2018 KEMA Conference

Fire Weather Services for Impact Based Decision Support

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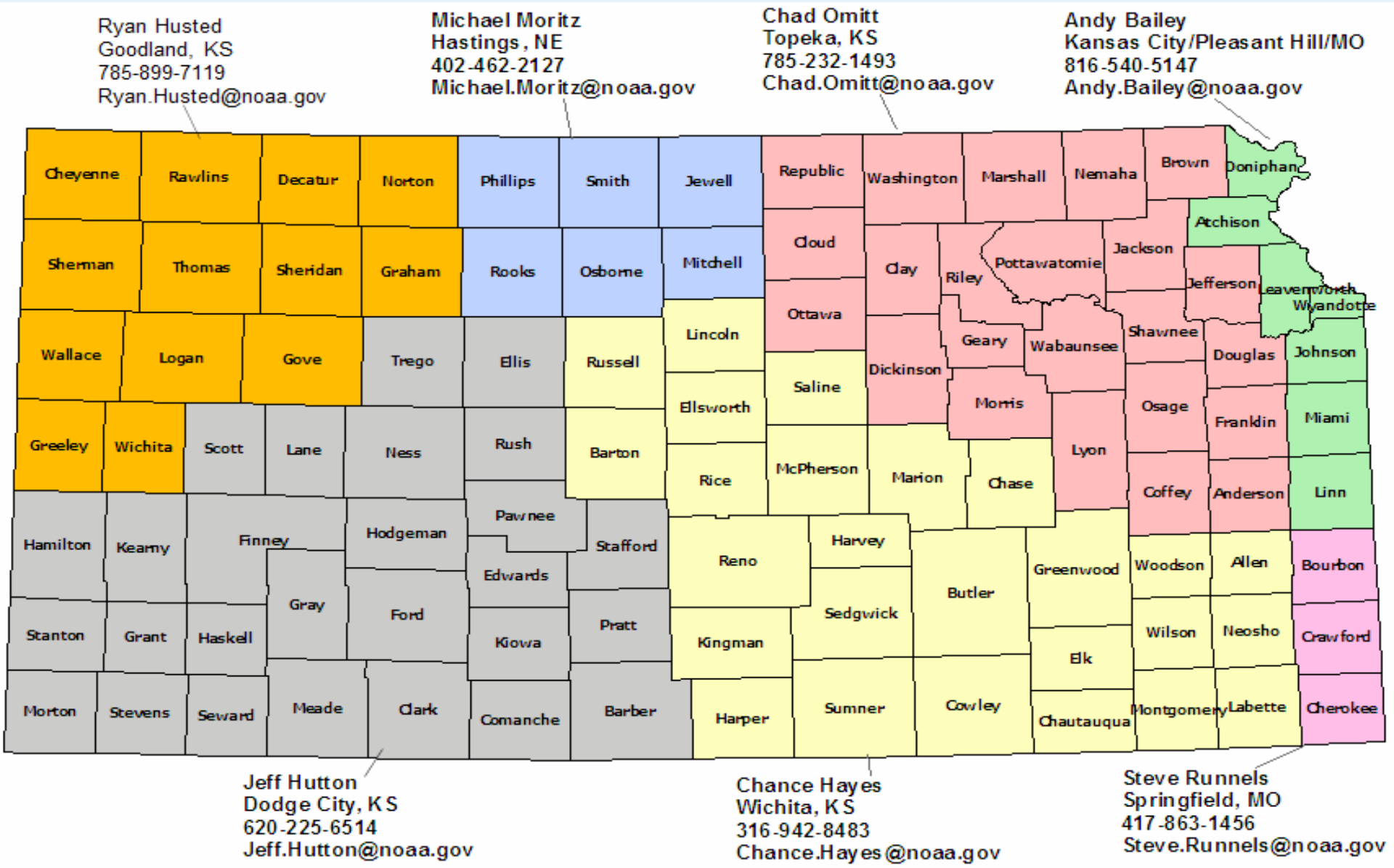
NWS – Dodge City

