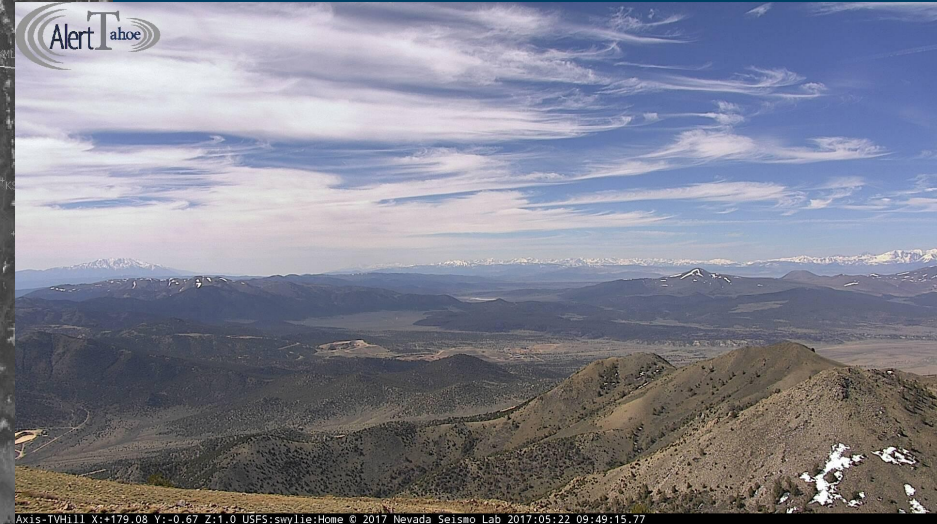
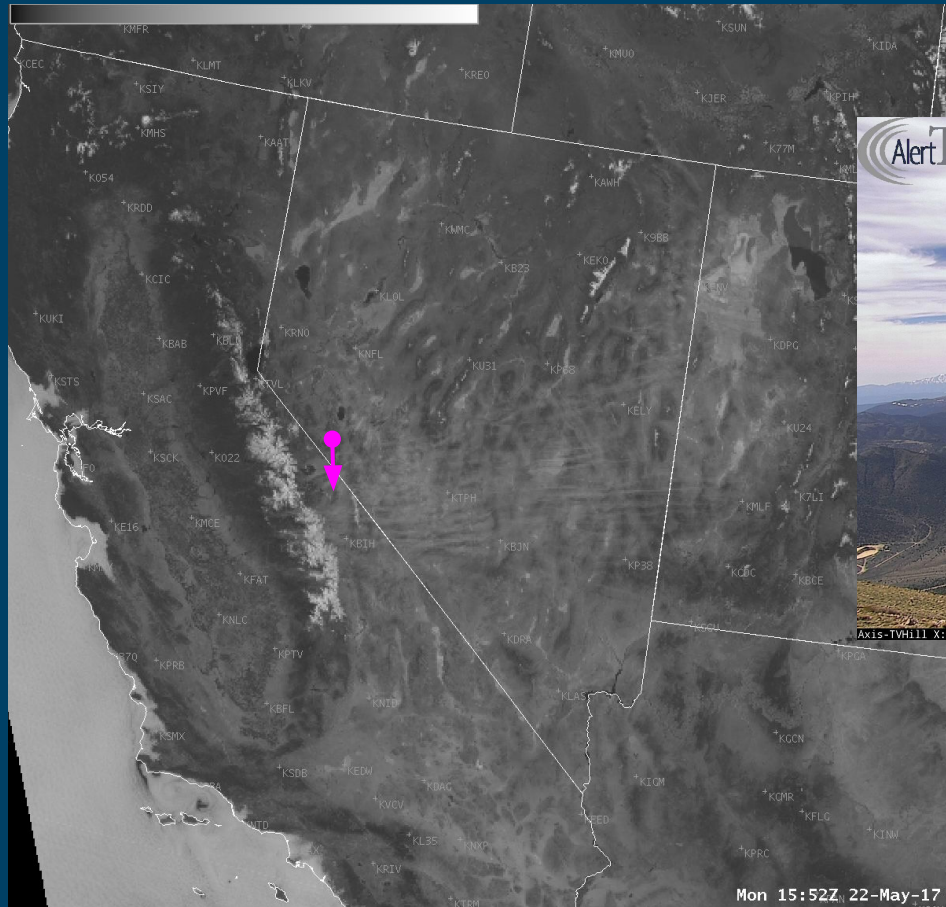


High, Thin Clouds Heading South



*Experimental GOES-16 5-minute visible imagery (left).
Alert Tahoe camera from "TV Hill" southwest of
Hawthorne, looking south (right).*



Short Attention Span Brief






- **Weather:** Warm temperatures through Wednesday, then a brief and slight cooldown late week, then heating back up again for the Memorial DAY weekend. Duration of that second heating remains low-medium confidence but favor continue into mid next week. Some simulations show another slight cool down late next week.
- **Initial Analysis:** Snowmelt over the weekend showing a **slower than expected melt** - upper elevations not contributing yet. This likely results in **lower peak flows for the coming week**. Heat duration of only 4 days will also mitigate peak flows some. Some concern this initial heat is the “ice breaker” for upper elevations with **next weekend heat seeing a lot more snowmelt response** and even higher flows, flooding (especially on Walker).

Short Attention Span Brief

- **Walker River @ Mason/Yerington:** WRID has updated their management plan to capture more of the flows this week in Topaz/Bridgeport. Resulting in **mainly minor-moderate flooding** impacts for main-stem Walker this week. Impacts confined to mainly rural, agricultural areas. **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 **mainly minor flood impacts**. Tributaries and streams - flows peaking early Wednesday and Thursday mornings. **Localized flooding impacts along these streams.** Humboldt is starting another slow rise from minor to moderate flood stage, but only localized impacts.

Situational Awareness - When Should I Freakout?

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

	Today ^{5/22}	Tuesday ^{5/23}	Wed. ^{5/24}	Thursday ^{5/25}	Friday ^{5/26}	Saturday ^{5/27}	Sunday ^{5/28}
Wind	light winds under 10 mph		breezy W-SW winds, low-end impacts		generally light winds under 10-15 mph		
Snow	no snow						
River & Snowmelt Flooding	snowmelt flows increasing as temps warm; mainly minor flooding impacts overall		rapid increase in flows areawide from Tues, Wed heat		most areas minor flooding issues; moderate flooding on main Walker	likely still moderate on main Walker but less confidence on impacts with renewed heating Mem Day weekend ; minor flood issues on other regional rivers and tributaries	
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; buildups or very isolated cells over the mountain areas possible each afternoon		a few thunderstorms, mainly mountains; no severe storms	mountain buildups or isolated storms possible but no widespread storm signals			
Unusual Cold or Heat	no widespread freezes or heat-health issues 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) 		




Temperature Trends Peak Heat Tues-Wed, Cooling, then More Heat for Weekend

Location: Reno Tahoe International Airport NV
 Lat: 39.510, Lon: -119.780
 Elev: 4438

Potential Heat Risks:

Today	Tue	Wed	Thu	Fri	Sat	Sun
-------	-----	-----	-----	-----	-----	-----

NWS Forecast:








						
High 86°F Low 56°F	High 88°F Low 57°F	High 86°F Low 57°F	High 82°F Low 50°F	High 77°F Low 48°F	High 79°F Low 53°F	High 84°F

Location: Yerington NV
 Lat: 38.990, Lon: -119.160
 Elev: 4398

Potential Heat Risks:

Today	Tue	Wed	Thu	Fri	Sat	Sun
-------	-----	-----	-----	-----	-----	-----

NWS Forecast:








						
High 83°F Low 54°F	High 86°F Low 55°F	High 88°F Low 53°F	High 82°F Low 49°F	High 79°F Low 47°F	High 83°F Low 50°F	High 85°F

Location: South Lake Tahoe CA
 Lat: 38.940, Lon: -119.980
 Elev: 6352

Potential Heat Risks:

Today	Tue	Wed	Thu	Fri	Sat	Sun
-------	-----	-----	-----	-----	-----	-----

NWS Forecast:








						
High 75°F Low 39°F	High 77°F Low 41°F	High 72°F Low 40°F	High 66°F Low 37°F	High 65°F Low 35°F	High 67°F Low 37°F	High 69°F

Location: Sonora Pass CA
 Lat: 38.340, Lon: -119.620
 Elev: 10007

Potential Heat Risks:

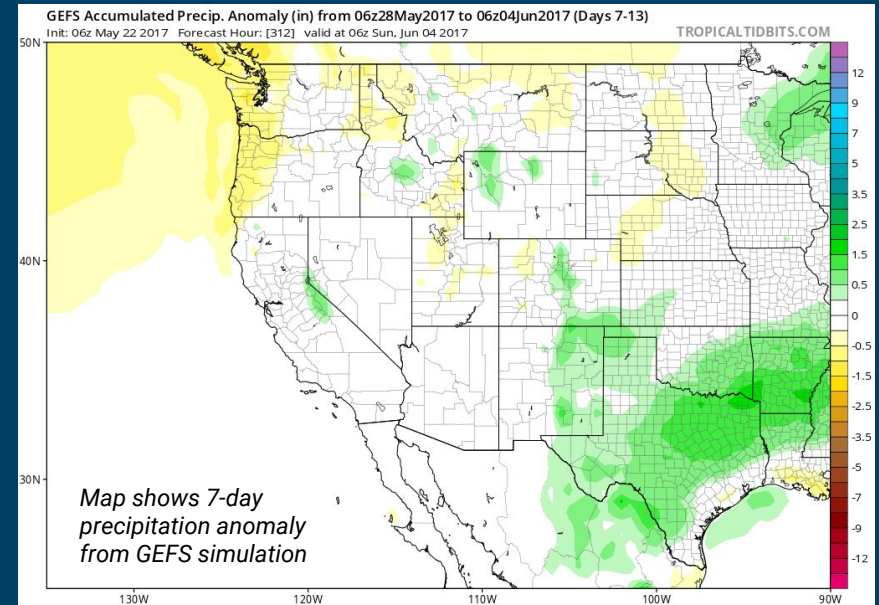
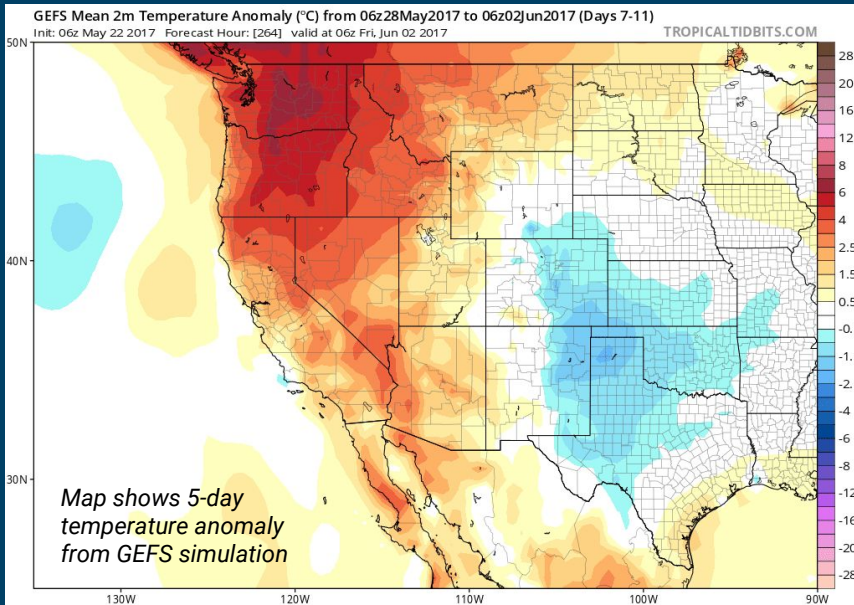
Today	Tue	Wed	Thu	Fri	Sat	Sun
-------	-----	-----	-----	-----	-----	-----

