

# 2008 Forecast Review

David C. Garen, Ph.D.

Hydrologist

USDA Natural Resources Conservation Service

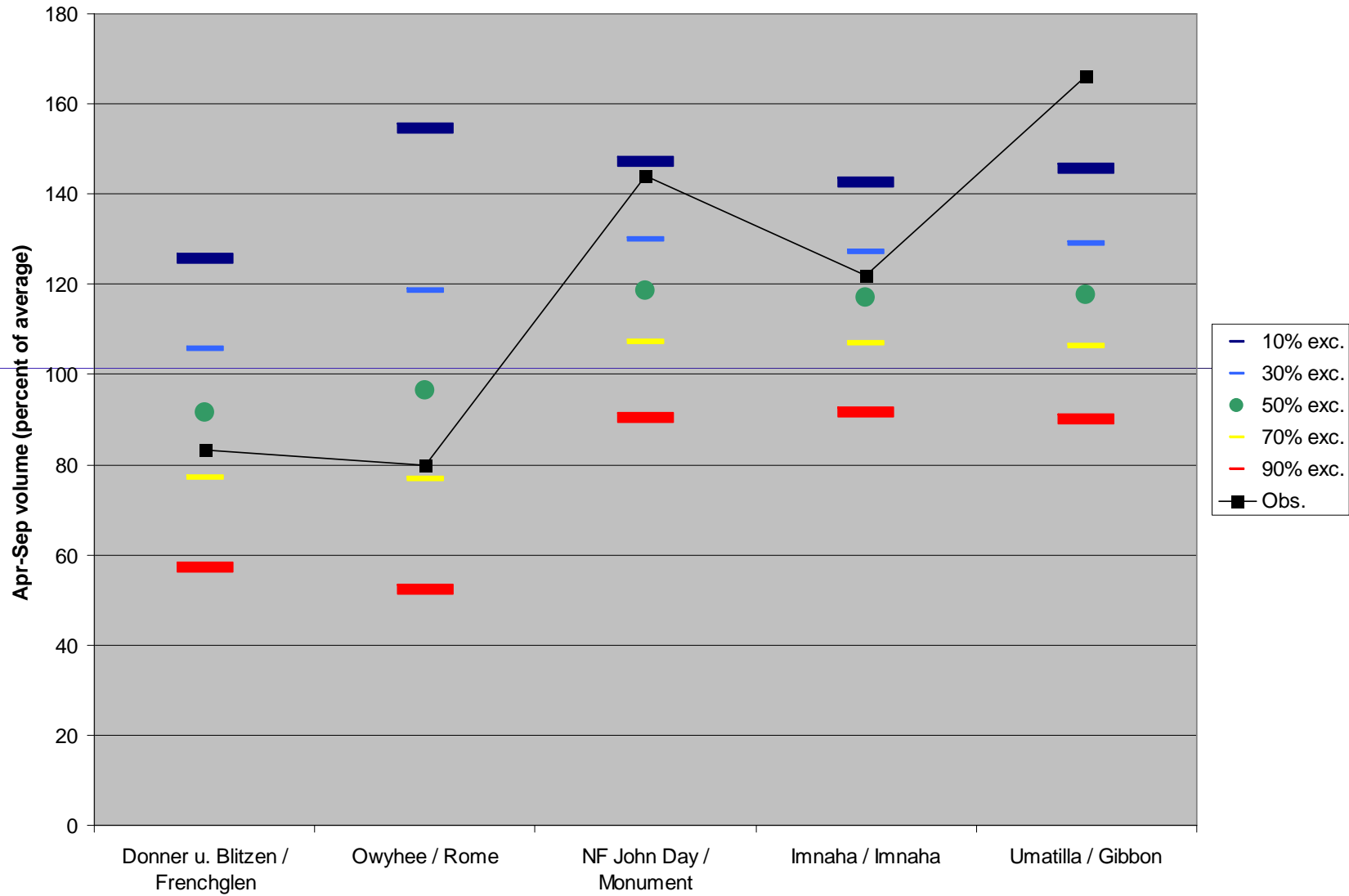
National Water and Climate Center

Portland, Oregon

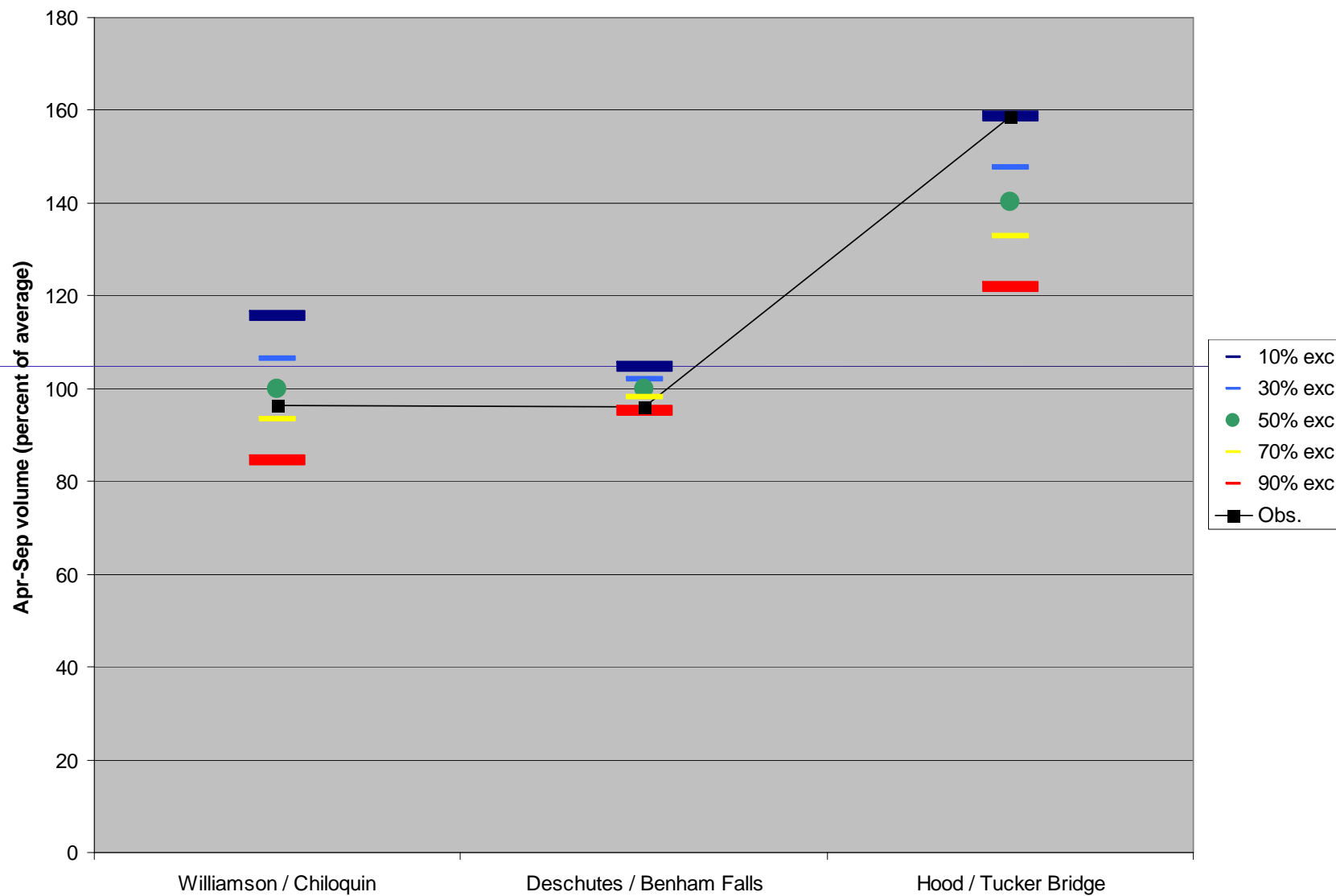
# Forecast Verification – A Sampling

- Selected 32 forecast points in Columbia Basin that have real-time USGS streamflow data and no adjustments
- Analysed 1 April 2008 forecasts for Apr-Sep period
- Expressed observed flow in relation to forecast distribution as depicted by five published exceedance probabilities

