“The U.S. Drought of 2012-13 Lingers and Shifts Westward”
Brad Rippey, USDA Meteorologist, Washington, D.C.
Potential U.S. Trouble Spots, 2014 Growing Season

- **California** (third year of drought; depleted soil moisture; diminishing water supplies)
- **Great Basin, Southwest** (see California)
- **Southern Great Plains** (fourth year of drought?; drought-damaged rangeland; subsoil moisture shortages)
- **Corn Belt** (lingering drought in Upper Midwest; wetness issues some places?)
- **Western Gulf Coast** (trending dry)
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://droughtmonitor.unl.edu/
Feb. 18, 2014: 35.73% of CONUS in drought.
Percentiles and the U.S. Drought Monitor

• Advantages of percentiles:
  – Can be applied to any parameter
  – Can be used for any length of data record
  – Puts drought in historical perspective

• D4, Exceptional Drought: once per 50 to 100 years
• D3, Extreme Drought: once per 20 to 50 years
• D2, Severe Drought: once per 10 to 20 years
• D1, Moderate Drought: once per 5 to 10 years
• D0, Abnormally Dry: once per 3 to 5 years
California Agricultural Production Statistics, 2012

- The state’s 80,500 farms and ranches received a record $44.7 billion for their output in 2012, up from $43.3 billion in 2011 and $37.9 billion in 2010.
- California is the number one state in cash farm receipts with 11.3 percent of the U.S. total.
- The state accounted for 15 percent of domestic receipts for crops and 7.1 percent of the U.S. revenue for livestock and livestock products.

Source: California Department of Food and Agriculture
## California Agricultural Production Statistics, 2012

- **Milk**: $6.90 billion
- **Grapes**: $4.45 billion
- **Almonds**: $4.35 billion
- **Nursery plants**: $3.54 billion
- **Cattle, Calves**: $3.30 billion
- **Strawberries**: $1.94 billion
- **Lettuce**: $1.45 billion
- **Walnuts**: $1.35 billion
- **Hay**: $1.25 billion
- **Tomatoes**: $1.17 billion

Note: These ten commodities accounted for approximately two-thirds of California’s agricultural cash receipts in 2012.

Source: California Department of Food and Agriculture
Percent of Normal Precipitation
October 1, 2013 – February 19, 2014
California, Precipitation, August-January

1901-2000 Avg: 12.83"

Precip

1917-18

1975-76

1990-91

2013-14
California Reservoir Storage, Million Acre-Feet, 2010-14

California recovered from a previous drought in 2009-10. The current drought began during the winter of 2011-12 and has persisted through 2012-13 and into 2013-14.

Note: One acre-foot is equal to 325,851 gallons, or the amount of water it takes to cover one acre to a depth of one foot. California’s reservoir storage is down nearly 20 million acre-feet, or about 6.35 trillion gallons, since the summer of 2011.
California recovered from a previous drought in 2009-10. The current drought began during the winter of 2011-12 and has persisted through 2012-13 and into 2013-14.

Source: California Department of Water Resources
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<td>2011</td>
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<td>5.8 (70%)</td>
<td>2012</td>
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Daily Sierra Nevada Snowpack (Inches) vs. Normal

Source: California Department of Water Resources
X = Rankings of Driest Years
U.S. Cattle Areas Experiencing Drought

Reflects February 18, 2014
U.S. Drought Monitor data

Approximately 39% of the domestic cattle inventory is within an area experiencing drought, based on NASS 2007 Census of Agriculture data.

- Major and minor agricultural areas are based on NASS 2007 Census of Agriculture data. Counties shaded in gray contain data that are not published by NASS, and hence were not used in delineating the major and minor agricultural areas. Additional information on these agricultural data can be found at: http://www.agecensus.usda.gov/.

- Mapped drought areas are derived from the U.S. Drought Monitor product and do not depict the intensity of drought in any particular location. More information on the Drought Monitor can be found at: http://droughtmonitor.unl.edu/.

- Major areas combined account for 75% of the total national inventory.
- Major and minor areas combined account for 99% of the total national inventory.
United States Cattle Areas Located in Drought

Agricultural Weather Assessments
World Agricultural Outlook Board
U.S. Hay Areas Experiencing Drought

Reflects February 18, 2014
U.S. Drought Monitor data

Approximately 24% of the domestic hay acreage is within an area experiencing drought, based on NASS 2007 Census of Agriculture data.

