

Utilizing FEWS Reports for Verification

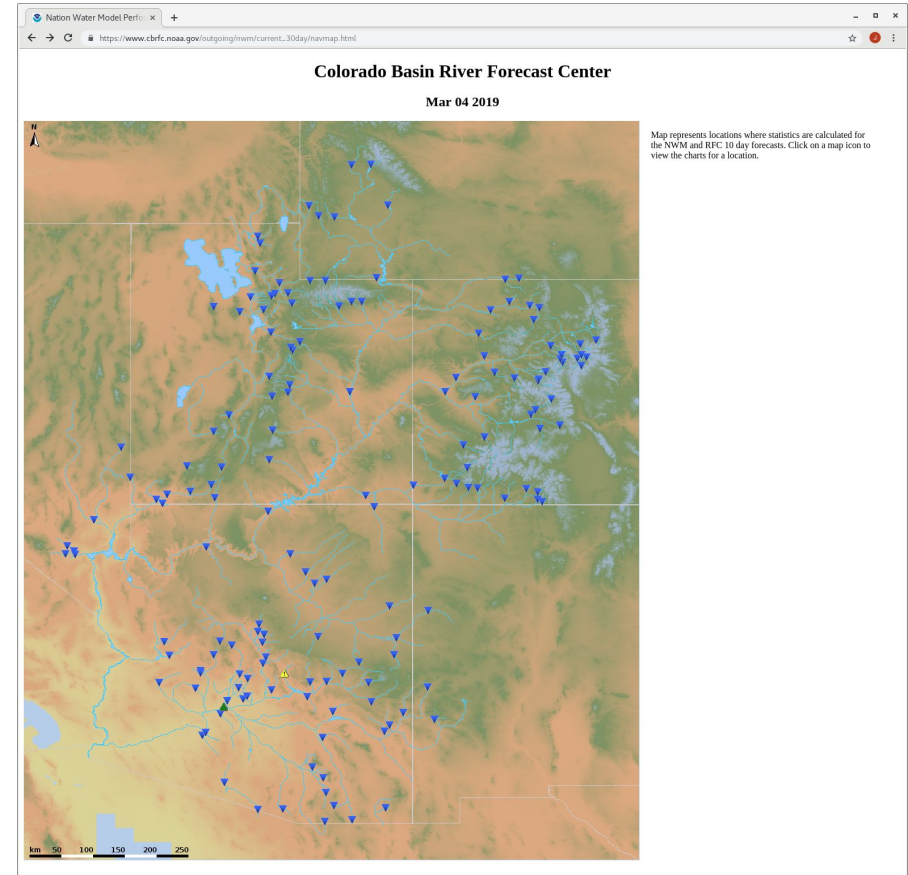
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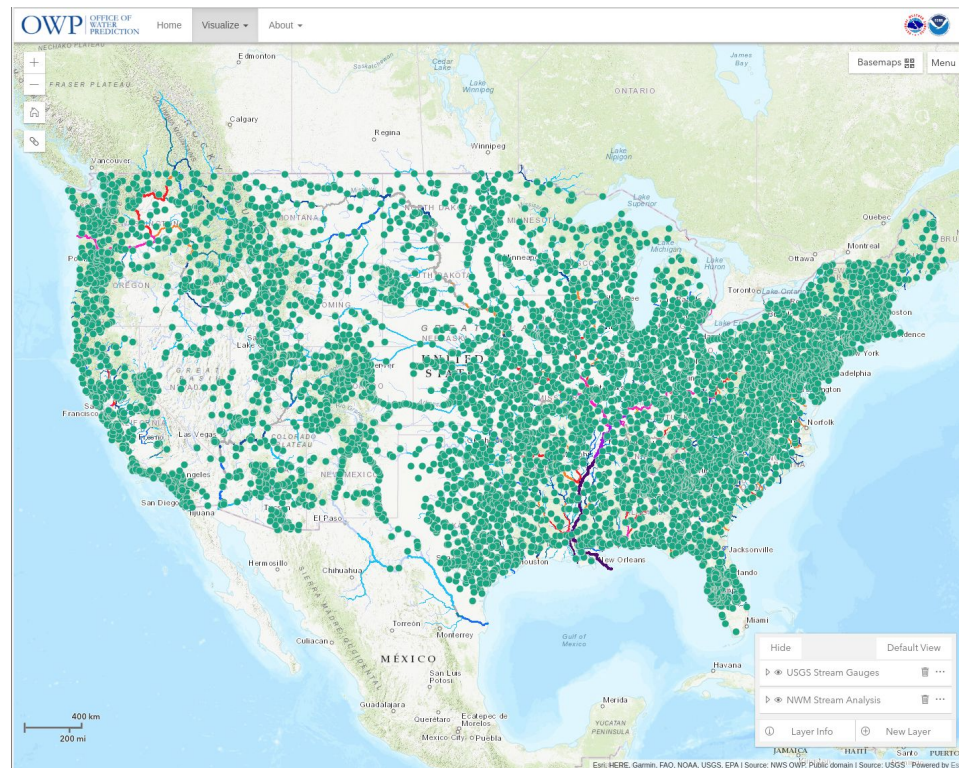
Utilizing FEWS Reports