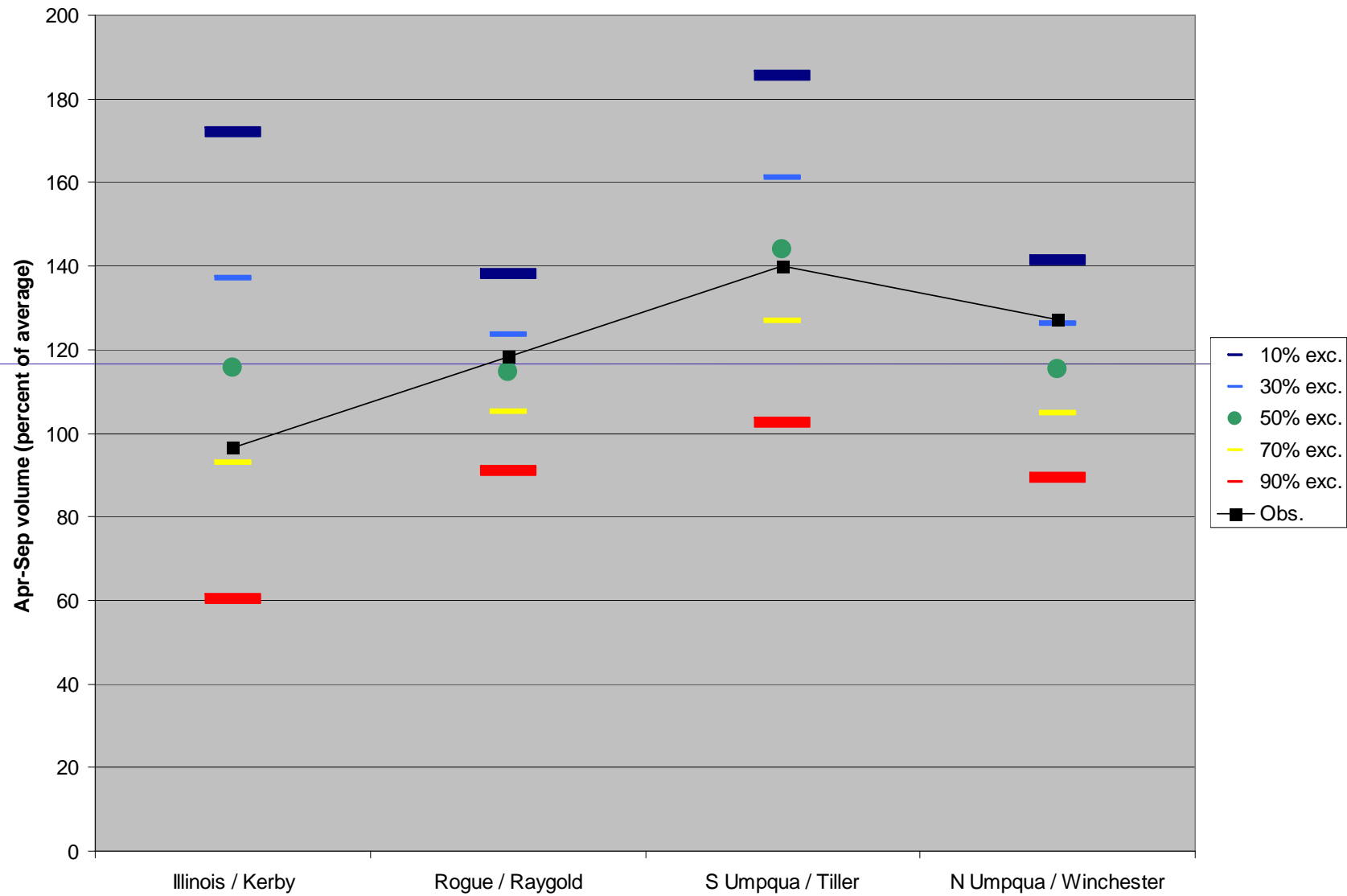
### 1 April 2008 Forecasts Eastern Oregon



