



# WRP Webinar on Wildfire & Forestry

Presented by:

- Chief Ken Pimlott, State Forester, CA Department of Forestry & Fire Protection
- Mr. Mike Zupko, Executive Manager, Wildland Fire Leadership Council
- Mr. Troy Timmons, Director of Strategic Initiatives, Policy Advisor, Western Governors' Association

# Presentation Outline

- History, mission and key activities of our organizations
- National Cohesive Wildland Fire Management Strategy
- Outlook and trends in wildfires in the West
- WGA Chairman's Initiative
- Collaborative efforts and best practices

# Presentation Outline

State, Regional, National





**CWSF**

**COUNCIL OF WESTERN  
STATE FORESTERS**

**The Council of Western State Foresters (CWSF) is a nonpartisan, nonprofit membership organization comprised of state, territorial and commonwealth foresters whose role is to protect, conserve and enhance Western and Pacific Island forests.**

CWSF's membership is comprised of 17 Western U.S. state foresters and six U.S.-Affiliated Pacific Island foresters. CWSF takes a broad and comprehensive approach to forest management and provides expertise on the many complex and interrelated factors at play in Western forestry.

Though there is great diversity across Western and Pacific Island forests, there are key forest management issues shared across forests types and jurisdictions. Addressing these pressing issues in forest management and conservation is the focus of CWSF's work.







## WESTERN FORESTRY LEADERSHIP COALITION

*The Mission of the Western Forestry Leadership Coalition (WFLC) is to promote science-based forestry management that serves the values of society and ensures the health and sustainability of Western forests.*



# WESTERN FORESTRY LEADERSHIP COALITION

## **Goals**

**Launch** initiatives that position the West to respond to the forest resource needs of the public.

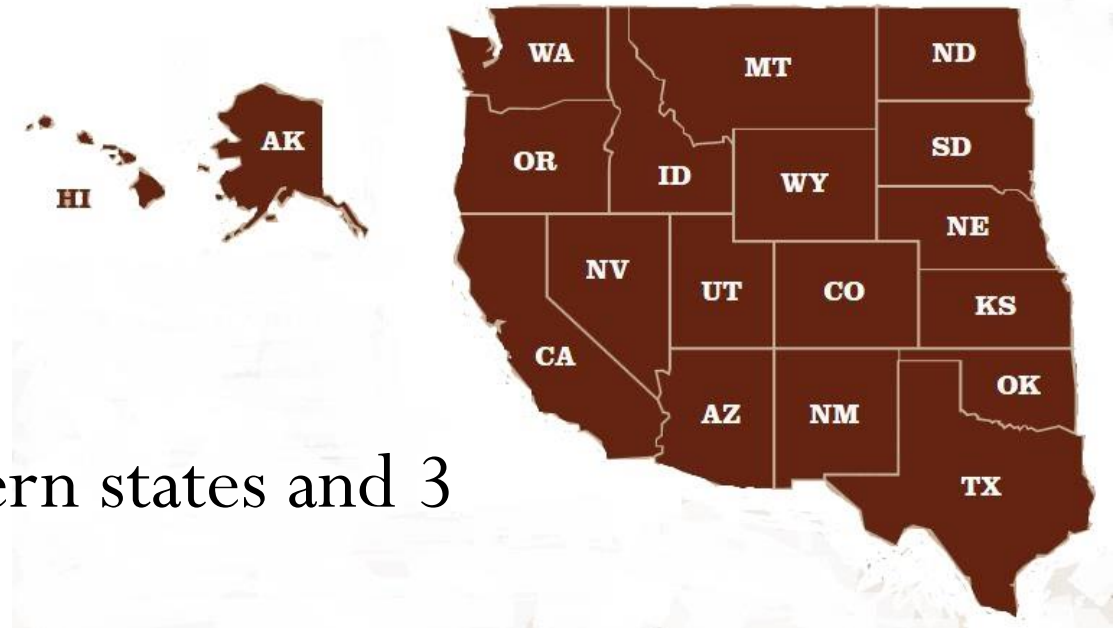
**Strengthen** the voice of Western forestry as it relates to matters of forest policy and land management.

**Facilitate** the development, integration and implementation of Western State and Private Forestry programs.

**Maximize** federal and state financial investments by combining resources and partnerships across agency and ownership boundaries.

**Tackle** emerging West-wide issues by providing research, recommending policies, and coordinating efforts across land ownerships.

# Western Governors' Association



- WGA – 19 western states and 3 U.S. flag islands
- WGA serves as an instrument of the Governors for bipartisan policy development, information-sharing, and collective action on issues

# Western Governors' Association

- Chair: Steve Bullock, Governor of Montana
- Vice Chair: Dennis Daugaard, Governor of South Dakota



# Wildland Fire Leadership Council

## Mission

- Dedicated to consistent implementation of wildland fire policies, goals and management activities.
- Provides strategic oversight to ensure policy coordination, accountability and effective implementation of long-term strategies.



# Wildland Fire Leadership Council

## History

- Stemmed out of National Fire Plan in 2002
- Chartered by Secretaries of Agriculture, Interior, Homeland Security and Defense
- Forum for high-level dialogues
- Informs wildland fire policies, goals and management activities



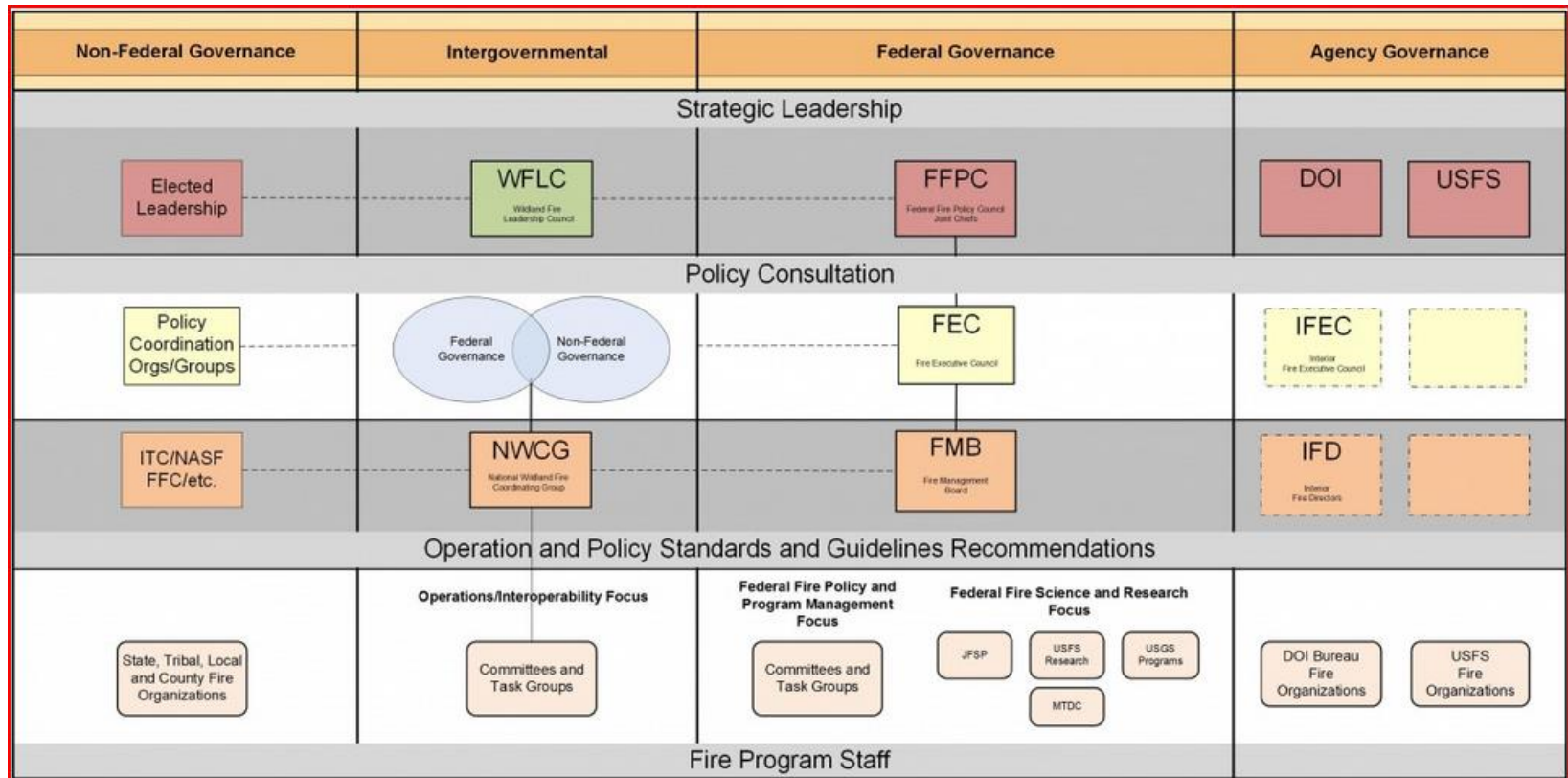
# Wildland Fire Leadership Council

## Membership

- USDA Undersecretary/Deputy and DOI Assistant Secretary (*co-chairs*)
- Department of Defense, Assistant Secretaries (2)
- FS and DOI Bureau Chiefs (BLM, FWS, NPS, BIA, USGS)
- FEMA/USFA Administrator
- National Governors' Association (2)
- National Association of Counties
- National League of Cities
- Intertribal Timber Council
- International Association of Fire Chiefs
- National Association of State Foresters



