



# THE POCKET CARD

THE SUPPORT FOR FIRE DANGER AWARENESS.

NATIONAL FIRE DANGER RATING SYSTEM VERSION 4

*NFDRS NEW VERSION 4 ROLL OUT*





# THE BACKGROUND

- THE FIRE DANGER POCKET CARD IS A TOOL BASED ON THE NATIONAL FIRE DANGER RATING SYSTEM (NFDRS) UPDATED VERSION 4 RELEASE
- DEVELOP AN AWARENESS OF THE CURRENT FIRE SITUATION THAT YOU ARE ABOUT TO STEP INTO.
- THE OBJECTIVE OF THE NFDRS IS TO PROVIDE A MEASUREMENT OF ENVIRONMENTAL CONDITIONS THAT LEAD TO LARGE FIRE GROWTH POTENTIAL
- VALUES HAVE CHANGED (INCREASED) BUT RISK REMAINS THE SAME.

# THE NEW VALUE AND THE OLD

## NFDRS VERSION 3 VS NFDRS VERSION 4

- LA BASIN = OLD 97<sup>TH</sup> = 151 AND THE NEW 97<sup>TH</sup> = 206
- SANTA MONICA MOUNTAINS = OLD 97<sup>TH</sup> = 156 AND THE NEW 97<sup>TH</sup> = 242
- SANTA CLARITA VALLEY = OLD 97<sup>TH</sup> = 153 AND THE NEW 97<sup>TH</sup> = 323
- HIGH COUNTRY = OLD 97<sup>TH</sup> = 226 AND THE NEW 97<sup>TH</sup> = 327
- ANTELOPE VALLEY = OLD 97<sup>TH</sup> = 124 AND THE NEW 97<sup>TH</sup> = 111
- CATALINA ISLAND = OLD 97<sup>TH</sup> = 82 AND THE NEW 97<sup>TH</sup> = 177

# New Burning Index Values “Roll Out 2022”

## NFDRS Version 4

Forecast Zone NFDRS Version 3 vs Version 4 97 <sup>th</sup> Percentiles	Old BI Value	New BI Value	LAC Augmented Staffing
	<i>NFDRS V 3</i>	<i>NFDRS V 4</i>	
LA Basin	151	206	206
Santa Monica Mountains	156	242	192 (90 <sup>th</sup> )
Santa Clarita Valley	153	323	323
High Country	226	327	327
Antelope Valley	124	111	111
Catalina Island	82	177	177
<b><u>Gray Book Staffing based on the 97<sup>th</sup> Percentile</u></b>			
Malibu Hills RAWS	152	250	
Saugus RAWS	166	357	





# FIRE DANGER RATING IS NOT THE BURNING INDEX

- THIS IS A DECISION AID THAT DESCRIBES THE FACTORS - FUELS, WEATHER AND TOPOGRAPHY - WHICH AFFECT THE INITIATION, SPREAD AND DIFFICULTY OF CONTROL OF WILDFIRES ON AN AREA.
- THIS IS AN INITIAL ATTACK FIRE SITUATIONAL AWARENESS TOOL.



LOW ...MODERATE....HIGH.....VERY HIGH.....EXTREME

# BUT WHAT WILL THE FIRE DANGER POCKET CARD DO FOR ME ?

- THE FIRE DANGER POCKET CARD IS USEFUL IN IDENTIFYING THE POTENTIAL FOR A LARGE FIRE GROWTH DAY
- THE FIRE DANGER POCKET CARD GIVES FIREFIGHTERS A GENERAL INDICATOR OF THE POTENTIAL FOR THE FUELS AND WEATHER TO SUPPORT FIRE BEHAVIOR AND THE DIFFICULTY OF CONTROL.





# WHAT *WON'T* THE FIRE DANGER POCKET CARD DO?

- THE FIRE DANGER POCKET CARD WILL *NOT* PROVIDE SITE SPECIFIC FIRE BEHAVIOR FORECASTS.

# HOW WILL WE USE THE FIRE DANGER POCKET CARDS?

- COMPARE CURRENT AND PREDICTED LOCAL FIRE DANGER TO HISTORICAL LOCAL FIRE DANGER IN ORDER TO ENHANCE SITUATIONAL AWARENESS.
- USE THIS INFORMATION TO BE AWARE OF INDICATORS THAT FORECAST THE POTENTIAL FOR AGGRESSIVE FIRE BEHAVIOR.
- ENHANCE OUR LOCAL AWARENESS TOWARD LARGE FIRE GROWTH POTENTIAL.





# THE DAILY BURN INDEX

- THE BI IS DISPLAYED VIA MDC AND EMAIL IN THE AFTERNOON
- POSTED ON THE INTRA NET MAIN PAGE BY 0800 AND IS LOCATED ON THE MAIN PAGE TITLED DAILY FIRE DANGER REPORT.
- IT IS FOUND ON YOUR FIRESYNC OPS APP.
- IT'S FOUND ON THE FIREONE LINK WITH THE NATIONAL WEATHER SERVICE  
[HTTPS://WWW.WEATHER.GOV/LOX/FIRE](https://www.weather.gov/lox/fire)
- INFORMATION WILL INCLUDE THE BURN INDEX FOR ALL 6 FORECAST ZONES.
- THE POCKET CARDS SHOULD BE REFERENCED BY PERSONNEL AT THE MORNING LINE UP OR PROMPTLY AFTER EMERGENCY ACTIVITIES.
- CAPTAINS AND CREW FORMAN SHALL ENSURE DAILY SITUATIONAL AWARENESS TO HIS OR HER ASSIGNED PERSONNEL REFERENCING THE DAILY BI'S AND POCKET CARD INFORMATION.
- CHIEF OFFICERS SHALL REVIEW FOR BUILDING SITUATIONAL AWARENESS





# FIRE DANGER POCKET CARD

- A DESCRIPTION IS IN THE INCIDENT RESPONSE POCKET GUIDE (IRPG)  
2022 EDITION FIRE ENVIRONMENT **ORANGE SECTION** PAGE 39.
- THE BURNING INDEX RELATES TO CONSTANT ENVIRONMENTAL AND FUEL FACTORS **NOT** VARIABLES ON THE FIRE GROUND.

# BURNING INDEX (BI)

- A DESCRIPTION IS IN THE INCIDENT RESPONSE POCKET GUIDE (IRPG) 2022 EDITION FIRE ENVIRONMENT **ORANGE SECTION** PAGE 39.
- HOWEVER THE BURNING INDEX RELATES TO CONSTANT ENVIRONMENTAL AND FUEL FACTORS NOT VARIABLES ON THE FIRE GROUND.
- THE BURNING INDEX SHOULD BE USED AS A FIRE DANGER ELEMENT AND NOT AS A FIRE BEHAVIOR TACTICAL DECISION TOOL.
- ***BASING YOUR TACTICS ON THE REPRESENTATION OF DIVIDING THE BURNING INDEX BY 10% WILL MOST LIKELY COMPROMISE SAFETY AND IS NOT ADVISED.***





# LET'S TAKE A LOOK

THE NEXT SERIES OF SLIDES WILL WALK YOU THROUGH  
THE POCKET CARD QUADRANT INFORMATION.

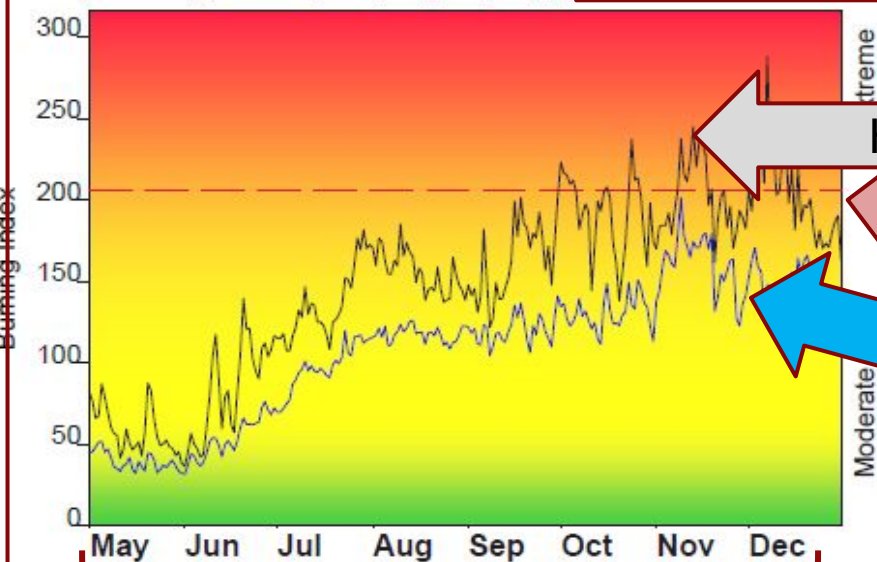
**There are 4 quadrants that have valuable information to build your situational awareness**





# FIRE DANGER -- LA Basin

Maximum, Average, and 97th Percentile, based on 5 years data



Prime Fire Season

Area of reference

Highest recorded Burn Index

97<sup>th</sup> Percentile

Average Burn Index

**You always start with the upper left hand quadrant with the forecasted daily Burning Index**

Examples provided several slides away.

Area of reference

Average Burn Index

97<sup>th</sup> Percentile

### Fire Danger Area:

- LA Basin
- Whitter, San Rafael Hills
- Tonner Cyn, Claremont
- \* Meets NWCG Wx Station Standards



### Fire Danger Interpretation:

**EXTREME** -- Use extreme caution

**High** -- Watch for change

**Moderate** -- Lower Potential, but always be aware

**Maximum** -- Highest Burning Index by day for 2016 - 2021

**Average** -- shows peak fire season over 5 years (1202 observations)

**97<sup>th</sup> Percentile** -- 3% of the 1202 days from 2016 - 2021 had an Burning Index above 206

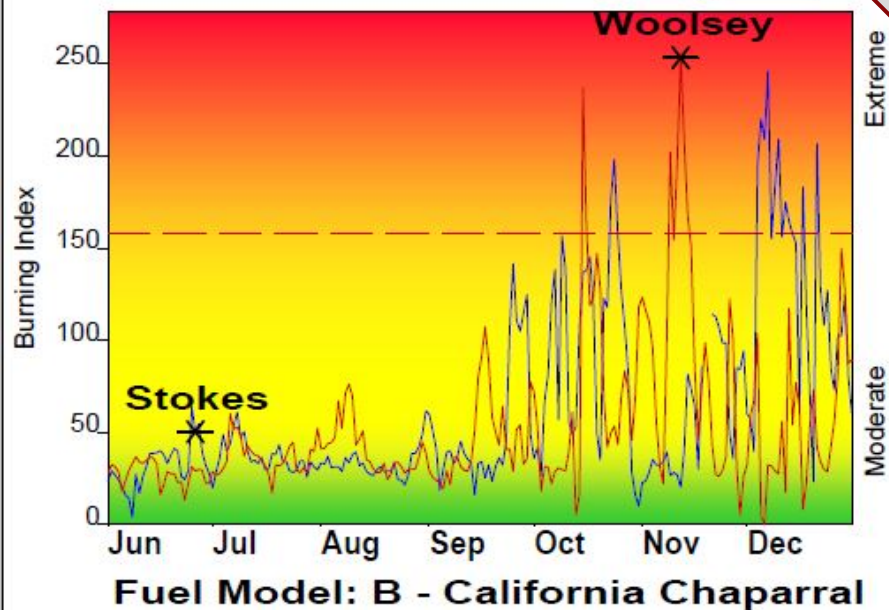
**Local Thresholds - Watch out:** Combinations of any of these factors can greatly increase fire behavior:  
**20' Wind Speed** over 15 mph, **RH** less than 20%,  
**Temperature** over 85, **Burning Index** over 177

Local Thresholds are:  
Fire Danger factors that influence  
aggressive fire behavior



Years to Remember: 2017 2018

Historic fires and there Burning Index



Fuel type in the Forecast Zone



This Lower Right Quadrant gives you the indicators that promote large fire growth and aggressive fire behavior

Factors that support large fire Growth

Predictable and forecasted

### Remember what Fire Danger tells you:

- ✓ Burning Index gives day-to-day fluctuations calculated from 2 pm temperature, humidity, wind, daily temperature & rh ranges, and precip duration.
- ✓ Wind is part of BI calculation.
- ✓ Watch local conditions and variations across the landscape -- Fuel, Weather, Topography.
- ✓ Listen to weather forecasts -- especially WIND.

### Past Experience:

Rates of Spread > 160 ch/hr  
Spotting up to 0.5-1 Mile Ahead of Fire Front  
Eye Level Wind Speed > 7 MPH  
Live Fuel Moistures < 75%  
Fine Fuel Moistures < 5%  
Active Night Burning Conditions with RH < 30%  
Non- Wind Driven Fires: Look for variation on the fire ground  
Identify the alignment of wind, slope, and solar pre-heating







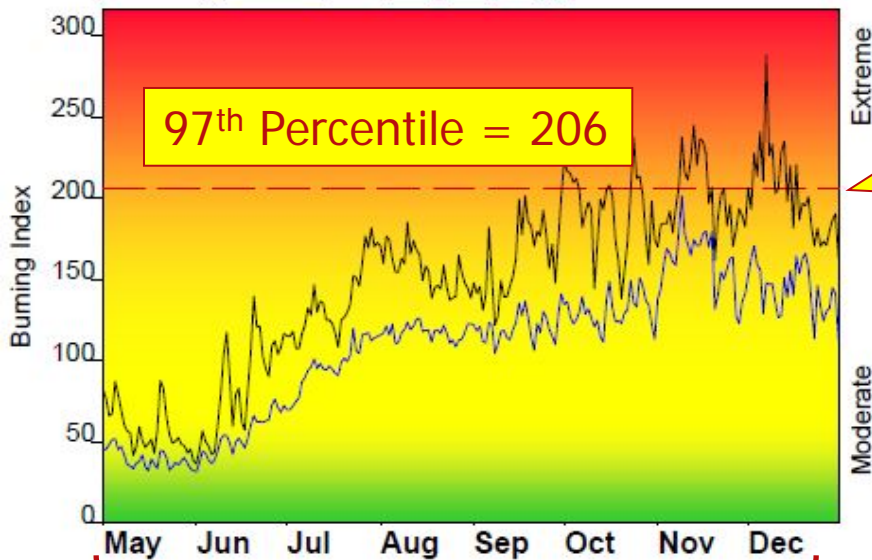
# LET'S PUT IT ALL TOGETHER

THE NEXT SERIES OF SLIDES WILL WALK YOU  
THROUGH HOW TO USE THE POCKET CARDS.



