

Southern Highlands

FIRE DANGER CARD

FUEL MODEL X

NWS Forecasting Offices

NWS Greenville/Spartanburg, SC (GSO)
NWS Morristown, TN (MRX)

RAWS

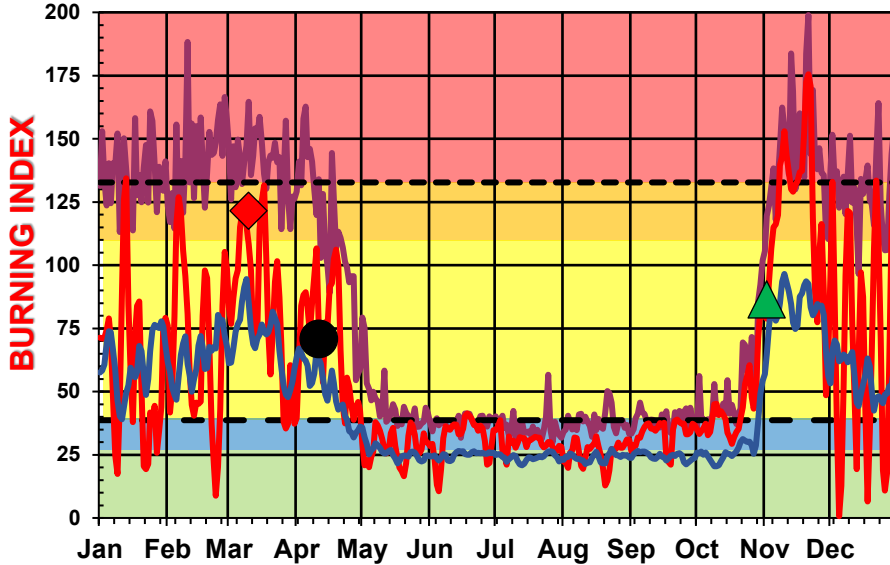
Tusquitee - 315602
Franklin - 315802
Highlands - 315803

All stations meet NWCG Weather Station standards

January - December



Cherokee, Clay, Graham, Swain, Haywood, Jackson, Macon Counties - NCFS. Wayah RD, Tusquitee, RD, Nantahala RD, Appalachian RD - USFS. Eastern Band of the Cherokee - BIA, Blue Ridge Parkway - NPS



MAXIMUM: Highest BI by day for 2006-2020.

AVERAGE: Shows mean daily BI value through the period.

2016: Representative fire season BI.

97th PERCENTILE: Only 3% of the days from 2006-2020 had a BI above 133.

67th PERCENTILE: Represents a BI level of 38 where large/multiple fire occurrences increase.

BURNING INDEX			
Fuel Model X	Average Seasonal Value	Average Highest Value	Highest Observed Value
January	61.7	83.1	160.8
February	63.6	92	188.3
March	70	98.4	164.7
April	50.5	71	162.7
May	26	34.3	79.3
June	25	31.8	41.4
July	23.9	30	56.6
August	24	31.6	50.2
September	24.4	34.9	45.7
October	27.8	43.8	101.9
November	81.4	118.7	199
December	56.1	80.6	164.2

Burning Index (BI): relates to the contribution of fire's behavior in containing the fire. The difficulty of containment is directly proportional to the fireline intensity. BI can be a cross reference to fireline intensity & flame length. It assists in assessing spotting & crown fire potential as well as suppression resource needs & tactical considerations. Doubling the burning index indicates that twice the effort will be required to contain a fire, providing all other parameters are held constant.

Remember what Fire Danger tells you:

Fire danger gives general conditions across the entire FDRA. Watch for localized conditions and variations across the landscape--Fuel, Weather, Topography. Listen to weather forecasts--especially RH and wind.

Local Weather and Fuel Thresholds That Shout WATCHOUT:

Combinations of any of these 4 factors can greatly increase fire behavior. Wind speed over 7 MPH, RH less than 30%, Temperature over 55°, FFM less than 10%.

