

DROUGHTSCAPE

The Newsletter of the National Drought Mitigation Center

DIRECTOR'S REPORT



pring always brings hope and anticipation, right? But in 2013, many of us wonder if the droughts of recent years are going to

continue. The NDMC helped the National Integrated Drought Information System organize a National Drought Early Warning Outlook held in Washington, D.C., in February. This outlook and the two-page brief produced for the event received much attention at the annual National Governors' Association meeting. Likewise, the U.S. Department of Agriculture hosted a "Drought Roundtable" for its various agencies in D.C. in early April. It is likely that similar events in the coming months will continue to promote better communication. coordination, and collaboration among the different federal, state, tribal, and local authorities -important with a cross-cutting issue such as drought.

This spring and summer I will help solidify connections between a drought earlywarning system, a national risk-management approach to drought, and stakeholders in the Czech Republic. I'll spend two months working with long-time colleagues at Mendel University in Brno. The Czech scientists have been developing a drought early warning system, and I will help with the implementation. It will also be a great opportunity to apply recommendations made at the

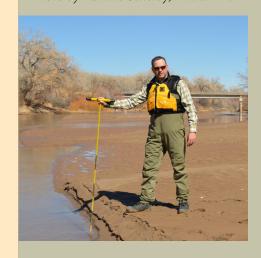
High-Level Meeting on National Drought Policy, hosted by the World Meteorological Organization, held in Geneva, Switzerland, in March 2013.

Michael J. Nayes

Photos on this page from U.S. Army Corps of Engineers, Albuquerque District. At top, the Rio Grande with the Sandia Mountains in the background, Oct. 24, 2012, by Ondrea Hummel. Below, Ryan Gronewold measures the water level in the Rio Grande near Socorro, New Mexico, with a calibrated survey rod. Because of drought, the river is too low for silvery minnow to spawn. The silvery minnow relies on flooded islands and cottonwood forests for spawning and raising their offspring. Photo by Ronnie Schelby, March 11.

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Spring Outlook and January to March Summary

By Brian Fuchs, Climatologist, National Drought Mitigation Center

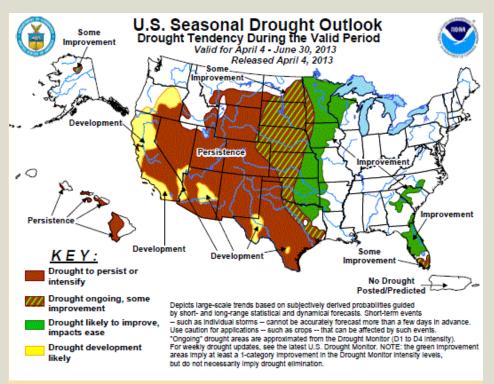
Drought classifications are based on the U.S. Drought Monitor. Details on the extent and severity of drought are online at http://droughtmonitor.unl.edu/archive.html. The outlook integrates existing conditions with forecasts from the National Oceanic and Atmospheric Administration's Climate Prediction Center: http://www.cpc.ncep.noaa.gov/

January: The month started with 61.09 percent of the United States in drought and ended with 57.68 percent in drought. Most of the improvements occurred in the Mid-Atlantic states and portions of Texas. Above-normal precipitation brought drought relief over much of Texas, into the Midwest and further east to include portions of the Ohio and Mississippi River valleys. Conditions were dry over much of the Southeast, and over the West Coast, from northern California to Washington. Temperatures were near-normal over much of

the central United States, and 6-9 degrees Fahrenheit abovenormal over the Southeast. From the Rocky Mountains westward, temperatures were well belownormal, with areas in the Great Basin recording temperatures as much as 15 degrees below normal for the month.

February: After a very dry January, conditions improved in the Southeast, as abovenormal precipitation brought drought relief to the region. From Louisiana to the Carolinas, all locations recorded above-normal precipitation for February. Some areas of south Georgia, Alabama and the Florida Panhandle recorded 9-15 inches of rain above normal, putting a significant dent in the long-term dry pattern of the region. Precipitation remained below normal for much of northern California and the Oregon coast and above normal in the central Plains and Midwest. Temperatures were below-normal over much of the United States with departures from 3-6 degrees Fahrenheit common from Arizona to Pennsylvania. Temperatures in the northern Rocky Mountains and southern Plains were 3-6 degrees above normal for the month. Unfortunately, not all drought areas got relief. February started with 57.68 percent of the United States in drought and ended with 54.17 percent in drought. At the end of February, more than 5 percent of the country was still in Exceptional Drought (D4), which was centered on Nebraska and surrounding states.