## FIRE DANGER -- LA Basin

Maximum, Average, and 97th Percentile, based on 5 years data



## Fire Danger Area:

- LA Basin
- Whittier, San Rafael Hills
- Tonner Cyn, Claremont
- \* Meets NWCG Wx Station Standards



## Fire Danger Interpretation:

- EXTREME** -- Use extreme caution
- High** -- Watch for change
- Moderate** -- Lower Potential, but always be aware

Maximum -- Highest Burning Index by day for 2016 - 2021

Average -- shows peak fire season over 5 years (1202 observations)

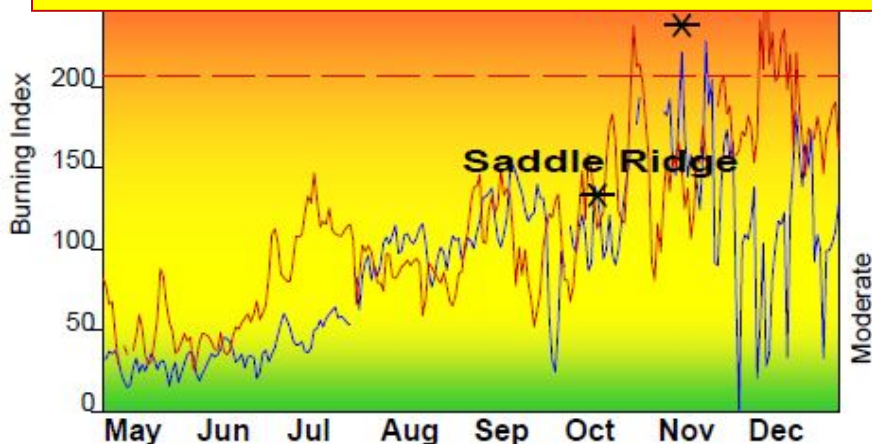
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**Local Thresholds - Watch out:** Combinations of any of these factors can greatly increase fire behavior:

20' Wind Speed over 15 mph, RH less than 20%  
Temperature over 85, Burning Index over 177

90<sup>th</sup> %

Only 3% of the days between May 1 and December 31 Had a Burning index over 206. (Prime Fire Season)



Fuel Model: X - Brush (2016)

## what Fire Danger tells you:

day-to-day fluctuations  
2 pm temperature, humidity, wind,  
& rh ranges, and precip duration.  
calculation.  
ions and variations across

- the landscape -- Fuel, Weather, Topography.
- ✓ Listen to weather forecasts -- especially WIND.

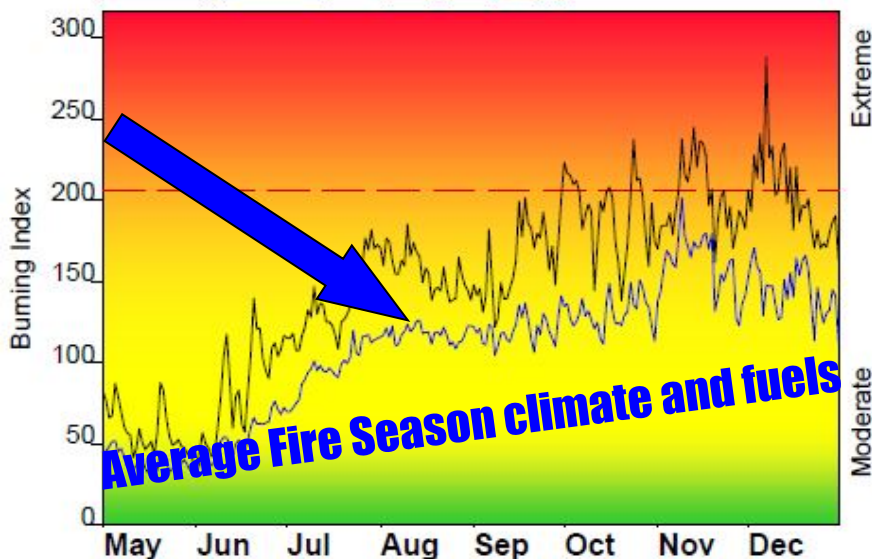
## Past Experience:

- Rates of Spread > 160 ch/hr
- Spotting up to 0.5-1 Mile Ahead of Fire Front
- Eye Level Wind Speed > 7 MPH
- Live Fuel Moistures < 75%
- Fine Fuel Moistures < 5%
- Active Night Burning Conditions with RH < 30%
- Non- Wind Driven Fires: Look for variation on the fire ground
- Identify the alignment of wind, slope, and solar pre-heating



## FIRE DANGER -- LA Basin

Maximum, Average, and 97th Percentile, based on 5 years data



## Fire Danger Area:

- LA Basin
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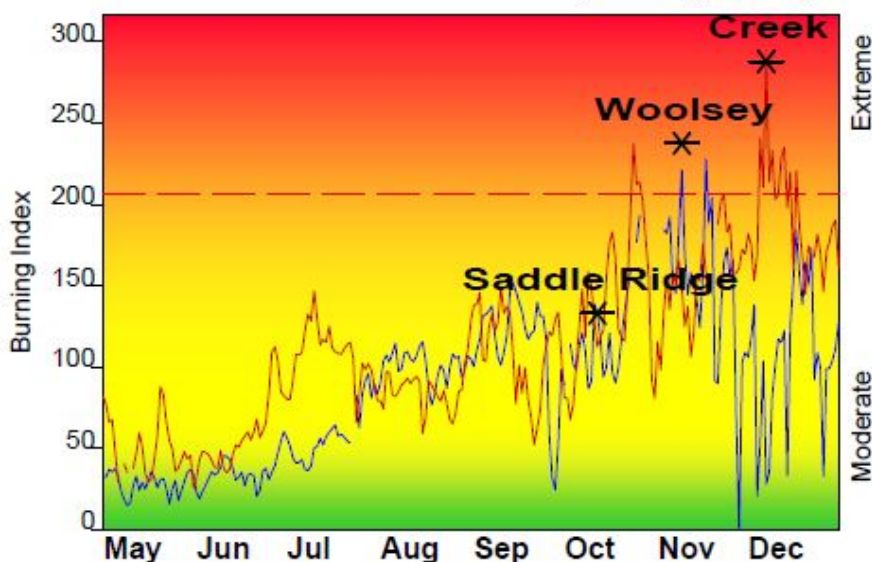
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## Years to Remember: 2019 2017



Fuel Model: X - Brush (2016)

## Remember what Fire Danger tells you:

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calculated from 2 pm temperature, humidity, wind,  
daily temperature & rh ranges, and precip duration.
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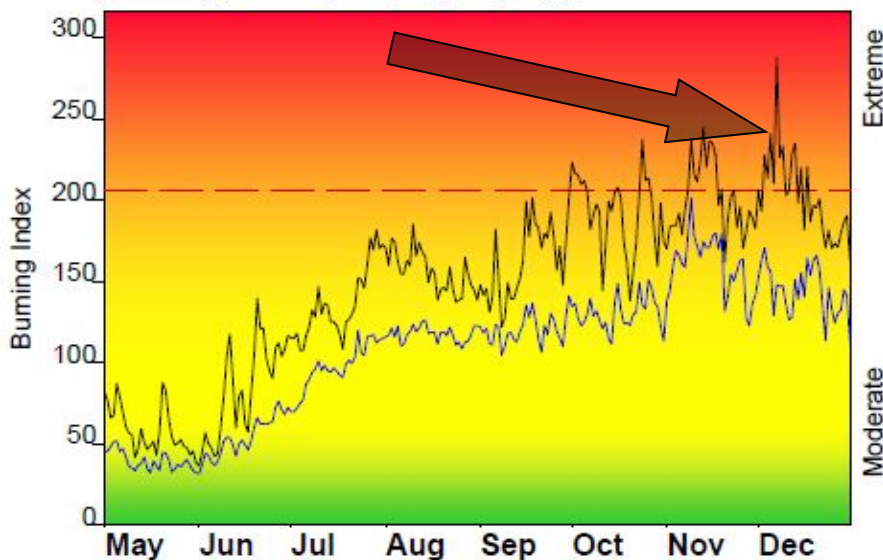
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Design by NWCG Fire Danger Working Team



## FIRE DANGER -- LA Basin

Maximum, Average, and 97th Percentile, based on 5 years data



## Fire Danger Area:

- LA Basin
- Whittier, San Rafael Hills
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## Fire Danger Interpretation:

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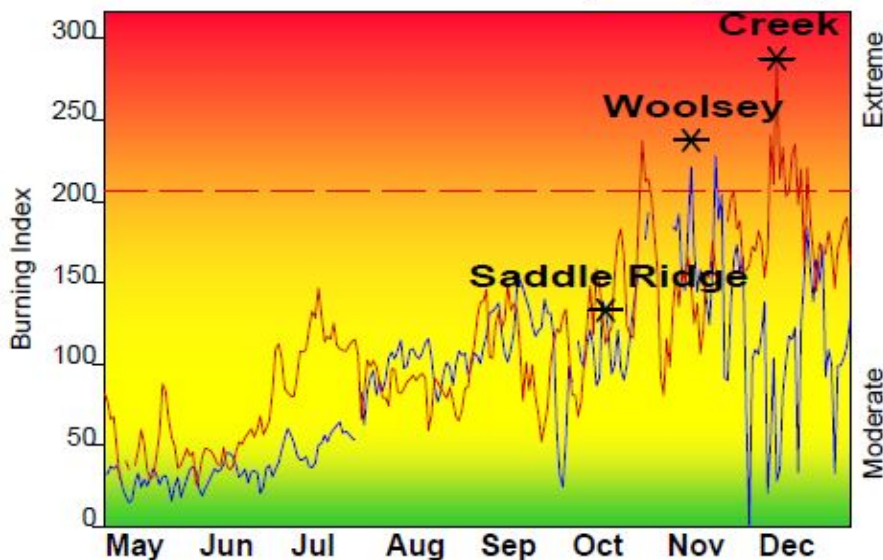
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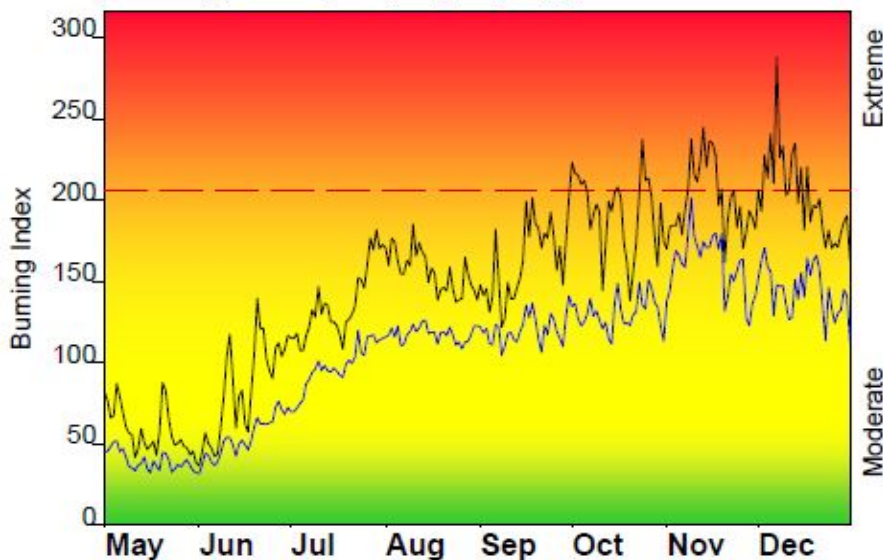
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## FIRE DANGER -- LA Basin

Maximum, Average, and 97th Percentile, based on 5 years data



## Fire Danger Area:

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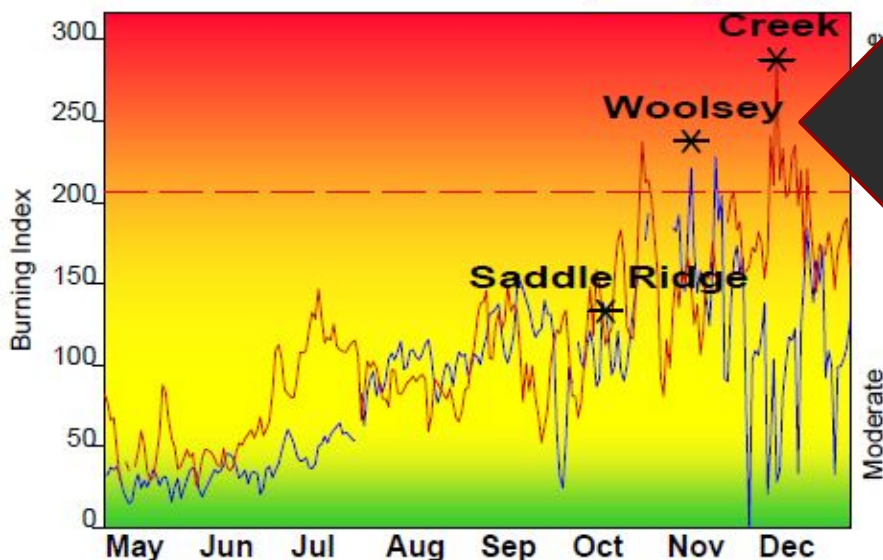
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## Years to Remember: 2019 2017



Fuel Model: X - Brush (2016)

## Remember what Fire Danger tells you:

- ✓ Burning Index gives day-to-day fluctuations calculated from 2 pm temperature, humidity, wind, daily temperature & rh ranges, and precip duration.