NWS Forecast:

						
High 55°F Low 43°F	High 55°F Low 46°F	High 58°F Low 38°F	High 48°F Low 35°F	High 47°F Low 33°F	High 51°F Low 36°F	High 54°F

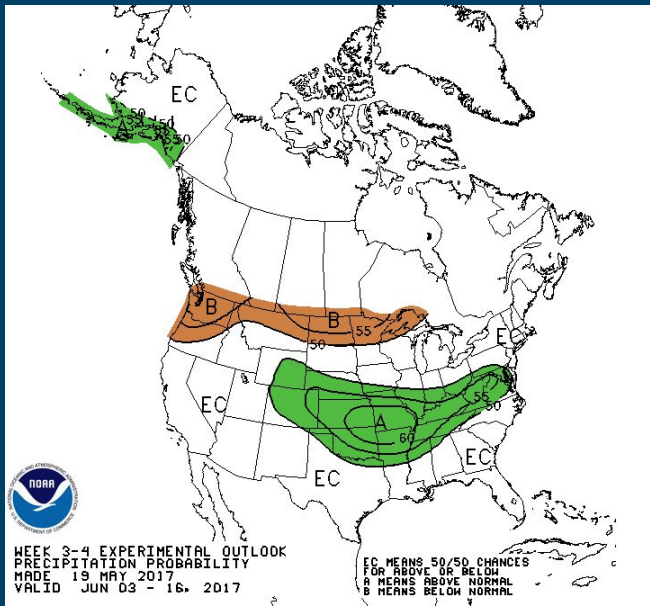
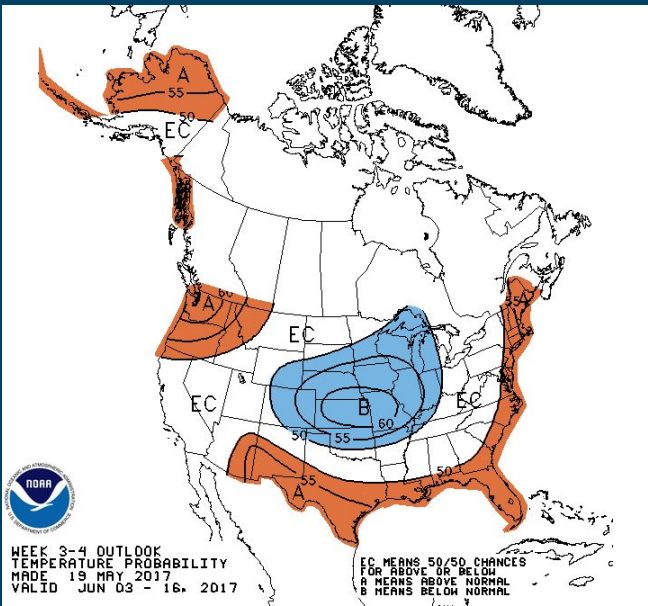


Next Week May 28 - June 3 Favoring Continued Warm but Intensity Uncertain



- Simulations favor warming through Memorial Day weekend and mid-next week. Some show low pressure offshore breaking down heat-ridge late next week - cooling temperatures, more thunderstorms. Hard to argue since it's been difficult for west coast ridges to persist more than 3-4 days all winter-spring!!
- Plan for continued flooding impacts, high flows. Severity remains low confidence but we **could see a second peak in flows Memorial Day holiday weekend!**

June Heat? No Strong Signals Either Way June 3-16



- 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.

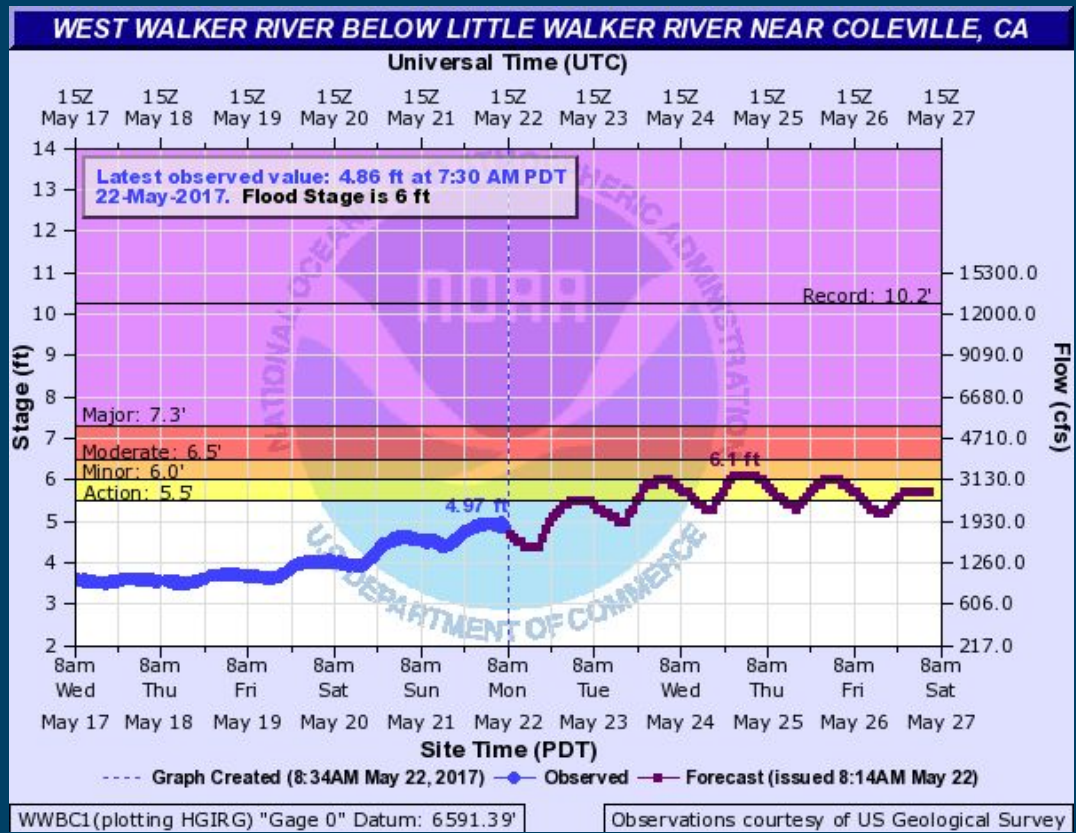
The Rivers

5-day forecasts

5 Day Forecast West Walker @ Sonora Junction

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

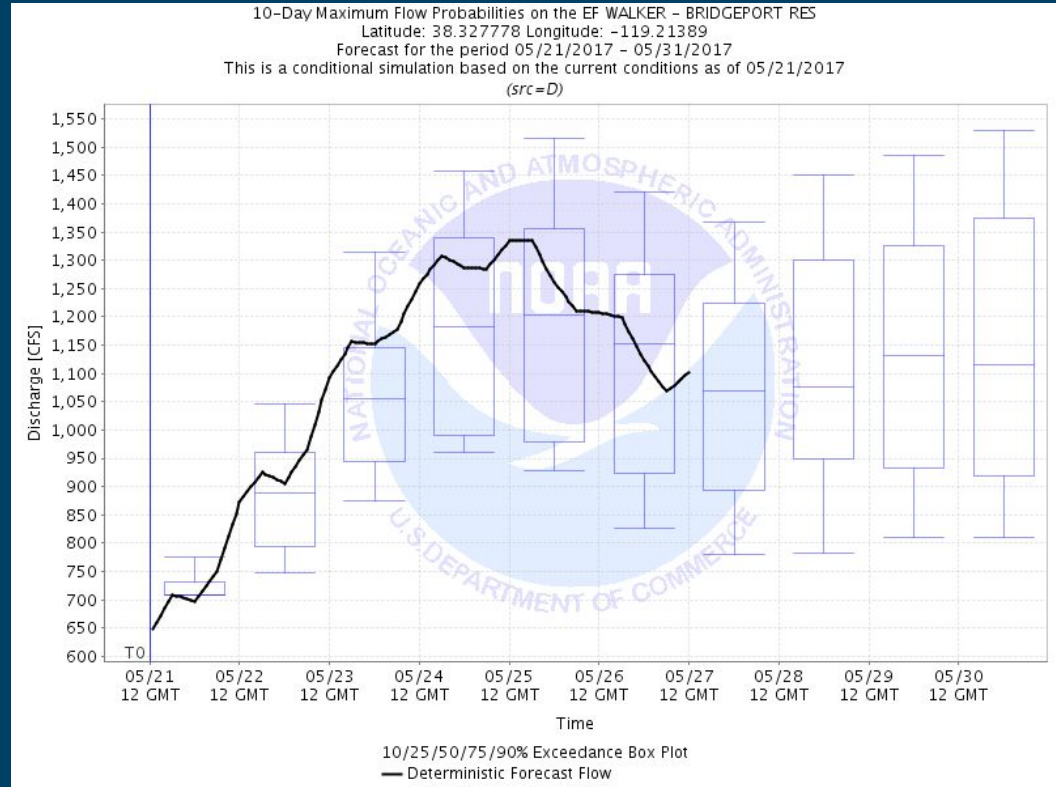
- Flood stages likely starting Tuesday night. Likely touching flood stage at night most of the week. Watch for campers too close to river.
- Impacts - Minor flooding of pasture & rural roads in West Walker River Canyon and Antelope Valley, including Walker, Coleville, Topaz, and Smith Valley
- Strong diurnal signal with night-time peaks.