National Weather Service

Goodland
Dodge City
Hastings
Wichita
Topeka
Pleasant Hill
Springfield

YOUR National Weather Service



Satellite Detection of Hotspots

- Objective
  - To provide incident Decision Support Services for potential wildfire initiation and subsequent support
  - Can provide initial notification prior 911 calls

Satellite Detection Limitations

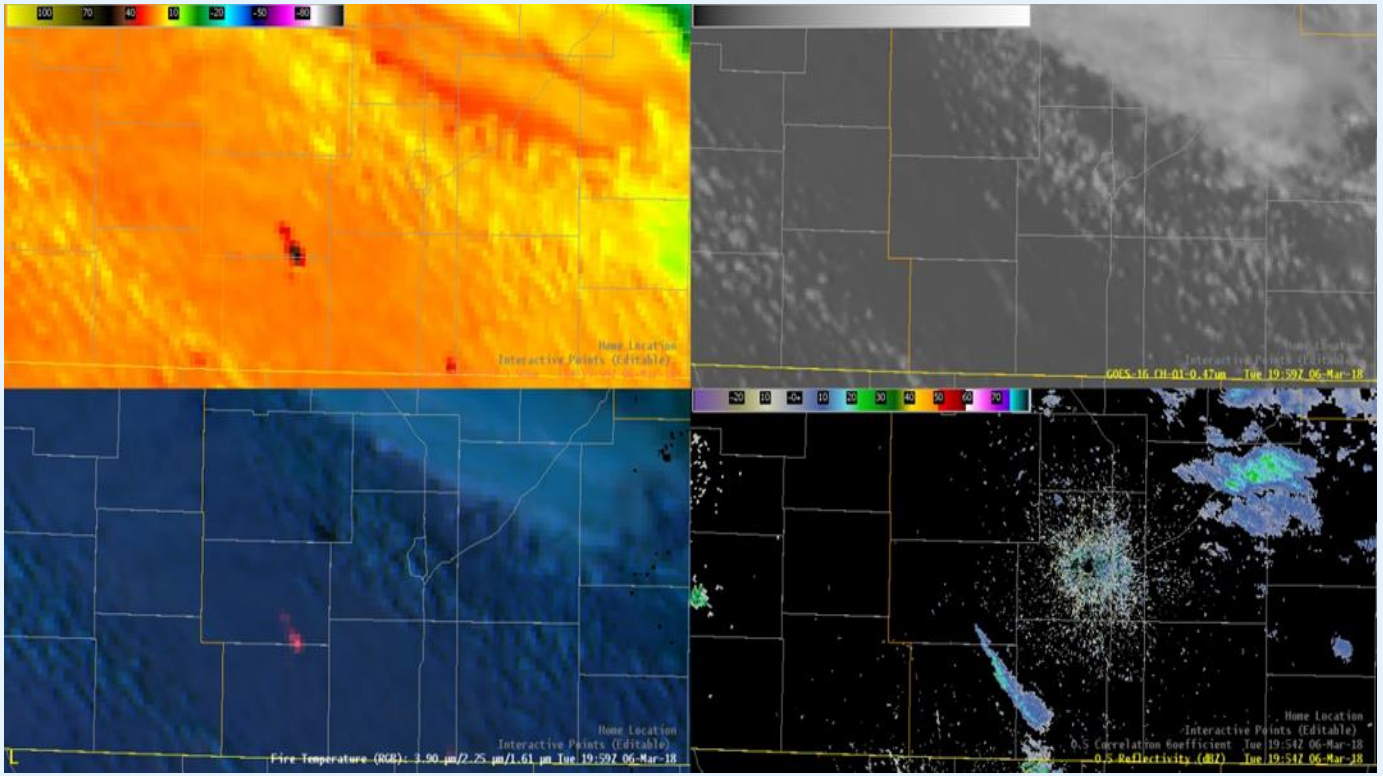
- The hotspot may not be a wildfire
- There can be an issue in determining if the potential fire is a prescribed burn or wildfire
- Pre-burned areas could be mis-detected as a fire.
- Most importantly, thick cloud cover or dust may prevent detection

NWS Fire Notifications

- In 2017 several Kansas NWS offices beta-tested notifications for potential wildfires
- Use of GOES-R fire channels made this possible
- Local guidelines varied
  - Participating offices were Wichita, Topeka, Dodge City, Goodland, and Hastings
- Notifications are issued when detection is made in a favorable wildfire environment

