

Colorado River Commission of Nevada

Natural Resources Group Hydrologic Update May 13, 2014



Unregulated Inflow



Unregulated Inflow Into Lake Powell

As of May 12, 2014

	MAF*	% Avg**
• WY 2014 (forecasted):	10.82	100%
• April-July 2014 (forecasted):	7.55	105%
• April (observed):	0.96	91%
• May (forecasted):	2.7	115%

*MAF=Million Acre-Feet

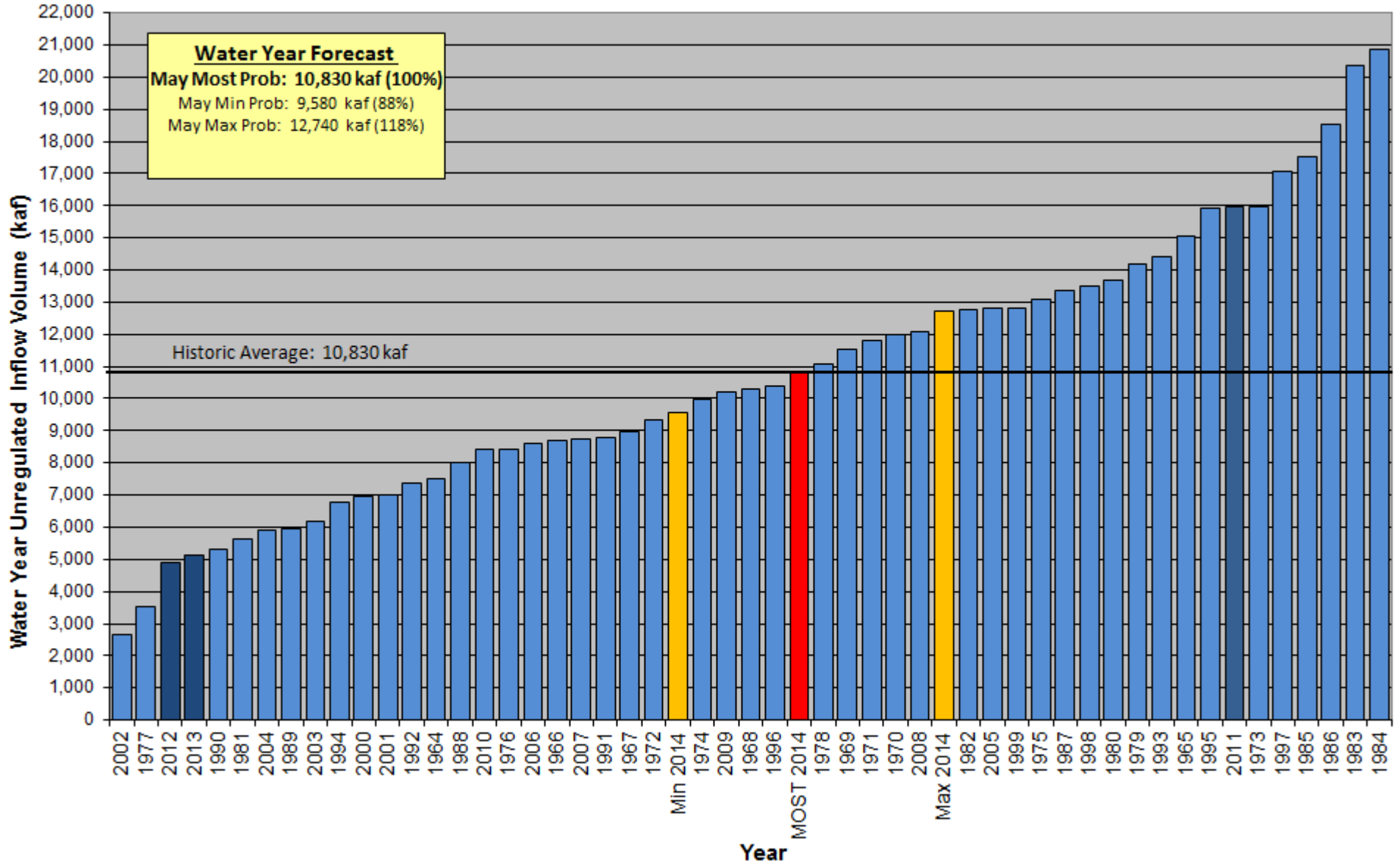
**30-year average, from 1981-2010 (current normal)



Powell Unregulated Inflow

Water Year 2014 Forecast (*Issued May 2*)