Historic Fires with there Burning Index

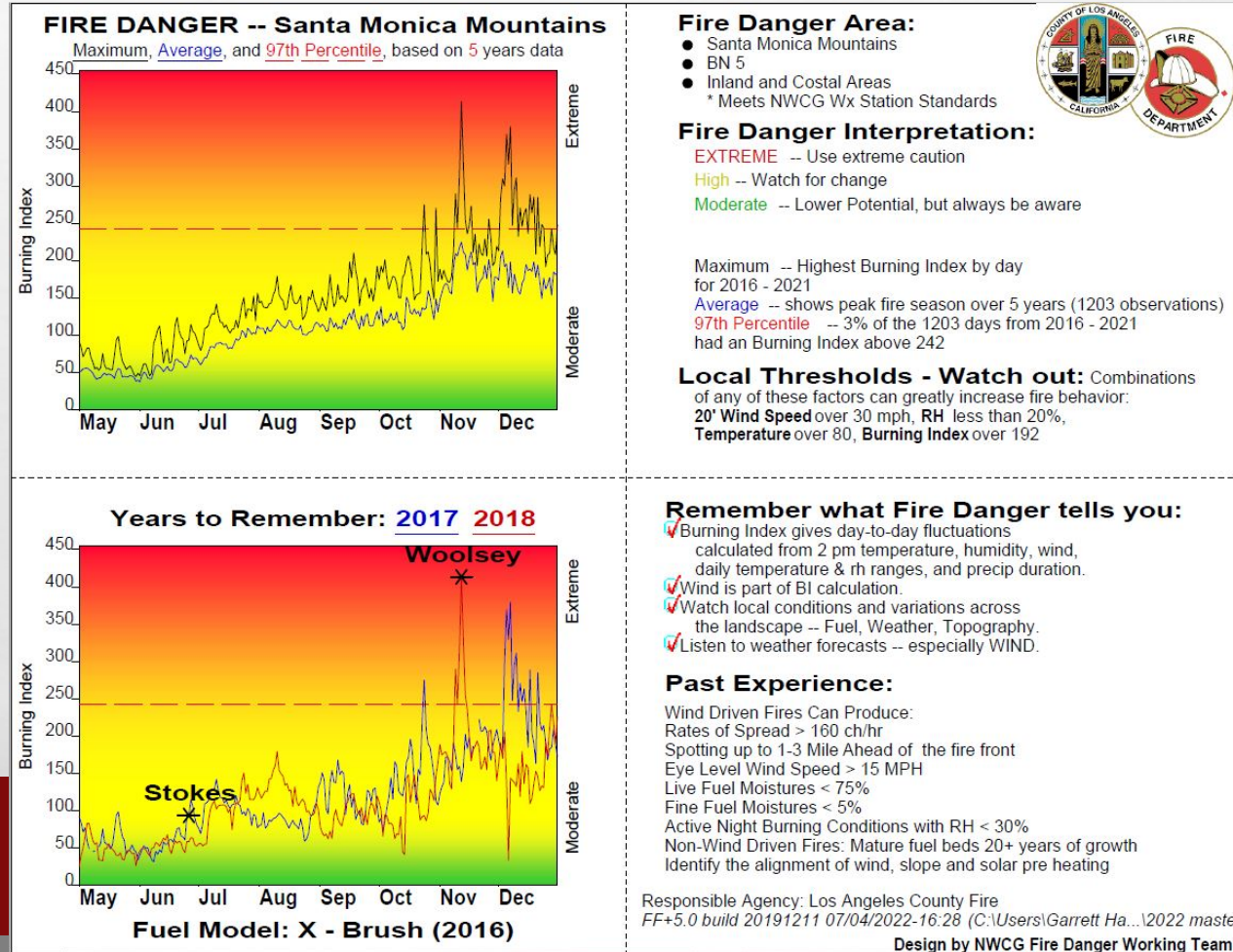
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- Identify the alignment of wind, slope, and solar pre-heating

Responsible Agency: Los Angeles County Fire  
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Design by NWCG Fire Danger Working Team

# LET'S WALK THROUGH THE USE OF THE POCKET CARD





# EXAMPLE #1

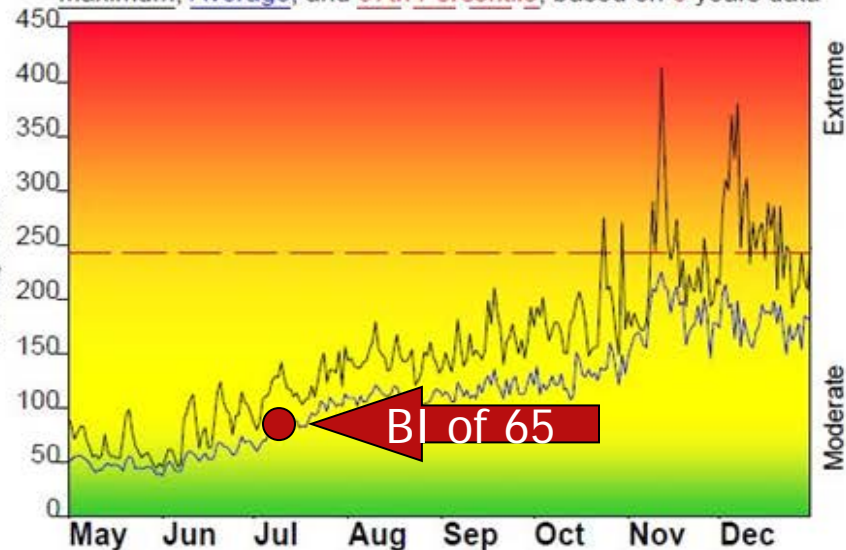
## TODAY IS JULY 3, 2022

- THE FORECASTED BURNING INDEX FOR THE SANTA MONICA MOUNTAINS IS 65
- WHAT DOES THIS MEAN FOR YOU TO BUILD YOUR SITUATIONAL AWARENESS
- WHAT IS THE POTENTIAL FOR A LARGE FIRE
- \*\* REMEMBER THE POCKET CARD TARGETS THE POTENTIAL FOR LARGE FIRE GROWTH  
NOT INITIAL ATTACK PROBABILITIES.
- REMEMBER SMOKEY BEAR IDENTIFIES THE POTENTIAL FOR INITIAL ATTACK



## FIRE DANGER -- Santa Monica Mountains

Maximum, Average, and 97th Percentile, based on 5 years data



## Fire Danger Area:

- Santa Monica Mountains
- BN 5
- Inland and Coastal Areas
- \* Meets NWCG Wx Station Standards



## Fire Danger Interpretation:

- EXTREME** -- Use extreme caution
- High** -- Watch for change
- Moderate** -- Lower Potential, but always be aware

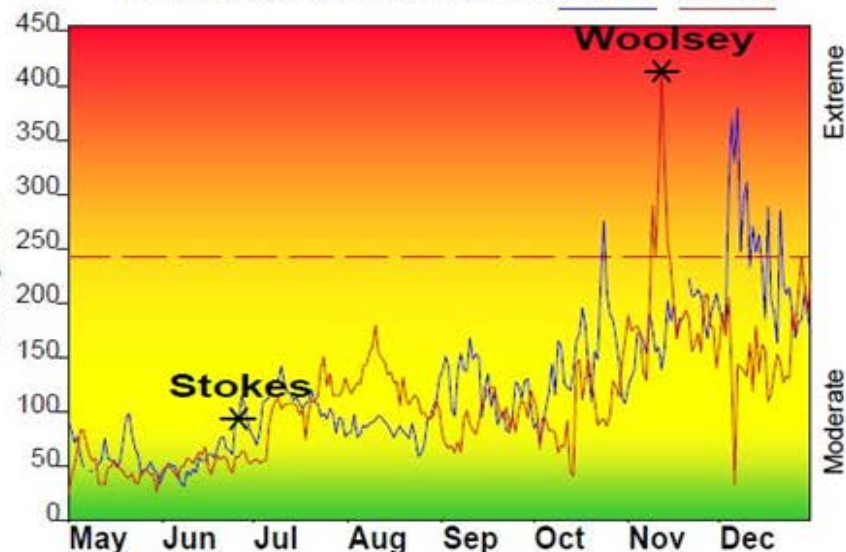
Maximum -- Highest Burning Index by day for 2016 - 2021

**Average** -- shows peak fire season over 5 years (1203 observations)

**97th Percentile** -- 3% of the 1203 days from 2016 - 2021 had an Burning Index above 242

**Local Thresholds - Watch out:** Combinations of any of these factors can greatly increase fire behavior:  
**20' Wind Speed** over 30 mph, **RH** less than 20%,  
**Temperature** over 80, **Burning Index** over 192

## Years to Remember: 2017 2018



Fuel Model: X - Brush (2016)

## Remember what Fire Danger tells you:

- ✓ Burning Index gives day-to-day fluctuations calculated from 2 pm temperature, humidity, wind, daily temperature & rh ranges, and precip duration.
- ✓ Wind is part of BI calculation.
- ✓ Watch local conditions and variations across the landscape -- Fuel, Weather, Topography.
- ✓ Listen to weather forecasts -- especially WIND.

## Past Experience:

Wind Driven Fires Can Produce:

Rates of Spread > 160 ch/hr

Spotting up to 1-3 Mile Ahead of the fire front

Eye Level Wind Speed > 15 MPH

Live Fuel Moistures < 75%

Fine Fuel Moistures < 5%

Active Night Burning Conditions with RH < 30%

Non-Wind Driven Fires: Mature fuel beds 20+ years of growth

Identify the alignment of wind, slope and solar pre heating

Responsible Agency: Los Angeles County Fire

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Design by NWCG Fire Danger Working Team

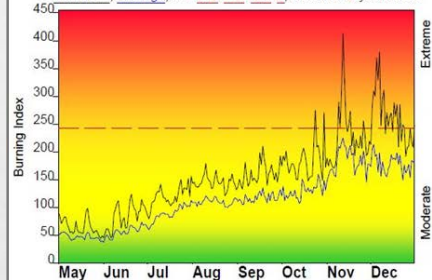


YOUR SITUATIONAL AWARENESS SHOULD BE WITH A BI OF 65:  
 THAT THE PROBABILITY OF LARGE FIRE GROWTH IS MINIMAL.  
 THE BURNING INDEX IS AT AVERAGE FOR TODAY  
 LOOK AT THE INTERPRETIVE CARD

65

# **FIRE DANGER -- Santa Monica Mountains**

Maximum, Average, and 97th Percentile, based on 5 years data



## **Fire Danger Area:**

- Santa Monica Mountains
- BN 5
- Inland and Coastal Areas
- \* Meets NWCG Wx Station Standards

## **Fire Danger Interpretation:**

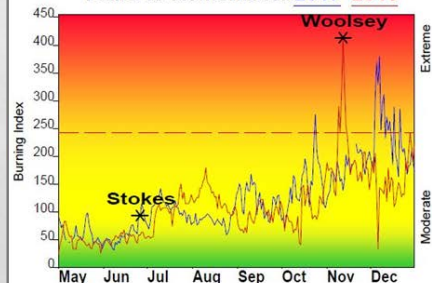
- EXTREME** -- Use extreme caution
- High** -- Watch for change
- Moderate** -- Lower Potential, but always be aware

Maximum -- Highest Burning Index by day for 2016 - 2021  
 Average -- shows peak fire season over 5 years (1203 observations)  
 97th Percentile -- 3% of the 1203 days from 2016 - 2021 had an Burning Index above 242

**Local Thresholds - Watch out:** Combinations of any of these factors can greatly increase fire behavior:  
 20' Wind Speed over 30 mph, RH less than 20%,  
 Temperature over 80, Burning Index over 192



## **Years to Remember: 2017 2018**



**Fuel Model: X - Brush (2016)**

## **Remember what Fire Danger tells you:**

- ✓ Burning Index gives day-to-day fluctuations calculated from 2 pm temperature, humidity, wind, daily temperature & rh ranges, and precip duration.
- ✓ Wind is part of BI calculation.
- ✓ Watch local conditions and variations across the landscape -- Fuel, Weather, Topography.
- ✓ Listen to weather forecasts -- especially WIND.

## **Past Experience:**

Wind Driven Fires Can Produce:  
 Rates of Spread > 100 ch/hr  
 Spotting up to 1-3 Mile Ahead of the fire front  
 Eye Level Wind Speed > 15 MPH  
 Live Fuel Moistures < 75%  
 Fine Fuel Moistures < 5%  
 Active Night Burning Conditions with RH < 30%  
 Non-Wind Driven Fires: Mature fuel beds 20+ years of growth  
 Identify the alignment of wind, slope and solar pre heating

Responsible Agency: Los Angeles County Fire  
 FF+5.0 build 20191211 07/04/2022-16.28 (C:\Users\Garrett Ha... \2022 master  
 Design by NWCG Fire Danger Working Team

## **Santa Monica Mountains Forecast Zone Pocket Card 2022**

BI	192	242+	Extreme Intensity Fire Behavior: Associated with Fire Weather Watch and Red Flag Conditions.
PERCENTILE	90% to 100%		
<b>Fire Behavior:</b> Rapid fire growth should be anticipated with high rates of spread. Significant spotting up to 3 miles with an exponentially expanding fire environment. Flame Length 40+ feet... <b>Key Indicators:</b> Temps > 80 degrees; Wind > 15 - 35 mph; RH < 15%; 10HR DFM ≤ 3%...LFM 80% -50% <b>Targeted Months:</b> September thru December <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations. <b>Fire Size Class:</b> 8000 plus acre potential within the first 4 hours.			

