United States Department of Agriculture
Forest Service
Manti-La Sal National Forest
Moab/Monticello Ranger District
62 East 100 North
P.O. Box 386
Moab, UT 84532
Phone # (435) 259-7155
Fax # (435) 259-7737

File Code: 2210/2230
Date: May 6, 2013

Harley, Lorraine and Kenneth Bates
PO Box 234
Moab, Utah 84532

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Dear Mr., Mrs. and Mr. Bates:

This letter will serve as your Annual Operating Instructions (AOI) for the Castle Valley C&H Allotment for the 2013 grazing season. This AOI is made part of your Term Grazing Permit consistent with Part 1, item 3 and Part 2, item 8(a). A failure to follow these instructions is a violation of your permit. The AOI complies with the standards and guidelines found in the Forest Plan. **Please read your instructions thoroughly.**

AUTHORIZED USE FOR 2013

Allotment	Numbers	Kind	Class	Season	Permittee	Non-use	
						Resource protection	Personal convenience
Castle Valley (Pinhook)	50-100	Cattle	Cow/calf	05/18 to 10/15	Bates, Harley, Lorraine and Kenneth		
Castle Valley (Mesas)	270	Cattle	Cow/calf	Between 06/01 and 10/20	Bates, Harley, Lorraine and Kenneth	30 c/c pair	

GRAZING SYSTEM AND SCHEDULE

Pinhook portion:

Pasture	Number	Kind	Approximate Dates
Lower Pinhook	100	Cattle	05/18 – 05/31
Upper Pinhook	50	Cattle	06/01 - 08/20
Miners Basin	50	Cattle	08/21 – 10/15

Mesas portion:

Pasture	Number	Kind	Approximate Dates
Adobe Mesa/Fisher Mesa	Used in conjunction with BLM		

West Andy	270	Cattle	06/01 – 07/01
East Andy	270	Cattle	07/01 – 08/01
Private Sec. 31 and State Land*	270	Cattle	08/01– 09/15 (off Forest)
Bachelor Basin/Willow Basin	130	Cattle	09/15 – 10/20 (grazed with Private land listed below)
Private Sec 36 & half of Sec 35*	140	Cattle	09/15 – 10/20

Permitted pack and saddle stock authorized on the allotment for livestock management will not exceed four head.

*These are private and/or State land and are not billed and are not part of permitted AUMs. They have been included in the AOI for information purposes only. It is estimated that less than half the area in the Bachelor Basin/Willow Basin area is on Forest with the rest on the private land sections. The 130 pair number attempts to reflect this.

You have requested and been granted on earlier on date for the Lower Pinhook unit. The reasoning for this is to be able to graze the cheatgrass in the area. This is expected to help in controlling the cheatgrass that increased in the area after the fire in 2008. The area will be monitored closely to ensure that the perennial bunchgrasses in the pasture do not receive overuse so they are better able to compete with the cheatgrass. As you are only to be in the pasture 2 weeks, it is expected the use on perennial grasses would be low.

Management Response to Drought Conditions

You are planning to take partial non-use on at least 30 c/c pair due to current below normal snow pack, precipitation and soil moisture conditions and because current forecasts are predicting a continuation of drought conditions into this summer (*see enclosed documents concerning current conditions and forecasts)*. In addition to a lowered stocking rate, you have agreed that you will increase the amount of riding done on the allotment to keep cattle dispersed and if needed, haul water down to the fenceline between Upper and Lower Pinhook. Management may need to be adjusted depending upon actual conditions on the ground. Livestock may need to be removed from the allotment earlier than planned if drought conditions worsen.

Your allotment should be inspected for range readiness to determine forage growth and fence and water improvement conditions. **The pasture move dates shown above are an estimate, and may change on the basis of actual range conditions.** Situations may develop during the grazing season which requires changes to these instructions. If this becomes necessary, or if you cannot comply with some part of these instructions, contact the District Ranger and obtain approval before initiating changes or deviating from these instructions.

PROPER GRAZING-USE INDICATORS

Utilization standards are tools used in achieving or moving towards desired rangeland conditions. Utilization standards are not the desired conditions or management objectives themselves, they are indicators. Desired conditions and objectives are discussed in the 1986 Forest Plan and/or the Allotment Management Plan.

Desired goals in the 1986 Forest Plan include:

- Bring livestock obligation in line with rangeland carrying capacity

- Maintain upward or stable trends in vegetation and soil condition.

Management Objectives in the 1995 Castle Valley Allotment Management Plan include:

- Improve the forage resource, increase desirable plant species; and maintain ground cover (vegetation and litter) at a level the will maintain the allotment's natural resources at its desired future condition.
- Improve and/or maintain the Lower Pinhook riparian area.

The 1990 Forest Plan Amendment for Range Proper-Use Criteria states proper use as ranging from 40-65% use of upland key species depending on the grazing system applied and from 30-60% use of riparian key species depending season of use. This amendment kept the existing provision that proper use criteria are to be established on an allotment by allotment basis and as given in the AMP and AOIs.

For the Castle Valley allotment proper use criteria for 2013 is:

Upland Areas:	**Use of Key Species**
Spring/Summer	**45-50%**
Fall	**50-60%**

Use levels on perennial bunchgrasses in Lower Pinhook must be kept below 40% to facilitate continued recovery from the fire.

Riparian Areas:	**Use of Key Species**
Spring (Early and rapid growth)	**50-60%**
Summer (Moderate growth)	**45-50%**
Fall (Slow growth)	**30-40% or 4-5 inches stubble or regrowth**

There is a difference between where percentage utilized is applied and where stubble height is applied to determine proper use in riparian areas. Percent utilized is used for plant species that are within the larger riparian area (the area that is influenced by the stream and the water table) but not along the greenline. The greenline is the first perennial vegetation on or near the stream's edge that is at least one foot wide. Stubble height measurements are used to determine proper use along the greenline. The plant species considered are typically water loving species (hydric species) such as sedges.

It is your responsibility as the permittee to recognize when proper use has been reached and promptly move all cattle as necessary. If you need some assistance, or methods and tools for determining proper use, please contact Tina Marian.

When proper use has been reached in the unit being grazed, your cattle are to be herded to the next scheduled unit. **When proper use is reached in the last unit grazed, all cattle are to be removed from the allotment, <u>even if this date is prior to the end of your grazing season.</u>** Cattle found on the Allotment before or after the permitted grazing season will be billed at the unauthorized use rate and permit non-compliance actions will be initiated.

You should be aware that Forest Service policy provides that "an authorized officer may require the permittee to monitor and report information on compliance with the grazing permit, allotment management plan and annual operation instructions as a term and condition of your permit."

To facilitate livestock moves, gates may be opened a few days prior to the scheduled move date only when moving into an adjacent pasture. Gates must be closed and the grazed pasture entirely cleaned of livestock no later than five days following the scheduled move date. Grazed pastures must be kept clean of livestock following the pasture move.

IMPROVEMENTS

Since 2006, the Forest Service has entered into structural improvement agreements with each permittee which will continue for this season. The purpose of these agreements and the following inspections is to document how and if range structural improvements are being maintained.

Thank you for completing and sending in photos of your 2012 fence and pond maintenance agreements.

FENCE AGREEMENT: Since 2006, all fences on the permit have been part of an agreement; however we will continue doing agreements so as to keep documentation of maintenance current. For 2013, the Miner's Basin fence will be the agreed upon fence to inspect and make sure it is to permit standards as shown on the attached map.

SPRING AGREEMENT: For 2013, you have agreed to replace the trough and bring to standard Cold Springs development as shown on the attached map.

When you complete your fence and spring agreements you must fill out and sign the Improvement Agreement Form (pink) that is found in your folder. I suggest that you provide photographs of before and after conditions to assist in documenting compliance with maintenance requirements. I also encourage you to contact Tina when you complete your maintenance so she can schedule a timely inspection.

