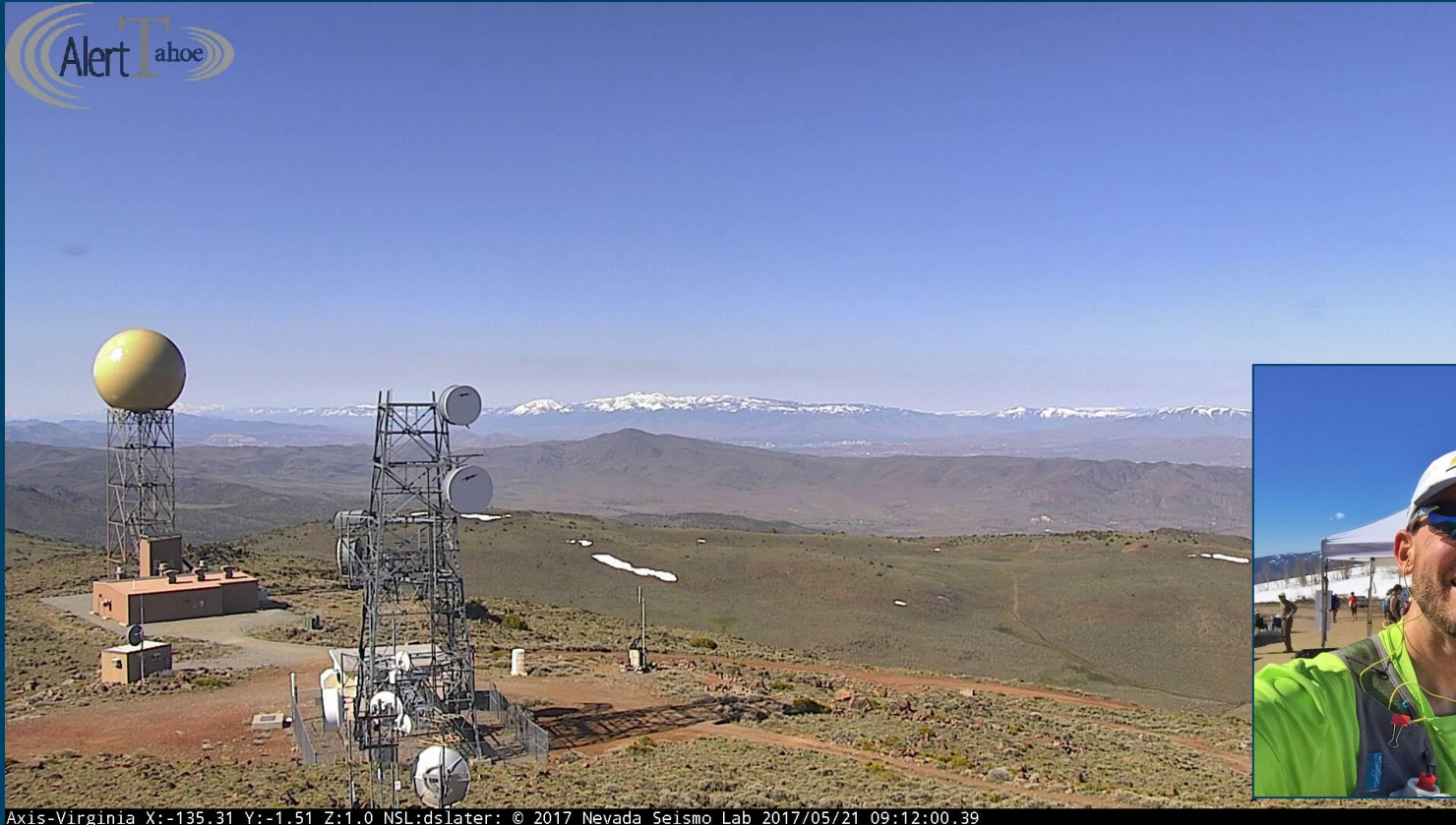


Not a Cloud in the Sky



Still a bit of snow on top of Peavine! 5/20


Axis-Virginia X:-135.31 Y:-1.51 Z:1.0 NSL:dslater: © 2017 Nevada Seismo Lab 2017/05/21 09:12:00.39



Breaking News Temporary Topaz Gauges Installed

USGS Nevada @USGS_Nevada Following

Looking upstream at 10296700 W #WalkerRiver BLW TOPAZ CANAL DIV NR TOPAZ today waterdata.usgs.gov/nwis/inventory ...



LIKES 2

3:23 PM - 20 May 2017

USGS Nevada @USGS_Nevada Following

Working on getting gage up and running blw Topaz Lake today.



LIKES 2

1:59 PM - 20 May 2017

**Big thanks to
USGS team!!**

USGS Nevada @USGS_Nevada Following

10296750 Topaz Canal blw Div W #WalkerRiver is almost in as emergency gage for forecasting flooding



LIKES 2

9:57 AM - 20 May 2017

Short Attention Span Brief

- **Weather:** Well above normal temperatures through Wednesday, then cooling to near normal late week with breezy periods. Trending back warmer for next week but magnitude low confidence. Buildups or very isolated thunderstorms each day, mainly mountains - less coverage than we thought earlier.
- **Walker River @ Mason/Yerington:** Peak flows delayed 12-24 hours in latest forecasts, but still **well above major flood stage**. Major flood starting Tuesday evening. Impacts leaning toward 1983/86 floods; 1997 level impacts would be seen if there's a channel/levee failure or other unforeseen issue.
- **Rest of the regional river and stream systems:** in the eastern Sierra, W Nevada will see minor to at times moderate flood impacts. Tributaries and smaller streams - flows generally 2-4 times what were observed going into this weekend.

Situational Awareness - When Should I Freakout?

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

	Today ^{5/21}	Monday ^{5/22}	Tuesday ^{5/23}	Wed. ^{5/24}	Thursday ^{5/25}	Friday ^{5/26}	Saturday ^{5/27}
Wind	generally light winds under 10 mph			breezy W-SW winds, typical impacts		generally light winds under 10 mph	
Snow	no snow						
River & Snowmelt Flooding	snowmelt flows gradually increasing as temps warm; mainly minor flooding impacts overall		much warmer temps, rapid increase in flows especially Walker	for most areas - widespread minor to maybe moderate flooding issues as temperatures continue to warm; main-stem Walker likely to see major flooding!			likely still major on main Walker but less confidence on impacts
Flash Flooding (fast paced flooding of streams, poor drainage and steep terrain areas, rock slides, burn scar runoff)	no heavy rainfall signals, thankfully						
Thunderstorms	thunderstorm signals have faded; very isolated cells over the mountain areas possible		a few thunderstorms, mainly mountains but can't rule out valleys; no severe storms but could see localized heavy rain, gusty winds, lightning, hail				
Unusual Cold or Heat	no widespread freezes expected						
Fire Weather			carryover grasses could dry enough from heat to burn with gusty winds				

What Does This Mean?
Integrates impacts and confidence

No worries



Low freakoutness



Moderate freakoutness



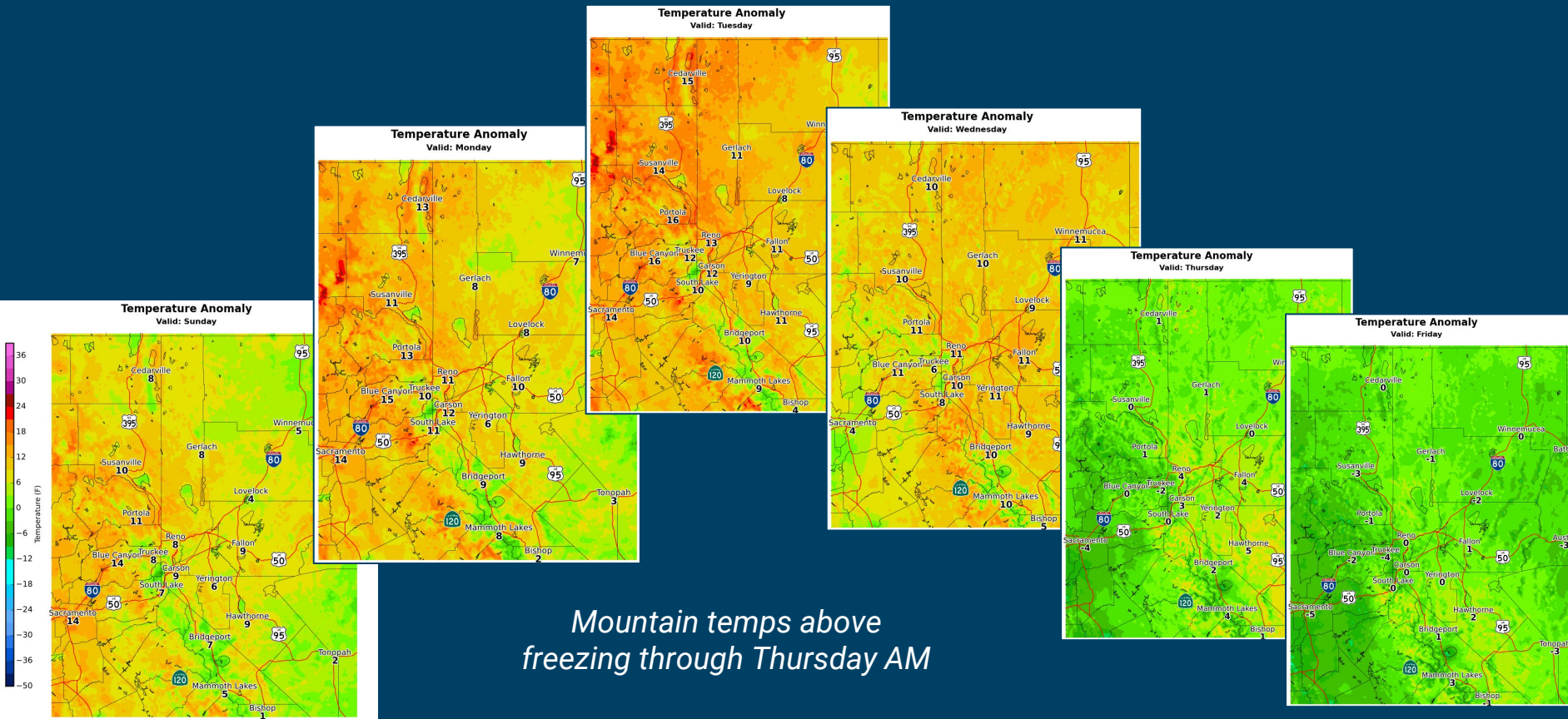
High freakoutness



End of this (aka really bad)

