

Memorial Day Weekend and Next week



Short Attention Span Brief

- **Weather:** Typical late spring weather for Memorial Day weekend, then some late spring heat to start next week. Potential for late afternoon/early evening showers and thunderstorms Sunday-Wednesday. **Main concern fast and cold creeks/ivers during the second half of Memorial Day weekend with “let’s cool off in the water” temperatures.**
- **Brief Analysis:** **High Sierra snowpack is large, takes more heat/energy than usual to get a big melt off.** It’s almost June, warm temperatures in the High Sierra are coming. Long range simulations not showing any big cool downs the next week or two. Favored scenarios: A steady rate of melting the next couple weeks, or **a lot more snowmelt response** and higher flows, flooding (especially on Walker Basin).

Short Attention Span Brief

- **Walker River @ Mason/Yerington: Minor flood** impacts confined to rural, agricultural areas. Any decrease in flows Today-Saturday are temporary. **Secondary peak in flows likely Memorial Day week - monitor for potential higher impacts.**
- **Rest of the regional river and stream systems:** in the eastern Sierra, W Nevada will see **minor flooding impacts along these streams.** Lower Humboldt continues in above minor flood stage with only localized impacts.

Situational Awareness - When Should I Freakout?

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

	Friday ^{5/26}	Saturday ^{5/27}	Sunday ^{5/28}	Mem. Day ^{5/29}	Tuesday ^{5/30}	Wednesday ^{5/31}	Thursday ^{6/1}
Wind	generally light winds under 10-15 mph				Gusty afternoon/evening winds - typical summer Zephyr winds (20-30 mph gusts)		
Snow	no snow						
River & Snowmelt Flooding	snowmelt flows with minor flooding impacts (Walker Basin)		don't let your guard down period - increased heating will raise snowmelt and flood potential but severity low confidence; hot weather will lead to more water rescues				
Flash Flooding (fast paced flooding of streams, poor drainage and steep terrain areas, rock slides, burn scar runoff)	no heavy rainfall signals, brief downpours from thunderstorms are possible						
Thunderstorms	None		isolated storms possible each afternoon but no strong storm signals				None
Unusual Cold or Heat	no widespread freezes or heat-health issues expected						
Fire Weather	Grasses drying out						

What Does This Mean?
Integrates impacts and confidence

No worries



Low freakoutness



Moderate freakoutness



High freakoutness



End of this (aka really bad)



Reno National Weather Service

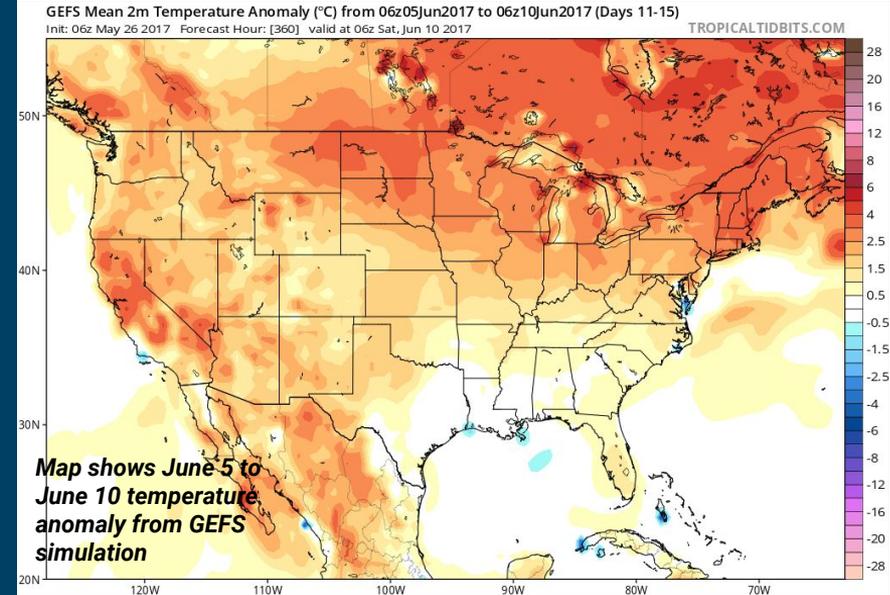
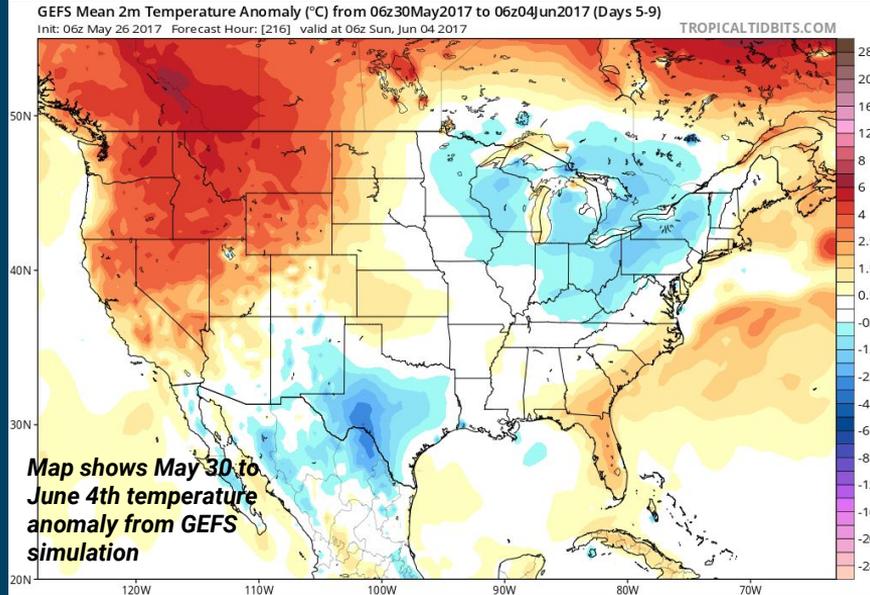
Forecasting for the Sierra and western Nevada since 1905



Temperature Trends



Next Couple Weeks - warmer than normal



- Simulations favor warm weather for the next couple weeks. Transition to a summer pattern, late afternoon/evening gusty winds and thunderstorms.
- Plan for continued flooding impacts (eastern Sierra, Walker Basin), high flows. Severity remains low confidence but we **could see a surge in flows second half Memorial Day weekend and into next week!**