- Outline
 - Motivation
 - Techniques
 - Output
- Credits
 - Taylor Dixon, NWRFC
 - Alison Macneil, NERFC
 - NOAT Team



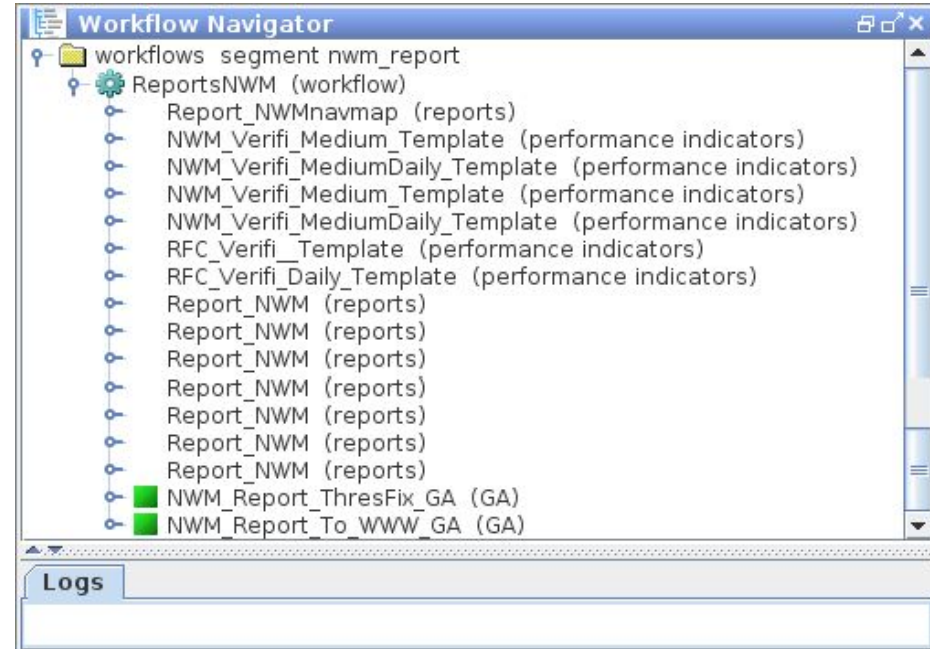
Motivation

- Easy way to view RFC and NWM performance
- One location for all forecast points
- Sharing with national team and developers
 - difficult for our forecasters to screenshot each event and write a report
- Other RFC's could implement without extra software