# Wildland Fire Governance Structure





# COHESIVE STRATEGY

# Evolution towards Cohesive Strategy

- Increasing Duration and Severity of Fire Seasons
- Decrease in Firefighting Workforce
- Reduced Resilience of the Landscape
- Increase in Development in the WUI
- Federal Fire Funding Challenges
  - Fire Borrowing
  - Structure of Funding



*“Safely and effectively extinguish fire, when needed; use fire where allowable; manage our natural resources; and as a nation, live with wildland fire.”*



# What is the Cohesive Strategy?

- A **national, collaborative** approach to addressing wildland fire across all lands and jurisdictions
- Developed with input from wildland fire organizations, land managers and policy-making officials representing all levels of governmental and non-governmental organizations
- 2009 FLAME Act - Directs Departments of Agriculture and the Interior to develop a Cohesive Wildland Fire Management Strategy – 5 year process
- GAO recommendations
  - Articulate potential approaches
  - Estimate costs of each approach
  - Describe trade-offs associated with each approach
- Three Phase Process
  - I – The Blueprint
  - II – Regional Assessments
    - Assessment of situation
  - III – Analysis and Action Plans
    - Risk analysis
    - Alternatives and actions
    - Implementation strategy
- Three Focus Areas
  - Restore and Maintain Landscapes
  - Fire Adapted (human) Communities
  - Effective and Efficient Wildfire Response



COHESIVE..STRATEGY

Effective../..Efficient..Response

Fire..Adapted..Communities

Resilient..Landscapes



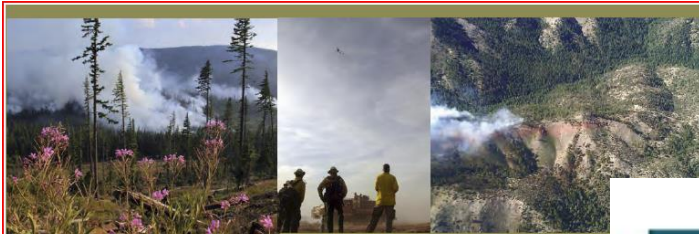
# All Hands – All Lands

- **Restore Resilient Landscapes:** Landscapes across all jurisdictions are resilient to fire-related disturbances in accordance with management objectives
- **Fire Adapted Communities:** Human populations and infrastructure can withstand a wildfire without loss of life and property
- **Wildfire Response:** All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions

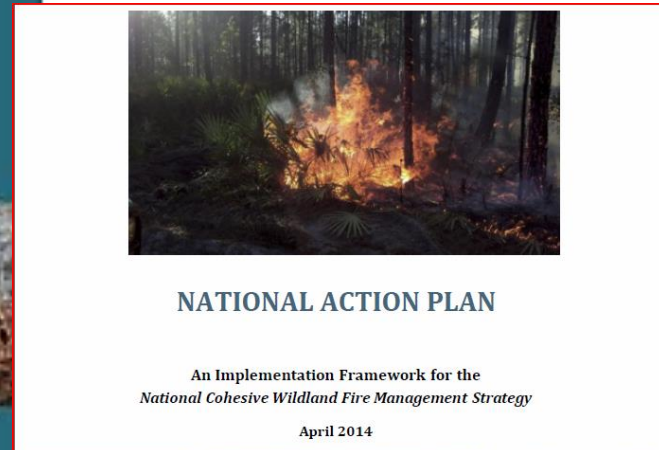
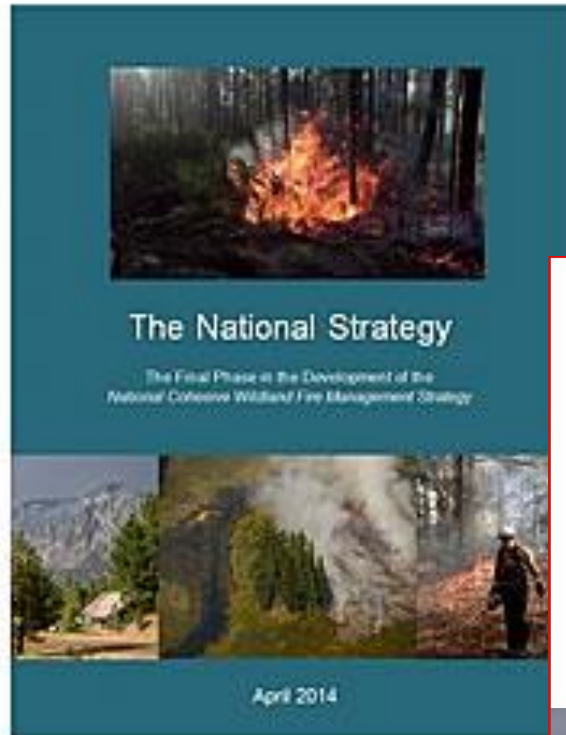
## Elements of the Cohesive Strategy



# National Development



Scientific Basis for Modeling Wildland Fire Management  
The Phase II Report of the National Science and Analysis Team



<http://forestsandrangelands.gov/strategy/index.shtml>



*The Cohesive Strategy is not a new program — it is a mechanism to promulgate a way of behaving that prioritizes and leverages resources, collaborates across jurisdictions, programs and physical boundaries, and ensures shared-decision space to achieve ecological, economic and social objectives.*





# National Considerations

## High priority barriers and critical success factors

### Vegetation & Fuels

Increase fuels management on private lands

Increase fuels management on federal land

Enhance the FEMA pre-disaster Mitigation Program

### Home, Communities & Values

Growth management, land development and zoning laws

Assisting communities at risk

### Managing Human-Caused Ignitions

Enforceable fire prevention ordinances at state and local levels

### Effective & Efficient Wildfire Response

Inefficiencies in the national qualification standards

Investment in firefighting workforce

### Administrative Efficiency

Remove policy barriers and process complexities for sharing resources

Improve wildland fire data

Inter-governmental wildland fire governance



# National Implementation (select examples)

- Department of Interior
  - Risk Based Wildland Fire Management
  - Resilient Landscapes Program
  - Rangeland Secretarial Order
- US Forest Service
  - Two Chiefs' Projects (with NRCS)
  - CS Pilot Projects
  - Local Agreements and Community Focus
  - CFLR and Watershed Restoration Projects
- USFA – grant program expansion of wildfire
- Fire Adapted Communities Network and Expansion
  - FAC Learning Network - TNC/Watershed Center
  - IAFC Ready, Set Go! Initiative
  - NFPA Firewise



# Additional National Opportunities

- Good Neighbor Authority
- Enhanced flexibility with Stewardship Contracting
- Targeted Federal Assistance - Targeting high risk on federal lands matched with state and local partners stepping up
- Reassessing Community Assistance Capabilities
- Continued Focus on FAC locally
- Shared Resources – Expanded agreements and training/recognition



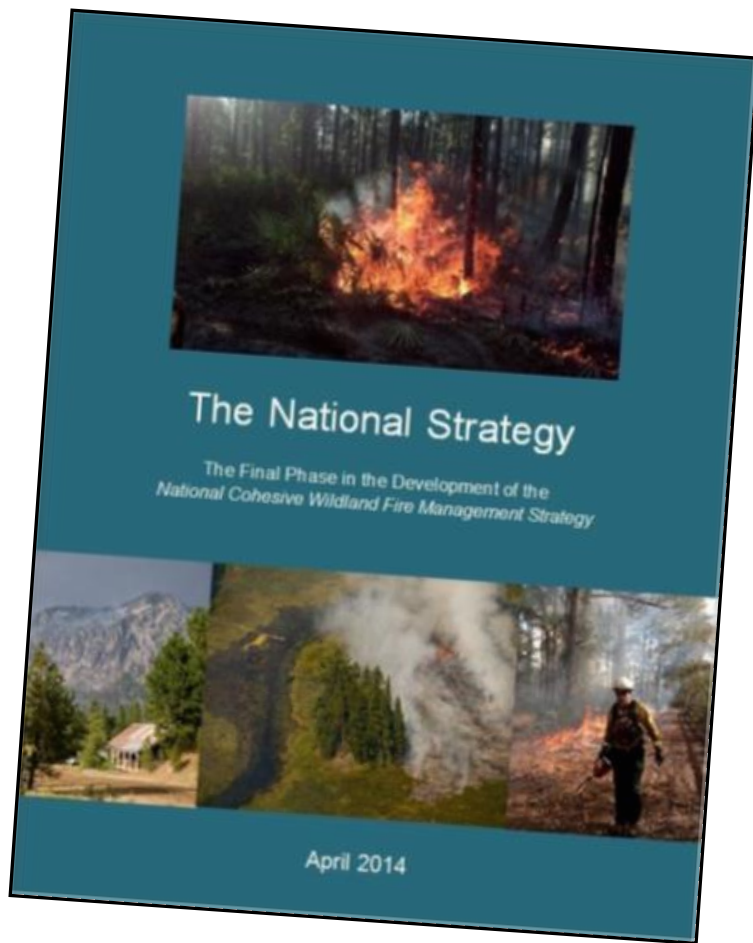
# The Cohesive Strategy Organization



# Regional Development and Implementation

- Regional Strategy Committees formed early 2011
- Regional Risk Analysis Completed 2012
- Regional Action Plans Completed 2013
  - Multiple actions and tasks offering options
  - Collaborative framework established and nurtured





Why should you care about implementing the Cohesive Strategy?