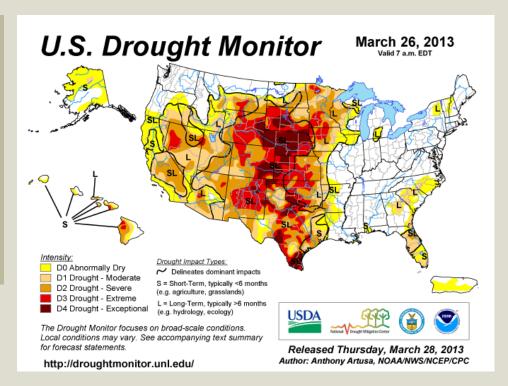
March: The momentum of widespread, above-normal precipitation did not continue into March. Most of the country was near normal for the month, with the largest deficits reported along



Qutlook: The outlooks have been very consistently showing good chances for above-normal temperatures to develop over much of the United States this spring, especially the southern Plains and New England. Most of the country has an equal chance at above- or below-normal precipitation. The Ohio River Valley is showing a signal for above-normal chances of above-normal precipitation, while much of the West and the southern Plains is showing a signal for below-normal precipitation. The Seasonal Drought Outlook shows drought persisting or developing over much of the western United States. Conditions could improve in the Plains and Midwest between now and June.

Portions of the Midwest had a 25degree Fahrenheit difference in average temperatures from March 2012 to 2013, with 2012 well-above and 2013 well-below normal.

the Gulf Coast and the Pacific Coast. Several locations in the Midwest had slightly above-normal precipitation. In a significant change from March 2012, temperatures were well belownormal over much of the country east of the Rocky Mountains, with departures of 12-15 degrees below normal in the Dakotas. Some portions of the Midwest had a 25-degree Fahrenheit difference in average temperatures from March 2012 to 2013, with 2012 well-above and 2013 well-below



normal. Temperatures in areas of the Southwest and Great Basin were 3-6 degrees Fahrenheit above normal for the month. Even with few areas recording above-normal precipitation for the month, the U.S. Drought Monitor showed continued improvement in the Southeast and Midwest, from 54.17 percent of the

country in drought at the beginning of March to 51.64 at the end of the month. In contrast, at the end of March 2012, only 36 percent of the country was in drought and this was relegated mostly to the southern Plains and southeast and southwest portions of the country.

CONTACT THE NATIONAL DROUGHT MITIGATION CENTER

P.O. Box 830988 Lincoln, NE 68583-0988 USA

819 Hardin Hall 3310 Holdrege St. School of Natural Resources University of Nebraska-Lincoln **East Campus**

email: ndmc@unl.edu phone: (402) 472-6707 fax: (402) 472-2946

Contact the editor of DroughtScape, Kelly Helm Smith: ksmith2@unl.edu

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Drought in 2012 results in record indemnity payments, idles ethano

by Denise Gutzmer, Drought Impact Specialist, NDMC

The NDMC added 163 impacts and 790 reports to the Drought Impact Reporter during the first quarter of 2013. Drought just won't let up in Texas, with 53 impacts reported for the state. Adequate rainfall has evaded parts of the state for years, leading to widespread problems stemming from drought. Low reservoir levels affect many communities because the typical winter and spring rains were not plentiful enough to boost water supplies. Low soil moisture is crippling agriculture in parts of the state. Inadequate grass growth leaves many ranchers offering supplemental feed to their livestock or further thinning herds.

Normally the winter months are relatively quiet as far as drought impacts go, but this year tensions were high over reduced water releases on the Missouri River because shipping was threatened on the Mississippi River between St. Louis and Cairo, Illinois. The U.S. Army Corps of Engineers worked to deepen channels by removing rock pinnacles and

helped avert the river's closure to barge traffic. Fortunately, the level of the Mississippi River did not fall far enough to stop navigation during the early part of 2013, but barges did move slower due to narrower channels and the river being closed during blasting operations. In making the case for federal intervention to keep the river open to shipping traffic, the American Waterways Operators, a tow industry trade group, said that 7.2 million tons of cargo worth \$2.8 billion could be delayed during the last three weeks of January if the river were to close.

Ranching U.S. cattle herd

The number of cattle in the U.S. fell to 89.3 million as of Jan. 1, 2013, a drop of 2 percent over the last year, according to the U.S. Department of Agriculture, as drought and limited feed and water supplies forced ranchers to trim their herds further. The last time the cattle herd was this small was in 1952, although cattle today are heavier and produce more meat than cattle did in the 1950s. Beef prices climbed 6 percent in

2012 and are expected to rise another 3 to 4 percent in 2013, although lower demand, resulting from higher prices, may help keep prices somewhat stable in 2013.

