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
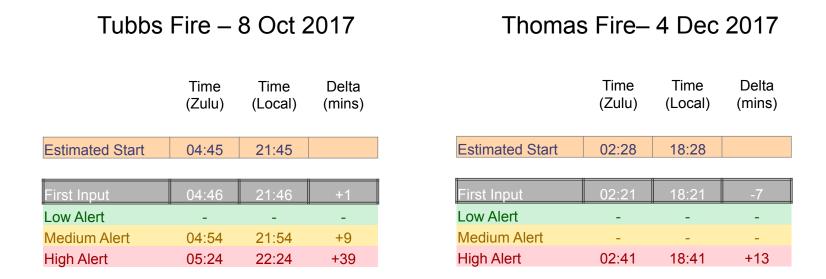
Hawkeye (cont.)

- 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

Tubbs Fire – 8 Oct 2017

	Time (Zulu)	Time (Local)	Delta (mins)
Estimated Start	04:45	21:45	
First Input	04:46	21:46	+1
Low Alert	-	-	-
Medium Alert	04:54	21:54	+9
High Alert	05:24	22:24	+39

Thomas Fire– 4 Dec 2017

	Time (Zulu)	Time (Local)	Delta (mins)
Estimated Start	02:28	18:28	
First Input	02:21	18:21	-7
Low Alert	-	-	-
Medium Alert	-	-	-
High Alert	02:41	18:41	+13

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