How National Weather Service River Forecast Centers use CoCoRaHS Data

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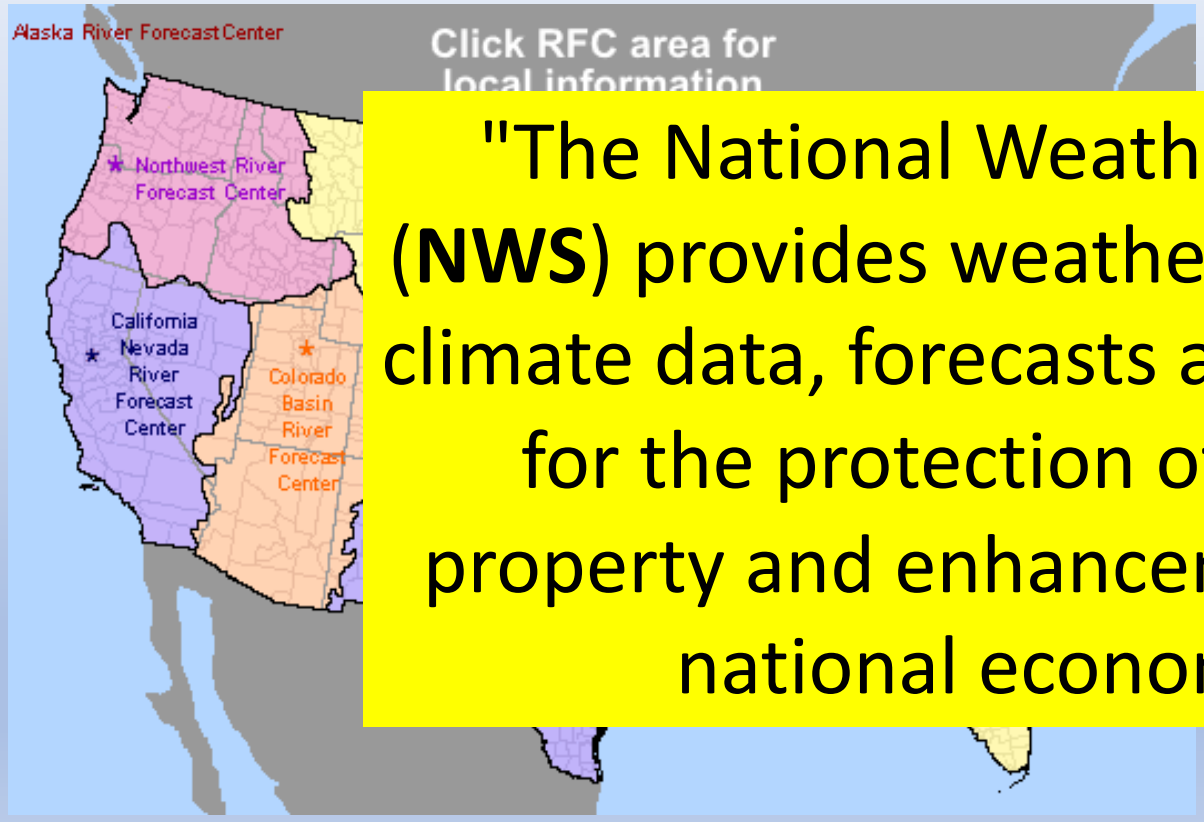
Arkansas-Red Basin River Forecast Center



"The National Weather Service (**NWS**) provides weather, water, and climate data, forecasts and warnings for the protection of life and property and enhancement of the national economy."

Centers
USA

WS WFOs
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ooding
nsible for
USACE
gulation,
measuring
water levels.

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What's the single biggest input variable for forecasting how high rivers will get?

Of course, it’s the amount of rain that has fallen….or will fall…

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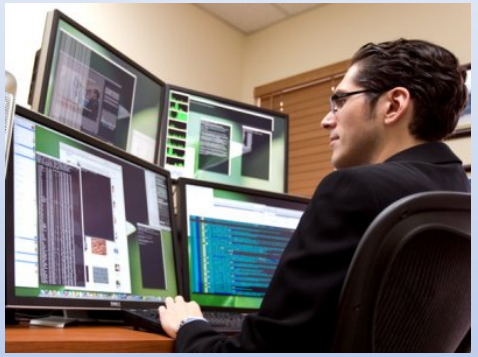