Local Watch Outs

- When wind and topography are in alignment – Rapid uphill fire spread
- Post passage of a dry Cold Front – Gusty winds and low Relative Humidity
- 1000-hour FMC below 18% - Greatly contributes to fire behavior, intense mop-up

Memorable Fires

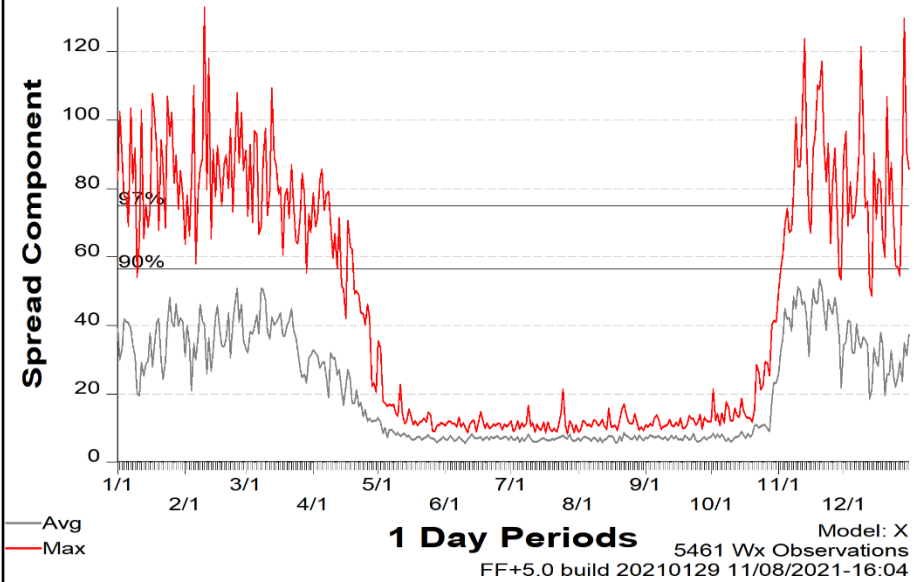
- ◆ **Daly:** 3/10/2021, Haywood County, 35 Acres. BI – 94.6, IC – 21.9, ERC – 71.3, 1000-FMC – 19.1, 1-hr FMC – 7.5
- **Chalk Hill:** 4/11/2021, Macon County, 34 Acres. BI – 70.9, IC – 16.1, ERC – 38, 1000-FMC – 18.1, 1-hr FMC – 8.4
- ▲ **Pack Mountain:** 11/1/2016, Cherokee County, 52 Acres. BI – 73.3, IC – 9, ERC – 27.1, 1000-FMC – 18, 1-hr FMC – 11.7

