

# The California NIDIS Pilot

**Anne Steinemann**

**Program Manager**

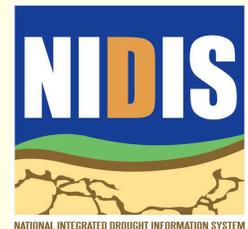
**CNAP**

**Scripps Institution of Oceanography**

**U.C. San Diego**



**Senior Research Scientist**  
**CIRES, NIDIS**



# The NIDIS Act of 2006

NIDIS shall provide an

**effective drought early warning system**

that collects and integrates information on the

**key indicators of drought**

in order to make usable, reliable, and timely

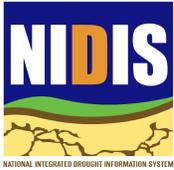
**drought forecasts and assessments**

to engender better decisions thereby leading to

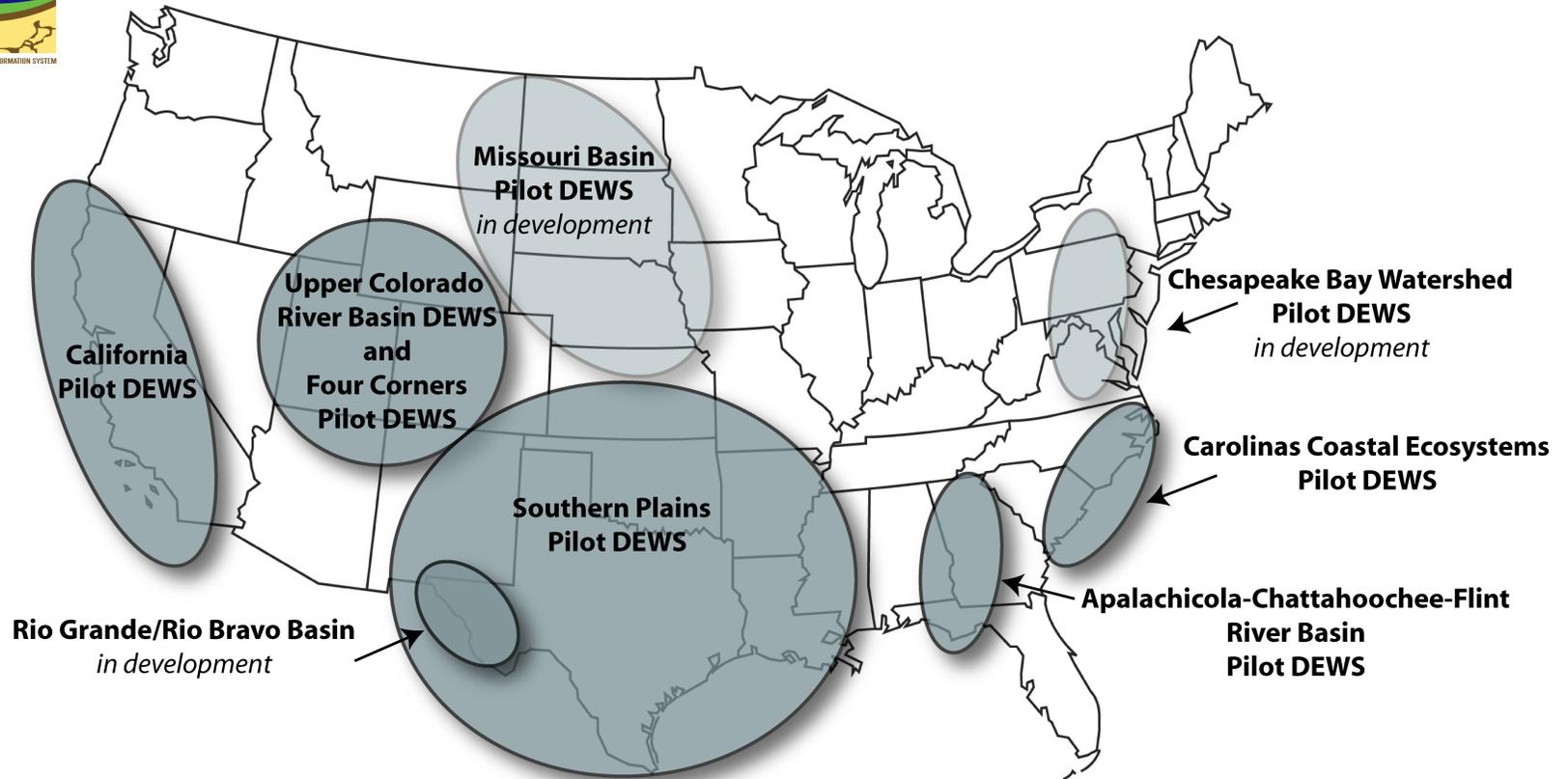
**reduced impacts and costs**



# NIDIS Pilot Regions



**National Integrated Drought Information System (NIDIS)**  
Regions in the US where NIDIS is currently developing drought early warning information systems



NIDIS is working toward a fully national drought information system through national, tribal and state partnerships  
NIDIS-supported research and monitoring is conducted across the nation

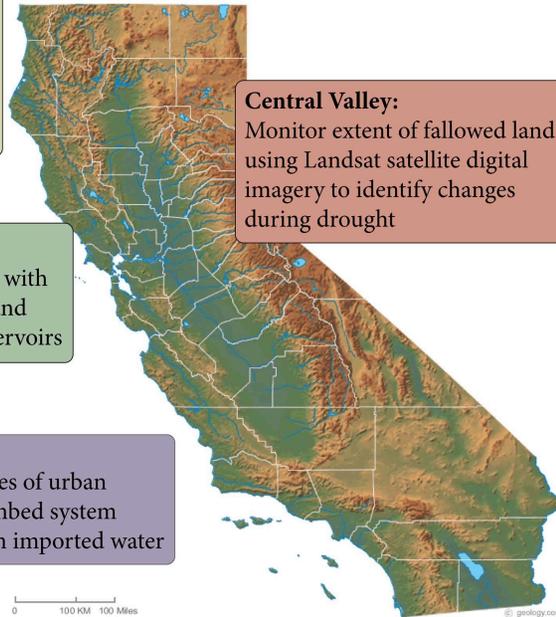
For monitoring, forecasting, data products, research activities and information on NIDIS webinars and meetings, visit the drought portal - [www.drought.gov](http://www.drought.gov)

# California NIDIS Pilot Activities

**Klamath River Basin:**  
Provide integrated hydroclimate information for a complex water environment through access to a variety of historical, current, and forecast data

**Russian River:**  
Focus on hydrologic extremes with droughts draining reservoirs and precipitation events filling reservoirs

**Southern California:**  
Address the complexities of urban droughts in a well-plumbed system that is heavily reliant on imported water



**Central Valley:**  
Monitor extent of fallowed land using Landsat satellite digital imagery to identify changes during drought

Develop useful and meaningful drought monitoring and prediction products

Collaborate with decision-makers and stakeholders across diverse regions and sectors

Address issues of concern for small water systems and tribes

# Meeting Drought Information Challenges and Needs in California

Drought is complex and diverse

Typical drought information products don't always "work"

Drought often depends on more than local precipitation

Drought means different things to different people

Drought has hundreds of different indicators

but one general concept:

*Drought is when supplies are inadequate to meet demands*

# What are "Useful" Drought Indicators?

## Stakeholder-Informed Criteria

comparable terms and scales

individual variables but possible to combine

practical and transparent

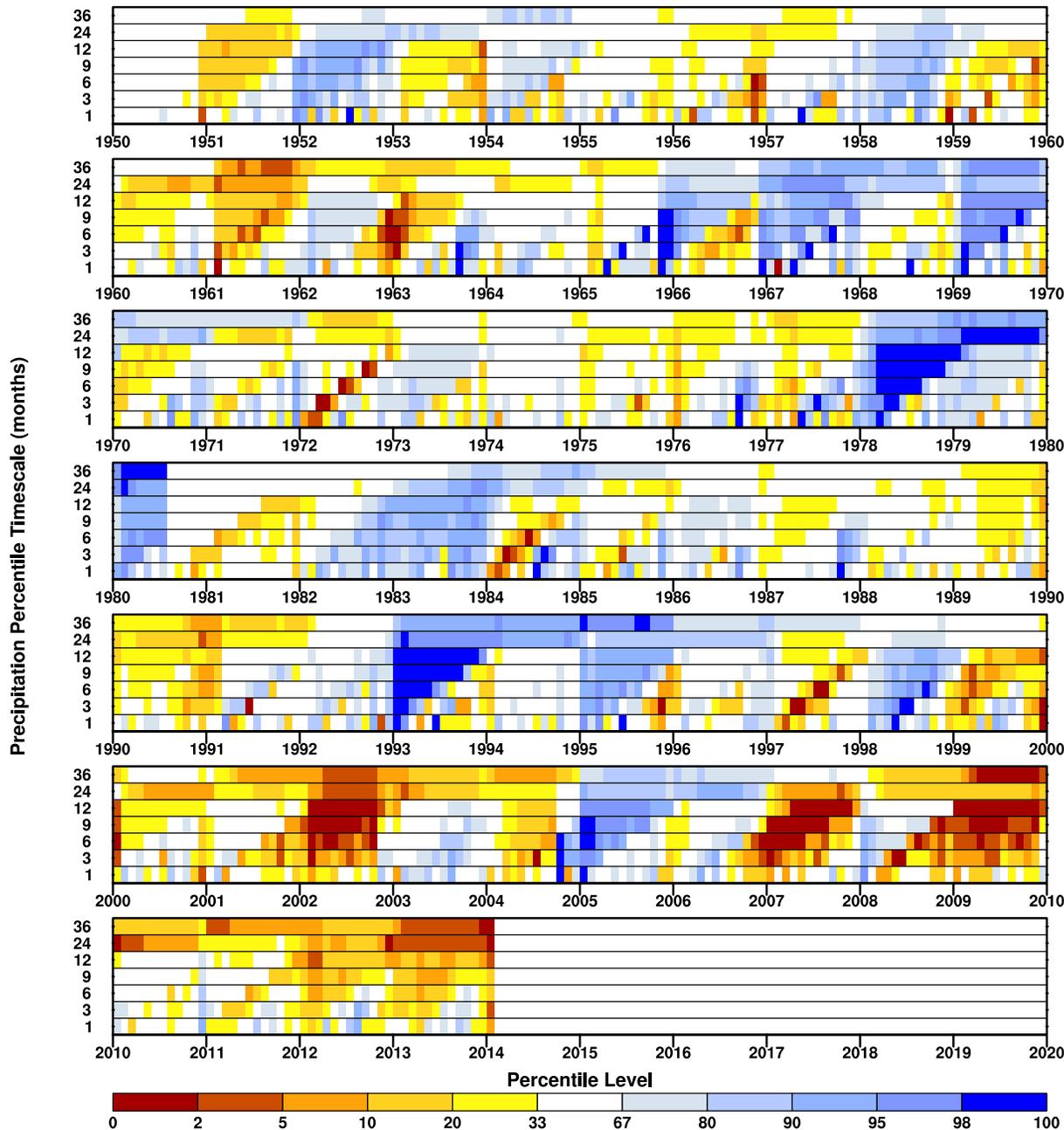
relevant to regional and local droughts

relative to historic conditions

all in one place – "one stop shopping"