Probability Plot East Walker @ Bridgeport Inflow

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

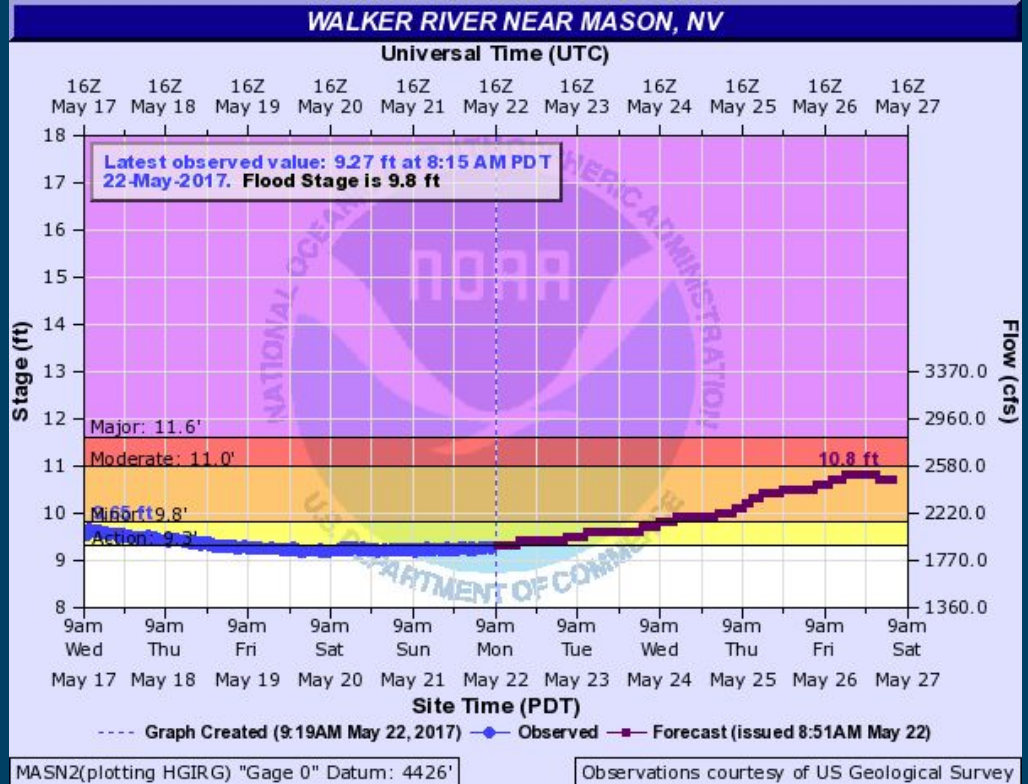
- **IMPORTANT:** These are estimated inflows, no gauging data to calibrate from so increased margin of error.
- Ensemble forecast product to represent uncertainty.
- Substantial increase in snowmelt flows into the reservoir. **Potentially 2 - 2.5 times current inflows.**
- Inflow expected to exceed current/planned releases Tuesday.
- Current plan is to maintain ~ 800cfs release instead of bump up to 1100 today.



5 Day Forecast Walker River @ Mason/Yerington

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

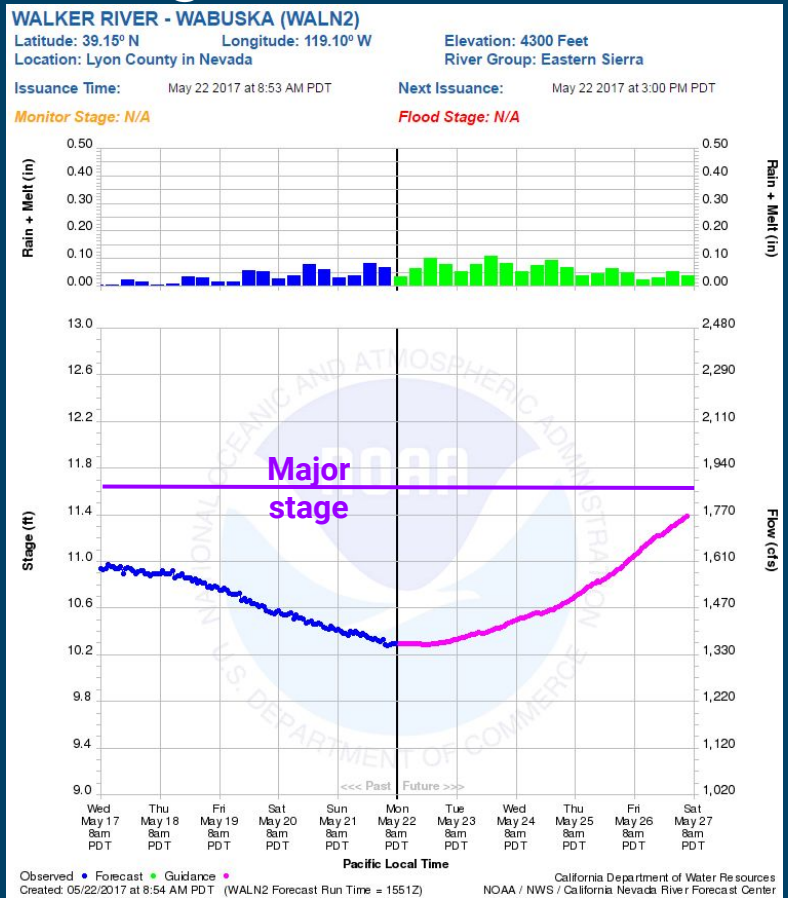
- **Big update:** Minor-moderate flooding impacts this week. Lasting through Memorial Day weekend!
- Based on new water management on Topaz and Bridgeport reservoirs, new gauging around Topaz, and slower snowmelt response.
- **IMPORTANT:** This new forecast factors in latest water management scenario, which may change depending on later forecasts and stream response.



5 Day Forecast Walker River @ Wabuska

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

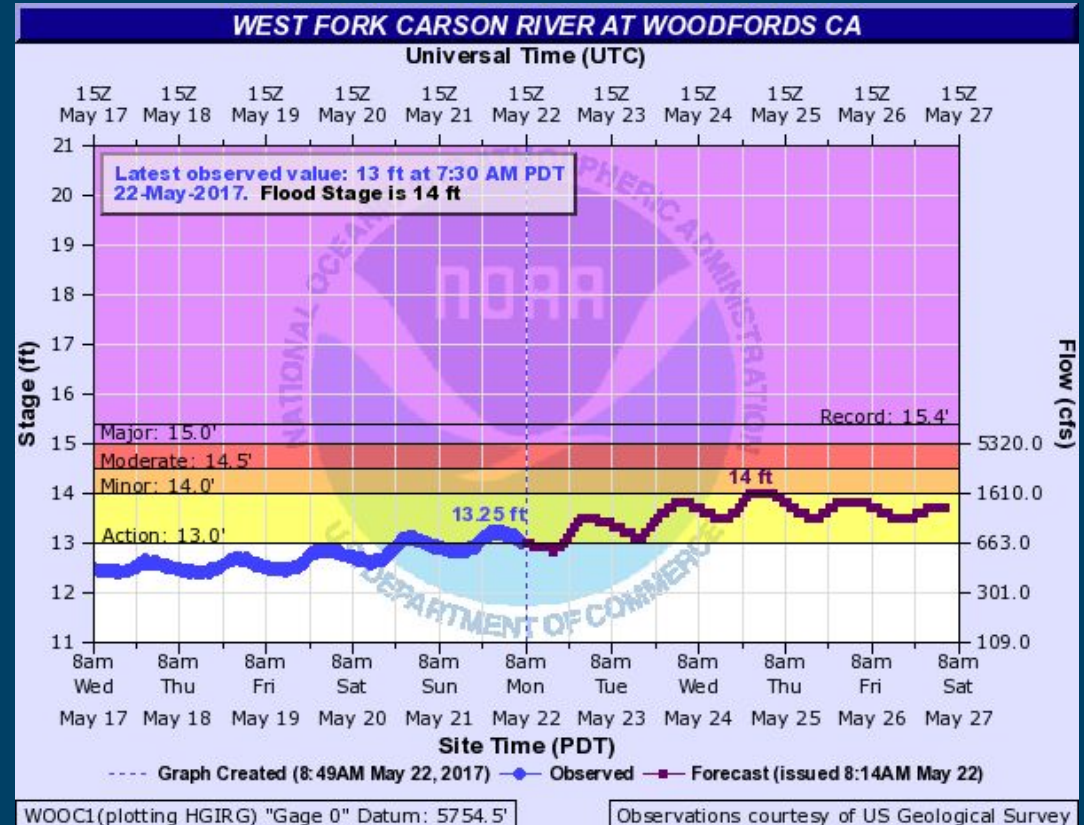
- High flows, minor-moderate flood stages mid to late week. Now remaining below major stage due to upstream water management changes Mon AM.
- ~ 18 to 24 hour lag to Weber Reservoir.
- Long duration and high volume event will likely result in minor to moderate flood impacts below Weber Reservoir. Lasting through Memorial Day weekend.



5 Day Forecast West Carson @ Woodfords

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

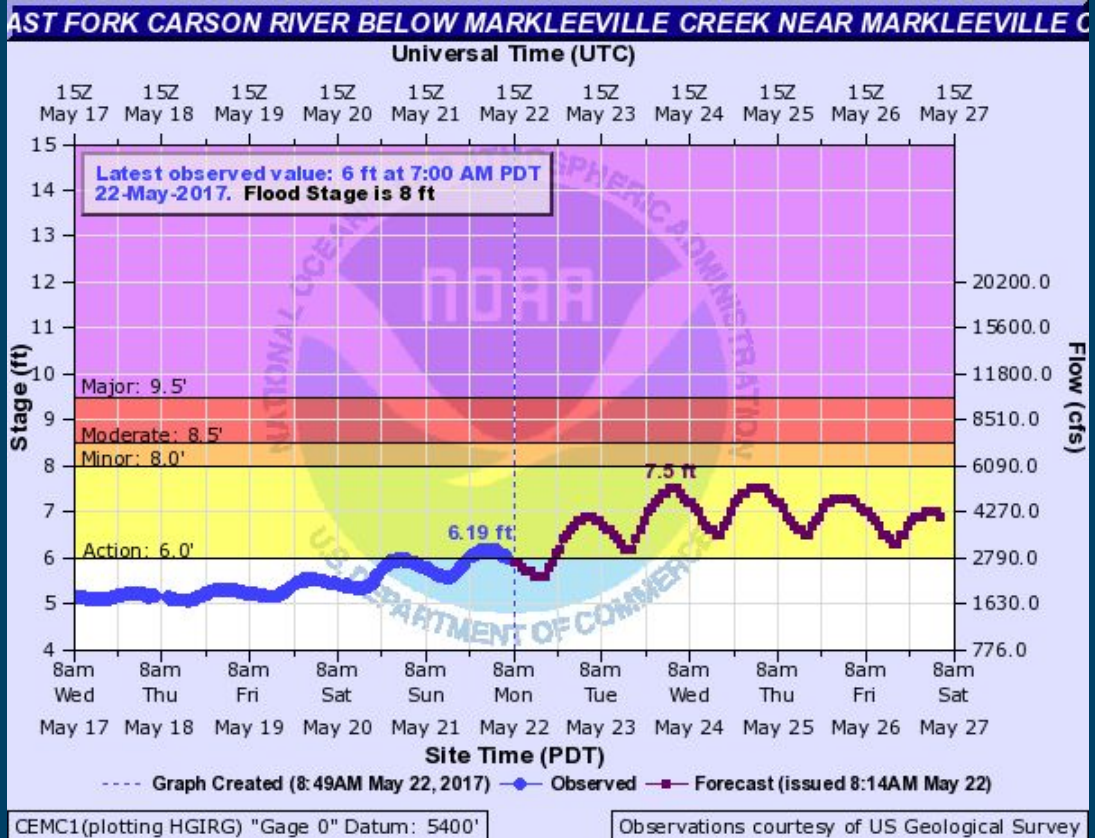
- Nearing or touching flood stage Tuesday, Wednesday, and Thursday nights.
- Impacts - Broad minor flooding in the southwestern Carson Valley between Centerville and Genoa NV.
- Strong diurnal signal with night-time peaks.
- Odds increasing that this could be peak flows for spring-summer, but prolonged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