Updated – 10/2021

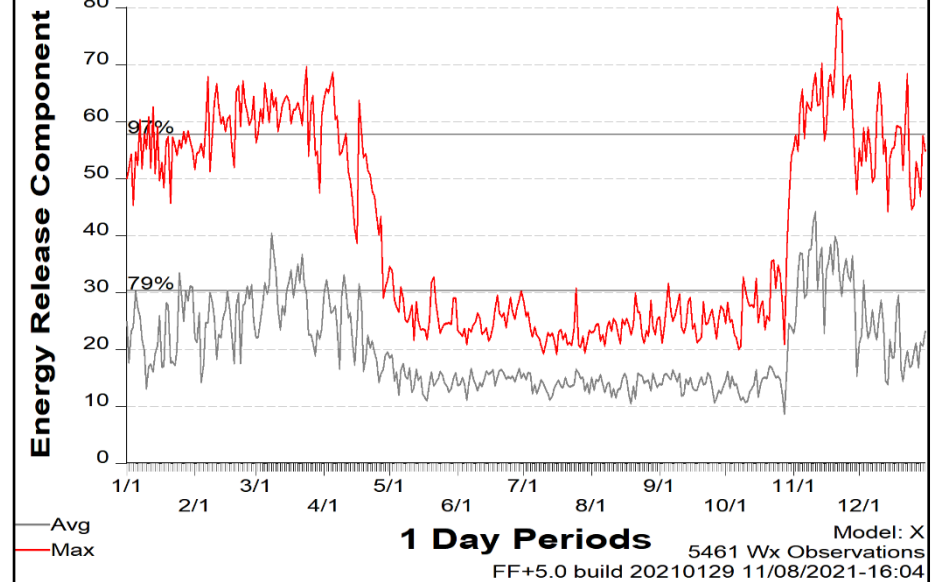
This card is based on 15 years of data



SIG - S Highlands 2006 - 2020



SIG - S Highlands 2006 - 2020

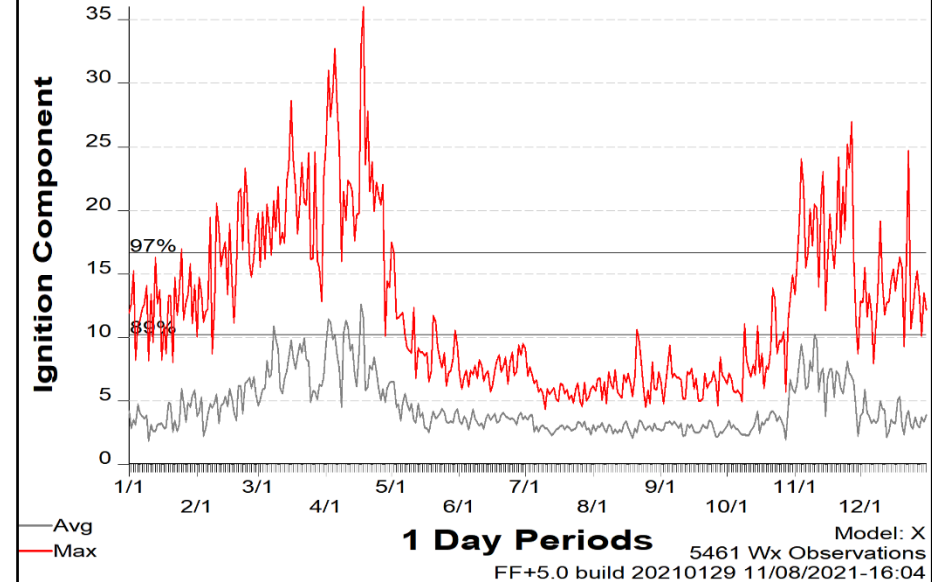


Spread Component (SC) - A rating of the forward rate of spread of a head fire. It integrates the effect of wind, slope, fuel bed and fuel particle properties. The daily variations are caused by the changes in the wind and moisture contents of the live fuels and the dead fuel moisture time lag classes of 1, 10, and 100 hour. **The higher the SC, the less likely that direct attack at the head of the fire will succeed.**

Ignition Component (IC) - The probability a firebrand will cause an “actionable” fire and requires suppression action. **IC** is more than just a probability of a fire starting. The fire must have the potential to spread. **IC** can be an aid in assessing spotting potential. **An IC value of greater than 10 (89th Percentile) is a critical threshold value. Expect short range spotting to occur above this value.**

Energy Release Component (ERC) - is a number related to the available energy (BTU) per unit area (square foot) within the flaming front at the head of a fire. The **ERC** reflects the contribution of all live and dead fuels to potential fire intensity. As live fuels cure and dead fuels dry, the **ERC** will increase. Each daily calculation considers the past 7 days in calculating the new number. Daily variations of the ERC are relatively small as wind is not part of the calculation. **An ERC value of 30 (79th Percentile) is a critical threshold value. At this value, large (>10 ac.) and multiple (>5) fires begin to occur within the FDRA**