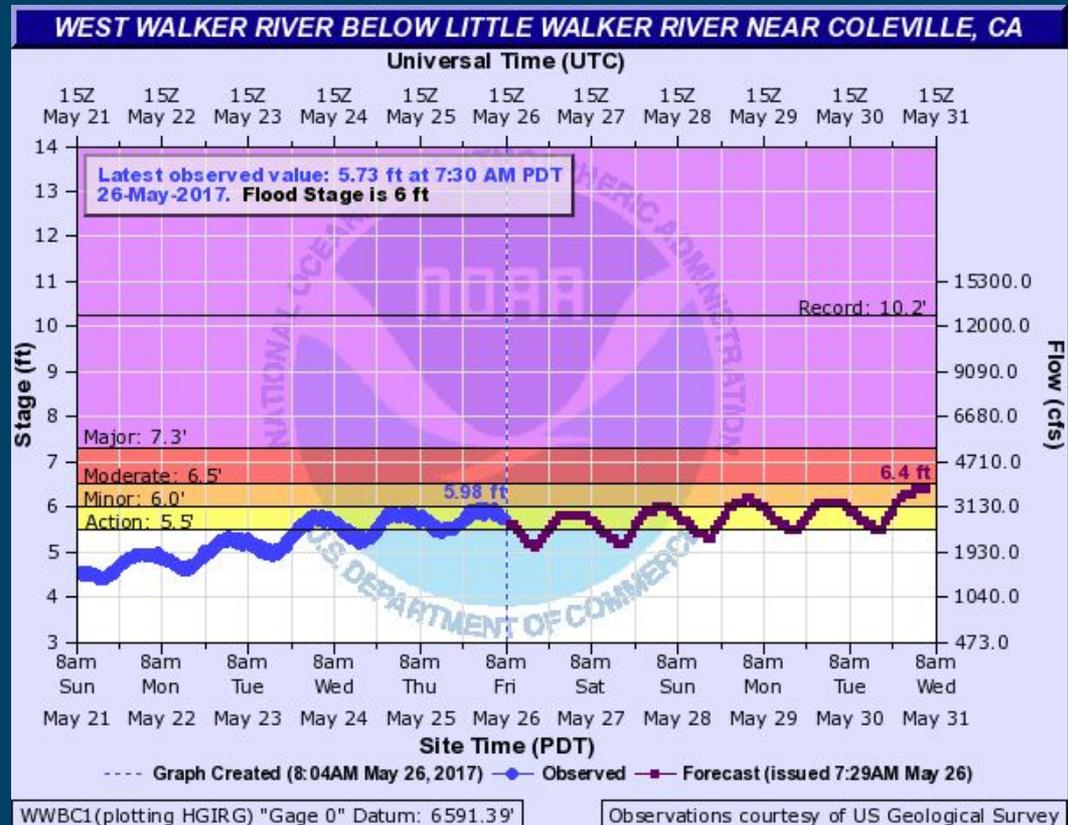
The Rivers

5-day forecasts

5 Day Forecast West Walker @ Sonora Junction

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

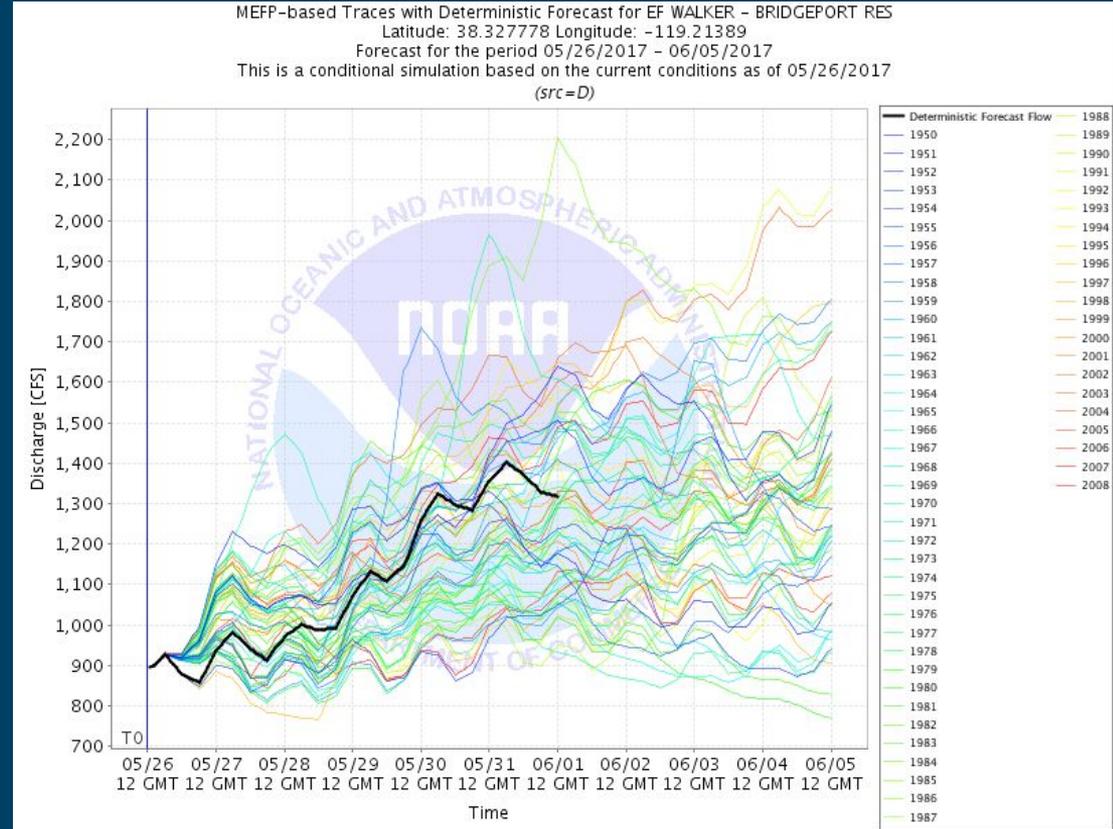
- Near or exceeding minor flood stage each night/early am this week. **Highest Flows Sunday into early next week.** Watch for campers too close to river.
- Impacts - Minor to moderate flooding of pasture & rural roads in West Walker River Canyon and Antelope Valley, including Walker, Coleville, Topaz, and Smith Valley
- Strong diurnal signal with night-time peaks.



Ensemble Plot East Walker @ Bridgeport Inflow

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

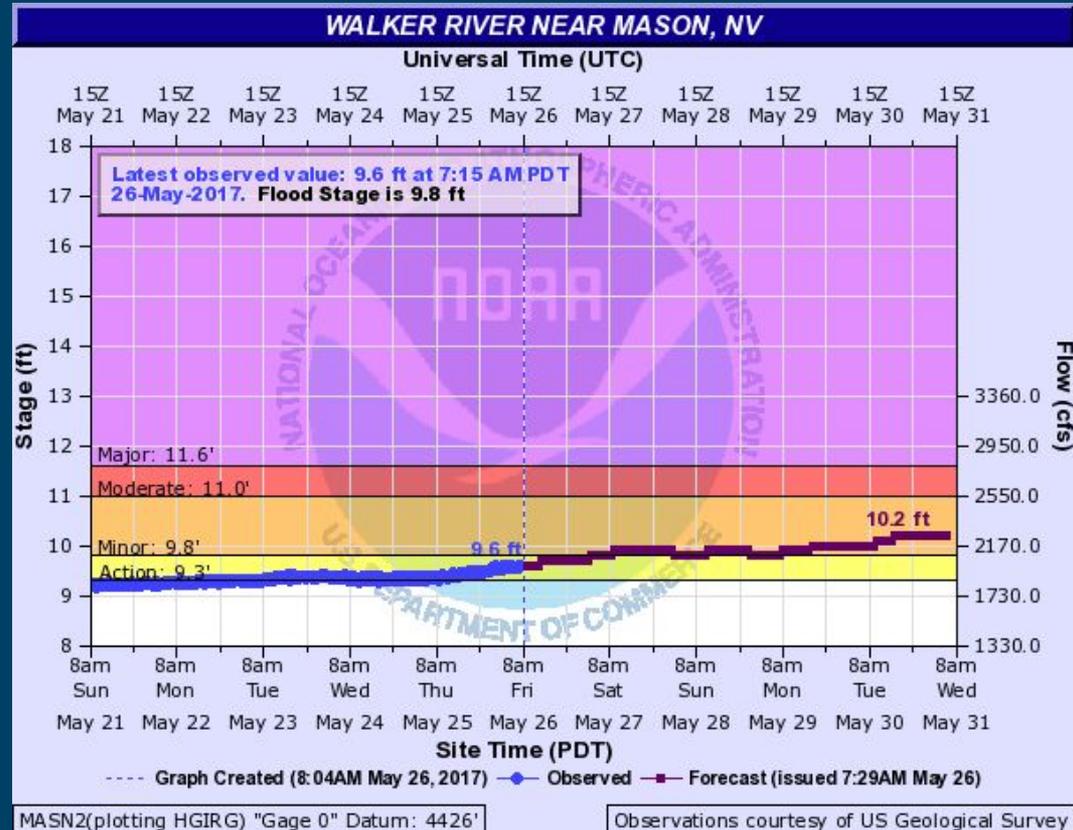
- **IMPORTANT:** These are estimated inflows, no gauging data to calibrate from so increased margin of error.
- Ensemble forecast product to represent uncertainty (59-years).
- 5-day deterministic forecast in black
- Increase in snowmelt flows into the reservoir. Most notably late weekend into early next week.



5 Day Forecast Walker River @ Mason/Yerington

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

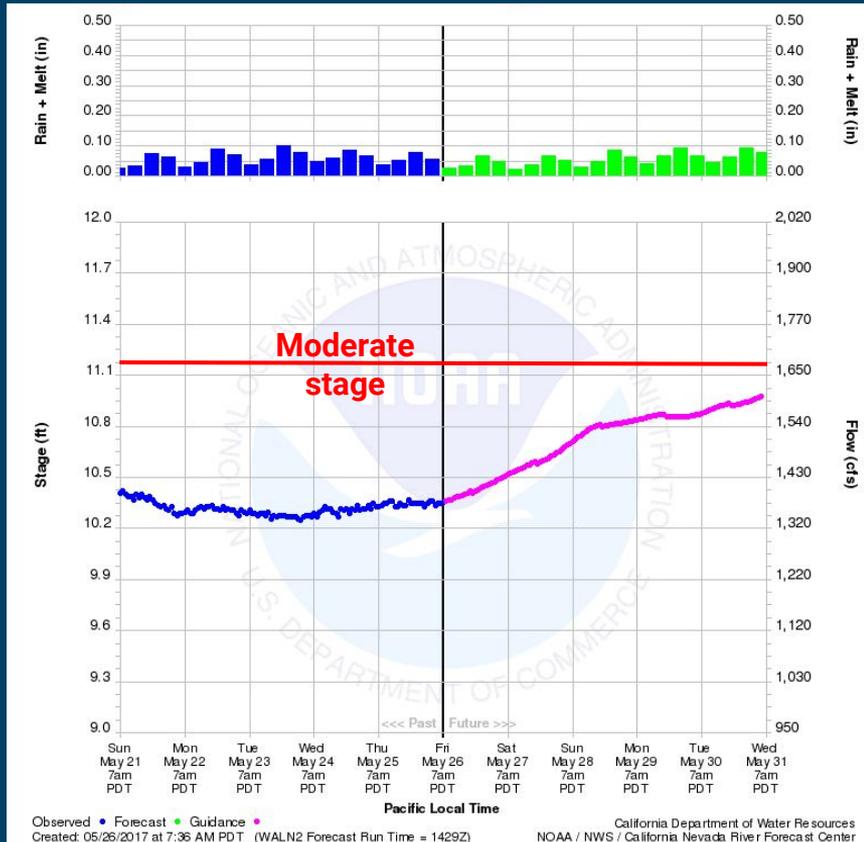
- **Slow rise occurring and expected to continue.** Minor flooding impacts this weekend. Levels Approaching Moderate flooding possible mid-end of next week.
- Based on water management on Topaz and Bridgeport reservoirs, new gauging around Topaz, and slower snowmelt response.
- **IMPORTANT:** This forecast factors in latest water management scenario, which may change depending on later forecasts and stream response.



