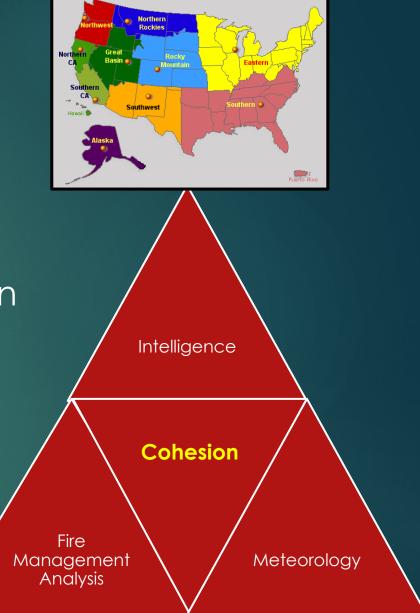


## Predictive Services

JUNE 22ND 2020 FIRE RESTORATION GROUP MEETING

### What is Predictive Services?

- ▶ Intelligence
  - ▶ Track fire business-resource mobilization
- Weather
  - Predict weather patterns/assess climatology-fuel conditions
- ▶ Fire Management Analyst
  - ▶ Put it all together



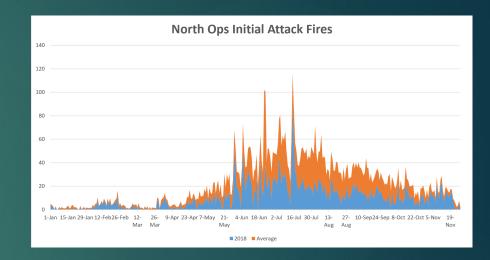
### Predictive Service Purpose

- ▶ 2000 Fire Plan intent: Provide decision support to Geographical and National Leadership.
  - ▶ Strategical planning (short & long range)
    - Analytics and assessments (fire behavior, fuels, critical weather, climatology, resource availability)

# Net Effect: Support preparedness decisions

### Leveraging Predictive Service

- Daily Situation's Report & News-Notes
  - ► General and Large fire activity/Planning Lvl
  - ► RX get shut down due to limited resources
- 7 Day Significant Fire Potential
  - ▶ Four tiered risk
  - ▶ Planning Lvl
  - Confidence
- Webcast
  - Weather and fuel info (3-5 min)
  - Confidence
- Smoke Transport and Stability Outlook
  - General ventilation trends (1-5 days)
  - ► Highlight clean-out and stagnant air periods



### Leveraging Predictive Service

- ▶ Daily 1300 smoke call
  - General weather assessment
  - Project and incident discussions
- ▶ Fuels charts
  - ► Track NFDRS indices and outputs
  - Updated daily
- Fuels and Fire Behavior Advisories
  - ► Highlight critical-unusual fuel/fire behavior alignments
- Seasonal Outlooks
  - ▶ Look out 4 months
  - Significant fire potential

Northwestern California August 3, 2018 - August 17, 2018

ubject: Potential for extreme fire behavior and rapid fire spread due to low live and dead fur

iscussion: A drier than normal rainy season has led to drier than normal fuels and soils across the North Ops region. Wet spring weather was also ideally timed to produce a heavier than normal fine fuel crop at mid and lower elevations and a near to slightly above normal green-up phase among perennial live fuels. Perennial live fuels are also now on their annual drying trend. Now that these fuels are readily available, extreme fire behavior can be expected from continuous fuels independent of topography or wind influences

The fine fuel crop in the foothills of the eastern Sacramento Valley had reached more than 180% of normal higher than the 120% reading last year North Ops' western PSA's 1000-hr fuel moisture charts show heavier fuels are drier than normal and at or below 10th percentile values. In some instances they are setting new record minimum values. Extreme fire behavior and rapid elevations below 7000 ft. and these conditions will spread to even higher



### Concerns to Firefighters and the Pu

- Any time the fire establishes itself in a continuous fuel bed, large fire growth is highly likely and containment measures may be ineffective.
- Large fire growth and intensity should be expected with any new or on going fires, particularly under critical fire weather conditions. This includes all areas of fire perimeters, even the normally les active flanks and heel.
- Energy Release Component (ERC) values at numerous weather stations have been running well above average. Some are above the 90th percentile or setting new record highs. Ignition potential remains very high, and new or spot fires can rapidly grow and outpace suppression efforts.
- Neither previous-year fire scars nor fuel transitions are acting as typically effective fire spread

- Modify tactics to account for potential high rates of spread and high resistance to control
- Ensure firefighters have LCES for both direct and indirect tactics, and evaluate hourly.
- Assume that fire growth and behavior may exceed anything previously experienced

### Net Use: Situational Awareness

### Summary

- ▶ PS provides guidance for preparedness
- ▶ PS interprets and looks for "gotcha" periods
  - Critical Weather-Fuel alignments
  - ▶ Unusual fire business
- PS products-services could be used to interpret "fringe" burn windows
  - ▶ Site specific regional burn ban waver
  - Where are most critical wind speeds within a designated High Risk-Red Flag area
  - Unusually high confidence in a weather pattern beyond the normal confidence horizon