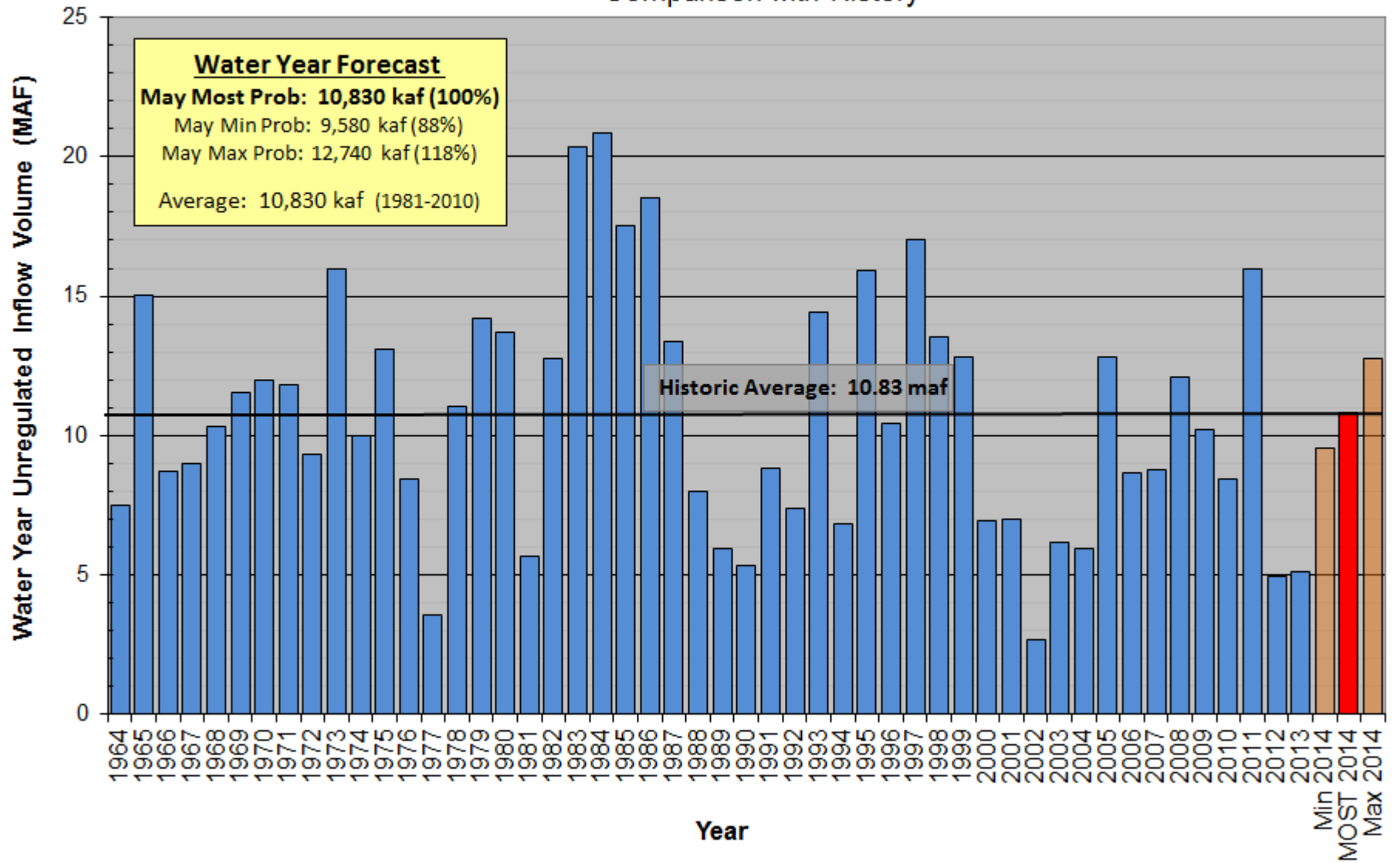
Comparison with History



Lake Powell Unregulated Inflow

Water Year 2014 Forecast *(issued May 2)*

Comparison with History



Storage Conditions

As of May 12, 2014

		<u>Percent of Capacity</u>	<u>Δ from last year</u>
Lake Mead elev.	1,092.64 ft	42%	↓ 18.79 ft
Lake Powell elev.	3,580.37 ft	41%	↓ 15.77 ft
Total System Storage (5/2014)	28.21 maf	47%	↓ 2.81 maf
Total System Storage (5/2013)	31.02 maf	52%	



Reservoir Storage

As of May 8, 2014

Colorado River Reservoir Storages

Basin	Reservoir	Max Storage	*Current Storage	Percentage	Current Storage subtotals
Upper Basin	Crystal Reservoir	17,356	14,189	82%	4,883,223
	Flaming Gorge	3,749,000	2,991,975	80%	
	Fontenelle	344,800	160,399	47%	
	Morrow Point	117,190	106,725	91%	
	Blue Mesa	829,500	543,510	66%	
	Navajo	1,696,000	1,066,425	63%	
	Lake Powell	24,322,000	9,883,100	41%	
Lower Basin	Lake Mead	26,120,000	11,116,000	43%	2,255,500
	Lake Mohave	1,809,800	1,668,700	92%	
	Lake Havasu	619,400	586,800	95%	
	TOTAL	59,625,046	28,137,823	47%	