5 Day Forecast Walker River @ Wabuska

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

- High flows, with minor flooding continuing. Additional rises with moderate flooding likely late next week. expected.
- ~ 18 to 24 hour lag to Weber Reservoir.
- Long duration and high volume event. Higher rises likely in next few weeks.



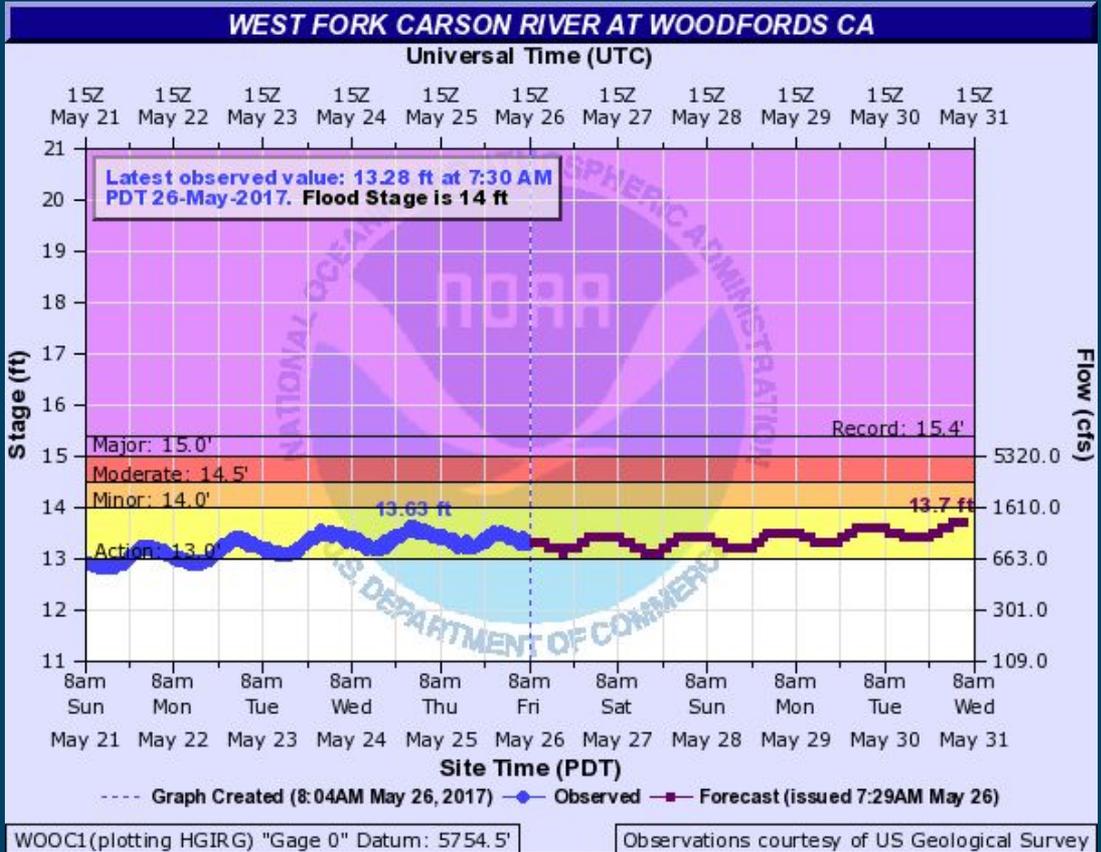
Observed • Forecast • Guidance •
Created: 05/26/2017 at 7:36 AM PDT (WALN2 Forecast Run Time = 1429Z) NOAA / NWS / California Nevada River Forecast Center



5 Day Forecast West Carson @ Woodfords

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

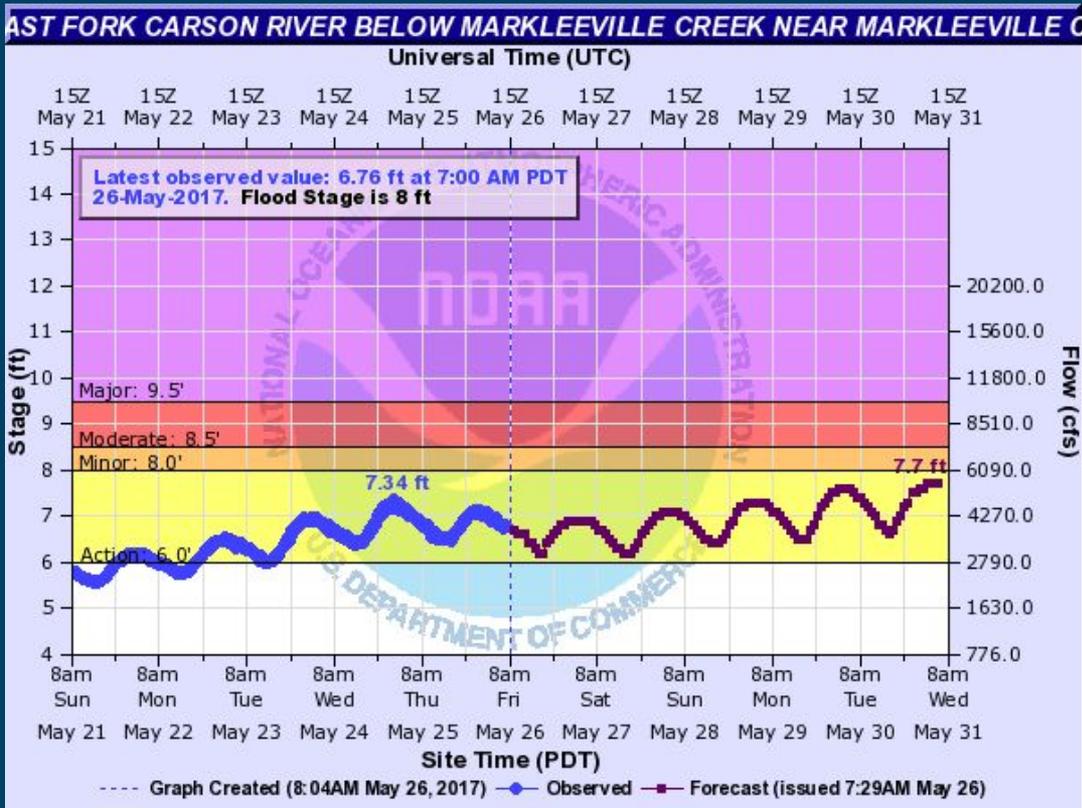
- Approaching minor flood stage every night.
- Impacts - possible minor flooding in the southwestern Carson Valley between Centerville and Genoa NV.
- Strong diurnal signal with night-time peaks.
- Somewhat higher flows early next week, but currently expected to be similar to earlier peak flows.
- Lots of snow gone below 7500 feet along Carson Pass.
- Odds increasing that we are near or just past peak flows for spring-summer.



5 Day Forecast East Carson @ Markleeville

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

- Well into monitor stage all week, possibly approaching flood stage early next week.
- Impacts - Broad minor flooding in lowest, flood prone portions of Carson Valley.
- Strong diurnal signal with night-time peaks.
- Odds increasing that snowmelt peak flows may be experienced within the next week, but prolonged high flows still expected.



