

Drought Early Warning Information System for Southern California

National Integrated Drought Information System (NIDIS) Pilot Activity

Thursday, May 10, 2012

Scripps Institution of Oceanography, San Diego, CA

Meeting Notes

This second planning meeting of the Southern California NIDIS Pilot Activity had more than 30 people in attendance, representing a range of key stakeholders, and spanning both drought information producers and users: federal, state, regional, and local agencies; industries; researchers; tribes; and other stakeholders concerned with drought. (See last pages for attendees and full member/invitee list for the SoCal NIDIS Pilot Activity.)

Goals and activities of this planning meeting included the following: (1) present and discuss examples and concepts of drought monitoring and forecast products and resources; (2) explore the types of information that would be useful and relevant for characterizing droughts in Southern California; (3) identify potential and specific applications of information needed for drought early warning and decision-making, and (4) establish working groups to further develop the activities in items (2) and (3).

The day began with a welcome from Anne Steinemann, Dan Cayan, Mike Dettinger, and Robin Webb, and introductions from each participant, followed by a summary of the previous meeting (January 18, 2012), and the goals, process, and expected outcomes of this meeting. Summaries of each goal and activities are provided below.

(1) The morning session was dedicated to presentations and discussions about drought information products. Presenters and topics were as follows: Dan Cayan—characterization of drought events using a set of indices. Mike Dettinger—analyses of how droughts end, and atmospheric rivers. Marty Ralph—atmospheric river events and the role of time integrated water vapor transport. Anne Steinemann—drought indicators and triggers, analyses, and applications. Jeanine Jones—California DWR drought products and resources for monitoring and forecasting. Kevin Werner—Colorado Basin overview and water supply forecasting.

(2) The presentations led to a discussion of what would be needed for a drought monitor-type product that would be useful and relevant for characterizing drought in an urban and well-plumbed system. Participants indicated that drought in Southern California is complex, it depends on the specific user and situation, and it depends on more than hydrology (e.g., regulatory factors). Thus, Drought Monitor-type indicators would likely not be sufficient. Further, one set of indicators would not necessarily be relevant to all users (even neighboring users), and thus individual users would need to determine what drought means to them, and customize a product accordingly.

(3) The discussion of drought information products led into the identification of potential applications of drought information for decision-making, focusing on the information needed and related decisions. Examples included the following:

Tom Kennedy (Olivenhain Municipal Water District): Need information on whether the drought is getting worse, which could influence capital investment decisions.

Sandy Kerl (San Diego County Water Authority): Need to know the severity and frequency of naturally occurring precipitation events, which could influence decisions regarding paying for more reliability (e.g., more pipes, deals, emergency storage). Forecasts needed would be winter month precipitation.

Jeanine Jones (California Department of Water Resources): Need to know, for the period from Oct/Nov through May, about what areas of the state will have precipitation below 50%. Need precipitation forecasts with updates every 30 days. Decisions would involve assistance to small water systems.

Michael Garrod (Sweetwater Authority): Need to know by the end of the December (60-90 days in advance) about whether blocking high is going to move, because water is transferred in January. Decision is whether to release as much water, if the blocking high is sticking around. Need to also know precipitation forecast, with rolling 30-day lead-time.

George Adrian (City of San Diego): Need to know by April to May, about temperature for June-September, which could influence how much water to hold for summer. For 2020 planning, need to know about spatial ET, as input for demand forecasts.

(4) To build on these discussions and progress, two working groups were created:

(a) "Experimental Drought Monitor" (EDM): the development and testing of a "drought information tool," for a well-plumbed system (such as Southern California), that integrates local climatic and hydrologic information along with external water supply and other public and non-public information, and allows the user to customize the type, format, and scale of this information. Ultimately, this tool could inform the development of alternative ways to monitor and display drought conditions in systems and areas that are not completely dependent on in situ precipitation.

(b) "Specialized Application" (SA): a partnership between a decision-maker (e.g., water agency) and a scientific team, with the goal of developing drought information that would help inform a specific decision(s) and that could potentially reduce impacts and costs. An example would be the development of seasonal temperature forecasts, for specific areas and time periods, that could be used to help decide whether to release or hold back more water from reservoirs.

Participants then indicated whether they would like to be involved in either or both working groups. For the next steps, each of the working groups will meet, individually, and then a third all-participant group meeting will be held.

Southern California NIDIS Pilot Activity
Member List

Name	Organization	Email
George Adrian	City of San Diego	gadrian@sandiego.gov
Amir AghaKouchak	U.C. Irvine	amir.a@uci.edu
Michael Anderson	Department of Water Resources	manderso@water.ca.gov
Tom Ash	Western Municipal Water District, Adviser	t-ash@sbcglobal.net
Seevani Bista	City of San Diego	SBista@sandiego.gov
Tim Bombardier	San Diego County Water Authority	tbombardier@sdewa.org
Timothy Brick	Metropolitan Water District	tbrick@gmail.com
Heidi Brow	Pala Band of Mission Indians	hbrow@palatribe.com ifrantz@palatribe.com
Dan Cayan	Scripps Institution of Oceanography; U.S. Geological Survey	dcayan@ucsd.edu
Brian D'Agostino	San Diego Gas & Electric	BDAgostino@semprautilities.com
Wes Danskin	U.S. Geological Survey	wdanskin@usgs.gov
Mike Dettinger	Scripps Institution of Oceanograph; U.S. Geological Survey	mdettinger@ucsd.edu
Ariel Dinar	University of California, Riverside	ariel.dinar@ucr.edu
Alan Flint	U.S. Geological Survey	aflint@usgs.gov
Lorraine Flint	U.S. Geological Survey	lflint@usgs.gov
Michael Garrod	Sweetwater Authority	mgarrod@sweetwater.org
Shasta Gaughen	Pala Band of Mission Indians	sgaughen@palatribe.com ifrantz@palatribe.com
Brandon Goshi	Metropolitan Water District	bgoshi@mwdh2o.com
Stephanie Granger	Jet Propulsion Laboratory	Stephanie.L.Granger@jpl.nasa.gov
David Groves	RAND Corporation	David_Groves@rand.org