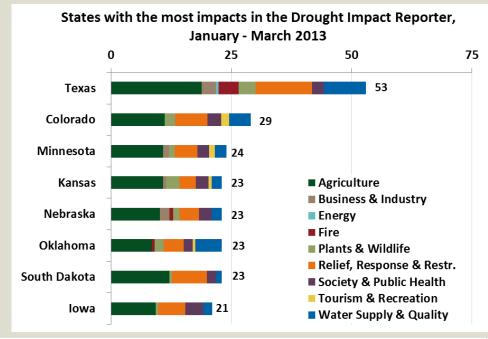
U.S. hay supplies

Hay stocks on Dec. 1, 2012 were 76.5 million tons, the lowest point in record keeping dating back to 1957, according to the USDA's National Agricultural Statistics Service. The 10-year average of December hay stocks was about 106 million tons, not including figures for 2011 and 2012 because drought reduced stocks during those years. In 2011, drought in the Southern Plains drew down stocks 11 percent from 2010, while in 2012, drought in the Midwest pulled hay stocks down another 16 percent for a total decline of 25 percent since December 2010.

Farming Crop insurance payments from 2012

Payments from crop insurance exceeded \$16 billion for the 2012 crop year, according to the Federal Crop Insurance Corp.'s April 8 tally. Losses were in large part due to widespread drought in the nation's midsection in 2012. The previous crop insurance payment record, in 2011, was set at \$10.843 billion. Indemnity payments in 2010 were \$4.251 billion. Farmers bought crop insurance for roughly 282 million acres of crops in 2012, 6.1 percent more than in 2011. Not all of the indemnity payments are subsidized by the federal government. An industry analyst estimated for the Associated Press that the federal tab would come to about \$11 billion.

"Record crop insurance payout stirs subsidy debate," by David Pitt, Associated Press, March 22, 2013. "U.S. Crop Insurance Claims Rise to Record After 2012 Drought," by Jeff Wilson, Bloomberg, Jan. 15, 2013.



I plants and closes meatpacking plants

States receiving more than \$1 billion in indemnities according to the April 8 report, and their loss ratios – payments compared with premiums -- were:

Illinois, \$2.994 billion, 3.88 Indiana, \$1.117 billion, 2.56 lowa, \$1.963 billion, 2.17 Kansas, \$1.363 billion, 1.69 Missouri, \$1.135 billion, 3.10 Nebraska, \$1.531 billion, 2.29 South Dakota, \$1.101 billion, 1.58

Texas, \$1.406 billion, 1.30 The national average for state loss ratios was 1.46.

Federal Crop Insurance Corporation Crop Year Statistics for 2012 as of April 8, 2013, Nationwide Summary by State, accessed April 9, 2013, at http://www3.rma.usda.gov/apps/sob/ current_week/state2012.pdf

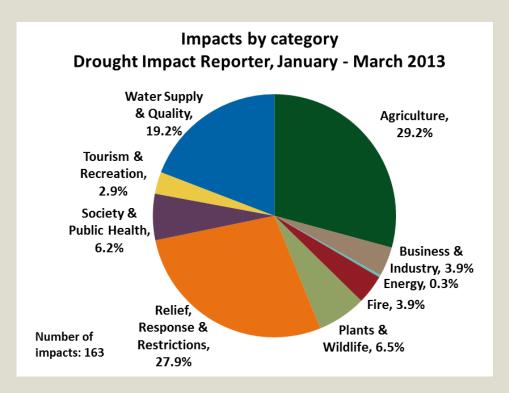
Crop insurance payments related to mycotoxins from 2012

Crop insurance payments for tainted corn affected by mycotoxins reached \$75 million in 2012, according to the USDA. Mycotoxins are produced by fungi that grow on corn in hot, dry weather and can be very harmful if ingested by humans or animals. Almost 85 percent of the crop insurance damage claims came from corn growers in Arkansas, Illinois, Indiana, Kansas, Mississippi and Missouri. In 2011, the payout for mycotoxins was roughly \$25 million.

"Dog food recall underscores toxic danger in drought-hit U.S. corn," by Carey Gillam and Julie Ingwersen, Reuters, Feb. 25, 2013.

Kansas

Roughly \$1.36 billion in crop insurance claims will go to Kansas farmers for drought-induced crop losses in 2012. About \$724 million was for lost corn production, \$247 million for grain sorghum, \$213 million for soybeans and nearly \$162 million for lost wheat production. Payouts were also



made on barley, canola, cotton, dry beans, millet, oats, pasture, potatoes, silage sorghum and sunflowers. Losses in Shawnee County on mainly corn production amounted to \$5.9 million. In 2011, Kansas farmers received \$1.08 billion in crop insurance payments after a dry year, considerably more than the payments of \$142 million in 2010 and \$291 million in 2009. From "Kansas crop insurance claims spelled out," by Megan Hart, The Capital-Journal, Topeka, Kansas, March 26, 2013.