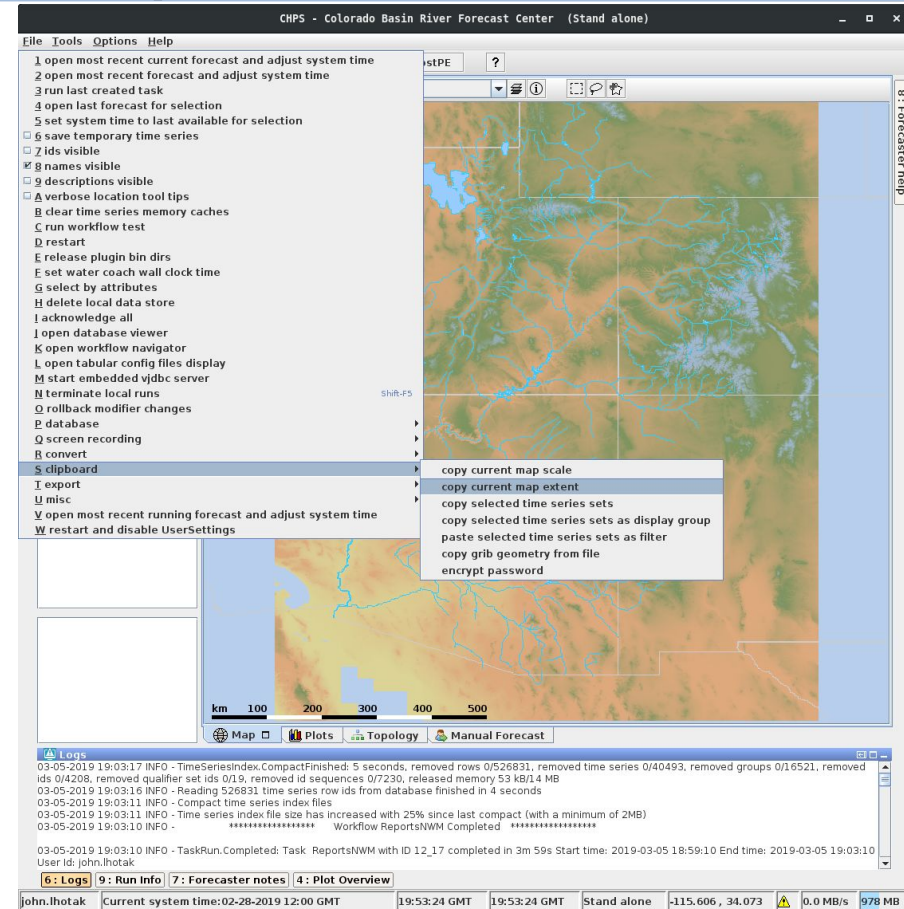
Techniques

- FEWS
 - Reports Module
 - Produces the Navigation Map and Charts
 - Performance Indicators
 - Analyses the forecasts
 - run on a daily and hourly timestep



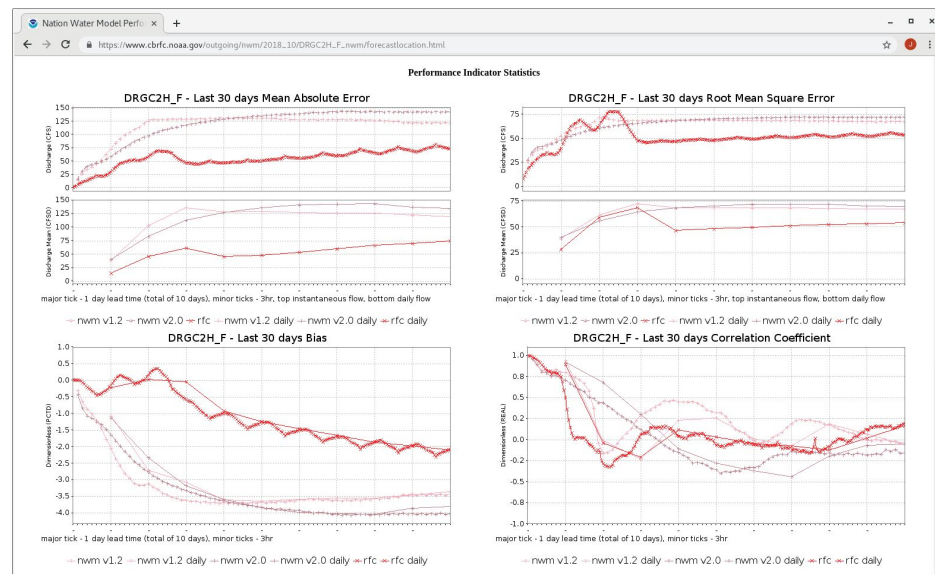
Techniques - Navigation Map

- FEWS used to create background map
 - need to create an empty location set
 - map is unprojected
 - export map and png (F12)
 - copy map extents to the clipboard (F12)
- Add to Report Module