If you fail to bring the above agreed improvements up to standard by **October 20th, 2013** you will not be allowed to stock the allotment in 2014 until the agreement is fulfilled.

Range improvements are essential in ensuring that livestock are well distributed and that Forest standards and guides are met.

- Improvements are to be maintained to standard prior to livestock entering the pasture and that failure to do so is a violation of their permit and action will be taken when violations are documented.
- If improvements have not been maintained, then develop a schedule to bring them up to standard.

- Until all improvements are functional it is not appropriate to authorize full numbers or season of use, unless assurances can be made that utilization standards will not be exceeded.

The maintenance of all structural improvements listed under part 3 of your Term Grazing Permit, Special Terms and Conditions: *Construction and Maintenance of Structural Improvements* is a requirement and should be completed prior to your entry into each pasture. The allotment permittee(s) are responsible for the maintenance of all structural range improvements on this allotment. For allotments managed by an Association or Herd Manager specific maintenance responsibilities may be assigned to individual permittees by the Association President or Herd Manager.

If you wish to use forest products (trees and oak brush) from the National Forest to maintain your fences/spring exclosures on your allotment, you must receive authorization from either the Moab or Monticello Office prior to cutting.

NEPA and PLANNED PROJECTS

The Forest Service is planning on completing an EA this year that will analyze the effects of the proposed water developments in Pinhook as well as other spring or water related projects on the La Sal Mountains. It is expected that a decision will be made this fall and implementation could begin early next spring.

The Willow Basin Fuels Reduction project is ongoing into this summer. There are still about 80 acres of mastication that will be implemented, likely in July. There will be a public meeting to be held about 2 weeks before they start the work as most of it is adjacent to private ground. In addition, during next winter piles within the thinned area will be burned. If you have question regarding the project or time of public meeting please contact Heather McLean (435-636-3310).

MISCELLANEOUS

Refer to Special Terms and Conditions in Part 3 of Term Grazing Permit for specific instructions pertaining to maintenance standards for range stock water developments, range fences, corrals, and herding standards.

All permitted livestock must be branded with your registered brand as documented in your Term Permit before they enter the National Forest.

Place salt blocks away from water, roads, meadows and other open areas so as to draw livestock into areas that receive light utilization. When livestock leave a pasture move the salt out of the pasture as well.

You will furnish sufficient riders or herders to achieve proper distribution of livestock.

Certified Weed Free Hay must be used if you do any supplemental feeding of horses on the allotment while gathering or moving cattle.

If you find the need to use mechanical clearing (tractors, bulldozers etc.) of fence lines or to clean ponds or other water improvements, you must have proper archeological clearance and permission from the District Ranger.

Enclosed in your AOI folder you will find an Actual Use Record sheet. As your 2013 grazing season progresses, please fill out this form in detail and return it promptly at the end of the grazing season. There are also extra sheets included in the folder where you are encouraged to document management on the allotment.

PAYMENT OF FEES

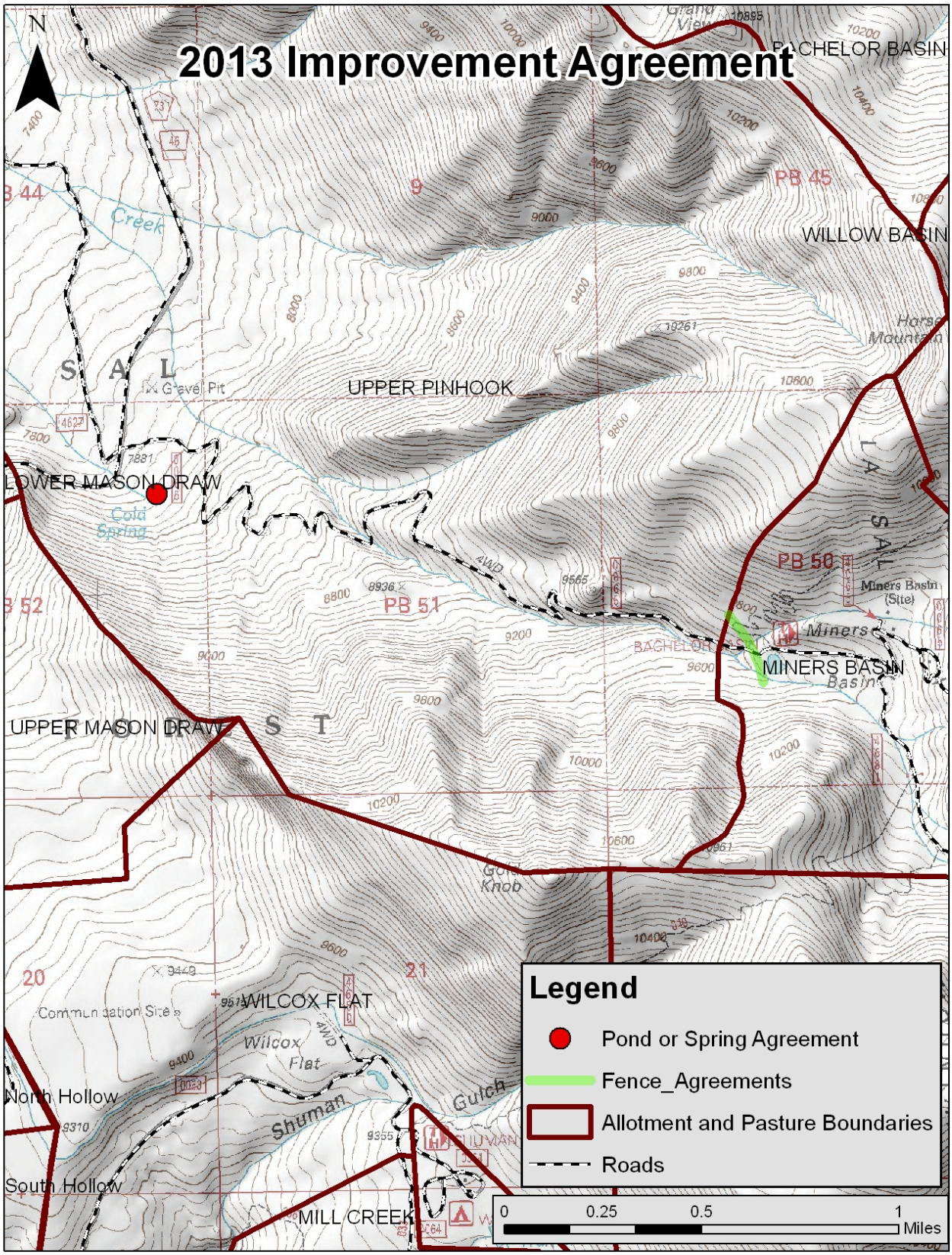
The permittee will not allow owned or controlled livestock to be on Forest Service-administered lands unless the fees specified in the Bill for Collection are paid and confirmation of payment through the "lock box" process is received prior to livestock entering NFS lands.

I am looking forward to working with you this summer. Please don't hesitate to call Tina Marian (435-636-3368) if you have any questions or if we can be of assistance.