# Regional Development and Implementation

*What are important actions the regions (**WRP**) or states (or locals) could take to address the 3 CS Goals?*

- **Convene leaders** to identify priority landscapes and issues
- **Use current collective planning resources** to identify landscapes, set priorities, and identify projects
- **Understand values to be protected**
- **Use the collaboration to communicate and coordinate** among CS partners.
- **Encourage guidance to facilitate program integration** as an inter-agency priority (program alignment)
- **Share successes** (collaborative efforts, projects, grants, community actions)

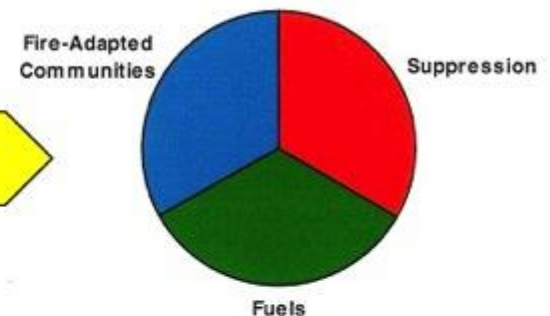


# National Cohesive Wildland Fire Management Strategy

Restoring Resilient Landscapes - Creating Fire Adapted Communities - Responding to Wildfires

## Opportunities for local engagement

### Cohesive Strategy



### Fire-Adapted Community Process





# WFLC Current Activities

New business model for an effective govt – reduce redundancy. Include key E.O. and S.O.

Mission centered and operational readiness

"Big data, big science, shared stewardship"

"Solution is in the economy, not the treasury"

# WFLC Current Activities

WFLC (*areas of joint opportunity in the short and mid-term*)

- Landscape Level Collaboration
- Smoke Management and Air Quality
- Environmental Compliance
- Reducing Risk to Communities
- *Efficient and Effective Response*

# WFLC Current Activities

## Landscape Level Collaboration

- Center of Excellence

## Smoke Management and Air Quality

- EPA messaging
- Interest in EPA R-10 to expand use of Rx Fire
- OR very interested in revision to SMP
- Other EPA regions have expressed similar interest

## Reducing Risk to Communities

<http://www.southsoundprairies.org/> - Puget Sound (WA) Joint Base Lewis-McChord , TNC, WADNR, Center for Natural Lands Management (Rx Fire, grazing, bayshore)

<https://www.army.mil/article/64103/169586>

**“CalTRES”** – Prescribed Fire councils, FLN, USFS, CalFire, NRCS and others – Prescribed fire Training Exchange and flagship initiative of state Rx Fire MOU

# 2017 Fire Season Status & Outlook

**Bryan Henry**

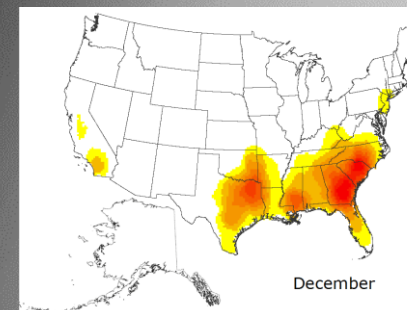
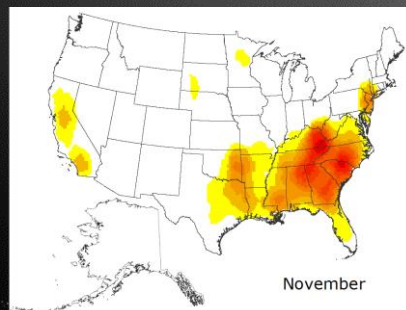
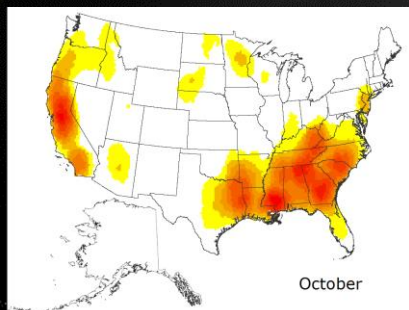
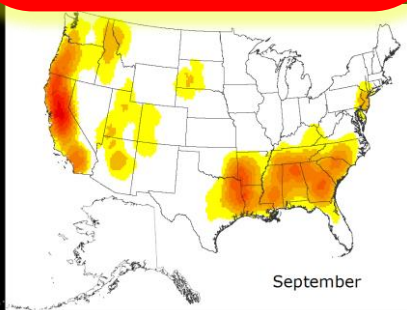
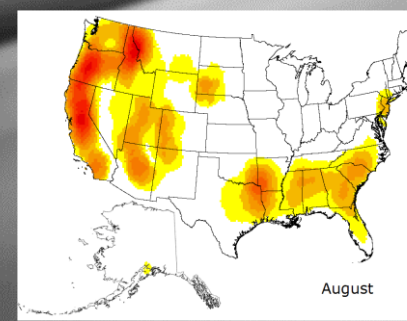
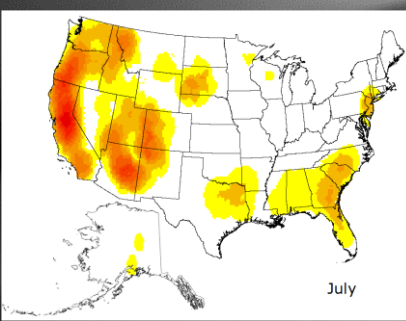
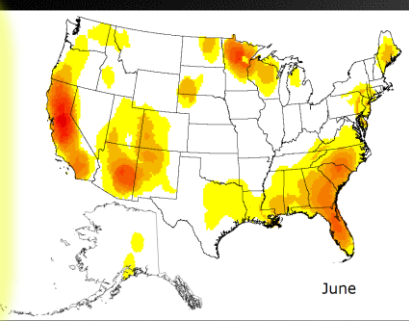
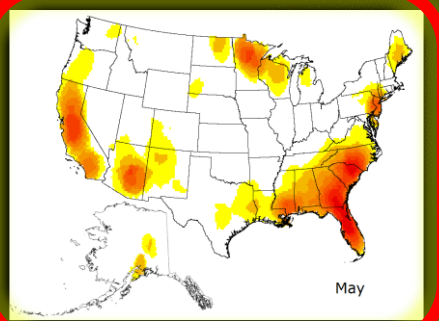
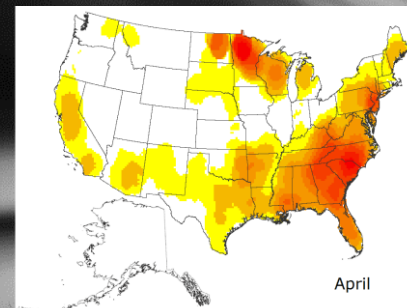
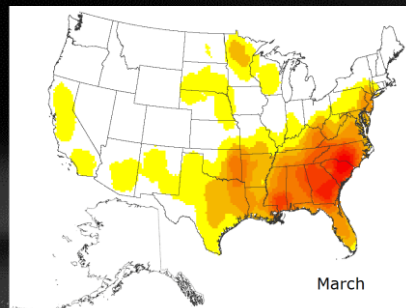
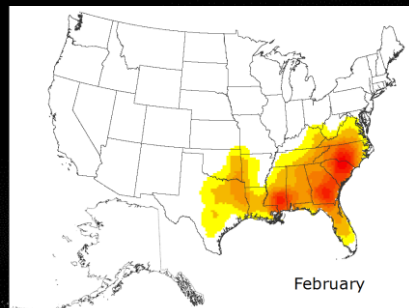
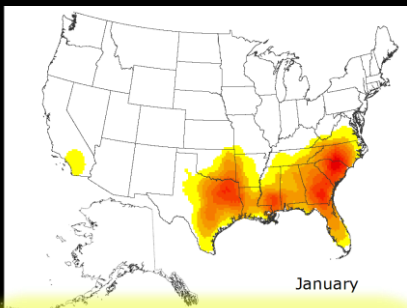
Assistant National Program Manager  
*Predictive Services*





