

Before It Snowed...



Chris' view from windy Genoa Peak Saturday morning
Carson Valley - left, Lake Tahoe - right

Short Attention Span Brief Weather

- Weather this week - **starting in March, ending in July.**
 - Unwelcome taste of winter today with rain/snow showers diminishing from west to east. Cool, breezy.
 - Gradual warm-up Tuesday-Wednesday; pleasant! Random nugget - earliest sunrises of the year occur this week. Sunrise 0531; Twilight 0459 PDT.
 - **Heat turns up considerably** starting Thursday, Friday. Has a **good potential of being long-lasting, through much of next week.** Solid 90's W Nevada cities. Generally light winds and plenty of sunshine. Heat health issues possible this weekend into next week for sensitive groups.
 - Low confidence if unusual warmth will continue into late June.

Short Attention Span Brief Hydrology

- High flows returning to rivers and streams draining high elevation terrain with late week heat up.
- West Walker River and Mono county streams remain primary concern, and are expected to slowly return to flows near earlier peaks. Flows will ramp up slowly each day starting Tuesday, highest flows over the weekend and into early next week.
- **Mason Valley has potential to exceed previous peak flows** early next week depending on available reservoir capacity and management.
- **Don't let your guard down on other creeks** and streams draining high elevation terrain. These will return to high flows in time for weekend recreation.
- **Lower than average river forecast confidence** related to recent “unexpected” responses of high elevation snow to cool down then heat with limited but very deep snow contributing area.

Situational Awareness - When Should I Freakout?

Chris' 7-Day Regional Freakout Forecast for the Sierra and western Nevada

	Today ^{6/12}	Tuesday ^{6/13}	Wed. ^{6/14}	Thursday ^{6/15}	Friday ^{6/16}	Saturday ^{6/17}	Sunday ^{6/18}
Wind	cool, breezy NW winds	typical winds, mainly under 10-15 mph.					
River & Snowmelt Flooding	gradually increasing snowmelt flows but below “typical mid-June levels”; main areas to watch are eastern Sierra creeks, Walker River				appreciable increases in snowmelt flows due to temperatures rising; main areas to watch remain eastern Sierra creeks, Walker basin, and upper Carson. <i>Could go red early next week - Walker, E Sierra.</i>		
Flash Flooding (fast paced, localized flooding outside of rivers)	no heavy rainfall scenarios						
Thunderstorms	not an issue					buildups over mountains; isolated cells possible next week	
Unusual Cold or Heat	cool but no freezes expected; gradual warming Tues-Thurs				heat health for sensitive groups	heat health concerns for sensitive groups & people outdoors all day, most W Nevada valleys into S Nevada and Owens	
Fire Weather	no concerns in wake of recent rain, light winds				light winds but fine fuels drying back out due to heat		
Air Quality (primarily from wildfire smoke plumes and local AQMD inputs)	no widespread issues anticipated						

What Does This Mean?

Integrates impacts and confidence

No worries



Low

freakoutness



Moderate

freakoutness



High

freakoutness



End of this (aka really bad)

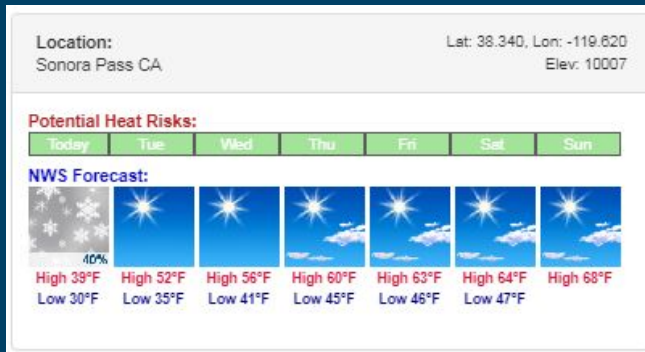
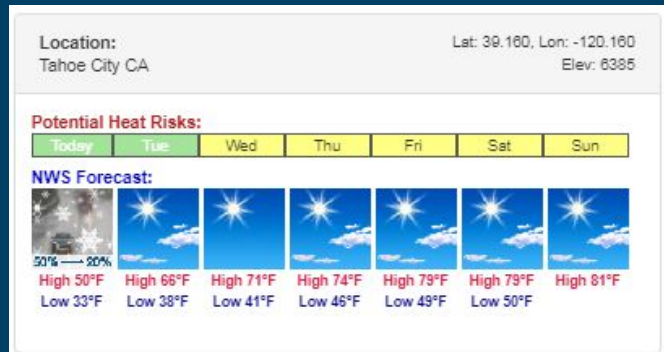
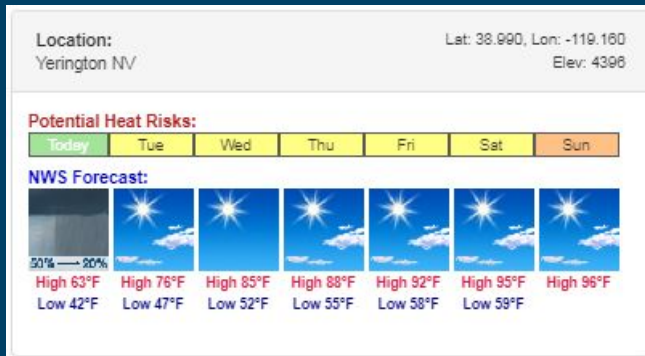