5 Day Forecast East Carson @ Markleeville

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

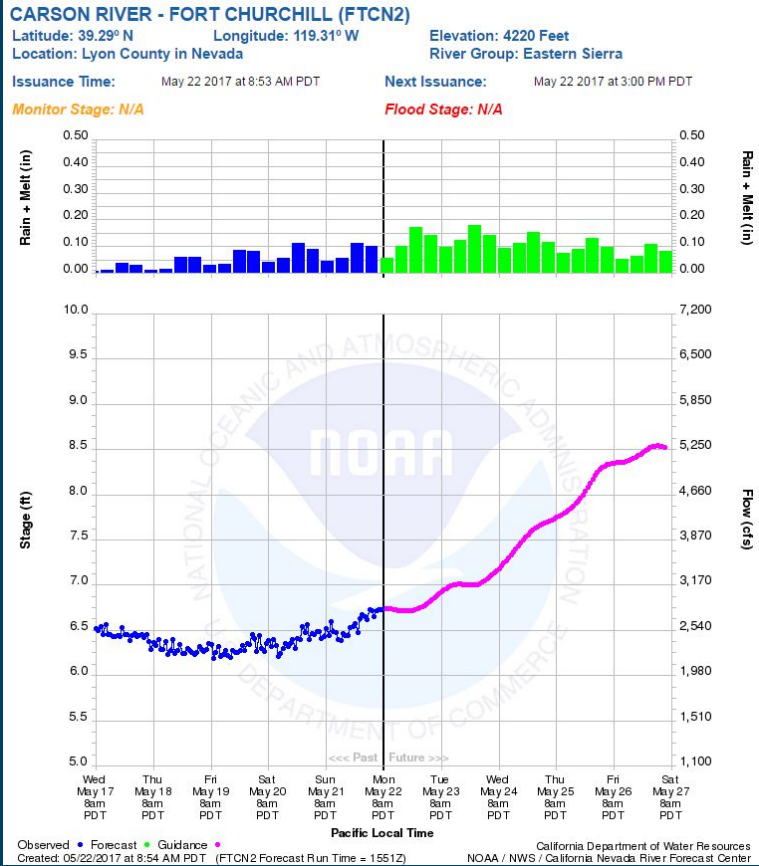
- Well into monitor stages all week, possibly approaching flood stages Tuesday, Wednesday nights.
- Impacts - Broad minor flooding in lowest, flood prone portions of Carson Valley.
- Strong diurnal signal with night-time peaks.
- Odds increasing that this could be peak flows for spring-summer, but prolonged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



5 Day Forecast Carson River @ Ft. Churchill

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

- Projections for next week have ~2 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



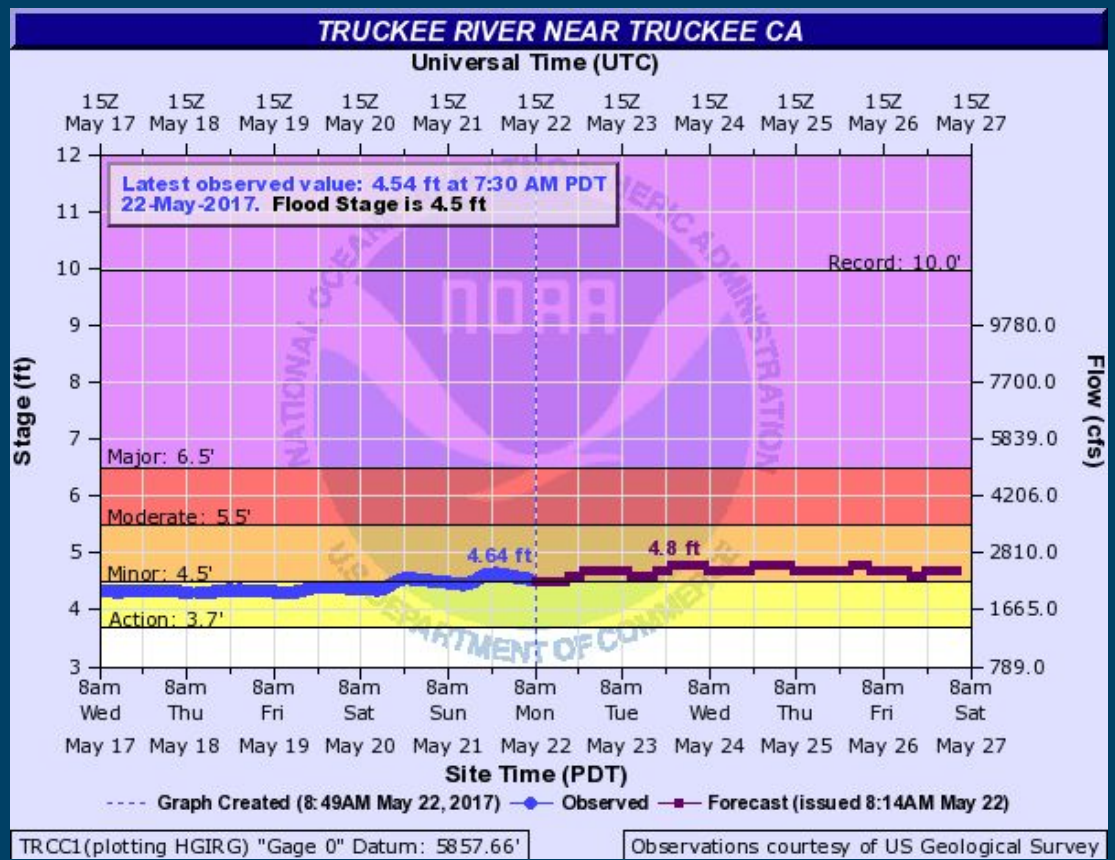
Observed • Forecast • Guidance • California Department of Water Resources
 Created: 05/22/2017 at 8:54 AM PDT (FTCN2 Forecast Run Time = 1551Z) NOAA / NWS / California Nevada River Forecast Center



5 Day Forecast Truckee River @ Truckee

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

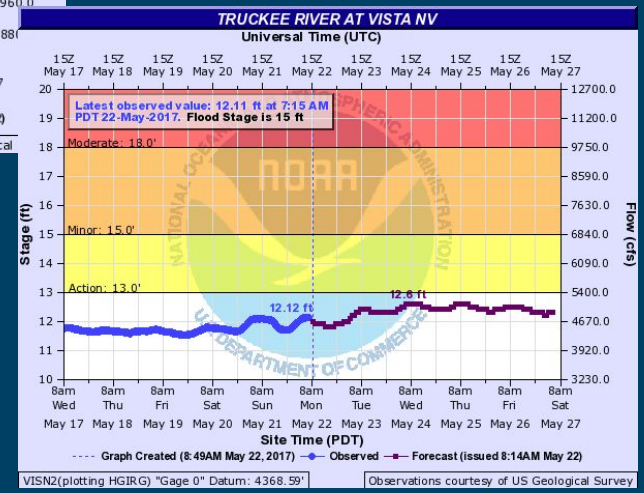
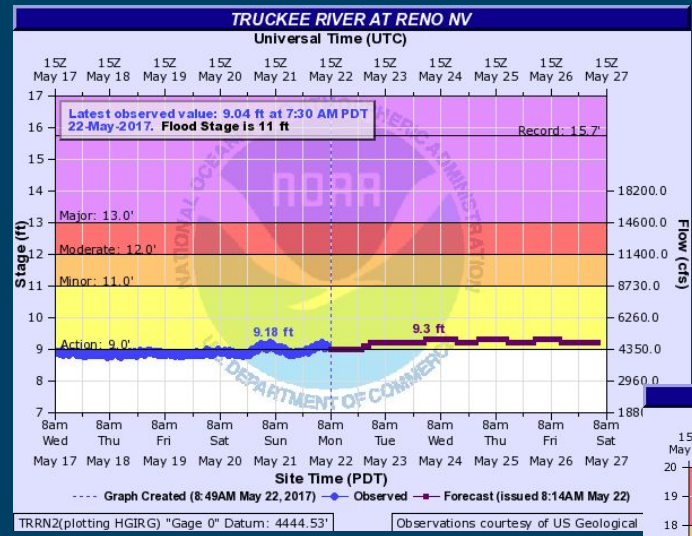
- **IMPORTANT:** Simulation assumes status quo water management, which may change depending on later weather forecasts.
- Flows increasing, mainly due to increased snowmelt flows from tributaries.
- Minor flooding impacts right along the river, issues we've seen already. Some riverfront basements, yards,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



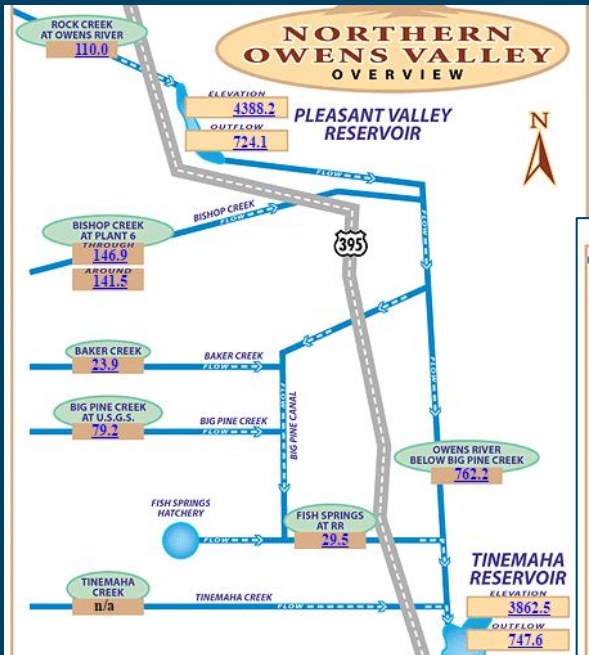
5 Day Forecast Truckee River @ Reno/Sparks