SIG - S Highlands 2006 - 2020



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January - May



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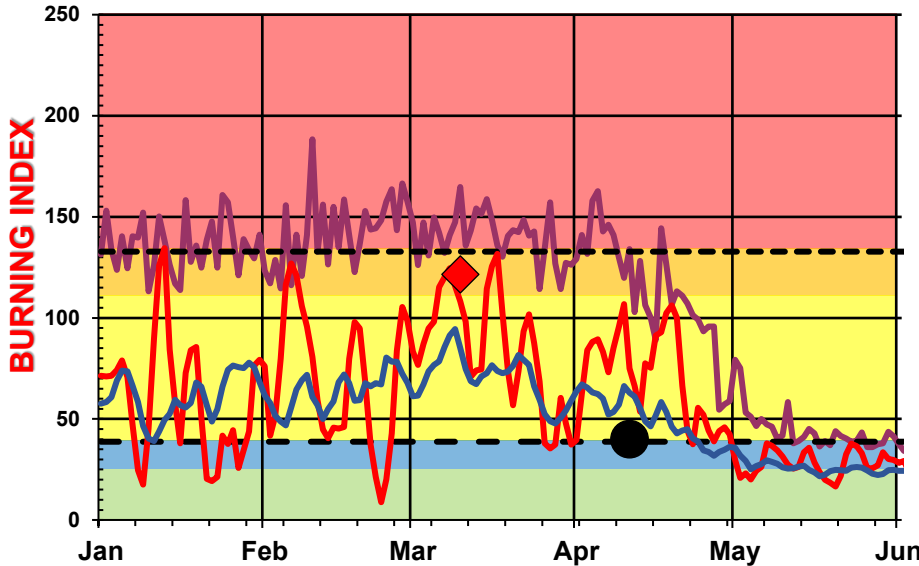
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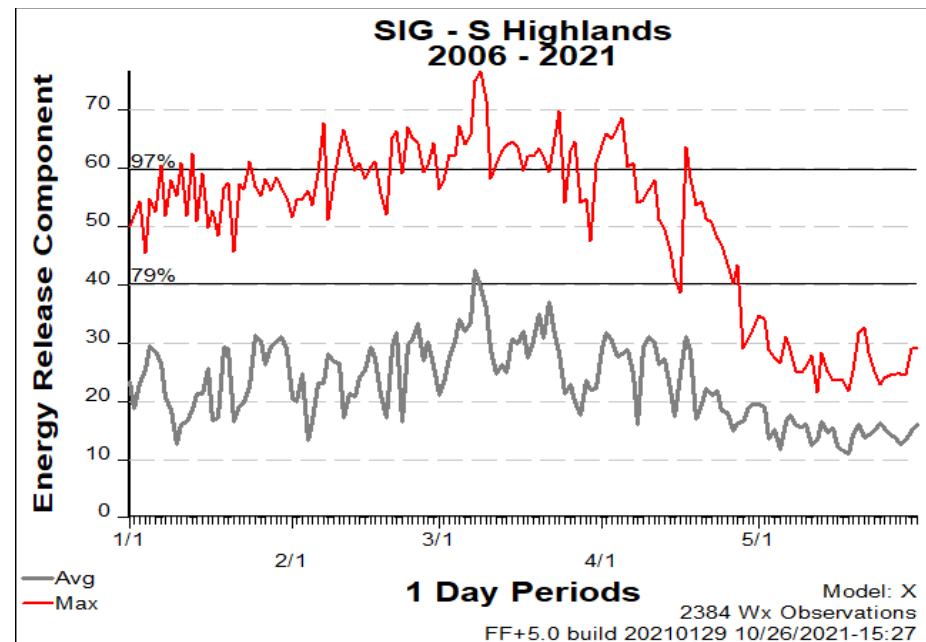
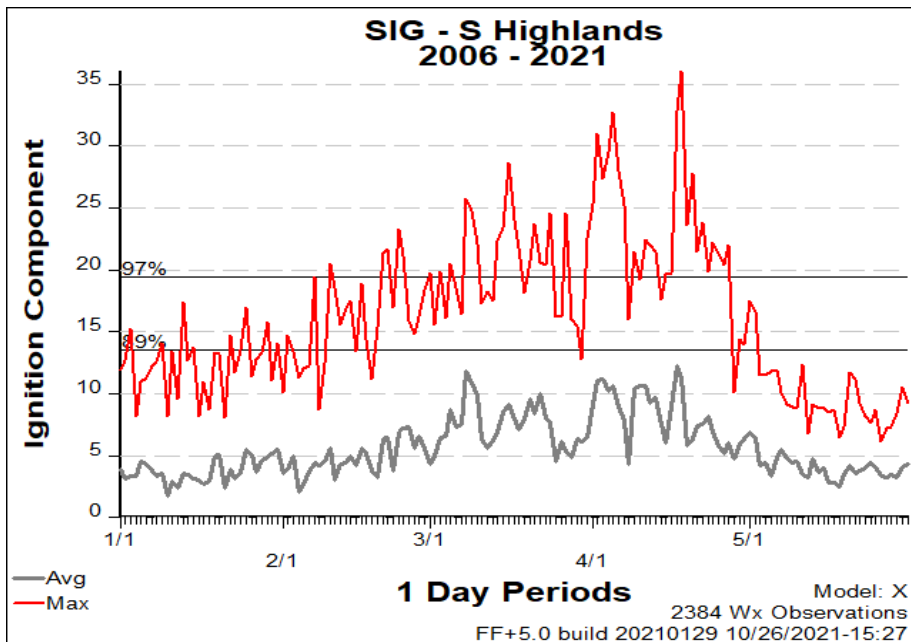
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Updated – 10/2021