# Predictive Services

## Wildfire Seasonality in the U.S.





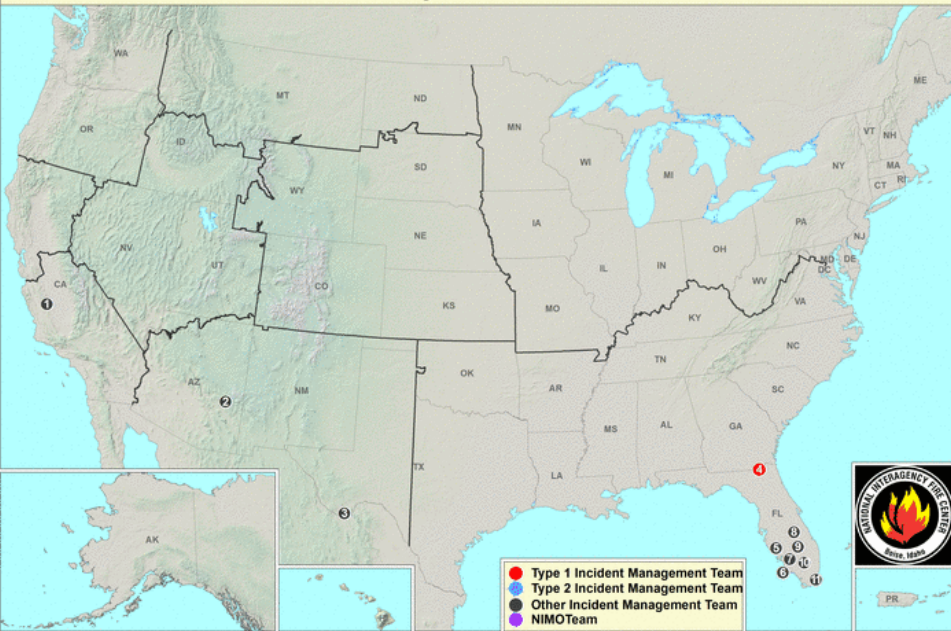
# Current Large Incidents

May 15, 2017



# Current Large Incidents

May 19, 2017



- 1 ELM 2
- 2 DOVE
- 3 CROWN MOUNTAIN
- 4 WEST MIMS
- 5 RAIN TREE BLVD.
- 6 30TH AVE
- 7 5TH ST
- 8 CRANE ISLAND
- 9 HUTTO
- 10 COWBELL
- 11 MOTHER'S DAY

Fires and Acres Year-to-Date (by Protection):

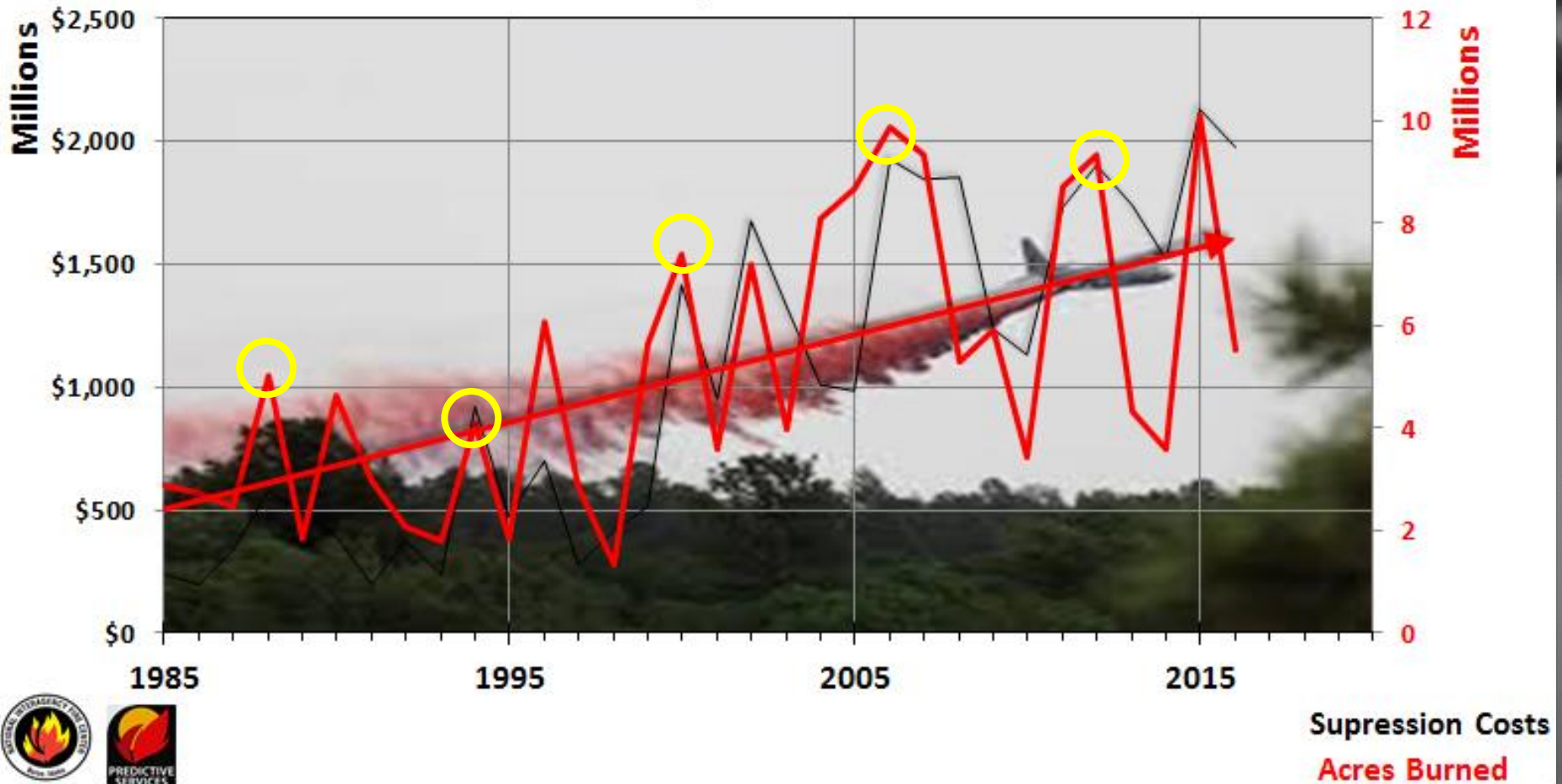
Area		BIA	BLM	FWS	NPS	ST/OT	USFS	TOTAL
Alaska Area	FIRES	0	19	0	0	46	3	68
	ACRES	0	1,996	0	0	43	1	2,040
Northwest Area	FIRES	1	4	1	0	24	14	44
	ACRES	1	0	1	0	52	2	56
Northern California Area	FIRES	0	1	0	1	125	11	138
	ACRES	0	401	0	1	195	7	604
Southern California Area	FIRES	2	11	0	3	421	47	484
	ACRES	4	30	0	3	8,407	283	8,727
Northern Rockies Area	FIRES	193	4	2	0	75	5	279
	ACRES	524	39	207	0	481	1	1,252
Great Basin Area	FIRES	4	32	0	3	57	4	100
	ACRES	2	34	0	3	653	1	693
Southwest Area	FIRES	241	80	3	9	279	128	740
	ACRES	511	609	53	134	67,200	7,183	75,690
Rocky Mountain Area	FIRES	77	26	6	2	209	37	357
	ACRES	1,903	170	199	58	467,671	1,947	471,948
Eastern Area	FIRES	317	0	5	14	1,876	220	2,432
	ACRES	672	0	14	129	7,230	3,047	11,092
Southern Area	FIRES	255	8	29	24	16,614	295	17,225
	ACRES	60,250	36	134,745	52,944	1,226,981	24,307	1,499,263
<b>TOTAL FIRES:</b>		<b>1,090</b>	<b>185</b>	<b>46</b>	<b>56</b>	<b>19,726</b>	<b>764</b>	<b>21,867</b>
<b>TOTAL ACRES:</b>		<b>63,867</b>	<b>3,315</b>	<b>135,219</b>	<b>53,272</b>	<b>1,778,913</b>	<b>36,779</b>	<b>2,071,365</b>

Ten Year Average Fires (2007 – 2016 as of today)	22,273
Ten Year Average Acres (2007 – 2016 as of today)	900,074

# Current Fire Activity

# Historical (6 Year Cycle Emerging)

Acres Burned and Suppression Costs since 1985



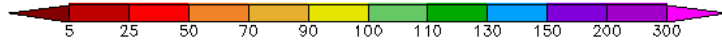
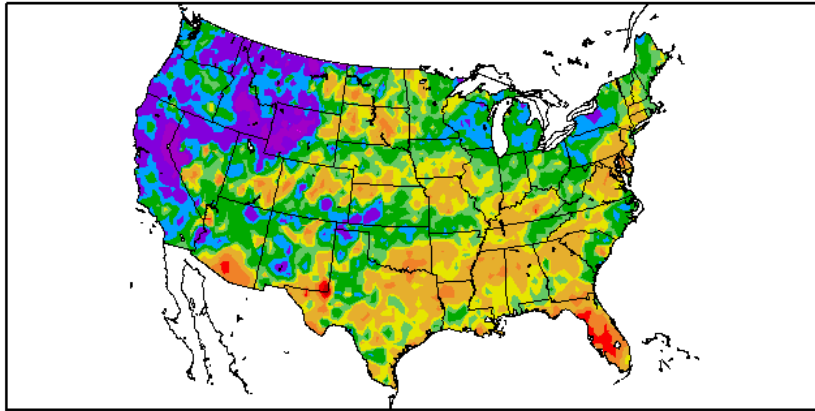
Suppression Costs  
Acres Burned