**-> Percentiles**

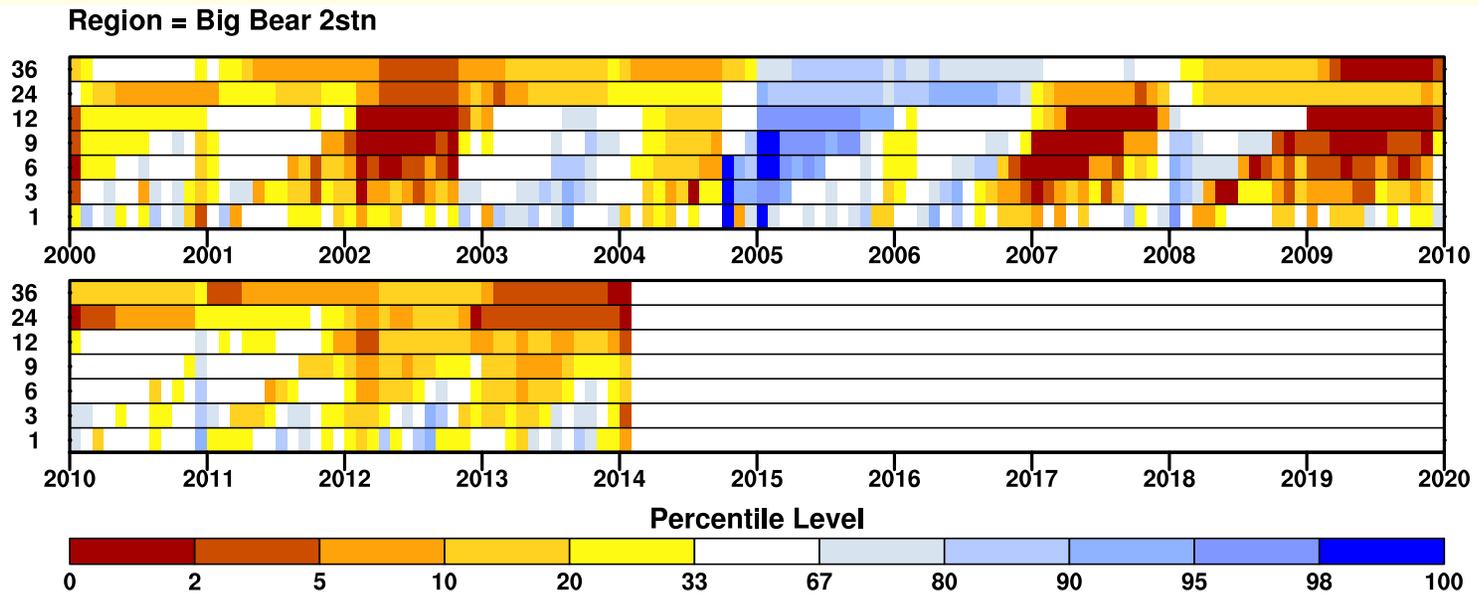
Region = Big Bear 2stn



# Monthly Precipitation Percentiles for Big Bear

1- to 36-month  
timescales

# Monthly Precipitation Percentiles for Big Bear



## JANUARY 2014 BIG BEAR (2 STN INDEX) PRECIPITATION PERCENTILES

1 Month	3 Months	6 Months	9 Months	12 Months	24 Months	36 Months
5.5%	4.5%	11.5%	12.9%	4.5%	1.6%	0.53%

# Statewide Drought Severity Levels

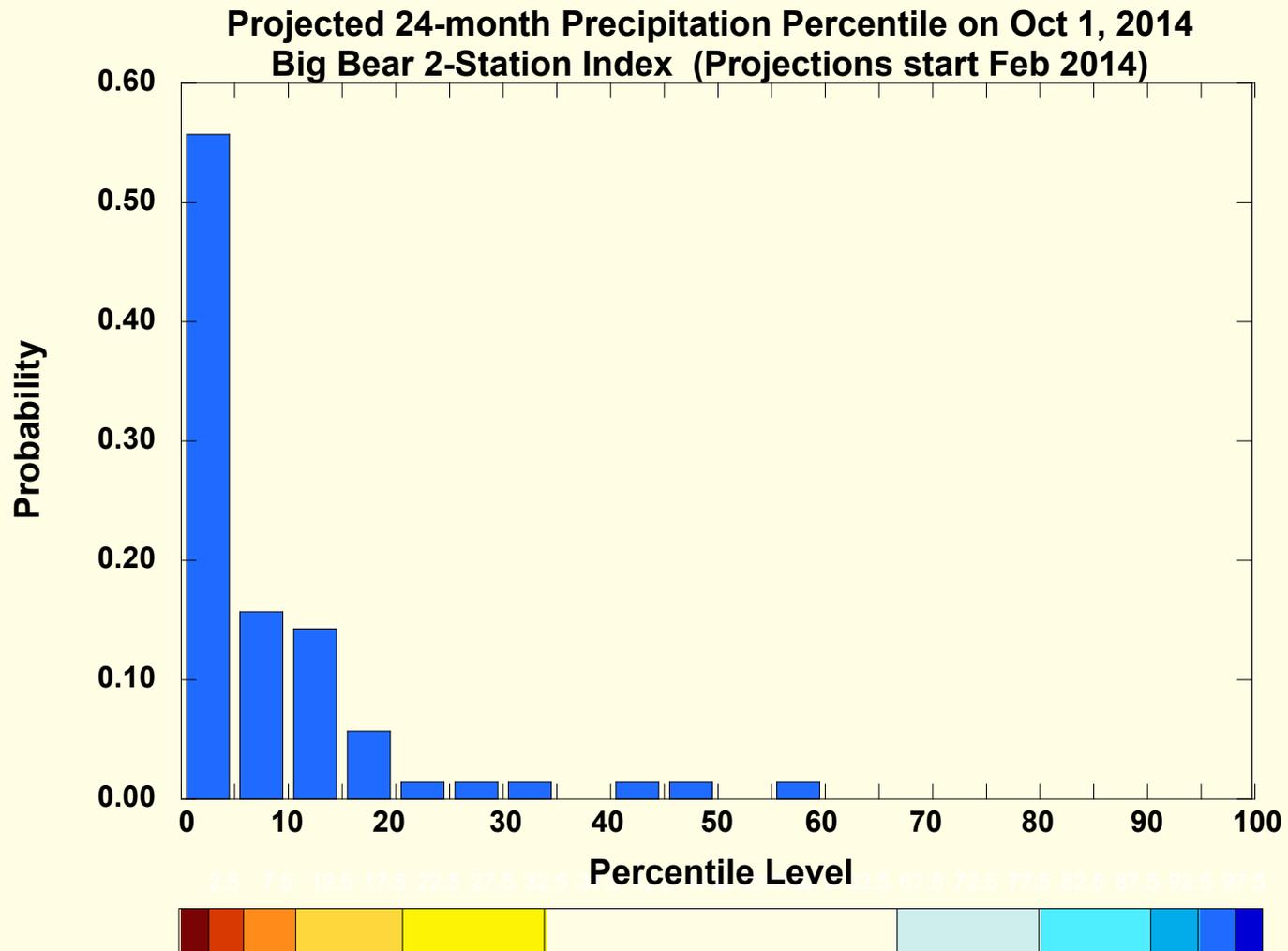
**JANUARY 2014 CALIFORNIA PRECIPITATION PERCENTILES**

Climate Division	1 Month	3 Months	6 Months	9 Months	12 Months	24 Months	36 Months
1	3.7%	0.17%	0.19%	0.39%	0.06%	3.4%	5.6%
2	1.8%	0.21%	0.27%	0.37%	0.02%	3.9%	8.2%
3	36.6%	9.2%	14.3%	18.7%	3.2%	19.3%	24.9%
4	0.10%	0.07%	0.05%	0.04%	0.01%	2.4%	6.6%
5	5.5%	1.1%	1.1%	2.1%	0.11%	0.67%	1.5%
6	3.4%	1.1%	1.3%	1.7%	0.13%	1.1%	3.0%
7	3.8%	16.3%	21.1%	19.4%	4.0%	3.0%	2.8%