BI	150	191	Moderate Intensity Fire Behavior: Associated with periods of hot, dry weather, light to moderate winds and spotting 1/2-1 mile.
<b>Fire Behavior:</b> Fires are mainly topography driven with Westerly wind alignment features in the summer. Trending into a Fire Weather Watch and light offshore winds in early Fall and Winter with low dead and live fuels will produce an aggressive fire. <b>Key Indicators:</b> Temps 75- 100 degrees; Wind 5- 15 mph; RH: 15%- 30%.. 10HR DFM >5-7%.. LFM 80% to 90% <b>Targeted Months:</b> July thru December ( October thru December a BI of 175 or greater may be trending toward a Fire Weather Watch) <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations. <b>Fire Size Class:</b> 250 - 1500 plus acres.			

BI	50	149	Low Fire Behavior Intensity: Routine weather for the area. Spotting up to 1/2 mile
<b>Fire Behavior:</b> Fires are mainly topography dominated with slow to moderate rates of spread. Alignment of forces must be identified on routine weather days. Slope, Wind and Solar pre heating. <b>Key Indicators:</b> Temps > 70 - 90 degrees; Wind 5 - 20 mph; RH < 25%- 50% ; 10 HR DFM 5-12% ; LFM 120% -60% <b>Targeted Months:</b> May thru December. <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Fires routinely held to topographic features with suppression activity. Identify Structure Defense needs. <b>Fire Size Class:</b> 5 - 250 plus acres.			

Revision Date: 6/1/2022  
 By: LAC Fire Behavior Team:  
 G.Hazleton LTAN / D.Smith FBAN





# Santa Monica Mountains Forecast Zone Pocket Card 2022

BI	192	242+	<b>Extreme Intensity Fire Behavior:</b> <i>Associated with Fire Weather Watch and Red Flag Conditions.</i>
PERCENTILE	90% to 100%		
<b>Fire Behavior:</b> Rapid fire growth should be anticipated with high rates of spread. Significant spotting up to 3 miles with an exponentially expanding fire environment. Flame Length 50+ feet... <b>Key Indicators:</b> Temps > 80 degrees; Wind >15 - 35 mph; RH < 15%; 10HR DFM ≤ 3%...LFM 80% -50% <b>Targeted Months:</b> September thru December <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations. <b>Fire Size Class:</b> 8000 plus acre potential within the first 4 hours.			

<b>BI</b>	<b>150</b>	<b>191</b>	<b>Moderate Intensity Fire Behavior: Associated with periods of hot, dry weather, light to moderate winds and spotting ½ -1 mile.</b>
<b>Fire Behavior:</b> Fires are mainly topography driven with Westerly wind alignment features in the summer. Trending into a Fire Weather Watch and light offshore winds in early Fall and Winter with low dead and live fuels will produce an aggressive fire.			
<b>Key Indicators:</b> Temps 75- 100 degrees; Wind 5- 15 mph; RH: 15%- 30%.. 10HR DFM >5-7%.. LFM 80% to 60%			
<b>Targeted Months:</b> July thru December ( October thru December a BI of 175 or greater may be trending toward a Fire Weather Watch)			
<b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations.			
<b>Fire Size Class:</b> 250 - 1500 plus acres.			

BI	50	149	Low Fire Behavior Intensity: Routine weather for the area. Spotting up to ½ mile
<b>Fire Behavior:</b> Fires are mainly topography dominated with slow to moderate rates of spread. Alignment of forces must be identified on routine weather days. Slope, Wind and Solar pre heating.			
<b>Key Indicators:</b> Temps > 70 - 90 degrees; Wind 5 - 20 mph; RH < 25%- 50% ; 10 HR DFM 5-12% ; LFM 120% -60%			
<b>Targeted Months:</b> May thru December.			
<b>Engagement Tactical Options:</b> Heel and Flank Suppression. Fires routinely held to topographic features with suppression activity. Identify Structure Defense needs.			
<b>Fire Size Class:</b> 5 - 250 plus acres.			





# EXAMPLE #2

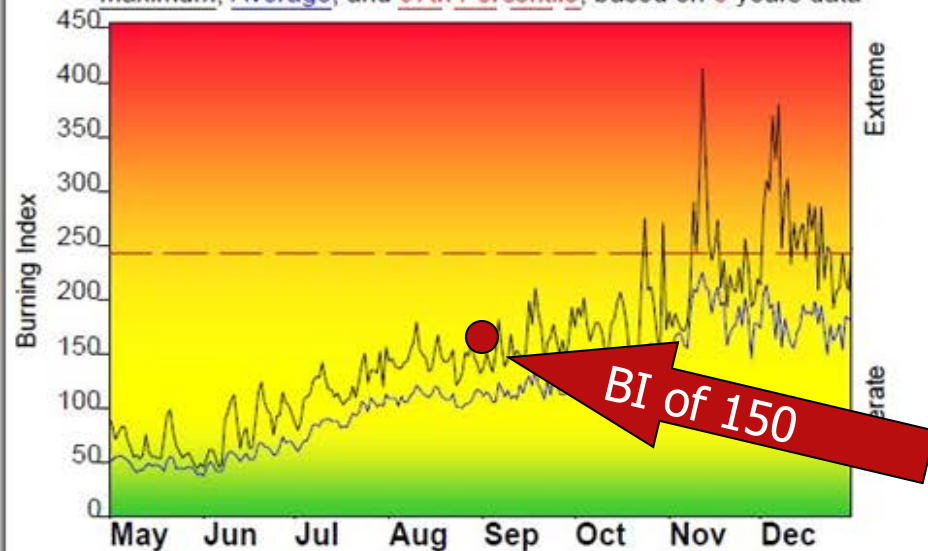
## TODAY IS AUGUST 18, 2022

- THE FORECASTED BURNING INDEX FOR THE SANTA MONICA MOUNTAINS IS 150
- WHAT DOES THIS MEAN FOR YOU TO BUILD YOUR SITUATIONAL AWARENESS
- WHAT IS THE POTENTIAL FOR A LARGE FIRE
- \*\* REMEMBER THE POCKET CARD TARGETS THE POTENTIAL FOR LARGE FIRE GROWTH  
NOT INITIAL ATTACK PROBABILITIES



## FIRE DANGER -- Santa Monica Mountains

Maximum, Average, and 97th Percentile, based on 5 years data



## Fire Danger Area:

- Santa Monica Mountains
  - BN 5
  - Inland and Coastal Areas
- \* Meets NWCG Wx Station Standards



## Fire Danger Interpretation:

- EXTREME** -- Use extreme caution
- High** -- Watch for change
- Moderate** -- Lower Potential, but always be aware

Maximum -- Highest Burning Index by day for 2016 - 2021

**Average** -- shows peak fire season over 5 years (1203 observations)

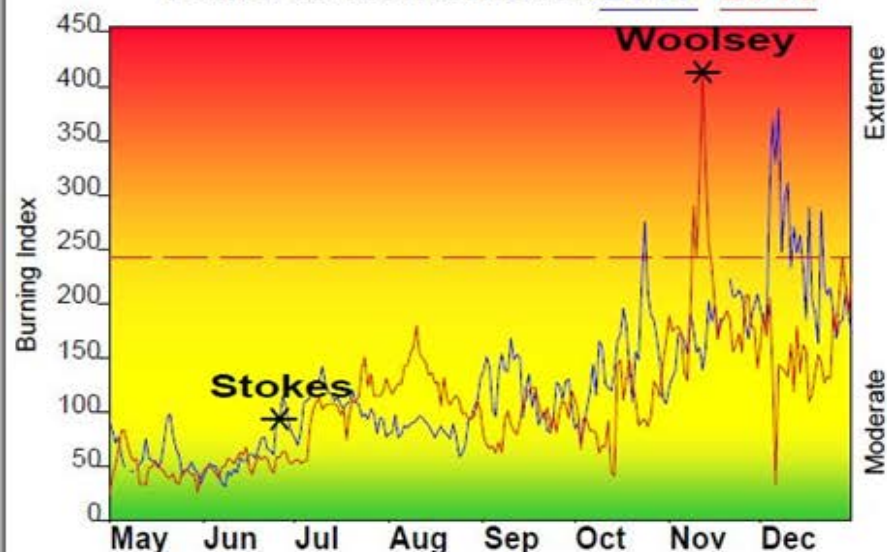
**97th Percentile** -- 3% of the 1203 days from 2016 - 2021 had an Burning Index above 242

## Local Thresholds - Watch out:

Combinations of any of these factors can greatly increase fire behavior:

- 20' Wind Speed** over 30 mph, RH less than 20%,
- Temperature** over 80, **Burning Index** over 192

## Years to Remember: 2017 2018



Fuel Model: X - Brush (2016)

## Remember what Fire Danger tells you:

- ✓ Burning Index gives day-to-day fluctuations calculated from 2 pm temperature, humidity, wind, daily temperature & rh ranges, and precip duration.
- ✓ Wind is part of BI calculation.
- ✓ Watch local conditions and variations across the landscape -- Fuel, Weather, Topography.
- ✓ Listen to weather forecasts -- especially WIND.

## Past Experience:

Wind Driven Fires Can Produce:

Rates of Spread > 160 ch/hr

Spotting up to 1-3 Mile Ahead of the fire front

Eye Level Wind Speed > 15 MPH

Live Fuel Moistures < 75%

Fine Fuel Moistures < 5%

Active Night Burning Conditions with RH < 30%

Non-Wind Driven Fires: Mature fuel beds 20+ years of growth

Identify the alignment of wind, slope and solar pre heating

Responsible Agency: Los Angeles County Fire

FF+5.0 build 20191211 07/04/2022-16:28 (C:\Users\Garrett Ha...\2022 master

Design by NWCG Fire Danger Working Team



# Santa Monica Mountains Forecast Zone Pocket Card 2022

BI	192	242+	<b>Extreme Intensity Fire Behavior:</b> <i>Associated with Fire Weather Watch and Red Flag Conditions.</i>
PERCENTILE	90% to 100%		
<b>Fire Behavior:</b> Rapid fire growth should be anticipated with high rates of spread. Significant spotting up to 3 miles with an exponentially expanding fire environment. Flame Length 50+ feet... <b>Key Indicators:</b> Temps > 80 degrees; Wind >15 - 35 mph; RH < 15%; 10HR DFM ≤ 3%...LFM 80% -50% <b>Targeted Months:</b> September thru December <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations. <b>Fire Size Class:</b> 8000 plus acre potential within the first 4 hours.			

BI	150	191	Moderate Intensity Fire Behavior: Associated with periods of hot, dry weather, light to moderate winds and spotting ½ -1 mile.
<b>Fire Behavior:</b> Fires are mainly topography driven with Westerly wind alignment features in the summer. Trending into a Fire Weather Watch and light offshore winds in early Fall and Winter with low dead and live fuels will produce an aggressive fire.			
<b>Key Indicators:</b> Temps 75- 100 degrees; Wind 5- 15 mph; RH: 15%- 30%.. 10HR DFM >5-7%.. LFM 80% to 60%			
<b>Targeted Months:</b> July thru December ( October thru December a BI of 175 or greater may be trending toward a Fire Weather Watch)			
<b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations.			
<b>Fire Size Class:</b> 250 - 1500 plus acres.			

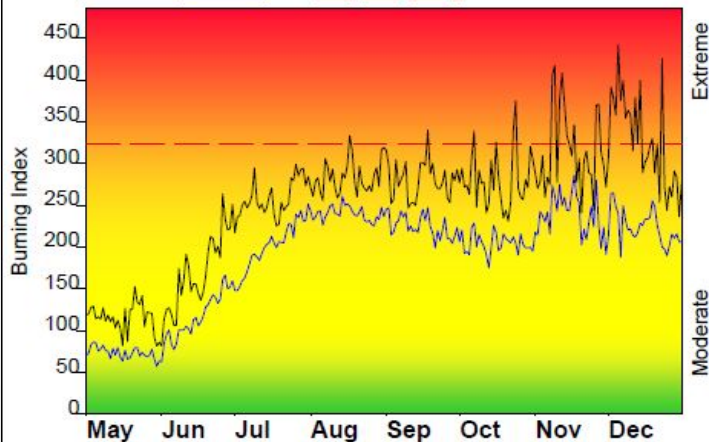
BI	50	149	Low Fire Behavior Intensity: Routine weather for the area. Spotting up to ½ mile
<b>Fire Behavior:</b> Fires are mainly topography dominated with slow to moderate rates of spread. Alignment of forces must be identified on routine weather days. Slope, Wind and Solar pre heating.			
<b>Key Indicators:</b> Temps > 70 - 90 degrees; Wind 5 - 20 mph; RH < 25%- 50% ; 10 HR DFM 5-12% ; LFM 120% -60%			
<b>Targeted Months:</b> May thru December.			
<b>Engagement Tactical Options:</b> Heel and Flank Suppression. Fires routinely held to topographic features with suppression activity. Identify Structure Defense needs.			
<b>Fire Size Class:</b> 5 - 250 plus acres.			



# LET'S LOOK AT THE SANTA CLARITA VALLEY

## FIRE DANGER -- Santa Clarita Valley

Maximum, Average, and 97th Percentile, based on 5 years data



## Fire Danger Area:

- Santa Clarita Valley
- BN 6 & 22
- Newhall Pass
- \* Meets NWCG Wx Station Standards



## Fire Danger Interpretation:

- EXTREME** -- Use extreme caution
- High** -- Watch for change
- Moderate** -- Lower Potential, but always be aware

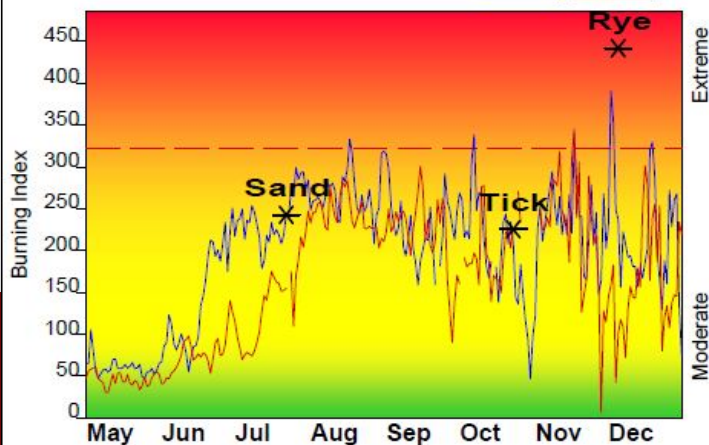
Maximum -- Highest Burning Index by day for 2016 - 2021

**Average** -- shows peak fire season over 5 years (1202 observations)

**97th Percentile** -- 3% of the 1202 days from 2016 - 2021 had an Burning Index above 323

**Local Thresholds - Watch out:** Combinations of any of these factors can greatly increase fire behavior:  
**20' Wind Speed** over 15 mph, **RH** less than 25%,  
**Temperature** over 90, **Burning Index** over 279

## Years to Remember: 2016 2019



Fuel Model: X - Brush (2016)

## Remember what Fire Danger tells you:

- ✓ Burning Index gives day-to-day fluctuations calculated from 2 pm temperature, humidity, wind, daily temperature & rh ranges, and precip duration.
- ✓ Wind is part of BI calculation.
- ✓ Watch local conditions and variations across the landscape -- Fuel, Weather, Topography.
- ✓ Listen to weather forecasts -- especially WIND.