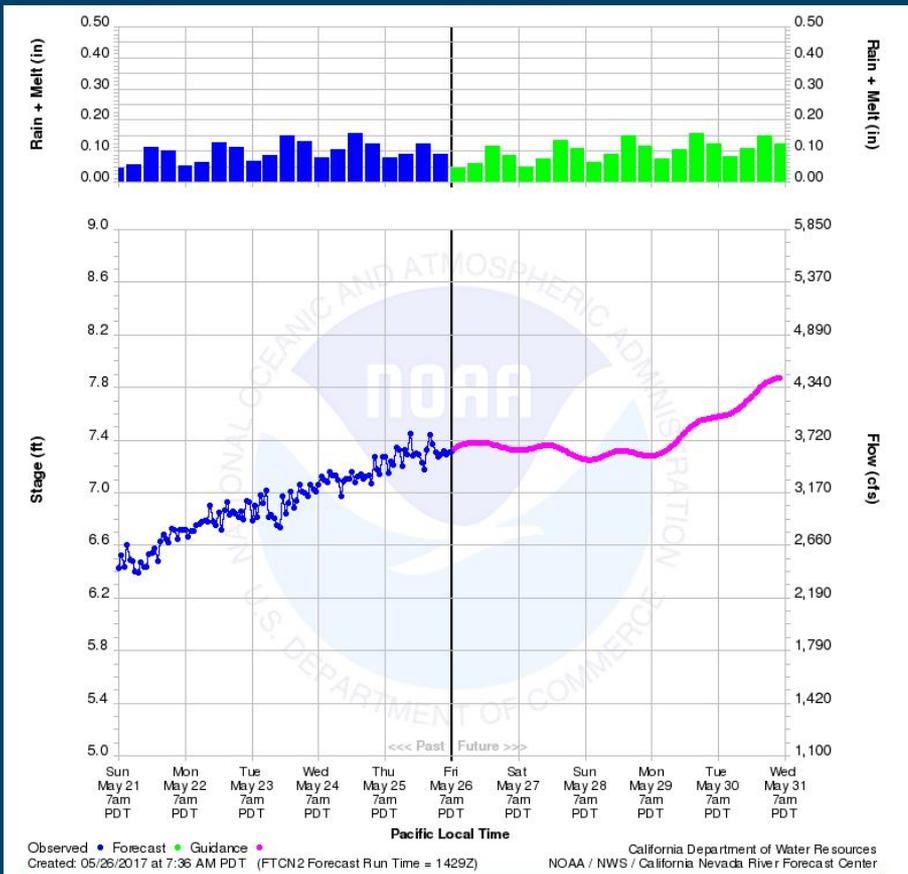
CEMC1(plotting HGIRG) "Gage 0" Datum: 5400'

Observations courtesy of US Geological Survey

5 Day Forecast Carson River @ Ft. Churchill

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

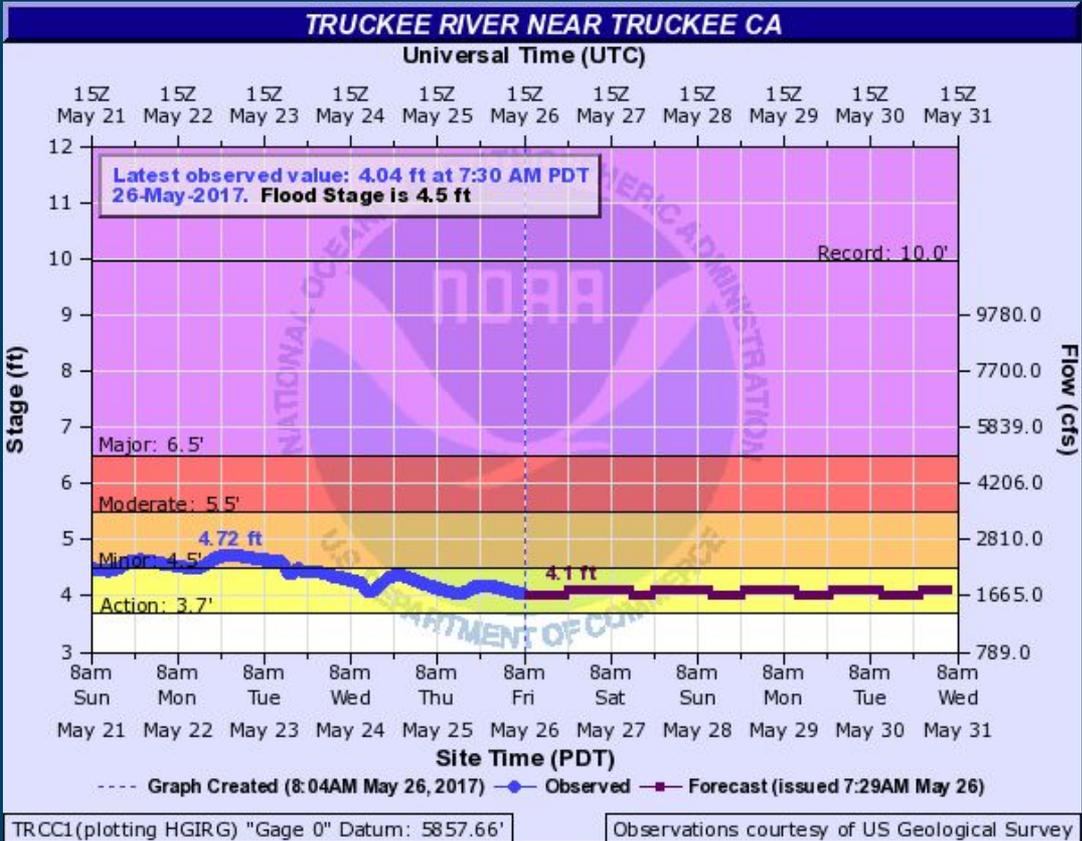
- Slowly increasing flows, expected to increase more significantly next week.
- Well below flood stage.
- Short range peak ~ late-next week.



5 Day Forecast Truckee River @ Truckee

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

- **IMPORTANT:** Simulation assumes status quo water management, which may change depending on later weather forecasts.
- Decrease in Tahoe release will **reduce and likely eliminate minor flood impacts.**
- Nightly increasing, mainly due to increased snowmelt flows from tributaries.
- Odds increasing that we are near or just past peak flows for spring-summer.



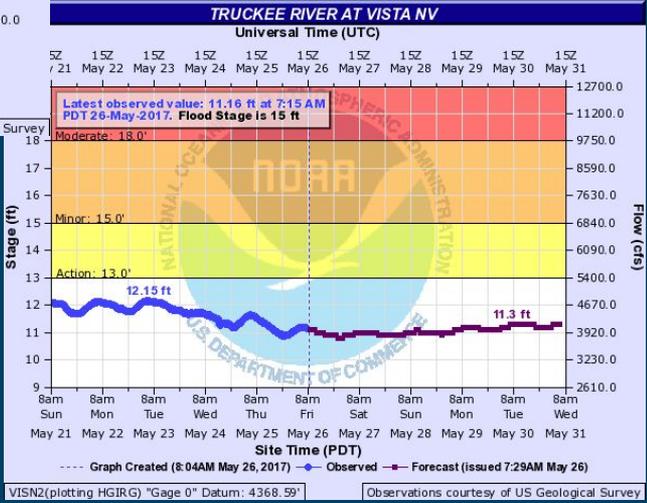
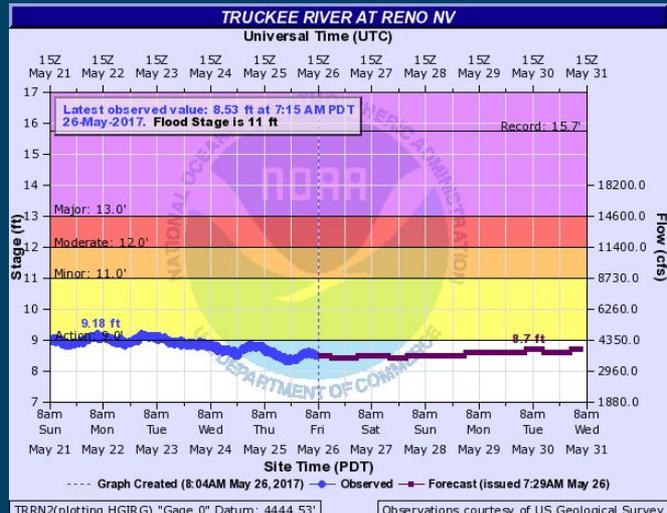
TRCC1 (plotting HGIRG) "Gage 0" Datum: 5857.66'

Observations courtesy of US Geological Survey

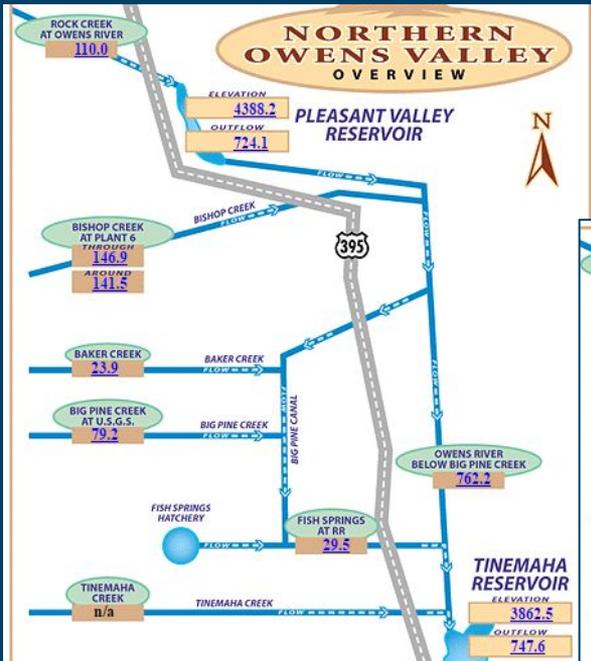
5 Day Forecast Truckee River @ Reno/Sparks

