NWS Fire Weather Forecast, Wildland Fire Assessment Systems and OKMesonet Products Applications as Short Term Mitigation Tools for Emergency Response

Presentation for The Southern Climate Impacts Planning Program (SCIPP)

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OBJECTIVES

- Demonstrate how we are using your products
- Show you our method of use
- Show you our challenges with interpreting products
- To hear your comments and suggestions on our method
Mitigation in This Context

- Prevent Responder Injuries
- Prevent Civilian Injuries
- Prevent Loss or Damage to Responder Equipment
- Prevent Loss or Damage to Values—Homes, Barns, Farm Equipment, etc.
- Prevent Loss or Damage to Environment
Resources

- National Weather Service
- Wildland Fire Assessment System
- Oklahoma Mesonet
- Locally Produced
NWS Fire Weather Forecast Product

- Temperature
- Relative Humidity
- 20 Foot Wind
- Transport Wind
- Spread Index
- Low Level Stability
Spread Index

- Replaced Burn Index
- Intuitive
- Easy to Remember
- Transferable
- SI is not ROS
Low Level Atmosphere

- **NWS – Stability – Pasquill Class**
  - A is for Awful
  - B is for Bad
  - C is for could go either way

- **WFAS – Severity – Haines Index**
  - 2 to 6
  - 6 is most severe
WFAS Product

- Dead Fuel Moisture
  - 10 Hour DFM
  - 100 Hour DFM
WFAS Product

- KBDI
  - Most useful during late summer through early fall with droughty weather
  - Especially when associated with extended exisstance of high pressure area
“Keeping up with the Okies”

- Eastward movement of fire conditions
- Sallisaw-T
- Wister-T
- Cookson-R
- Broken Bow-P
Local Products

- Fuel Survey
  - Greenness
  - Curing
- I Hour Dead Fuel Moisture
- Leaf Fluffiness
- Personnel Capacity
Synergize

- Influence Public Behavior
- Influence Responder Behavior
- Make Strategic and Tactical Decisions
Information Ramp Up-Public

Two Critical Messages

1. Prevent Accidental or Intentional Ignitions
2. Early Notification of Out of Control Fire
   - Dispatch Center
   - Local Media
   - Website
   - Social Media
   - Signs Posted
   - CodeRed
Info Ramp Up to Responders

- Daily Announcements on Nets
- Emails
- Text Messages
- Website
- Social Media
- CodeRed
Responders know basic fire stuff
- Fire Triangle
- Fire Behavior at S-190 level
- Skill and Equipment

TRAINING RESPONDERS IS KEY!
- Briefings at Fire Chiefs Meetings
- Presentations at Fire Departments
- Briefings at AFC Wildland Fire Class
- Severe Weather Workshop
Incident Management

- Today’s SIT / STAT
  - Fuel Survey
    - Greenness
    - Curing
  - 1 Hour Dead Fuel Moisture
  - Leaf Fluffiness
  - Personnel Components Available
Incident Management

- AT FIRE SCENE
  - Actual Fuel
  - Topography
  - Personnel Components Assigned & Available
  - Observed Weather
  - Values
Decisions Made Better—Preventing Injuries and Damage

- What suppression tactics are we going to use?
- How much do we give to fire?
- Where can we park?
- Mop up decisions.
- Resources needed
How are we measuring Success?

1. Increased number of Responders calling for:
   - Forecast
   - Prescribed Fire Advice
   - Spot Forecast during event
   - Advice on Mop up
   - To report Staffing Shortage for day or week, etc.
   - To report seeing Castle Clouds
How are we measuring Success?

2. Better On Scene Risk Management
   - Safer Suppression Actions
   - Survival Attitude
   - Fewer Trucks Stuck
Thank You Note To:

- Climatologist
- Fuel Specialist
- Course Developers
- Workshop Sponsors & Host
- NWCG, NWS, COMET, MESONET, NIFC, etc.
- Old Farmers, Timbermen and Firefighters who have helped me understand weather’s influence on wildland fire behavior

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