Sincerely,

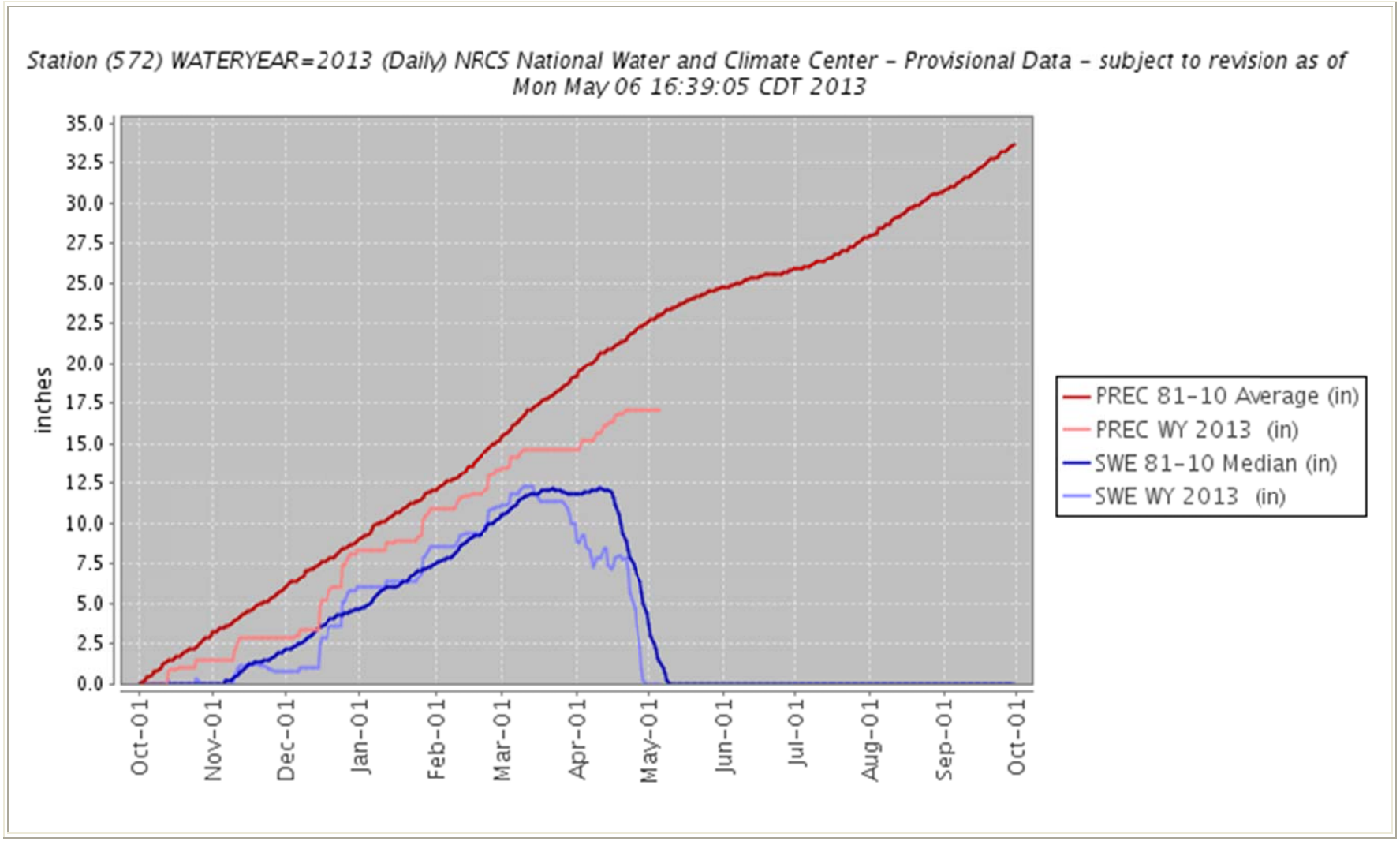
Tina Marian

for MICHAEL DIEM
District Ranger


2013 Improvement Agreement
N
BACHELOR BASIN
WILLOW BASIN
PB 45
PB 50
PB 51
UPPER PINHOOK
LOWER MASON DRAW
UPPER MASON DRAW
MINERS BASIN
WILCOX FLAT
MILL CREEK
Legend
Pond or Spring Agreement
Fence_Agreements
Allotment and Pasture Boundaries
Roads
0
0.25
0.5
1
Miles

Utah (PST) SNOTEL Site LASAL MOUNTAIN (572) (09L03S) Daily series for wateryear=2013

NRCS National Water and Climate Center - Provisional Data - subject to revision as of 2013-May-06. Notes on dates - Daily sensors (e.g. TAVG.D-1) report a summary value for the previous day. Hourly sensors (e.g. TAVG.H-1) report a summary value for the previous hour. Instantaneous sensors (e.g. TOBS.I-1) report a single observation on the hour.



Utah Climate and Water Report

May 2013

Western Uintah Mountains; April 2013.
Photo by Kent Sutcliffe

Scale in cm

Utah Climate and Water Report

The purpose of the Climate and Water Report is to provide a snapshot of current and immediate past climatic conditions and other information useful to agricultural and water user interests in Utah. The report utilizes data from several sources that represent specific parameters (streamflow data from the United States Geological Survey, reservoir data from the Bureau of Reclamation, and other sources), geography including high elevation United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Snowpack Telemetry (SNOTEL) data, and agriculturally important data from the USDA-NRCS Soil Climate Analysis Network (SCAN). Data on precipitation, soil moisture, soil temperature, reservoir storage, and streamflow are analyzed and presented. These data analyses can be used to increase irrigation efficiency and agricultural production. As with all data and analyses, there are limitations due to data quality, quantity, and spatial application.

Report Content

1) Climate and Water Information – Soil Climate Analysis Network

   a) Utah SCAN Water Year Precipitation
   b) North Central
   c) Northern Mountains
   d) Uintah Basin
   e) Southeast
   f) South Central
   g) Western and Dixie
   h) 2010 Minimum Soil Temperatures at Utah SCAN sites

2) General Hydrological Conditions

   a) SNOTEL Current Snow Water Equivalent (SWE) % of Normal
   b) SNOTEL Water Year to Date Precipitation
   c) Bear River Basin
      - Water Availability Index
   d) Weber and Ogden River Basins
      - Water Availability Index
   e) Utah Lake, Jordan River, and Tooele Valley Basins
      - Water Availability Index
   f) Uintah Basin
      - Water Availability Index
   g) Southeast River Basins
      - Water Availability Index
   h) Sevier and Beaver River Basins
      - Water Availability Index
   i) E. Garfield, Kane, Washington, and Iron Co.
      - Water Availability Index

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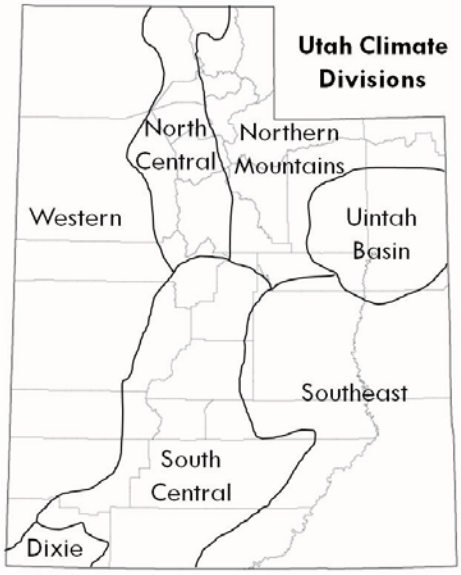
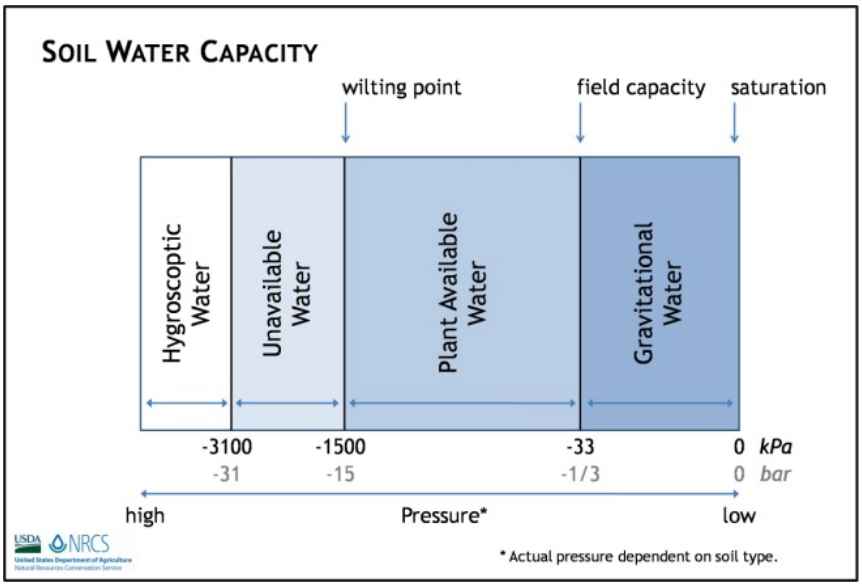
Climate and Water Information