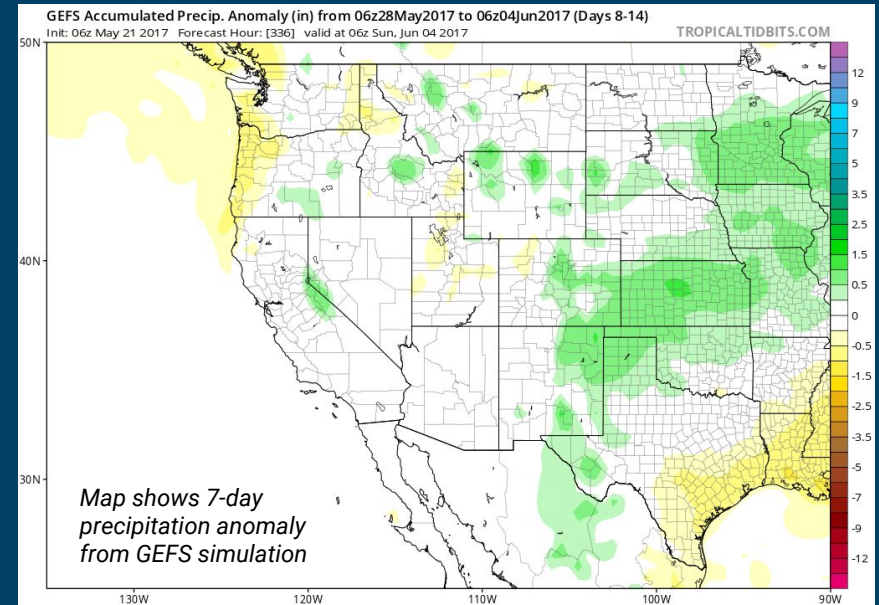
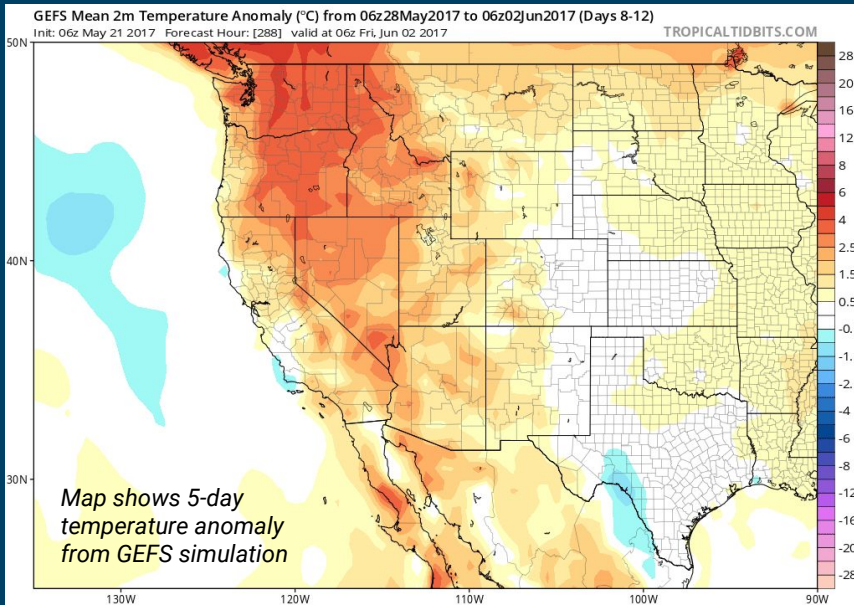


Temperatures Heading Up Peak Heat Tuesday, then Gradual Cooling



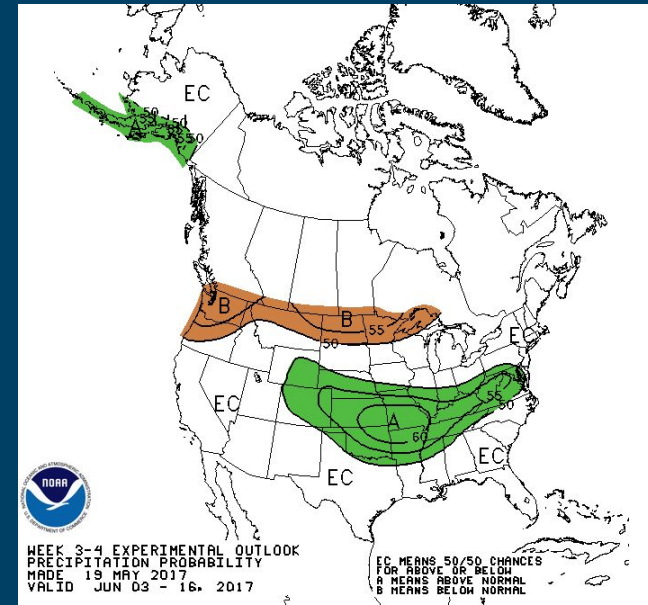
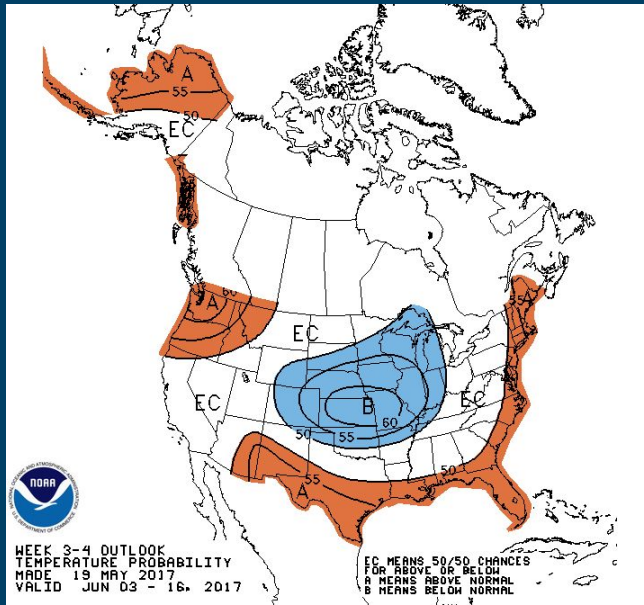
Mountain temps above freezing through Thursday AM

Next Week May 28 - June 3 Favoring Continued Warm but Intensity Uncertain



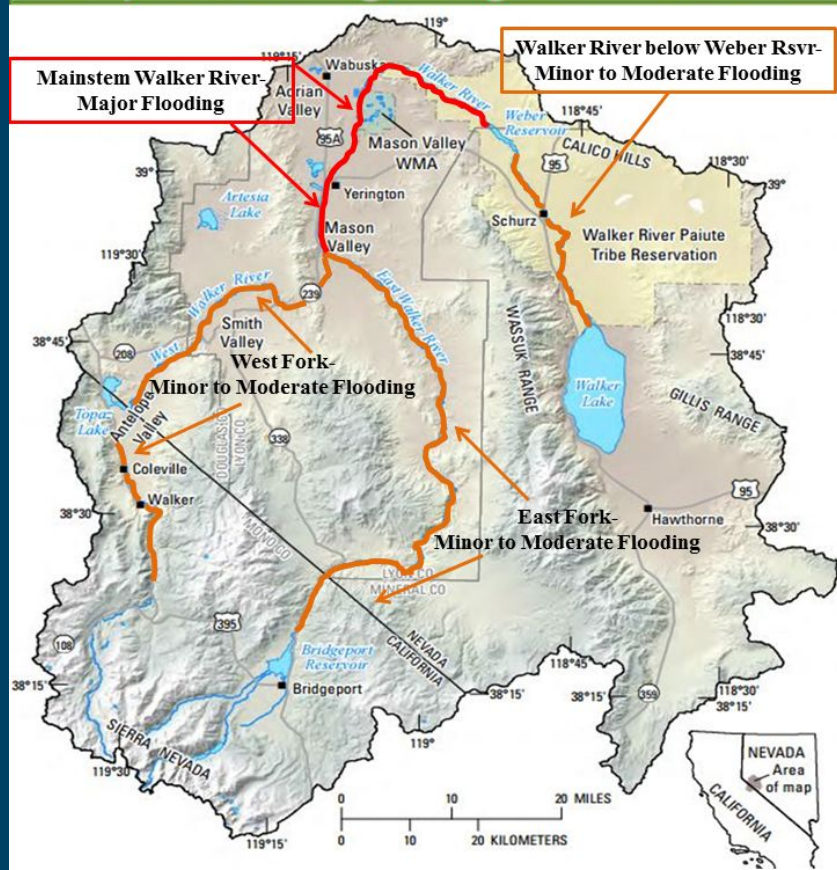
- Simulations into early June are leaning more toward a warmer-than-normal outcome, with daily storms possible mainly over the mountains. **Magnitude of warmth remains low confidence.**
- Plan for continued flooding impacts, high flows. Severity remains lower confidence - related to warmth magnitude and remaining snow covered area.

Into Mid-June No Strong Signals Either Way



- No favored temperature, precipitation scenario for our region first couple weeks of June. Simulations are all over the place - some warm, some slightly cooler than normal.
- Plan for continued high flows, possible flooding but little confidence in severity during this period.

Major Flooding along Walker River



Walker River Forecast Overview

Advice : PREPARE NOW FOR MAJOR FLOODING

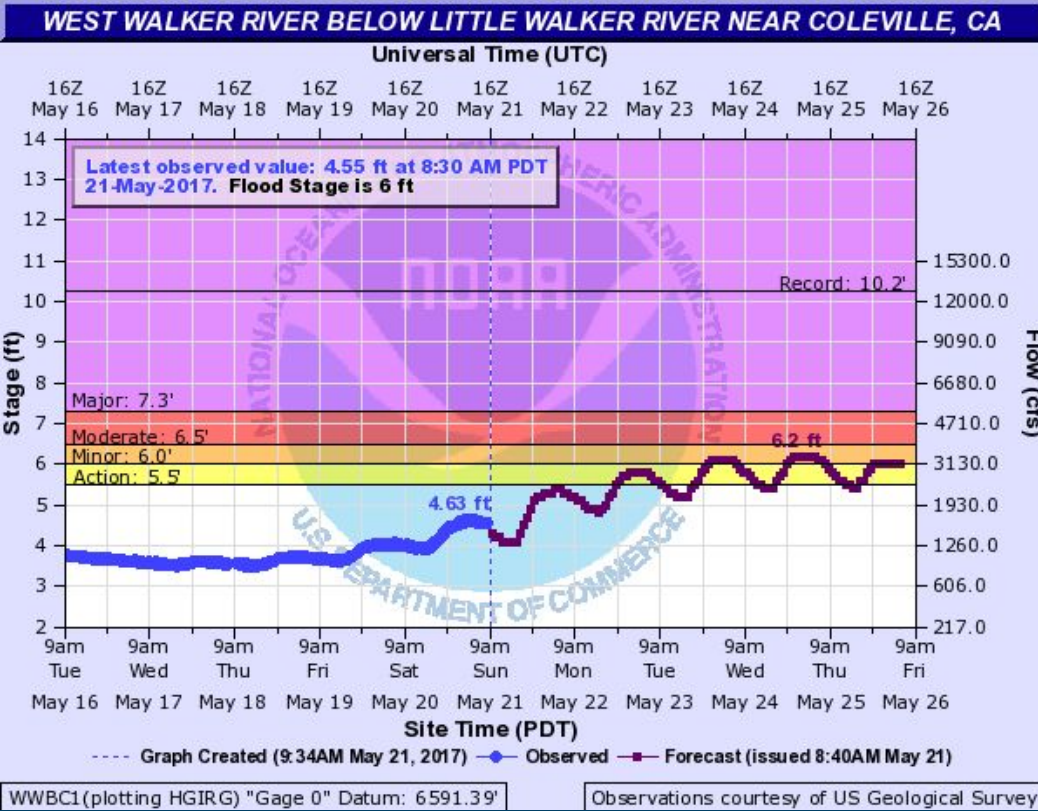
Impacts could be similar to flooding in 1983 and 1986

5 Day Forecast - West Walker River

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

Sonora Junction, CA

- Flood stages likely starting Tuesday night next week. Likely touching flood stage at night all week. Watch for campers too close to river.
- Impacts - Minor to isolated 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.