## Water Year – Since 01 Oct 2016

## Last 30 Days – Since 08 Apr 2017

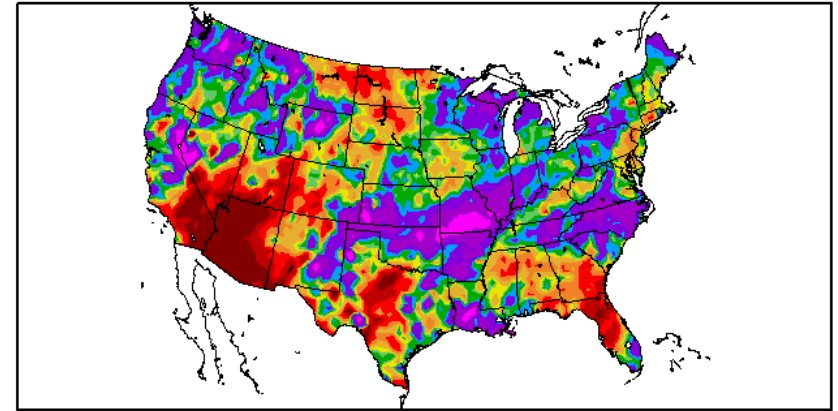
Percent of Normal Precipitation (%)  
10/1/2016 – 5/7/2017



Generated 5/8/2017 at HPRCC using provisional data.

Regional Climate Centers

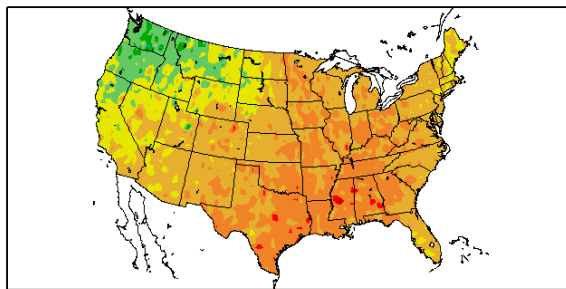
Percent of Normal Precipitation (%)  
4/8/2017 – 5/7/2017



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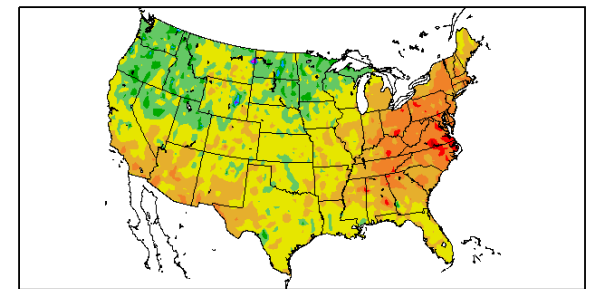
Departure from Normal Temperature (F)  
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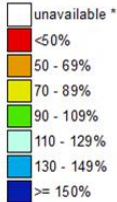
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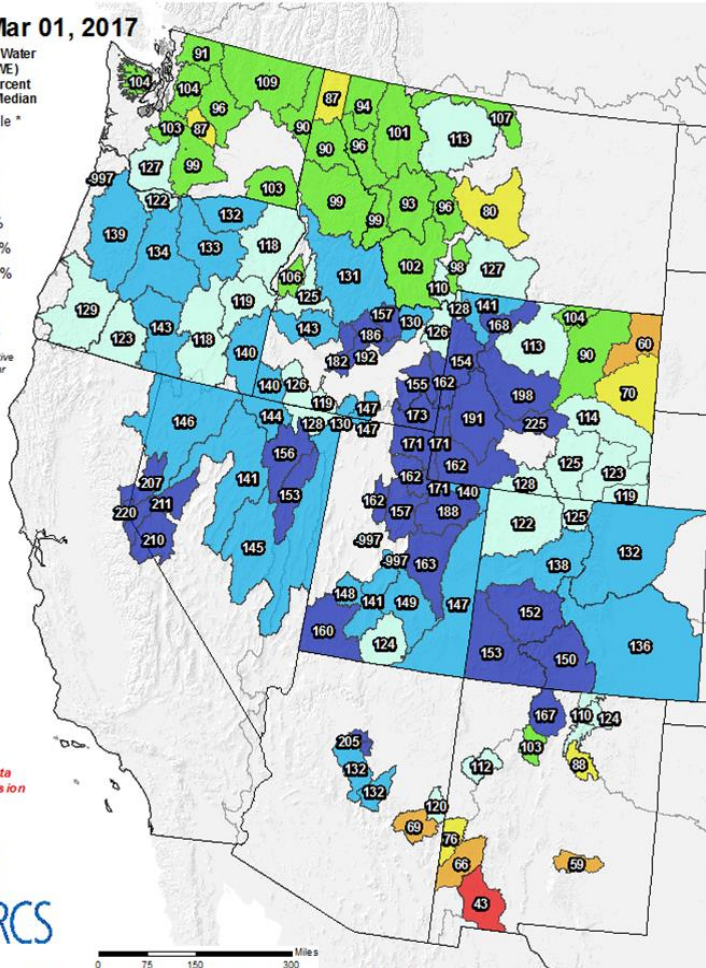
## Westwide SNOTEL Current Snow Water Equivalent (SWE) % of Normal

Mar 01, 2017

Current Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median



\* Data unavailable at time of posting or measurement is not representative at this time of year



Provisional data subject to revision



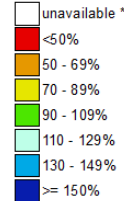
The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

Prepared by:  
USDA/NRCS National Water and Climate Center  
Portland, Oregon  
<http://www.wcc.nrcs.usda.gov>

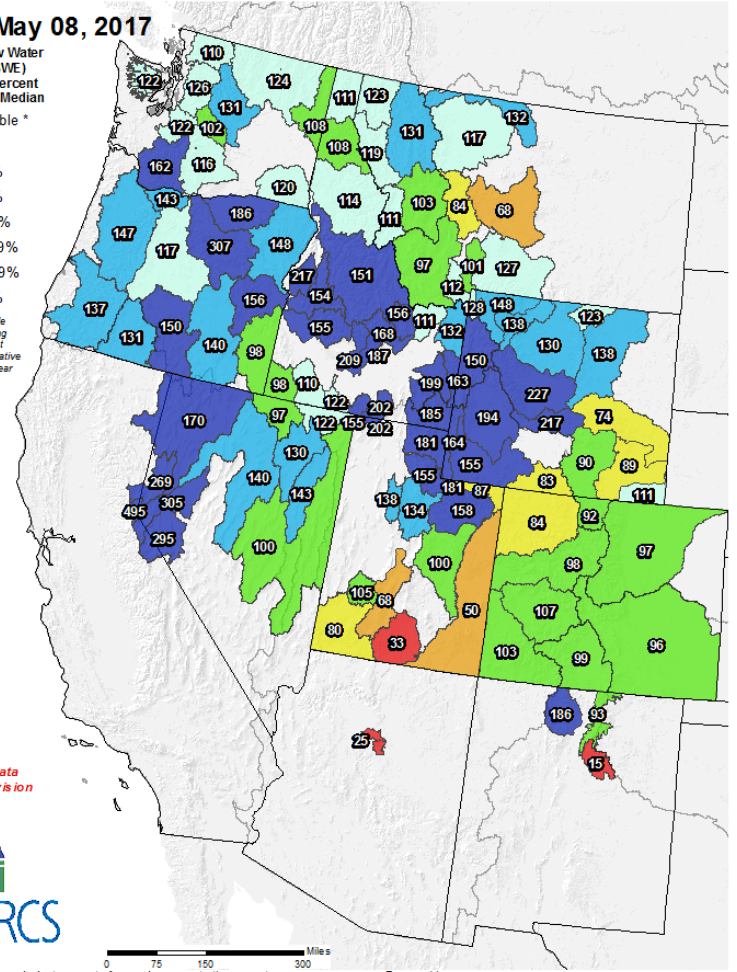
## Westwide SNOTEL Current Snow Water Equivalent (SWE) % of Normal

May 08, 2017

Current Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median



\* Data unavailable at time of posting or measurement is not representative at this time of year



Provisional data subject to revision



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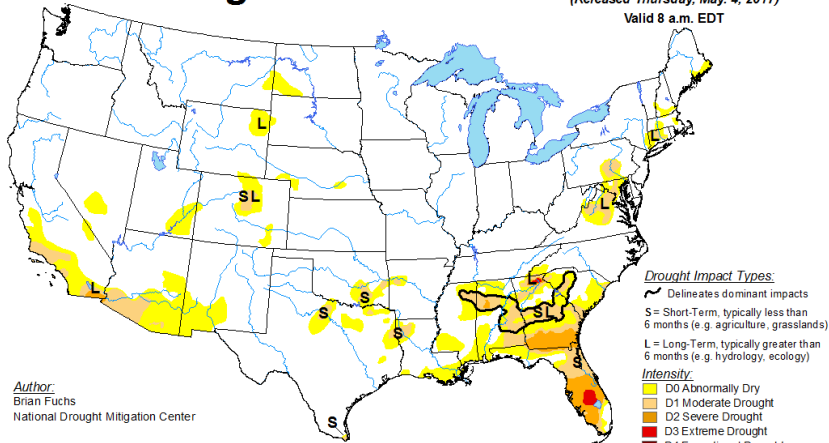
# Drought