## Past Experience:

Wind Driven Fire Can Produce:

- Rates of Spread > 160 ch/hr
- Spotting up to 0.5-1 Mile ahead of fire front.
- Eye Level Winds > 7 MPH
- Live Fuel Moistures < 75%
- Fine Fuel Moistures < 5%
- Active night burning conditions with RH < 30%
- Non- Wind Driven Fires: Look for variation on the fire ground
- Identify the alignment of wind, slope, and solar pre-heating

Responsible Agency: Los Angeles County Fire  
 FF+5.0 build 20191211 07/01/2022-17:43 (C:\Users\Garrett Ha...\2022 master  
 Design by NWCG Fire Danger Working Team





# EXAMPLE #3

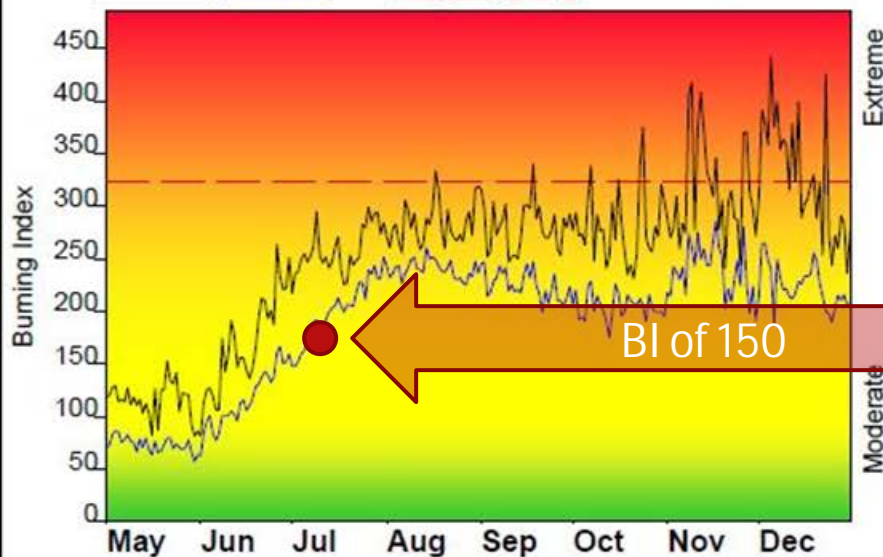
## TODAY IS JULY 3, 2022

- THE FORECASTED BURNING INDEX FOR THE SANTA CLARITA IS 150
- WHAT DOES THIS MEAN FOR YOU TO BUILD YOUR SITUATIONAL AWARENESS
- WHAT IS THE POTENTIAL FOR A LARGE FIRE
- \*\* REMEMBER THE POCKET CARD TARGETS THE POTENTIAL FOR LARGE FIRE GROWTH  
NOT INITIAL ATTACK PROBABILITIES



## FIRE DANGER -- Santa Clarita Valley

Maximum, Average, and 97th Percentile, based on 5 years data



## Fire Danger Area:

- Santa Clarita Valley
- BN 6 & 22
- Newhall Pass

\* Meets NWCG Wx Station Standards



## Fire Danger Interpretation:

**EXTREME** -- Use extreme caution

**High** -- Watch for change

**Moderate** -- Lower Potential, but always be aware

**Maximum** -- Highest Burning Index by day for 2016 - 2021

**Average** -- shows peak fire season over 5 years (1202 observations)

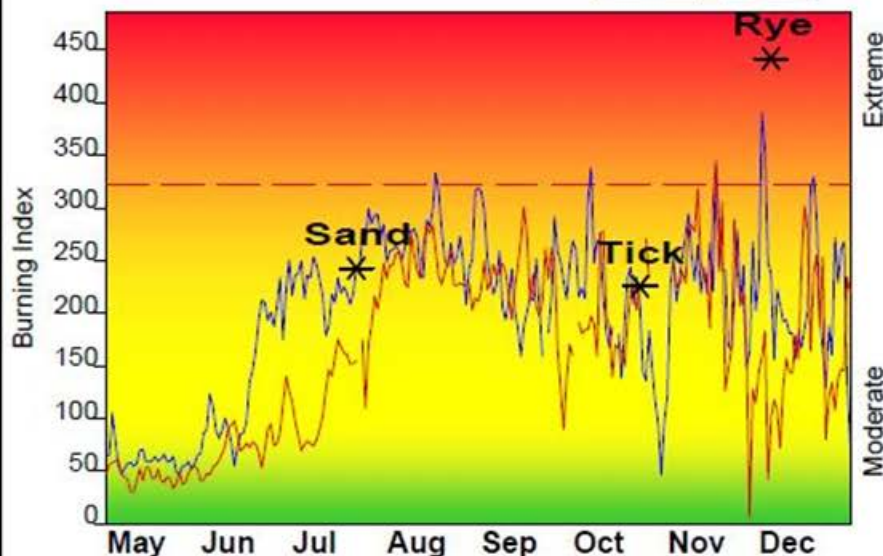
**97th Percentile** -- 3% of the 1202 days from 2016 - 2021 had an Burning Index above 323

## Local Thresholds - Watch out:

Combinations of any of these factors can greatly increase fire behavior:

**20' Wind Speed** over 15 mph, **RH** less than 25%,  
**Temperature** over 90, **Burning Index** over 279

## Years to Remember: 2016 2019



Fuel Model: X - Brush (2016)

## Remember what Fire Danger tells you:

- ✓ Burning Index gives day-to-day fluctuations calculated from 2 pm temperature, humidity, wind, daily temperature & rh ranges, and precip duration.
- ✓ Wind is part of BI calculation.
- ✓ Watch local conditions and variations across the landscape -- Fuel, Weather, Topography.
- ✓ Listen to weather forecasts -- especially WIND.

## Past Experience:

Wind Driven Fire Can Produce:

Rates of Spread > 160 ch/hr

Spotting up to 0.5-1 Mile ahead of fire front.

Eye Level Winds > 7 MPH

Live Fuel Moistures < 75%

Fine Fuel Moistures < 5%

Active night burning conditions with RH < 30%

Non- Wind Driven Fires: Look for variation on the fire ground

Identify the alignment of wind, slope, and solar pre-heating

Responsible Agency: Los Angeles County Fire

FF+5.0 build 20191211 07/01/2022-17:43 (C:\Users\Garrett Ha...\2022 master

Design by NWCG Fire Danger Working Team



# Santa Clarita Forecast Zone Pocket Card 2022

BI	279	323+	Extreme Intensity Fire Behavior: (Wind and or Instability) Associated with Fire Weather Watch and Red Flag Conditions.
PERCENTILE	90% to 100%		
<b>Fire Behavior:</b> Rapid fire growth should be anticipated with high rates of spread. Significant spotting up to 3 miles with an exponentially expanding fire environment. Flame Length 50+ foot.. <b>Key Indicators:</b> Temps > 80 degrees; Wind >15 – 35+ mph; RH < 15%; 10HR DFM ≤3; LFM 80% -50% <u>Unstable Conditions = Abnormal Hot and Dry with little to no wind with critically dry live and dead fuels. (July-September)</u> <u>Plume dominated Fire Conditions.....LAL 2&amp;6</u> <b>Targeted Months:</b> August thru December. <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations. <b>Fire Size Class:</b> 5000 plus acre potential within the first 4 hours.			

BI	161	278	Moderate Intensity Fire Behavior: Associated with periods of hot, dry weather, light to moderate winds and spotting ½ -1 mile.
<b>Fire Behavior:</b> Fires are mainly topography driven with Westerly wind alignment features in the summer. Instability features may exist with fuels dominated fires leading to a plume dominated fire environment.			
<b>Key Indicators:</b> Temps 85- 110 degrees; Wind 5- 15 mph; RH: 10%- 30%.. 10HR DFM >3-7%.. LFM 80% to 60%			
<u>Unstable Conditions = Hot and Dry with little to no wind with dry live and dead fuels. (July-September) .....LAL 2&amp;6</u>			
<b>Targeted Months:</b> July thru December			
<b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations.			
<b>Fire Size Class:</b> 250 - 5000 plus acres.			

BI	55	160	Low Fire Behavior Intensity: Routine weather for the area. Spotting up to ½ mile
<b>Fire Behavior:</b> Fires are mainly topography dominated with slow to moderate rates of spread. Alignment of forces must be identified on routine weather days. Slope, Wind and Solar pre heating. <b>Key Indicators:</b> Temps > 70 - 90 degrees; Wind 5 - 20 mph; RH 25%- 40% ; 10 HR DFM 5-9% ; LFM 120% -60% <b>Targeted Months:</b> May thru December <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Fires routinely held to topographic features with suppression activity. Identify Structure Defense needs. <b>Fire Size Class:</b> 5 - 250 plus acres.			



# EXAMPLE #4

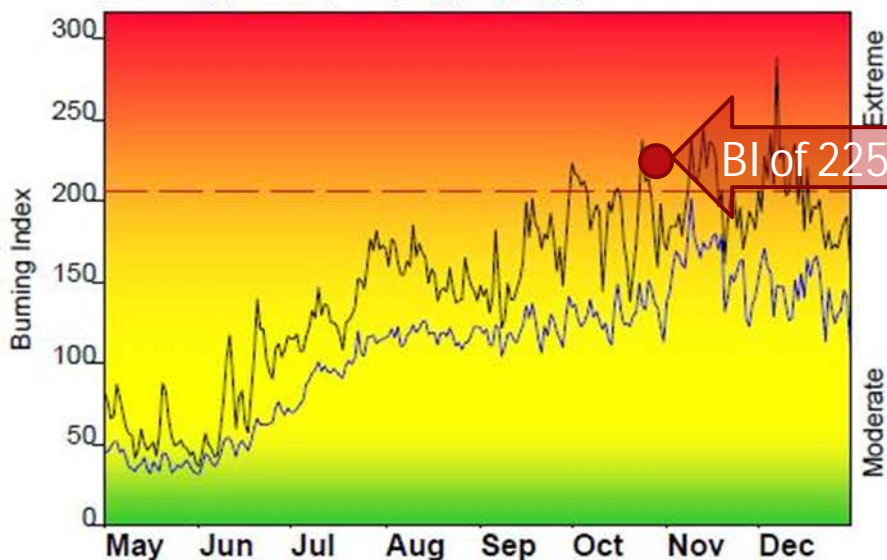
## TODAY IS OCTOBER 21, 2022

- THE FORECASTED BURNING INDEX FOR THE LA BASIN IS 225
- WHAT DOES THIS MEAN FOR YOU TO BUILD YOUR SITUATIONAL AWARENESS
- WHAT IS THE POTENTIAL FOR A LARGE FIRE
- \*\* REMEMBER THE POCKET CARD TARGETS THE POTENTIAL FOR LARGE FIRE GROWTH  
NOT INITIAL ATTACK PROBABILITIES



## FIRE DANGER -- LA Basin

Maximum, Average, and 97th Percentile, based on 5 years data



## Fire Danger Area:

- LA Basin
- Whittier, San Rafael Hills
- Tonner Cyn, Claremont
- \* Meets NWCG Wx Station Standards



## Fire Danger Interpretation:

**EXTREME** -- Use extreme caution

**High** -- Watch for change

**Moderate** -- Lower Potential, but always be aware

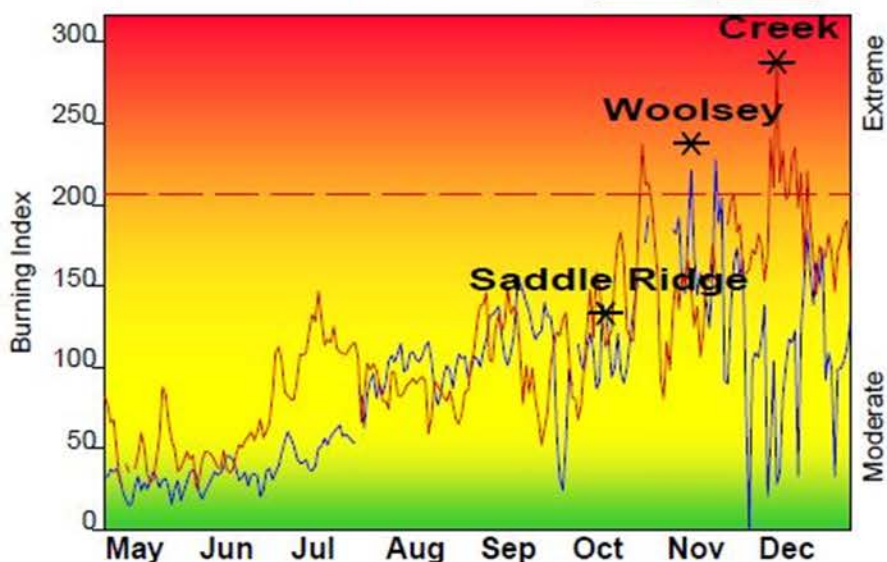
Maximum -- Highest Burning Index by day for 2016 - 2021

Average -- shows peak fire season over 5 years (1202 observations)

97th Percentile -- 3% of the 1202 days from 2016 - 2021 had an Burning Index above 206

**Local Thresholds - Watch out:** Combinations of any of these factors can greatly increase fire behavior:  
**20' Wind Speed** over 15 mph, **RH** less than 20%,  
**Temperature** over 85, **Burning Index** over 177

## Years to Remember: 2019 2017



Fuel Model: X - Brush (2016)

## Remember what Fire Danger tells you:

- ✓ Burning Index gives day-to-day fluctuations calculated from 2 pm temperature, humidity, wind, daily temperature & rh ranges, and precip duration.
- ✓ Wind is part of BI calculation.
- ✓ Watch local conditions and variations across the landscape -- Fuel, Weather, Topography.
- ✓ Listen to weather forecasts -- especially WIND.