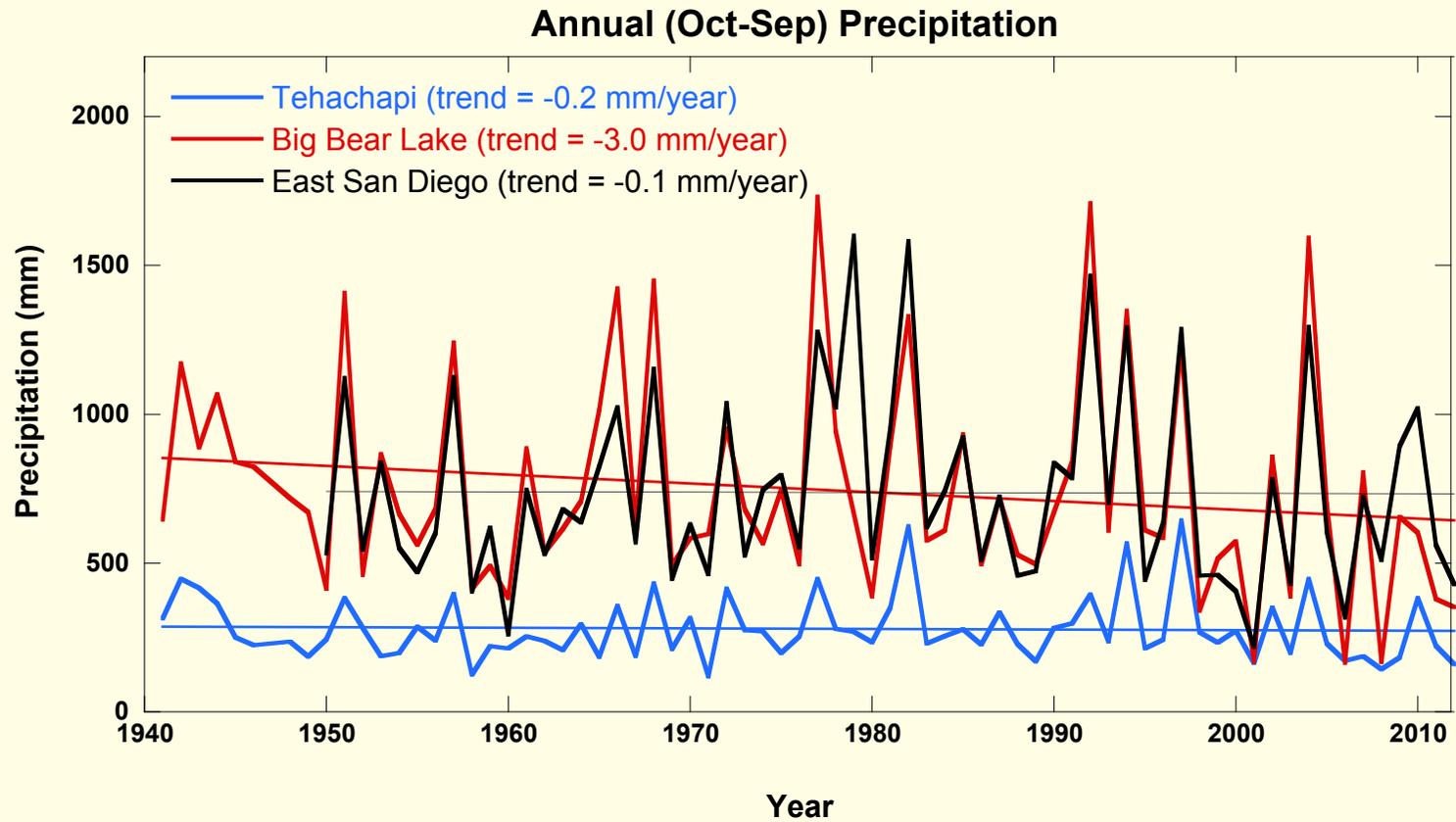
California



# Likelihood of Drought Recovery



# Precipitation Trends



# Ongoing Work

- What indicator and forecast information is needed?
- What are the best ways to provide it?
- How could this information help small systems to reduce drought impacts and vulnerability?

# Thank You

for more information

[www.drought.gov](http://www.drought.gov)

contact

[asteinemann@ucsd.edu](mailto:asteinemann@ucsd.edu)