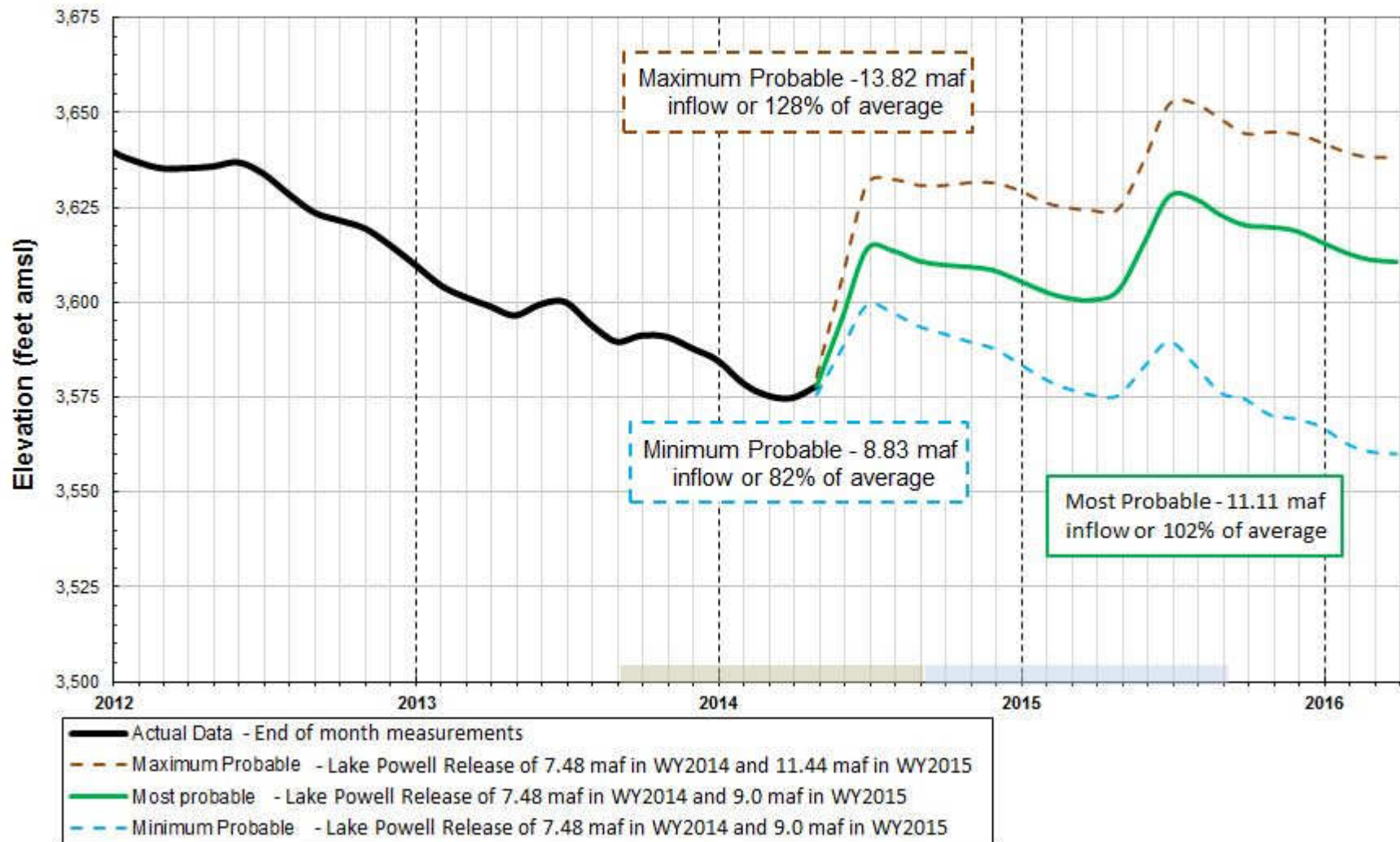
*Data current as 5/8/2014

<http://www.usbr.gov/lc/region/g4000/hourly/levels.html>

<http://www.usbr.gov/uc/water/rsrvs/ops/r40day.html>

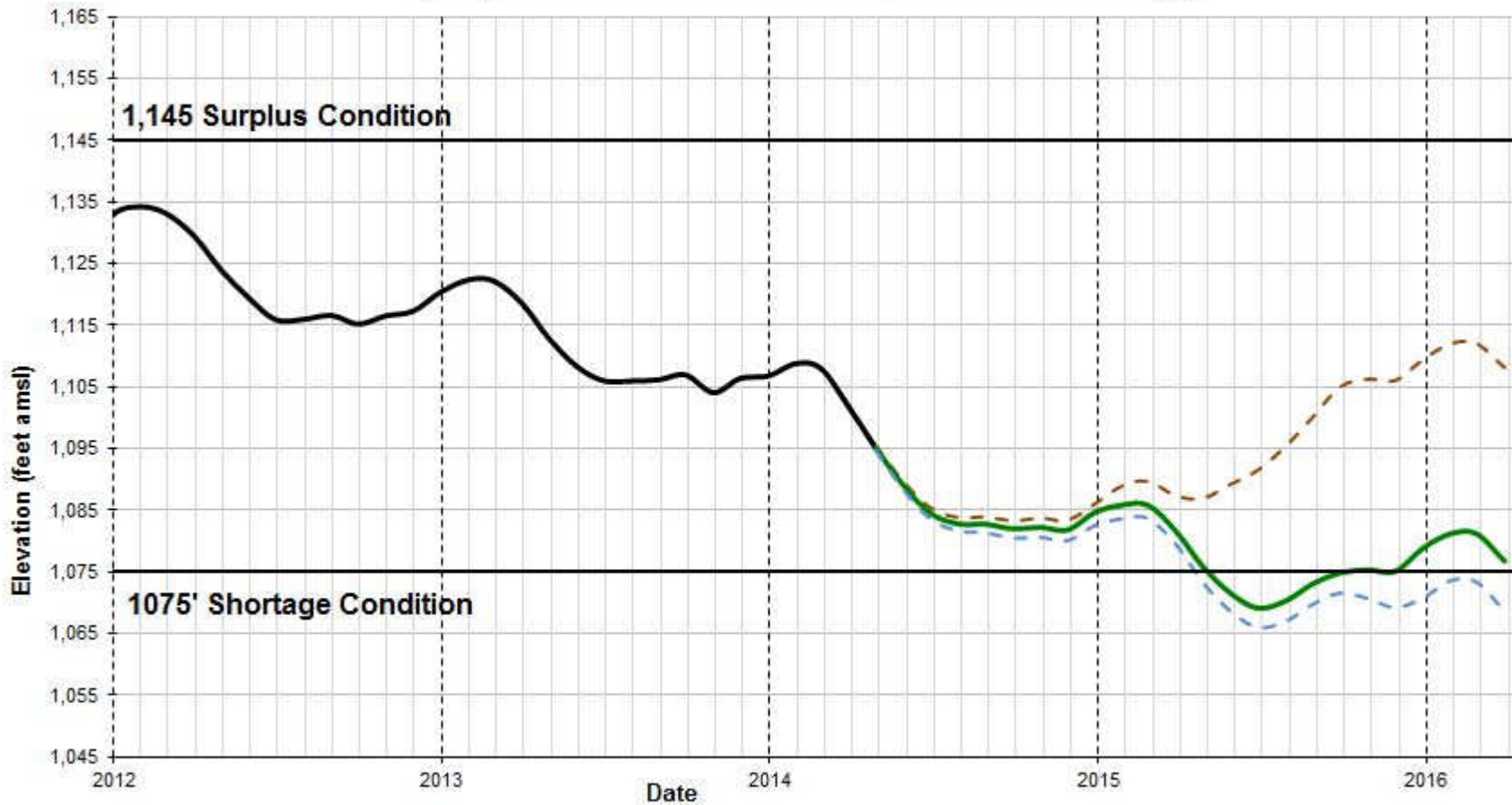
Lake Powell End of Month Elevations

(based on APR 2014 24-month Study)



Lake Mead End of Month Elevation Projections

(Projections based on the APR 2014 24-month study)



- Actual Data - End of month measurements
- - - Maximum Probable - Lake Powell Release of 7.48 maf in WY2014 and 11.44 maf in WY2015
- Most probable - Lake Powell Release of 7.48 maf in WY2014 and 9.0 maf in WY2015
- - - Minimum Probable - Lake Powell Release of 7.48 maf in WY2014 and 9.0 maf in WY2015

Drought and Precipitation



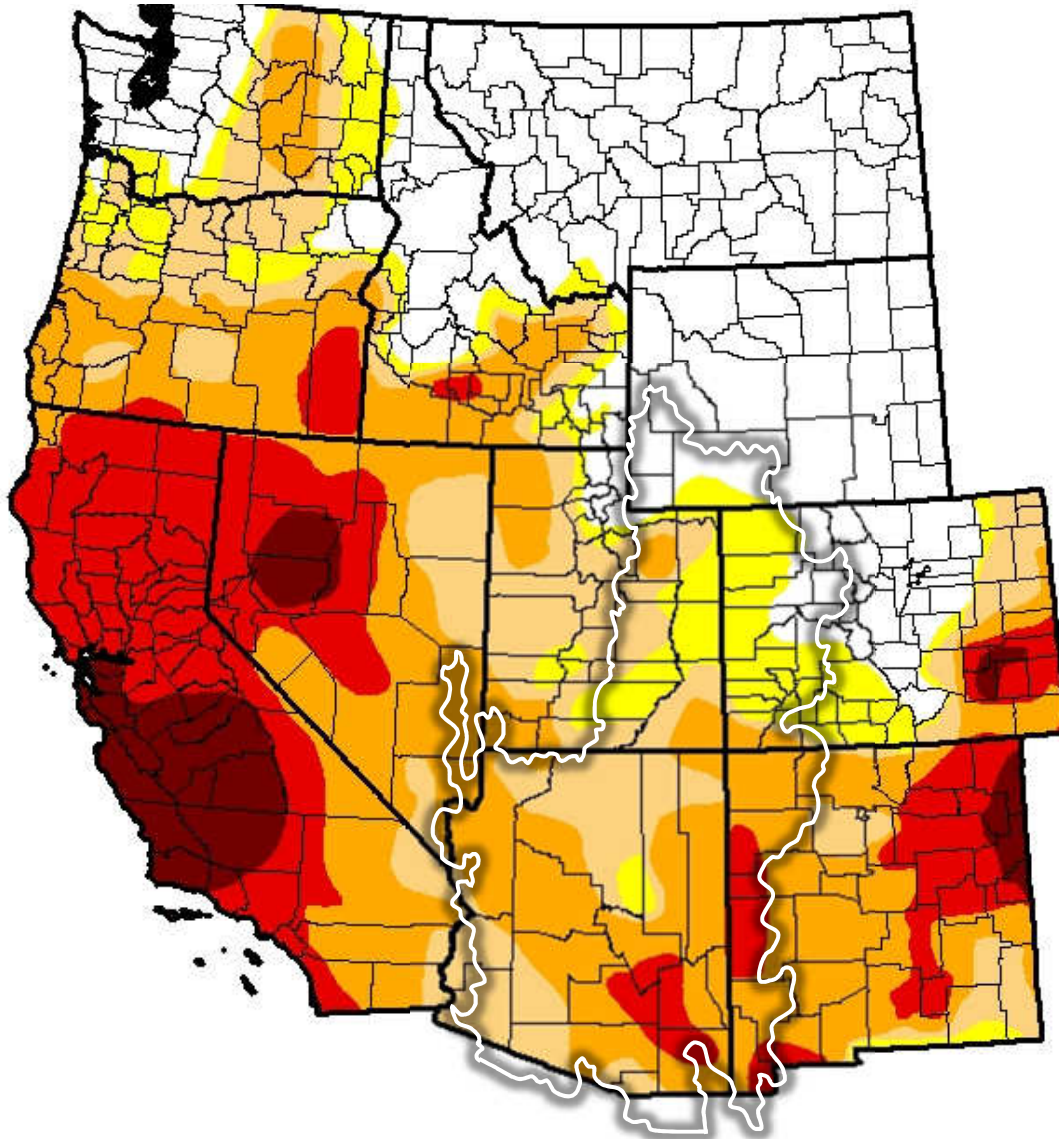
U.S. Drought Monitor

West






May 6, 2014

(Released Thursday, May 8, 2014)

