

Preparing for Drought in California: The California NIDIS Pilot

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CNAP

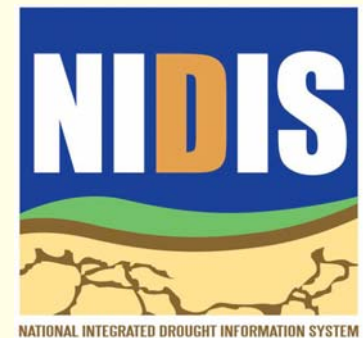
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The NIDIS Act of 2006

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

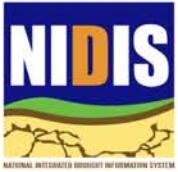
drought forecasts and assessments

to engender better decisions thereby leading to

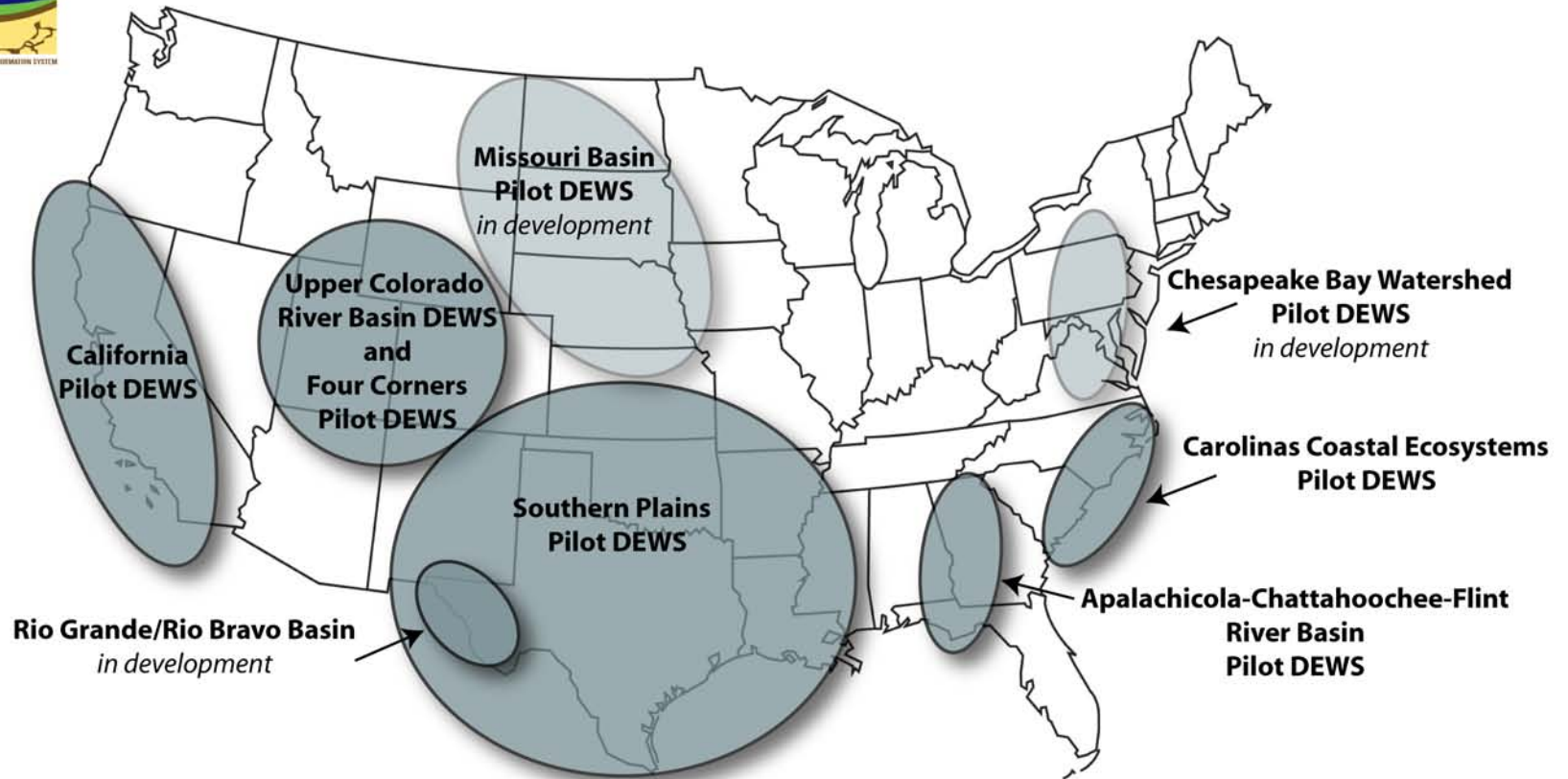
reduced impacts and costs



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

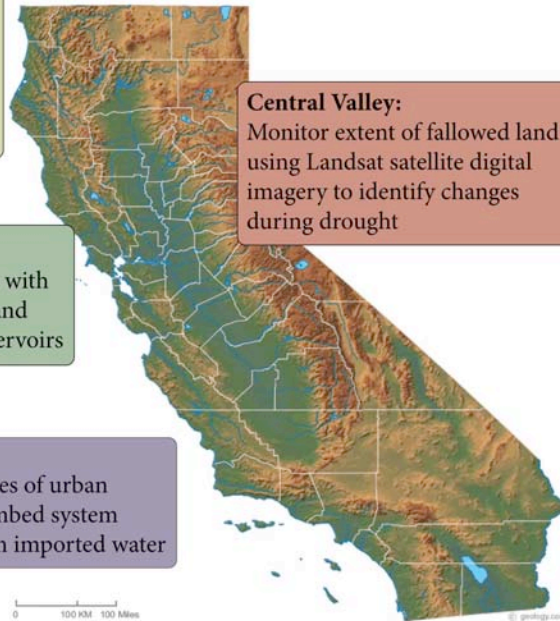
For monitoring, forecasting, data products, research activities and information on NIDIS webinars and meetings, visit the drought portal - www.drought.gov