NWS Guidelines

- Detection methods
  - Satellite
  - Radar
  - Reports



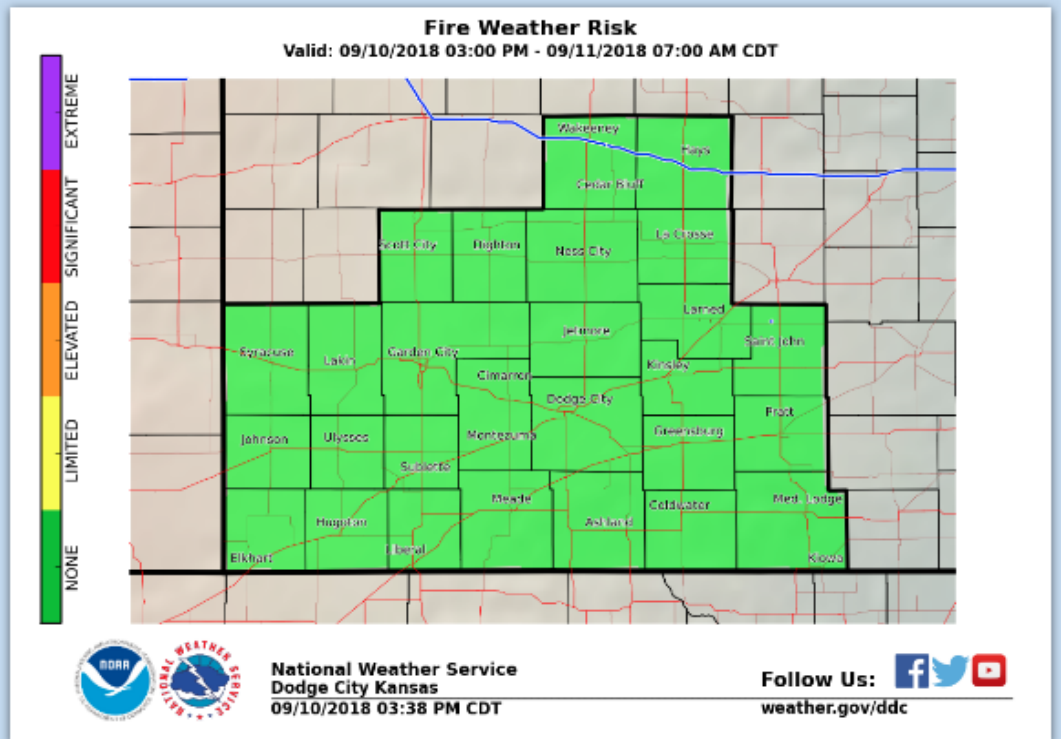
NWS Guidelines

- Notifications by satellite or dual-pol radar
  - Will be issued when detected in a favorable wildfire environment

NWS Guidelines

- For WFO Dodge City
- Level of use – Enhanced Hazardous WX Outlook
  - Elevated, significant, extreme
  - Based on wind, RH, temp and ***does not account for fuel moisture***

Fire Weather Risk
This Afternoon/Tonight
Current Time - 7 am



24 Hr. Hazards	Day 1	Tue	Wed	Thu	Fri	Sat	Sun
Severe Thunderstorm Arrival Tool							
Tornado							
Hail							
Thunderstorm Wind Gust							
Severe Thunderstorms							
Lightning							
Flooding							
Fire Weather							
Grassland Fire Weather Index							
Fog							
Non Thunderstorm Winds							
Excessive Heat							
Snow & Sleet							
Ice Accumulation							
Frost & Freeze							
Excessive Cold							