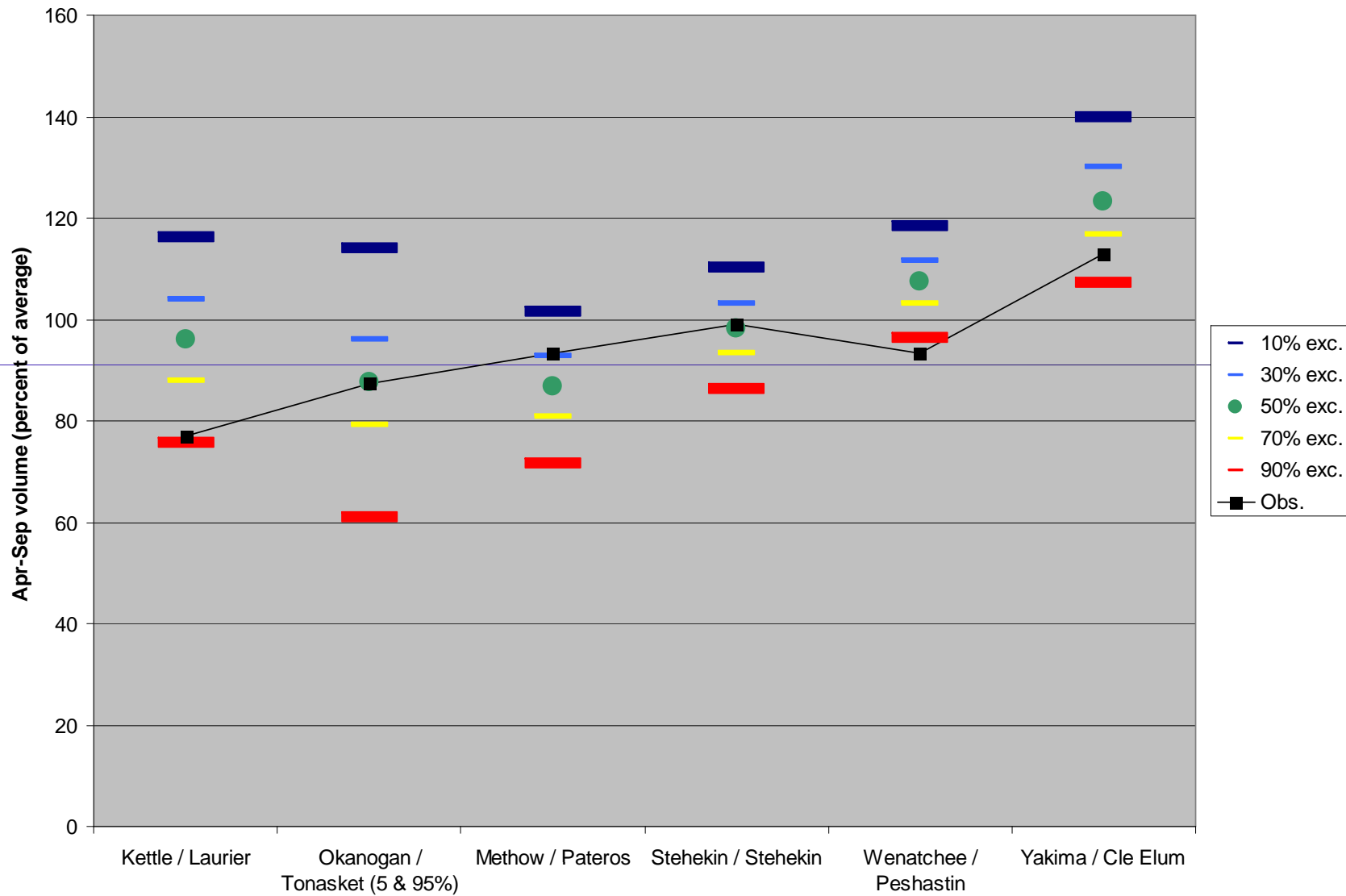
### 1 April 2008 Forecasts Central Oregon