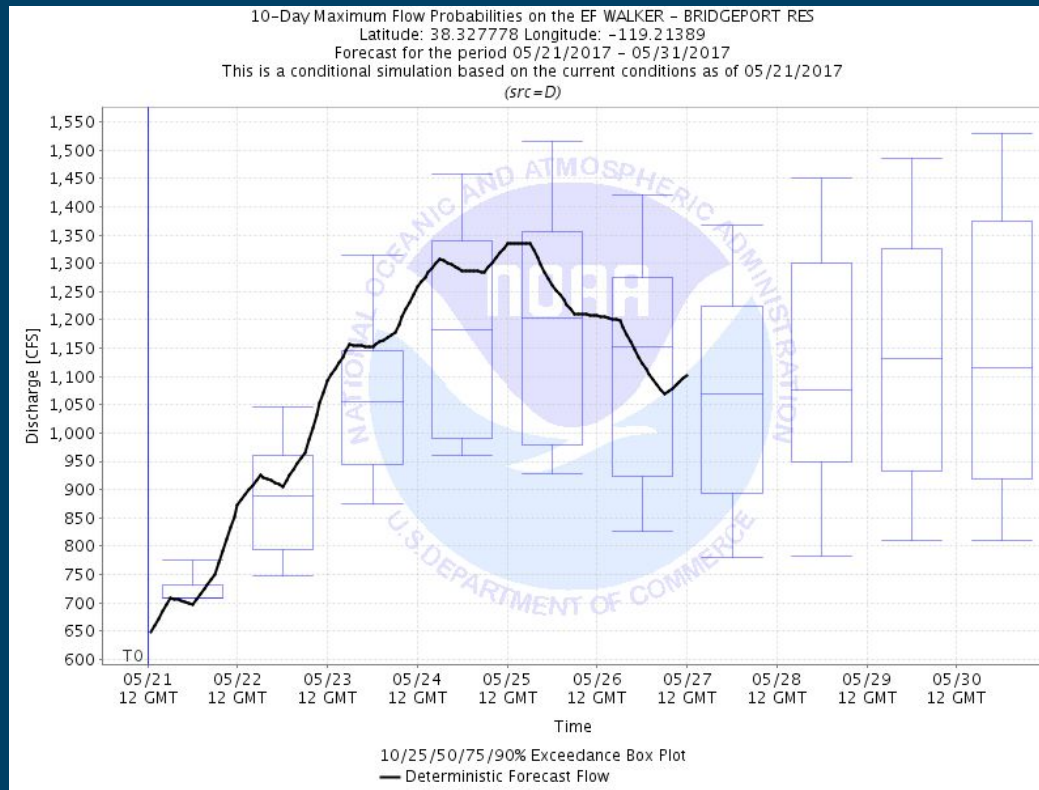


East Walker River - Probability plot

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

Bridgeport Inflow

- **IMPORTANT:** These are estimated inflows, no gauging data to calibrate from so increased margin of error.
- Ensemble forecast product to represent uncertainty.
- Substantial increase in snowmelt flows into the reservoir. **Potentially 2 to 3 times current inflows next week.**
- Inflow expected to exceed current/planned releases Tuesday.

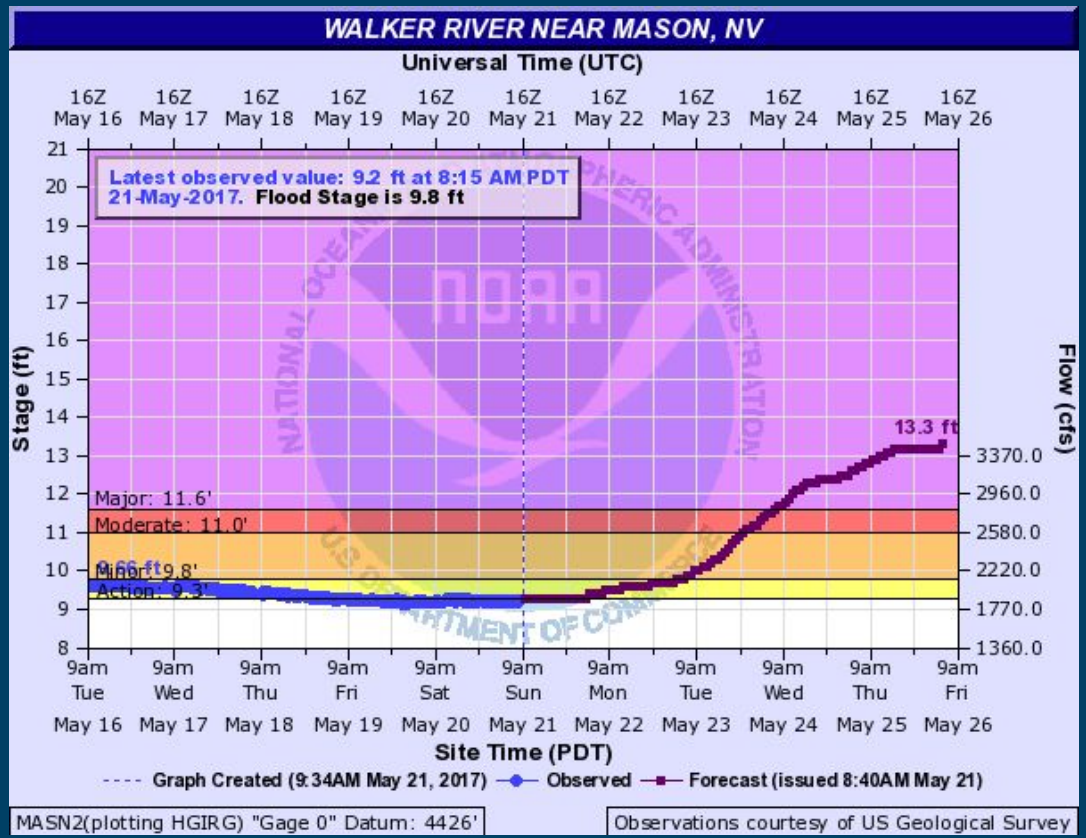


5 Day Forecast - Walker River

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

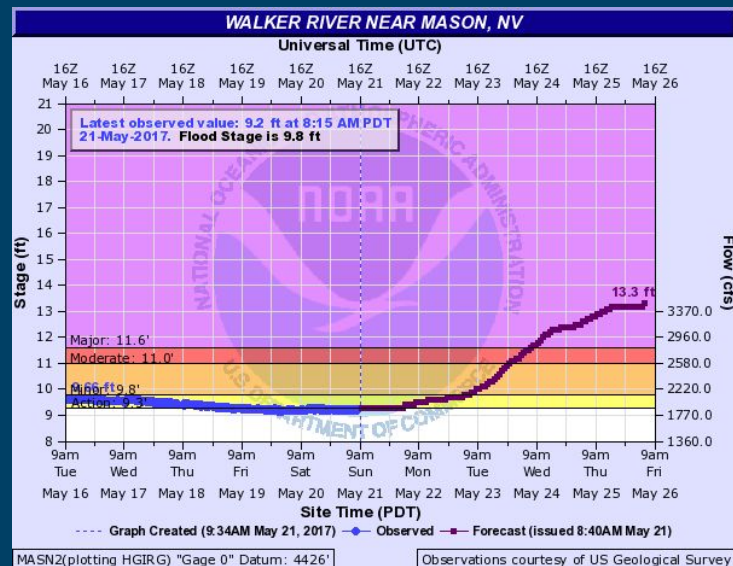
Yerington/Mason, NV

- **Major flooding** starting Tuesday night.
- Continuing through the week, even with cooling temperatures.
- Keeping it real: **We don't know how bad this will get.** Never measured these levels before (next slide).
- **IMPORTANT:** Simulation assumes current water management scenario, which may change depending on later forecasts.



Walker River at Mason- Flood Stages and Impacts

- USGS Mason gage has only 17 years of non-continuous records. Missing big flood years including '86, '95, and '97.
- '97 Estimated flow (3900 cfs) is likely very poor or even useless due to channel breach.
- Flows and Impacts more likely to be similar to '83 or '86. **(unpredictable chanel breach would cause much greater impacts, '97-like)**
- **Ongoing mitigation efforts**
- We will be updating text in statements to remove/adjust '97 reference due to poor record)



13. Record flood disaster in the Mason Valley-Yerington area. Numerous homes...businesses...structures... roads...bridges and over 4000 acres of farmland and pasture are flooded with major damage. At about 4150 cfs...worse than record flood of January 4 1997...which flooded over 3000 acres in the Yerington area...with over 500 businesses and homes affected. USGS estimates that this much flow has about a one in 35 chance of being exceeded any year.

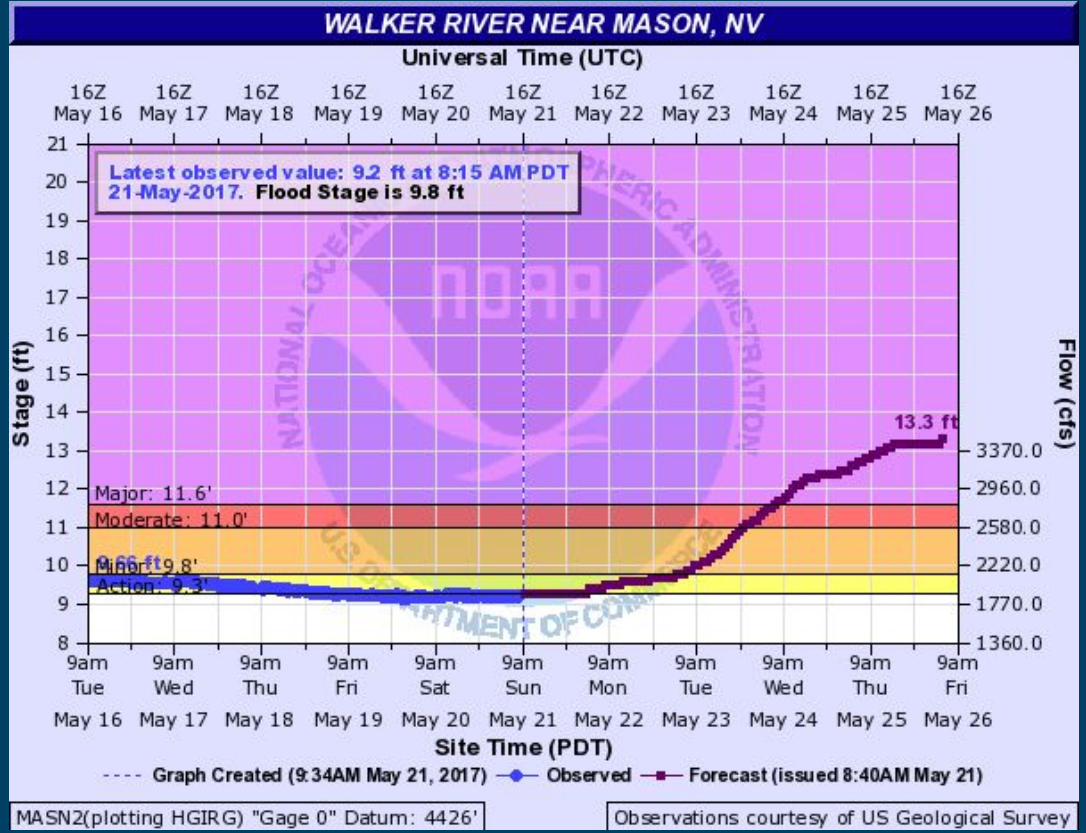
12.5 Near record Major flooding in the Mason Valley-Yerington area. Homes...businesses...farmland...pasture...roads...bridges...and structures in the floodplain...