PREDICTIVE SERVICES

## U.S. Drought Monitor

May 2, 2017  
(Released Thursday, May 4, 2017)  
Valid 8 a.m. EDT



### Drought Impact Types:

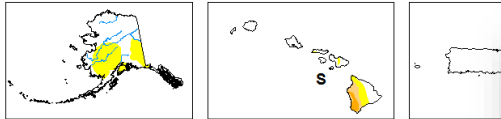
- ~ Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

### Intensity:

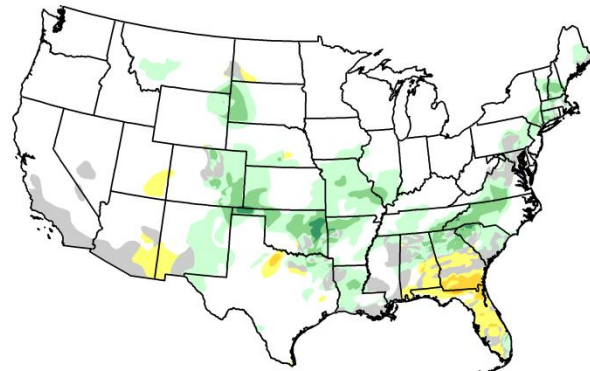
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for more details.

Author:  
Brian Fuchs  
National Drought Mitigation Center



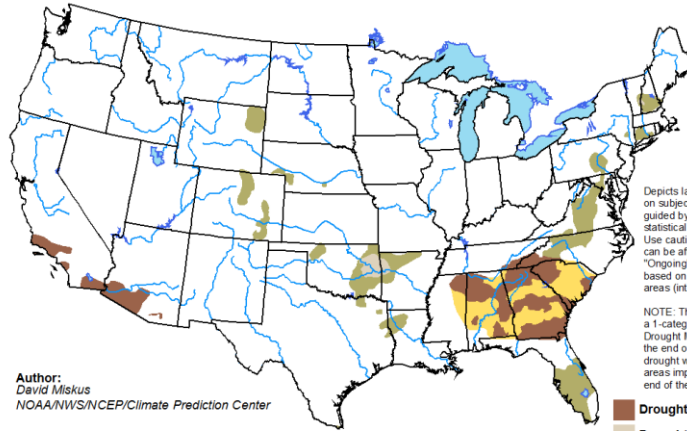
## U.S. Drought Monitor Class Change - CONUS 1 Month



- 5 Class Degradation
- 4 Class Degradation
- 3 Class Degradation
- 2 Class Degradation
- 1 Class Degradation
- No Change
- 1 Class Improvement
- 2 Class Improvement
- 3 Class Improvement
- 4 Class Improvement
- 5 Class Improvement

## U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for April 20 - July 31, 2017  
Released April 20, 2017



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



<http://go.usa.gov/3eZ73>



# Moisture Impact on Fuels

- Moisture is a double edged sword for fire activity.
- Less water means drier heavy fuels, lower moisture in live fuels, increased mortality.
- More water means more continuous brush, grass fuels, heavier fuel loads.

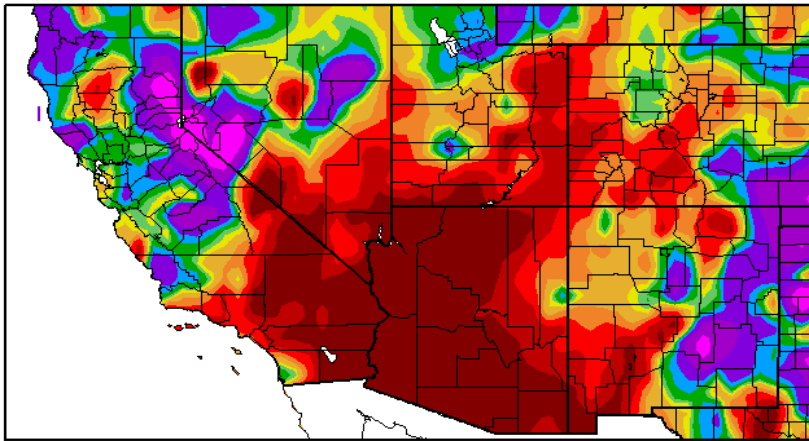




# Southwestern Season Developments



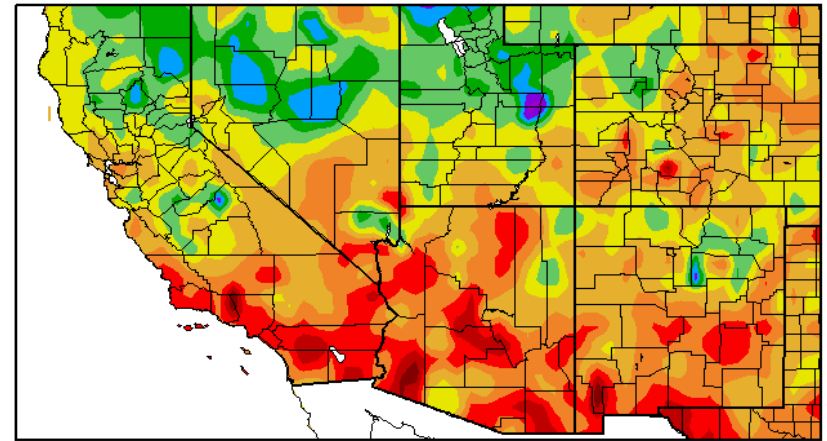
Percent of Normal Precipitation (%)  
4/8/2017 - 5/7/2017



Generated 5/8/2017 at HPRCC using provisional data.

Regional Climate Centers

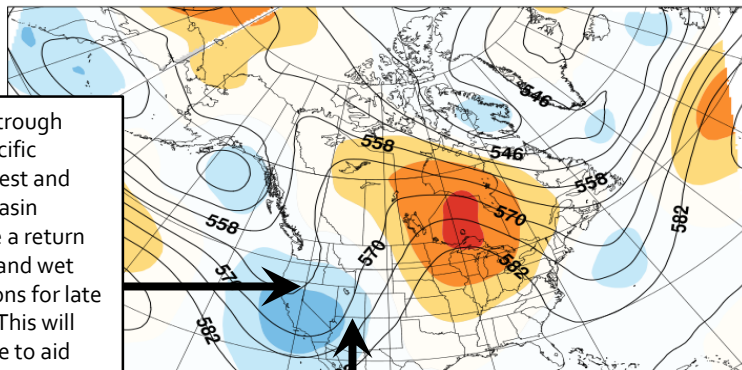
Departure from Normal Temperature (F)  
4/8/2017 - 5/7/2017



Generated 5/8/2017 at HPRCC using provisional data.

Regional Climate Centers

## CFSv2 Initialization: 2017-05-06, Forecast Period: 2017-06-03 -> 2017-06-09



Strong trough over Pacific Northwest and Great Basin indicate a return to cool and wet conditions for late spring. This will continue to aid grass growth and slow high elevation snow melt.

Breezy southwesterly flow pattern could indicate periodic critical fire weather conditions along Mexican border.

- Image taken from the CFS long range model.
- While accuracy of this model's data is sometimes suspect, it can do a fair job on predicting overall patterns.
- In this image, we are interested in the lines which indicate/infer wind flow from west to east.
- Colors indicate abnormal numerical values associated with the lines. Reds are higher than average (warmer). Blues are lower than average (cooler.)
- Potential impacts are shown on the map.