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

- **IMPORTANT:** Simulation assumes status quo water management, which may change depending on later river/weather forecasts.
- Snowmelt increases offset by changes in reservoir management. Resulting in slight decreases in flow.
- Minimal to no remaining impacts, but.. **Fast, cold water = increased rescue incidents when it gets warm out.**



Eastern Sierra Outlook General Guidance



Sunday AM



Friday AM



Friday AM

Sunday AM

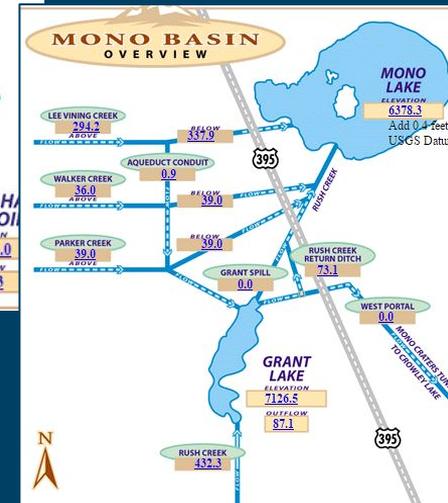


Eastern Sierra Outlook General Guidance

- Best estimate -- flows this week coming out of the unregulated eastern Sierra mountain streams and creeks are likely to continue to increase. ~ **2 times current flows.**
- **Peak flows from this heat episode likely Wednesday or Thursday nights. Higher Peak flows likely still to come.**
- Flood impacts - most likely minor to moderate impacts for areas near creeks/streams. Areas that have flooded already this spring likely to see flooding, perhaps longer and more widespread.



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



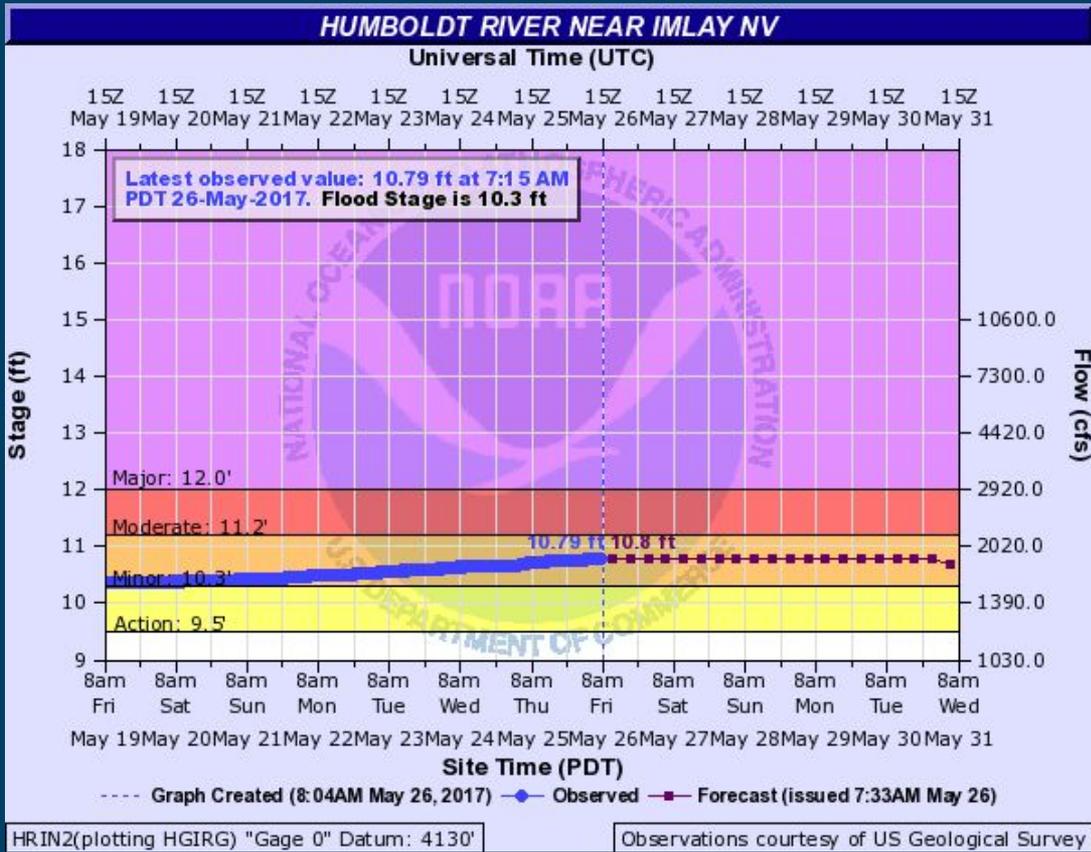
NWS does not have specific river simulations in the eastern Sierra, aside from Walker River basin. So we use projected rises on the Walker River and internal (highly) experimental National Water Model guidance.



5 Day Forecast Humboldt River @ Imlay/Rye Patch

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

- Currently in minor flood stages with localized impacts to rural roads upstream of Rye Patch.
- Upstream, Comus has crested, but will likely rise again this season.
- Slight rise for next few days, with continued high flows. Impacts remain localized to rural roads in Pershing County.
- More water into Humboldt Sink.



Bonus Materials

including 10-day simulations

Situational Awareness - When Should I Freakout?

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

	Next Two Weeks	Rest of June	July	August
Walker, East & West Forks	minor to moderate flooding as snowmelt accelerates	mainly minor-moderate flood issues	mainly minor-moderate flood issues	high water but likely on downward trend
Walker, Mainstem	mainly minor-moderate flooding but concern for sudden increases during heatwaves - remain alert	basin and timeframe of highest risk - good confidence of seeing major flooding at some point in June	likely on a downward trend but uncertain how quickly, still prone to big heatwave melt-offs of high snowpack	high water but likely on downward trend
Carson, East & West Forks	peak risk of seeing minor to moderate flooding as snowmelt accelerates	mainly minor flood issues but risk of more significant flooding lessening	mainly minor flood issues, flows likely on downward trend	
Carson, Mainstem	minimal issues unless we have a big heatwave	potential for minor-moderate flooding with prolonged heatwave overwhelming inflows/capacity to/of Lahontan	mainly minor flood issues, flows likely on downward trend	
Truckee, Entire Reach	heavily regulated system; minor flood issues above Truckee, CA	strong, cold flows persist into mid-summer; more widespread flooding requires heavy rain or prolonged big heatwave trigger		
E Sierra, Tahoe Creeks	minor-moderate flooding during warm periods; highest risk for Tahoe	minor-moderate flooding during warm periods; highest risk for E Sierra	mainly minor flood issues, flows likely on downward trend	
NE California Creeks, Rivers	low risk of significant flooding, most snow has melted; strong, cold flows continue in larger streams, rivers.			
Humboldt, Entire Reach	slow moving flood; impacts most substantial Winnemucca eastward			