Valid 8 a.m. EDT



Intensity:

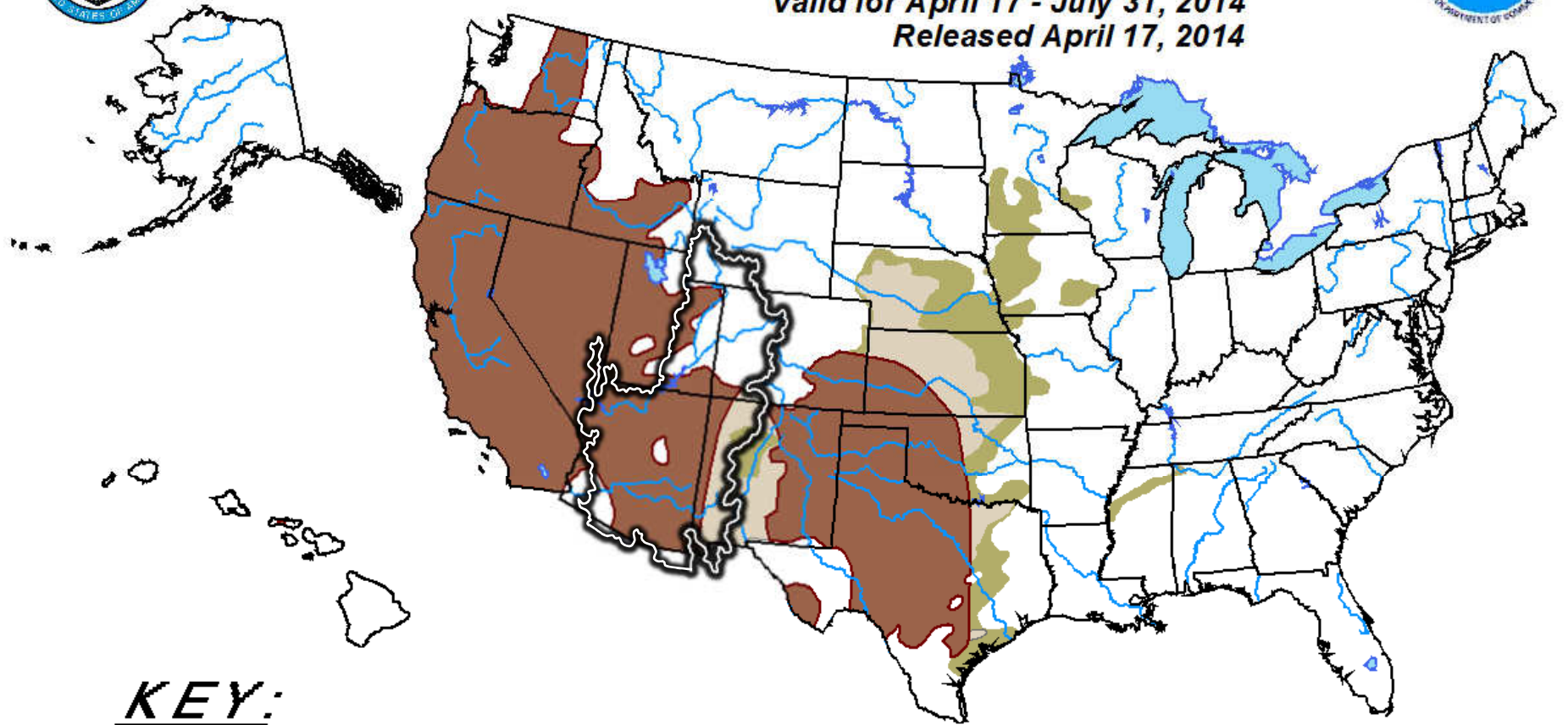
-  D0 - Abnormally Dry
-  D1 - Moderate Drought
-  D2 - Severe Drought
-  D3 - Extreme Drought
-  D4 - Exceptional Drought







U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for April 17 - July 31, 2014
Released April 17, 2014



KEY:

-  Drought persists or intensifies
-  Drought remains but improves
-  Drought removal likely
-  Drought development likely

Author: Brad Pugh, Climate Prediction Center, NOAA

http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.html

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 tan area areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period although drought will remain.

The Green areas imply drought removal by the end of the period (D0 or none)

Precipitation – Colorado River Basin

As of May 12, 2014

Upper Colorado Basin

WY Precip to Date

101% (22.3")

Current Basin Snowpack

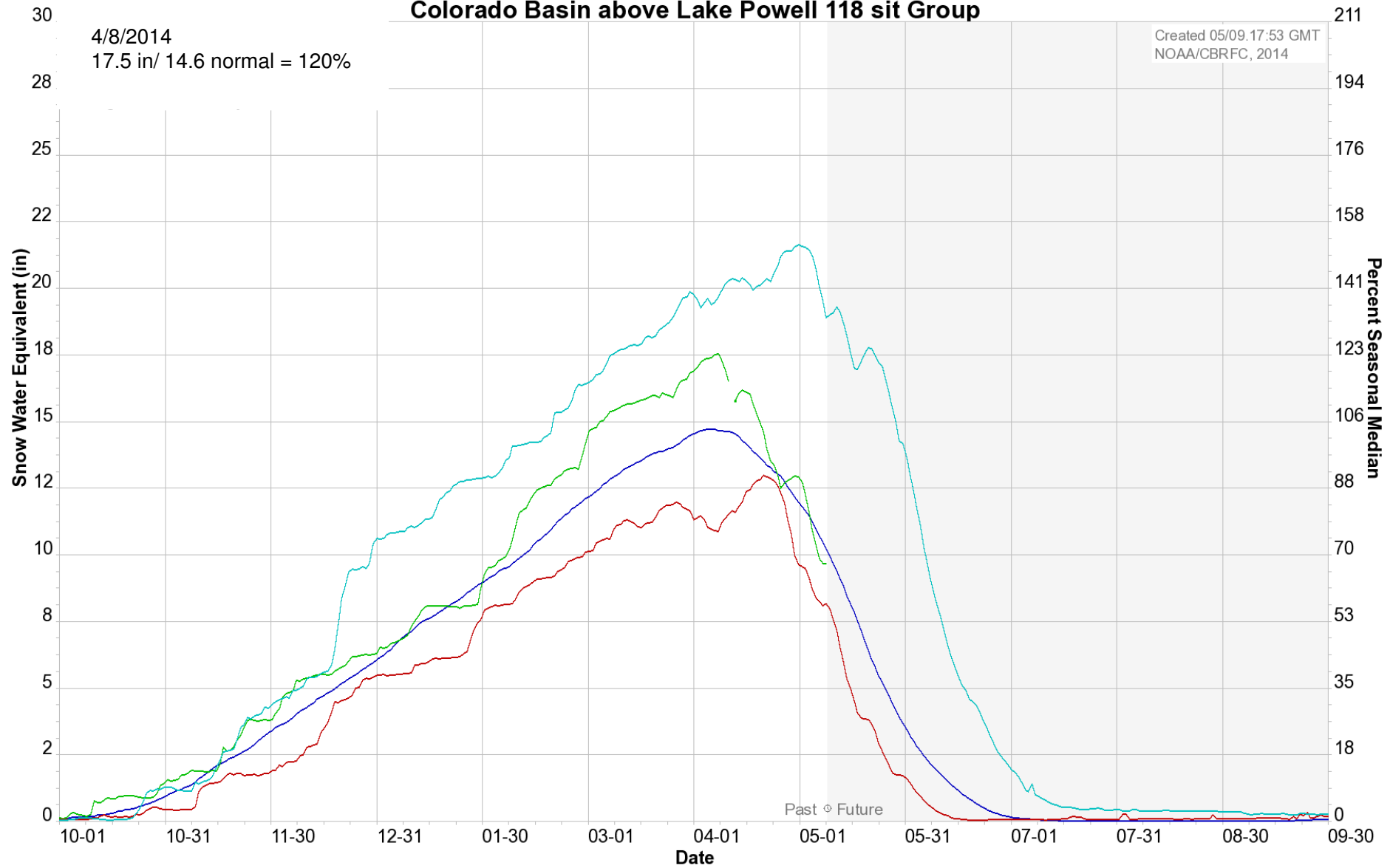
119% (10.3")