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

Provide information in ways that are usable and valuable for drought early warning, preparedness, and response

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

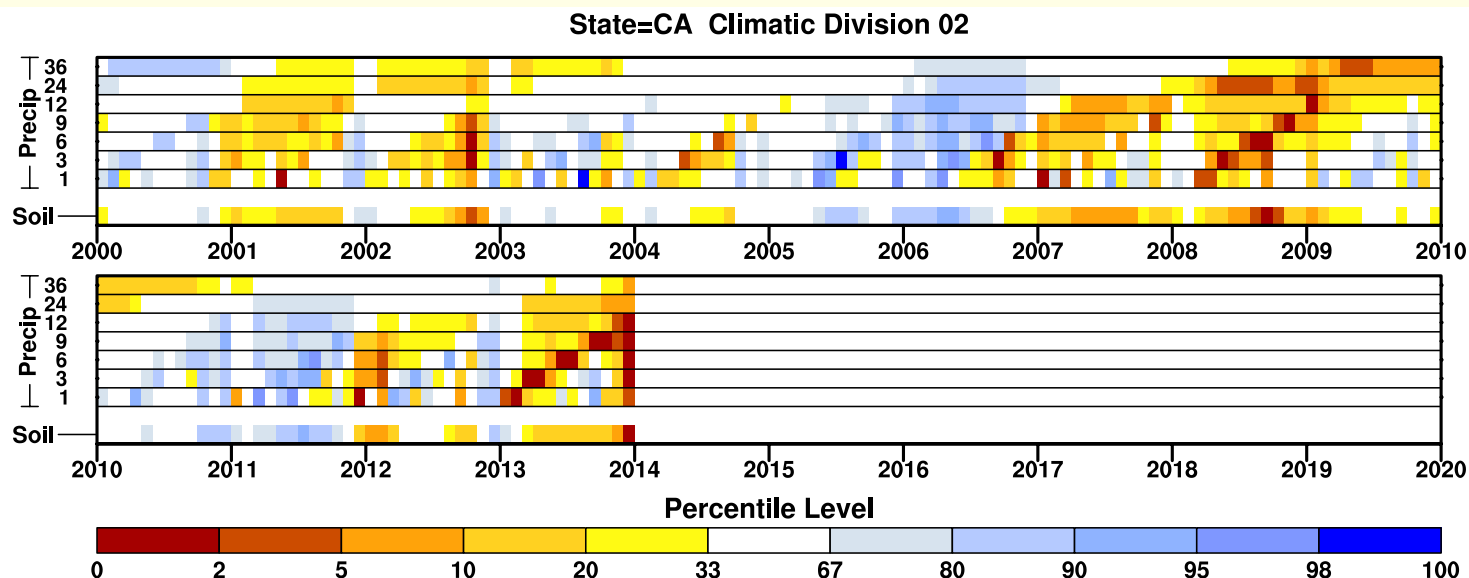
relative to historic conditions

all in one place – "one stop shopping"

-> Percentiles

Drought Indicators

1- to 36-month Precipitation and monthly Soil Moisture Sacramento Drainage Basin (CD2)



DECEMBER 2013 CALIFORNIA CD 2 PRECIPITATION PERCENTILES

	1	3	6	9	12	24	36
Month	Months	Months	Months	Months	Months	Months	Months
	2.0%	0.80%	1.6%	1.2%	0.06%	8.7%	9.3%

California



How severe is the drought?