Soil Climate Analysis Network

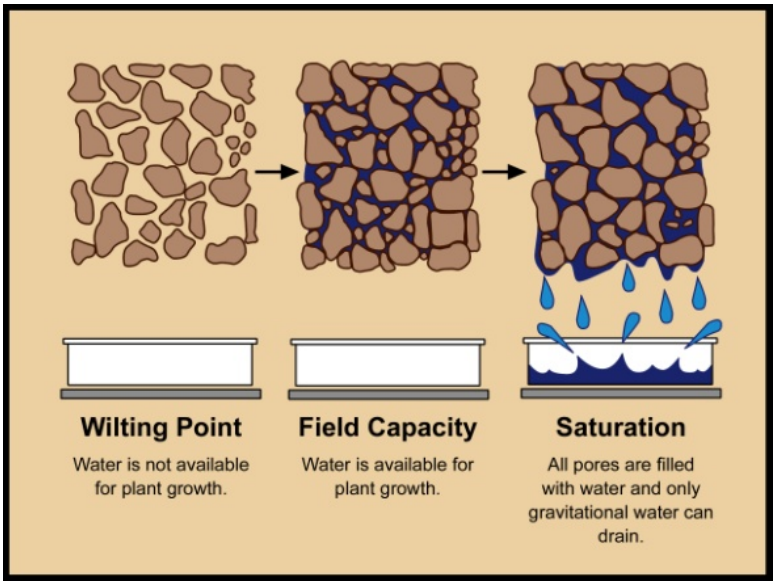
Soil Climate Analysis Network (SCAN) stations are primarily located on low- to mid-elevation, agriculturally important landscapes that maintain representative soils. Elevations range from 3,000 to 7,000 ft. The SCAN network provides real-time soil moisture and temperature data coupled with additional climate information for use in natural resource planning, drought assessment, water resource management, and resource inventory. Stations are situated on non-irrigated, native soils, are remotely located, and collect hourly atmospheric and soils data that are available to the public online.

In order to summarize SCAN data, the 35 sites in Utah are grouped by climate divisions (North Central, Northern Mountains, Uintah Basin, Southeast, South Central, Dixie, and Western).





Explanation of soil water capacity definitions. Field capacity (FC) and wilting point (WP) are calculated in the laboratory for each soil horizon. The amount of water held between field capacity and wilting point is plant available.

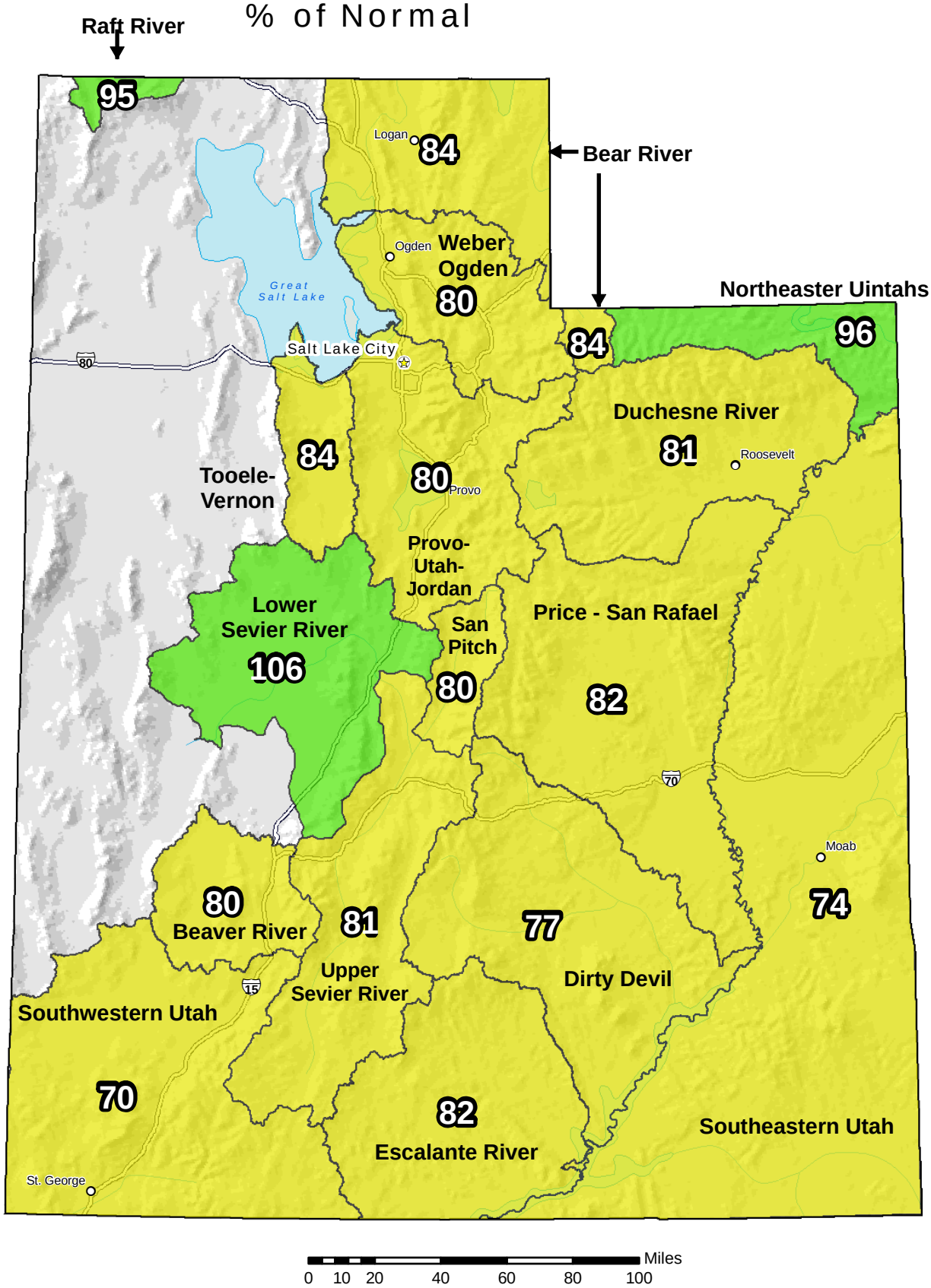


Visual explanation of soil water capacity definitions.

http://www.wcc.nrcs.usda.gov/scan/Utah/utah.html

Utah
SNOTEL Water Year (Oct 1) to Date Precipitation
% of Normal

May 01, 2013



Water Year (Oct 1) to Date Precipitation Basin-wide Percent of 1981-2010 Average

- unavailable *
- <50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- >=150%

* *Data unavailable at time of posting or measurement is not representative at this time of year*

Provisional Data Subject to Revision

The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

Prepared by the USDA/NRCS National Water and Climate Center
Portland, Oregon http://www.wcc.nrcs.usda.gov/gis/
Based on data from http://www.wcc.nrcs.usda.gov/reports/
Science contact: Jim.Marron@por.usda.gov 503 414 3047