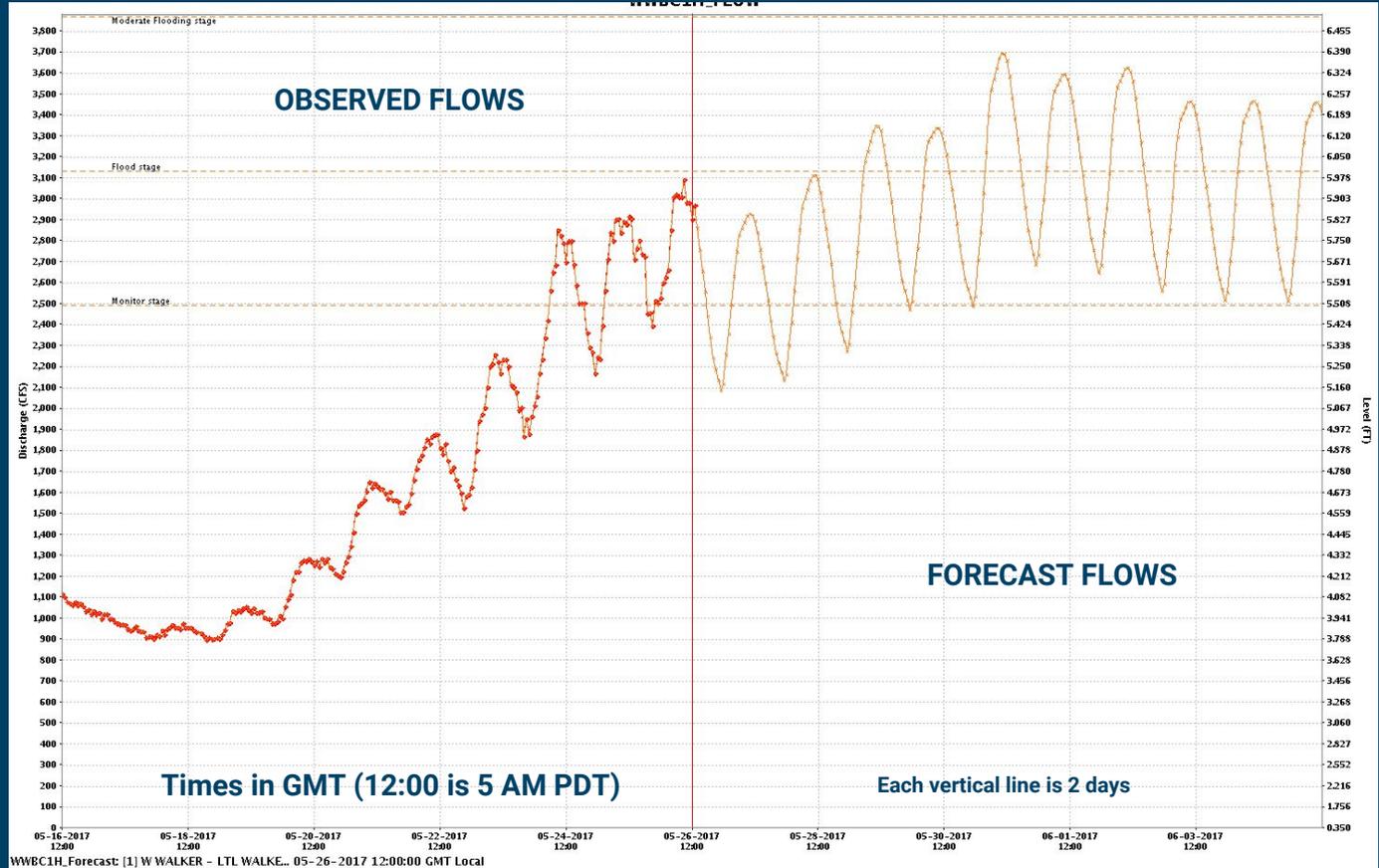
What Does This Mean?
Integrates impacts and confidence

No worries 	Low freakoutness 	Moderate freakoutness 	High freakoutness 	End of this (aka really bad) 
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10 Day Simulation West Walker @ Sonora Jct

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

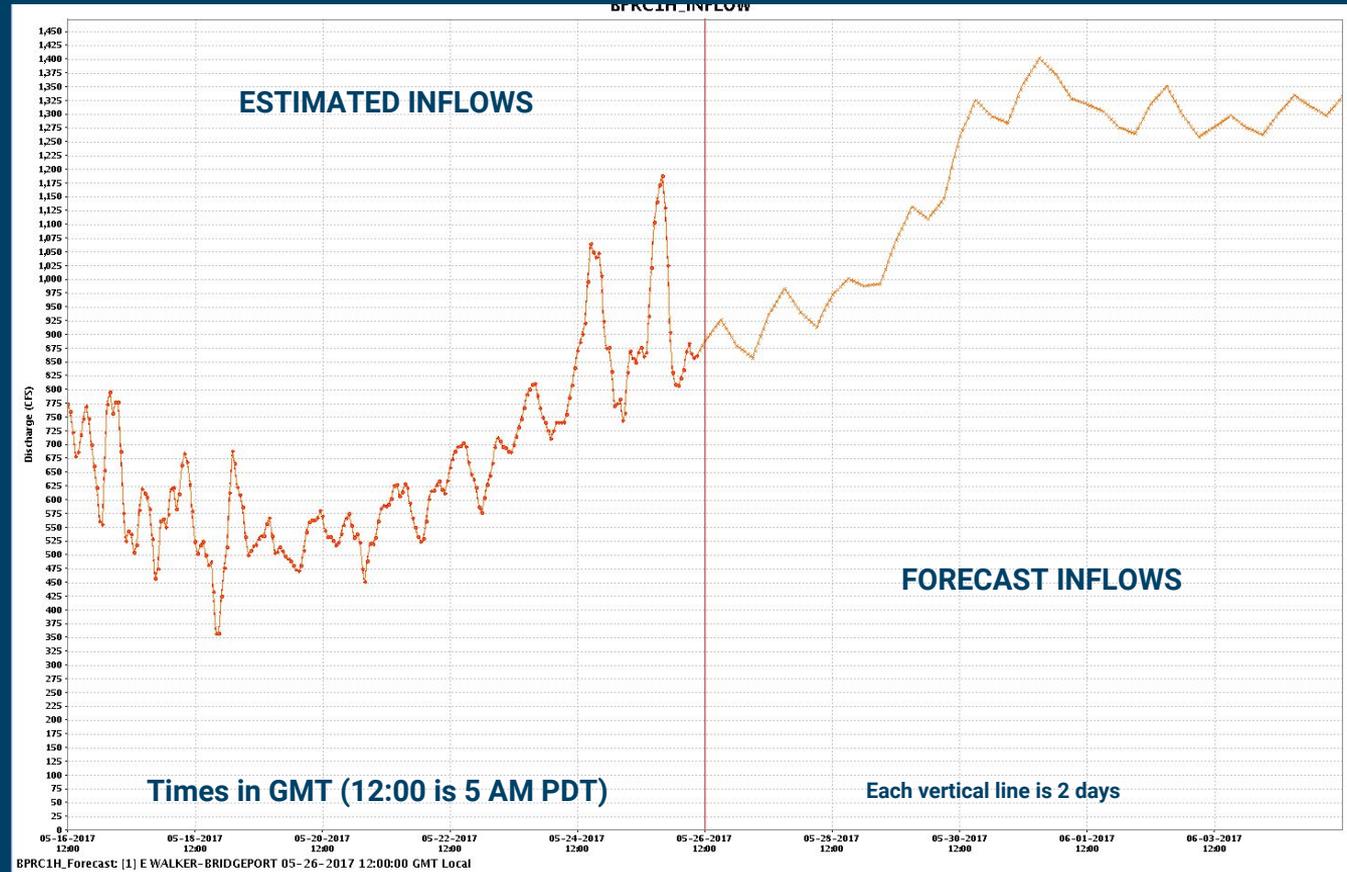
10-day simulations are experimental and provide rough long-range guidance for our public safety partners. For many rivers, this assumes status-quo water management on reservoirs and releases.