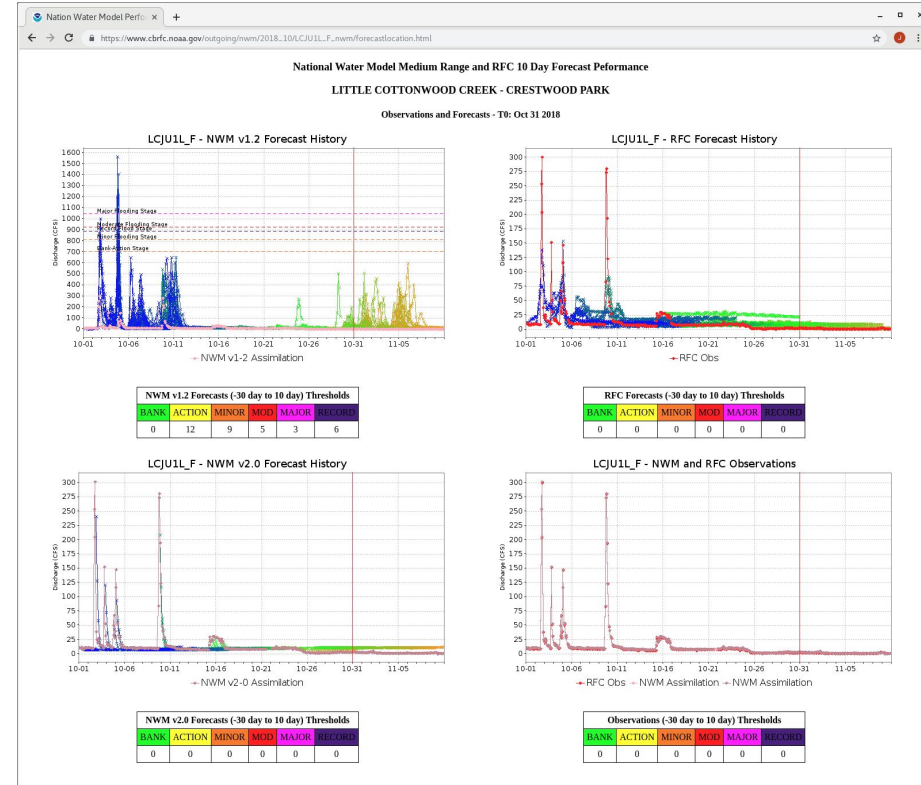
Techniques - Performance Indicators

- Show both RFC and NWM (v1.2 and v2.0) performance
 - Mean Absolute Error
 - Root Mean Square Error
 - Bias
 - Correlation Coefficient
- There are other indicators available
- [Performance Indicator Example](#)