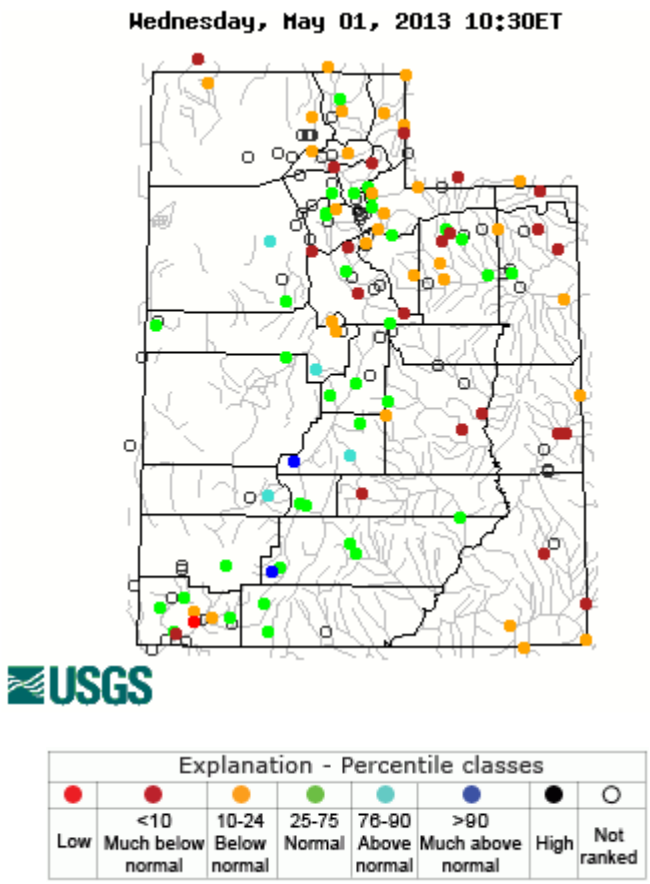
Utah Hydrologic Summary

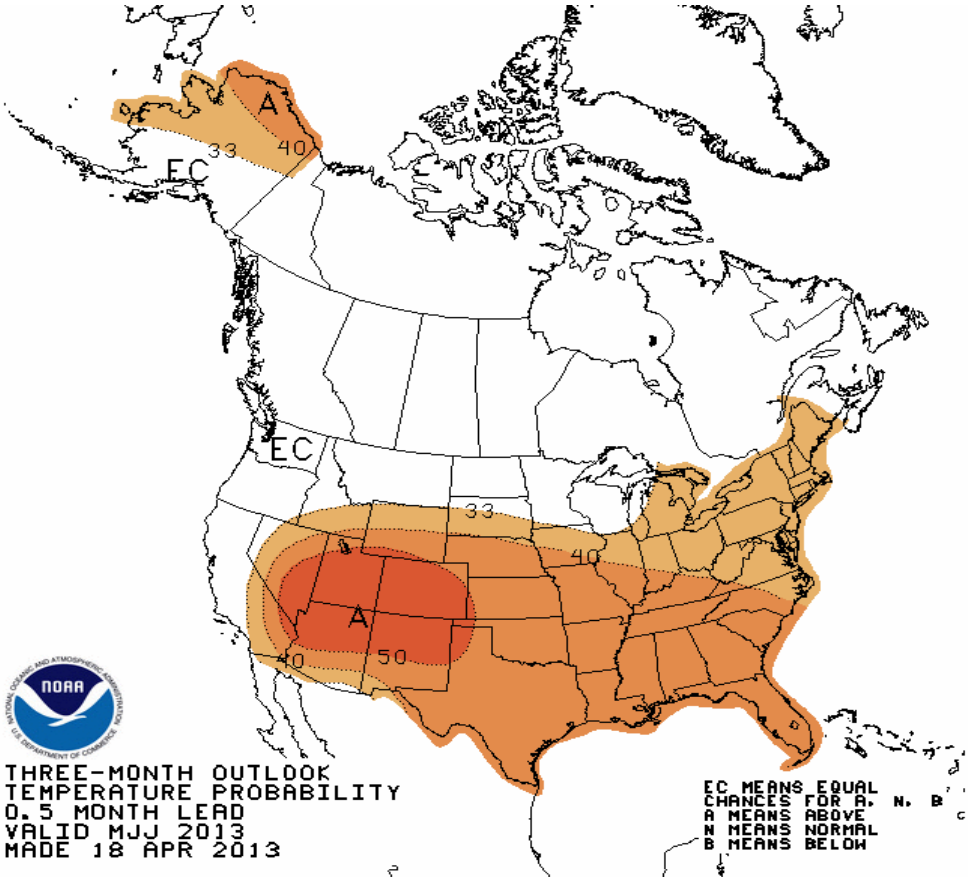
May 1, 2013

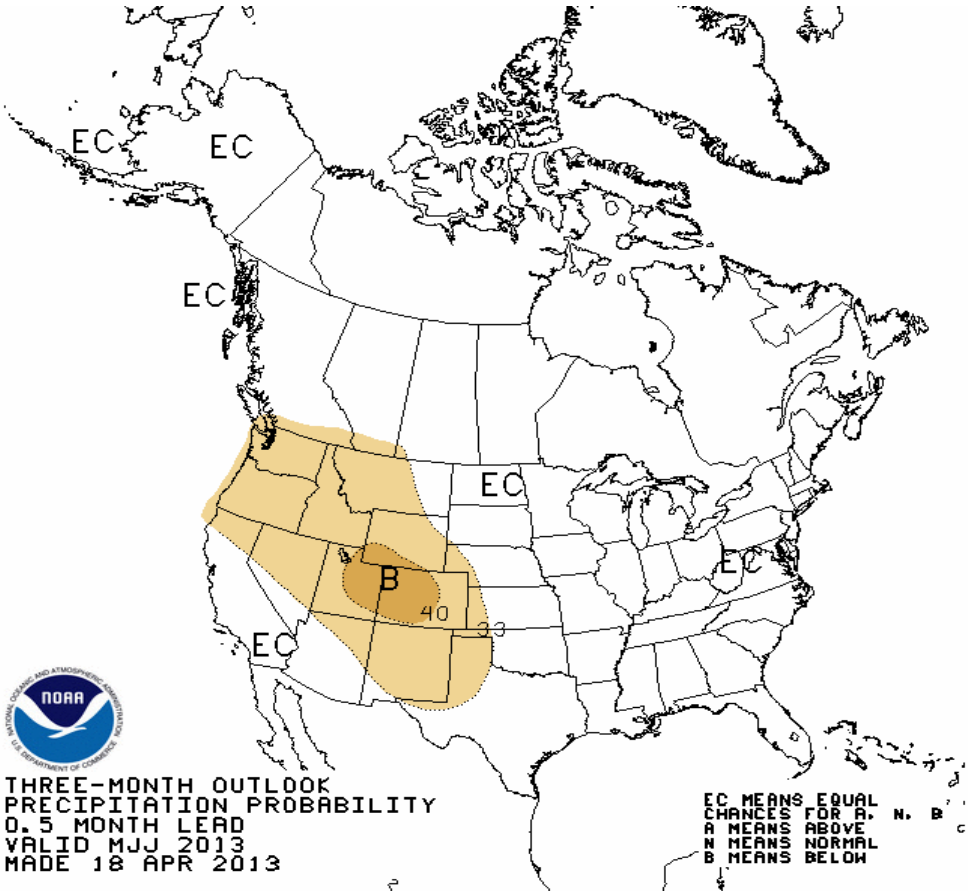
Current Conditions

Current runoff, as shown in the USGS graphic below, is mostly below to much below average across many areas of Utah. Snow packs over much of southern Utah are close to melt out with the exception of the Beaver and upper Sevier. In southeast Utah, peak flows and in some cases, the majority of this season's stream flows are already past and stream flow will continue to decline. Peak flows in the remainder of the state will likely occur in May with rapid declines thereafter. There simply isn't sufficient snowpack to sustain high flows this year and long term base flow conditions will likely be much lower as well. Much of this year's snowmelt has gone to recharge soil moisture which is currently average in the north and much dryer and drying quickly in the south. The southeast is very dry and is reflected in the observed streamflows. April precipitation was fantastic in the north (150%-200%) and below normal in the south (25%-75%). Reservoir storage is nearly 20% less than last year, near 73% of capacity across the state. Southeast Utah is very low at 49% of reservoir capacity. Having melted the greater part of snowpack in southeastern Utah, observed runoff response has been very weak. Expect this trend to continue for many areas of the state: low volumes and low peak flows. Poor runoff conditions will and already have had impacts on agriculture across the state with water allocation cuts. The National Climate Prediction Center forecasts for the area suggest warmer and drier conditions for the next 3 months. Based on all available water supply data, (reservoir storage, runoff predictions, climate forecasts, etc) agriculture producers will have to determine how much and what type of crops to plant in order to minimize risk and maximize production in what is becoming a very challenging year.

Current Utah Streamflow - Courtesy US Geological Survey