## Past Experience:

- Rates of Spread > 160 ch/hr
- Spotting up to 0.5-1 Mile Ahead of Fire Front
- Eye Level Wind Speed > 7 MPH
- Live Fuel Moistures < 75%
- Fine Fuel Moistures < 5%
- Active Night Burning Conditions with RH < 30%
- Non- Wind Driven Fires: Look for variation on the fire ground
- Identify the alignment of wind, slope, and solar pre-heating

Responsible Agency: Los Angeles County Fire  
 FF+5.0 build 20191211 07/01/2022-17:42 (C:\Users\Garrett Ha...\2022 master

Design by NWCG Fire Danger Working Team



# Los Angeles Basin Forecast Zone Pocket Card 2022

BI	177	206+	<b>Extreme Intensity Fire Behavior:</b> <i>Associated with Fire Weather Watch and Red Flag Conditions.</i>
PERCENTILE	90% to 100%		
<b>Fire Behavior:</b> Rapid fire growth should be anticipated with high rates of spread. Significant spotting up to 3 miles with an exponentially expanding fire environment. Flame Length 50+ feet <b>Key Indicators:</b> Temps > 80 degrees; Wind >15 - 35 mph; RH < 15%; 10HR DFM ≤3; LFM 80% -50% <b>Targeted Months:</b> September thru December <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations. <b>Fire Size Class:</b> 8000 plus acre potential within the first 4 hours.			

BI	111	176	Moderate Intensity Fire Behavior: Associated with periods of hot, dry weather, light to moderate winds.
<b>Fire Behavior:</b> Fires are mainly topography driven with Westerly wind alignment features. Instability features may exist with fuels dominated fires leading to a plume dominated fire environment. Spotting ½ - 1 mile			
<b>Key Indicators:</b> Temps 75- 100 degrees; Wind 5- 15 mph; RH: 15%- 30%.. 10HR DFM >5-7%.. LFM 80% to 60%			
<b>Targeted Months:</b> July thru January (October - December BI Range 150 + YOU MAY BE TRENDING TOWARD a High Risk Day)			
<b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations.			
<b>Fire Size Class:</b> 250 - 1500 plus acres.			

BI	40	110	Low Fire Behavior Intensity: Routine weather for the area
<b>Fire Behavior:</b> Fires are mainly topography dominated with slow to moderate rates of spread. Alignment of forces must be identified on routine weather days. Slope, Wind and Solar pre heating.			
<b>Key Indicators:</b> Temps > 70 - 90 degrees; Wind 5 - 20 mph; RH < 25%- 50% ; 10 HR DFM 5-12% ; LFM 120% -60%			
<b>Targeted Months:</b> May thru January			
<b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations.			
Fire Size Class: 5 - 250 plus acres.			

Revision Date: 7/1/2022 NFDRS 2016v

By: LAC Fire Behavior Team:

G.Hazleton LTAN / D.Smith FBAN

# YOU GET THE IDEA

SO PUT THIS VALUED INFORMATION TO USE. THE BURNING INDEX  
IS USELESS....UNLESS YOU MAKE IT USEFUL

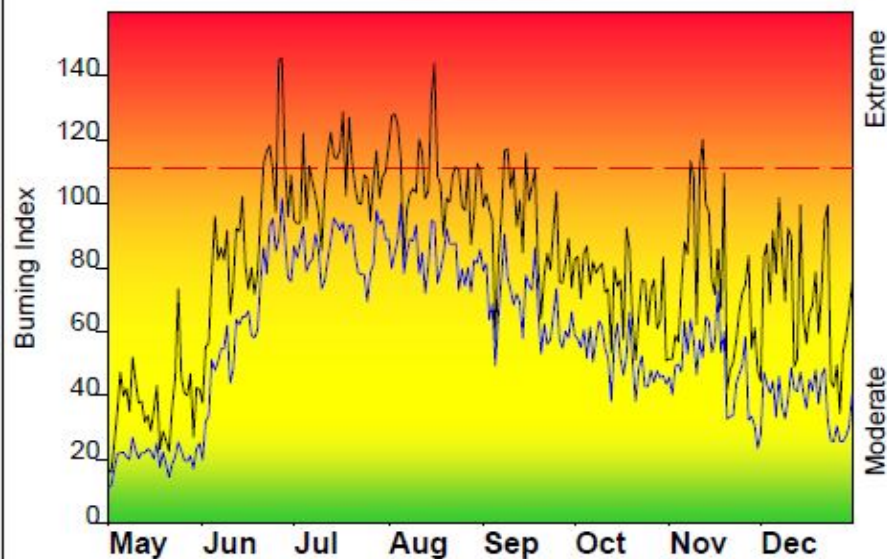
## Here are all the cards





## FIRE DANGER -- Antelope Valley

Maximum, Average, and 97th Percentile, based on 5 years data



## Fire Danger Area:

- Antelope Valley Zone
- BN 11 & 17
- AV WX Stations
- \* Meets NWCG Wx Station Standards



## Fire Danger Interpretation:

- EXTREME** -- Use extreme caution
- High** -- Watch for change
- Moderate** -- Lower Potential, but always be aware

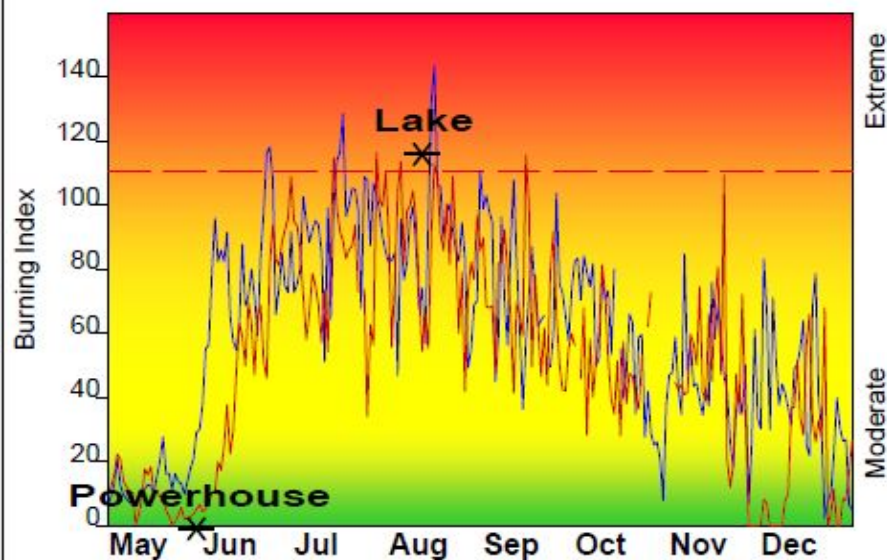
Maximum -- Highest Burning Index by day for 2016 - 2021

Average -- shows peak fire season over 5 years (1201 observations)

97th Percentile -- 3% of the 1201 days from 2016 - 2021 had an Burning Index above 111

**Local Thresholds - Watch out:** Combinations of any of these factors can greatly increase fire behavior:  
**20' Wind Speed** over 10 mph, **RH** less than 15%,  
**Temperature** over 90, **Burning Index** over 97

## Years to Remember: 2016 2019



## Remember what Fire Danger tells you:

- ✓ Burning Index gives day-to-day fluctuations calculated from 2 pm temperature, humidity, wind, daily temperature & rh ranges, and precip duration.
- ✓ Wind is part of BI calculation.
- ✓ Watch local conditions and variations across the landscape -- Fuel, Weather, Topography.
- ✓ Listen to weather forecasts -- especially WIND.

## Past Experience:

Wind Driven Fires Can Produce:  
 Rates of Spread > 120 ch/hr  
 Spotting up to .5-1 Mile Ahead of the fire front  
 Eye Level Wind Speed > 7 MPH  
 Live Fuel Moistures < 75%  
 Fine Fuel Moistures < 5%  
 Active Night Burning Conditions with RH < 30%



# Antelope Valley Zone Pocket Card 2022

BI	97	111+	<b>Extreme Intensity Fire Behavior: (Wind and or Instability)</b> <i>Associated with Fire Weather Watch and Red Flag Conditions.</i>
PERCENTILE	90% to 100%		
<b>Fire Behavior:</b> Rapid fire growth should be anticipated with high rates of spread. Significant spotting up to 1 mile with an exponentially expanding fire environment. Flame Length 25+ feet.. <b>Key Indicators:</b> Temps > 80 degrees; Wind >15 – 35+ mph; RH < 15%; 10 HR DFM ≤3; LFM 80% -50% <u>Unstable Conditions = Abnormal Hot and Dry with little to no wind with critically dry live and dead fuels. (July-September)</u> <u>Plume dominated Fire Conditions. LAL-2 and 6 where fire transitions to heavier fuel beds.</u> <b>Targeted Months:</b> May thru October. <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations. <b>Fire Size Class:</b> 5000 plus acre potential within the first 4 hours.			

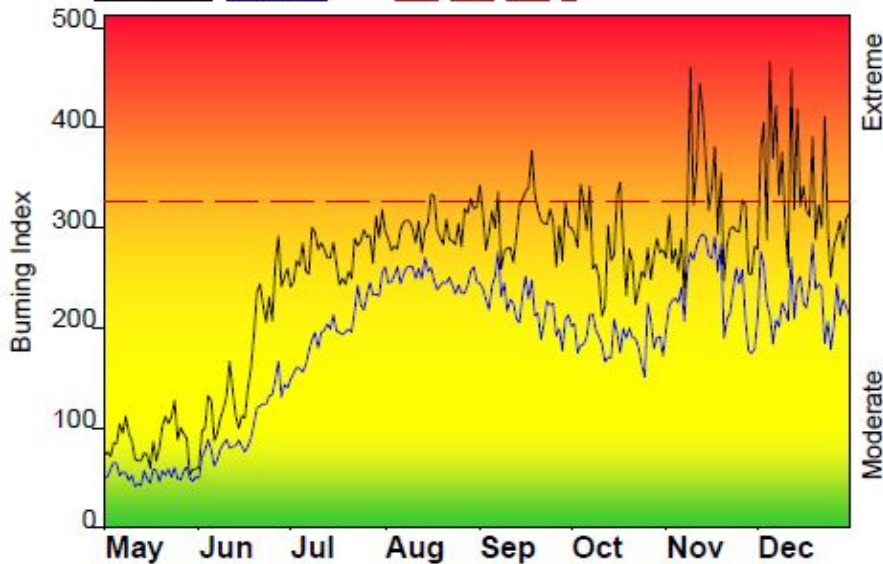
BI	70	96	Moderate Intensity Fire Behavior: Associated with periods of hot, dry weather, light to moderate winds and spotting ½ -1 mile.
<b>Fire Behavior:</b> Fires are mainly wind and topography driven with Westerly wind alignment features in the early to late Summer. Instability features may exist with fuels dominated fires leading to a plume dominated fire environment where fire transitions into heavier fuel beds. (Heads up on days with LAL-2 and 6).			
<b>Key Indicators:</b> Temps 85- 110 degrees; Wind 5- 15 mph; RH: 10%- 20%.. 10 HR DFM >3-7%.. LFM 80% to 60%			
<b>Targeted Months:</b> July thru January			
<b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations.			
<b>Fire Size Class:</b> 250 - 5000 plus acres.			

BI	20	69	Low Fire Behavior Intensity: Routine weather for the area. Spotting up to 1/4 mile.
<b>Fire Behavior:</b> Fires are mainly topography dominated with slow to moderate rates of spread. Alignment of forces must be identified on routine weather days. Slope, Wind and Solar pre heating.			
<b>Key Indicators:</b> Temps > 70 - 90 degrees; Wind 5 - 20 mph; RH 25%- 40% ; 10 HR DFM 5-9% ; LFM 120% -60%			
<b>Targeted Months:</b> May thru January			
<b>Engagement Tactical Options:</b> Heel and Flank Suppression. Fires routinely held to topographic and road features with suppression activity. Identify Structure Defense needs.			
<b>Fire Size Class:</b> 5 - 250 plus acres.			