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

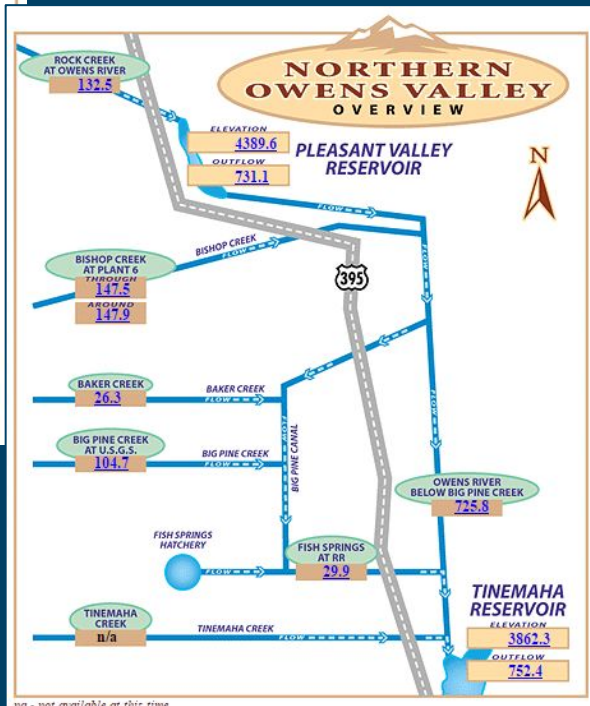
- **IMPORTANT:** Simulation assumes status quo water management, which may change depending on later river/weather forecasts.
- Flows gradually increase due to snowmelt from tributaries + releases. Monitor stages at both Reno and Vista gauges.
- Minor flooding impacts right along the river, issues we've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



Eastern Sierra Outlook General Guidance



Sunday AM



Monday AM



Sunday AM



Monday 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 be **2 times current flows**. **Smaller creeks likely 3 times current flows**.
- **Peak flows from this heat episode likely Wednesday or Thursday nights**
- 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](#)



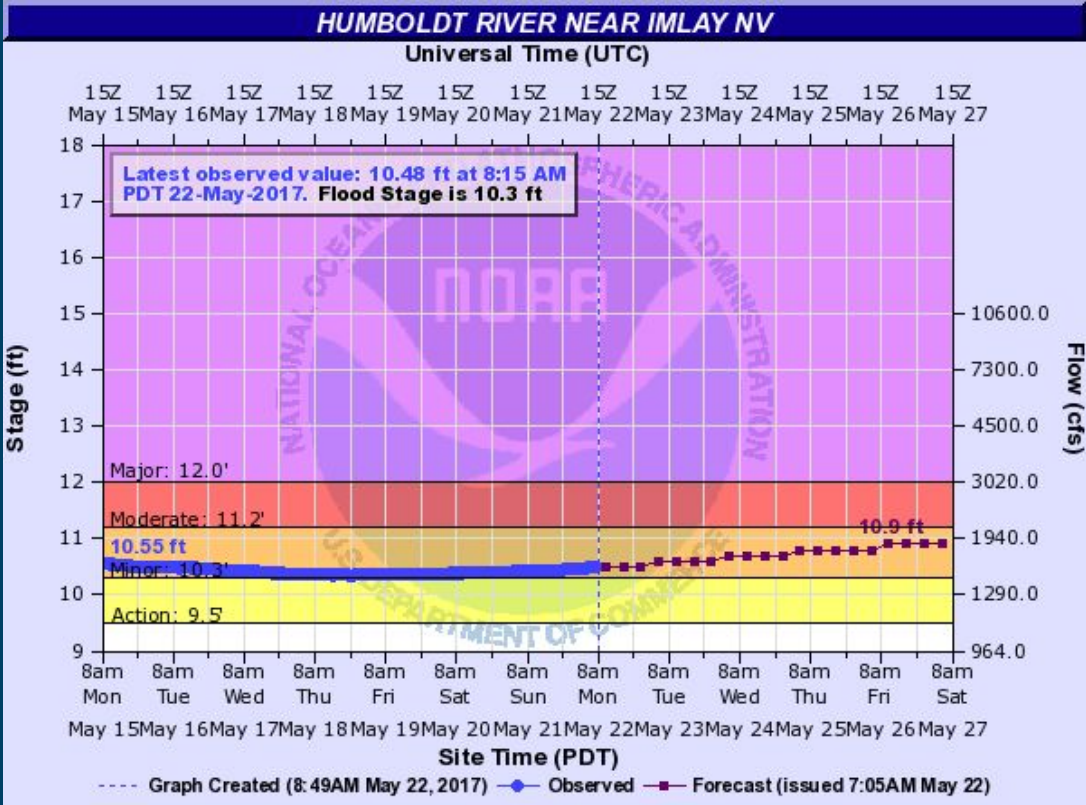
NWS does not have specific river simulations in the eastern Sierra, aside from Walker River basin. So we use projected rises on the Walker River and internal (highly) experimental National Water Model guidance.



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.
- 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 simulations

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	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 

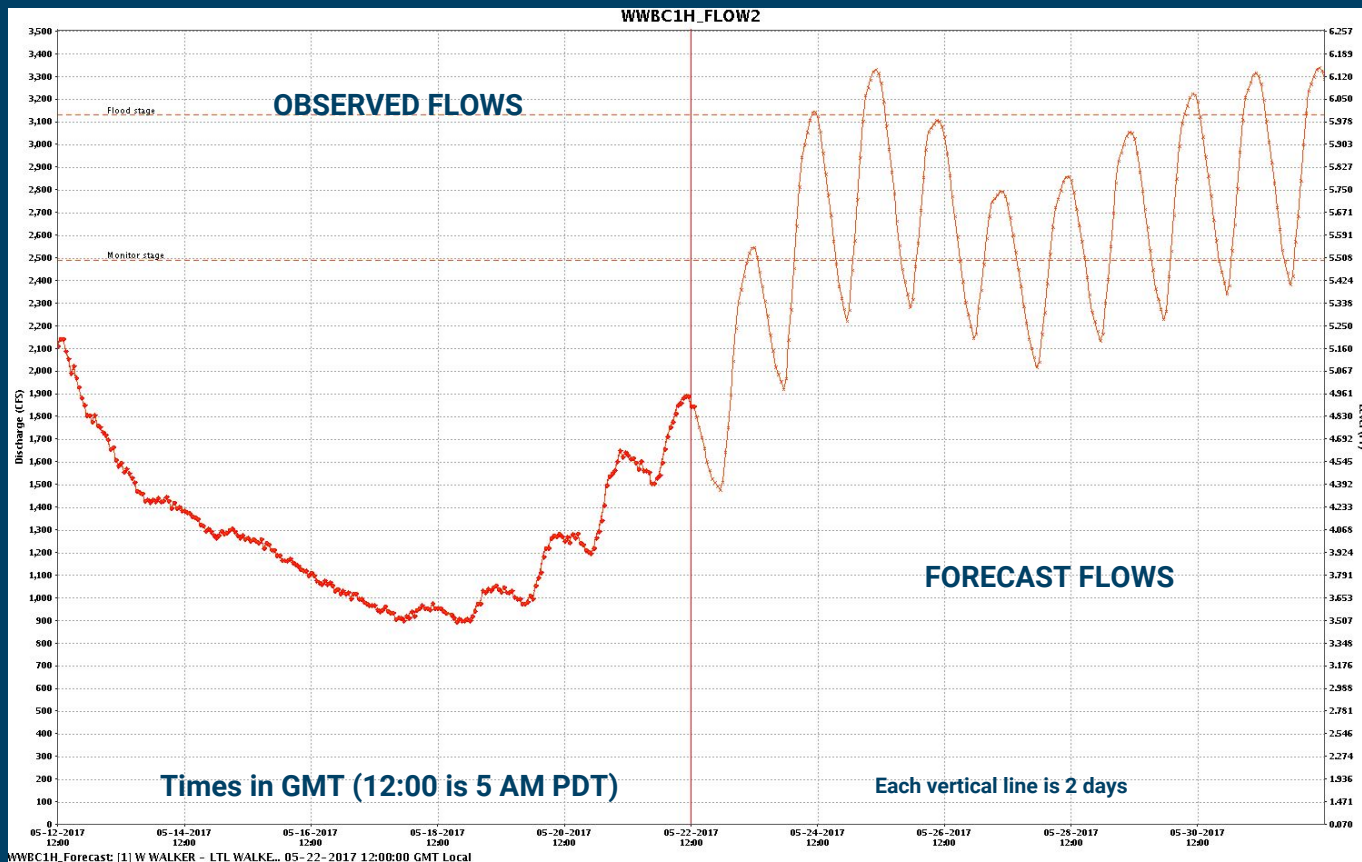
High freakoutness 

End of this (aka really bad) 

10 Day Simulation West Walker @ Sonora Jct

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

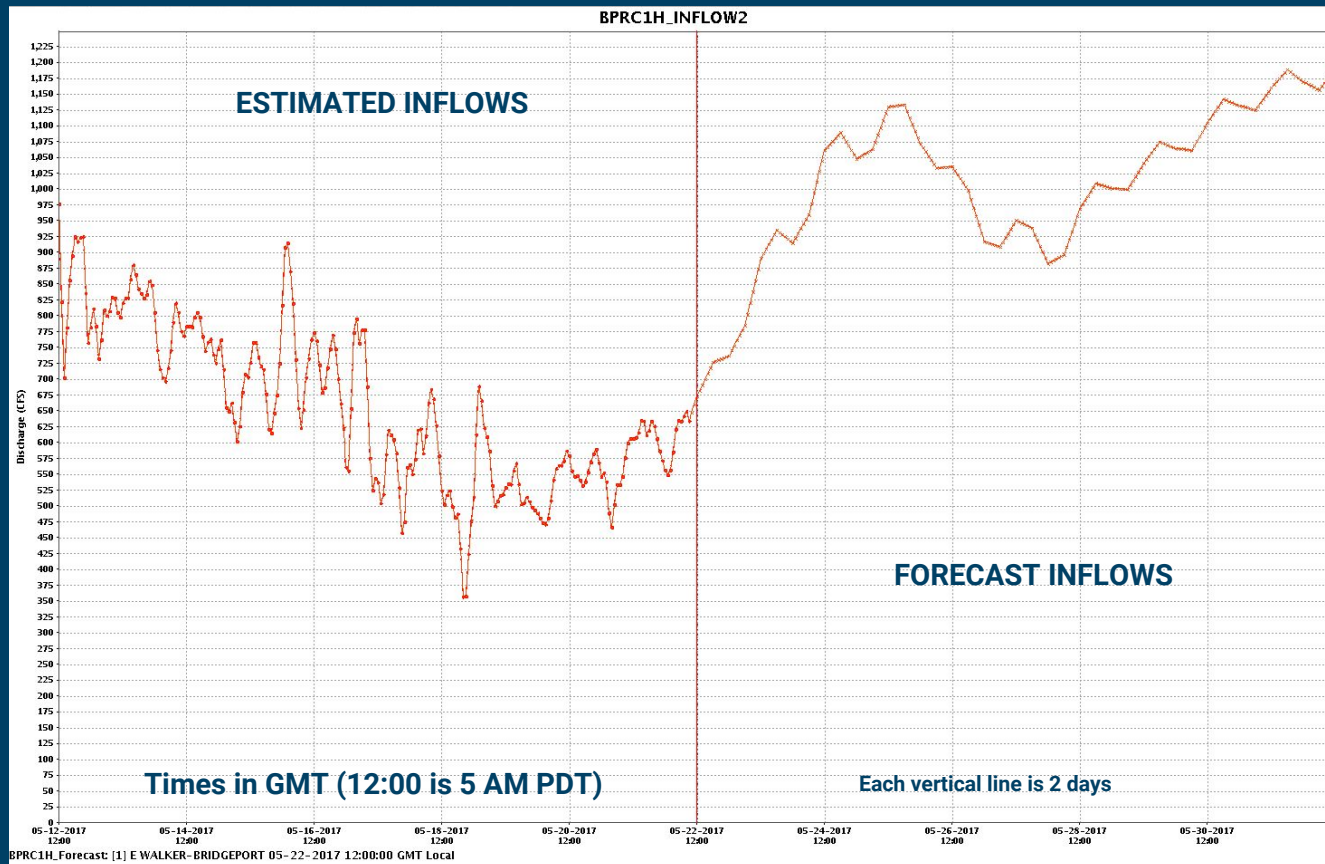
10-day simulations are experimental and provide rough long-range guidance for our public safety partners. For many rivers, this assumes status-quo water management on reservoirs and releases.