Indiana

Crop insurance payments for corn, soybean and wheat losses in Indiana climbed to an all-time high of \$1 billion. The previous high for the state occurred in 2008 when farmers received \$522 million in crop insurance payments, according to Chris Hurt, Purdue Extension agricultural economist. The average corn yield in the state in 2012 was 99 bushels per acre, which is nearly 40 percent below average. Roughly 75 percent of the corn crop was insured in 2012. "Indiana crop insurance payouts top \$1 billion a state record," by Keith Robinson, Purdue Ag

Communications. March 12, 2013.

Iowa

lowa corn production in 2012 amounted to 1.87 billion bushels. in comparison with 2.36 billion bushels last year. The average yield was 137 bushels per acre, down from 172 bushels per acre last year. The soybean yield was 43 bushels per acre, down from the average 51.5 bushels per acre. Total soybean production in the state was 415 billion bushels in 2012, lower than the 475 billion bushels grown in 2011.

"lowa corn yield, production fell 20% last year," Des Moines Register, Jan. 12, 2013.

Personal income

Drought pulled down personal income in South Dakota by 0.2 percent in 2012. Earnings for the farm industry dropped by an estimated 27 percent, compared to 2011, and crop output declined by 18 percent, according to a regional economist with the U.S. Commerce Department's Bureau of Economic

continued on page 6

Drought impacts, continued

Analysis. Drought contributed to below-average total income growth in 2012 in Nebraska, Kansas and lowa.

"Last year's drought smacks South Dakotans in the wallet," by Kelly Thurman, *Argus Leader*, March 27, 2013.

"Average state personal income in Colorado grew 3.9 percent in 2012," by Howard Pankratz, *The Denver Post*, March 28, 2013.

Farm incomes in the Midwest increased in the fourth quarter of 2012, as crop insurance payments made up for lost crop production, according to results of the Agricultural Finance Monitor, a survey of banks in seven Midwestern states. Fourth quarter income and spending were above the same quarter in 2011. Claims from Missouri and Illinois farmers amounted to about \$3.2 billion, or nearly 23 percent of the \$13.7 billion that had been paid out by early February, according to the Federal Reserve Bank of St. Louis. "Drought lowered crop production, but farmers earned more," by Georgina Gustin, St. Louis Post-Dispatch, Feb. 14, 2013.

Water shortages, conflicts

Water is more of a concern this year for many areas than in previous years as drought persists, leaving water supplies low ahead of what is expected to be a very hot and dry summer. Many cities and water irrigation districts have announced water restrictions to safeguard their dwindling resources.

Colorado

In Colorado, the thin snowpack has many communities, including Denver, enacting mandatory water restrictions. In late March, statewide snowpack was roughly 77 percent of average, while reservoir storage was 71 percent of average, which is 39 percent of capacity.

"Colorado drought expected to persist through spring," by Bob Berwyn, *Summit County Citizens Voice*, March 27, 2013.

Texas

In extreme southern Texas, communities that rely on the Rio Grande River for municipal and irrigation supplies expect to run dry because reservoirs are nearly empty. These communities would benefit from Mexico releasing water owed to the U.S., but the 1944 Guadalupe Water Treaty allows Mexico 2½ years to pay up on its water defict. Some communities already have emergency water restrictions in place, due to low flow in the Rio Grande River.

"U.S. waits for Mexico water response expected Friday," by Allen Essex and Jesse Mendoza, *Brownsville Herald*, Texas, March 20, 2013.

New Mexico

The Carlsbad Irrigation District issued a priority call on the Pecos River because the farmers around Carlsbad feel that water users upstream near Roswell were pumping too much groundwater from their artesian wells, leaving too little surface water for users further south. A priority call means that water rights holders with the oldest rights would get water, while those with more recent water rights would be high and dry. There will be some difficult consequences as a result of the priority call.

"New Mexico Farmers Seek 'Priority Call' as Drought Persists," by Felicity Barringer, *The New York Times*, March 26, 2013.

California

Apprehension over the snowpack, which is about 57 percent of normal for the end of March, led state officials to urge water conservation statewide. The California State Department of Water Resources trimmed the State Water Project water delivery estimate from 40 to 35 percent. "Reduced state water deliveries won't hurt local cities," by Michael Waterson, *The American Canyon Eagle*, California, March 27, 2013.

Nebraska

The Nebraska Department of Natural Resources ordered the release of water from four reservoirs in the Republican River Basin to keep the state in compliance with the Republican River Compact. This followed a Jan. 1 compact call by the Natural Resources director, due to drought conditions, mandating extra conservation measures on the part of irrigation districts. Surface water irrigators were strongly affected by the legal requirement to keep enough water in the Republican River to satisfy the state of Kansas. "State orders Republican reservoir releases," by Art Hovey, Lincoln Journal-Star, April 3, and "Bearing drought's burden," editorial, April 9,

Society & Public Health Radon

Radon remediation businesses in the Kansas City area have found higher levels of radon, which is a slightly radioactive, natural and odorless gas, in homes as drought shifts soil and creates new pathways for radon to seep into basements. Roughly 33 to 45 percent of the homes in the Kansas City area have levels of radon above 4 picocuries per liter, the concentration above which the Environmental Protection Agency urges remediation.