## FIRE DANGER -- High Country

Maximum, Average, and 97th Percentile, based on 5 years data



## Fire Danger Area:

- High Country Zone
- Mostly Within ANF
- Camp 9 & Whitaker RAWS
- \* Meets NWCG Wx Station Standards



## Fire Danger Interpretation:

- EXTREME** -- Use extreme caution
- High** -- Watch for change
- Moderate** -- Lower Potential, but always be aware

Maximum -- Highest Burning Index by day for 2016 - 2021

Average -- shows peak fire season over 5 years (1202 observations)

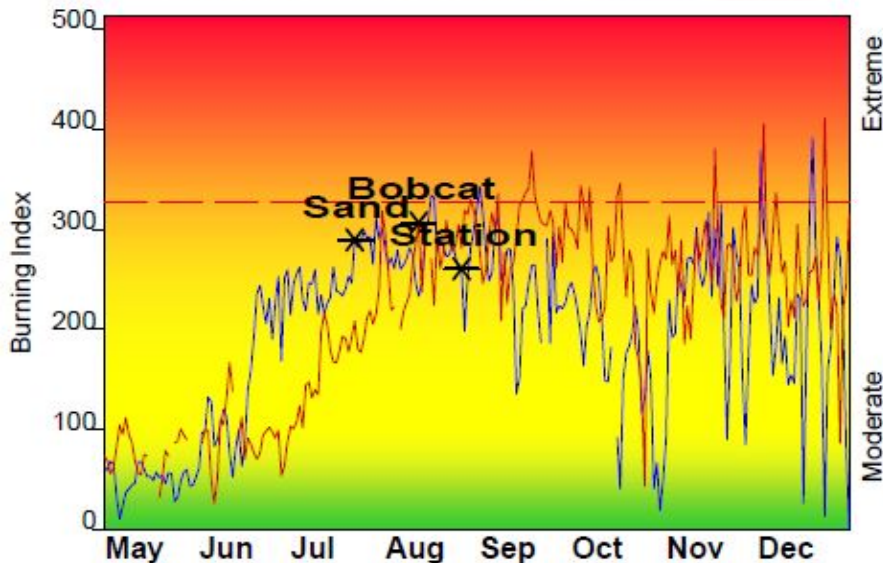
97th Percentile -- 3% of the 1202 days from 2016 - 2021 had an Burning Index above 327

## Local Thresholds - Watch out:

Combinations of any of these factors can greatly increase fire behavior:

- 20' Wind Speed over 15 mph, RH less than 25%,
- Temperature over 75, Burning Index over 294

## Years to Remember: 2016 2020



Fuel Model: X - Brush (2016)

## Remember what Fire Danger tells you:

- ✓ Burning Index gives day-to-day fluctuations calculated from 2 pm temperature, humidity, wind, daily temperature & rh ranges, and precip duration.
- ✓ Wind is part of BI calculation.
- ✓ Watch local conditions and variations across the landscape -- Fuel, Weather, Topography.
- ✓ Listen to weather forecasts -- especially WIND.

## Past Experience:

Wind Driven Fire Can Produce:

- Rates of Spread >80 ch/hr
- Spotting up to 0.5 - 1 Miles ahead of the fire front.
- Eye Level Winds > 7 MPH
- Live Fuel Moistures < 75%
- Fine Fuel Moistures < 5%
- Active night burning conditions with RH < 25%
- Non-Wind Driven Fires: Mature fuel beds 20+ years of growth
- Identify the alignment of wind, slope and solar pre heating

Responsible Agency: Los Angeles County Fire

FF+5.0 build 20191211 07/01/2022-17:39 (C:\Users\Garrett Ha...\2022 master

Design by NWCG Fire Danger Working Team



# High Country Forecast Zone Pocket Card 2022

<b>BI</b>	<b>294</b>	<b>327+</b>	<b>Extreme Intensity Fire Behavior: (Wind and or Instability)</b>
<b>PERCENTILE</b>	<b>90% to 100%</b>		<b>Associated with Fire Weather Watch and Red Flag Conditions.</b>
<b>Fire Behavior:</b> Rapid fire growth should be anticipated with high rates of spread. Significant spotting up to 3 miles with an exponentially expanding fire environment. Flame Length 50+ feet.. <b>Key Indicators:</b> Temps > 80 degrees; Wind >15 – 35+ mph; RH < 15%; 10HR DFM ≤3; LFM 80% -50% <u>Unstable Conditions = Abnormal Hot and Dry with little to no wind with critically dry live and dead fuels. (July-September)</u> <u>Plume dominated Fire Conditions.</u> <b>Targeted Months:</b> August thru December. <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations. <b>Fire Size Class:</b> 5000 plus acre potential within the first 4 hours.			

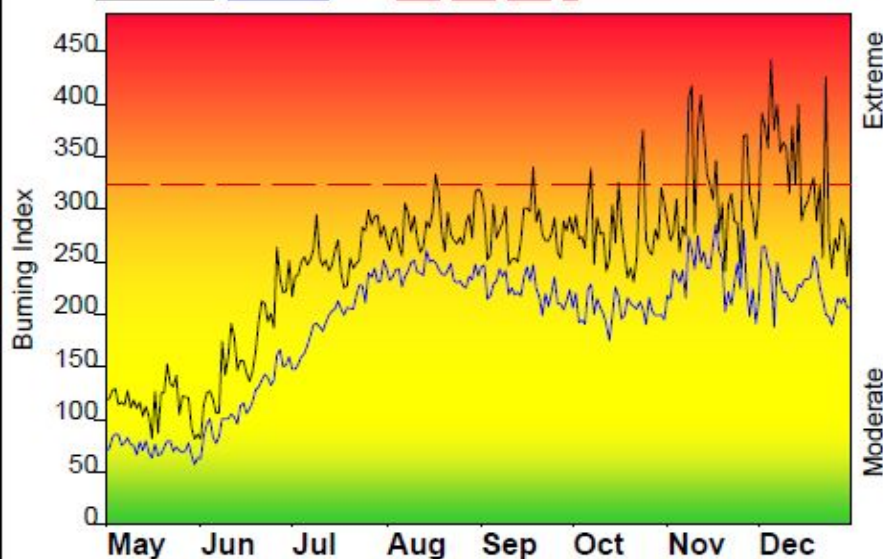
<b>BI</b>	<b>200</b>	<b>293</b>	<b>Moderate Intensity Fire Behavior: Associated with periods of hot, dry weather, light to moderate winds and spotting ½ -1 mile.</b>
<b>Fire Behavior:</b> Fires are mainly topography driven with Westerly wind alignment features in the summer. Steep topography leads to containment challenges due to roll out and re alignment to head fire. <b>Key Indicators:</b> Temps 85- 110 degrees; Wind 5- 15 mph; RH: 10%- 30%.. 10HR DFM >3-7%.. LFM 80% to 60% <u>Unstable Conditions = Hot and Dry with little to no wind with dry live and dead fuels. (July-September) .....LAL 2&amp;6</u> <b>Targeted Months:</b> July thru December <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations. <b>Fire Size Class:</b> 250 - 5000 plus acres.			

<b>BI</b>	<b>50</b>	<b>199</b>	<b>Low Fire Behavior Intensity: Routine weather for the area. Spotting up to ½ mile</b>
<b>Fire Behavior:</b> Fires are mainly topography dominated with slow to moderate rates of spread. Alignment of forces must be identified on routine weather days. Slope, Wind and Solar pre heating. <b>Key Indicators:</b> Temps > 70 - 90 degrees; Wind 5 - 20 mph; RH 25%- 40% ; 10 HR DFM 5-9% ; LFM 120% -60% <b>Targeted Months:</b> May thru December <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Fires routinely held to topographic features with suppression activity. Identify Structure Defense needs. <b>Fire Size Class:</b> 5 - 250 plus acres.			



## FIRE DANGER -- Santa Clarita Valley

Maximum, Average, and 97th Percentile, based on 5 years data



## Fire Danger Area:

- Santa Clarita Valley
- BN 6 & 22
- Newhall Pass

\* Meets NWCG Wx Station Standards



## Fire Danger Interpretation:

**EXTREME** -- Use extreme caution

**High** -- Watch for change

**Moderate** -- Lower Potential, but always be aware

Maximum -- Highest Burning Index by day  
for 2016 - 2021

Average -- shows peak fire season over 5 years (1202 observations)

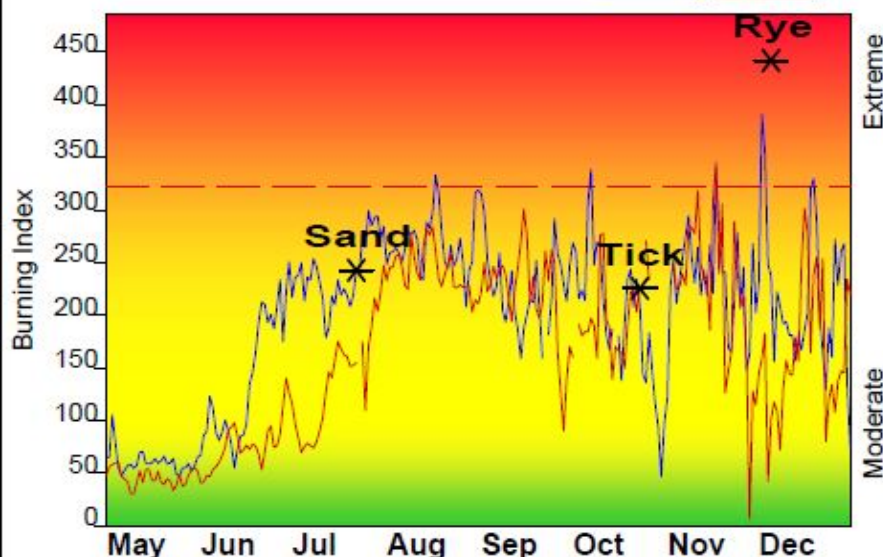
97th Percentile -- 3% of the 1202 days from 2016 - 2021  
had an Burning Index above 323

## Local Thresholds - Watch out:

Combinations of any of these factors can greatly increase fire behavior:

**20' Wind Speed** over 15 mph, **RH** less than 25%,  
**Temperature** over 90, **Burning Index** over 279

## Years to Remember: 2016 2019



Fuel Model: X - Brush (2016)

## Remember what Fire Danger tells you:

- ✓ Burning Index gives day-to-day fluctuations calculated from 2 pm temperature, humidity, wind, daily temperature & rh ranges, and precip duration.
- ✓ Wind is part of BI calculation.
- ✓ Watch local conditions and variations across the landscape -- Fuel, Weather, Topography.
- ✓ Listen to weather forecasts -- especially WIND.

## Past Experience:

Wind Driven Fire Can Produce:

Rates of Spread > 160 ch/hr

Spotting up to 0.5-1 Mile ahead of fire front.

Eye Level Winds > 7 MPH

Live Fuel Moistures < 75%

Fine Fuel Moistures < 5%

Active night burning conditions with RH < 30%

Non- Wind Driven Fires: Look for variation on the fire ground

Identify the alignment of wind, slope, and solar pre-heating

Responsible Agency: Los Angeles County Fire

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Design by NWCG Fire Danger Working Team



# Santa Clarita Forecast Zone Pocket Card 2022

BI	279	323+	Extreme Intensity Fire Behavior: (Wind and or Instability) Associated with Fire Weather Watch and Red Flag Conditions.
PERCENTILE	90% to 100%		
<b>Fire Behavior:</b> Rapid fire growth should be anticipated with high rates of spread. Significant spotting up to 3 miles with an exponentially expanding fire environment. Flame Length 50+ foot.. <b>Key Indicators:</b> Temps > 80 degrees; Wind >15 – 35+ mph; RH < 15%; 10HR DFM ≤3; LFM 80% -50% <u>Unstable Conditions = Abnormal Hot and Dry with little to no wind with critically dry live and dead fuels. (July-September)</u> <u>Plume dominated Fire Conditions.....LAL 2&amp;6</u> <b>Targeted Months:</b> August thru December. <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations. <b>Fire Size Class:</b> 5000 plus acre potential within the first 4 hours.			

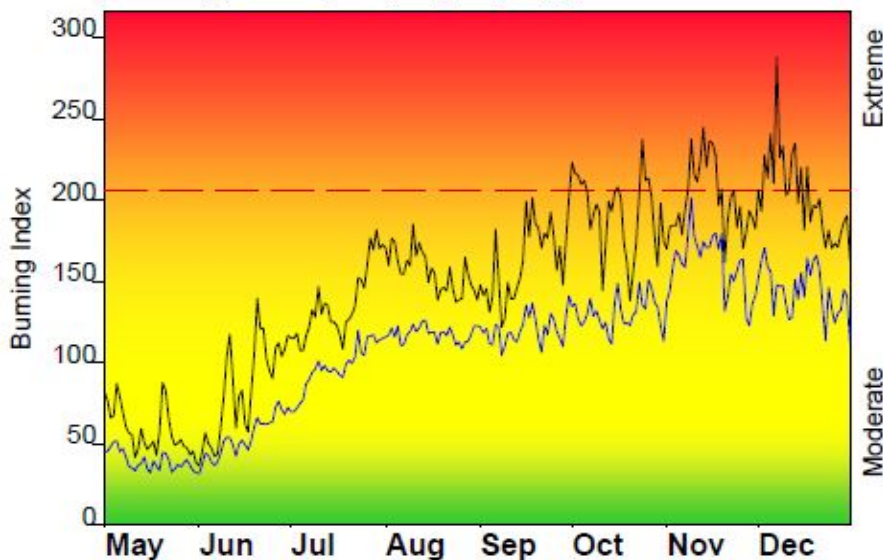
BI	161	278	Moderate Intensity Fire Behavior: Associated with periods of hot, dry weather, light to moderate winds and spotting ½ -1 mile.
<b>Fire Behavior:</b> Fires are mainly topography driven with Westerly wind alignment features in the summer. Instability features may exist with fuels dominated fires leading to a plume dominated fire environment.			
<b>Key Indicators:</b> Temps 85- 110 degrees; Wind 5- 15 mph; RH: 10%- 30%.. 10HR DFM >3-7%.. LFM 80% to 60%			
<u>Unstable Conditions = Hot and Dry with little to no wind with dry live and dead fuels. (July-September) .....LAL 2&amp;6</u>			
<b>Targeted Months:</b> July thru December			
<b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations.			
<b>Fire Size Class:</b> 250 - 5000 plus acres.			

BI	55	160	Low Fire Behavior Intensity: Routine weather for the area. Spotting up to ½ mile
<b>Fire Behavior:</b> Fires are mainly topography dominated with slow to moderate rates of spread. Alignment of forces must be identified on routine weather days. Slope, Wind and Solar pre heating. <b>Key Indicators:</b> Temps > 70 - 90 degrees; Wind 5 - 20 mph; RH 25%- 40% ; 10 HR DFM 5-9% ; LFM 120% -60% <b>Targeted Months:</b> May thru December <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Fires routinely held to topographic features with suppression activity. Identify Structure Defense needs. <b>Fire Size Class:</b> 5 - 250 plus acres.			