10 Day Simulation Bridgeport Inflow

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

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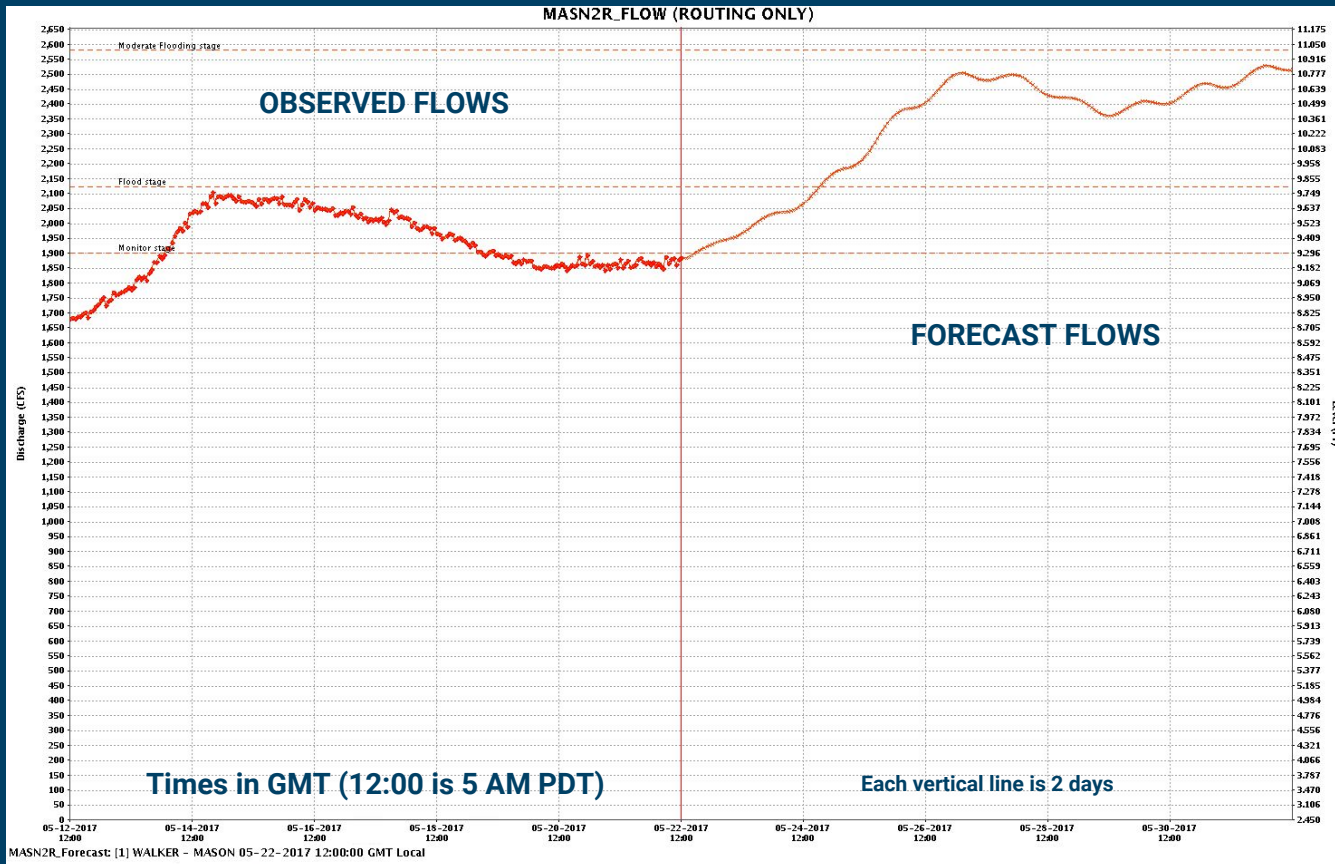


BPRC1H.Forecast [1] E WALKER - BRIDGEPORT 05-22-2017 12:00:00 GMT Local



10 Day Simulation Walker @ Mason

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

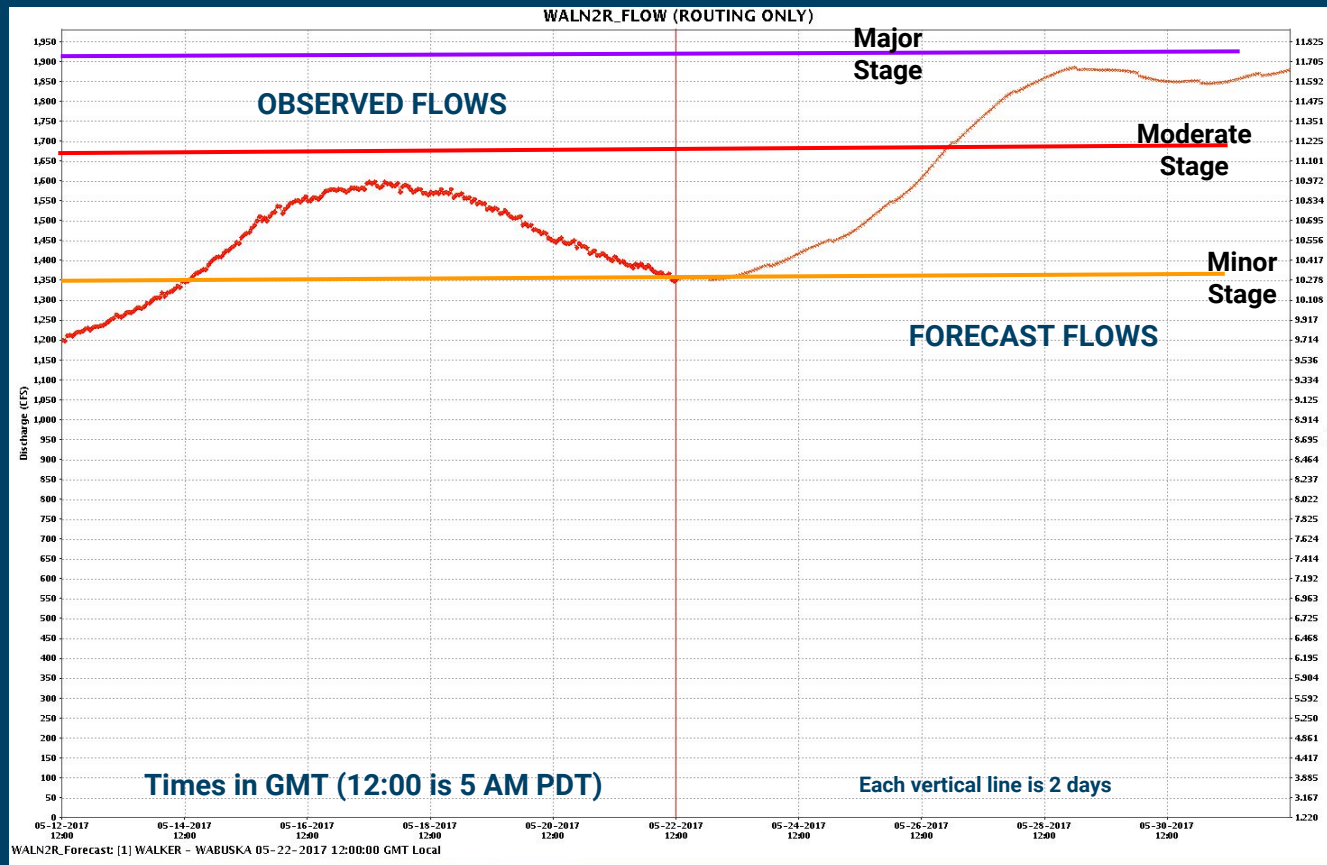


10-day simulations are experimental and provide rough long-range guidance for our public safety partners. For many rivers, this assumes status-quo water management on reservoirs and releases.