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Forecasting for the Sierra and western Nevada since 1905



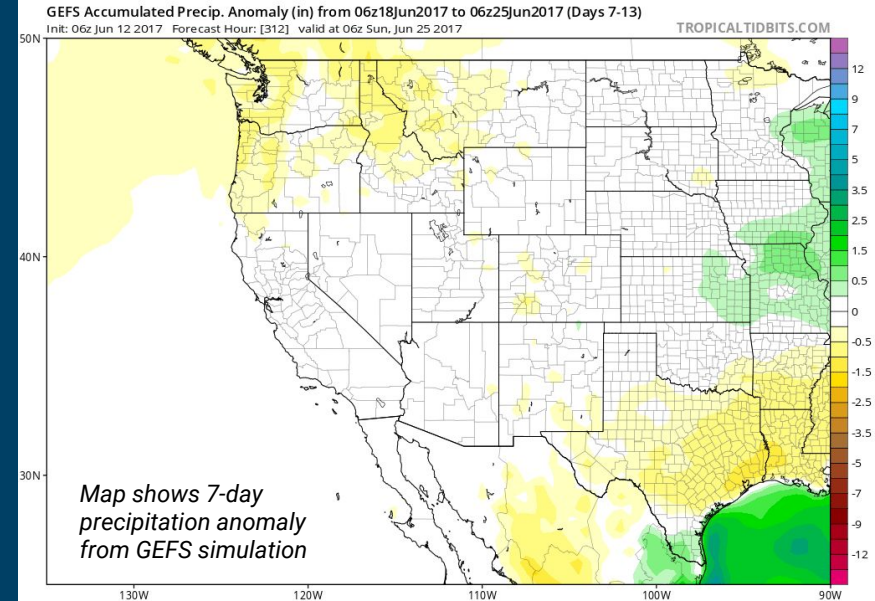
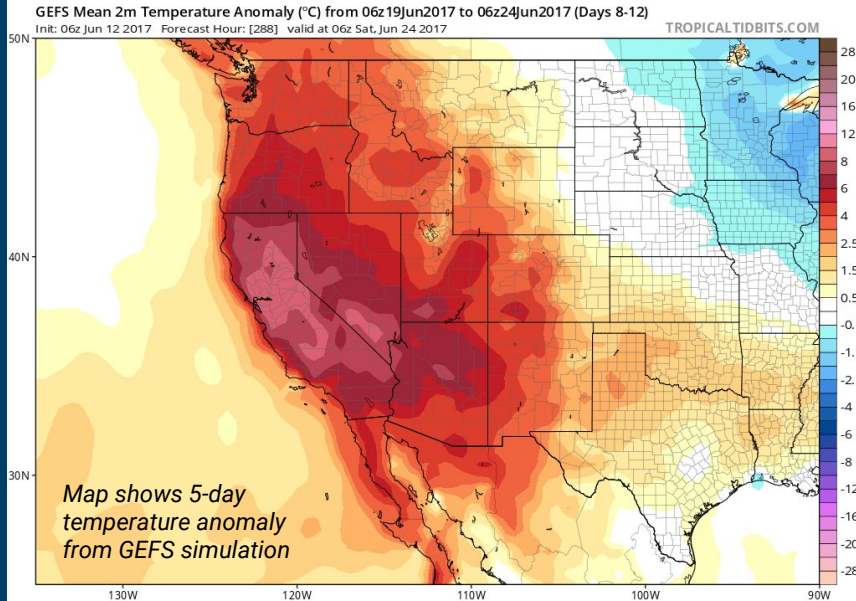
Temperature Trends Gradual Warming then Hot Late Week



