



CIROH DevCon

CIROH and the Federal Partners

Edward P. Clark

Director, National Water Center

Deputy Director, Office of Water Prediction

Office of Water Prediction | National Weather Service

National Oceanic & Atmospheric Administration

U.S. Department of Commerce

The Federal Community is Part of CIROH



USACE



Forecasts into reservoir decisions

Integrating advanced modeling to optimize water management and safety operations.



Reclamation



Snow science into western water supply forecasting

Bridging cryospheric research with operational water availability predictions.



USGS



Observations into national modeling fabric

Embedding hydrographic data into a unified, high-resolution modeling framework.

USACE and FIRO | From Ensembles to Decisions

Forecast Informed Reservoir Operations (FIRO) makes ensemble forecasting concrete by turning inputs into reservoir risk decisions.

- **HEFS:** The operational bridge between hydrology and risk frameworks
- **RFC Integration:** Embedding FIRO hydrologists to strengthen the R2O pipeline.
- **Bias Reduction:** Minimizing errors in atmospheric and hydrologic models.

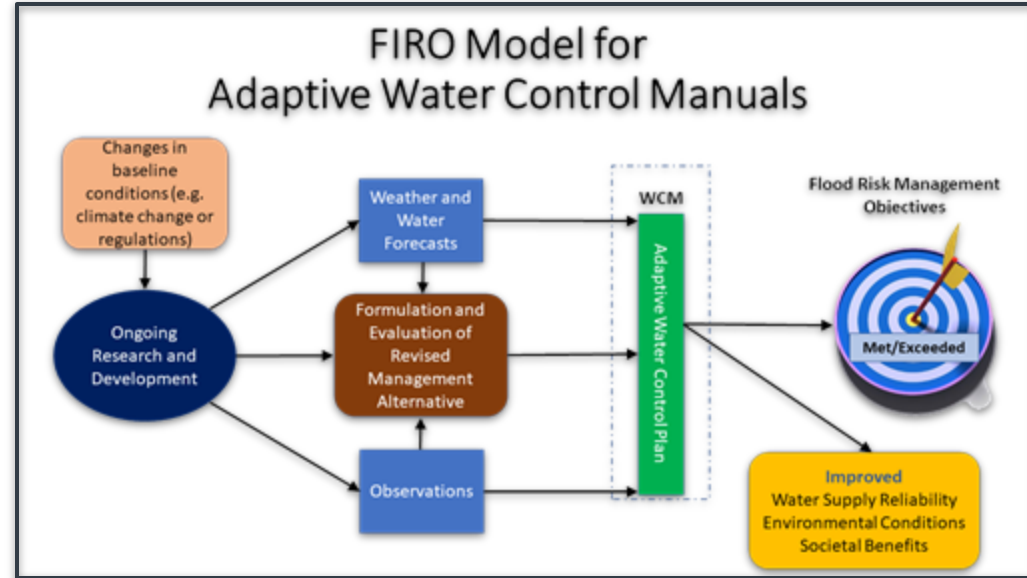
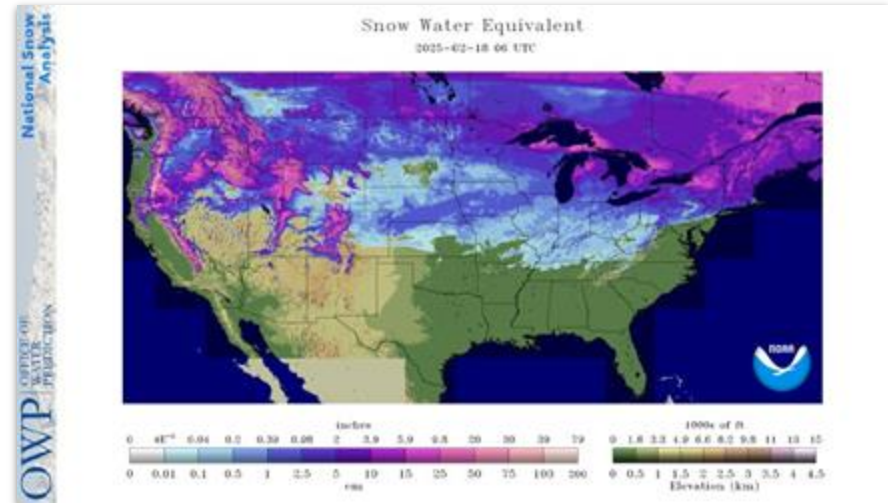


Diagram illustrating the FIRO process to develop an adaptive water control manual. (Image: CW3E)

USBR and Snow | Prediction as Western Water Infrastructure

Snowpack is more than a variable. It is the West's primary water bank. Better characterization leads to:

- Improved drought preparedness
- Strategic hydropower management
- Ecosystem and Reservoir Planning
- Interagency platform for science and obs. integration



The 2027 Opportunity

Operational Focus

What snow variables matter most for supply decisions?

Observation Gaps

Where are current observation networks insufficient?

NextGen Integration

How do we connect SNODAS to future modeling frameworks?



OWP | OFFICE OF
WATER
PREDICTION



Thank You!



Edward Clark



edward.clark@noaa.gov



<https://water.noaa.gov>