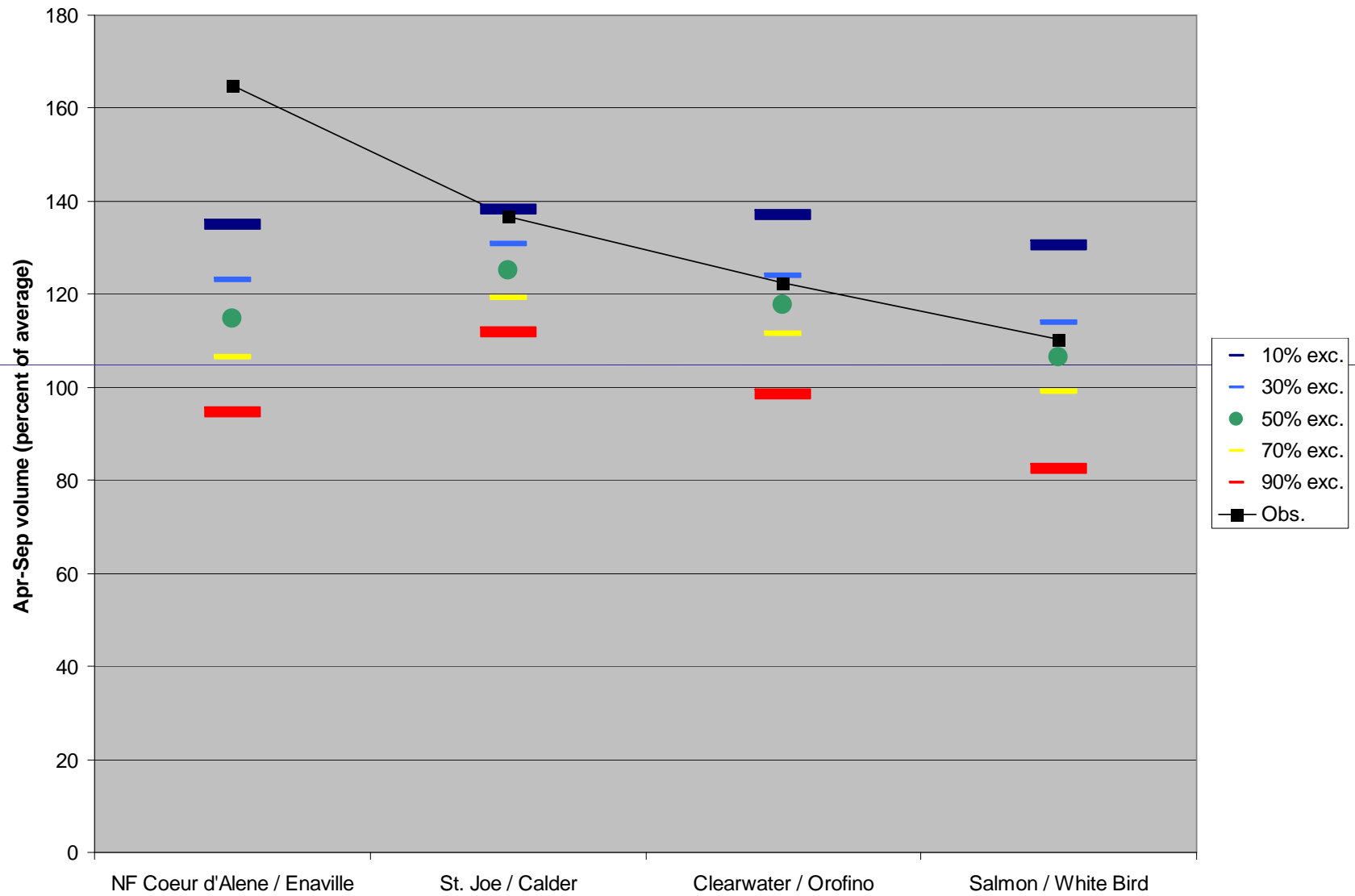
### 1 April 2008 Forecasts Southwestern Oregon