5 Day Forecast - Walker River

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

Yerington/Mason, NV

- Odds favor **long-duration flood** as temps Memorial Day into early June are leaning warm.
- Timing shifted 12-24 hours later than earlier runs
- **Estimated short range crest Friday-Saturday with continued flows in excess of Major flood stage.**

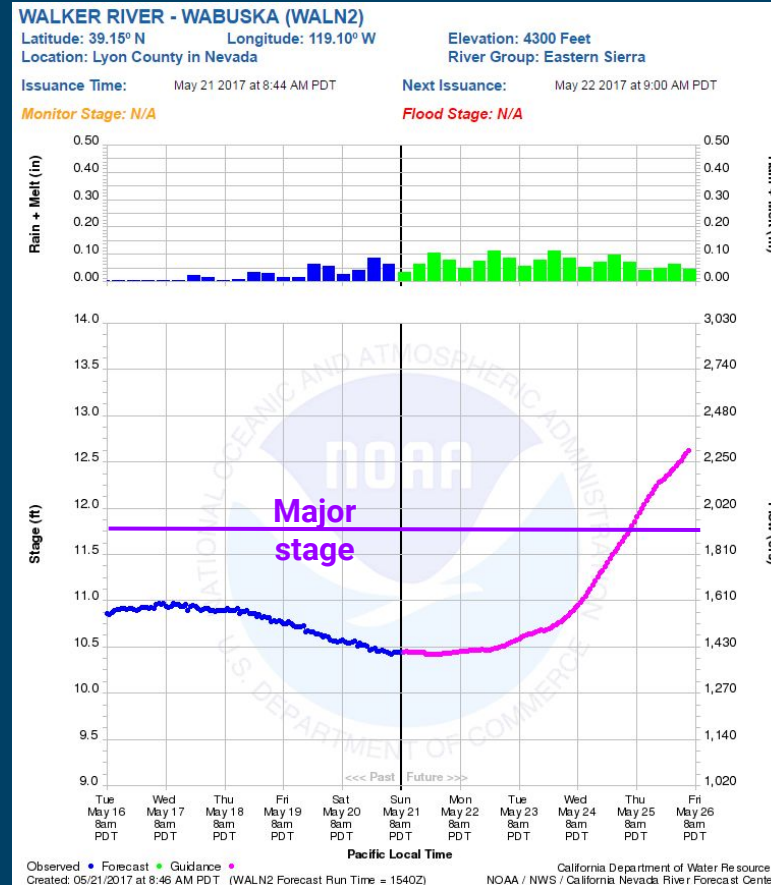


5 Day Forecast - Walker River

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

Wabuska, NV

- Major Flood Wave pushing to Wabuska and beyond to Weber Reservoir and Schurz
- Exceeding estimated major flood stage at Wabuska ~ Wednesday 5/24 afternoon.
- ~ 18 to 24 hour lag to Weber Reservoir.
- Long duration and high volume event will likely result in minor to moderate flood impacts below Weber Reservoir.

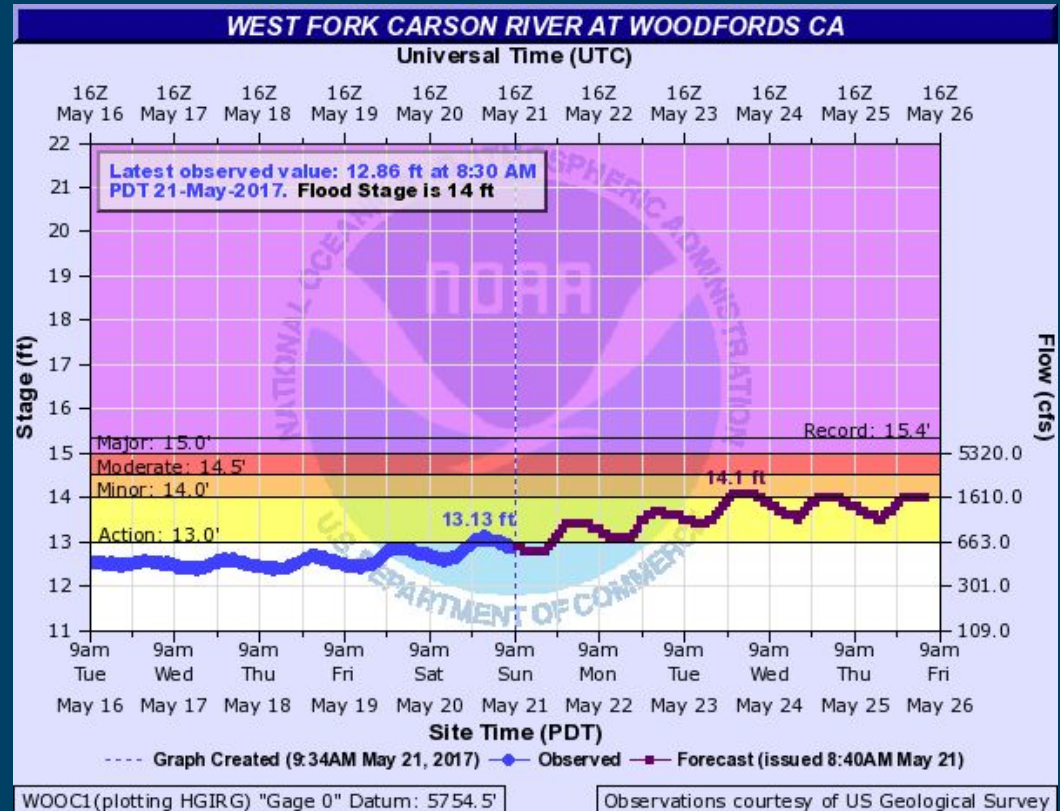


5 Day Forecast - West Carson River

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

Woodfords, CA

- Flood stages likely starting Tuesday night. Likely touching flood stage at night all week.
- Impacts - Broad minor flooding in the southwestern Carson Valley between Centerville and Genoa NV.
- Strong diurnal signal with night-time peaks.
- Odds increasing that this could be peak flows for spring-summer, but prolonged high flows still expected.
- Lots of snow gone below 7500 feet along Carson Pass.

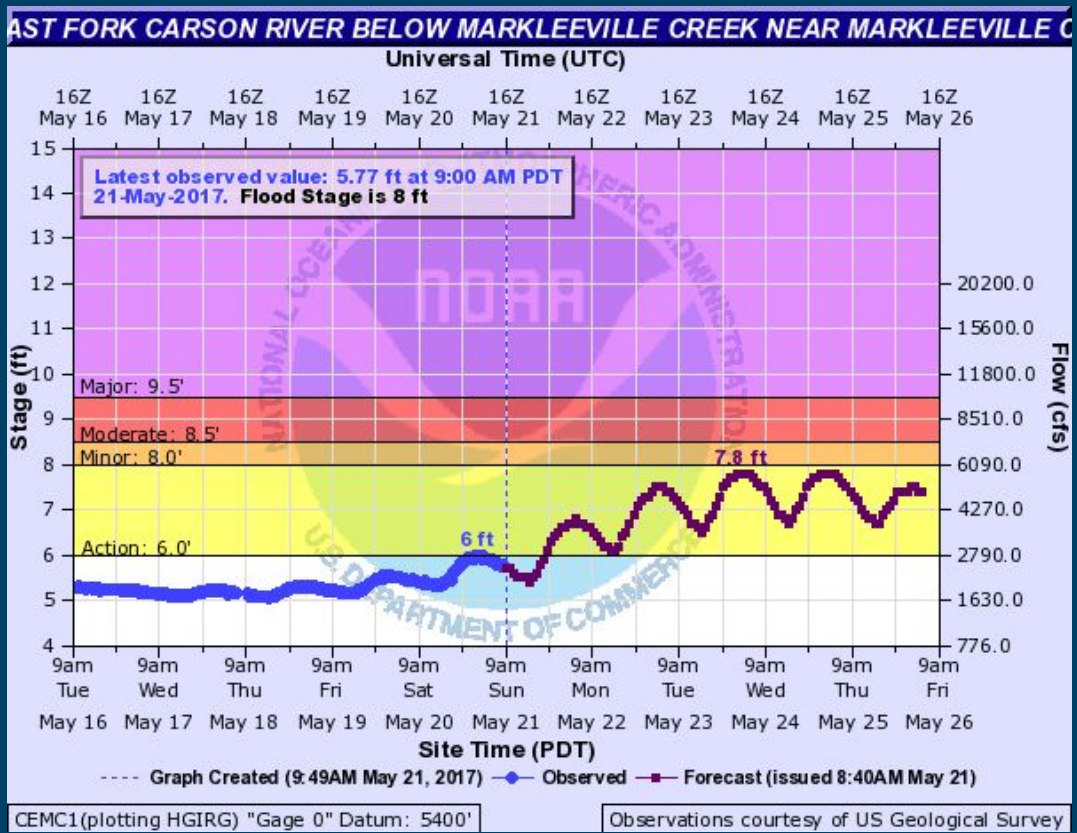


5 Day Forecast - East Carson River

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

Markleeville, CA

- Well into monitor stages all week, possibly approaching flood stages Tuesday, Wednesday nights.
- Impacts - Broad minor flooding in lowest, flood prone portions of Carson Valley.
- Strong diurnal signal with night-time peaks.
- Odds increasing that this could be peak flows for spring-summer, but prolonged high flows still expected.