Heat Risk Levels

Green	0	No Elevated Risk
Yellow	1	Low Risk for those extremely sensitive to heat, especially those without effective cooling and/or adequate hydration
Orange	2	Moderate Risk for those who are sensitive to heat, especially those without effective cooling and/or adequate hydration
Red	3	High Risk for much of the population, especially those who are heat sensitive and those without effective cooling and/or adequate hydration
Magenta	4	Very High Risk for entire population due to long duration heat, with little to no relief overnight

Next Week Potentially Quite Hot



- Many simulations show **very impressive heat signal** for CA/NV/AZ next week; other simulations are warm but not nearly as intense. If warmest scenario pans out - 100's possible in W Nevada cities early/mid week.
- No clear signal on rain potential, but this pattern can produce isolated storms over mountains each day. No big monsoon push evident in simulations.

Situational Awareness - When Should I Freakout?

Chris & Tim's Rough Sketch on Timing the Highest Risks of Snowmelt Flooding

	Rest of June	July	August
Walker River Basin	widespread minor-moderate flooding likely with prolonged heatwave; don't let your guard down	likely on a downward trend but uncertain how quickly; maintain preparedness	high water but likely on downward trend
Carson River Basin	areas of minor flooding during heatwaves, mainly Carson Valley and upper reaches of E/W forks	above normal flows continue	
Truckee River Basin	heavily regulated system; high flows persist with main flood issues above Truckee, CA	above normal flows continue	
Tahoe Basin Creeks/Streams	high flows persist with areas or minor flooding during heatwaves	high water continues but likely on downward trend	
NE California Basins	past peak, very localized minor flooding issues		
E Sierra Creeks/Streams	many areas of minor to moderate flooding during heatwaves; don't let your guard down	high water continues but likely on downward trend	
Lower Humboldt River Basin	high water continues, possibly increased due to June 11-12 snow	gradual decrease in flows	

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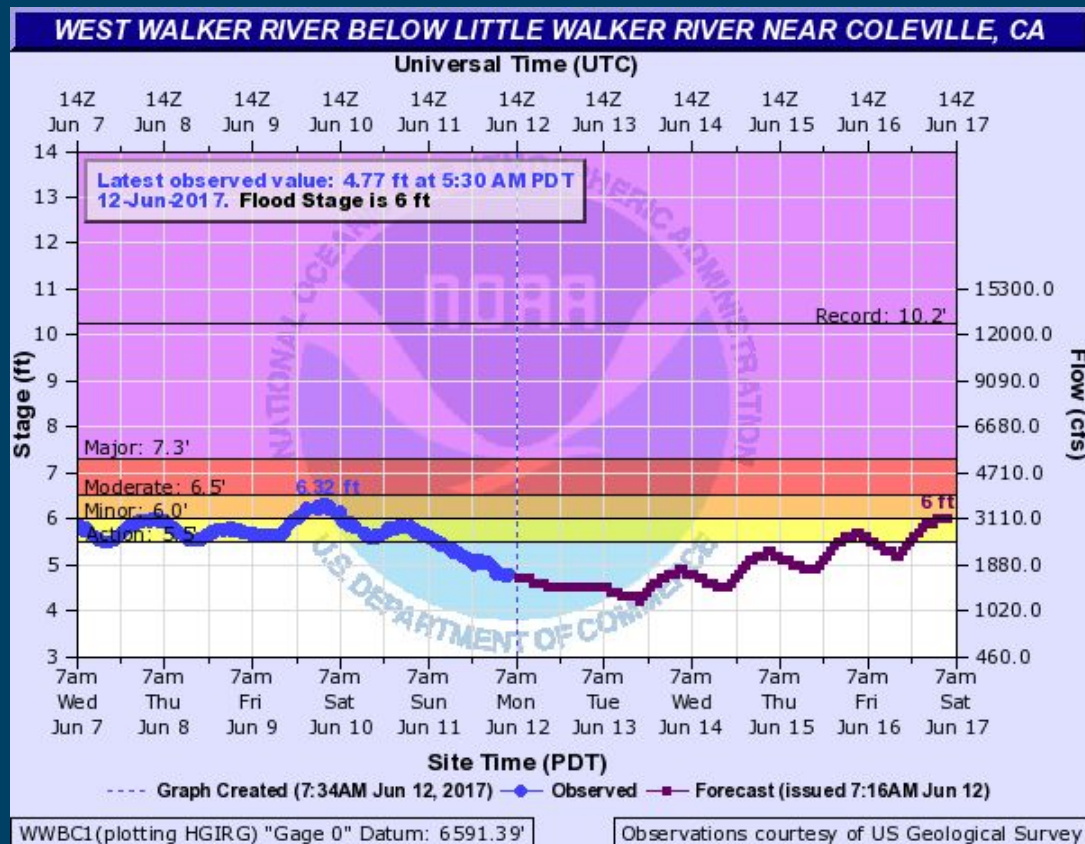