= QPEs or Quantitative Precipitation Estimates

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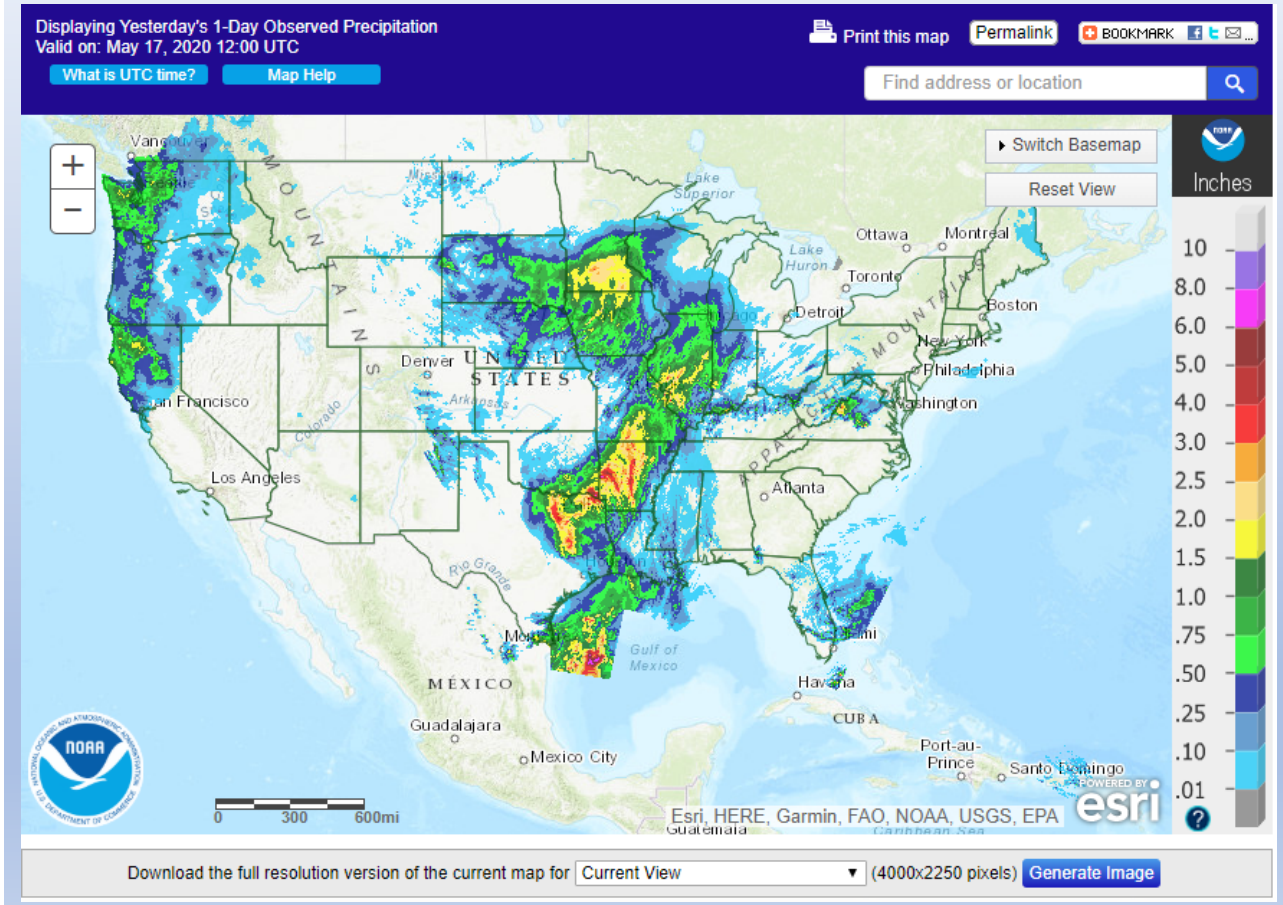

- Data from all 13 RFCs mosaiced into National image
- Gridded data on 4x4km grid, hourly resolution
- One of the single most used products from RFCs; outstanding popularity
- Used by everyone from a kayaker to Wal Mart
- water.weather.gov/precip

