Exploring Drought Recovery Climate Tools in the Western U.S.

September 15th, 2015

Croul Hall, Room 3101, University of California, Irvine

Objectives:

- Identify current usage of the National Centers for Environmental Information (NCEI) drought amelioration tool including users, application, and decisions supported.
- Describe other drought amelioration tools.
- Brief on the NIDIS and NCEI project to improve drought amelioration tool.
- Facilitate open discussion on improvements to NCEI's drought amelioration web page.

Outcomes:

- Identification of drought amelioration tool usage in a timely and regionally-relevant context.
- A user community that is better informed about drought amelioration tools and as a result able to make better decisions as they set priorities and allocate resources.
- Guidelines and suggestions for improvements to NCEI's drought amelioration web page.

Audience: Current and potential users of the drought amelioration tool including elected officeholders, members of the media, and interested general public.

8:00am – Coffee and Networking

8:30am – Welcome and Introduction to the Workshop

8:50am - Session 1: Evaluating NCEI's Drought Amelioration Web Tool

In the first session, participants will be shown the current drought amelioration web page alongside some of the revised products NCEI is working on for the page. Participants will be encouraged to utilize the drought amelioration tool on their own computers if they have them and can connect to the internet.

Participants will then be asked to complete an assessment of the website to identify key features and their understanding of the content on the page. Thereafter, participants will answer website specific questions in breakout groups.

10:30am – Break

10:45am – Report out in plenary. Participants will be facilitated to identify the top three changes they would like to see implemented on the site.

12:00pm – Lunch on your own

1:00pm – Session 2: Review Existing Drought Amelioration Climate Products
This session is focused on diagnosing the types of drought amelioration tools that can be used to enhance situational awareness and support decision-making. Participants will examine what works and what needs to be changed using additional input from select presentations outlining existing drought amelioration products and services. Each speaker will have 15-minutes and questions from the audience are encouraged throughout the session.

- Richard Heim on CPC/IRI tools and how/why they differ from NCEI products
- Nina Oakley on WRCC products
- Marty Ralph on Atmospheric Rivers

1:50pm - Participants will break into groups and answer questions geared toward the usage of other drought amelioration tools.

2:30pm – Break

3:00pm - Session 3: Seasonal Rainfall Outlook and Drought Amelioration (Panel Session)
The final session of the workshop will focus the discussion on the upcoming water year precipitation outlook and how the predictions of El Niño influence drought amelioration. Each speaker will have 15-minutes and questions from the audience are encouraged throughout the session.

- Michael Anderson, California State Climatologist
- Alex Tardy, National Weather Service San Diego Warning Coordination Meteorologist
- Alan Haynes, National Weather Service California Nevada River Forecast Center

4:00pm – Review next steps and actions

4:20pm – Plus, Minus, Delta exercise – what did you like (plus), what didn't you like (minus), and what could we do differently next time (delta).

4:30pm – Workshop concludes

Outcomes from the Workshop:

- The morning breakout session had attendees go online and work through the NCEI Drought Termination and Amelioration tool. Many users found the web site difficult to navigate and understand.

- Workshop participants were given an opportunity to vote on a variety of their identified suggested changes for the website. The changes that garnered the most votes included moving toward a high-resolution gridded dataset instead of climate divisions, improving the graphical

presentation of the maps (adding GIS-based zoom-in capabilities and improving the legends), adding more identifying information to the online data files, and streamlining the information in the Introduction.

- Most agreed that the information presented in the tool is not relevant to drought recovery in California. Some found it to be useful for assessing drought recovery in the Midwest.

- Users felt that the drought recovery tool could be improved if it incorporated additional indices and variables besides PHDI, including snowpack, precipitation/streamflow needed to restore reservoir levels and groundwater levels, and precipitation needed to restore deficit loss since beginning of the drought. Some asked if a new drought recovery index could be created which incorporates PHDI and water resources indices.

- With the hydrology of southern California depending on water from distant source regions, it was suggested that southern California drought recovery estimates be weighted sums of estimates derived for each source region.

- Integrating forecast products (forecasted SPI, forecasted PHDI, NWS/CPC forecasts, and NWS/RFC forecasts) into the drought recovery tool was identified as a useful next step.

- The U.S. Drought Monitor (USDM) was discussed, including how it is created subjectively from numerous objective drought indicators. This prompted attendees to recommend that NOAA personnel be devoted to subjectively interpreting the drought recovery tools for users and determine how they should be applied to the different regions in the U.S.

- Attendees suggested that NIDIS hold a workshop of drought experts to determine what drought indices, models, and forecasts are applicable for the different regions of the U.S.