NWS Guidelines

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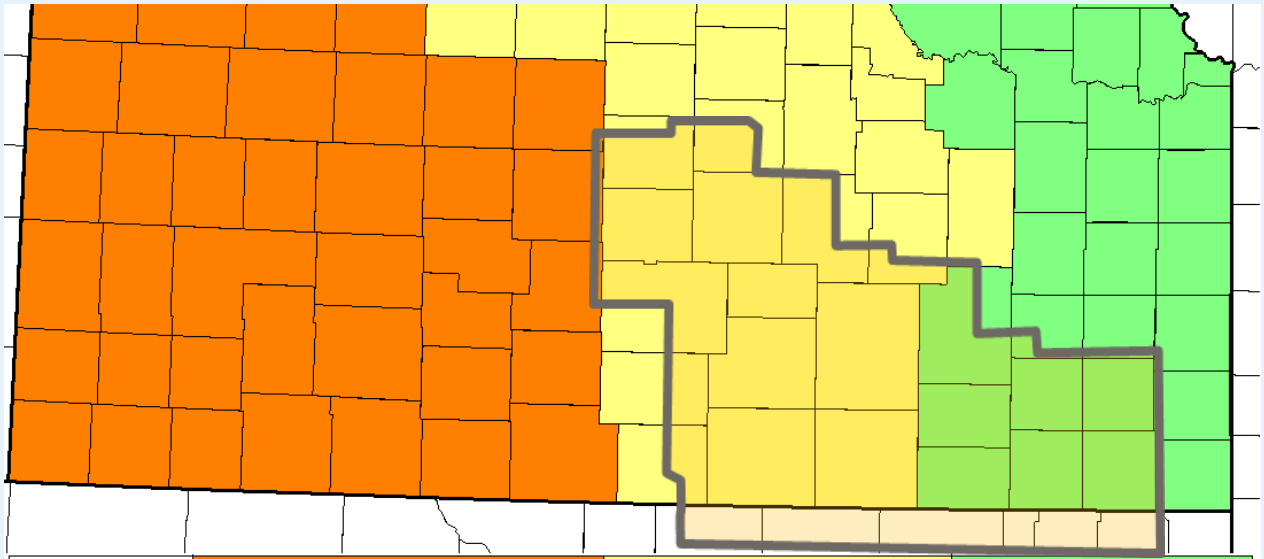
Risk Level	Definition
None	**Open burning is usually safe with proper containers and precautions under low fire danger conditions.** *Residents should **always** check on local ordinances that prohibit open burning under any conditions.*
Limited	**Open burning is usually safe with the proper precautions.** **Burning should be done in the early morning and late evening to avoid windier and drier conditions from midday through mid-afternoon.** *Residents should **always** check on local ordinances that prohibit open burning under any conditions.*
Elevated	**Any open burning is discouraged due to increased wind and lower humidity - except by experienced fire personnel.** *Increasing winds and lower humidity contribute to drying fuels. Fires escape control more easily and containment is difficult for inexperienced fire personnel.* **Approaching Red Flag conditions.**
Significant	**Open burning should not be attempted.** *High winds and extended dry periods lead to extreme burning conditions. Open fires can quickly escape and are very difficult to control, even for experienced fire fighters.* **Conditions exceed minimum criteria for a Red Flag Warning in most cases.**
Extreme	**Very strong winds, well in excess of Red Flag Criteria combined with moderate to low humidity.** *Fires will spread very quickly with spot fires common. Fire control is extremely difficult due to very strong winds.*

NWS Guidelines

- For WFO Wichita
  - Level of use – **G**rassland **F**ire **D**anger **I**ndex
  - Very high to extreme or catastrophic GFDI



Low-Mod	< 8	< 7	< 6
High	9-23	8-19	7-15
Very high	24-59	20-49	16-39
Extreme	60-99	50-79	40-59
Catastrophic	100 +	80 +	60 +

NWS Guidelines

- Dedicated DSS satellite detection Meteorologist
  - Who is notified and by what method?
    - Varies with each office

NWS Guidelines

- Dodge City
  - By text message or email
  - Immediately followed up by a phone call
  - May contact downstream county

