



Trying Tools & Technology

Then & Now

- **2007 Interim Guidelines**

- Relied on administrative actions: shortage sharing, forbearance, conservation

- **Preparing for 2023**

- Technologies becoming available for federal, state, and local agencies to supplement administrative actions, including improved forecasting & measurement
- New funding available from IIJA

Improving Forecasting & Measurement

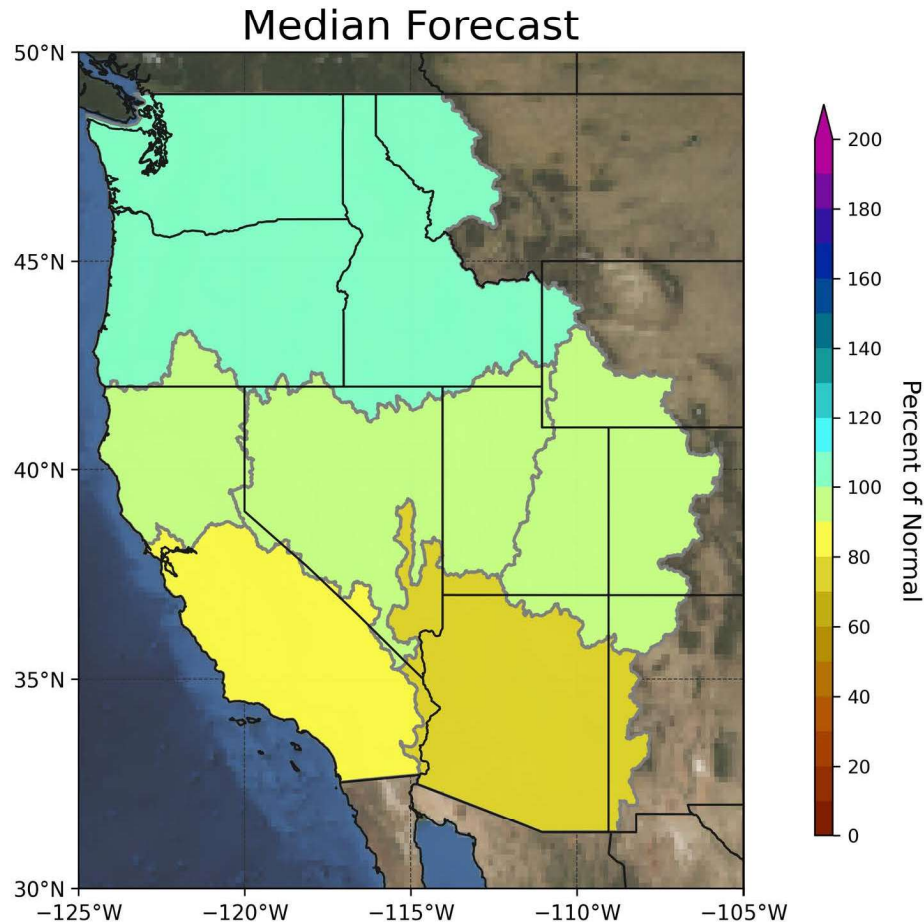
- Better forecasts provide longer lead times & support more efficient operation of infrastructure
 - Improving seasonal precipitation forecasting (CRWUA 2022)
 - Improving snowmelt runoff forecasts through remotely sensed snow observations
- Can't manage what you can't measure
 - Remote sensing of water use

Operating More Efficiently

- Forecast-informed reservoir operations
 - Opportunities at USACE & Section 7 dams
- Reducing evaporative losses
 - Hundreds of miles of canals....
- Managing salt build-up
 - Excessive salt build-up affects agricultural management, water recycling & treatment

Experimental Seasonal Precipitation Forecast

Forecast of November-March 2022/2023



Probabilistic Forecast for Northern California

10th percentile = 60% of normal

50th percentile = 95% of normal

90th percentile = 143% of normal

Southern California

10th percentile = 46% of normal

50th percentile = 82% of normal

90th percentile = 110% of normal

Upper Colorado

10th percentile = 68% of normal

50th percentile = 92% of normal

90th percentile = 127% of normal

A Solar Future?



This Panel

- **Operational status in Basin:**

- Airborne remote measurement of snowpack
- Remote sensing for water use estimation

- **Not operational in Basin, piloted elsewhere or under development:**

- Solar panels over canals
- Forecast-informed reservoir operations
- Inland brine management