# Fuel Conditions and Weather Outlook



- **Slow melt of Western Snowpack could lead to delayed start in higher elevations if current trends continue. Bumper crop of fine fuels expected in the lower elevations.**
- **California has for the most part exited the multi-year drought. Lingering snowpack is > 300% of normal in several locations!**
- **Long term drought conditions appear to be worsening across the Southeast and are starting to develop across the Southwest.**

# Fuel Conditions and Weather Outlook



- **The Central and Southern Great Plains have experienced significant relief from drought conditions though there are parts of Central Texas that are dry.**
- **Keep an eye on Alaska. The interior has been slightly warmer than average and the snowpack came off a little earlier than normal across parts of the interior. Also, greenup appears to be less robust than normal.**

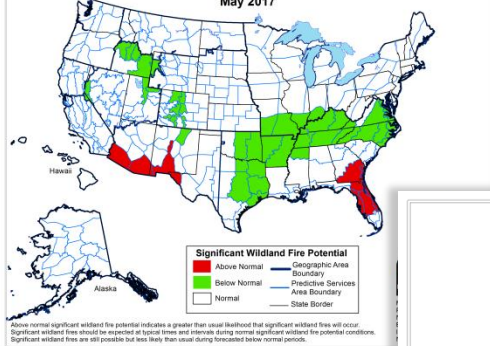


# Significant Wildland Fire Potential Outlook

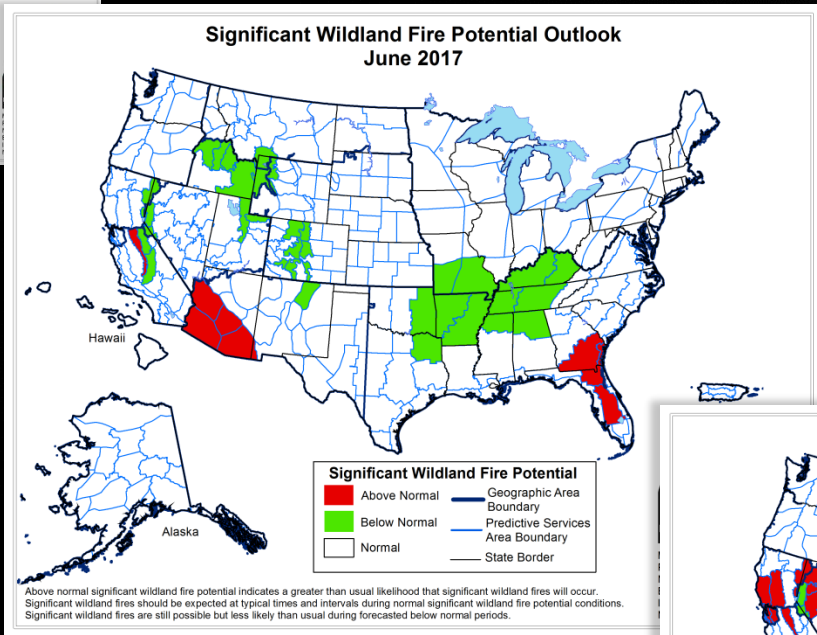


**PREDICTIVE SERVICES**

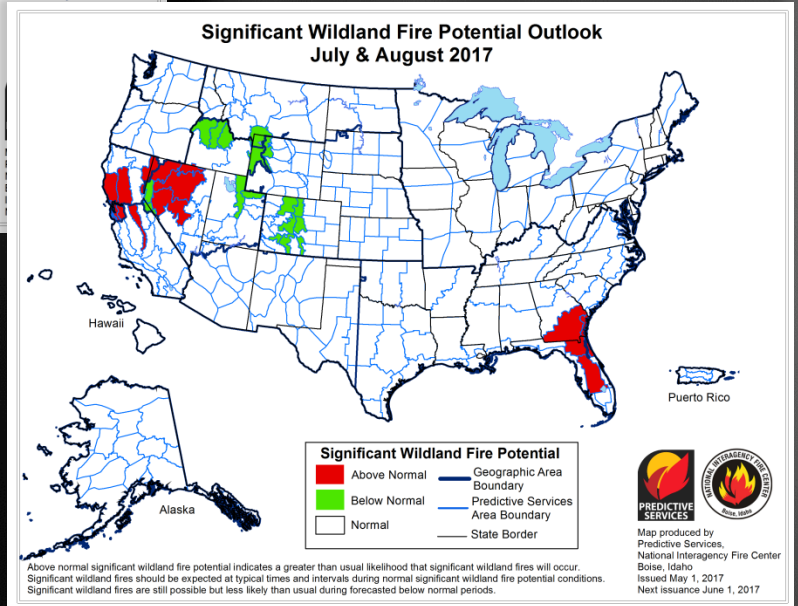
Significant Wildland Fire Potential Outlook  
May 2017



Significant Wildland Fire Potential Outlook  
June 2017



Significant Wildland Fire Potential Outlook  
July & August 2017



Map produced by  
Predictive Services,  
National Interagency Fire Center  
Boise, Idaho  
Issued May 1, 2017  
Next issuance June 1, 2017

# 2017 Fire Season Factors to Consider

Higher elevations will likely develop into delayed and below normal activity with normal activity occurring at most mid and lower elevations due to significant winter moisture and lingering snowpack.

## Significant Wildland Fire Potential Outlook July & August 2017

Fire activity should be normal across the Northern Plains and will be driven by periodic wind events as usual.

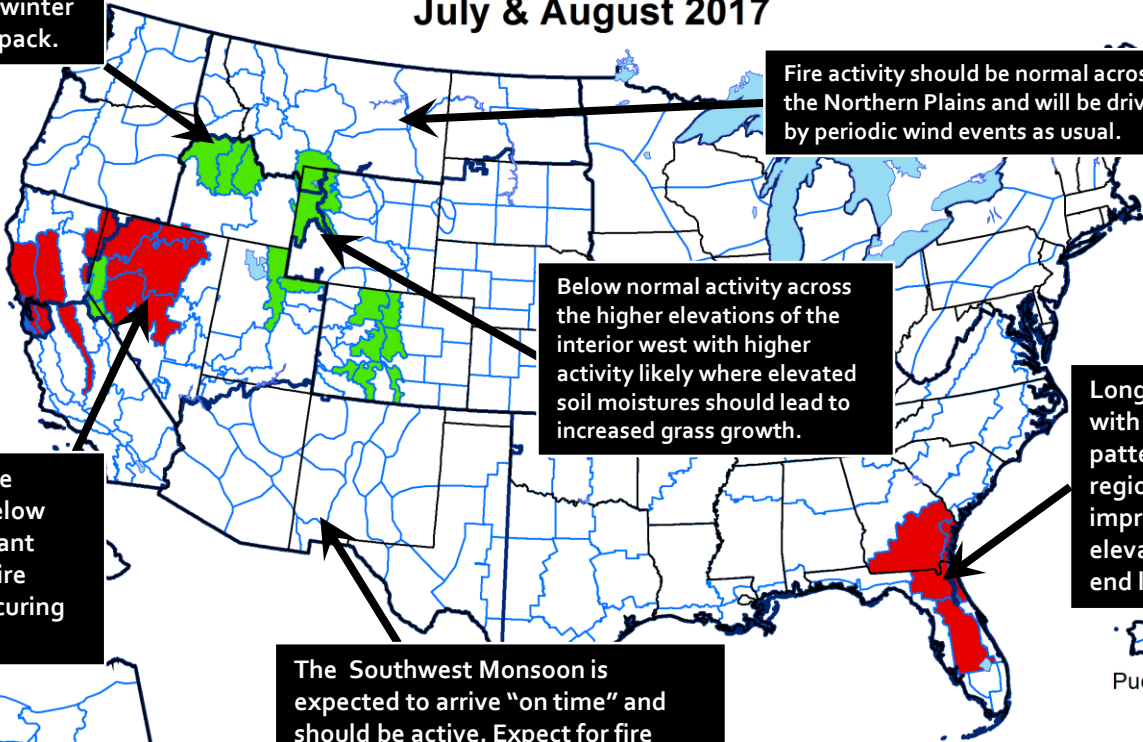
Below normal activity across the higher elevations of the interior west with higher activity likely where elevated soil moistures should lead to increased grass growth.

Long term drought will continue but with the onset of tropical weather patterns beginning in late June, the region should begin to see improvement by mid-July. The elevated potential in this area is "front-end loaded."

While higher elevations in the Sierras are expected to be below normal, the expected abundant grass crop will elevated the fire potential significantly once curing has occurred by July

The Southwest Monsoon is expected to arrive "on time" and should be active. Expect for fire activity to diminish as usual beginning in early July

Some areas of the central interior may see periods of elevated fire activity.



Puerto Rico

**Fire Potential**

<span style="color: red;">■</span> Above Normal	Geographic Area Boundary
<span style="color: green;">■</span> Below Normal	Predictive Services Area Boundary
<span style="border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> Normal	State Border



Map produced by Predictive Services, National Interagency Fire Center Boise, Idaho  
 Issued May 1, 2017  
 Next issuance June 1, 2017

Above normal significant wildland fire potential indicates a greater than usual likelihood that significant wildland fires will occur. Significant wildland fires should be expected at typical times and intervals during normal significant wildland fire potential conditions. Significant wildland fires are still possible but less likely than usual during forecasted below normal periods.