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5 Day Forecast West Walker @ Sonora Junction

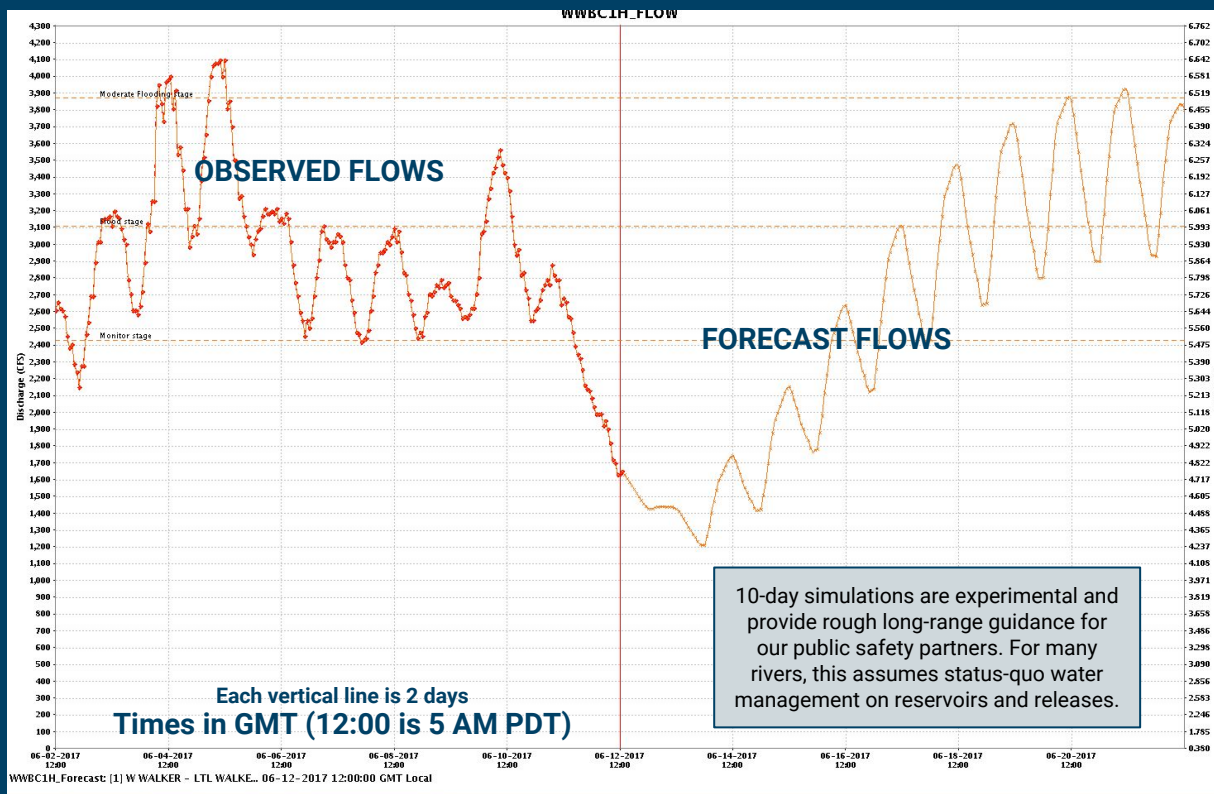
5-day official forecasts - [CNRFC](#) or [NWS Reno](#)