Major and minor agricultural areas are based on NASS 2007 Census of Agriculture data. Counties shaded in gray contain data that are not published by NASS, and hence were not used in delineating the major and minor agricultural areas. Additional information on these agricultural data can be found at: http://www.agecensus.usda.gov/.

Mapped drought areas are derived from the U.S. Drought Monitor product and do not depict the intensity of drought in any particular location. More information on the Drought Monitor can be found at: http://droughtmonitor.unl.edu/.

- Major areas combined account for 75% of the total national acreage.
- Major and minor areas combined account for 99% of the total national acreage.
Besides California, reservoir storage for this time of year is far below normal in Nevada, New Mexico, and Oregon.
Potential U.S. Trouble Spots, 2014 Growing Season

• **California** (third year of drought; depleted soil moisture; diminishing water supplies)
• **Great Basin, Southwest** (see California)
• **Southern High Plains** (fourth year of drought?; drought-damaged rangeland; subsoil moisture shortages)
• **Corn Belt** (lingering drought in Upper Midwest; wetness issues farther east?)
• **Western Gulf Coast** (trending dry)
U.S. Winter Wheat Areas Experiencing Drought

Reflects February 18, 2014
U.S. Drought Monitor data

Approximately 45% of the winter wheat grown in the U.S. is within an area experiencing drought, based on historical NASS crop production data.

Major and minor agricultural areas are derived from NASS county-level crop production data from 2006 to 2010. Additional information on these agricultural data can be found at: http://www.nass.usda.gov/.

Mapped drought areas are derived from the U.S. Drought Monitor product and do not depict the intensity of drought in any particular location. More information on the Drought Monitor can be found at: http://droughtmonitor.unl.edu/.

- Major areas combined account for 75% of the total national production annually.
- Major and minor areas combined account for 99% of the total national production annually.

USDA
Agricultural Weather Assessments
World Agricultural Outlook Board
United States Winter Wheat Areas Located in Drought

Agricultural Weather Assessments
World Agricultural Outlook Board

Percent

Date

Moderate or more intense drought (D1+)
Severe or more intense drought (D2+)
Extreme or more intense drought (D3+)
Exceptional drought (D4)
Years since the 1950s with W.W. abandonment > 22%:

2013: 2nd highest winter wheat abandonment in the “modern era” behind 2002
Based on NASS crop progress data.

Index Weighting: Excellent = 4; Good = 3; Fair = 2; Poor = 1; Very Poor = 0
**Winter Wheat Conditions**  
*February 2, 2014*

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</table>
Potential U.S. Trouble Spots, 2014 Growing Season

- **California** (third year of drought; depleted soil moisture; diminishing water supplies)
- **Great Basin, Southwest** (see California)
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- **Corn Belt** (lingering drought in Upper Midwest; wetness issues farther east?)
- **Western Gulf Coast** (trending dry)
The impacts of the 2012 drought and heat on corn were severe; lowest U.S. yield since 1995.

2010-12: First time U.S. corn yield fell 3 years in a row since 1928-30.

From “USDA Agricultural Projections to 2023”: 2014 U.S. corn yield of 165.6 bushels/acre
Iowa, Summer Average Temperature (°F), 1895-2013

Iowa, Temperature, June-August

1901-2000 Avg: 71.5°F

Temperature
U.S. Corn Areas Experiencing Drought

Reflects February 18, 2014 U.S. Drought Monitor data

Approximately 29% of the corn grown in the U.S. is within an area experiencing drought, based on historical NASS crop production data.

- Major areas combined account for 75% of the total national production annually.
- Major and minor areas combined account for 99% of the total national production annually.

Major and minor agricultural areas are derived from NASS county-level crop production data from 2006 to 2010. Additional information on these agricultural data can be found at: http://www.nass.usda.gov/.

Mapped drought areas are derived from the U.S. Drought Monitor product and do not depict the intensity of drought in any particular location. More information on the Drought Monitor can be found at: http://droughtmonitor.unl.edu/.

USDA Agricultural Weather Assessments
World Agricultural Outlook Board
United States Corn Areas Located in Drought

Agricultural Weather Assessments
World Agricultural Outlook Board

Percent

Date


Moderate or more intense drought (D1+)
Severe or more intense drought (D2+)
Extreme or more intense drought (D3+)
Exceptional drought (D4)
U.S. Soybean Areas Experiencing Drought

Reflects February 18, 2014
U.S. Drought Monitor data

Approximately 20% of the soybeans grown in the U.S. is within an area experiencing drought, based on historical NASS crop production data.

