



## Storm Damage Survey results for event at West Yellowstone, August 28, 2010



### Overview

At approximately 300pm on Saturday August 28, 2010 a severe thunderstorm moved into the southwestern portions of West Yellowstone. The storm moved through the town over the next 5 to 10 minutes producing localized structural damage and downed or snapped trees across the town in a southwest to northeast line through the town due to straight-line winds, possibly associated with a microburst. The path of the damage was close to 1 mile in length, and extended from the far southwest corner of the town to near the USFS station on the northeast edge of town. Wind speeds were estimated near 85 mph.

### Details of the Survey

The survey team consisted of Michael Mercer, Meteorologist in Charge; and Benjamin Schott, Warning Coordination Meteorologist. The survey team was dispatched to West Yellowstone after receiving reports of significant structural damage in the town, and many trees down, snapped and uprooted shortly after the event. The survey team reached the town the following morning at 9am and met with Robert Glenn, West Yellowstone Public Works to survey the damage together. The team started just southwest of town and noticed a scattering of trees down, approximately 10 trees. The survey team worked northeast across the town investigating structural damage at a few private residences where the corners of roofs were peeled off, each had significant eaves which may have helped the wind provide greater forcing on the roof, and a church had its brick/stone covered entry displaced from the wind gusts. A few trees were down near the church as well. The survey team then stopped in the city park where many trees were downed, and a few snapped, a portable tarp-covered stage had been pushed off its jacks and the 2 inch diameter supports bent. Next to the park is where the majority of the structural damage occurred with three hotels receiving significant damage to their roofs. The Best Western -Weston had most of the roof blown back behind the building, with some of the metal roof material in trees 50 to 100 feet behind the hotel. The roof had large eaves and that may have contributed to the loss of the structure, no other damage was noticed and as a note of interest the many flower pots still hung neatly all along the front of the hotel that was open to the strong winds. The debris from the roof did considerable damage to a few automobiles behind the hotel. The last of the damage was spotted just north of the hotel with some scattered trees down between the hotel and the USFS station.

The damage was consistent with straight-line wind damage with the trees downed in the same direction throughout the town. All debris from the hotels was sent in the same relative direction as the downed trees. Witnesses, nearly 20, reported funnel clouds but no one ever witnessed seeing the funnel cloud reaching the ground. A video taken as the storm entered town did show some elevated rotation, yet not a tornado. Aerial photos were taken through the Civil Air Patrol (photos below), in coordination with Gallatin County DES, and showed the scattered and localized nature of the damage in West Yellowstone. A big thanks to both West Yellowstone Public Works, and Gallatin County DES for a well coordinated effort in gathering information and support for the survey.

**Photos:**



Photos from top left to bottom left:

Top left: Roof damage to hotel, most of roof blown off behind the building, extensive clean-up had occurred

Top right: Roof damage to hotel

Bottom right: Roof damage with debris blown behind the hotel, debris piled in open lot during clean up of site

Bottom left: Roof of hotels damaged, few trees down in park