## FIRE DANGER -- LA Basin

Maximum, Average, and 97th Percentile, based on 5 years data



## Fire Danger Area:

- LA Basin
- Whitter, San Rafael Hills
- Tonner Cyn, Claremont
- \* Meets NWCG Wx Station Standards



## Fire Danger Interpretation:

- EXTREME** -- Use extreme caution
- High** -- Watch for change
- Moderate** -- Lower Potential, but always be aware

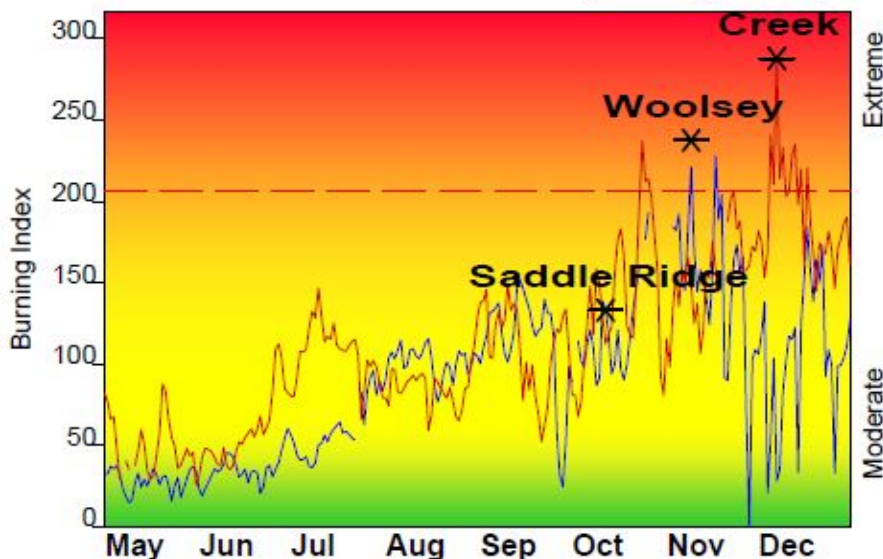
Maximum -- Highest Burning Index by day for 2016 - 2021

Average -- shows peak fire season over 5 years (1202 observations)

97th Percentile -- 3% of the 1202 days from 2016 - 2021 had an Burning Index above 206

**Local Thresholds - Watch out:** Combinations of any of these factors can greatly increase fire behavior:  
**20' Wind Speed** over 15 mph, **RH** less than 20%,  
**Temperature** over 85, **Burning Index** over 177

## Years to Remember: 2019 2017



Fuel Model: X - Brush (2016)

## Remember what Fire Danger tells you:

- ✓ Burning Index gives day-to-day fluctuations calculated from 2 pm temperature, humidity, wind, daily temperature & rh ranges, and precip duration.
- ✓ Wind is part of BI calculation.
- ✓ Watch local conditions and variations across the landscape -- Fuel, Weather, Topography.
- ✓ Listen to weather forecasts -- especially WIND.

## Past Experience:

- Rates of Spread > 160 ch/hr
- Spotting up to 0.5-1 Mile Ahead of Fire Front
- Eye Level Wind Speed > 7 MPH
- Live Fuel Moistures < 75%
- Fine Fuel Moistures < 5%
- Active Night Burning Conditions with RH < 30%
- Non- Wind Driven Fires: Look for variation on the fire ground
- Identify the alignment of wind, slope, and solar pre-heating



# Los Angeles Basin Forecast Zone Pocket Card 2022

BI	177	206+	<b>Extreme Intensity Fire Behavior:</b> <i>Associated with Fire Weather Watch and Red Flag Conditions.</i>
PERCENTILE	90% to 100%		
<b>Fire Behavior:</b> Rapid fire growth should be anticipated with high rates of spread. Significant spotting up to 3 miles with an exponentially expanding fire environment. Flame Length 50+ feet <b>Key Indicators:</b> Temps > 80 degrees; Wind >15 - 35 mph; RH < 15%; 10HR DFM ≤3; LFM 80% -50% <b>Targeted Months:</b> September thru December <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations. <b>Fire Size Class:</b> 8000 plus acre potential within the first 4 hours.			

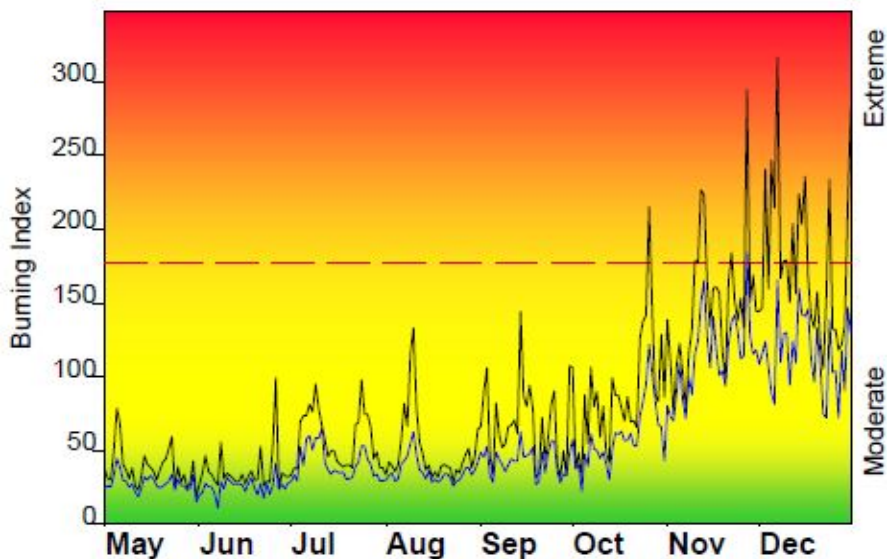
BI	111	176	Moderate Intensity Fire Behavior: Associated with periods of hot, dry weather, light to moderate winds.
<b>Fire Behavior:</b> Fires are mainly topography driven with Westerly wind alignment features. Instability features may exist with fuels dominated fires leading to a plume dominated fire environment. Spotting ½ - 1 mile <b>Key Indicators:</b> Temps 75- 100 degrees; Wind 5- 15 mph; RH: 15%- 30%.. 10HR DFM >5-7%.. LFM 80% to 60% <b>Targeted Months:</b> July thru January (October - December BI Range 150 + YOU MAY BE TRENDING TOWARD a High Risk Day) <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations. <b>Fire Size Class:</b> 250 - 1500 plus acres.			

BI	40	110	Low Fire Behavior Intensity: Routine weather for the area
<b>Fire Behavior:</b> Fires are mainly topography dominated with slow to moderate rates of spread. Alignment of forces must be identified on routine weather days. Slope, Wind and Solar pre heating.			
<b>Key Indicators:</b> Temps > 70 - 90 degrees; Wind 5 - 20 mph; RH < 25%- 50% ; 10 HR DFM 5-12% ; LFM 120% -60%			
<b>Targeted Months:</b> May thru January			
<b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations.			
Fire Size Class: 5 - 250 plus acres.			



## FIRE DANGER -- Catalina Island

Maximum, Average, and 97th Percentile, based on 5 years data



## Fire Danger Area:

- Catalina Island
- Ridge Top
- Dakin Peak RAWS
- \* Meets NWCG Wx Station Standards



## Fire Danger Interpretation:

- EXTREME** -- Use extreme caution
- High** -- Watch for change
- Moderate** -- Lower Potential, but always be aware

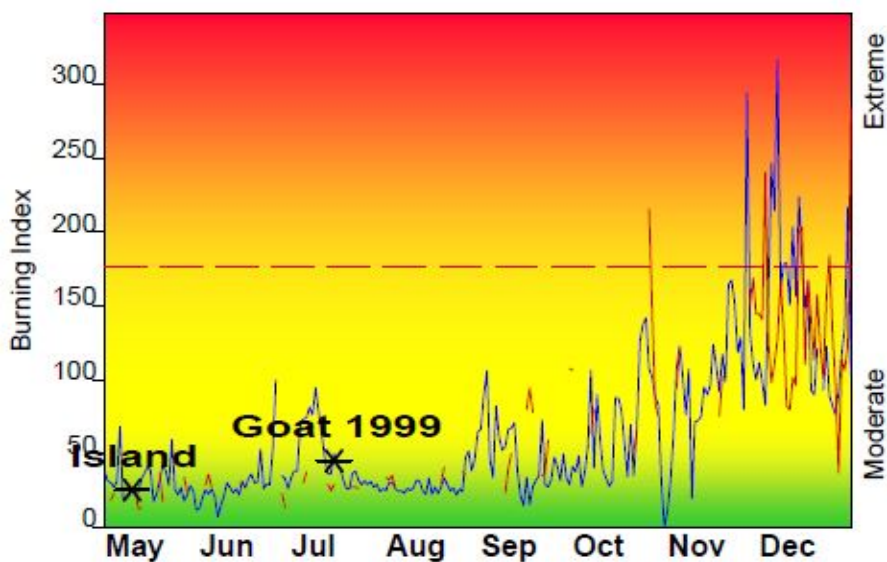
Maximum -- Highest Burning Index by day for 2016 - 2021

Average -- shows peak fire season over 5 years (785 observations)

97th Percentile -- 3% of the 785 days from 2016 - 2021 had an Burning Index above 177

**Local Thresholds - Watch out:** Combinations of any of these factors can greatly increase fire behavior:  
**20' Wind Speed** over 15 mph, **RH** less than 25%,  
**Temperature** over 75, **Burning Index** over 127

## Years to Remember: 2017 2020



Fuel Model: X - Brush (2016)

## Remember what Fire Danger tells you:

- ✓ Burning Index gives day-to-day fluctuations calculated from 2 pm temperature, humidity, wind, daily temperature & rh ranges, and precip duration.
- ✓ Wind is part of BI calculation.
- ✓ Watch local conditions and variations across the landscape -- Fuel, Weather, Topography.
- ✓ Listen to weather forecasts -- especially WIND.

## Past Experience:

Wind Driven Fires Can Produce:

Rates of Spread > 160 ch/hr

Spotting up to 0.5-1 Mile Ahead of Fire Front

Eye Level Winds > 7 MPH

Live Fuel Moistures < 75%

Fine Fuel Moistures < 5%

Active Night Burning Conditions with RH < 15%

Non- Wind Driven Fires: Mature fuel beds 20+ years of growth

Identify the alignment of wind, slope and solar pre-heating

Responsible Agency: Los Angeles County Fire Department

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Design by NWCG Fire Danger Working Team



# Catalina Island Forecast Zone Pocket Card 2022

BI	127	177+	<b>Moderate to High Intensity Fire Behavior:</b> <u><i>May not be associated with a Fire Weather Watch and Red Flag Conditions.</i></u>
PERCENTILE	90% to 100%		
<b>Fire Behavior:</b> Increased fire growth should be anticipated with rates of spread at 1 mile an hour. Spotting ½ to 1 mile. Flame Length 30+ feet. <b>Key Indicators:</b> Temps > 80 degrees; Wind >15 - 35 mph; RH < 15%; 10 HR DFM ≤5; LFM 100% -50% The abundance of old growth fuels on the island will significantly contribute to a high resistance to control. <b>Targeted Months:</b> May thru December <b>Engagement Tactical Options:</b> Heel and Flank Suppression. Identify Structure Defense and Evacuations. <b>Fire Size Class:</b> 1500 plus acre potential within the first 4 hours.			

BI	80	126	Moderate Intensity Fire Behavior: Associated with periods of hot, dry weather, light to moderate winds and short range spotting
<b>Fire Behavior:</b> Fires are mainly topography driven with Westerly wind alignment features.			
<b>Key Indicators:</b> Temps 75- 100 degrees; Wind 5- 15 mph; RH: 15%- 30%.. 10 HR DFM >5-7%.. LFM 80% to 60%			
<b>Targeted Months:</b> May thru December			
<b>Engagement Tactical Options:</b> Heel and Flank Suppression fires are routinely held to topographic and road features. Identify Structure Defense and Evacuations.			
<b>Fire Size Class:</b> 25 - 1500 plus acres.			
(Moisture of extinction in fine fuels routinely after nightfall)			

BI	25	79	Low Fire Behavior Intensity: Routine weather for the area
<b>Fire Behavior:</b> Fires are mainly topography dominated with slow to moderate rates of spread. Alignment of forces must be identified on routine weather days. Slope, Wind and Solar pre heating. Backing fire will have limited spread.			
<b>Key Indicators:</b> Temps > 70 - 90 degrees; Wind 5 - 20 mph; RH < 30%- 50% ; 10 HR DFM 5-12% ; LFM 120% -60%			
<b>Targeted Months:</b> May thru December			
<b>Engagement Tactical Options:</b> Heel and Flank Suppression. Fires are routinely held to topographic and road features. Identify Structure Defense.			
Fire Size Class: 5 – 25 acres.			
(Moisture of extinction in fine fuels routinely after nightfall)			

# New Burning Index Values “Roll Out 2022”

## NFDRS Version 4

Forecast Zone NFDRS Version 3 vs Version 4 97 <sup>th</sup> Percentiles	Old BI Value	New BI Value	LAC Augmented Staffing
	<i>NFDRS V 3</i>	<i>NFDRS V 4</i>	
LA Basin	151	206	206
Santa Monica Mountains	156	242	192 (90 <sup>th</sup> )
Santa Clarita Valley	153	323	323
High Country	226	327	327
Antelope Valley	124	111	111
Catalina Island	82	177	177
<b>Gray Book Staffing based on the 97<sup>th</sup> Percentile</b>			
Malibu Hills RAWS	152	250	
Saugus RAWS	166	357	





# THANK YOU FOR YOUR TIME.

STOP...

From your LAC Fire Behavior Team

SITUATIONAL AWARENESS

THINK ABOUT YOUR SURROUNDINGS

OBSERVE THE FIRE ENVIRONMENT

PREDICT WHAT THE FIRE HAS THE ABILITY TO DO