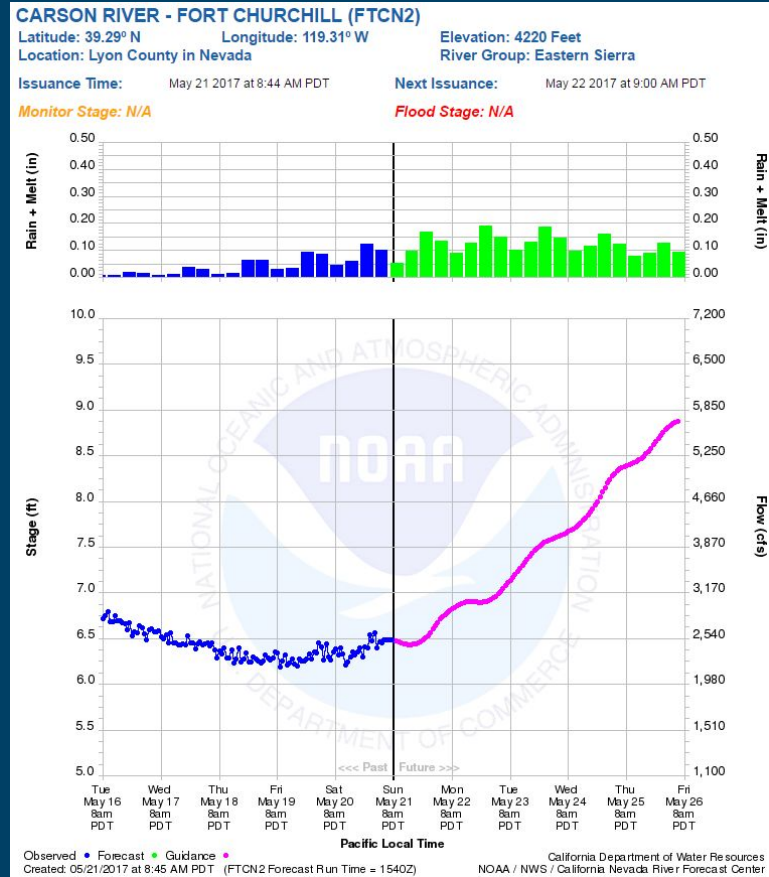


5 Day Forecast - Carson River

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

Ft. Churchill, NV

- Projections for next week have **~2.5 times the current flows into Lahontan. Inflows exceeding releases.**
- Flood stage 10 feet, so remaining below that at Ft Churchill.
- Friday-Sunday estimated short-range peak timing



5 Day Forecast - Truckee River

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

Truckee, CA

- **IMPORTANT:** Simulation assumes status quo water management, which may change depending on later weather forecasts.
- Flows increasing, mainly due to increased snowmelt flows from tributaries.
- Minor flooding impacts right along the river, issues we've seen already. Some riverfront basements, yards, campgrounds impacted.
- Odds increasing that this will be peak flows for spring-summer.

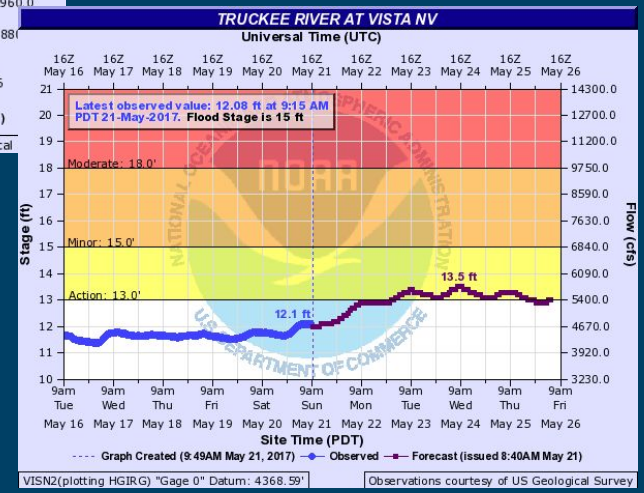
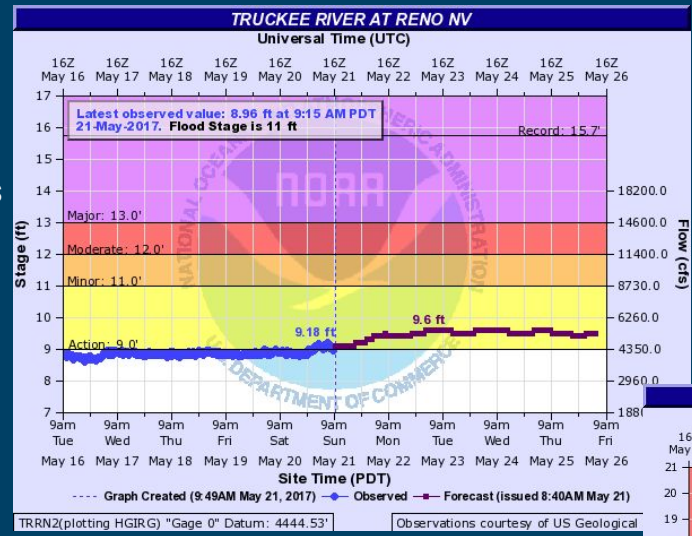


5 Day Forecast - Truckee River

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

Reno/Sparks, NV

- **IMPORTANT:** Simulation assumes status quo water management, which may change depending on later river/weather forecasts.
- Flows gradually increase due to snowmelt from tributaries + releases. Monitor stages at both Reno and Vista gauges.
- Minor flooding impacts right along the river, issues we've seen already. **Fast, cold water = increased rescue incidents when it gets warm out.**



Eastern Sierra Outlook General Guidance

Eastern Sierra Creeks/Streams

- Best estimate -- flows this week coming out of the unregulated eastern Sierra mountain streams and creeks are likely to be **2-2.5 times current flows**. **Smaller creeks likely 3 times current flows.**
- **Peak flows from this heat episode likely Wednesday or Thursday nights**
- Flood impacts already observed in April/May likely to be more widespread in the coming 7-10 days. **Severity remains uncertain.**

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.



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



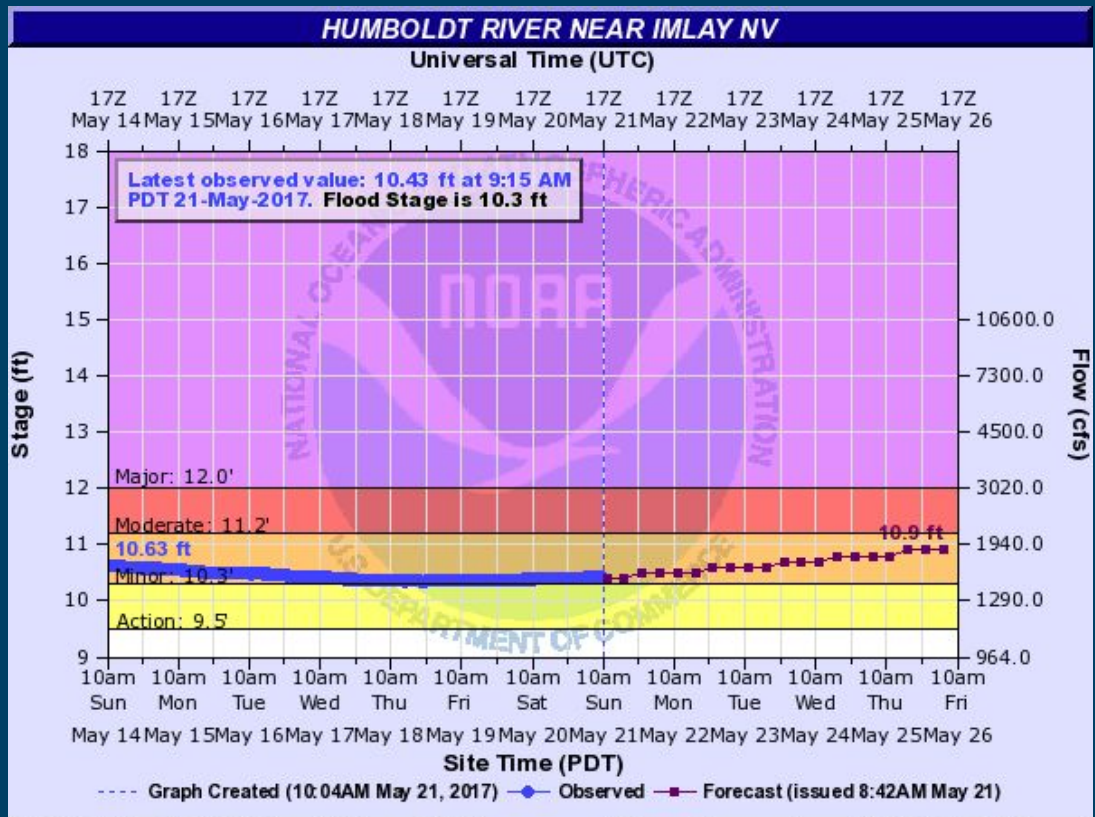
10 - not available at this time

5 Day Forecast - Humboldt River

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

Imlay/Rye Patch, NV

- Currently in minor flood stages with localized impacts to rural roads upstream of Rye Patch.
- Additional snowmelt and large, slow moving wave of increased water working down river.
- Rising to near or above moderate flood late week. Impacts remain localized to rural roads in Pershing County.
- More water into Humboldt Sink.



HRIN2(plotting HGIRG) "Gage 0" Datum: 4130'

Observations courtesy of US Geological Survey



Bonus Materials

including 10-day outlooks

Situational Awareness - When Should I Freakout?

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

	Rest of May	June	July	August
Walker River Basin	rapidly increasing flood coverage/severity due to late month warming	river basin at highest risk - major impacts Lyon County, plus impacts in Mono Co	likely on a downward trend but uncertain how quickly	high water but likely on downward trend
Carson River Basin	increasing flood coverage due to late month warming but not as high a confidence in severity	next biggest concern - esp Carson Valley, downstream of Lahontan	high water but likely on downward trend	
Truckee River Basin	heavily regulated system; main flood issues above Truckee, CA	high flows persist; flood risk depends on heavy rain trigger		
Tahoe Basin Creeks/Streams	during upcoming warm periods	big time snowpack, lots of streams		
NE California Basins				
E Sierra Creeks/Streams	during upcoming warm periods	big time snowpack, lots of streams but a number of unknowns		
Lower Humboldt River Basin	slow moving flood; impacts most substantial Winnemucca eastward			

