



# Norton Point Fire - 8/3/11

**Fire Location:** 24 mi. N of Dubois

**Public meeting:** Saturday 7 p.m., Dubois Headwaters Center

**Actions:** On Tuesday firefighters worked south from the fire's southeast corner, clearing brush, thinning trees, and cutting low tree limbs near the secondary contingency line. For the next two days they will continue to work southward. North of Game & Fish's Bear Creek Campground on Forest land, contingency line extending eastward has been identified but will not yet be cleared.

Two fire modules and one of the two remaining helicopters were released from the fire this morning. Two crews remain: the Worland fuels crew and Bighorn Basin.

## Long-Term Course of Action:

Planning for long-term management of the Norton Point Fire is among the Ranger District's assignments for the incident management team. Fire spread modeling is a component of the planning; See p.2 for details. Detailed plans for tactical operations in response to the fire's evolving location and behavior are being made. Requisite staffing, costs and safety mitigations related to each contingency action are being planned. Frequent reconsideration of road and area closures is included.



Much of the ridge between Park and Fremont Counties has little vegetation and is an effective barrier to fire spread. Photo by Angie Foster, Rocky Mountain Incident Management Team 2 A.

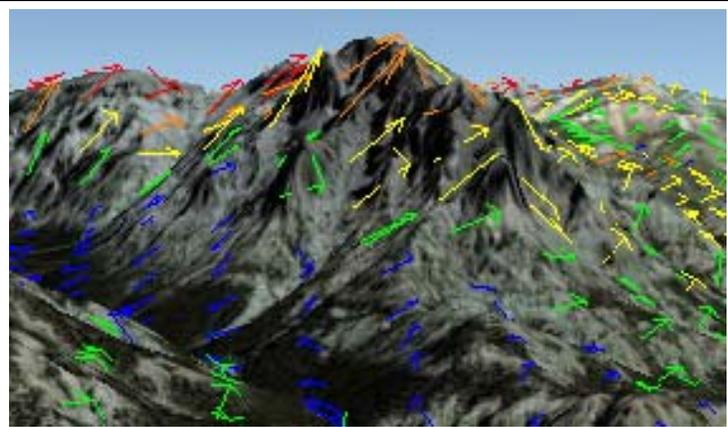
In general the modeling results suggest that the most likely scenario - though certainly not the only possible one - is that most of the fire's growth has already occurred. Any large-scale future growth is most likely to be in the Bug Creek and possibly Bear Creek drainages.

**Vital Statistics:** 119 firefighters 13,175 acres, no change since 8/2

**More Information:** [www.inciweb.org](http://www.inciweb.org). To contact us or to receive Norton Point Fire updates via email send your address to [nortonpointfire@gmail.com](mailto:nortonpointfire@gmail.com) or call 307-455-1801.

## Fire Spread Modeling

With appropriate caveats, fire spread models have proven to be enormously useful planning tools. The models help focus contingency preparation where it is most likely to be needed. They facilitate communication about risks among all of the people who have stakes, from fireline supervisors to area residents to land management agency regional staff. The models inform scheduling of fire tactics so the work is effective and cost-efficient. Again heavily tempered by field verification, they sometimes even help in identifying safety concerns.



Arrows display one set of modeled surface wind speeds and directions at Norton Point.

The foundation of most fire behavior modeling worldwide is a simple equation developed in a Missoula laboratory forty years ago. Author Dick Rothermel's first career was as a nuclear aeronautics engineer. With characteristically backhanded deference, firefighters say the spread equation "isn't rocket science." And Rothermel himself, now retired, still reminds firefighters to test model results against their experience-based intuition and to recognize that precision is no finer than what is drawn with a blunt crayon.

Today's best and sophisticated fire projection models still ultimately display Rothermel's basic calculations, iterated thousands of times.

- But newer fire spread models apply probabilistic weather, and derive expected moisture of dead wood from weather history.
- Underlying maps of vegetation that might burn combine satellite data, aerial photography and field verification.
- A decade ago Rothermel's similarly brainy successors built new inputs for the equation. The new set of "fuel models" describes various types of vegetation numerically.
- A submodel takes in upper-level wind data and modifies it to reflect how the 'lay of the land' affects the wind. The submodel calculates wind speeds and directions at eye-level.
- Computer interfaces simplify the math of calibrating results with a real fire's growth to date before making projections.
- Mapped outputs make results easier to grasp intuitively.

It looks increasingly like rocket science.

If you would like to know more about the long-term course of action or have questions or comments about other aspects of the Norton Point fire, you may call 307-455-1801, email [nortonpointfire@gmail.com](mailto:nortonpointfire@gmail.com) and/or attend the public meeting at the Dubois Headwaters Center at 7 p.m. next Saturday.