Name	Organization	Email
Randall Hanson	U.S. Geological Survey	rthanson@usgs.gov
Bill Hasencamp	Metropolitan Water District	whasencamp@mwdh2o.com
Michael Hayes	National Drought Mitigation Center, University of Nebraska	mhayes2@unl.edu
Alan Haynes	NOAA, California Nevada River Forecast Center	alan.haynes@noaa.gov
Doug Headrick	San Bernardino Valley Municipal Water District	dough@sbtvmwd.com
Roy Herndon	Orange County Water District	rherndon@ocwd.com
Reuben Hofshi	California Avocado Commission	rhofshi@gmail.com
Terri Hogue	UCLA	thogue@seas.ucla.edu
Mark Jackson	NOAA	mark.jackson@noaa.gov
Mark Johnson	Coachella Valley Water District	MJohnson@cvwd.org
Ted Johnson	Water Replenishment District of Southern California	tjohnson@wrd.org
Jeanine Jones	Department of Water Resources	jeanine@water.ca.gov
Jeremy Jungreis	Camp Pendleton	jeremy.jungreis@usmc.mil
Tom Kennedy	Olivenhain Municipal Water District	tkennedy@olivenhain.com
Sandy Kerl	San Diego County Water Authority	skerl@sdcwa.org
Khalique Khan	Camp Pendleton	khalique.khan@usmc.mil
Robert Krohn	National Interagency Fire Center	rkrohn@fs.fed.us
Delon Kwan	Los Angeles Department of Water & Power	Delon.Kwan@ladwp.com
Jayme Laber	National Weather Service	jayme.laber@noaa.gov
Robert Lempert	RAND Corporation	Lempert@rand.org
Glen MacDonald	UCLA	macdonal@geog.ucla.edu karen@ioes.ucla.edu
Chad McNutt	NOAA, NIDIS Program Office	Chad.McNutt@noaa.gov

Name	Organization	Email
Tony Morgan	United Water Conservation District	tonym@unitedwater.org
Carl Nettleton	Nettleton Strategies	carl@nettstrategies.com
Son V. Nghiem	Jet Propulsion Laboratory	Son.V.Nghiem@jpl.nasa.gov
Betty Olson	U.C. Irvine; Santa Margarita Water District	bholson@uci.edu
Roger Pierce	NOAA, San Diego WFO	roger.pierce@noaa.gov
Demetri Polyzos	Metropolitan Water District	DPolyzos@mwdh2o.com
Marty Ralph	NOAA	Marty.Ralph@noaa.gov
Kelly Redmond	Desert Research Institute	Kelly.Redmond@dri.edu
Eric Reichard	U.S. Geological Survey	egreich@usgs.gov
Thomas Rolinski	National Interagency Fire Center	thomasrolinski@fs.fed.us
Kurt Schwabe	UCR	kurt.schwabe@ucr.edu
Jill Sherman-Warne	Native American Environmental Protection Coalition	jill@naepc.com
Jack Simes	U.S. Bureau of Reclamation	JSimes@usbr.gov
James Smyth	Sweetwater Authority	jsmyth@sweetwater.org
William Steele	U.S. Bureau of Reclamation	wsteele@usbr.gov
Anne Steinemann	Scripps Institution of Oceanography; Univ. of WA	asteinemann@ucsd.edu
Marsi Steirer	City of San Diego	Msteirer@sandiego.gov
Mark Stuart	Department of Water Resources	marks@water.ca.gov
Alexander Tardy	NOAA/NWS San Diego	alexander.tardy@noaa.gov
Goldy Thach	City of San Diego	GThach@sandiego.gov
Kim Thorner	Olivenhain Municipal Water District	kthorner@olivenhain.com
Deven Upadhyay	Metropolitan Water District	DUpadhyay@mwdh2o.com
Steven Vanderburg	SDG&E	SVanderburg@semprautilities.com

Name	Organization	Email
Jim Verdin	NIDIS Program Office; U.S. Geological Survey	verdin@usgs.gov
Robin Webb	NOAA, NIDIS Program Office	Robert.S.Webb@noaa.gov
Kevin Werner	NOAA	kevin.werner@noaa.gov
Amy Witherall	U.S. Bureau of Reclamation	awitherall@usbr.gov

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AGENDA

- 9:30 a.m. Continental Breakfast
- 10:00 a.m. Welcome, Introductions, Meeting Goals:
A. Steinemann, D. Cayan, M. Dettinger, R. Webb
- 10:20 a.m. Drought monitoring and forecast products, concepts, and examples:
Presentations by D. Cayan, M. Dettinger, M. Ralph
- 11:15 p.m. Break
- 11:35 p.m. Drought monitoring and forecast products, concepts, and examples:
Presentations by A. Steinemann, K. Werner, J. Jones
- 12:30 p.m. Lunch (brought in)
- 1:00 p.m. Discuss potential and needed drought information products for California /
Southern California:
led by A. Steinemann, D. Cayan, M. Dettinger
- 1:50 p.m. Break
- 2:10 p.m. Discuss potential and specific applications of early warning information
for drought decision-making:
led by A. Steinemann, D. Cayan, M. Dettinger
- 3:00 p.m. Next Steps:
led by A. Steinemann, D. Cayan, M. Dettinger
- 4:00 p.m. Meeting Adjourned