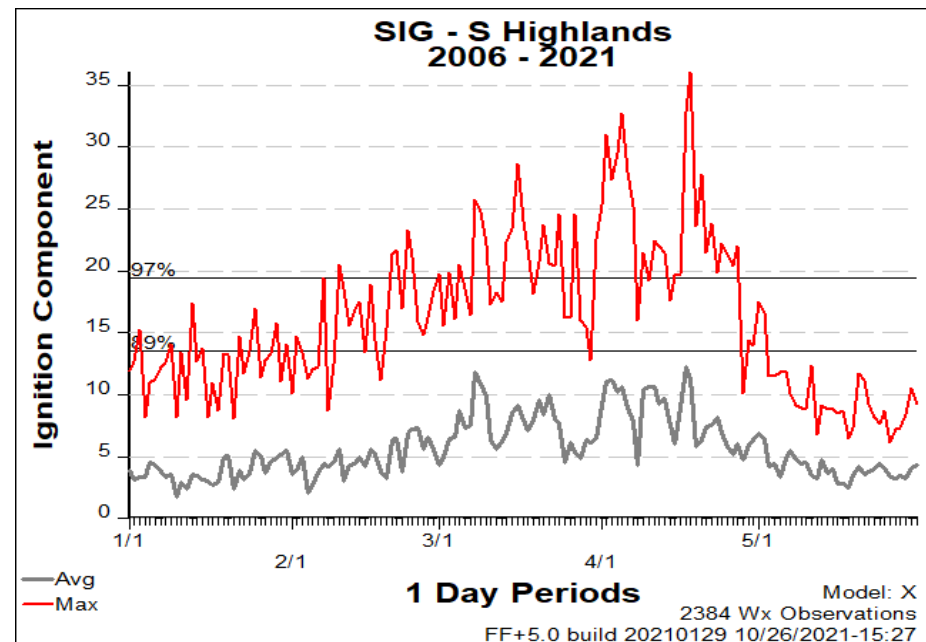
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October - December