# Western Trends

Drastic increase in the occurrence of large, damaging wildfires

Five years of historic drought

Unprecedented bark beetle epidemic

Three consecutive warmest years on record

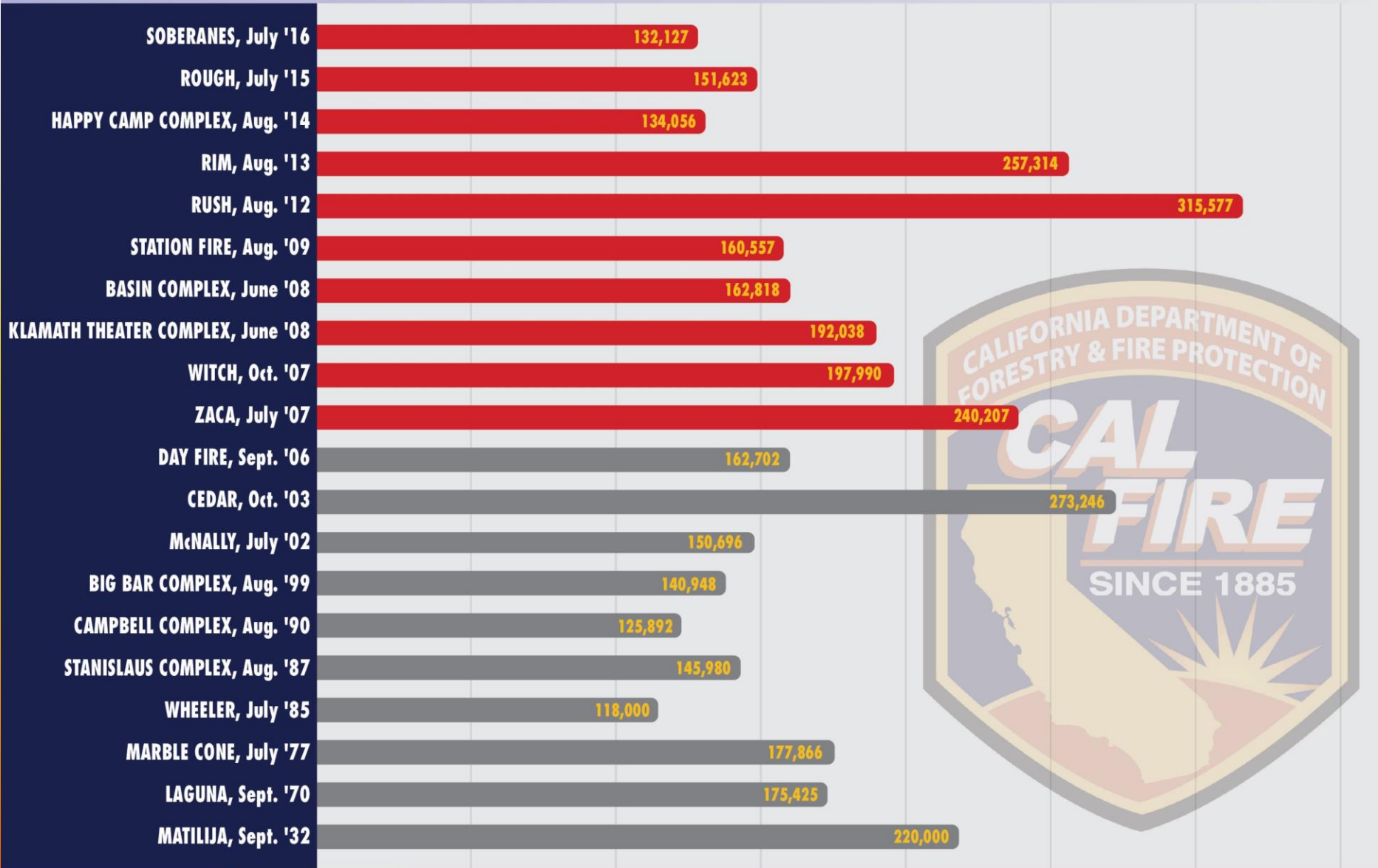
Followed by one of the wettest years on record





**2015 Valley Fire**

# 10 OF CALIFORNIA'S 20 LARGEST WILDFIRES HAVE BURNED SINCE 2007



IN ACRES BURNED: 50,000 100,000 150,000 200,000 250,000 300,000 350,000



# TREE MORTALITY NORTHERN FRESNO COUNTY



MAY 2015



FEBRUARY 2016





# Western Trends

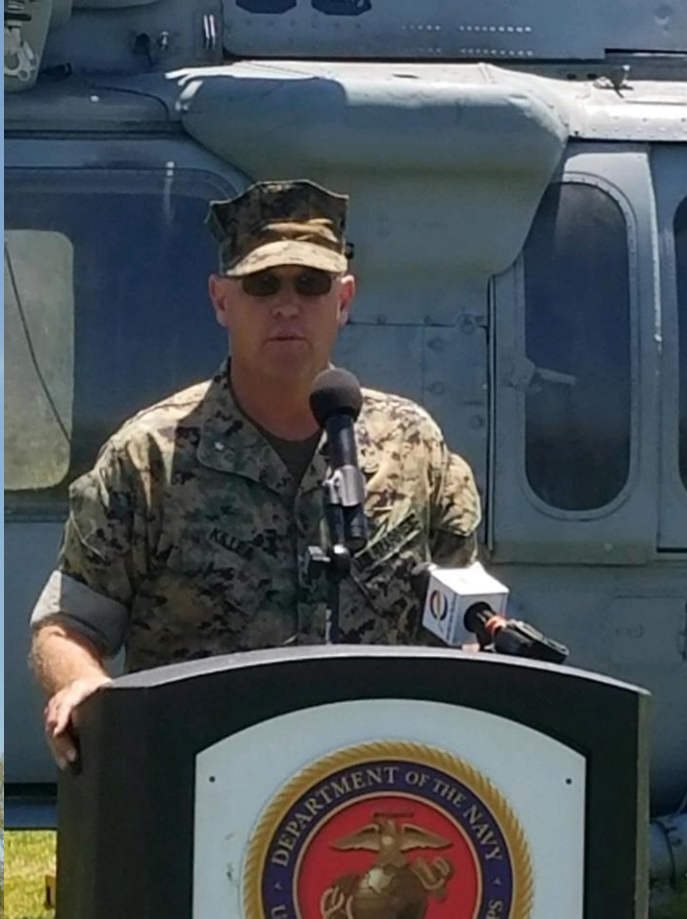
*So, what needs to be done?*

Maintain strong response model, including local, state and federal partners.

Increase pace and scale of Rx fire and fuels treatments that mimic the effects of beneficial fire

Active management of forestlands and watersheds

*To do this, we need to gain social license*





## ***Prescribed Fire MOU***





***2013 Rim Fire***

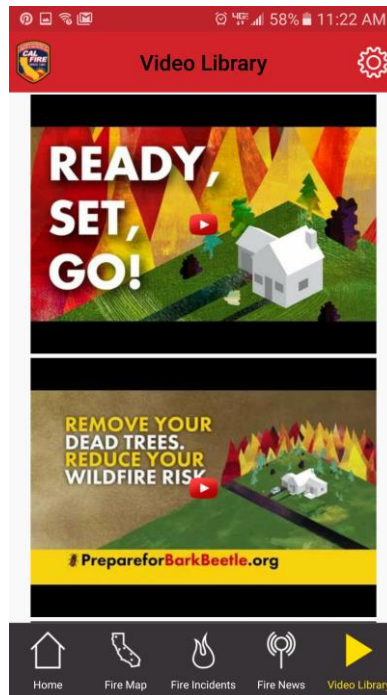
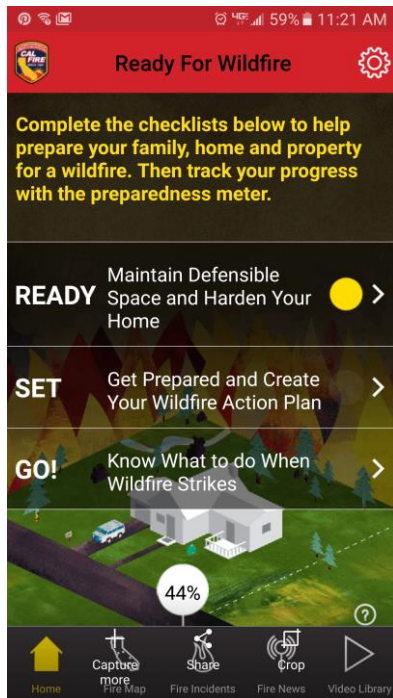


- Good Neighbor Authority
- Large Landscape Level Projects

*2014 King Fire*



# 'Ready for Wildfire' app



# Western Landscape Initiatives

West Wide Risk Assessment and state assessments

Landscape Scale Restoration

State Forest Action Plans and State Wildlife  
Action Plans



# WGA Forest and Rangeland Initiative

## Initiative Goals:

- Give states an opportunity to share successes (and failures)
- Hard look at collaboration
- Examine current statutory authorities (GNA, SCA, I&D)
- Recommend improvements

# WGA Forest and Rangeland Initiative

## Process:

- Workshops
- Webinars
- Survey Instruments

# WGA Forest and Rangeland Initiative

## Findings:

- First year – released at WGA's Annual Meeting
- Second year – workplan under development

# WGA Forest and Rangeland Initiative

Looking ahead:

- Department of Defense role
- Management challenges on Defense lands
- Opportunities for collaboration and involvement

# Collaborative Efforts and Opportunities

## *DISCUSSION*

Action  
 Innovative  
 Principled  
 Transnational  
 Transformation  
 Active  
 Overarching  
 Partnership  
 Stakeholders  
 Integrated  
 Leadership  
 Tenets  
 Institutionalize  
 Risk Management  
 Shared  
 Co-management  
 Non-prescriptive  
 Vision  
 Consistency  
 Collaborative  
 Wildland  
 Accept  
 Success  
 Communities  
 Outreach  
 Framework  
 Long-term  
 Mitigate  
 Strategic  
 Engage  
 Responsibilities  
 Change  
 Cohesive  
 Leverage