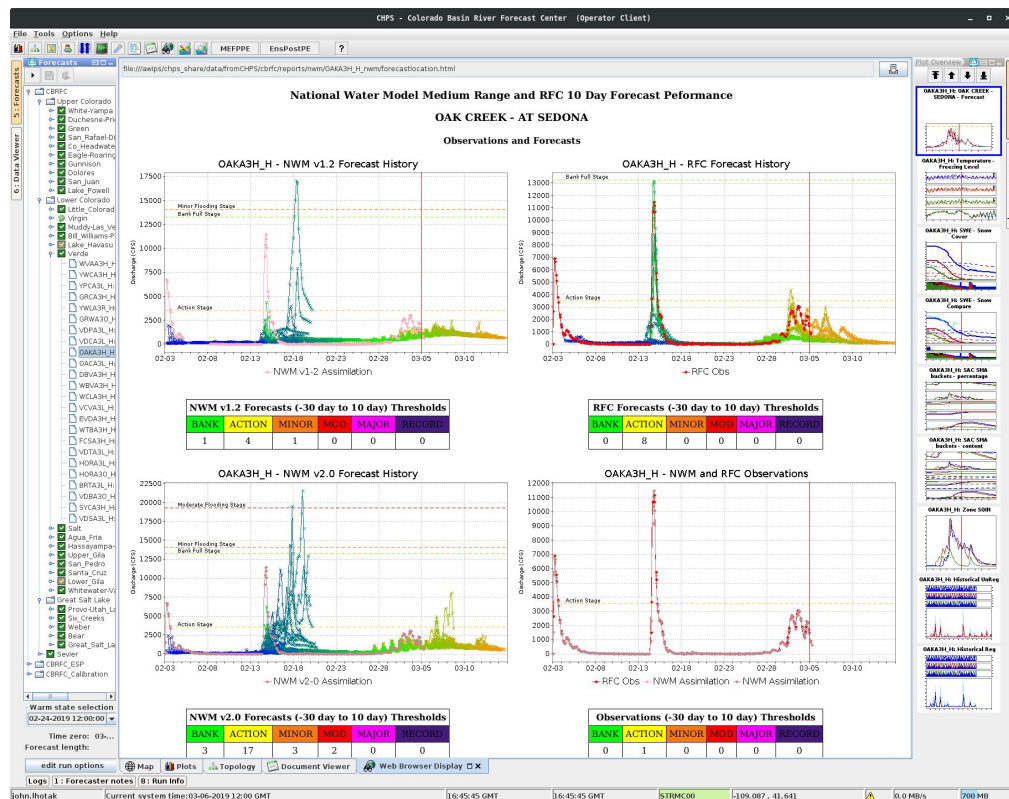
Techniques - Report Charts

- Report Charts used to plot previous forecast
- Utilized Threshold Crossing Table to count critical stages exceeded
 - had to write a post processing script to format the Threshold Crossing Table
- [Report Example](#)



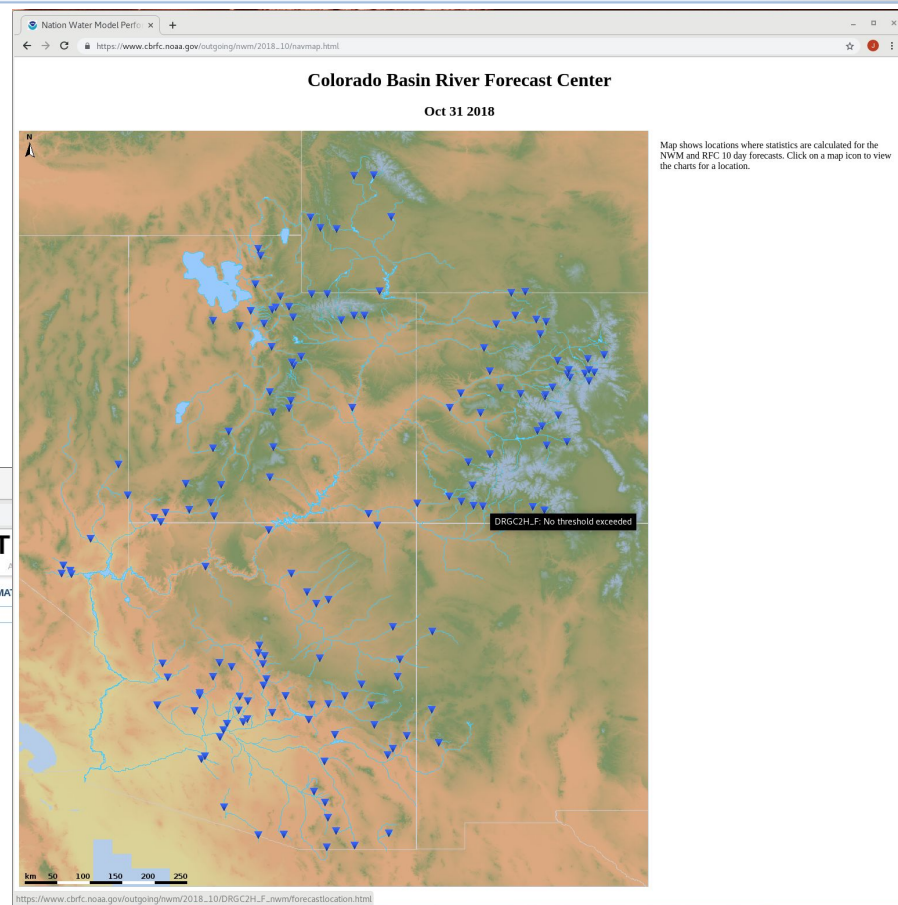
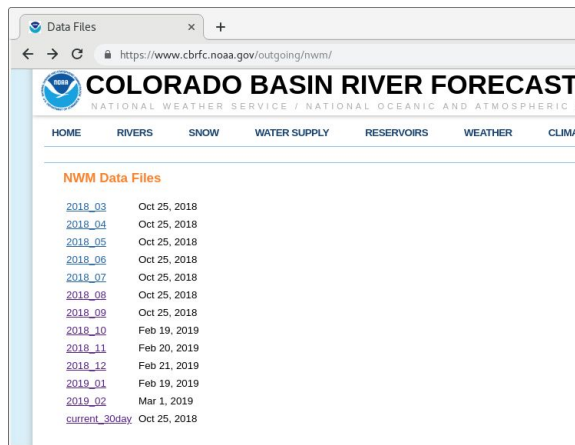
Output and Sharing

