Fire Weather Decision Support

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Hotspot Notification Tool

Original Developer
Aaron Anderson - NWS Norman
GOES-16 satellite can detect locations where the ground is much warmer than surrounding areas (Hot spots)

- Right now, looks like 20-50 acre fires may be detectable
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These warm areas on satellite are assumed to be wildfires
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- Right now, looks like 20-50 acre fires may be detectable

These warm areas on satellite are assumed to be fires

We now have a tool that can send you text messages when we detect a possible fire
Example GOES-16 Hot Spot
Initial Message

1. Location

- Lat: 37.290 / 37 17.392 N
- Lon: 96.076 / 96 4.659 W
- Location: 5 miles NW of Hale, KS.
- County: Chautauqua, KS
Initial Message

Location

- Lat: 37.250 / 37.17.592 N
- Lon: 96.075 / 96.459 W
- Location: 5 miles NW of Hale, KS
- County: Chautauqua, KS

2. Fire weather level

Grassland Fire Danger Index: Extreme
Initial Message

Location

- Lat: 37.290 / 37°17.992 N
- Lon: 96.075 / 96°4.659 W
- Location: 5 miles NW of Hale, KS
- County: Chautauqua, KS

Fire weather level

- Grassland Fire Danger Index: Extreme

3. Detection method

- Detection Method: GOES Satellite has detected a wildfire
Initial Message

Location

- Lat: 37.250 / 37.17.392 N
- Lon: 96.075 / 96.4.659 W
- Location: 5 miles NW of Halse, KS
- County: Chautauqua, KS

Fire weather level

- Grassland Fire Danger Index: Extreme

Detection method

- Detection Method: GOES Satellite has detected a wildfire

4. Nearest weather observation

Initial Message

Location

- Lat: 37.290 / 37.17.992 N
- Long: 96.075 / 96.4.659 W
- Location: 5 miles NW of Hale, KS
- County: Chautauqua, KS

Fire weather level

- Grassland Fire Danger Index: Extreme

Detection method

- Detection Method: GOES Satellite has detected a wildfire

Nearest weather observation

- Observation: KOWP T: 66 DpT: 21 RH: N/A WDIR: 240 WSPD: 18 WGST: 47 8.9 miles SSW of point of interest

5. Google Map link of the hot spot

- Map: maps.google.com/?q=37.290,-96.076&ll=37.290,-96.075&z=10
Initial Message

Location

- Lat: 37.290 / 96.075 N
- Lon: 37.290 / 96.459 W
- Location: 5 miles NW of Hale, KS
- County: Chautauqua, KS

Fire weather level

- Grassland Fire Danger Index: Extreme

Detection method

- Detection Method: GOES Satellite has detected a wildfire

Nearest weather observation


Google Map link of the hot spot

- Map: maps.google.com?q=37.290,-96.0756&ll=37.290,-96.0756&z=10

6. Contact information

- NWS Wichita
  - 1-800-367-5736
Possible Wildfire

Lat: 37.290 / 37 17.392 N
Lon: -96.076 / 96 4.559 W
Location: 5 miles NW of Hale, KS.
County: Chautauqua, KS
Grassland Fire Danger Index: Extreme
Detection Method: GOES Satellite has detected a wildfire
Observation: KOWP T: 66 DpT: 21 RH: N/A WDIR: 240 WSPD: 18 WGST: 47.8 WSW of point of interest.

Map: maps.google.com/?q=37.290,-96.076&ll=37.290,-96.076&z=10

NWS Wichita
1-800-367-5736
Caveats

Active Monitoring on Red Flag Warning Days

We can’t be 100% positive it’s a fire

Very slight risk of false alarm

Prescribed burn or wildfire?

Cloud cover or dust will likely prevent detection
<table>
<thead>
<tr>
<th>2018 Contacts Database</th>
<th>2019 Contacts Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>105</td>
<td>178</td>
</tr>
<tr>
<td>+70%</td>
<td></td>
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</tbody>
</table>
Hourly Distribution

- mid-3am
- 3am - 6am
- 6am - 9am
- 9am-noon
- noon-3 pm
- 3pm-6pm
- 6pm-9pm
- 9pm-mid

2019 vs. 2018
Hourly Distribution

88%