Major and minor agricultural areas are derived from NASS county-level crop production data from 2006 to 2010. Additional information on these agricultural data can be found at: http://www.nass.usda.gov/

Mapped drought areas are derived from the U.S. Drought Monitor product and do not depict the intensity of drought in any particular location. More information on the Drought Monitor can be found at: http://droughtmonitor.unl.edu/

- Major areas combined account for 75% of the total national production annually.
- Major and minor areas combined account for 99% of the total national production annually.
United States Soybean Areas Located in Drought

Agricultural Weather Assessments
World Agricultural Outlook Board
Even though some flooding is occurring now in the Lower Midwest, soil moisture models point toward the northern Plains as the region to watch for potential spring flooding and planting delays.
“Fast Track” Secretarial Disaster Designation Process

- Streamlines the USDA Secretarial designation process by eliminating steps from the current process;
- A reduced interest rate for emergency loans that effectively lowers the current rate from 3.75 percent to 2.25 percent;
- Preserves the ability of a state governor or Indian Tribal Council to request a Secretarial Disaster Designation;
- Removes the requirement that a request for a disaster designation be initiated only by a state governor or Indian Tribal Council;
- Further streamlines the disaster designation process for severe drought occurrences by utilizing the U.S. Drought Monitor as a tool to automatically trigger disaster areas with no further documentation;
- Does not impose any new requirements on producers or the public.
- Led to drought disaster declarations in 2,254 counties in 39 states.
Secretarial Drought Designations for 2013

Disaster Incidents as of February 5, 2014

- State Boundary
- County Boundary
- Tribal Lands

February 5, 2014

- Primary Counties: 1257
- Contiguous Counties: 315
• U.S. Drought Monitor Usage by FSA

• Food, Conservation, and Energy Act of 2008 ("Farm Bill") authorizes the Livestock Forage Disaster Program (LFP)
  – Grazing loss because of drought on owned or leased grazing land or pastureland that is physically located in a county experiencing:
    • D2 intensity for at least 8 consecutive weeks during normal grazing period will be eligible to receive an amount equal to 1 monthly payment
    • D3 intensity during the normal grazing period will be eligible to receive an amount equal to 2 monthly payments
    • D3 intensity for at least 4 weeks or a D4 intensity any time during the grazing period will be eligible to receive an amount equal to 3 monthly payments
• U.S. Drought Monitor Usage by FSA

• Agricultural Act of 2014 ("Farm Bill") re-authorizes the Livestock Forage Disaster Program (LFP)
  – Grazing loss because of drought on owned or leased grazing land or pastureland that is physically located in a county experiencing:
    • D2 intensity for at least 8 consecutive weeks during normal grazing period will be eligible to receive an amount equal to 1 monthly payment
    • D3 intensity during the normal grazing period will be eligible to receive an amount equal to 3 monthly payments
    • D3 intensity for at least 4 weeks or a D4 intensity any time during the grazing period will be eligible to receive an amount equal to 4 monthly payments
    • D4 intensity for at least 4 weeks during the normal grazing period will be eligible to receive an amount equal to 5 monthly payments
• 2008 “Farm Bill” Livestock Forage Disaster Program (LFP) Payouts (financial assistance to producers who suffered grazing losses due to drought or fire on or after January 1, 2008, and before October 1, 2011, during the calendar year in which the loss occurs):
  – 2008 calendar year: $165,540,837
  – 2009 calendar year: $  98,739,950
  – 2010 calendar year: $  33,334,458
  – 2011 calendar year: $180,950,088
  – 2012 calendar year: $                  0
  – LFP total, 2008-11: $478,565,333
Retroactive LFP Payouts

The 2014 Farm Bill contains permanent livestock disaster programs including the Livestock Forage Disaster Program, which will help producers in California and other areas recover from the drought. At President Obama’s direction, USDA is making implementation of the disaster programs a top priority and plans to have the programs available for sign up in 60 days. Producers will be able to sign up for the livestock disaster programs for losses not only for 2014 but for losses they experienced in 2012 and 2013. While these livestock programs took over a year to get assistance out the door under the last Farm Bill, USDA has committed to cut that time by more than 80 percent and begin sign-up in April. California alone could potentially receive up to $100 million for 2014 losses and up to $50 million for previous years.
Thank you!

- Contact info
  - e-mail: brippey@oce.usda.gov
  - phone: (202) 720-2397
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<td>10.</td>
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**Source:** National Climatic Data Center (http://www.ncdc.noaa.gov/billions/)