NWS Guidelines

- Wichita
  - By text message or email

NWS Guidelines

- Goodland
  - Text message or email

NWS Guidelines

- Hastings
  - Text message or email

NWS Guidelines

- Topeka
  - Text message and email

NWS Guidelines

- Pleasant Hill
  - Will work out details for 2019

NWS Guidelines

- Springfield
  - Will work out details for 2019

Notification by Email or Text Msg

- Thu Sep 06 2018 12:25 CDT
  --Subject: Another Test-12
  --Lat: 37.780 / 37 46.801 N
  --Lon: -99.970 / 99 58.195 W
  --Location: 3 miles ENE of Dodge City, KS.
  --County: Ford, KS
  --Fire Weather Level: Elevated
  --Detection Method: Satellite - 1min
  --Observation: KDDC T: 66 DpT: 64 RH: N/A WDIR: 40 WSPD: 12 WGST: N/A 0.0 miles WSW of point of interest.
  --Comments: Testing
  --Map: maps.google.com/?q=37.780,-99.970&ll=37.780,-99.970&z=10
  Thanks

Internet Satellite

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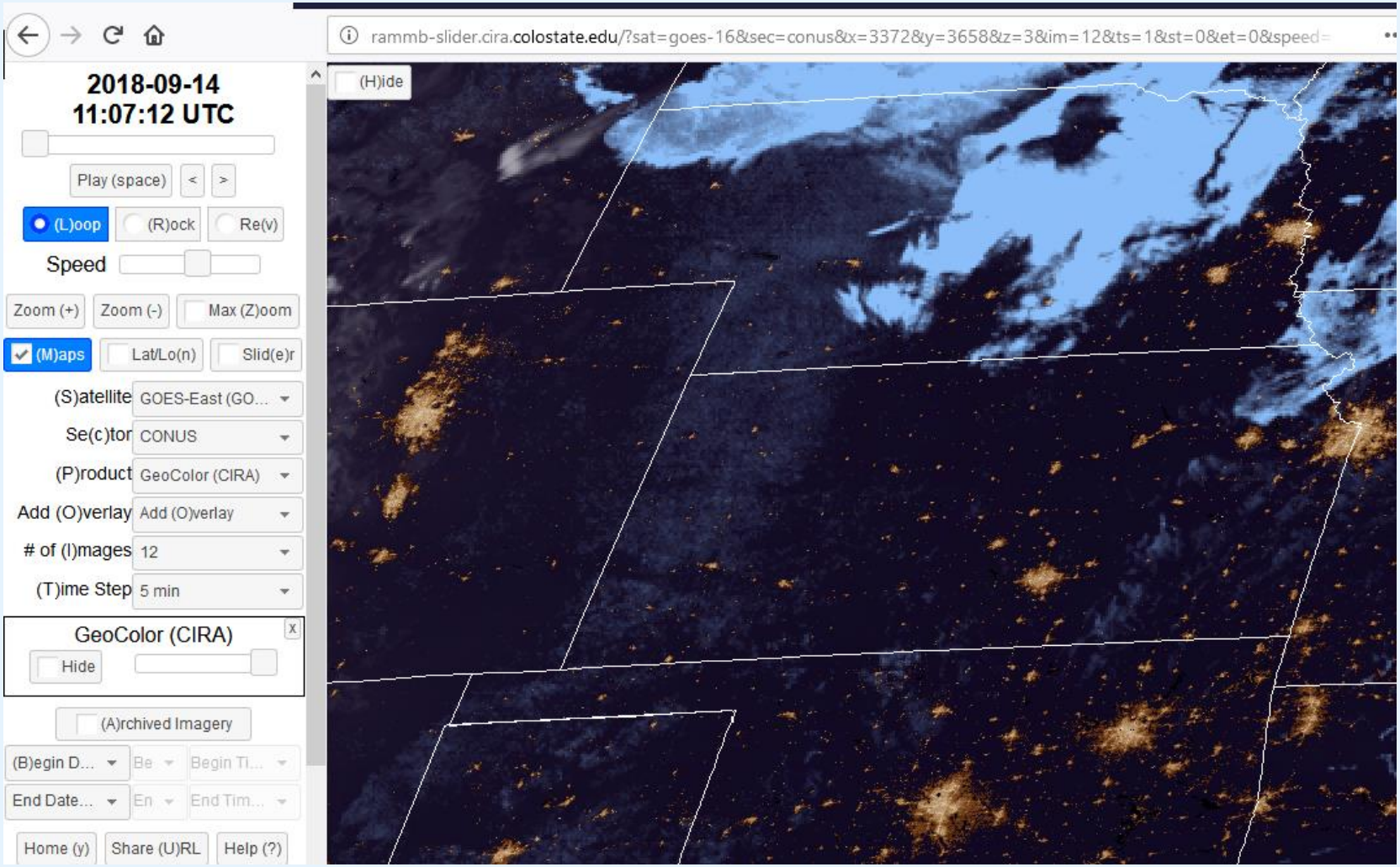

