

Verification Lab



Kevin Werner
Chad Kahler

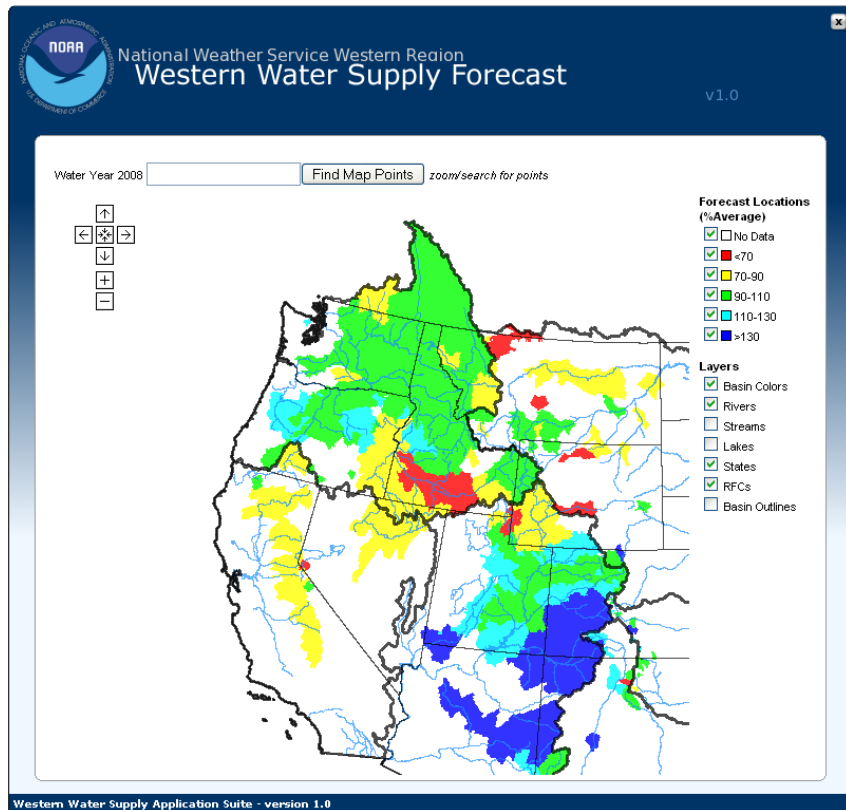
Objectives

- Build familiarity with forecast evaluation concepts and tools
- Discussion on forecast evaluation usefulness

Background: NWS Western Water Supply Web Page



Map: Single map for all western WS forecasts from 6 RFCs



Forecast evolution: Plotting capability to show evolution of current year forecast and observed river flow

Verification: Forecast evaluation from past forecasts and forecast tools

Ensemble services: Interaction capability with ensemble streamflow prediction

Data Access: Access data from database

Forecast Verification

December 2007

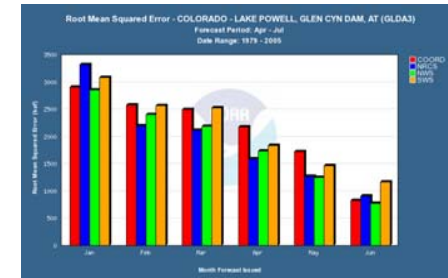
- Easy to understand
- Meaningful
- Accessible from forecasts
- Dynamically generated plots from database