10 Day Simulation Bridgeport Inflow

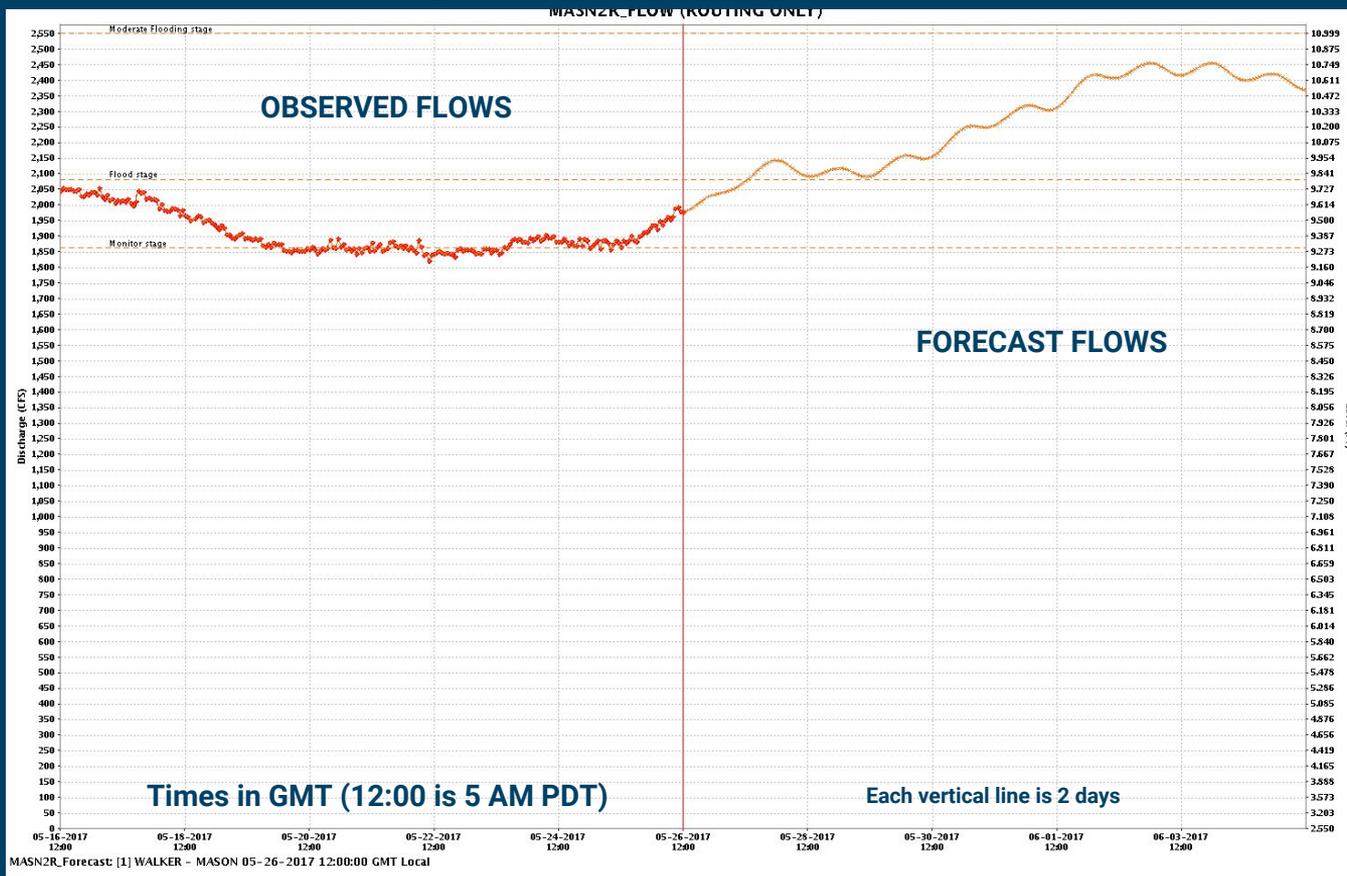
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10 Day Simulation Walker @ Mason

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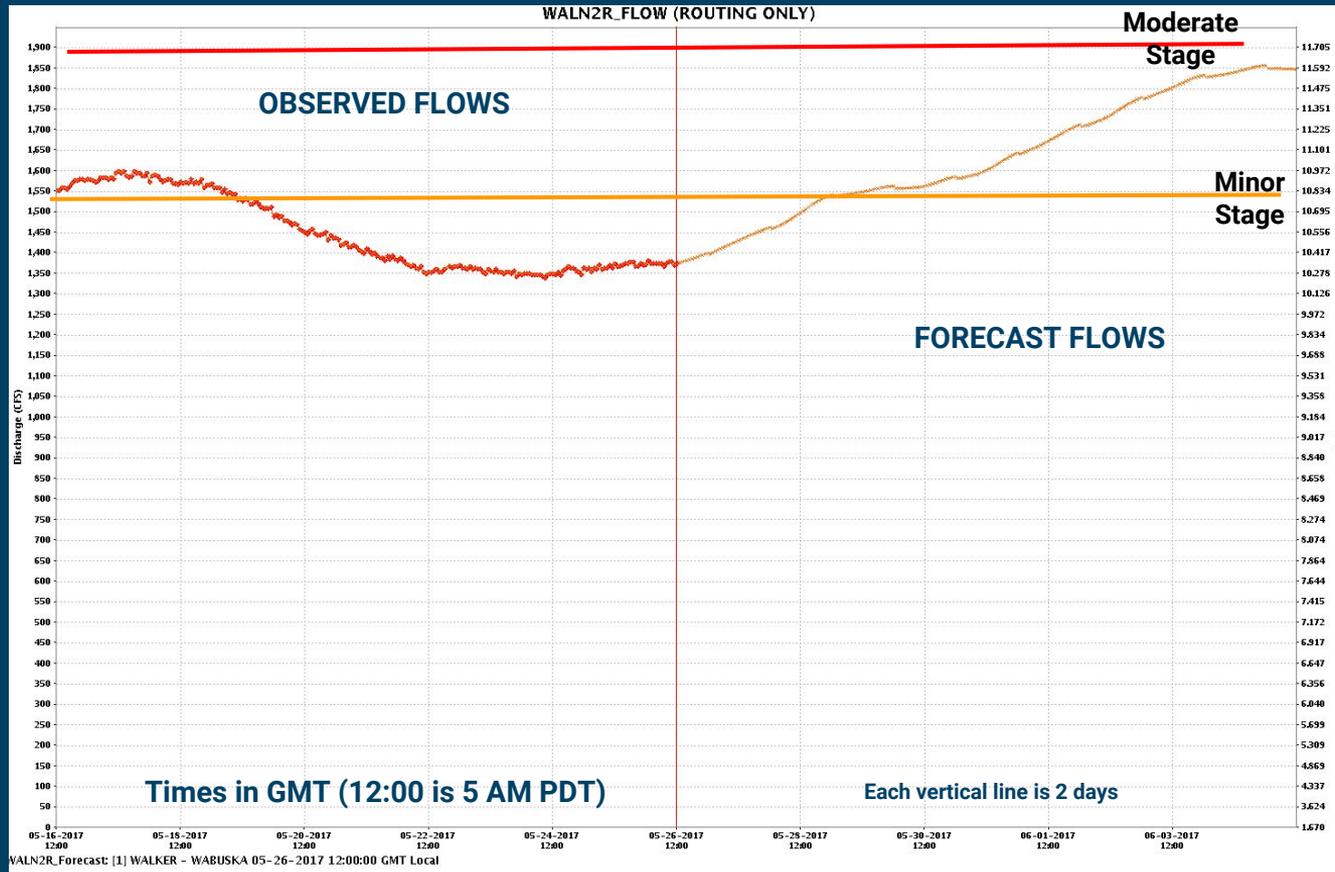


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10 Day Simulation Walker @ Wabuska

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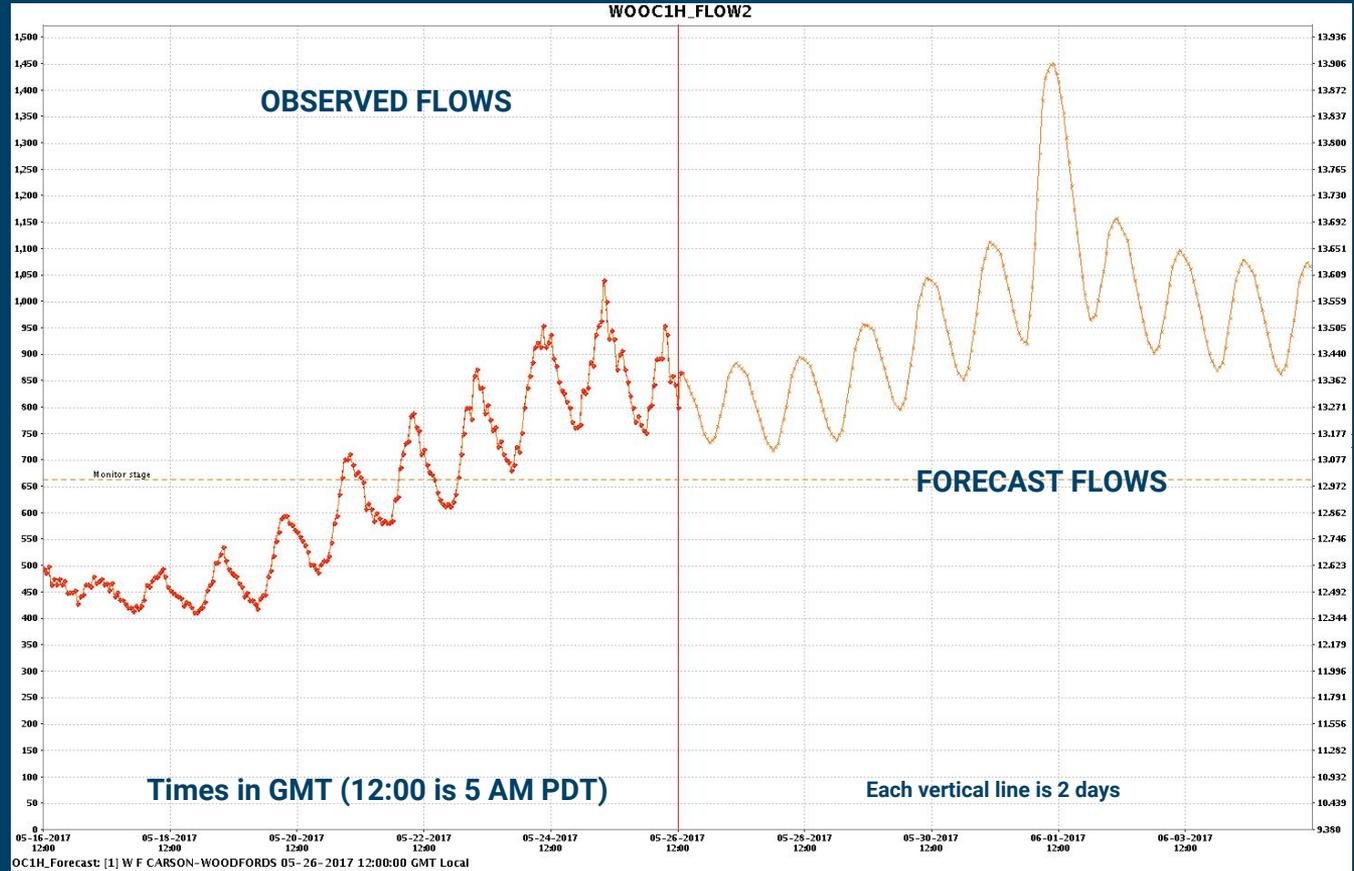
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10 Day Simulation West Carson @ Woodfords