(Avg 1981-2010)



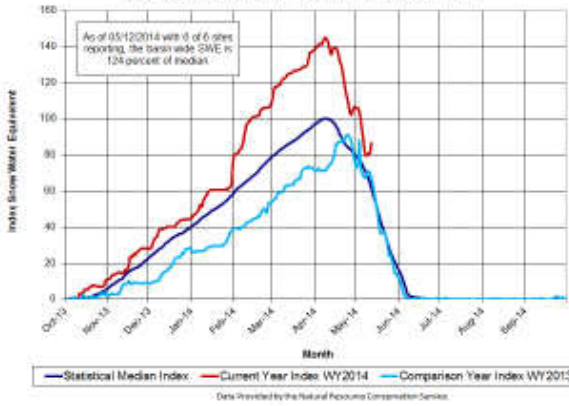
Colorado Basin River Forecast Center Colorado Basin above Lake Powell 118 sit Group

Created 05/09 17:53 GMT
NOAA/CBRFC, 2014

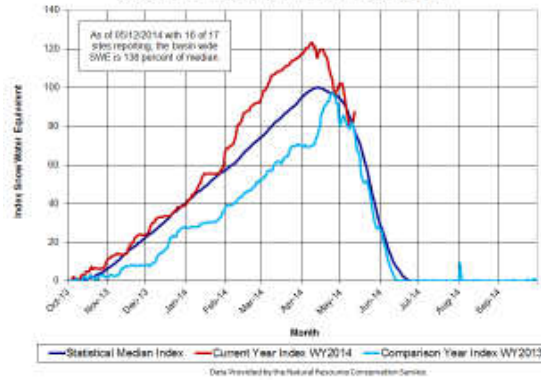


Average 1981-2010 — 2014 — 2013 — 2011 —

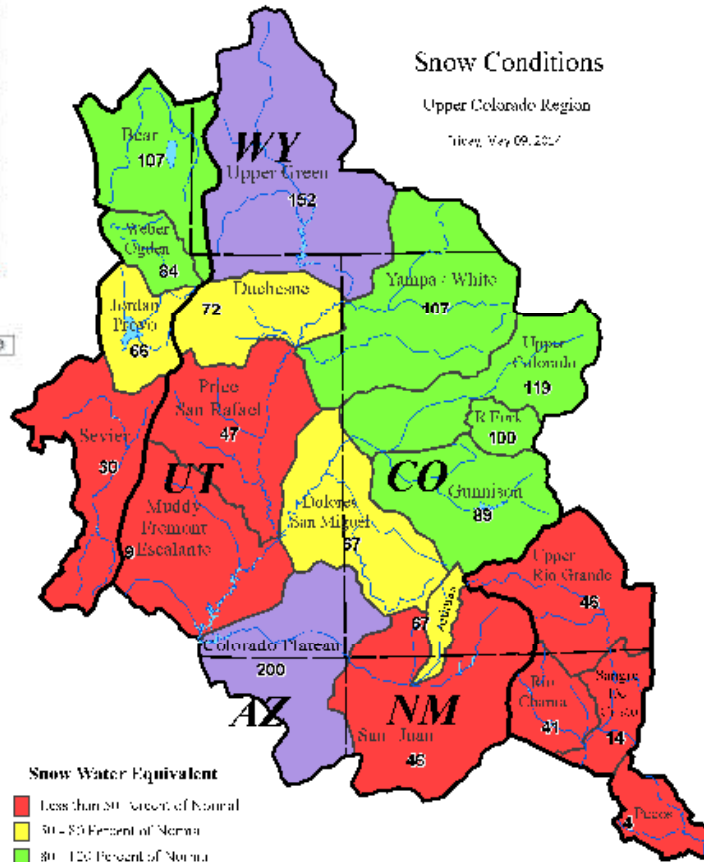
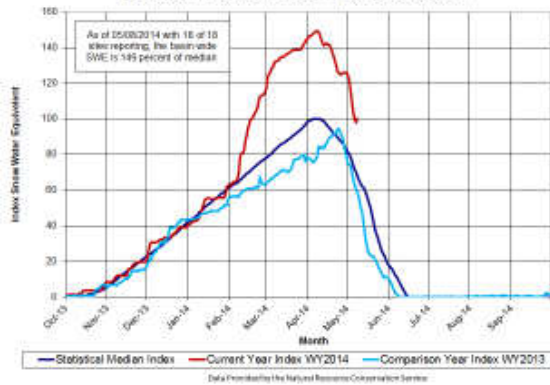
Roaring Fork Basin Snotel Tracking
Aggregate of 6 Snotel Sites in the Roaring Fork River Basin



Upper Colorado River Headwater Basin Snotel Tracking
Aggregate of 17 Snotel Sites in the Upper Colorado Basin

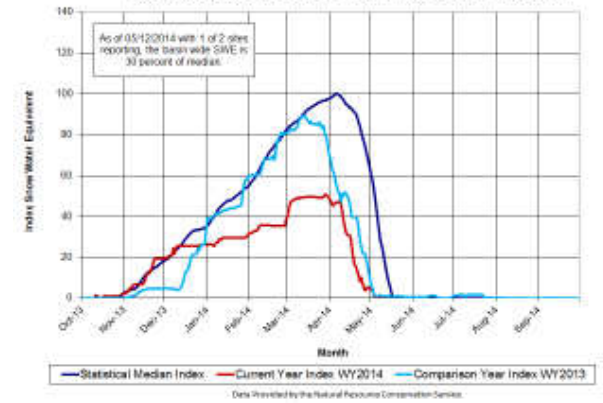


Upper Green River Basin Snotel Tracking
Aggregate of 18 Snotel Sites above Flaming Gorge Reservoir