A
33
40
EC
EC
33
40
A
40
50
THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID MJJ 2013
MADE 18 APR 2013
EC MEANS EQUAL
CHANCES FOR A. N. B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW


EC
EC
EC
EC
EC
B
40
33
EC
THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID MJJ 2013
MADE 18 APR 2013
EC MEANS EQUAL
CHANCES FOR A. N. B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

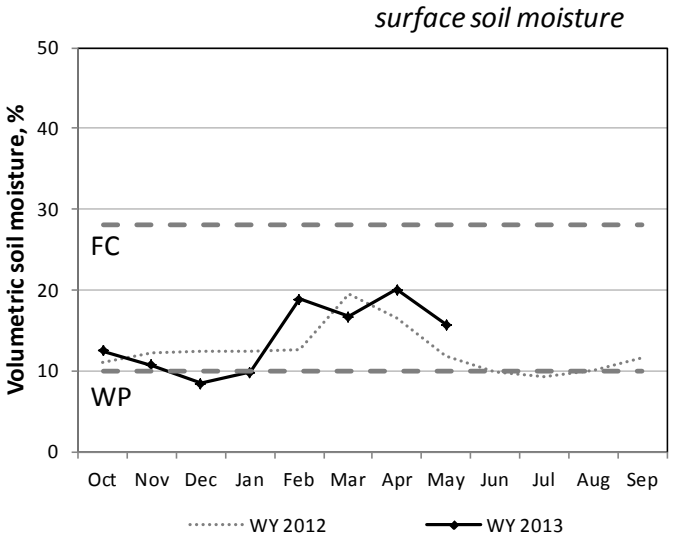
Southeast

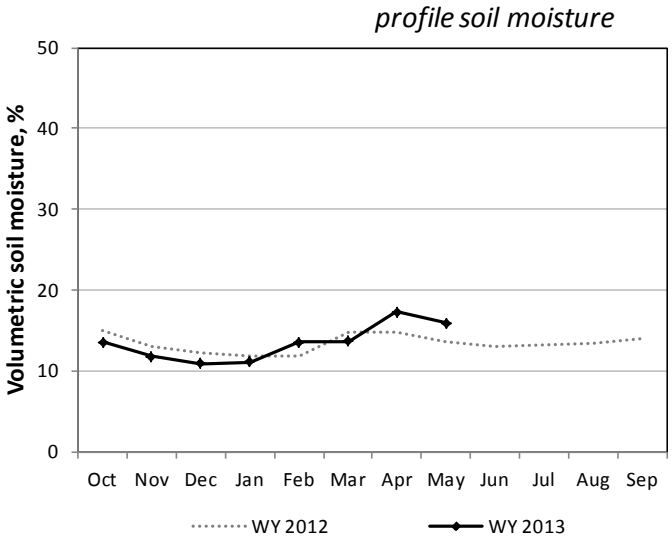
Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	in.	*in.*	*volume %*					*°F*				
SOUTHEAST												
Price	4.3	1.3	2	20	26	15	18	55	59	60	55	51
Green River	1.9	0.4	7	12	13	5	8	66	67	68	62	56
Harm's Way	3.1	0.6	12	0	20	24	11	59	57	58	53	49
West Summit	2.6	0.4	11	18	22	24	16	56	58	57	51	47
Eastland	3.0	0.1	17	19	22	33	34	55	56	56	51	48
Alkali Mesa	4.2	0.1	9	9	18	20	13	60	60	60	55	50
McCracken Mesa	4.7	0.2	9	24	24	24	12	62	64	64	58	55

* Precipitation since October 1 (beginning of the water year). Monthly Precip is the amount of precipitation accumulated in the past month. SCAN sites utilize tipping bucket rain gauges which do not accurately measure precipitation in the form of snowfall. Soil moisture and temperature values reflect conditions measured on the first of the month.

Southeast





Surface soil moisture is the weighted mean of the water content measured at depths of 2, 4, and 8 inches. **FC** is the mean field capacity, **WP** is the mean permanent wilting point for the soil surface (0 to 12 inches) at SCAN sites within the region, and **WY** is the water year lasting October through September. *Profile soil moisture* is the weighted mean of water content measured at depths of 2, 4, 8, 20, and 40 inches.

Additional data available at the SCAN website, including: hourly air temperature, relative humidity, wind speed, wind direction, barometric pressure, precipitation, solar radiation, soil temperature, and soil moisture.

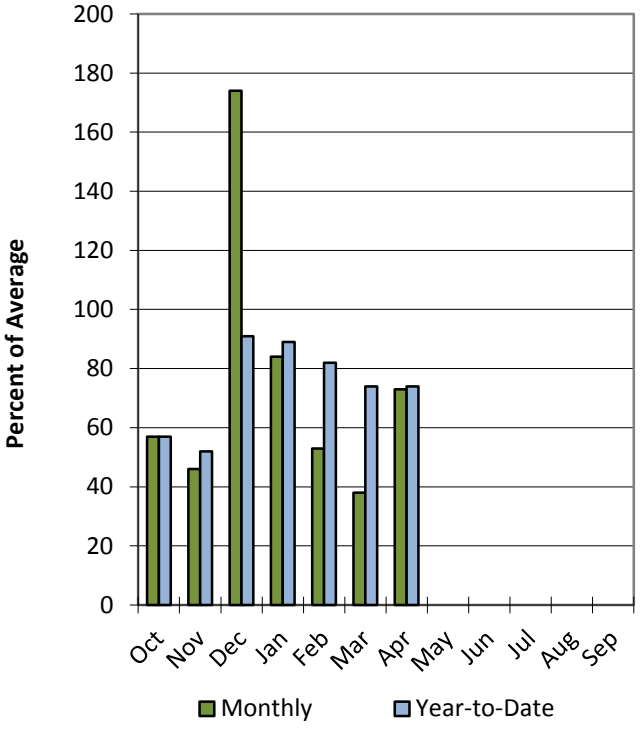
http://www.wcc.nrcs.usda.gov/scan/Utah/utah.html

