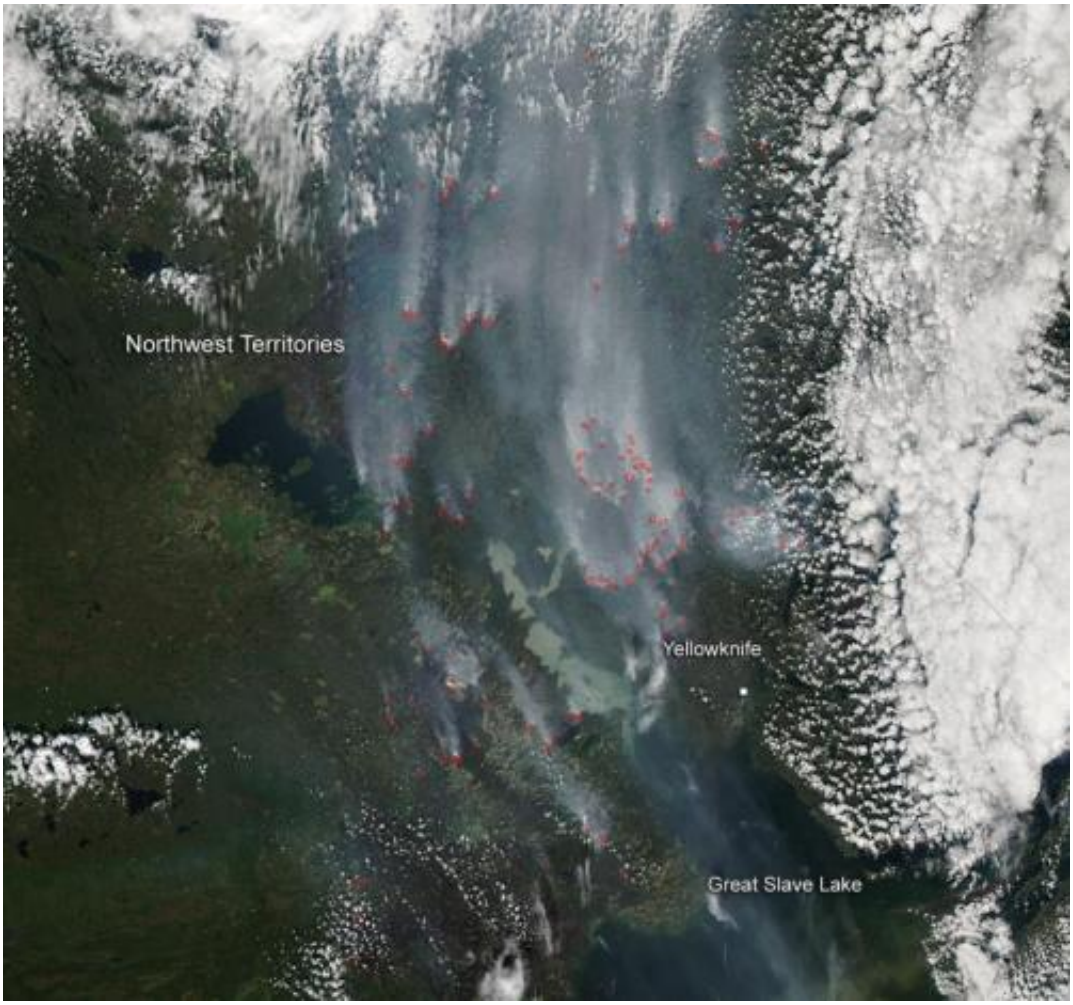
Image: Southfork and Staley Complex fires in Oregon

August 11 2014



This natural-color satellite image was collected by the Moderate Resolution Imaging Spectroradiometer aboard the Aqua satellite on August 09, 2014. Actively burning areas, detected by MODIS's thermal bands, are outlined in red. Credit: NASA image courtesy Jeff Schmaltz, MODIS Rapid Response Team.

The Southfork Complex fire began with a lightning strike on July 31, 2014. The complex of Murderers Creek South fire and the Buck Fork fire is located 20 miles southwest of John Day, Oregon and has affected 62,476 acres to date. The fire area experienced a shift in direction of the prevailing winds Sunday. There were short up-slope, up-canyon runs. At present there are 798 personnel fighting this fire complex.

Projected outlook for this fire complex in the next twelve hours sees continued fire spread to to the north toward Dayville, Oregon as well as continued fire spread to the north and northeast toward Aldrich Ridge. The fire is expected to continue moving south and southeast along active areas of the perimeter. Down drafts associated with thunderstorm activity may increase fire behavior throughout affected portions of the incident. Within 24 hours, downdrafts associated with thunderstorm activity may increase fire behavior in areas of the incident. Continued torching, spotting and up-slope runs along active sections of the fire are expected to continue, especially when winds and terrain align. In 48 hours expected fire behavior is continued torching, spotting and up-slope runs along active sections of the fire especially when winds and terrain align. The fire is currently 30% contained.

The Staley Complex is composed of two fires burning in steep, rocky terrain in a remote area of the Willamette National Forest 28 miles south of the town of Oakridge, Oregon which began with lightning strikes on July 30, 2014. The steep rocky terrain is punctuated by cliffs and is too dangerous for firefighters to access on the ground. Crews are working along the nearest accessible road systems to construct and prep indirect and contingency line for a planned firing operation to burnout inside indirect firelines and secure perimeter of the fire. Helicopters are being utilized for bucket drops to slow the progress of the Staley and Davey fires. Fire crews are also available for initial attack and during the first week of the incident were busy locating and extinguishing more than two dozen small fires ignited by nearly 700 lightning strikes on the Middle

Fork Ranger District. There are currently 405 personnel fighting this fire complex.

Outlook for the fire is as follows: Red Flag Warning in effect 5 pm Sunday through 11pm Tuesday for lightning and dry fuels. Temperatures will be 80-85 degrees with a relative humidity of 25-30%. Thunderstorms could produce wind gusts to 40 mph. Haines 5 conditions can be expected as well. Haines (1988) developed the Lower Atmosphere Stability Index, or Haines Index, for fire weather use. It is used to indicate the potential for wildfire growth by measuring the stability and dryness of the air over a fire. It is calculated by combining the stability and moisture content of the lower atmosphere into a number that correlates well with large fire growth. The stability term is determined by the temperature difference between two atmospheric layers; the moisture term is determined by the temperature and dew point difference. This index has been shown to be correlated with large fire growth on initiating and existing fires where surface winds do not dominate fire behavior. A Haines 5 condition is for moderate potential. The only higher index is 6 which is high potential with dry unstable lower atmosphere.

This natural-color satellite image was collected by the Moderate Resolution Imaging Spectroradiometer (MODIS) aboard the Aqua satellite on August 09, 2014. Actively burning areas, detected by MODIS's thermal bands, are outlined in red.

Provided by NASA's Goddard Space Flight Center