DECEMBER 2013 CALIFORNIA PRECIPITATION PERCENTILES

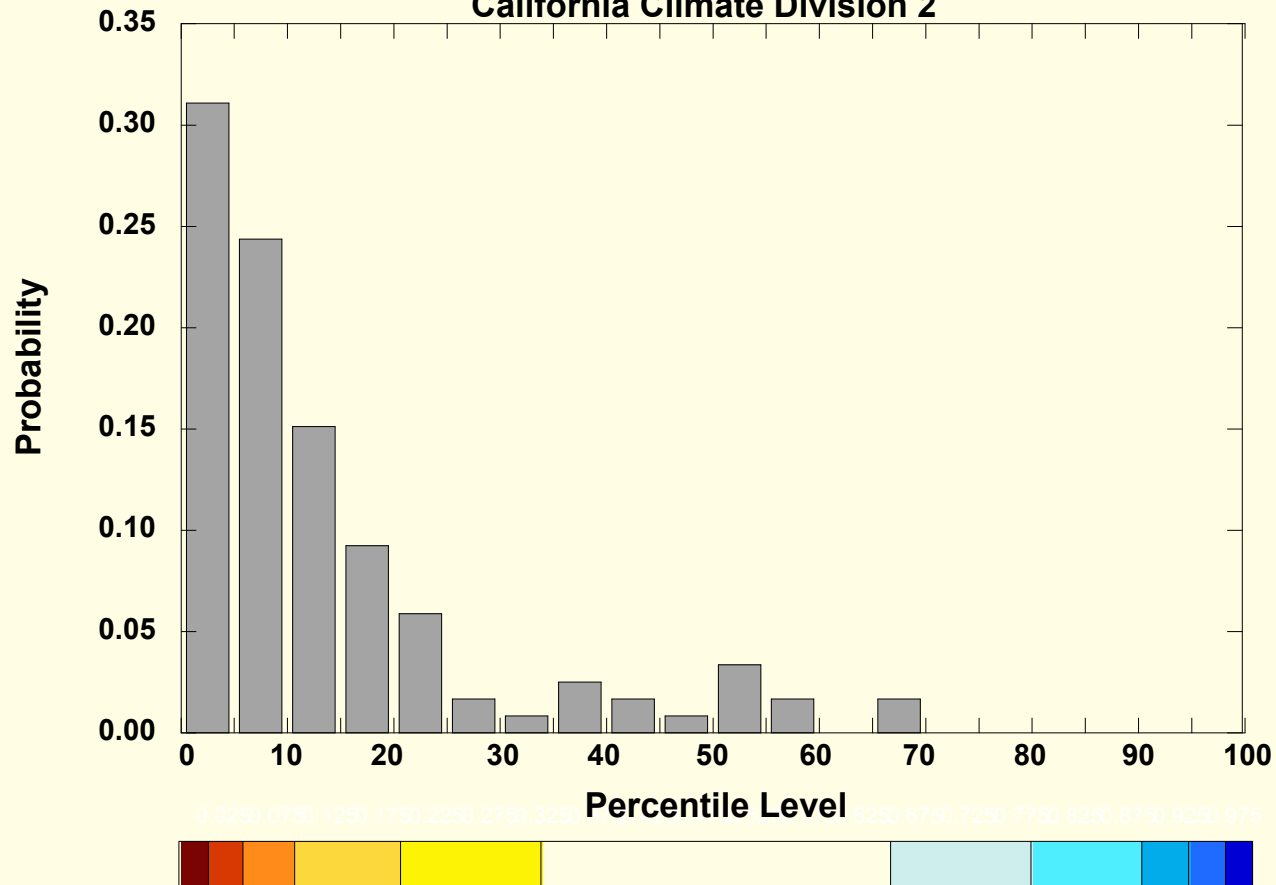
Climate Division	1 Month	3 Months	6 Months	9 Months	12 Months	24 Months	36 Months
1	0.82%	0.14%	0.71%	1.3%	0.07%	8.7%	6.0%
2	2.0%	0.80%	1.6%	1.2%	0.06%	8.7%	9.3%
3	17.9%	6.9%	20.9%	19.2%	1.3%	25.8%	20.3%
4	2.1%	0.61%	0.75%	0.13%	0.01%	5.9%	8.9%
5	6.1%	2.5%	10.7%	2.7%	0.27%	1.2%	2.1%
6	9.8%	9.7%	8.5%	2.7%	1.1%	1.8%	3.6%
7	5.0%	36.7%	48.8%	31.6%	7.8%	3.8%	2.7%

California



Likelihood of getting out of drought for Sacramento Drainage Basin (CD2)

Projected 24-month Precipitation Percentile on Oct 1, 2014
California Climate Division 2



prob. of recovery to normal or above = 6.7%

Ongoing Work

Collaborating with stakeholders across four regions in state:

- What indicator information is needed?
- What are the best ways to provide it?
- How could this information help decision-making and reduce drought impacts, costs, and vulnerability?

Developing a unified and customizable indicator system for drought monitoring and forecasting

Thank You

for more information

www.drought.gov

contact

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