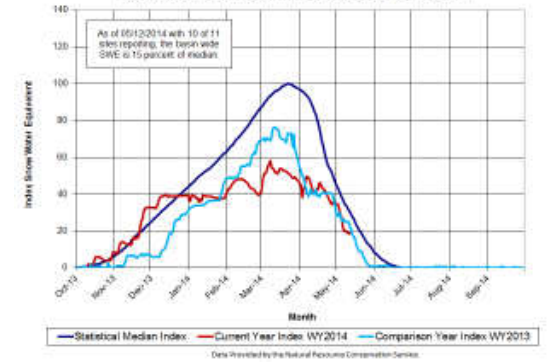


Data Provided by the Natural Resources Conservation Service

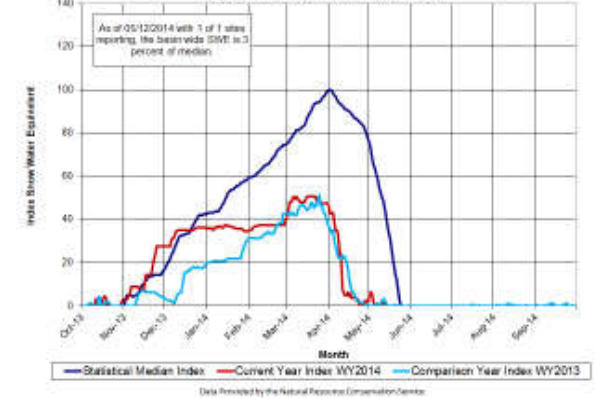
Rio Chama River Basin Snotel Tracking
Aggregate of only 2 available Snotel Sites in the Rio Chama River Basin



Sangre de Cristo River Basin Snotel Tracking
Aggregate of 11 Snotel Sites in the Sangre de Cristo River Basin



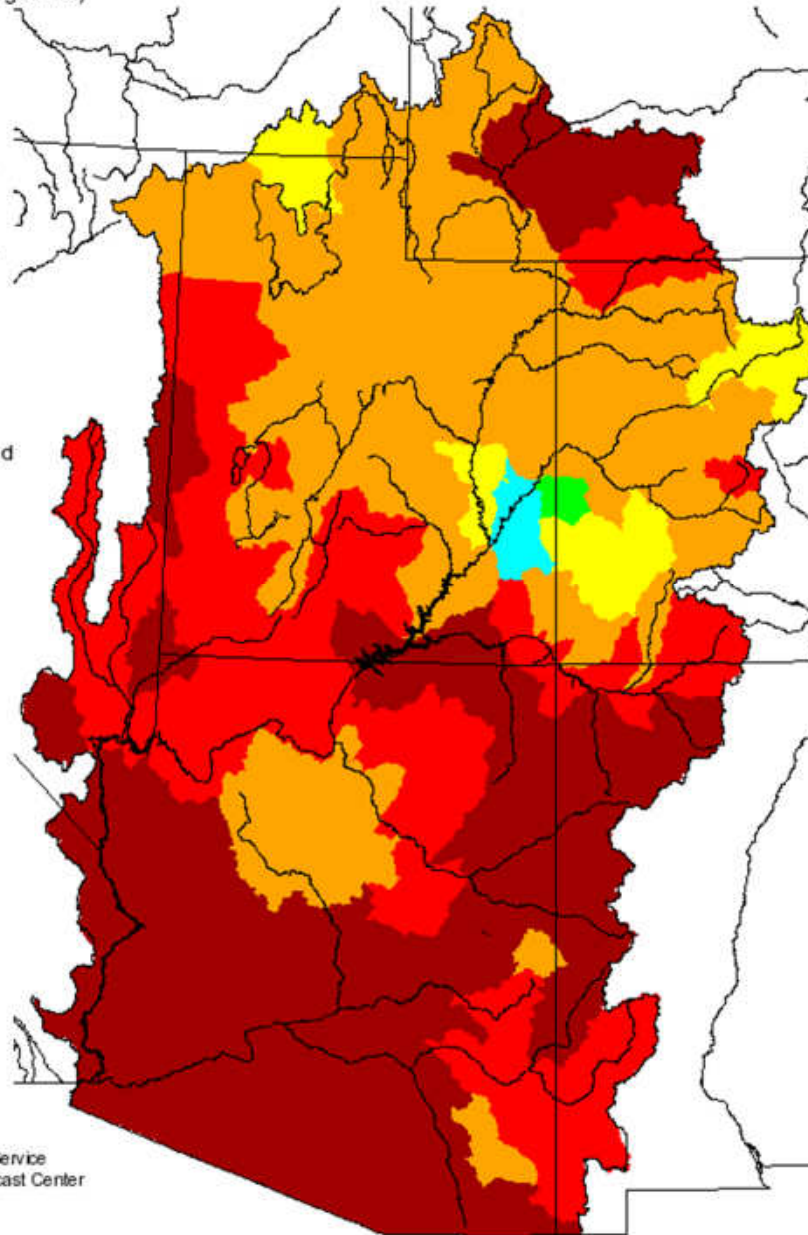
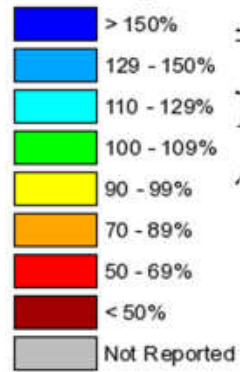
Pecos River Basin Snotel Tracking
Aggregate of only 1 available Snotel Site



Monthly Precipitation for April 2014

(Averaged by Hydrologic Unit)