- Decreasing flows before stair step return to high flows.
- Return to **Minor and possibly Moderate flooding by the weekend**, impacting mainly agricultural areas in Antelope Valley. Possible impacts to recreation areas and rural roads in Walker Canyon.
- Likely to see high flows similar to or possibly in excess of earlier peaks.**
- W. Walker snowmelt response has been especially challenging to model leading to greater forecast uncertainty



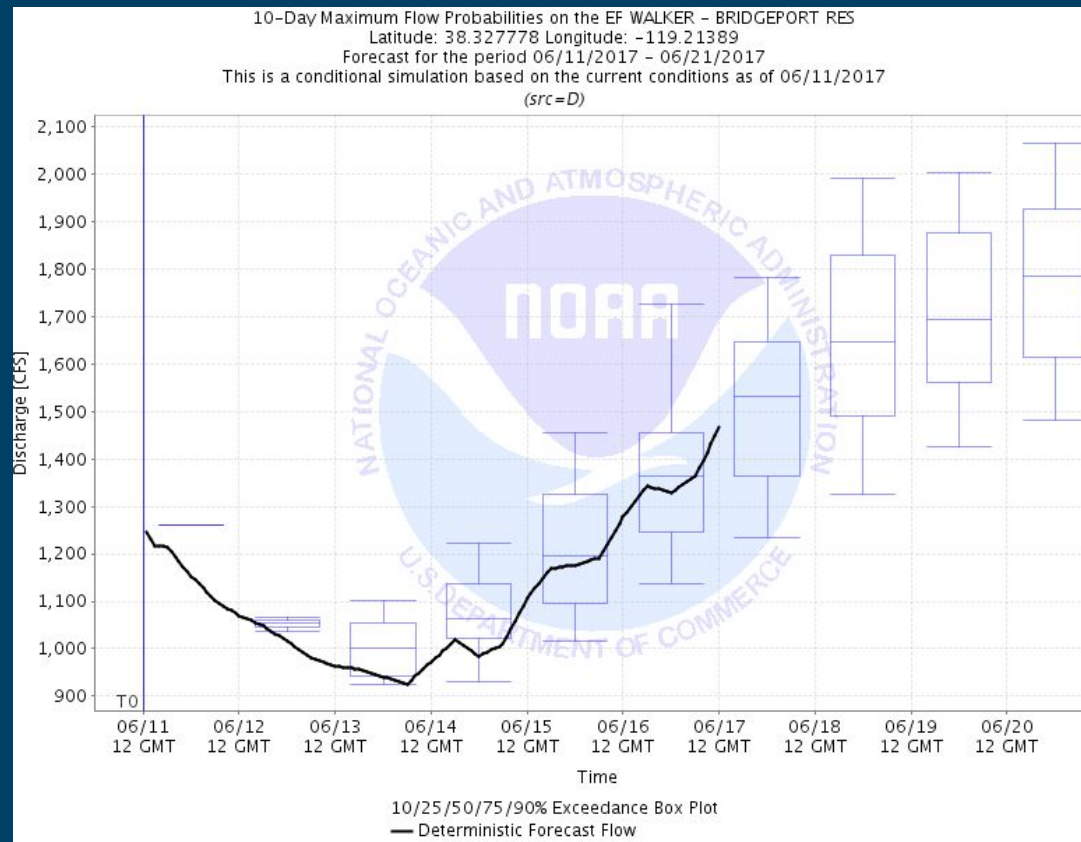
10 Day Simulation West Walker near Sonora Jct

5-day official forecasts - [CNRFC](#) or [NWS Reno](#)



10- Day Ensemble Forecast East Walker Bridgeport inflow

- **IMPORTANT:** These are estimated inflows, no gauging data to calibrate from so increased margin of error.
- Flows decreasing then increasing mid-week with warming temps.
- **Inflows likely to exceed earlier peaks.**
- Inflows consistently exceeding current releases.