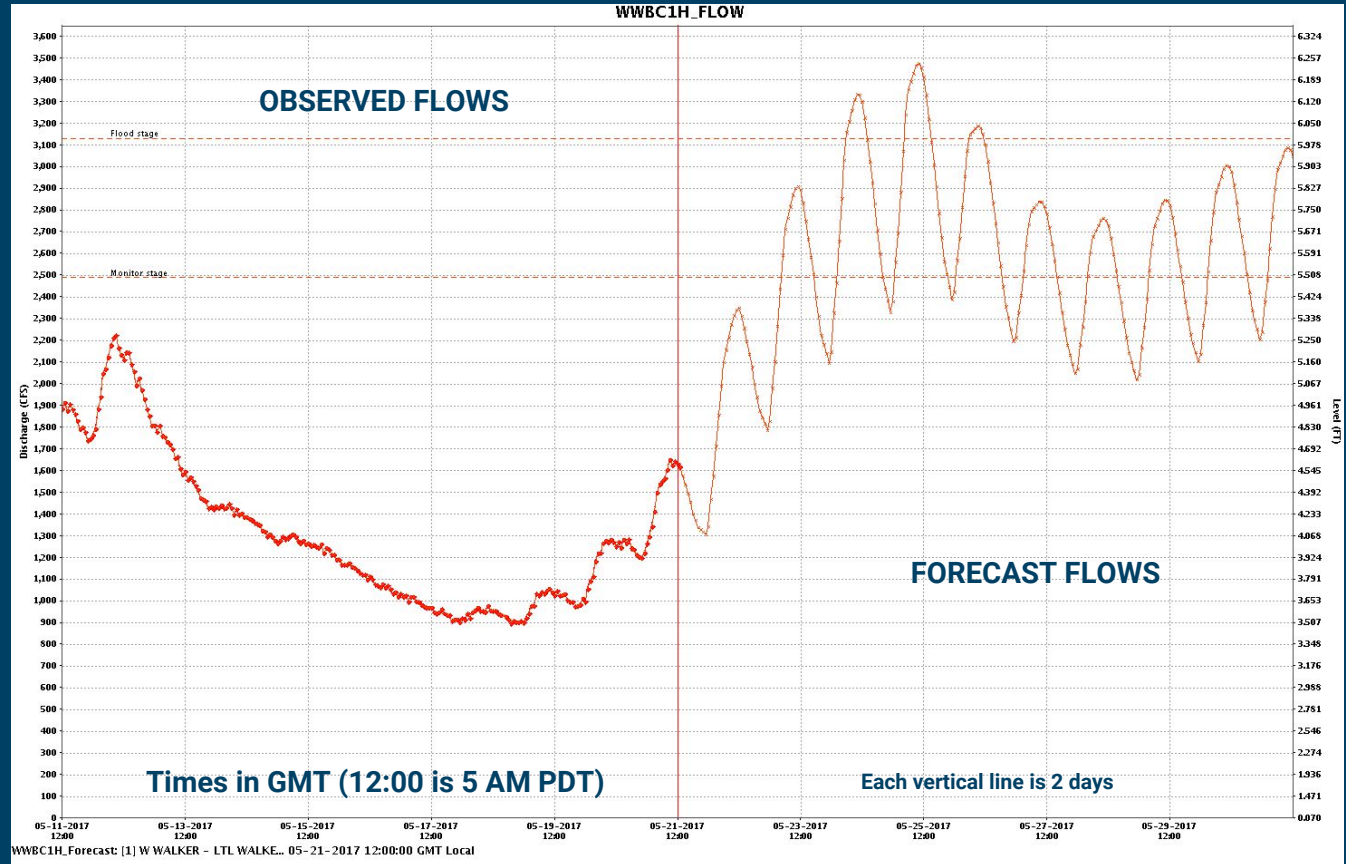
What Does This Mean?
Integrates impacts and confidence

No worries 
Low freakoutness 
Moderate freakoutness 
High freakoutness 
End of this (aka really bad) 

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.



10 Day Simulation Bridgeport Inflow

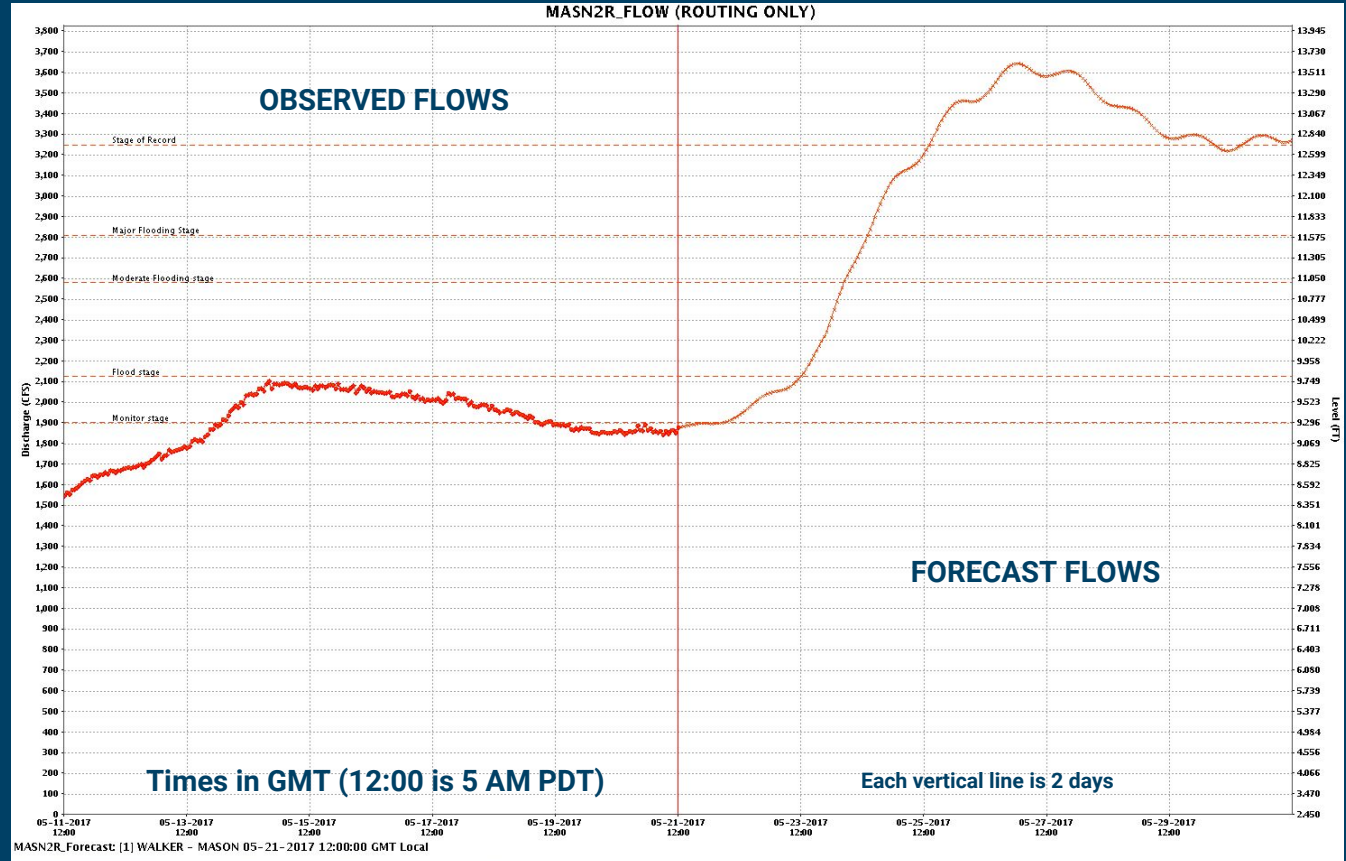
5-day official forecasts - [CNRFC](#) or [NWS Reno](#)

10-day simulations are experimental and provide rough long-range guidance for our public safety partners.



10 Day Simulation Walker @ Mason

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

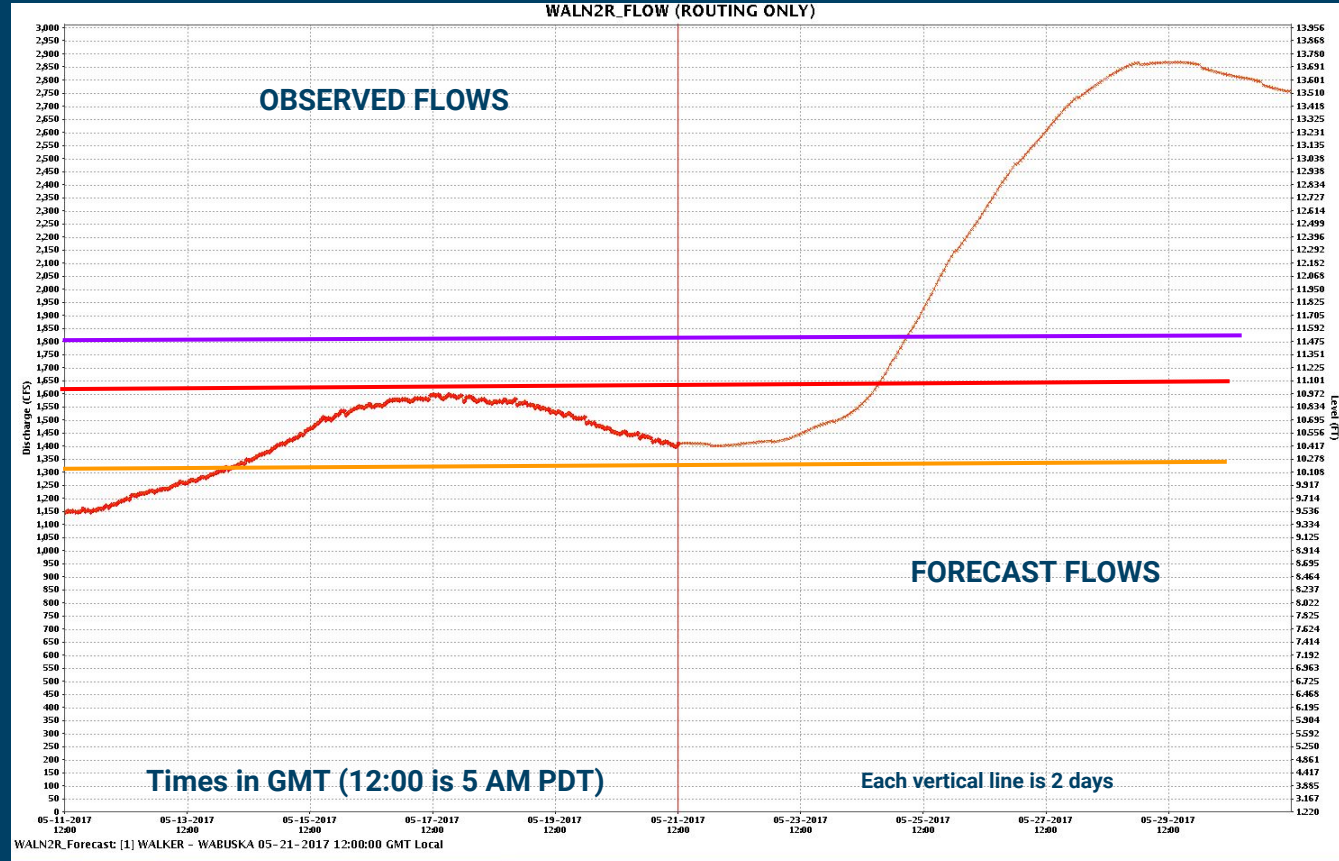


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10 Day Simulation Walker @ Wabuska

