Wildfire Support

10 May 2018
Hawkeye

• What is Hawkeye?
  • Hawkeye is a system that compiles information from multiple sources and assesses the consolidated input for indications of a wildland fire
  • It provides near real-time wildland fire alerts to federal, state, and local wildland fire agencies via the US Forest Service (USFS)

• Hawkeye has three primary objectives:
  • Provide early indications of wildland fires, especially in regions where alternative reporting sources are limited or nonexistent.
  • Provide geolocation services for wildland fires whose location may not be very well determined
  • Provide confirmation of previously reported wildland fires
Hawkeye (cont.)

• Hawkeye alerts contain:
  • Date/Time
  • Latitude/Longitude
  • Confidence Factor: Low, Medium, High

• Hawkeye reporting frequency:
  • Initial report within 5 minutes of meeting reporting criteria
  • Re-reports every half hour until the fire drops below reporting criteria
Hawkeye (cont.)

• Hawkeye capabilities:
  • Large fires (typically several acres in size)
  • 1 km accuracy

• Hawkeye operations:
  • 24/7/365 w/occasional outages
  • Lower 48 States, Alaska, Hawaii, Canada, Puerto Rico (depending on availability of sources)
Hawkeye Performance - 2017

• ~99,000 alerts generated
  • Initial alerts (Low, medium, high)
  • 30 min updates

• ~15% were of California fires in last 45 days of the year
Hawkeye (cont.)

• Hawkeye dissemination:
  • Alerts posted to Ignition Point (IgPoint) sever upon receipt
  • Viewable on Enterprise Geospatial Portal (EGP) under IgPoint Tab
  • To request an EGP account, go to https://egp.nwcg.gov/egp/default.aspx

• Tailored alerting via email, text, instant messaging, pager, etc… is also available
  • Contact egp@firenent.gov to make arrangements
Firefly

• What is Firefly?
  • Firefly is the aggregated input into Hawkeye
  • Has the potential for providing a much more detailed near-real-time description of a wildfire

• Contrast with Hawkeye:
  • Earlier reporting
  • Smaller fires
  • Shorter reporting interval
  • Increased potential for false positives

Firefly is not authorized for release to the Civil Community
## Initial Reporting Examples

<table>
<thead>
<tr>
<th></th>
<th>Tubbs Fire – 8 Oct 2017</th>
<th></th>
<th></th>
<th>Thomas Fire– 4 Dec 2017</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time</strong> &lt;br&gt;<strong>(Zulu)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated Start</td>
<td>04:45</td>
<td>21:45</td>
<td></td>
<td>Estimated Start</td>
<td>02:28</td>
<td>18:28</td>
<td></td>
</tr>
<tr>
<td>First Input</td>
<td>04:46</td>
<td>21:46</td>
<td>+1</td>
<td>First Input</td>
<td>02:21</td>
<td>18:21</td>
<td>-7</td>
</tr>
<tr>
<td>Low Alert</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Low Alert</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Medium Alert</td>
<td>04:54</td>
<td>21:54</td>
<td>+9</td>
<td>Medium Alert</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**NOTE:** Can be up to 5 minutes between time stamp in the alert and receipt at EGP
2018 California Wildfire Season Proposal

• Continue with Hawkeye reporting

• Provide Firefly output to California Guard
  • Extract critical information
  • Integrates information into RC-26/MQ-9 operations
  • Provide manual input into EGP

• Gather input from field to inform what works best
BLM Assessment

2016 Hawkeye Alerts

- Total Alerts: 43,667
  - This is before re-reporting was turned on
- Evaluated: 5,171 (~12%)
  - Federal lands only
  - Directly associated to 340 wildfires
  - Based on the federal fire occurrence data set and GeoMAC perimeters

Status

- Final Updates made in Feb 2018