10 Day Simulation Walker @ Wabuska

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



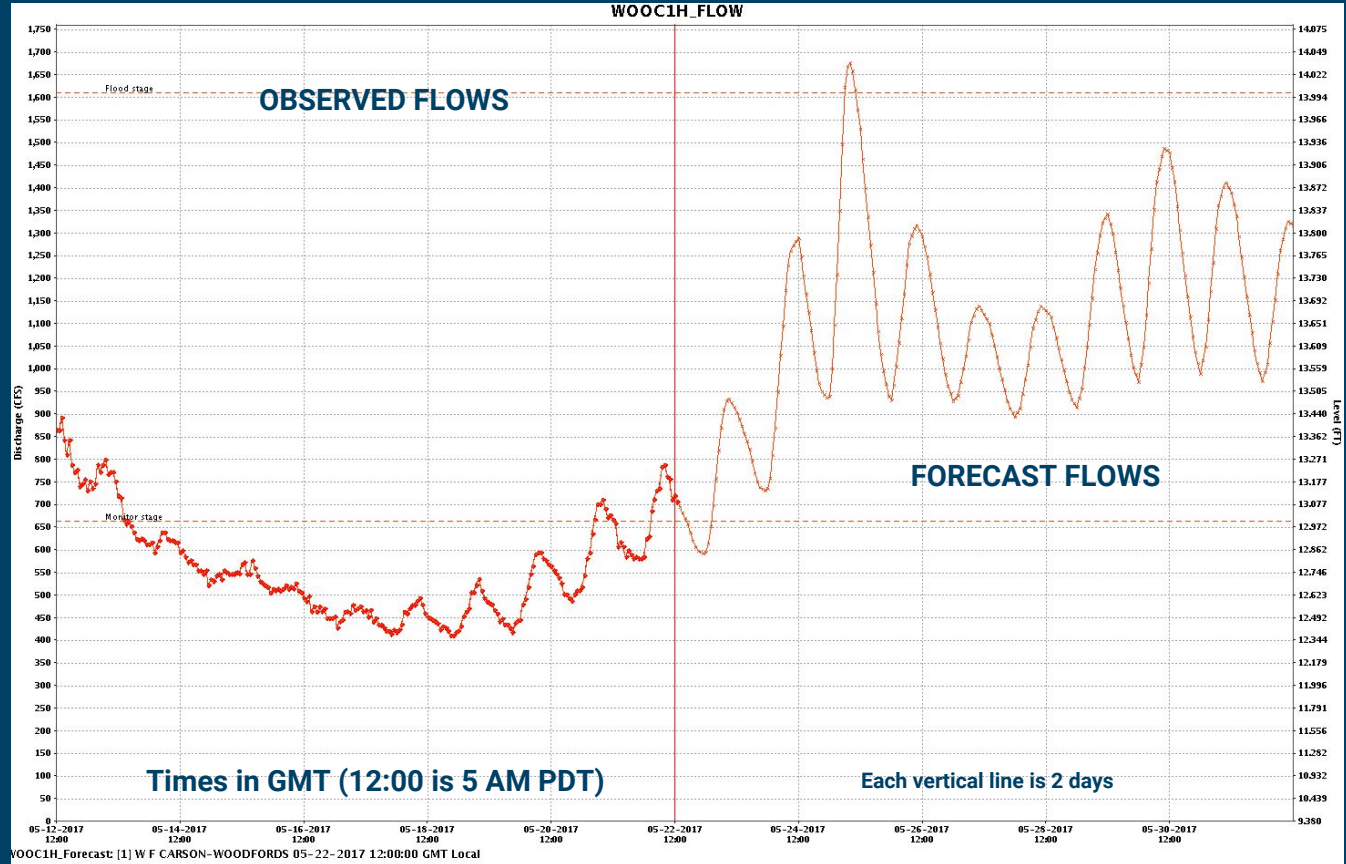
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10 Day Simulation West Carson @ Woodfords

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

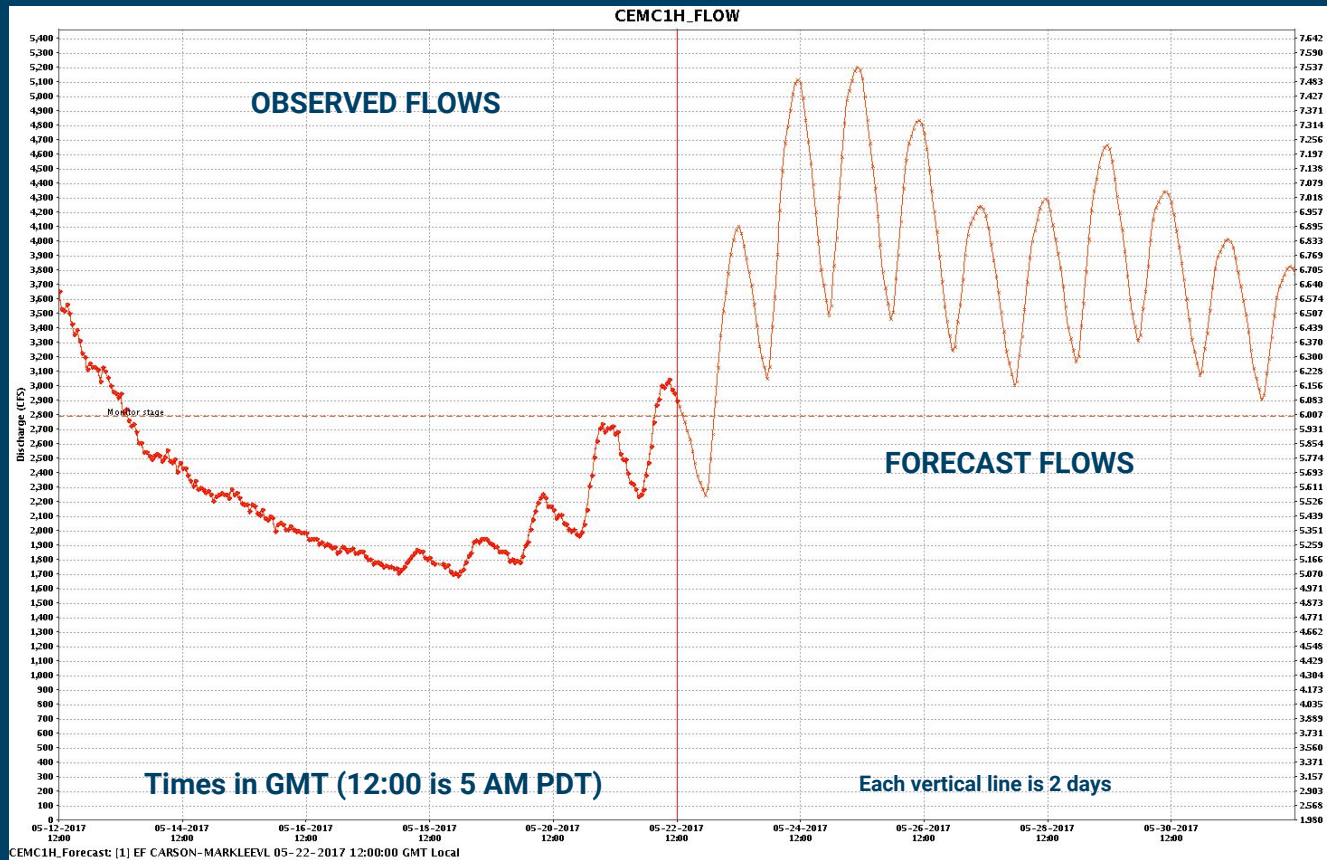
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10 Day Simulation East Carson @ Markleeville

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

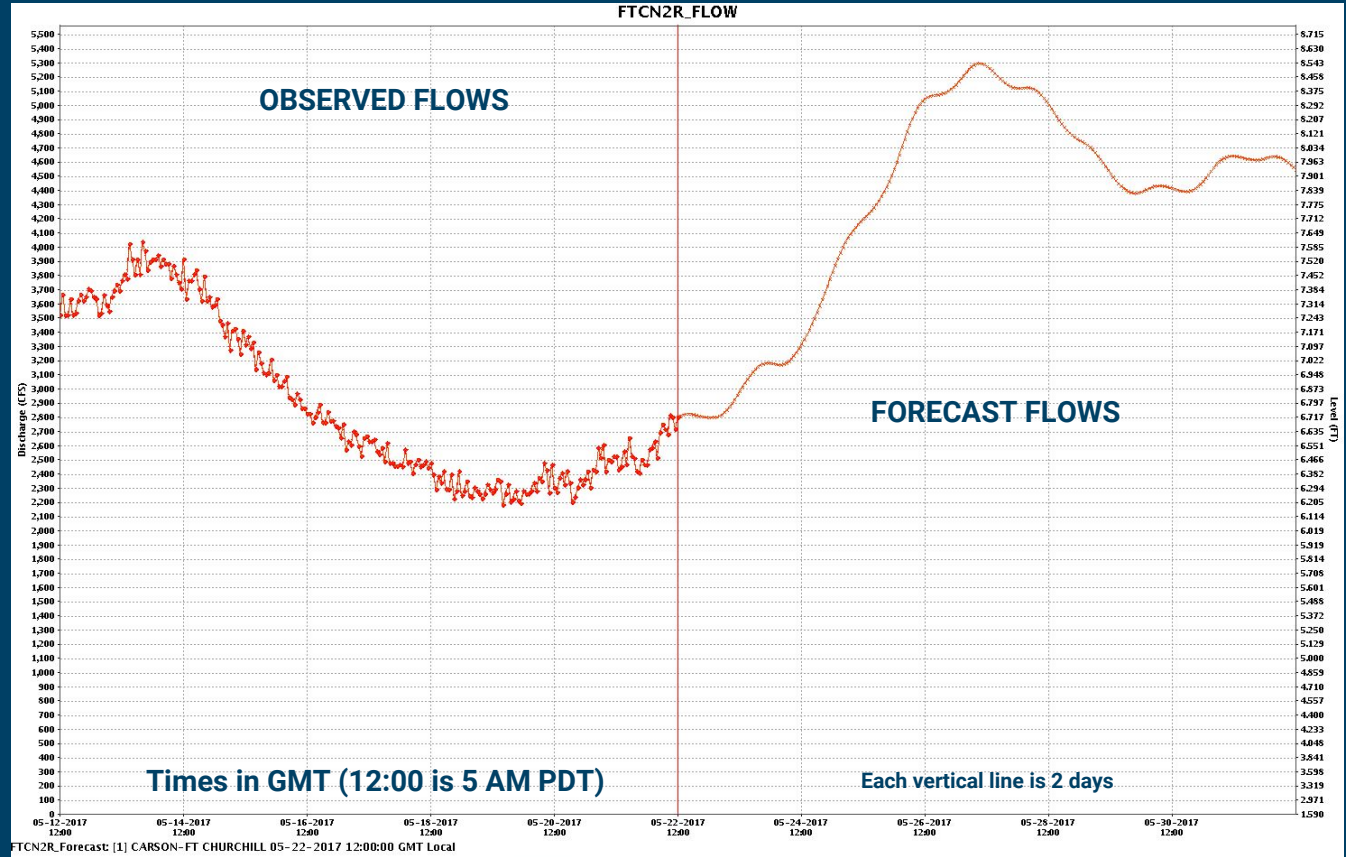
10-day simulations are experimental and provide rough long-range guidance for our public safety partners. For many rivers, this assumes status-quo water management on reservoirs and releases.