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

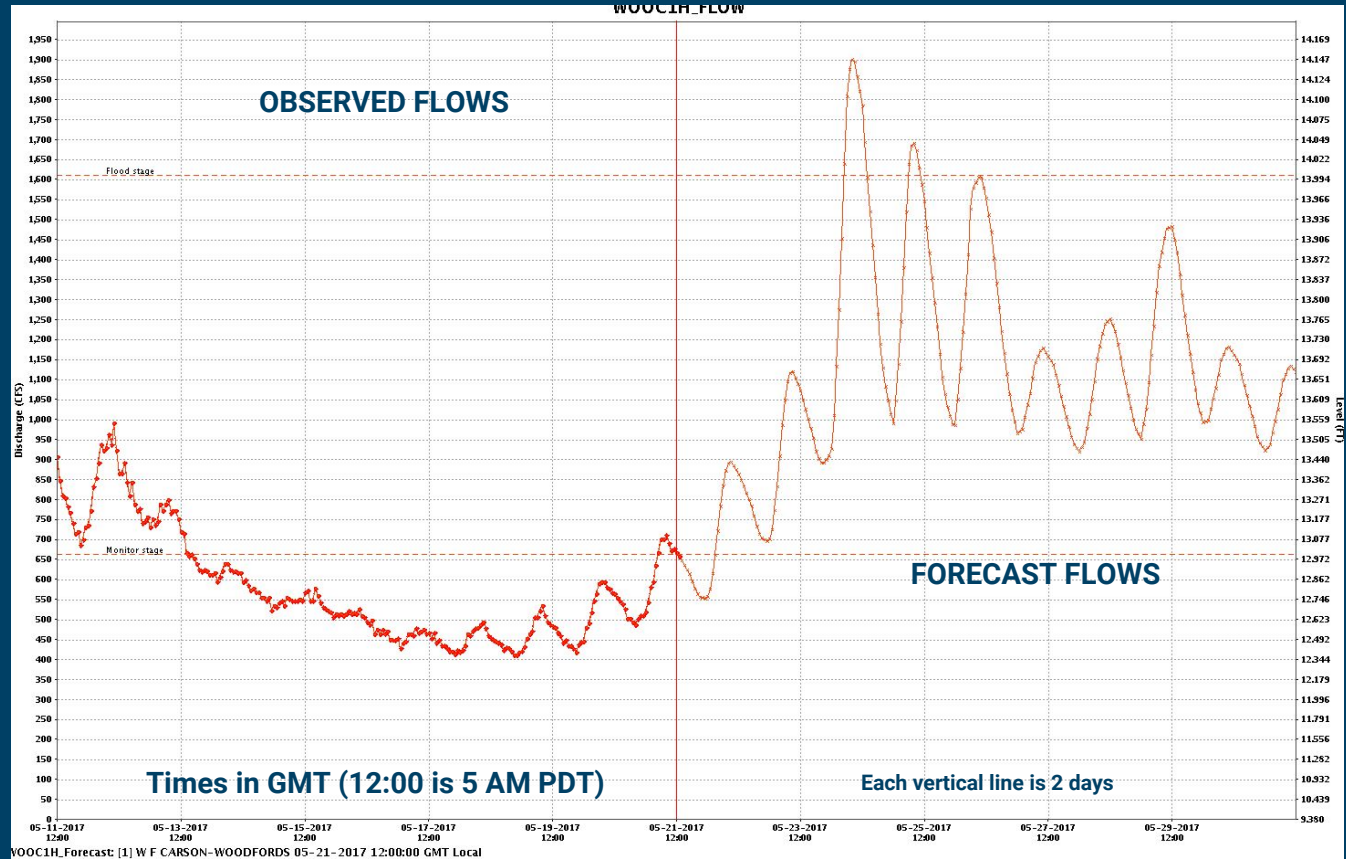


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10 Day Simulation West Carson @ Woodfords

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

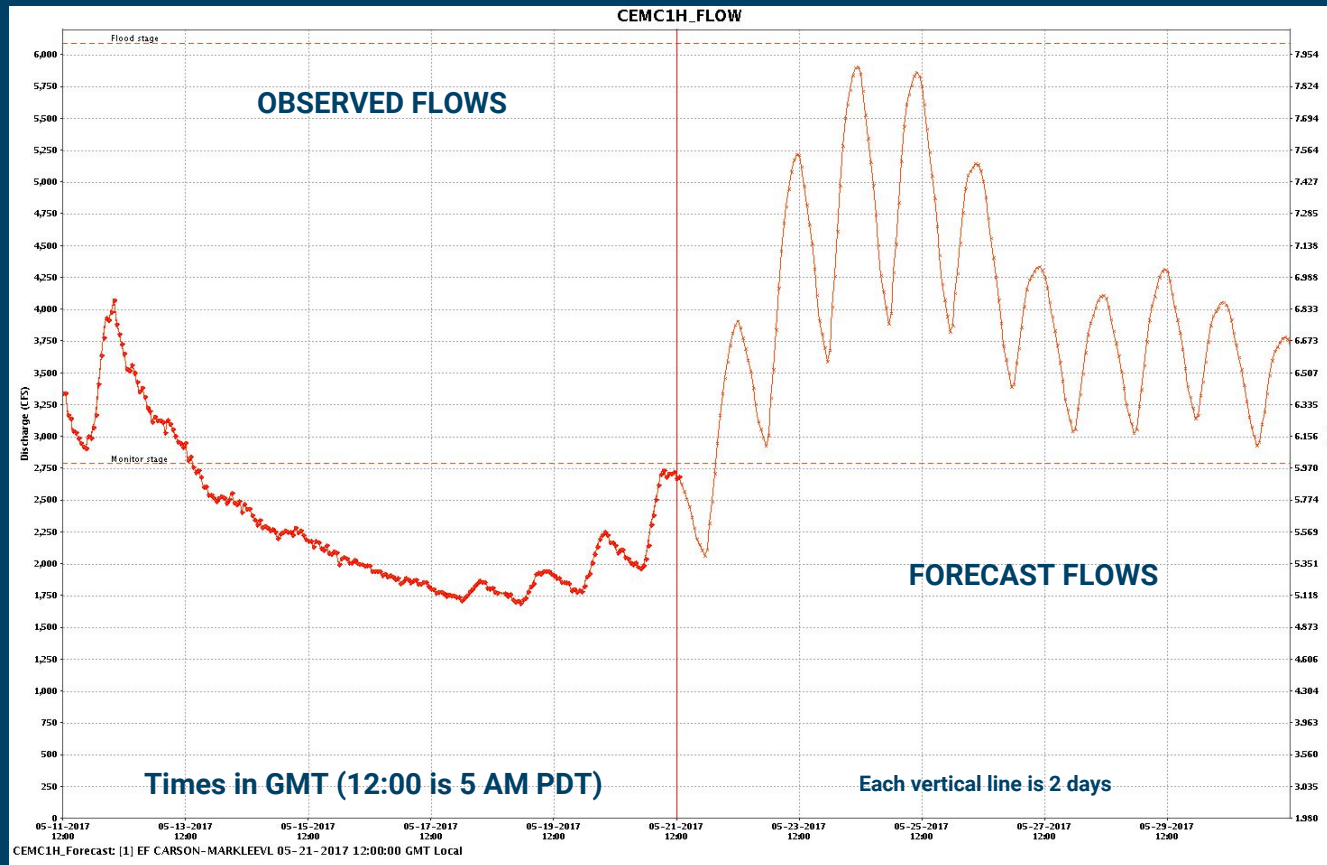


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10 Day Simulation East Carson @ Markleeville

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

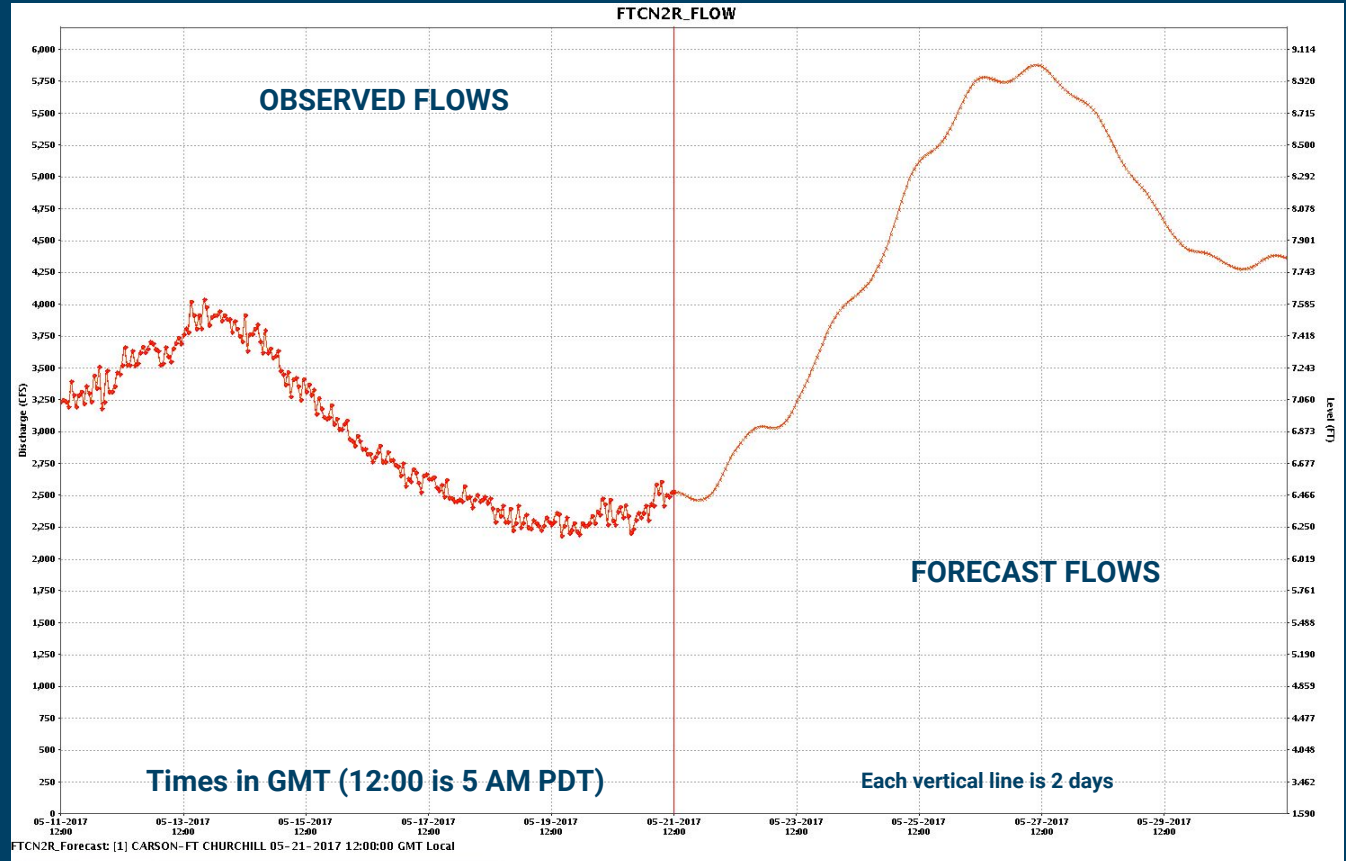


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10 Day Simulation Carson @ Ft Churchill