Data Visualization



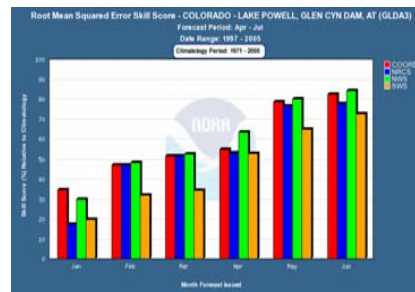
Error

- MAE, RMSE, etc
- Conditional on Lead time, year



Skill

- Skill relative to Climatology
- Conditional



Categorical

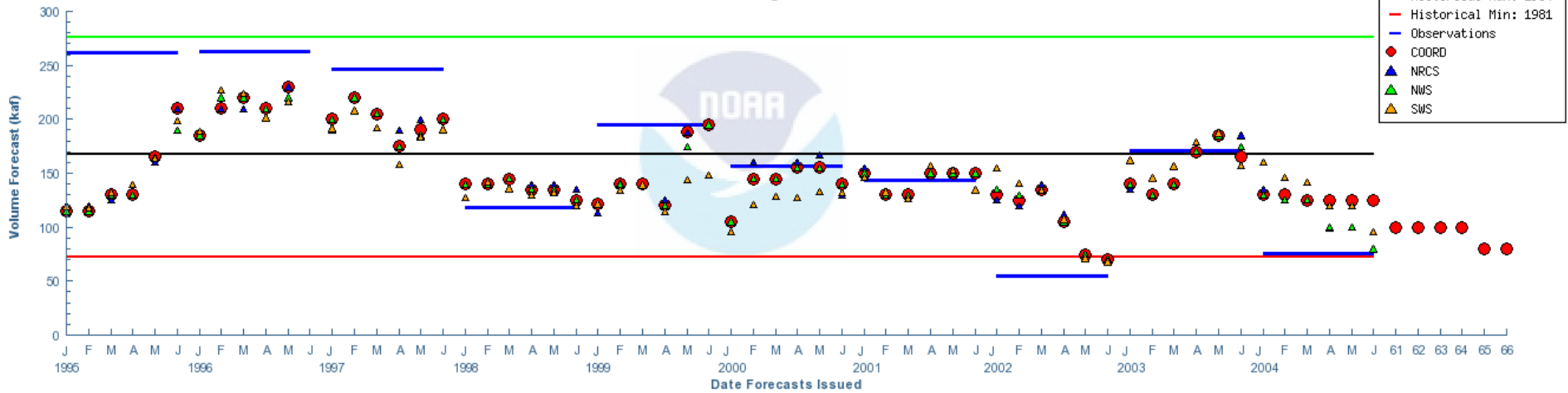
- Traditional (NWS) verification including FAR and POD
- Category definitions tied to climatology values (e.g. mean flow, terciles, etc.) or user definable