10 Day Simulation Carson @ Ft Churchill

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

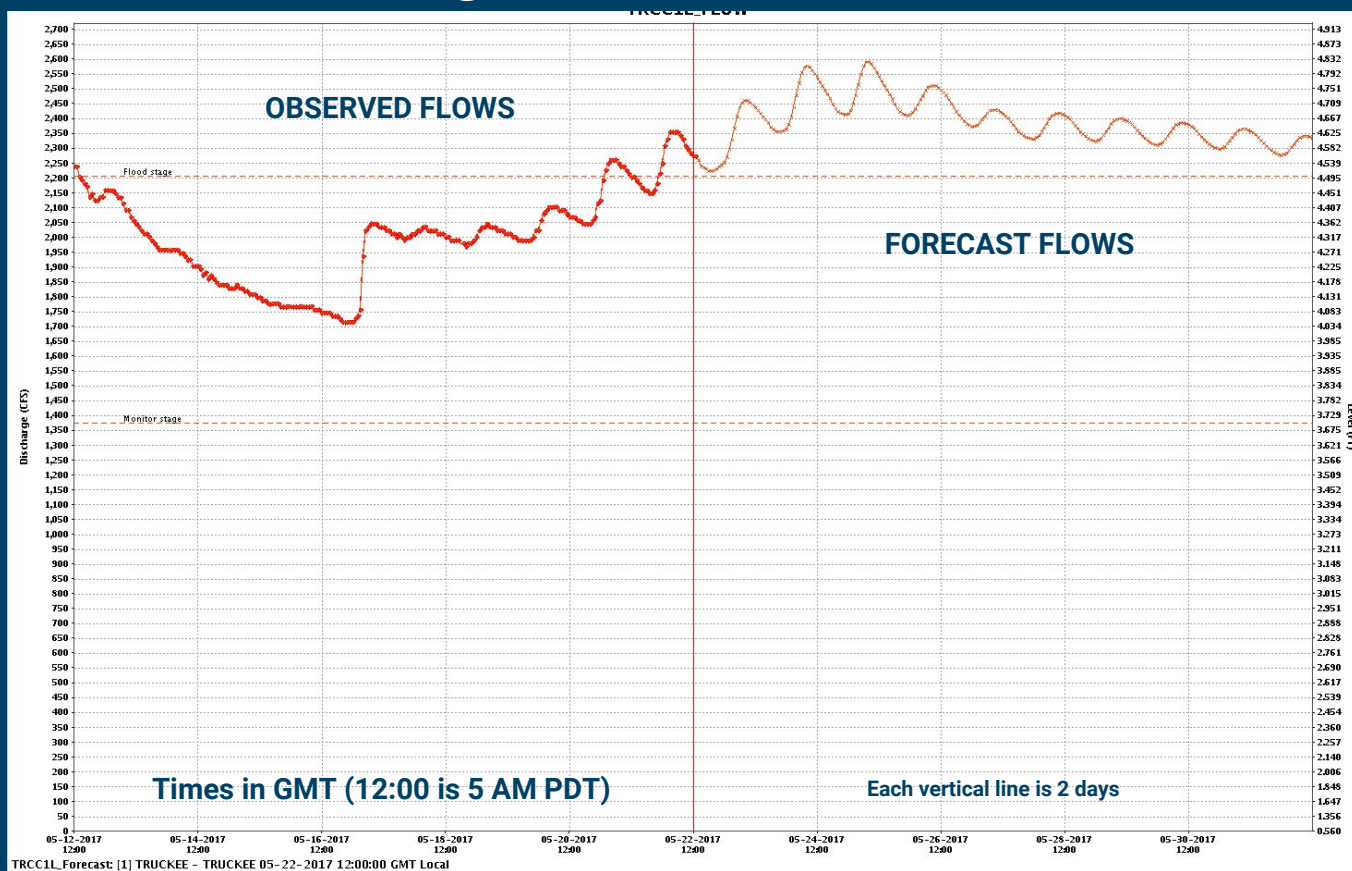
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10 Day Simulation Truckee @ Truckee

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

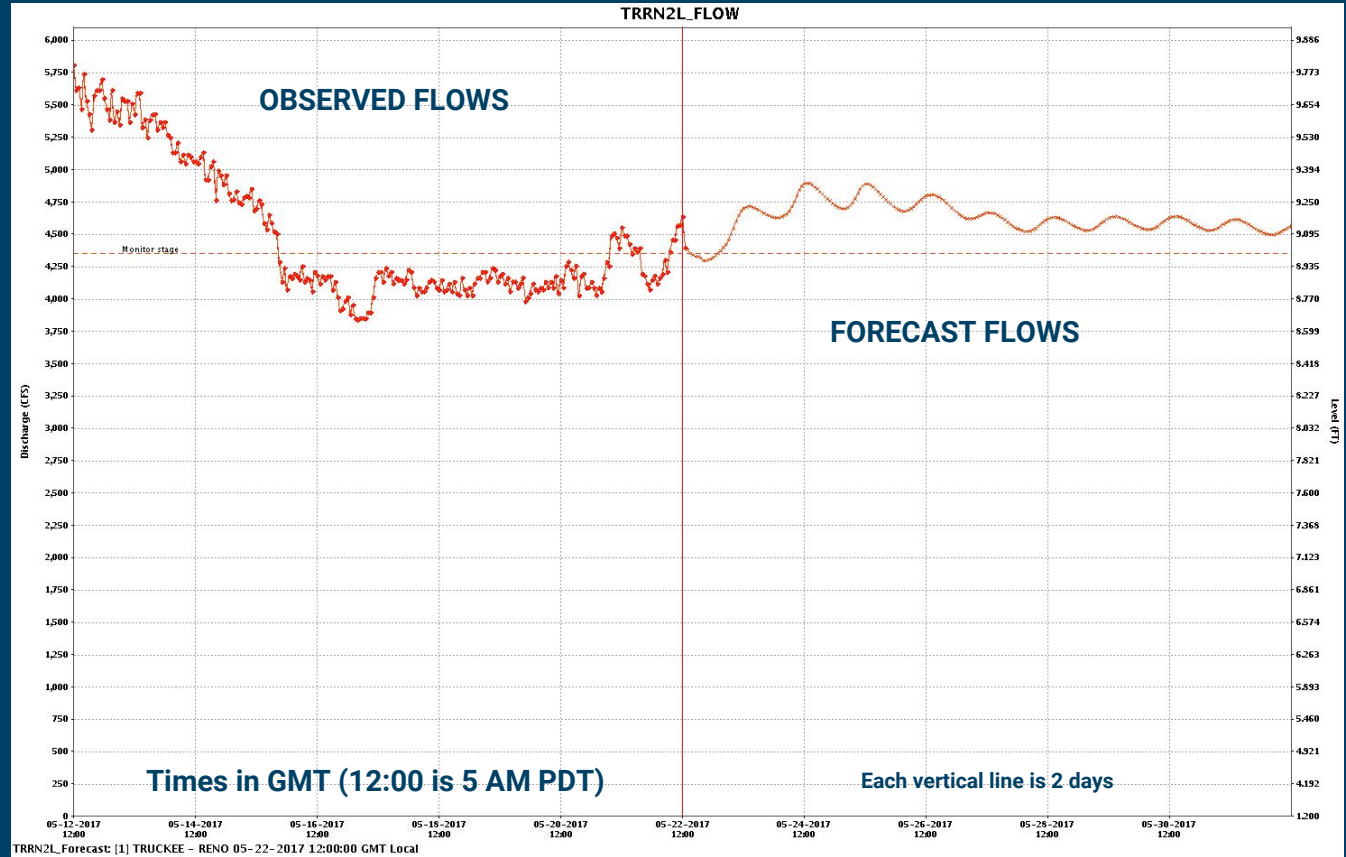
10-day simulations are experimental and provide rough long-range guidance for our public safety partners. For many rivers, this assumes status-quo water management on reservoirs and releases.



10 Day Simulation Truckee @ Reno

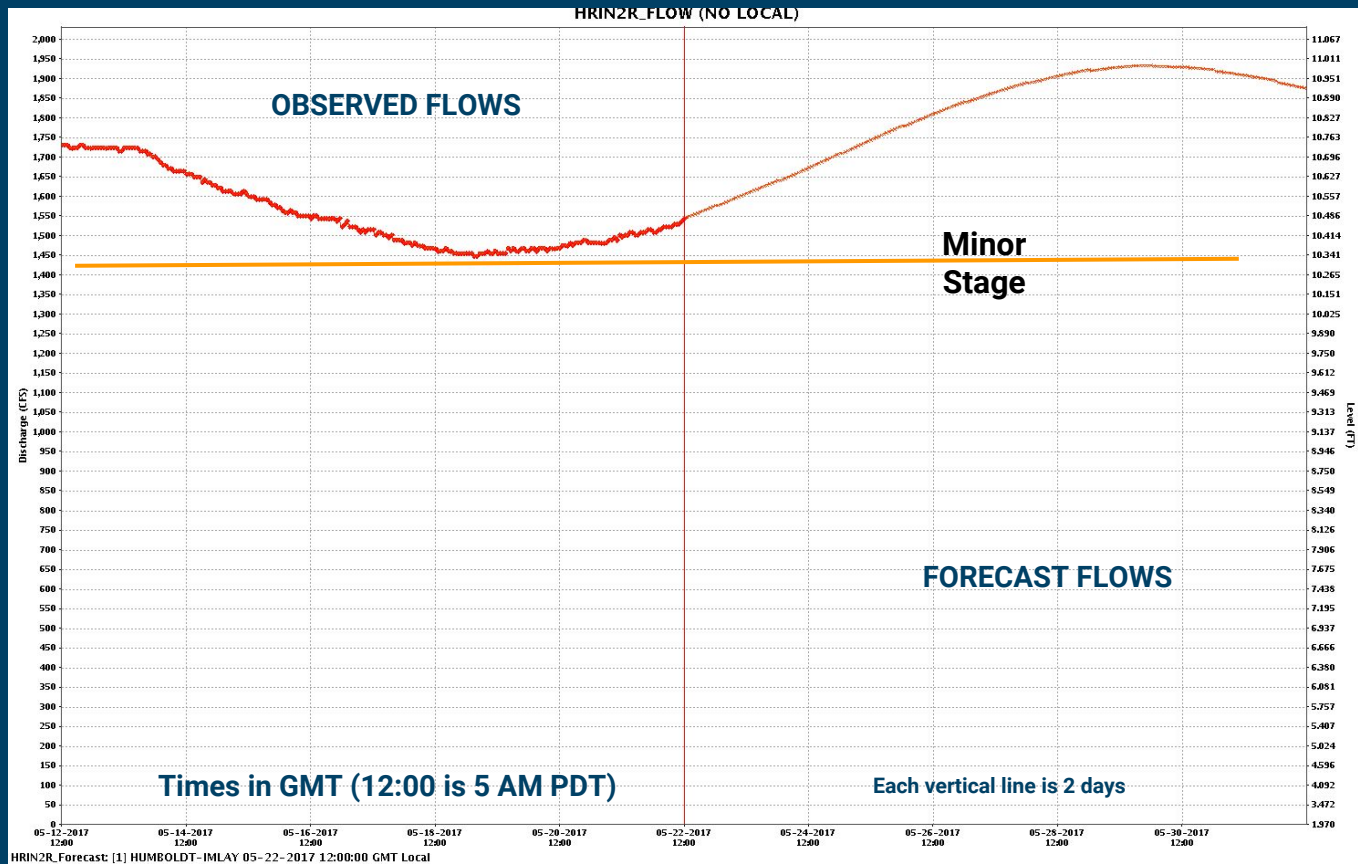
5-day official forecasts - [CNRFC](#) or [NWS Reno](#)

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



10 Day Simulation Humboldt @ Imlay

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



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