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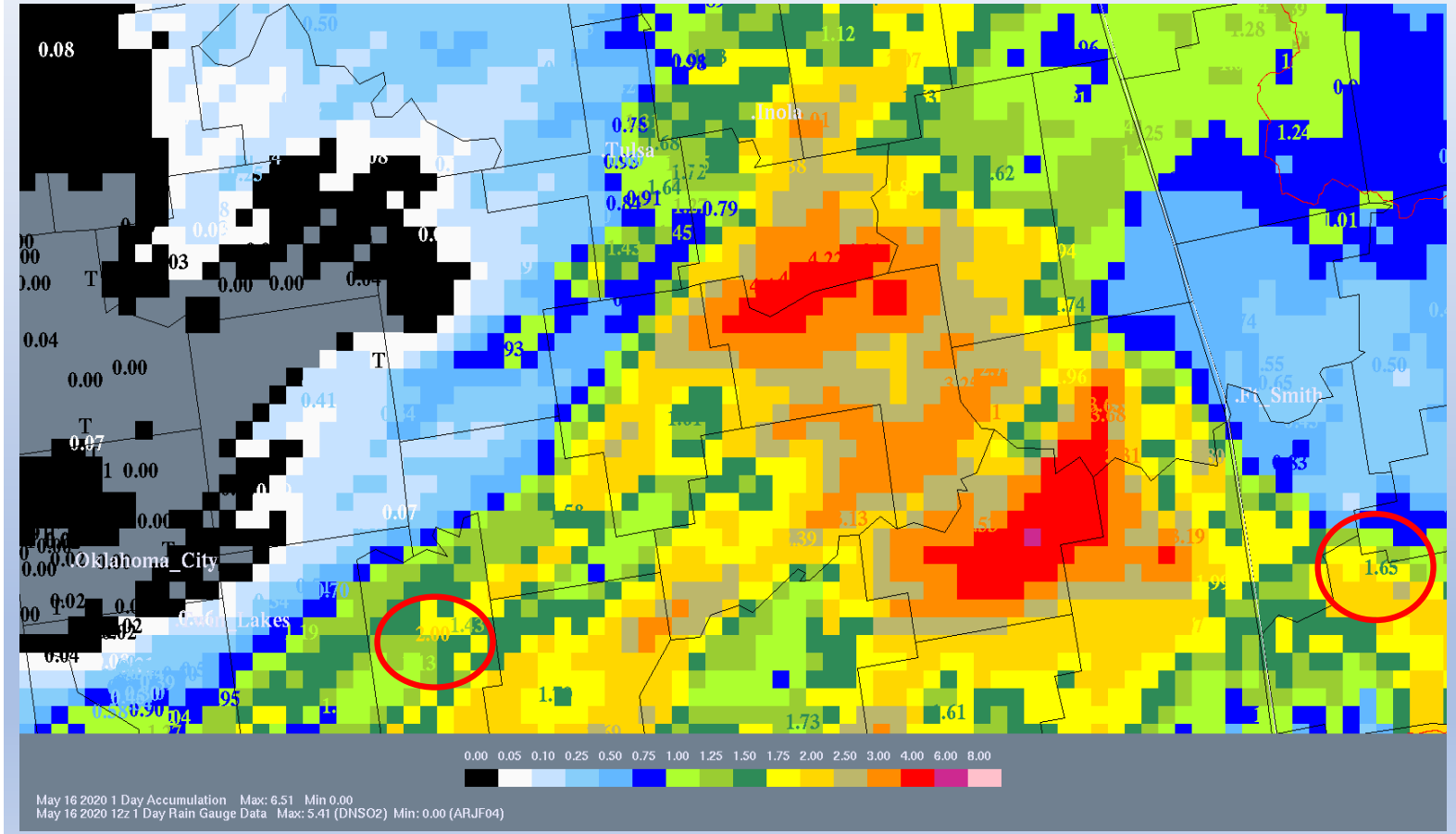

- RFC Data Analysis
- Performed every day at 12z for preceding 24 hour period
- 12z varies by time zone and time of year
- But your time stamp on your data is VERY VERY IMPORTANT!!!!
- Forecaster determines if gage value is valid…
- If so, and 24 hours sum of hourly grids do not match, the grids are adjusted up or down

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So how do CoCoRaHS observers help RFCs?

- Frequently have reports in otherwise data sparse areas
- Replace/Complement the co-ob observers that the NWS has traditionally relied on, but starting to decrease
- Much more dense network!
- Gives **more** confidence to our precipitation estimates, especially during convection, which in turn gives more confidence to river forecasts
- Human totals are usually more accurate during most intense rainfall amounts due to limits in automated technology
- CoCoRaHS, more often than not, reports the largest totals during extreme events, which is critical during large floods

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Closing thoughts about CoCoRaHS data reports

- Time stamps on reports are critical!
- We use every rainfall report we can get our hands on, but daily reporting increases our confidence in a particular gage, we like seeing ZEROS!
- Other RFCs may have slightly different uses for CoCoRaHS data, esp when 7am local is farther from 12z.
- Data is tremendously helpful! River forecast accuracy has **IMPROVED** due to CoCoRaHS! THANK YOU!!!!