Data Visualization

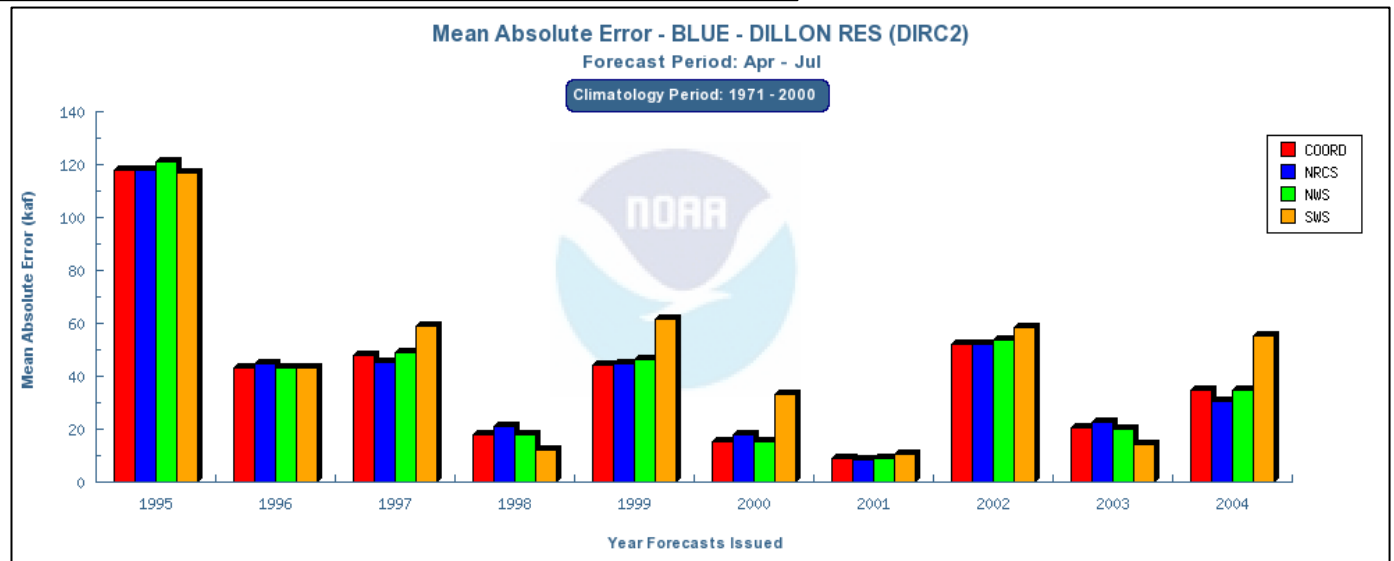
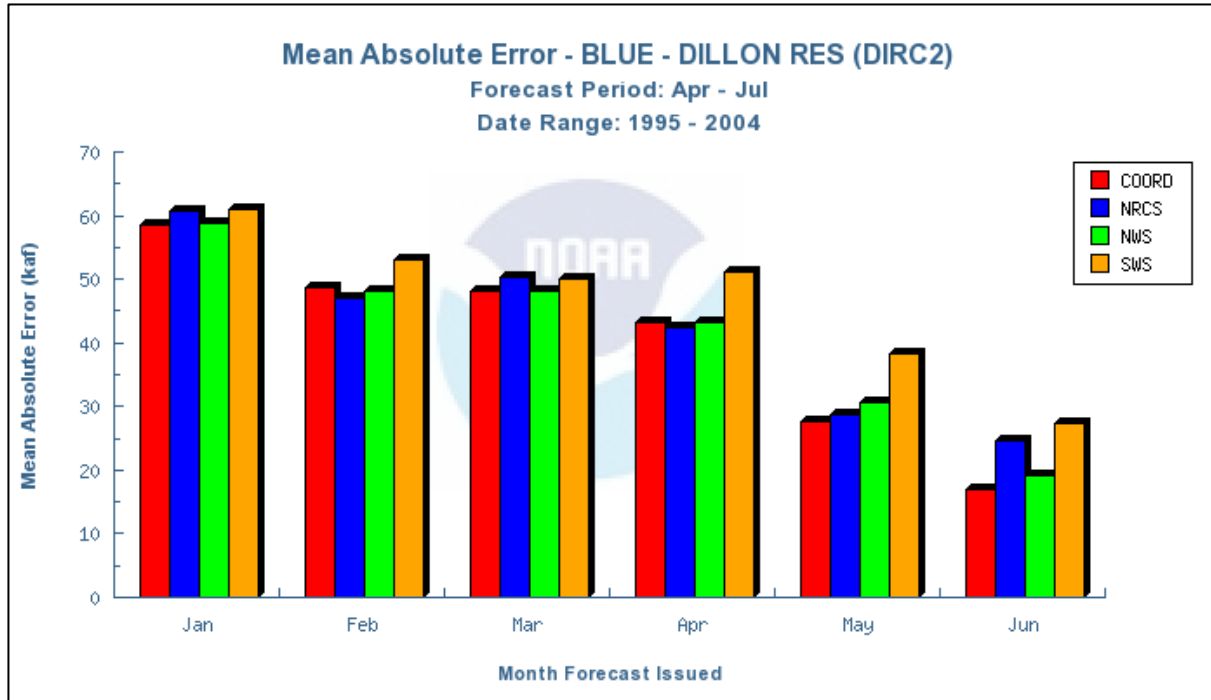
BLUE - DILLON RES (DIRC2)