% Average

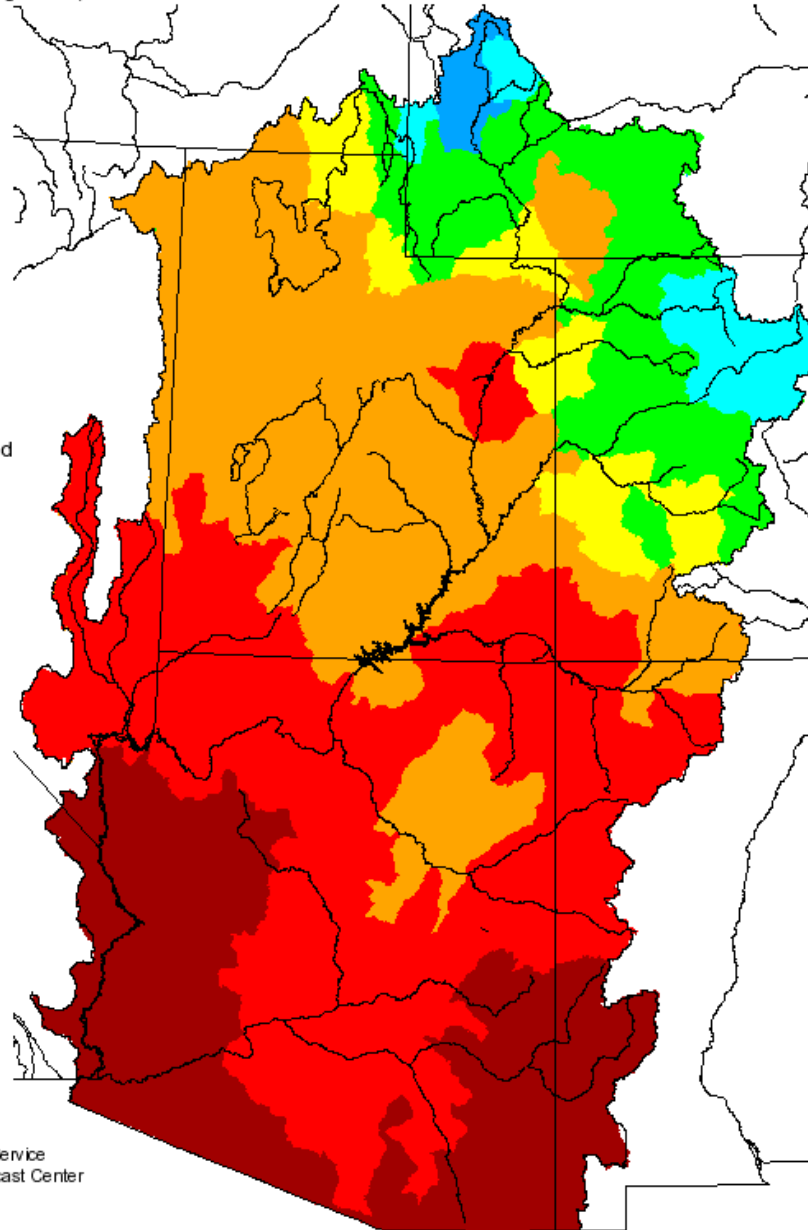
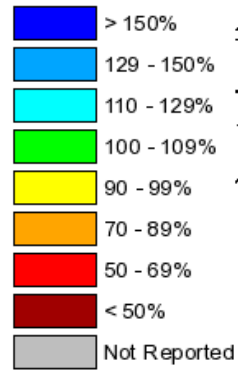


Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbrfc.noaa.gov

Seasonal Precipitation, October 2013 - April 2014

(Averaged by Hydrologic Unit)

% Average



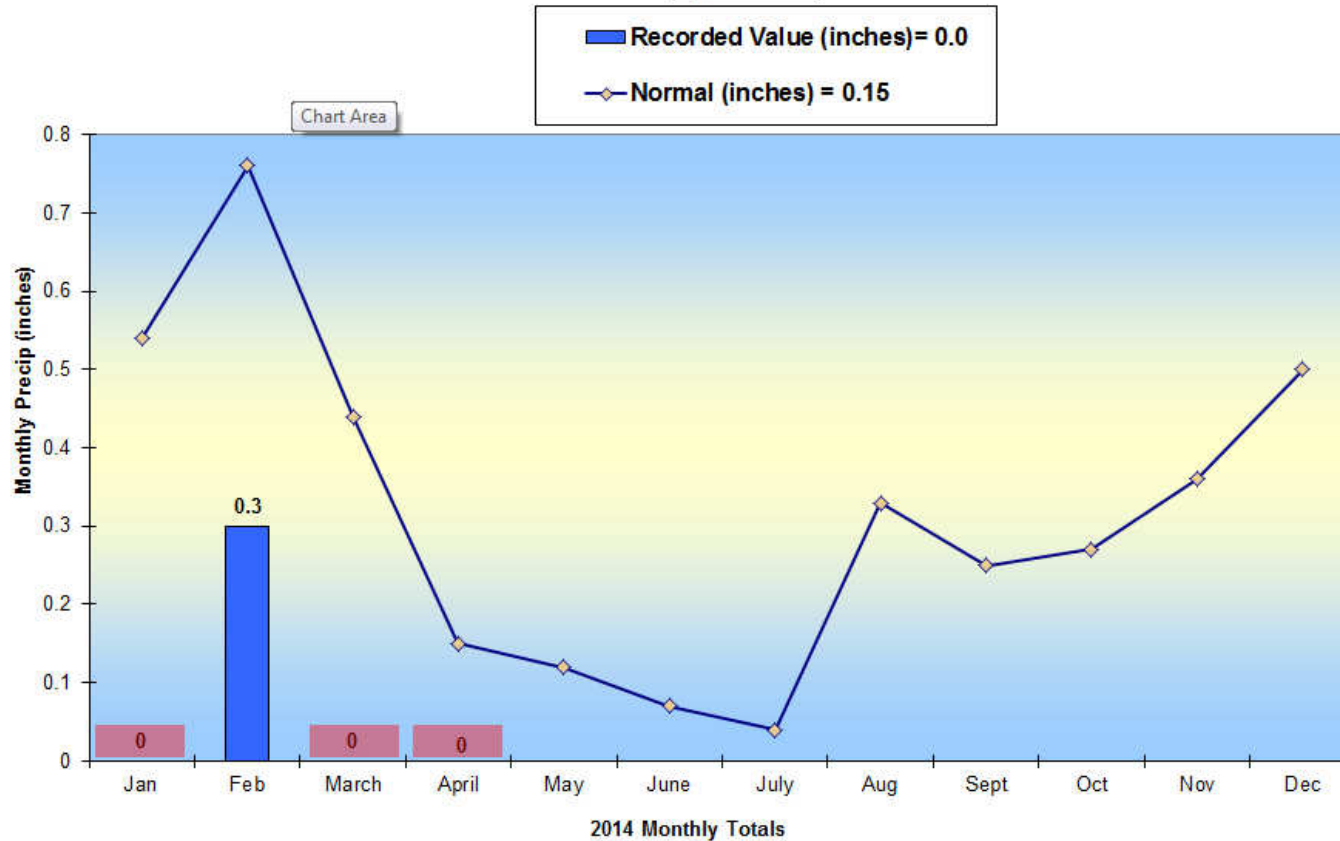
Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbrfc.noaa.gov