Southeastern Utah Basin

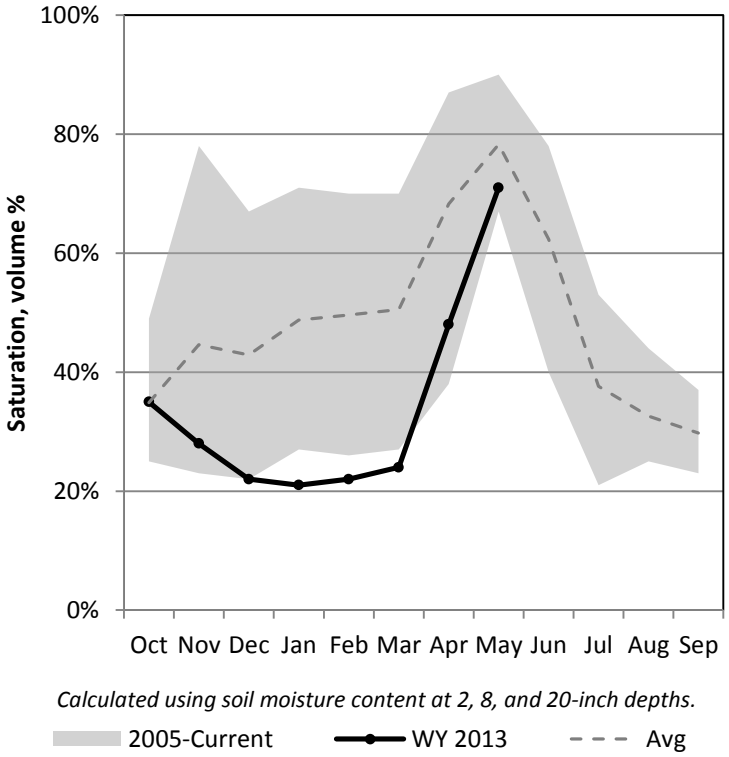
5/1/2013

Precipitation in April was below average at 73%, which brings the seasonal accumulation (Oct-Apr) to 74% of average. Soil moisture is at 71% compared to 72% last year. Reservoir storage is at 20% of capacity, compared to 65% last year. The water availibility index for Moab is 4%.

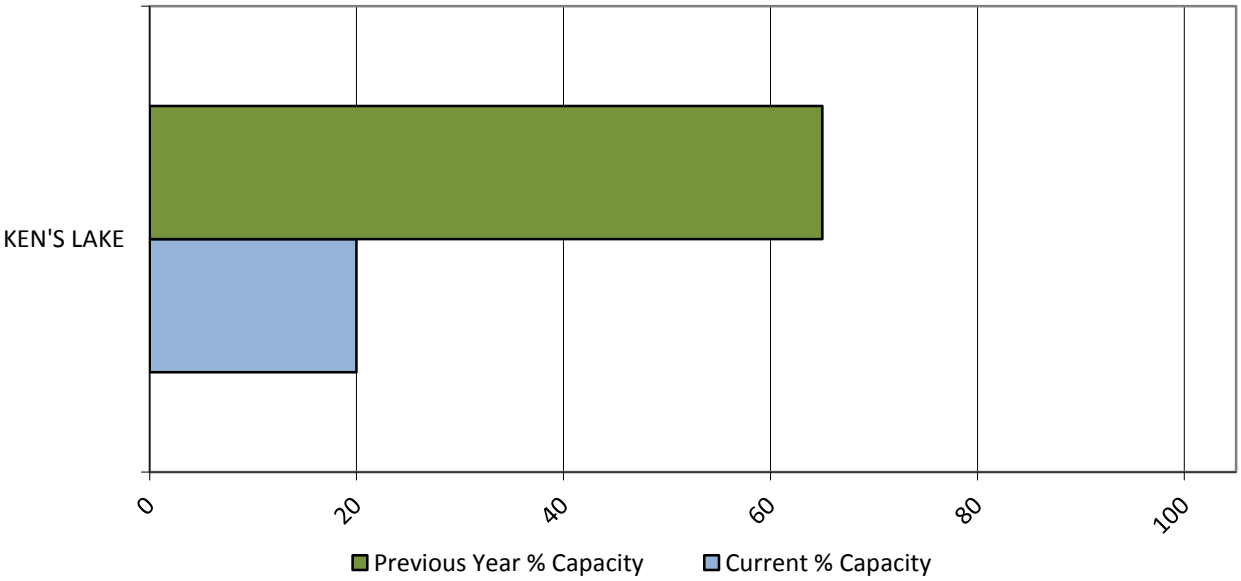
Precipitation



Soil Moisture



Reservoir Storage



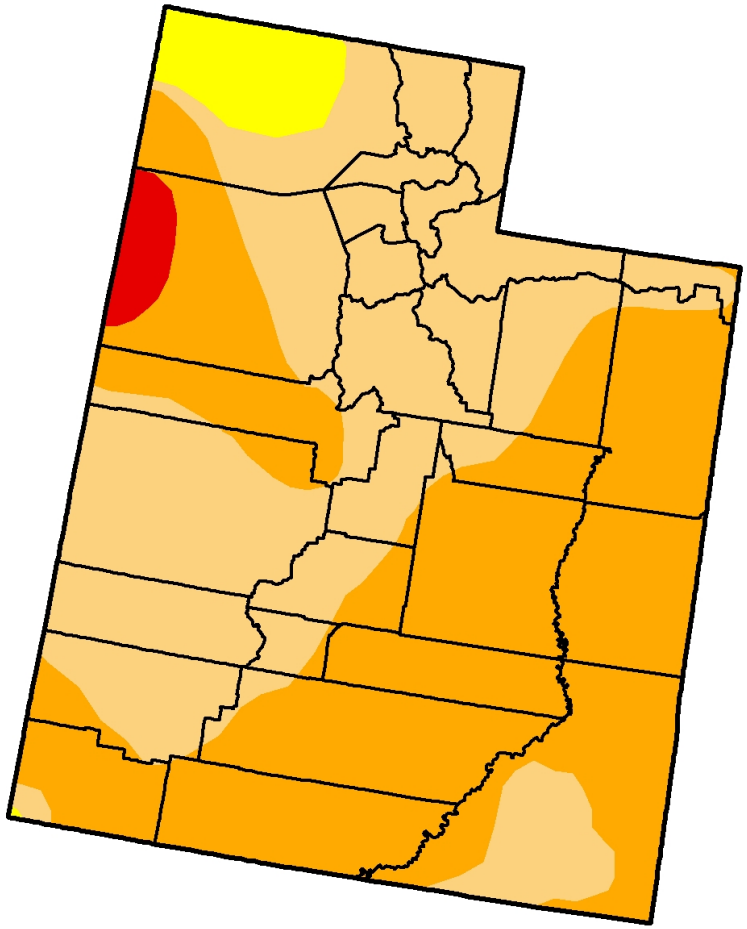
U.S. Drought Monitor

Utah

April 30, 2013
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	96.29	51.39	1.53	0.00
Last Week (04/23/2013 map)	0.00	100.00	96.29	49.42	1.53	0.00
3 Months Ago (01/29/2013 map)	0.00	100.00	99.90	63.96	13.95	0.00
Start of Calendar Year (01/01/2013 map)	0.00	100.00	99.99	66.47	21.34	0.00
Start of Water Year (09/25/2012 map)	0.00	100.00	100.00	83.18	22.53	0.00
One Year Ago (04/24/2012 map)	1.05	98.95	62.76	28.76	0.00	0.00



Intensity:

- *D0 Abnormally Dry*
- *D1 Drought - Moderate*
- *D2 Drought - Severe*
- *D3 Drought - Extreme*
- *D4 Drought - Exceptional*