5 Day Forecast Walker River @ Mason/Yerington

5-day official forecasts - [CNRFC](#) or [NWS Reno](#)

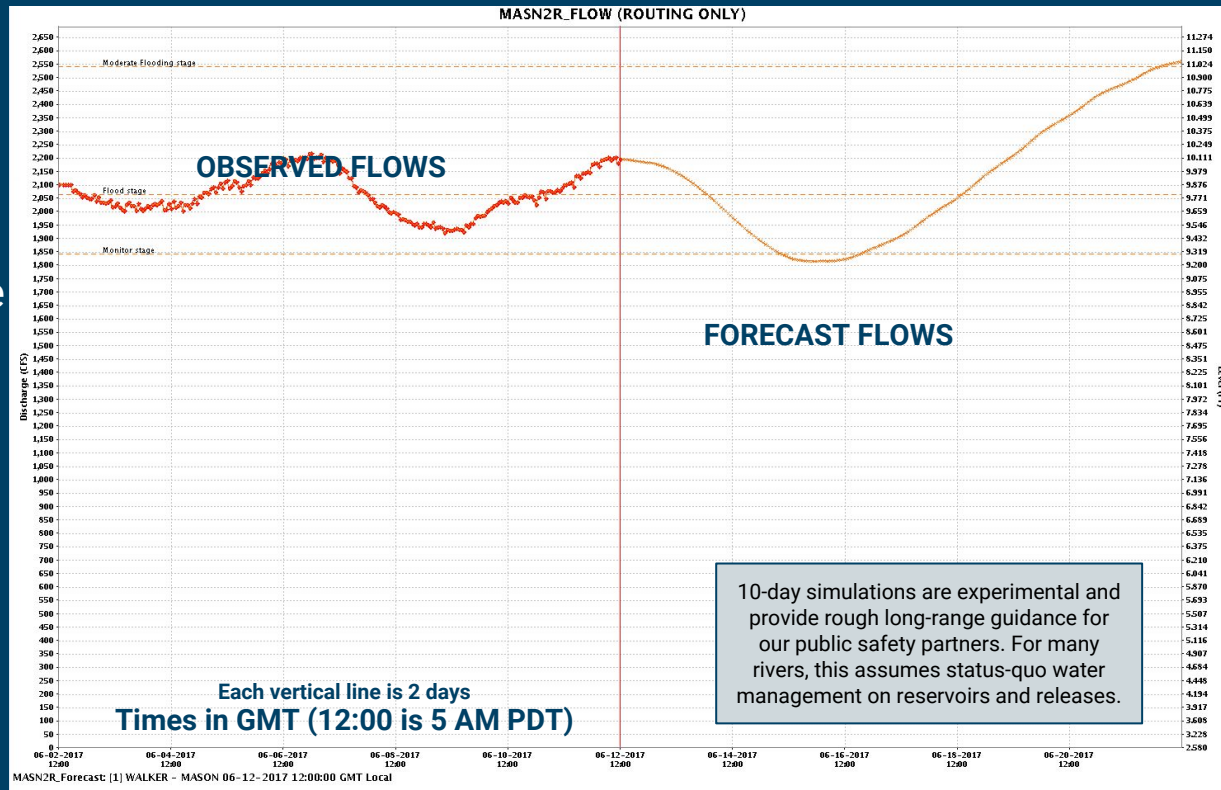
- **Minor flooding ongoing.** Currently at or very near high point for this week. Flows slowly decreasing before returning to minor flood stage over the weekend.
- **Moderate flooding possible early next week** depending on West Walker snowmelt response and remaining reservoir capacity and management.
- **IMPORTANT:** This new forecast factors in latest water management scenario, which may change depending on later forecasts and stream response.



10 Day Simulation Walker @ Mason/Yerington

5-day official forecasts - [CNRFC](#) or [NWS Reno](#)

- **IMPORTANT:** Simulation assumes status quo water management and persistent heat scenario.
- Given this - rising to moderate flood stage early to mid next week.
- **Confidence - low to medium** due to uncertainty in upstream snowpack and attenuation due to minor flooding and agricultural diversions.