"Elevated radon levels in Kansas City area homes," Kansas City Star, March 3, 2013.

Dog food recall

High levels of aflatoxin were found in dog food tested at a Hy-Vee store in Iowa, prompting the grocery chain to recall the dog food at its stores in eight Midwestern states. The source of the aflatoxin was corn grown in the Midwest during the 2012 drought and was subsequently used in the making of dog food at a Pro-Pet plant in Kansas City, Kansas. Aflatoxin is

produced by fungi that grows on corn during drought.

"Dog food recall underscores toxic danger in drought-hit U.S. corn," by Carey Gillam and Julie Inwersen," Reuters, Feb. 25, 2013.

Business & Industry Ethanol

Ethanol production in the last week of January fell to 770,000 gallons per day, the smallest amount produced since the U.S. **Energy Information Administration** began tracking weekly data in June 2010. The drought that hampered corn production in 2012 forced 20 of the 211 ethanol plants in the country to close in 2012 and 2013 as corn supplies dwindled, according to the Renewable Fuels Association. Production is anticipated to resume at most of the 20 plants after the 2013 corn harvest brings a new supply of corn. There is plenty of stockpiled ethanol with no shortage expected, assuming that the 2013 corn crop does reasonably well.

"Corn shortage idles 20 ethanol plants nationwide," by Jim Salter, Associated Press, Feb. 10, 2013.

Texas

An ethanol plant in Plainview, Texas belonging to White Energy stopped production on January 7, due to the high cost of grains, according to the vice president of the company. The plant's 41 employees will do some maintenance work and clean for the time being. Production will remain at a standstill through the end of the first quarter and possibly until October. (According to Google Maps, Plainview had a population of 22,194 people in the 2000 census.)

"Another Plainview business impacted by drought," Fox 34 News, Lubbock, Texas, Jan. 19, 2013.

Drought has contributed to the shrinking of the cattle population in the U.S., leading Cargill Inc. to announce that it would "indefinitely

idle" a beef processing plant in Plainview, Texas, on Feb. 1. Roughly 2,000 people worked at the plant. The U.S. has a greater capacity for beef processing than is needed since the cattle herd has been on a downward trend in recent years and has reached its lowest point since 1952. "Carrill to idle Texas beef plant" by Mike

"Cargill to idle Texas beef plant," by Mike Hughlett, *Minneapolis StarTribune*, Jan. 17, 2013

A cattle-slaughtering and meat-packing plant in San Angelo closed on March 26 because there were too few cattle to process, as drought forced ranchers to downsize over the past few years. Roughly 200 employees learned on March 26 that they were being laid off that day. Prior to the drought in 2011, the plant processed nearly 700 cattle daily, in comparison with the 350 to 400 cattle it has processed in recent days. The size of cattle herds in the state has been shrinking as drought forces ranchers to sell livestock rather than feed and water them. leading to a smaller cattle population and less demand for slaughtering and meat-packing plants.

"Drought closes packing plant; 200 jobs lost," by Justin Zamudio, *San Angelo Standard-Times*, March 27, 2013.

Plants and Wildlife Butterflies

Drought in Texas and much of the Southwest, wildfires in Texas and changes in farming practices, such as the use of more pesticides, have winnowed down the number of monarchs able to return to Mexico to overwinter there. Fiftynine percent fewer monarch



Photo by by Morris Creedon-McVean, March 7, 2013, shows a tree in Austin, Texas, being trimmed because it was dropping large limbs on the house next door, after years of catastrophic drought.

butterflies wintered in Mexico this winter, the lowest number in the past 20 years since records have been kept.

"Drought choking off butterfly population," by Erin Mulvaney, *Houston Chronicle*, March 18, 2013.

Trees

Drought killed hundreds of thousands of trees in the Midwest during 2012 and will continue to kill stressed trees in upcoming years, said scientists, including a plant pathologist from Purdue University. Many cedar and Florida cypress trees died in Indiana in late summer, while Alberta and Colorado blue spruce trees were continuing to die. City officials in Brookings, South Dakota, said roughly 300 trees died from drought; in McPherson, Kansas, said approximately 44 trees died from drought; and in Columbia, Missouri, said a significant number died from drought.