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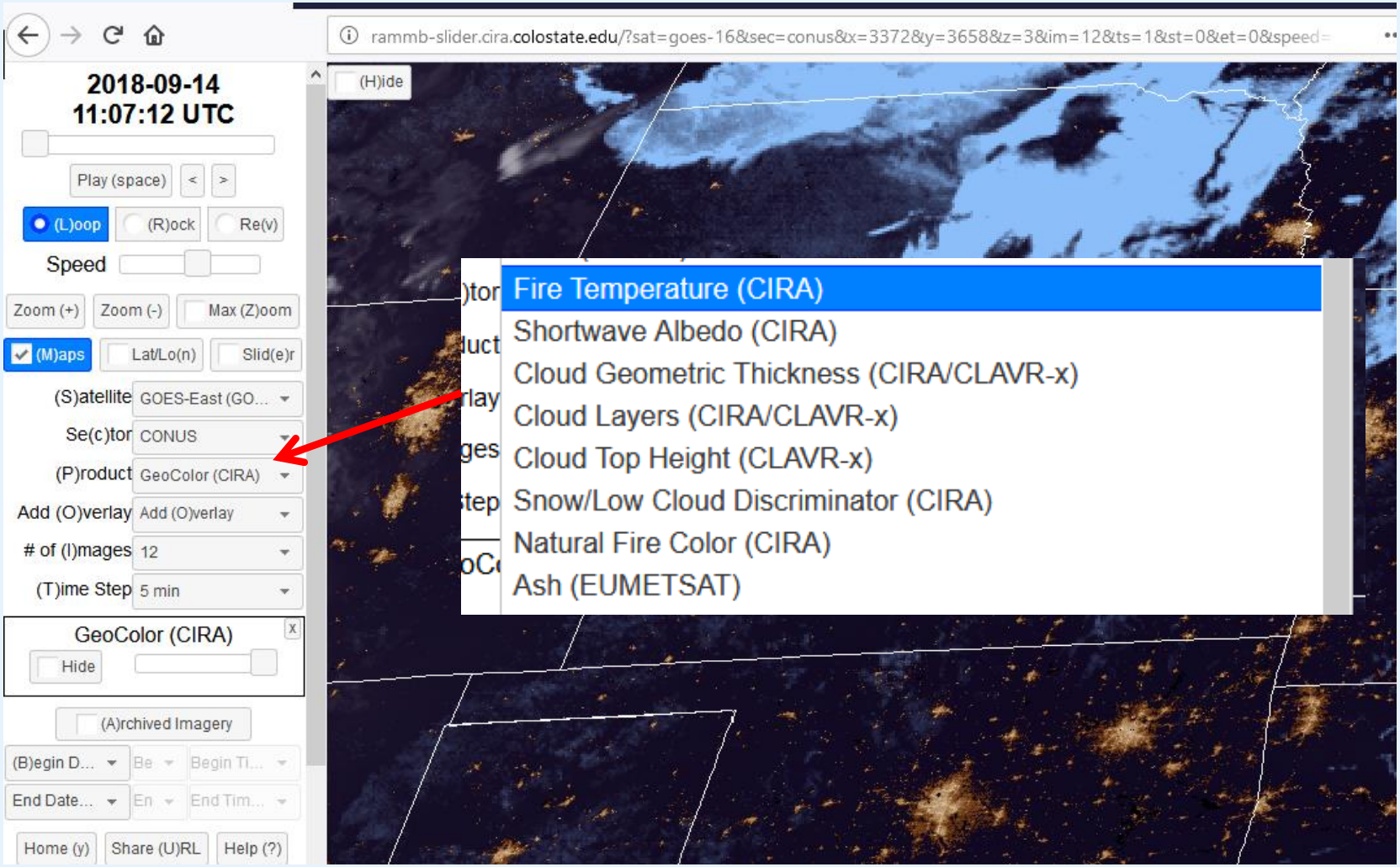