Monthly Precipitation, Las Vegas, NV

As of April 30, 2014

Record of Precipitation at McCarran International Airport, Las Vegas, NV

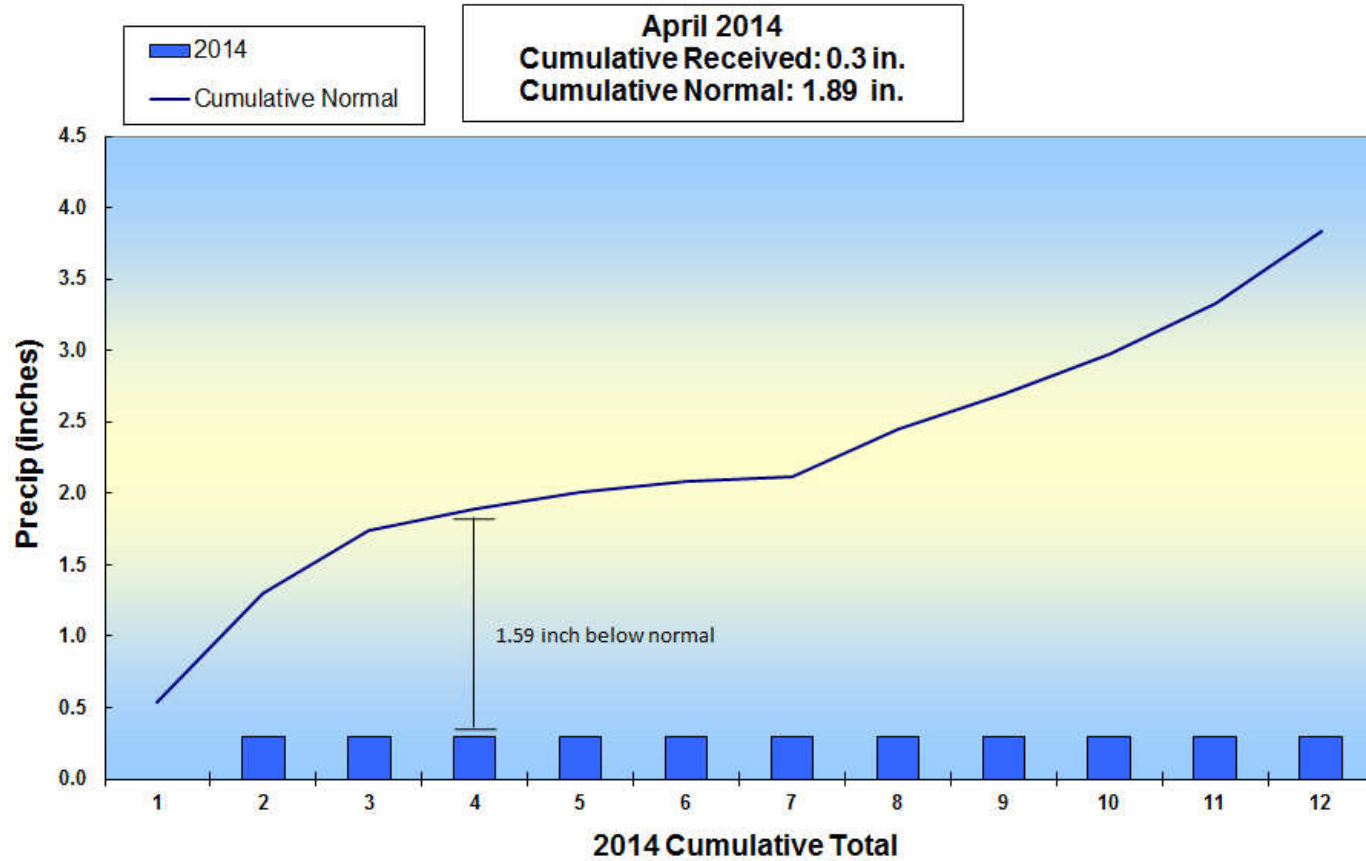
April 2014



Cumulative Precipitation, Las Vegas, NV

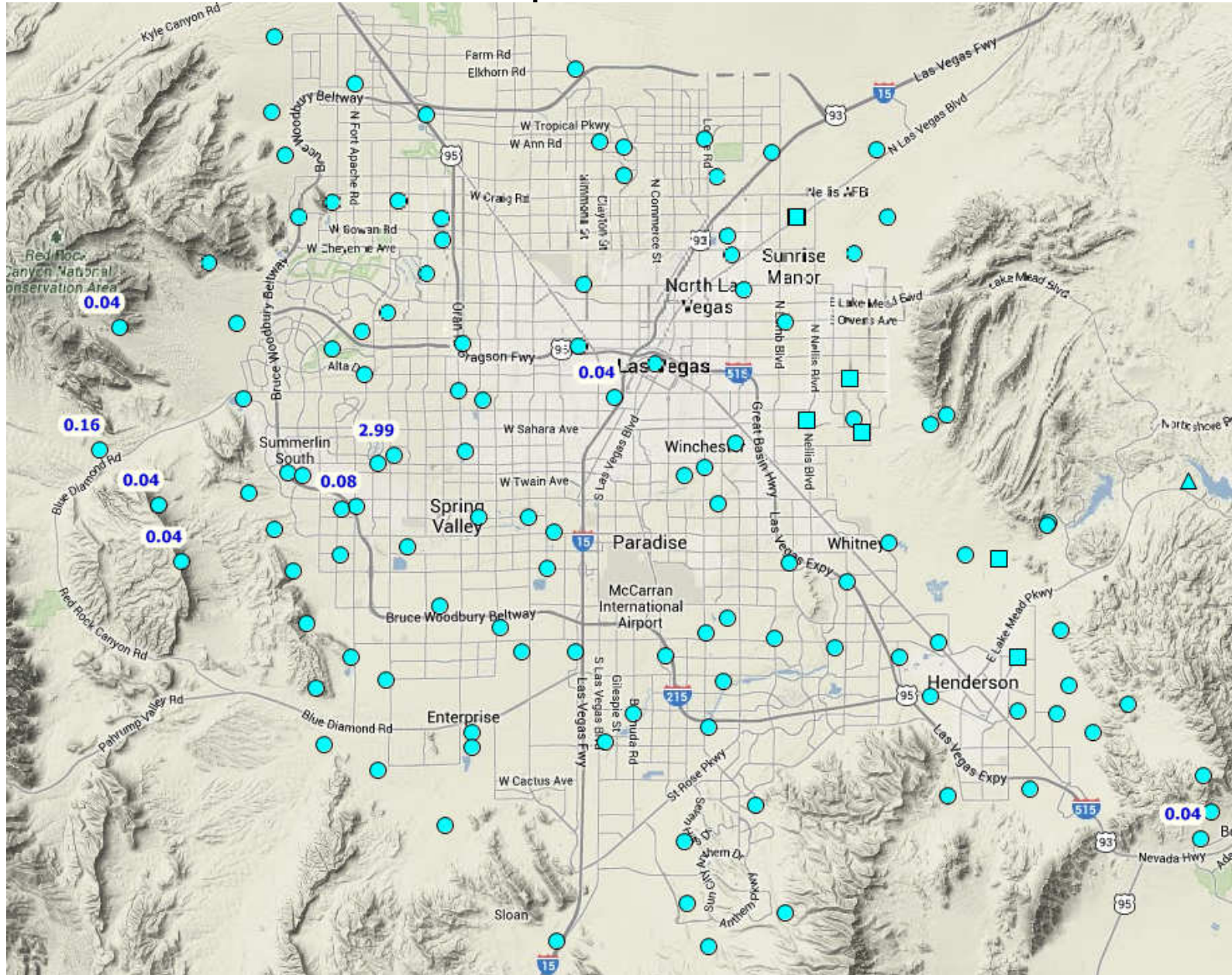
As of April 30, 2014

Record of Precipitation at McCarran International Airport, Las Vegas, NV



Clark County Regional Flood Control District Rain Gages

April 2014 Totals



Water Use in Southern Nevada



Water Use in Southern Nevada

January – March 2014

2014*: Consumptive Use = 30,157

CR Water Banked = 0

30,157

2013*: Consumptive Use = 32,731

CR Water Banked = 0

32,731

Difference = - 2,574 af

*Subject to final accounting.



Water Use Comparison

January – March 2014

Water Use	2013 Acre Feet	2014 Acre Feet	Difference	% Change
Las Vegas Wash Gauged Flow	53,076	55,645	2,569	4.8%
Diversions	86,259	86,596	337	0.4%
Return Flow Credit	53,527	56,438	2,911	5.4%
Consumptive Use	32,731	30,157	-2,574	-7.9%



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