Challenges facing wildland fire forecasters

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Predictive Services
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Predictive Services

- Established in 2001
- Decision-support for fire management and resource distribution
- 10 geographic area units
- National Office in Boise, ID
- 23 meteorologists
- 3 fire analysts
Predictive Services

❖ Support strategic planning for and operational management of wildland firefighting resources

❖ Three key functional areas:
  ❖ Fire weather and climate
  ❖ Fuels and fire danger
  ❖ Fire activity and resources intelligence
Challenges

- What are we forecasting?

Eagle Creek Fire, Columbia River Gorge 4 Sep 2017
Challenges

- What are we forecasting?
- What are the business needs?

La Tuna Fire, Burbank, CA, 2 Sep 2017
Challenges

- What are we forecasting?
- What are the business needs?
- Spatial and temporal scales?

2017 Fire Perimeters (from GeoMAC)
What are we forecasting?

- Ignitions
- Number?
- Probability?
- Cause?
What are we forecasting?

- Ignitions
- Number?
- Probability?
- Cause?
- Size
- Threshold?
- Growth?

<table>
<thead>
<tr>
<th>Incident Name</th>
<th>Unit</th>
<th>Size</th>
<th>%</th>
<th>Ctn/Comp</th>
<th>Est</th>
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<td></td>
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<td>Acres</td>
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<tr>
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What are we forecasting?

- Ignitions
  - Number?
  - Probability?
  - Cause?
- Size
  - Threshold?
  - Growth?
- Environmental Conditions?
What are the business needs?

- Wildland fire management
- Safety
- Suppression
- Natural resources management
- Firefighting resources management
Spatial and temporal scales

- **Spatial scales**
  - Local unit/incident
  - Geographic area
  - National
  - International

- **Temporal scales**
  - Burn periods
  - Days to weeks
  - Seasonal
What can we do about it?

- Clearly define what we’re forecasting
- Develop new forecast models.
- What is normal in monthly/seasonals?
- Tie forecasts to business needs
  - Tactical/strategic decisions
  - Economics
- Just plain ol’ weather forecasting
Questions?

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