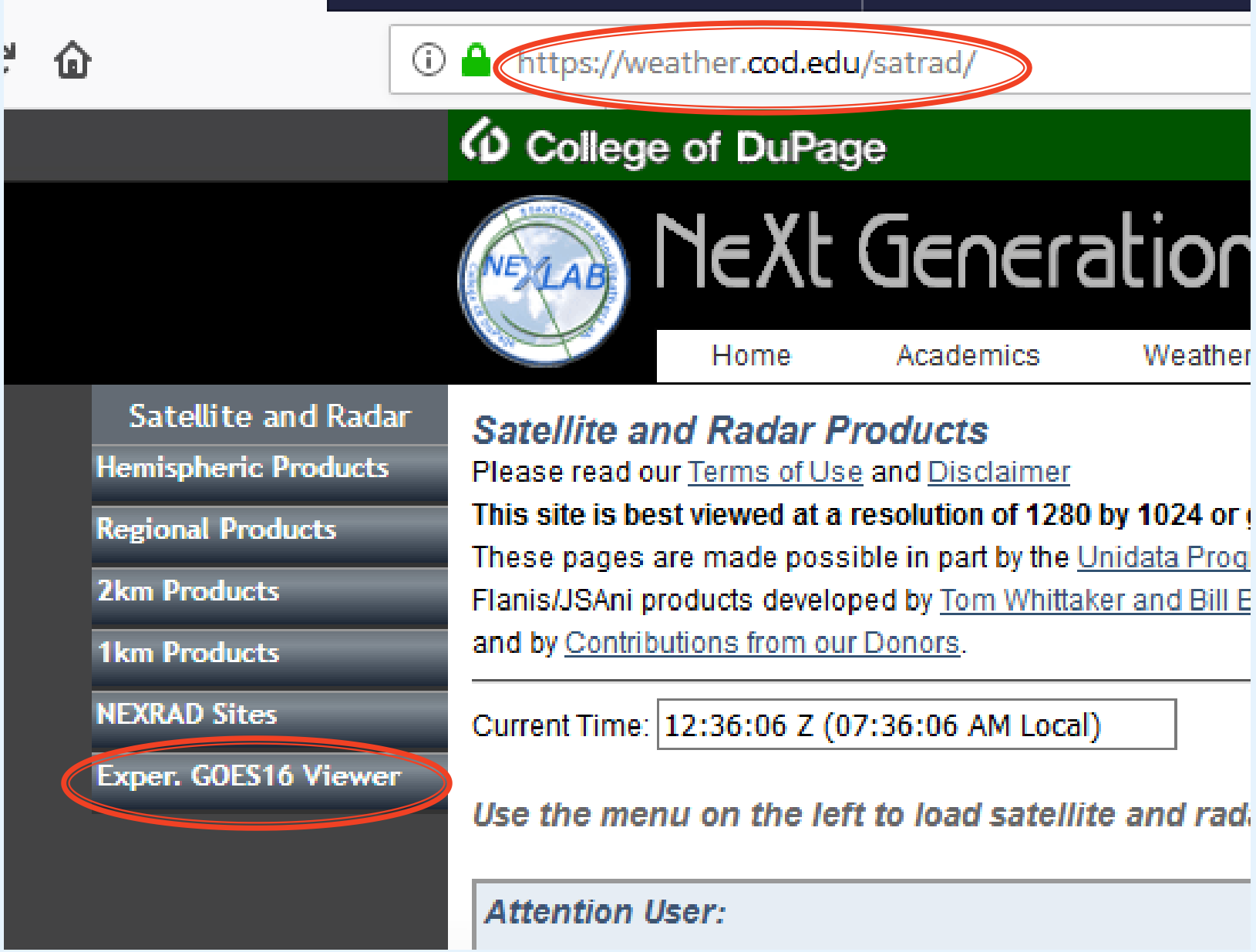
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2km Products
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Use the menu on the left to load satellite and rad
Attention User:

Questions

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