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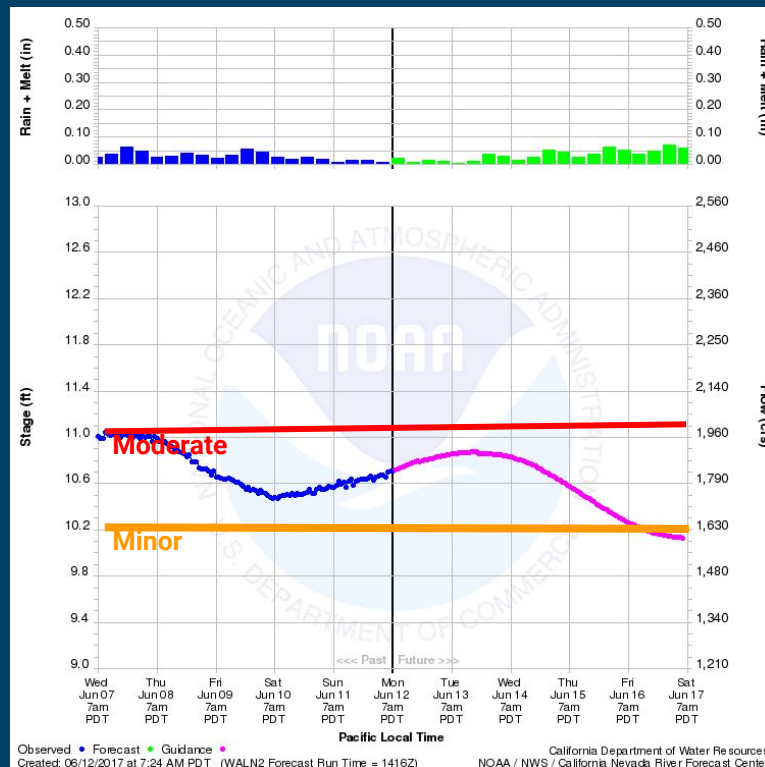
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5 Day Forecast Walker River @ Wabuska

5-day official forecasts - [CNRFC](#) or [NWS Reno](#)

- High flows, increasing towards moderate flood stages early this week before decreasing.
- **Secondary rise expected early next week.**
- ~ 18 to 24 hour lag to Weber Reservoir.
- Long duration and high volume event may result in minor to moderate flood impacts below Weber Reservoir.



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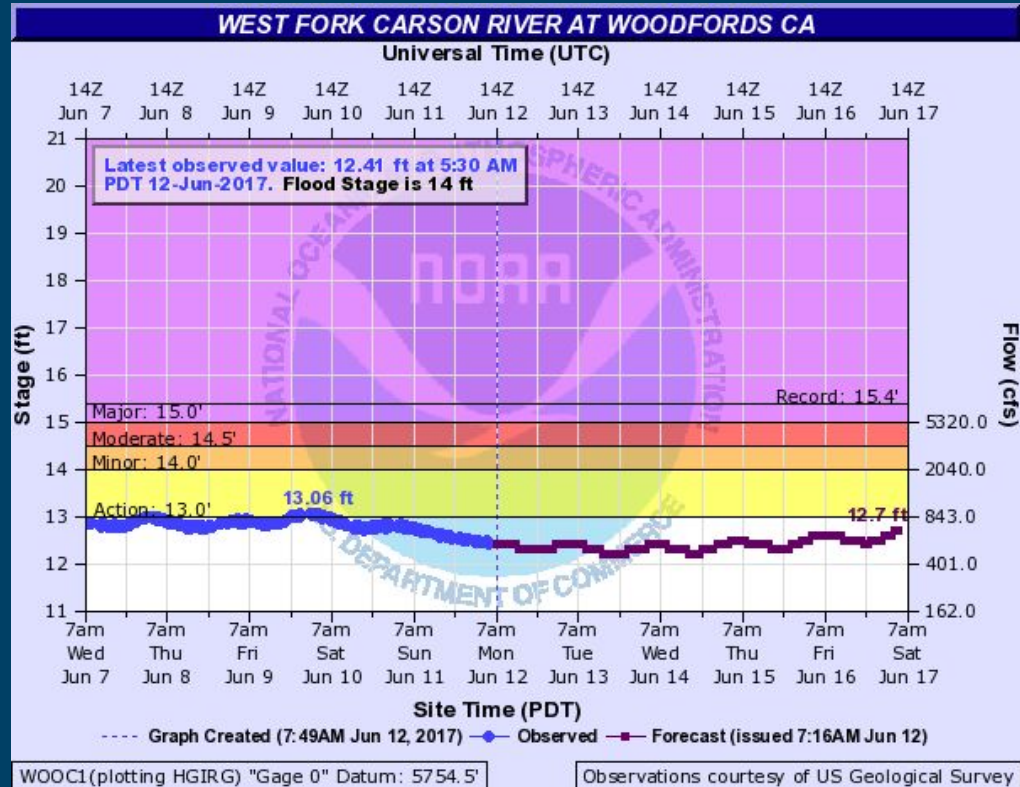
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5 Day Forecast West Carson @ Woodfords