Drought Impact Reporter http://droughtreporter.unl.edu

Submit a Report, even upload photos: http://public.droughtreporter.unl.edu/submitreport/

International declaration calls for national drought policies

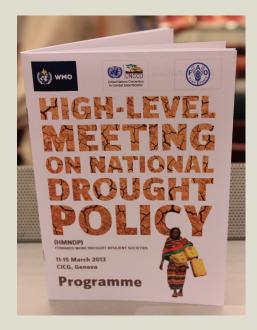
The international declaration on national drought policy adopted March 14 will help United Nations agencies and development organizations focus resources on drought planning, preparedness and the development of national drought policies, said Dr. Donald A. Wilhite, founding director of the National Drought Mitigation Center.

Reducing drought risk will be crucial to helping people in developing countries rise out of poverty; otherwise, drought can wipe out years of economic and development gains, Wilhite said.

"Droughts are becoming more prevalent and are an almost a permanent phenomenon in parts of Africa, punctuated by floods, leaving no recovery periods for vulnerable households," said Gideon Galu, a regional scientist based in Africa with the Famine Early Warning Systems Network (FEWS NET). Galu was quoted in a story by IRIN, an international news organization that focuses on humanitarian issues.

IRIN's coverage pointed out that "recent droughts in the Horn of Africa, the Sahel and the US have had massive humanitarian consequences. Drought in the Sahel cut cereal production by 26 percent in 2012, compared with the previous year's production, according to the UN. The situation remains critical - over 10 million people are still food insecure, and 1.4 million children are at risk of acute malnutrition.

"But countries in the Sahel are struggling to get even their basic drought response mechanisms in order. Most are far from developing the sophisticated inter-sectoral approaches and scientifically based best practices advocated at the conference."



Wilhite emphasized that developed countries need drought risk management policies too, and that Australia is currently the only country in the world that has a national drought policy.

Wilhite said that so far in the United States, states have been the biggest advocates for a unified national drought policy. But last summer's federal response to the widespread U.S. drought, with an emphasis on multi-agency, coordinated response, led from the White House, was a step in the right direction.

"It starts at the top. It's important to engage the administration," Wilhite said. "You need to think of this as a framework. Identify the principles of a drought policy based on risk-based management at the national level. It's a philosophy. You're really trying to reduce risk and impacts, rather than just respond to and recover from drought. And, build resilience to future drought episodes in areas or sectors where the greatest vulnerabilities exist."

Wilhite, who helped draft the text of the declaration, helped

organize the High Level Meeting on National Drought Policy that was held March 11-15 in Geneva, Switzerland. Sponsoring U.N. organizations were the World Meteorological Organization, the Convention to Combat Desertification, and the Food and Agricultural Organization. There were many other partnering organizations and sponsors.

Internationally, the declaration calling for a risk management approach to drought will help United Nations agencies approach donors and development banks to direct resources towards the development of national drought policies, Wilhite said. The declaration also provides a unifying framework for the different U.N. agencies and development organizations working in areas related to drought.

The Integrated Drought
Management Program, launched
at the conference in March and
modeled after the U.N.'s Integrated
Flood Management Program, will
also help provide information and
focus on implementing national
drought risk management policies,
Wilhite said.

Countries don't have to have all the answers in hand before moving toward establishing a national drought policy, Wilhite said. "You put something in place and you continuously revise or tweak it in response to recurring droughts," he said. "You look at the key elements, what works and what doesn't."

The policy document also recommended that nations follow a 10-step drought planning process originally devised by Wilhite and since used by many countries around the world.

"From drought policy to reality," by Jaspreet Kindra, IRIN, March 18, 2013

NDMC contributes to U.N. Meeting on National Drought Policy

The time is now for nations to plan for drought and stop reacting to drought in crisis mode, particularly given the likelihood of more frequent, more intense droughts resulting from climate change, Don Wilhite said in the keynote address at an international meeting in Geneva that was March 11-15. The High Level Meeting on National Drought Policy included several presentations by faculty and staff associated with the National Drought Mitigation Center.

About 360 people from 92 countries attended the week-long meeting, including scientists, representatives of development agencies, policymakers and heads of state.

On Thursday, country representatives unanimously acclaimed a declaration encouraging countries to develop and implement national drought policies.

"It is imperative that we bring together scientific information and move forward with a drought risk management approach," said Wilhite in his keynote address, "Managing Drought Risk in a

Changing Climate: The Role of National Drought Policy."

Wilhite, founding director of the NDMC, stressed that monitoring should go beyond precipitation to include other physical characteristics such as reservoir levels and streamflow. "Measuring precipitation alone isn't enough," he said. "Impacts and deficiencies ripple through all areas of the hydrologic and socioeconomic system." Unlike other disasters, drought varies spatially and temporally, and has multiple and migrating epicenters.

"It's so important today to take into account climate change," he said. "The climate of the past is no longer a model for the climate of the future. It challenges all of us in the scientific community to be able to provide factual information to policymakers."

Mike Hayes and Mark Svoboda gave an overview on "The Making of the U.S. Drought Monitor," a weekly map showing the location and intensity of drought, based on many numeric indicators and on the input of a network of observers all over the country.