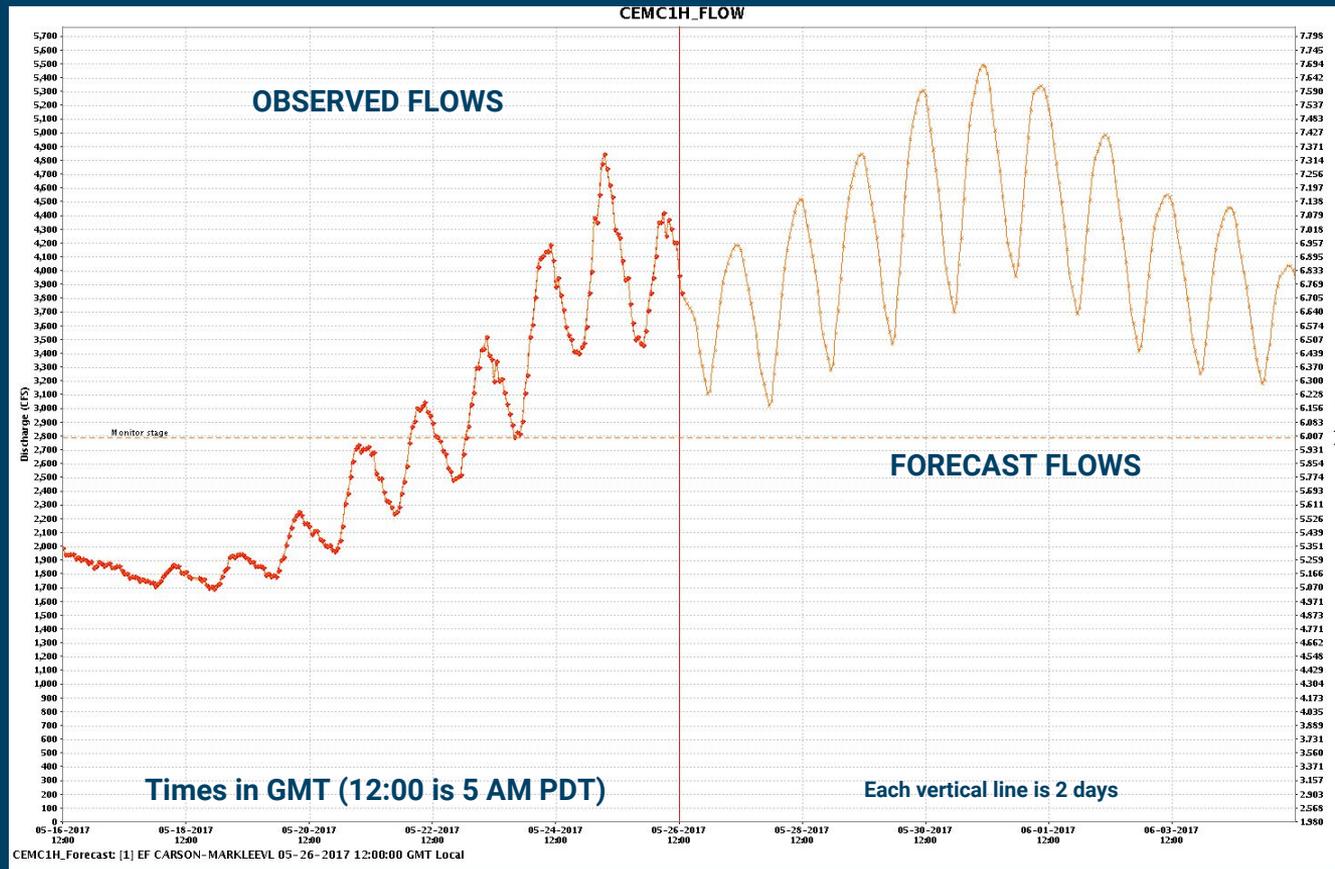
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10 Day Simulation East Carson @ Markleeville

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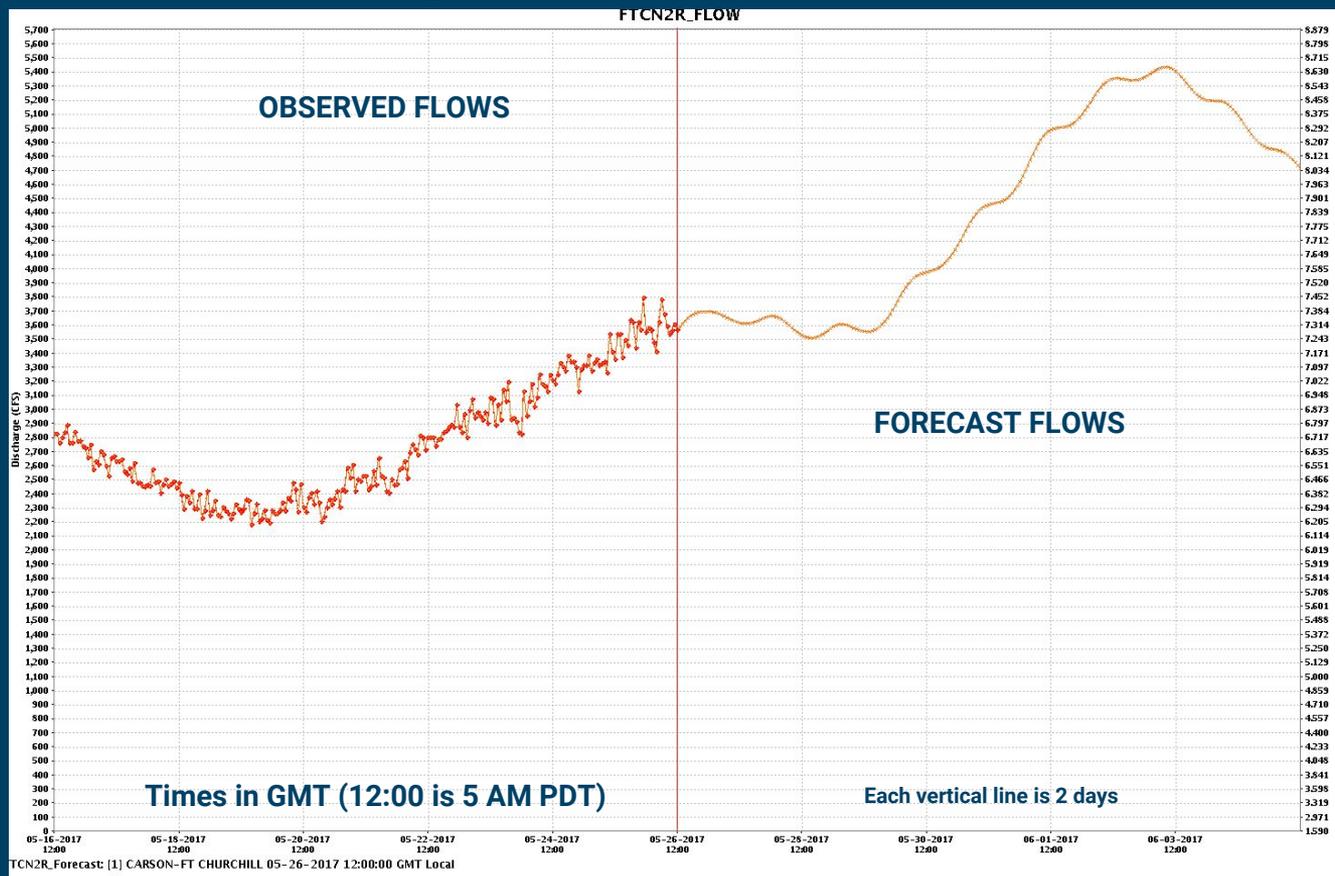


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10 Day Simulation Carson @ Ft Churchill

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10 Day Simulation Humboldt @ Imlay

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