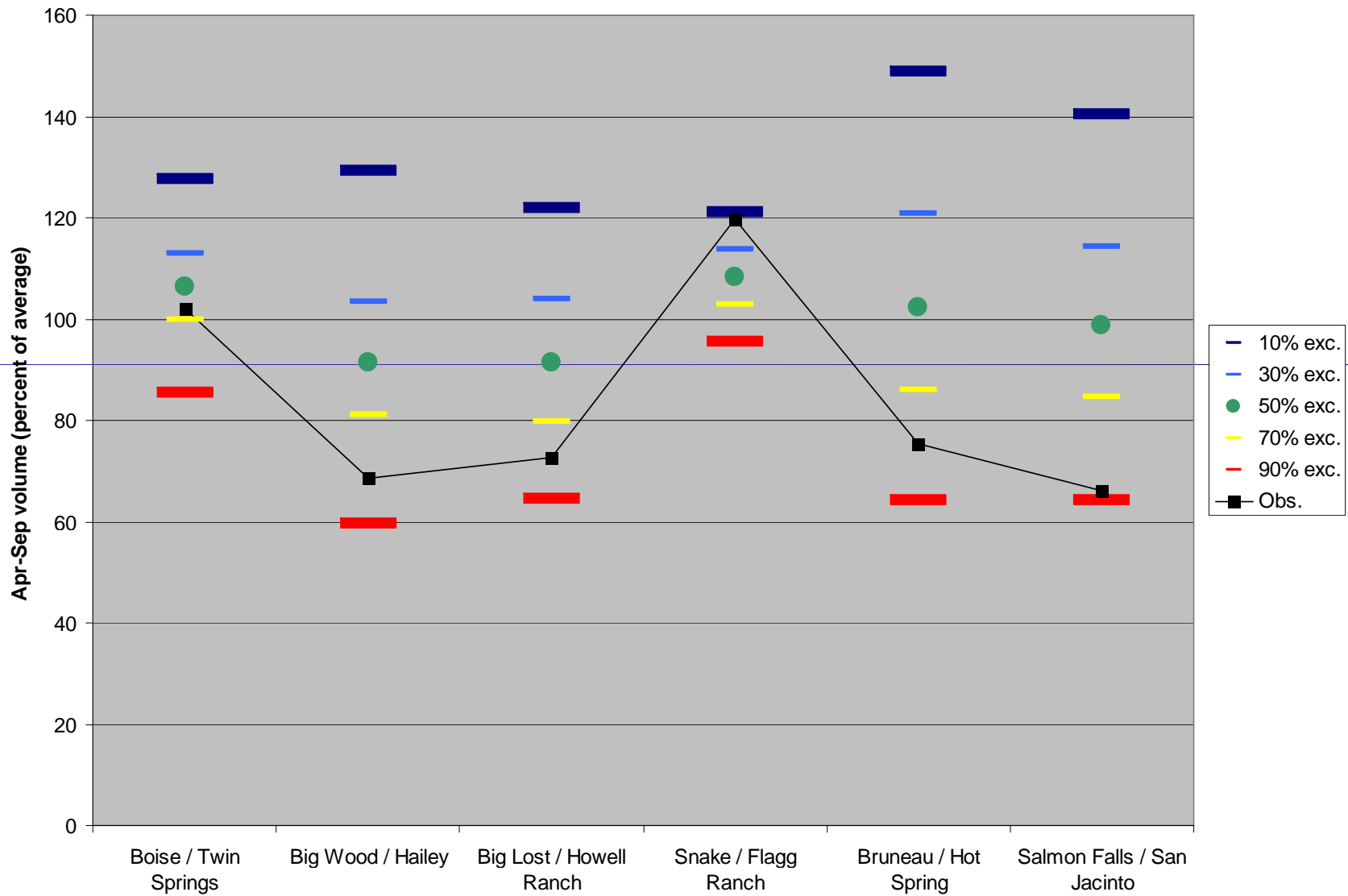
### 1 April 2008 Forecasts Eastern Washington