Forecast Period: Apr - Jul

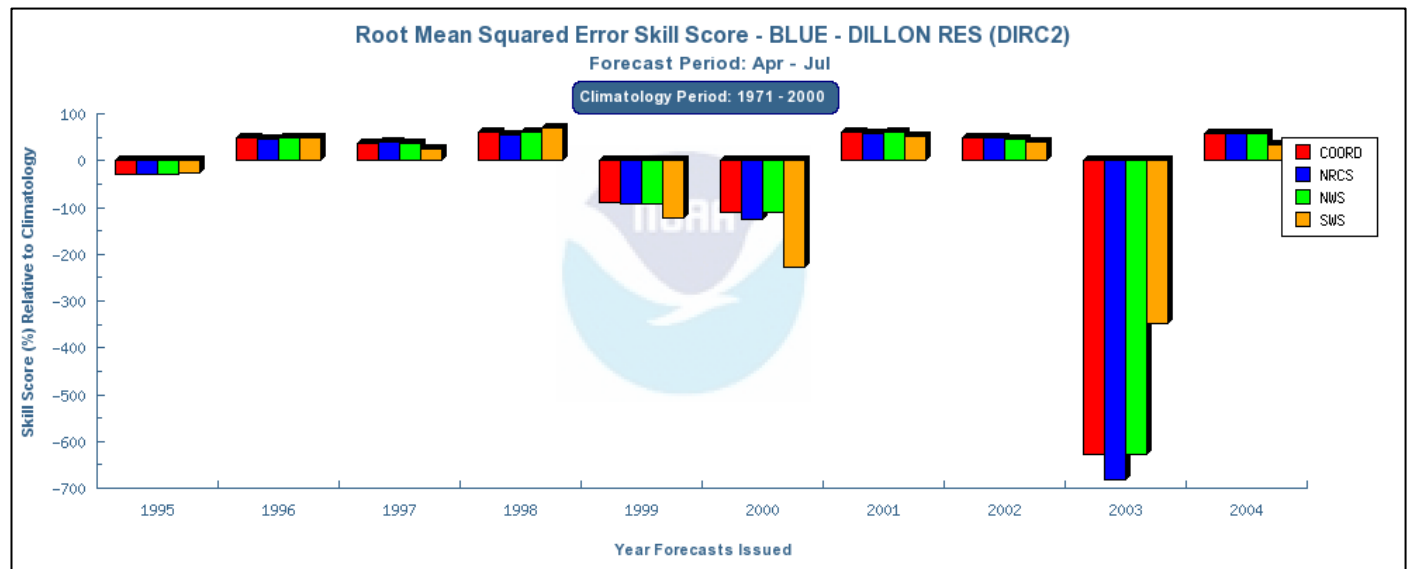
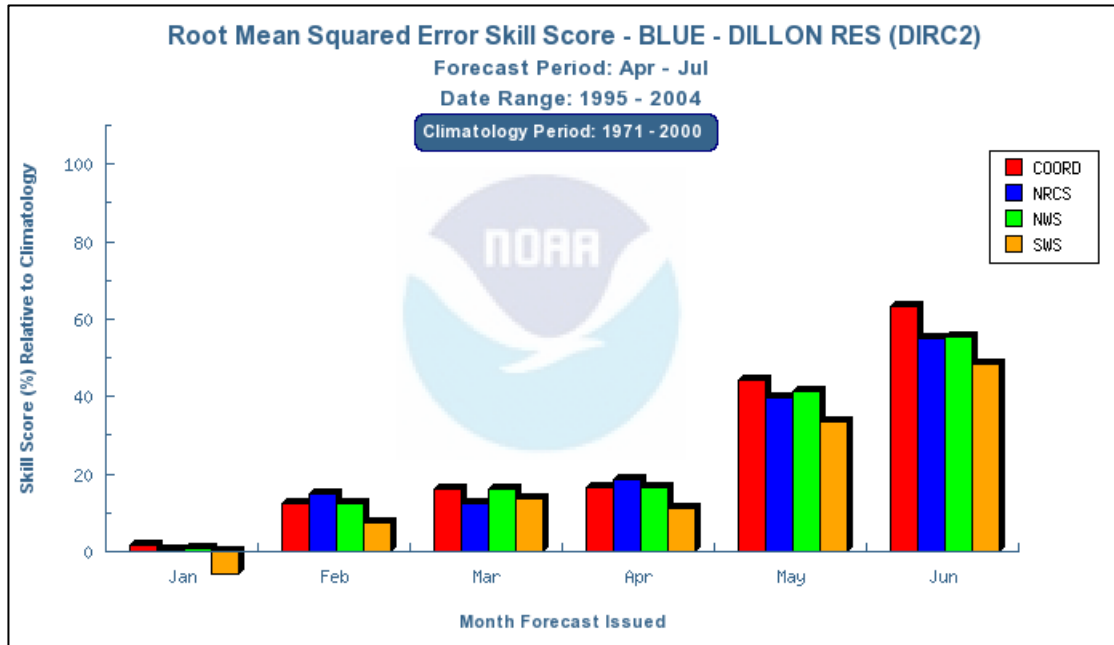
Date Range: 1995 - 2004



Error Statistics



Skill Score



Lab Exercise

- Groups of ~4-6 people
- (at least) one computer per group
- Instructions provided

Questions from Lab

Open Discussion Topics

- What do you hope to get out of verification?
- Do you think there is any value in verification? Why?
- Are you likely to begin doing more with verification?