opted not to evacuate and attempted to defend their properties on their own initiative, often staying long after successful defense was rendered impossible and all escape routes were compromised.

Conversely, the experience of Holland, Michigan, provides an early example of an effective evacuation effort. Although a wind shift resulted in the near-total destruction of the town, there was only one fatality in this area—an old woman who lived alone and slept through the alarm. Both Holland and Manistee sounded the fire alarm early enough to evacuate all or nearly all of their residents, even though later changes in wind speed and direction overwhelmed local firefighting efforts and led to each town's destruction. Effective communication and rapid evacuation saved hundreds, if not thousands, of lives.

Notable impact or historical significance for the wildland fire service from this incident:

This fire occurred at the same time as the Great Chicago Fire and the Peshtigo Fire...all three together are sometimes referred to as the Great Midwest Fires of 1871. As a result of this fire, over 200 people lost their lives and over 15,000 people became homeless. As many lumberjacks and loggers worked dispersed and unaccounted for throughout the state, an exact death count is impossible to determine. Heavy smoke settled over the Great Lakes and much of the Midwest and Canada, contributing to a significant uptick in shipwrecks over the next month.

Contemporaries viewed the fire as an unusually horrific but unavoidable tragedy. Confident in their mission to clear and settle the North American continent, most settlers recalled the fire as a temporary setback that was an expected hazard when clearing large swathes of forest.

If the fire spurred anyone to think about the systematic construction of defensible space or the establishment of standardized wildland fire management or suppression practices, their opinions have not surfaced. The 1881 Thumb Fire would burn much of the area destroyed by the Port Huron Fire, with similar effects.

Links to more information on this incident:

<https://project.geo.msu.edu/geogmich/fires.html>
<https://www.seconddwavemedia.com/lakeshore/features/holland-history-fire-10.aspx>
https://www.cpc.ncep.noaa.gov/products/people/wd51hd/vddoolpubs/other/other_1871Fires_VandenDool.pdf
<https://ieeexplore.ieee.org/document/6302640>
<https://sites.rootsweb.com/~mimanist/ManHist14.html>
<https://link.springer.com/article/10.1186/s42408-024-00253-3>

Books:

- *Michigan on Fire* ~ by Betty Soddors
- *Michigan's Great Thumb Fires of 1871 and 1881* ~ by Alan Naldrett
- *History of the Great Fires in Chicago and the West* ~ by Rev. E. J. Goodspeed (1871) <https://www.loc.gov/item/rc01001878/>

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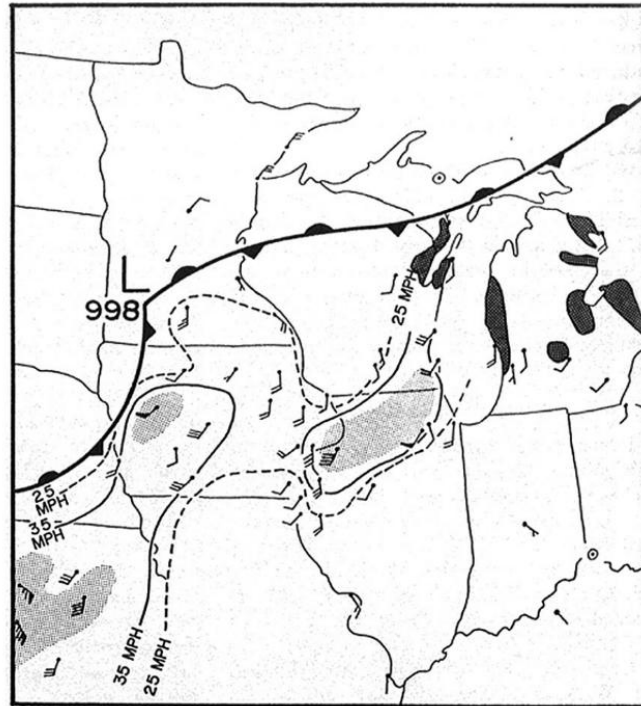


Fig. 8.1. Schematic weather map, 2100 EST, 8 October 1871
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