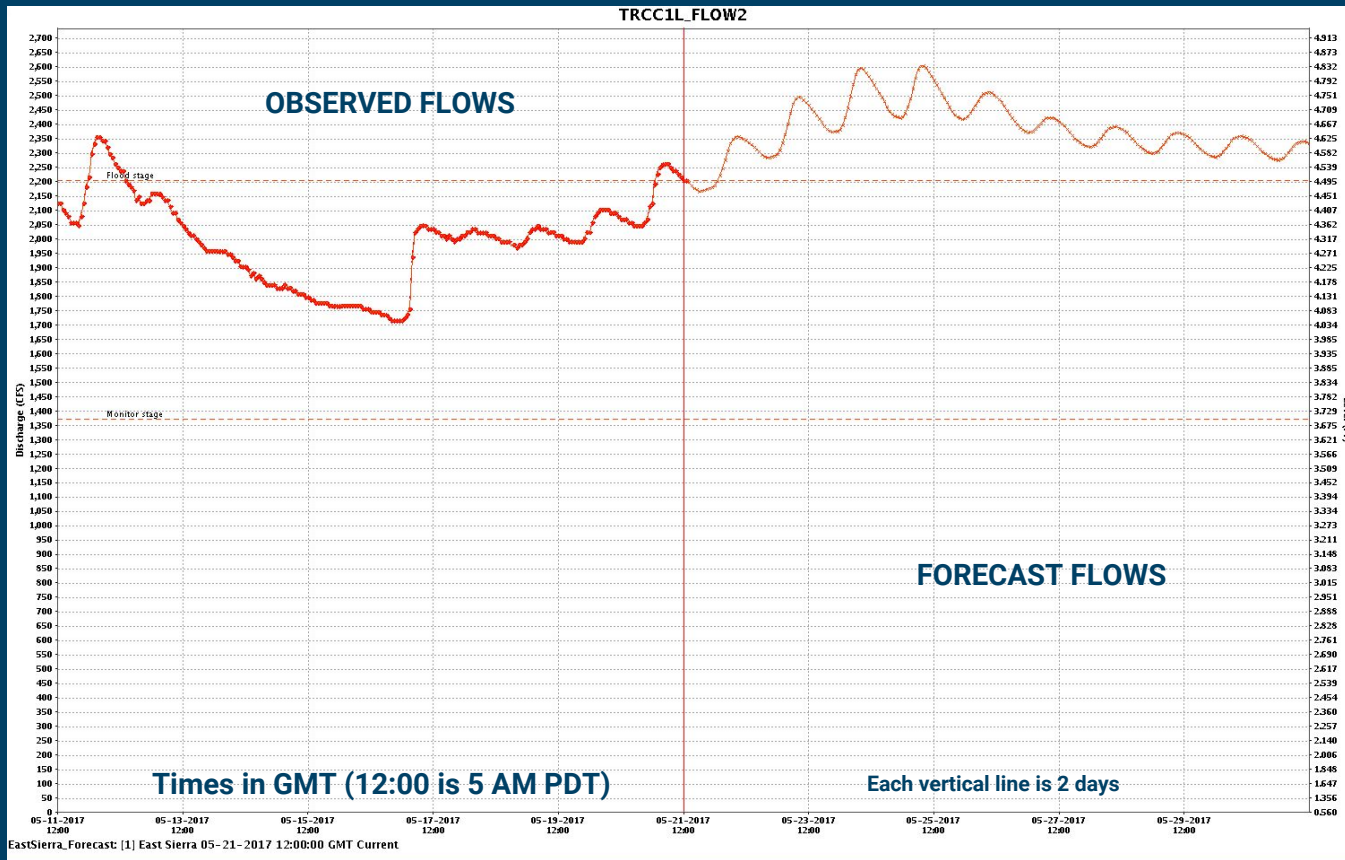
5-day official forecasts - [CNRFC](#) or [NWS Reno](#)

10-day simulations are experimental and provide rough long-range guidance for our public safety partners.



10 Day Simulation Truckee @ Truckee

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

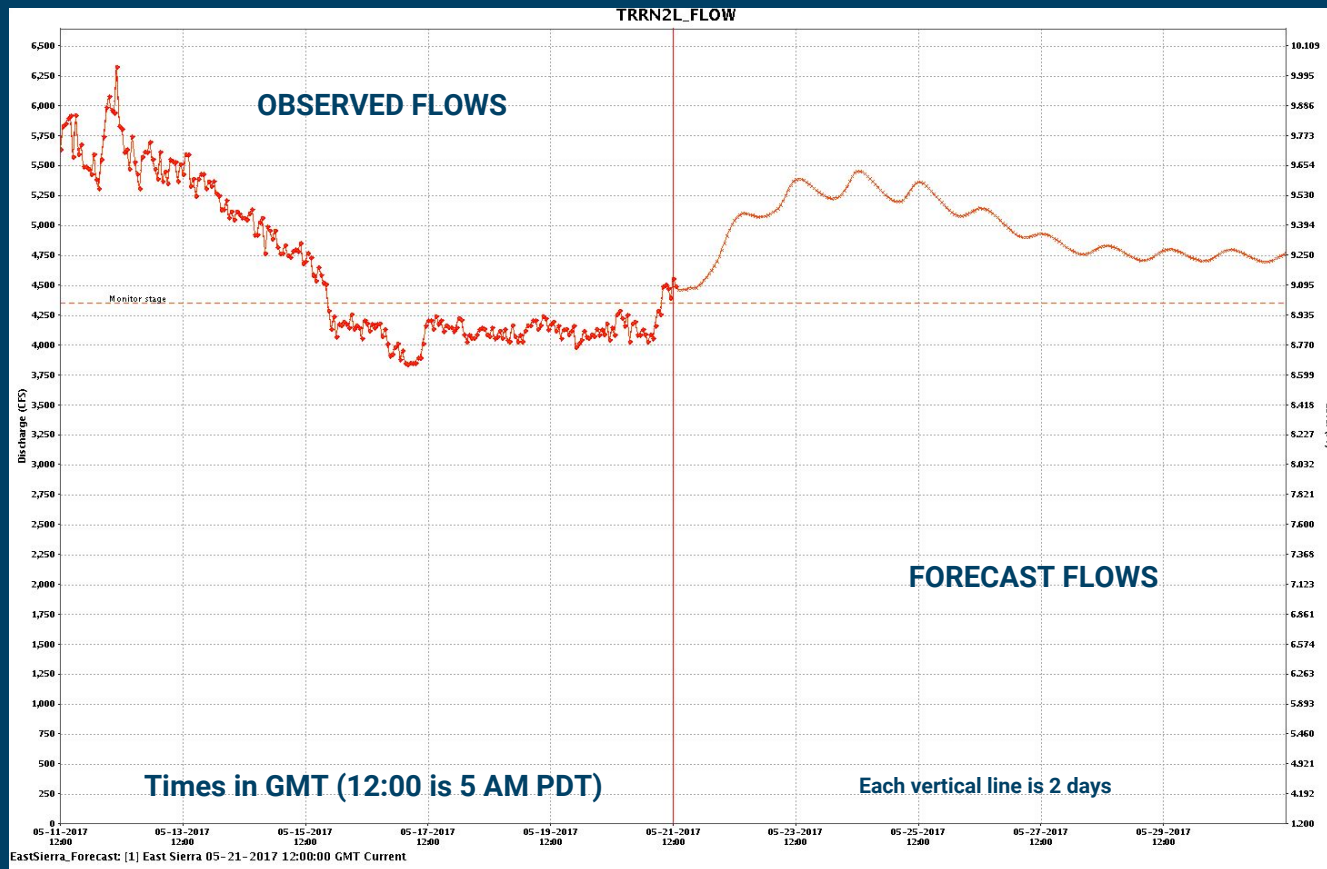


10-day simulations are experimental and provide rough long-range guidance for our public safety partners.



10 Day Simulation Truckee @ Reno

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

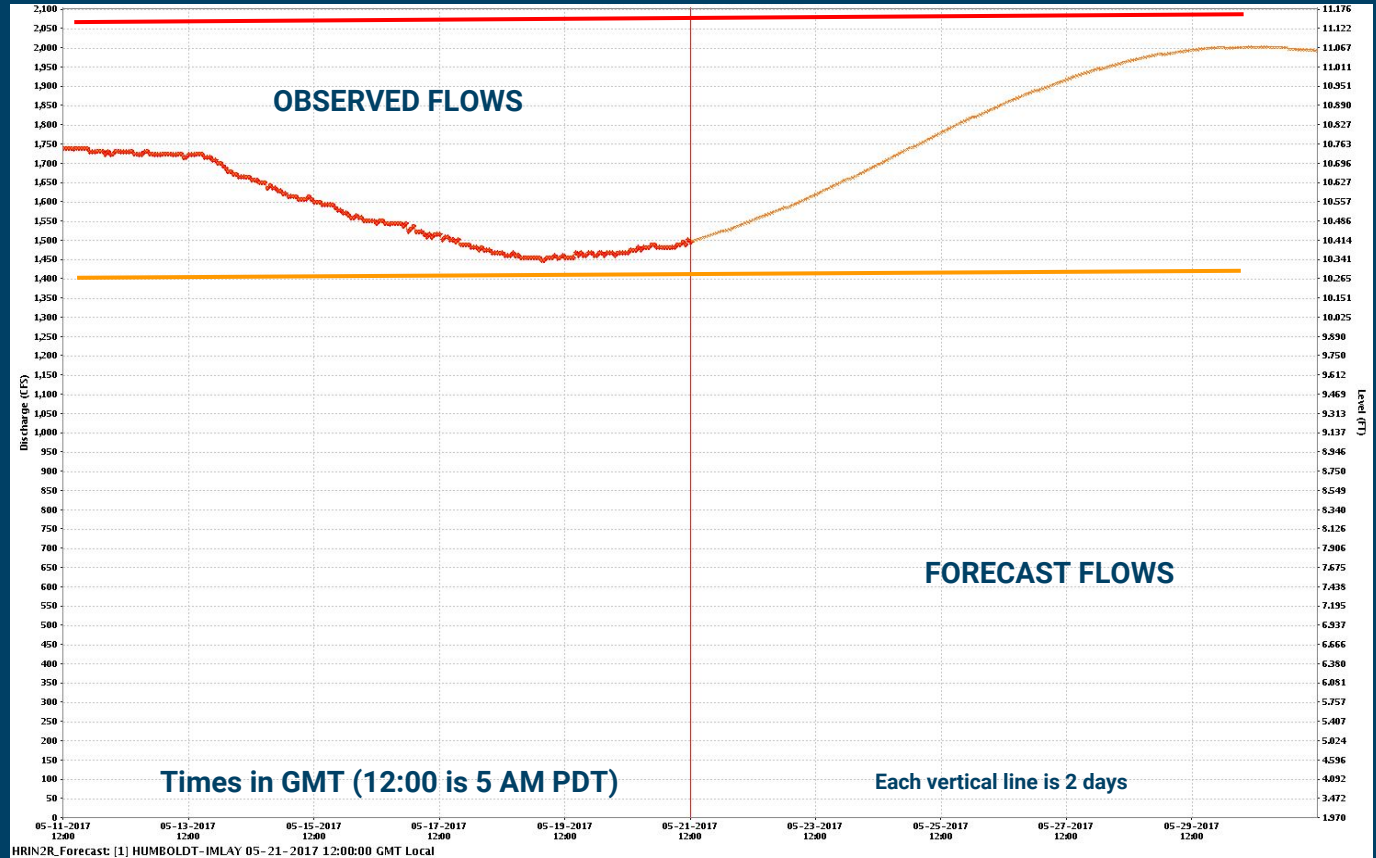


10-day simulations are experimental and provide rough long-range guidance for our public safety partners.



10 Day Simulation Humboldt @ Imlay

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



10-day simulations are experimental and provide rough long-range guidance for our public safety partners.