Haves, director of the NDMC, and Svoboda, leader of the center's Monitoring Program Area, stressed that the involvement of local observers all over the country has contributed to the credibility of the weekly map showing the location and intensity of drought. This credibility makes it easier for policymakers to base decisions on the map.

Kelly Helm Smith, communications and drought resources specialist at the NDMC, was part of a panel on drought education. She said that education in many settings, from formal classrooms to community initiatives, can help move people out of crisis mode when dealing with drought, and toward more planned responses and greater resilience to drought.

Hayes, Svoboda and Wilhite also contributed to other sessions at the meeting in various capacities.

For more information about the High Level Meeting on National Drought Policy, please visit http://hmndp.org



Mark Svoboda, left, head of the NDMC's Monitoring Program, listens as Roger Pulwarty, director of the National Integrated Drought Information System, makes a presentation on Drought Monitoring, Early Warning and Information Systems.

New Guide Helps Communities Cope with Drought

Communities that need to pull together to face drought have a new resource that may help guide them through the process.

The Extension Disaster **Education Network and National** Voluntary Organizations Active in Disaster have developed a Community Capacity-Building Program for Drought Response, a multi-agency, multi-organization effort to help communities tackle drought issues. The guide, in pilot testing now, draws from the National VOAD Long-Term Recovery Manual, from the Guide to Drought-Ready Communities. developed by the National Drought Mitigation Center and partners, and from other resources. It is intended to serve as a resource for communities currently in drought,

"All disasters are local. ... The widespread nature of the 2012-2013 megadrought will require each community to assess your own abilities to respond to and recover from the drought."

- Steve Cain

said Steve Cain, Purdue University Disaster Specialist and chair of the VOAD Drought Taskforce.

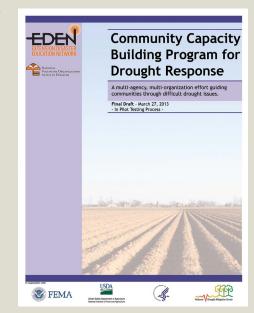
"All disasters are local," Cain says in an introductory letter accompanying the new resource. "While there are state and federal programs and humanitarian assistance that can help, the widespread nature of the 2012-2013 mega-drought will require each community to assess your own abilities to respond to and recover from the drought."

It will be locally that communities work together and participate in actions to combat the drought, which is what drought capacity-building is all about. A handful of states are currently evaluating the new program with an eye toward working with specific communities.

Cain recommends using the Guide in developing a Drought Capacity Planning Program and a possible Workshop and Resource Fair. It includes ideas on how to:

- Recruit a leadership team with necessary skills.
- Identify federal and state partner agencies.
- Promote the program.
- Solicit suggestions.
- Ask people how drought affects them as individuals and as a community, and what can be done about it.

The Drought Planning Tool Box includes:



- A community vulnerability scorecard, based on a detailed inventory of possible drought impacts.
- Community assets identification.
- Ways to list and priorities solutions and mitigation actions.

The EDEN/VOAD Community Capacity-Building Program for Drought Response guide is one of the newest additions to a growing collection of resources from extension services across the country, available free, online at http://www.EDEN.lsu.edu/drought or by contacting Steve Cain at cain@purdue.edu.

Also check the EDEN drought website for details on an upcoming webinar.

For more information:

The EDEN/VOAD Community Capacity Building Program for Drought Response guide is one of the newest additions to a growing collection of resources from extension services across the country, available free, by contacting Steve Cain at cain@purdue.edu or online at http://www.EDEN.lsu.edu/drought.

The Guide to Drought-Ready Communities is also available free, online at http://drought.unl.edu/Planning/PlanningProcesses/DroughtReadyCommunities.aspx

Svoboda contributes to food and water security focus in D.C.

ark Svoboda, the National Drought Mitigation Center's Monitoring Program Area leader, took part in "Too Hot, Too Wet, Too Dry: Building Resilient Agroecosystems" on March 20 in Washington, D.C., organized by the Global Harvest Initiative and the

and ranchers, and the drought will continue to have major implications for agriculture here in the U.S. and abroad."

The commemoration of World Water Day provided opportunities for industry experts and policymakers to discuss water

> and food security. Roberto Lenton. executive director of the Robert B. Daugherty Water for Food Institute, and Margaret Zeigler, executive director of the Global Harvest Initiative. organized the event. The Global Harvest Initiative is a Washington, D.C.-based think tank financed by large agribusiness companies.

Other speakers, panelists and moderators were

Ronnie D. Green. Harlan vice chancellor of the Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln and vice president of the University of Nebraska: Paul Weisenfeld, with USAID, assistant to the administrator, Bureau for Food Security, part of President Obama's Feed the Future Initiative:

"The 2012 drought in the U.S. was the worst in a generation. Now we're looking ahead to what could be another very tough year for U.S. farmers and ranchers, and the drought will continue to have major implications for agriculture here in the U.S. and abroad."