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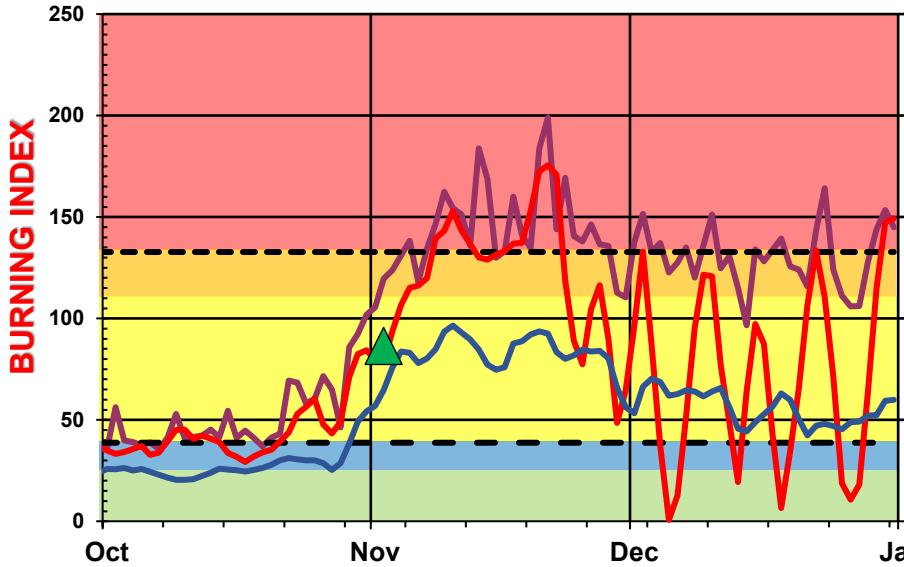
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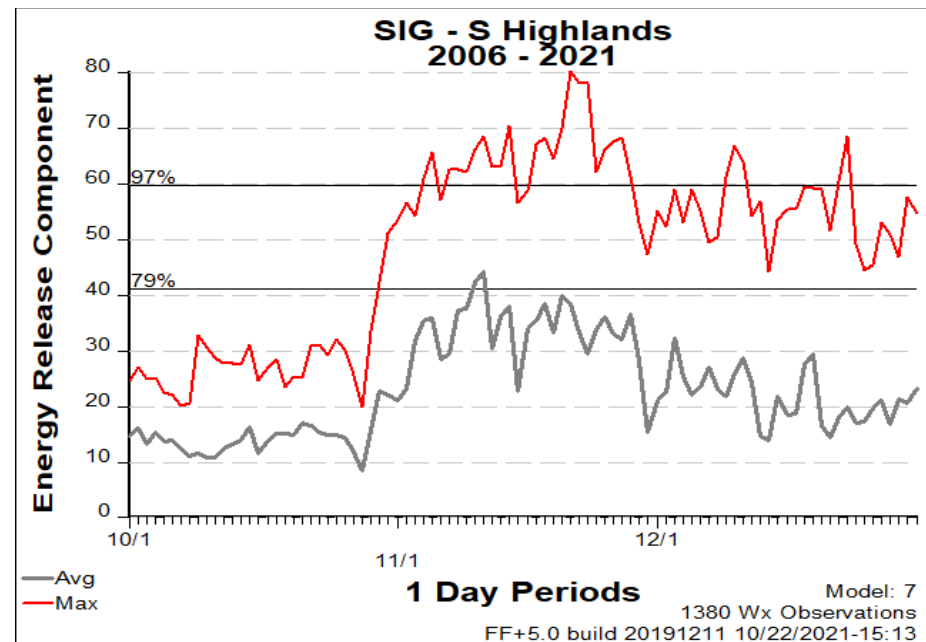
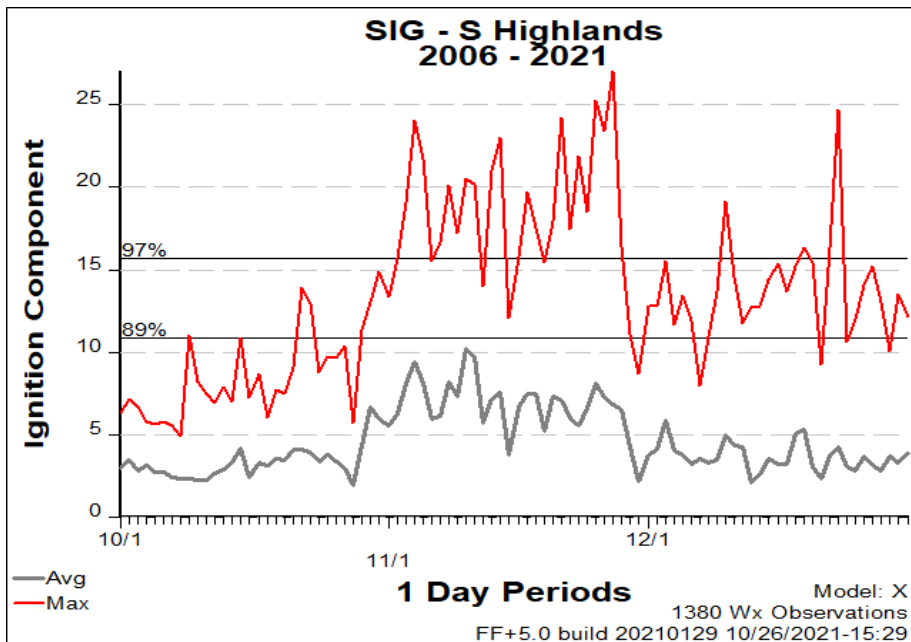
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