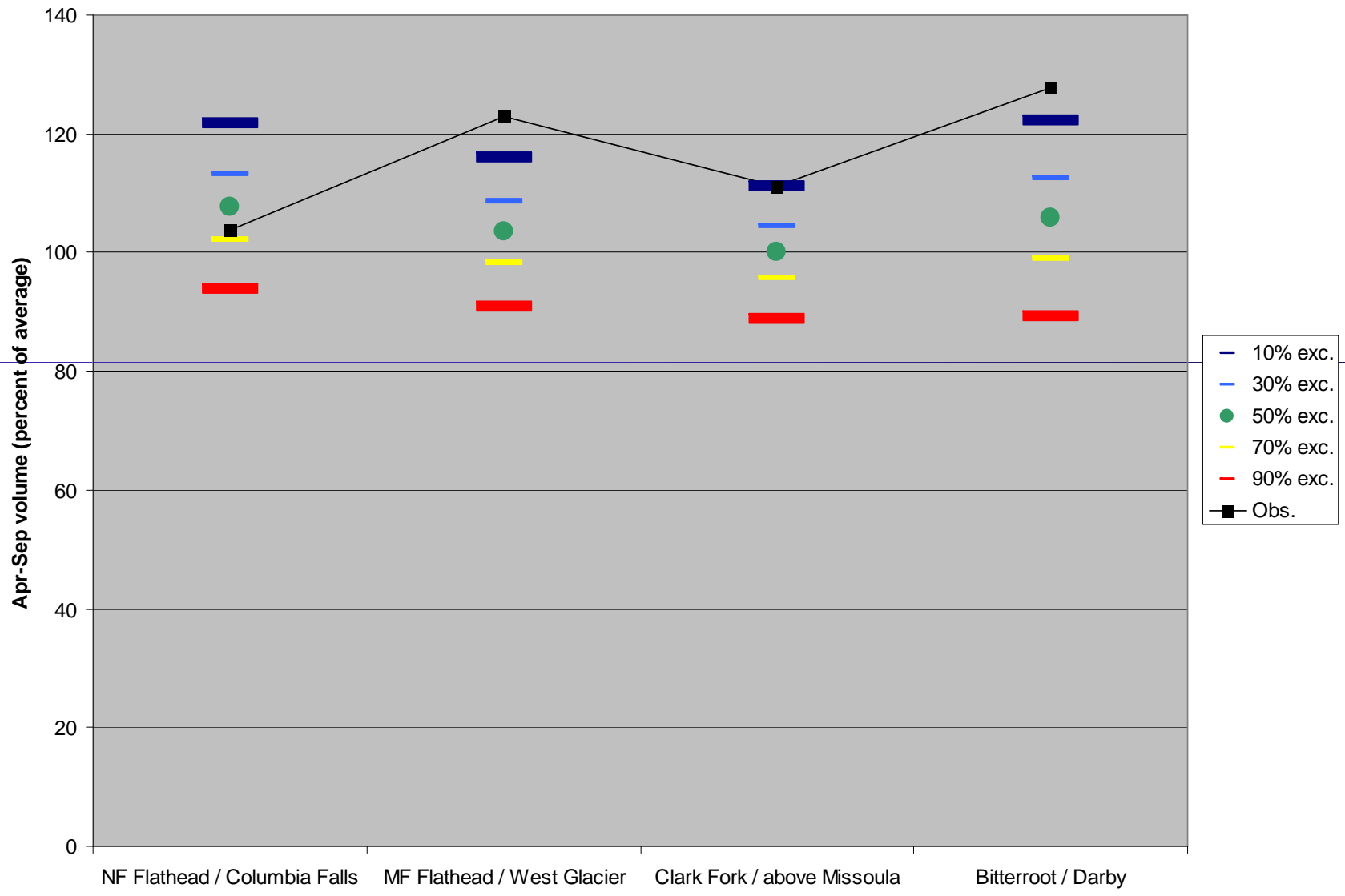
### 1 April 2008 Forecasts Northern Idaho



### 1 April 2008 Forecasts Southern Idaho



### 1 April 2008 Forecasts Montana



# Forecast Percentile Bins for Observed Flows

		Theoretical	Actual
- Overforecast -	100-90% exc.	3.2	1
	90-70% exc.	6.4	7
	70-50% exc.	6.4	8
- Underforecast -	50-30% exc.	6.4	6
	30-10% exc.	6.4	6
	10-0% exc.	3.2	4

Based on sample of 32 forecasts

# Conclusions

- There were a couple of notable forecast “misses” (Umatilla, NF Coeur d’Alene), otherwise all other sampled forecasts were within reasonable ranges with respect to observed values
- Forecast percentile bin distribution of observed flows was appropriate