- Mark Svoboda

Manish Bapna, executive vice president and managing director of the World Resources Institute; and Claudia Garcia, senior director of global corporate affairs for Elanco and chairwoman of the Global Harvest Initiative Board of Directors.

DWFI is a research, education and policy analysis institute committed to helping the world efficiently use its limited freshwater resources, with particular focus on ensuring the food supply for current and future generations.

GHI coverage: http://www. globalharvestinitiative.org/index.php/2013/03/ ghi-ag-climate-experts-global-water-threats/



Mark Svoboda spoke March 20 at the National Press Club.

Robert B. Daugherty Water for Food Institute (DWFI) at the University of Nebraska. The day included presentations at the National Press Club and on Capitol Hill.

"The 2012 drought in the U.S. was the worst in a generation," Svoboda said. "Now we're looking ahead to what could be another very tough year for U.S. farmers



Don Wilhite, founding director of the NDMC, will moderate the Drought Preparedness Case Studies session, and Mark Svoboda will present during the Communicating about Climate Roundtable session at the 2013 Water for Food conference.

New Mexico Ranch Workshop: May 29, Socorro

A New Mexico drought workshop, **Drought Outlook and Management** Considerations for Rangeland Livestock Production, will be Wednesday, May 29, in Socorro. The National Drought Mitigation Center and the National Integrated Drought Information System are working with the Bureau of Land Management and the New Mexico State University Extension.

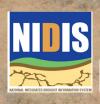
The workshop, at the Socorro County Extension office, 198 Neel Ave., starts with registration at 7:30 a.m. Morning sessions include outlooks for drought and wildfire and an overview of climate services, the current drought status in New Mexico and the west, impacts of drought on soils and vegetation, and implications of drought for rangeland

livestock production.

Afternoon sessions will focus on state and federal agencies' responses to livestock grazing during drought, drought tools for producers, an overview of drought plan development, and help with drought planning.

Presenters, who are still being lined up, will include experts from New Mexico State University, from NIDIS and from the NDMC.

For more information, please contact Nicole Wall at the NDMC, nwall2@unl. edu, 402-472-6776, or Nathan Combs, Bureau of Land Management and president of the New Mexico Chapter of the Society for Rangeland Management, ncombs@blm.gov, 575-838-1251.









Managing Drought Risk on the Ranch Updates

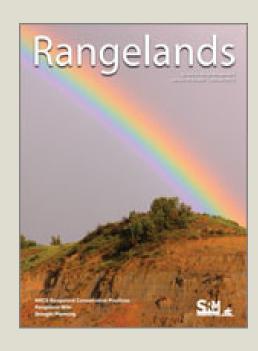


Archived webinars from this year's "Managing Drought Risk on the Ranch Professional Development" series are online: http://drought.unl.edu/ranchplan/ Overview.aspx

Tonya Haigh and Cody Knutson have coauthored recent publications related to Managing Drought Risk on the Ranch, one scholarly and one more applied:

"A Drought Planning Methodology for Ranchers in the Great Plains" appeared in Rangelands, Vol. 35, No. 1, February 2013, which you can find at www.srmjournals. org. Rangelands is a full-color publication of the Society for Range Management published six times per year.

A scholarly article, "Roles of Perceived Control and Planning in Ranch Drought Development," appears in the Spring 2013 edition of Great Plains Research.



Tune in to the US Drought Monitor Forum, April 16-18

Besides looking at some of the latest ways to monitor drought and its impacts, this year's U.S. Drought Monitor Forum, April 16-18 in West Palm Beach, Florida, will focus on drought in the tropics. International participants will explore the possibility of expanding the North American Drought Monitor to include the Caribbean. Central America and various Pacific islands

Agenda

http://go.unl.edu/usdmforum2013agenda

Adobe Connect

http://ndmc.adobeconnect.com/dmforum/

Twitter

#USDroughtMonitor

Archived webinar looks at scenario-based drought planning

A Feb. 6 webinar focused on using simulations to plan and prepare for drought. Canada and the state of Colorado have recently used drought scenarios as a planning tool.

Find this webinar and other National Integrated Drought Information System Engaging Preparedness Communities working group activities archived online:

http://drought.unl.edu/AboutUs/CurrentResearch/ EngagingPreparednessCommunities.aspx







CoCoRaHS WxTalk focuses on drought



Mark Svoboda, leader of the NDMC's Monitoring Program Area, gave a good "Drought 101" talk as part of CoCoRaHS' WxTalk Webinar series. He discussed drought in general as well as specifics of drought in 2012-13. Tune in on YouTube:

http://youtu.be/604WhTxkvsM