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://droughtmonitor.unl.edu

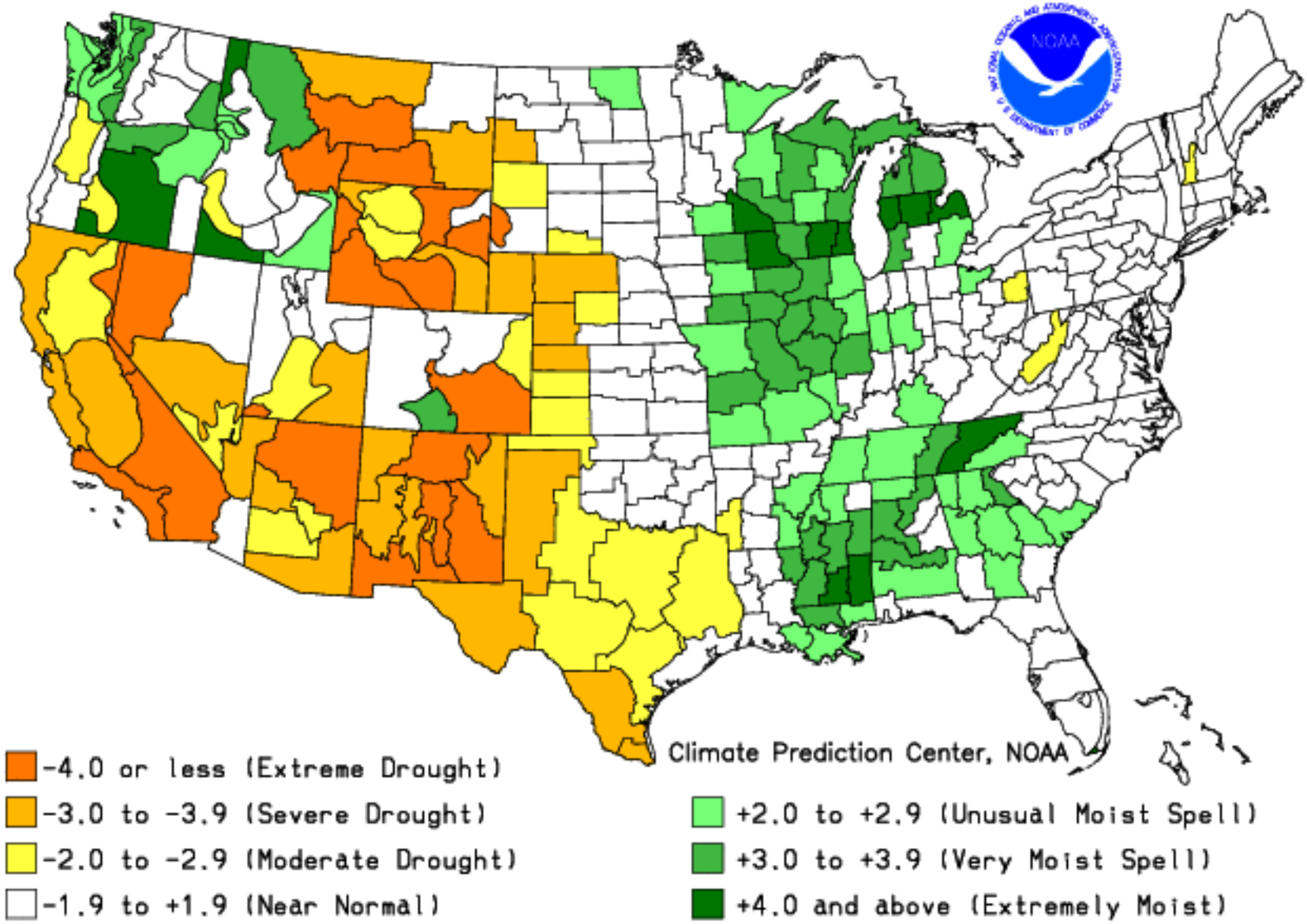
Released Thursday, May 2, 2013

Eric Luebehusen, U.S. Department of Agriculture

Drought Severity Index by Division

Weekly Value for Period Ending MAY 4, 2013

Long Term Palmer

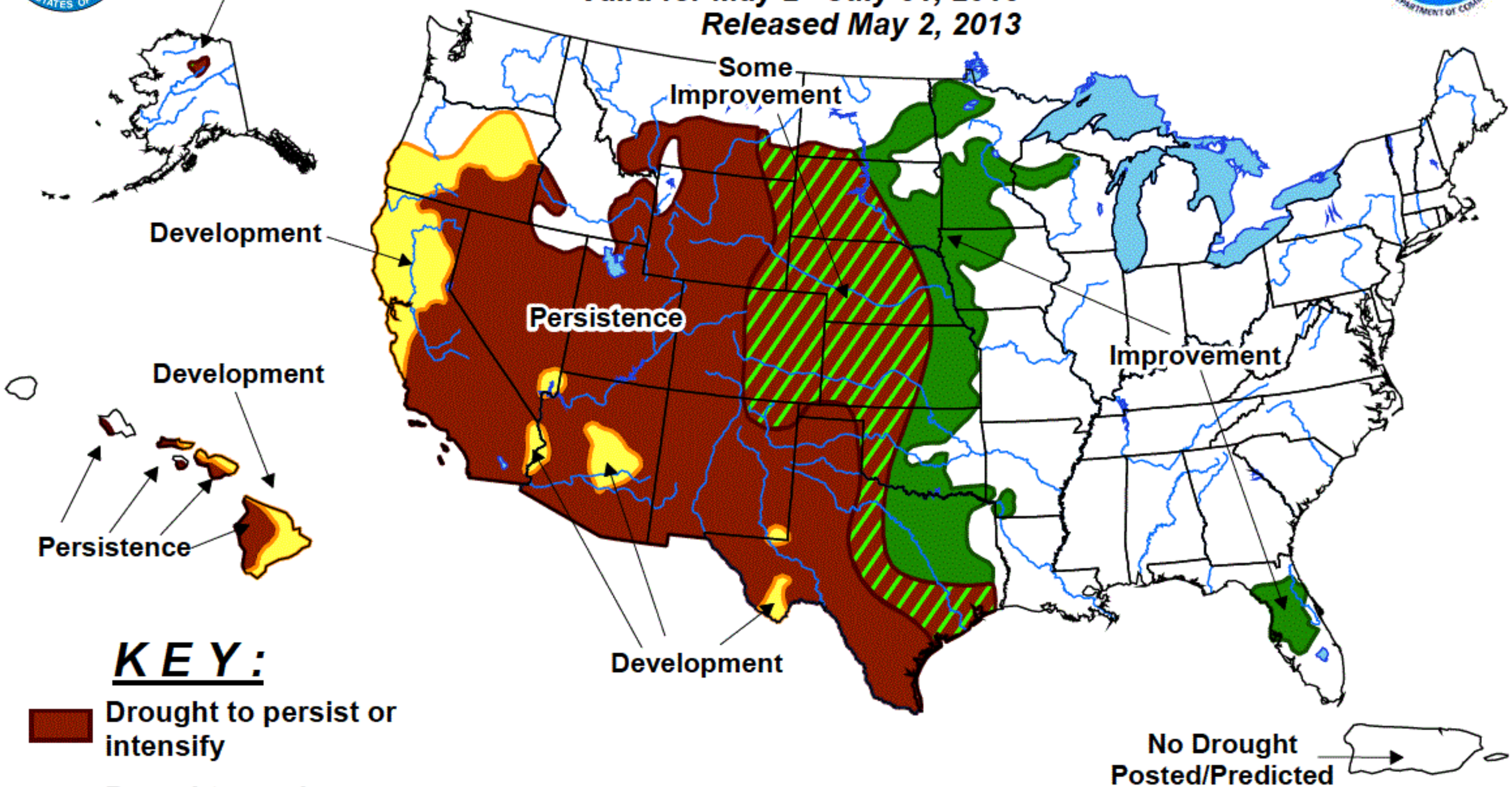


U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for May 2 - July 31, 2013

Released May 2, 2013



KEY:

- Drought to persist or intensify
- Drought ongoing, some improvement
- Drought likely to improve, impacts ease
- Drought development likely

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.