- The Report is run for the last 30 days
- Each end of month Report is archived
- Available to NWM Developers from webpage
- RFC staff from webpage and FEWS Web Browser Display



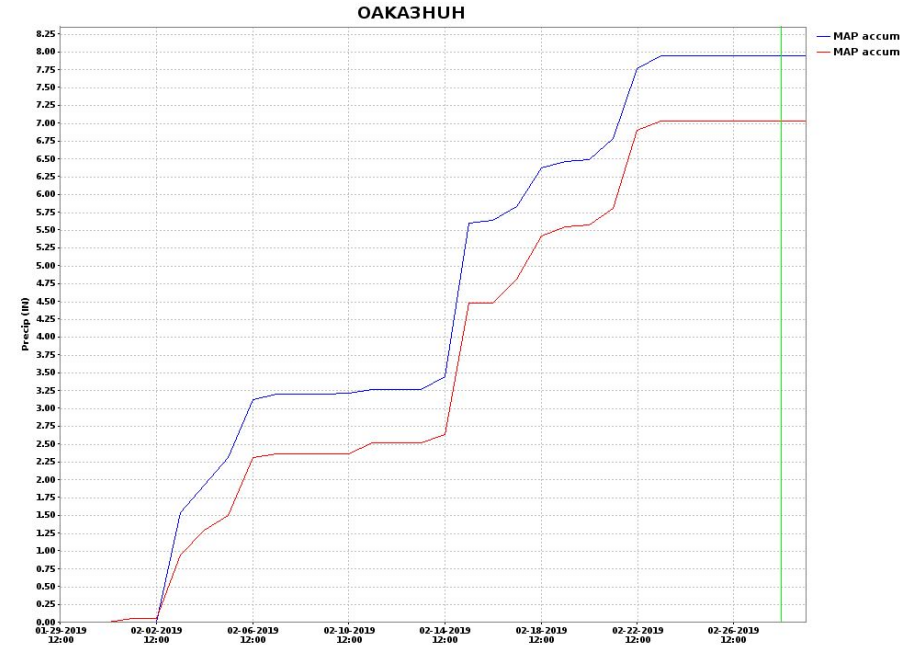
Output and Sharing

- Clickable Map
 - Mainly Headwater locations displayed ...
 - A few important locations below regulations are included
- Demo



Future Additions

- Precipitation Analysis
- SWE Analysis
- ??



Questions

Thank You

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