5-day official forecasts - [CNRFC](#) or [NWS Reno](#)

- No flooding expected, slow return to high flows.
- Keep an eye on stream response as we warm up, potential for remaining high elevation snowmelt to exceed expectations with prolonged heat.



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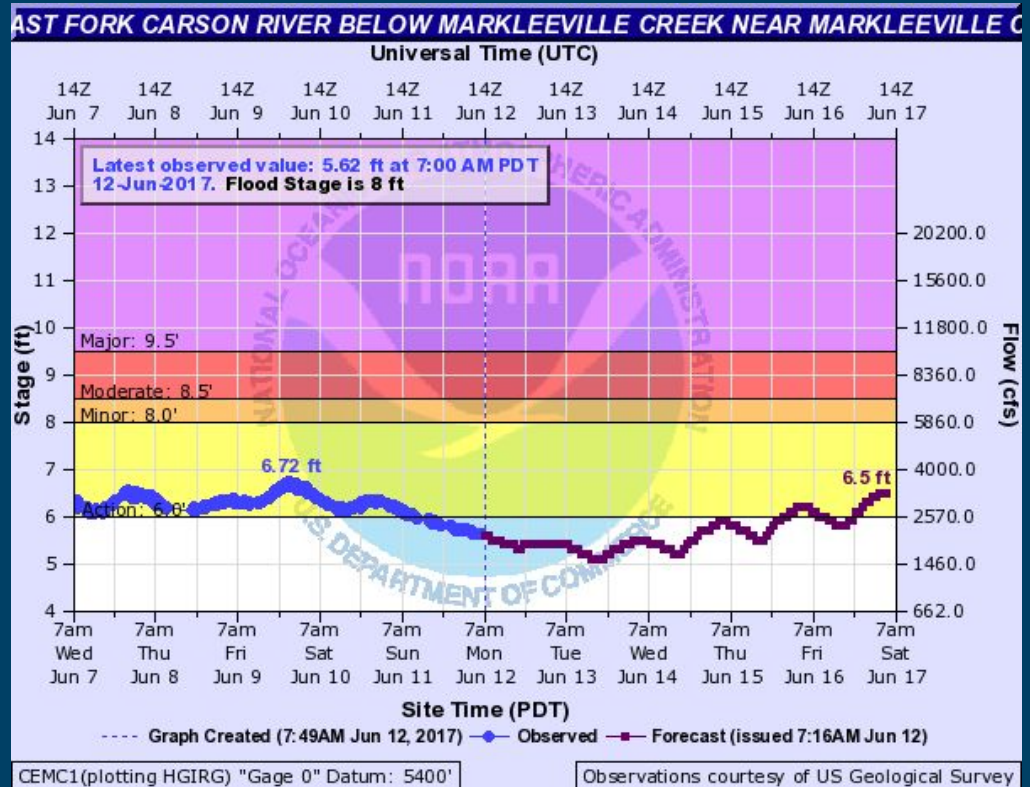
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5 Day Forecast East Carson @ Markleeville

5-day official forecasts - [CNRFC](#) or [NWS Reno](#)

- No flooding expected, slow return to very high flows.
- Keep an eye on stream response as we warm up, potential for remaining high elevation snowmelt to exceed expectations with prolonged heat.



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Forecasting for the Sierra and western Nevada since 1905



Eastern Sierra Outlook General Guidance

- Flows slowing due to cooler temps, but high flows returning late this week and through weekend.
- High flows likely to be similar or higher to earlier observed flows.
- Reported impacts on Rush and Hilton Creeks, additional minor to moderate impacts for areas near creeks/streams are likely.



Source - [LADWP Real-time data](#)



NWS does not have specific river simulations in the eastern Sierra, aside from Walker River basin. So we use projected rises on the Walker River and internal (highly) experimental National Water Model guidance.