

Colorado River Commission of Nevada

Natural Resources Group Hydrologic Update December 14, 2015



Unregulated Inflow Into Lake Powell

As of December 7, 2015

	MAF*	% Avg**
• WY 2015 (observed):	10.17	94%
• April-July 2015 (observed):	6.71	94%
• November (observed):	0.44	94%
• December (forecasted):	0.32	88%

*MAF=Million Acre-Feet

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



Storage Conditions

As of December 7, 2015

		<u>Percent of Capacity</u>	<u>Δ from last year</u>
Lake Mead elev.	1078.87 ft	38%	↓ 5.52 ft
Lake Powell elev.	3,604.67 ft	50%	↑ 3.73 ft
Total System Storage (12/2015)	29.86 maf	50%	↑ 0.14 maf
Total System Storage (12/2014)	29.72 maf	50%	



Reservoir Storage

As of December 7, 2015

Colorado River Reservoir Storages

Basin	Reservoir	Max Storage	*Current Storage	Percentage	Current Storage subtotals
Upper Basin	Crystal Reservoir	17,356	10,420	60%	5,669,012
	Flaming Gorge	3,749,000	3,284,268	88%	
	Fontenelle	344,800	215,902	63%	
	Morrow Point	117,190	102,860	88%	
	Blue Mesa	829,500	656,831	79%	
	Navajo	1,696,000	1,398,731	82%	
	Lake Powell	24,322,000	12,201,280	50%	
Lower Basin	Lake Mead	26,120,000	9,918,000	38%	2,072,000
	Lake Mohave	1,809,800	1,513,500	84%	
	Lake Havasu	619,400	558,500	90%	
	TOTAL	59,625,046	29,860,292	50%	

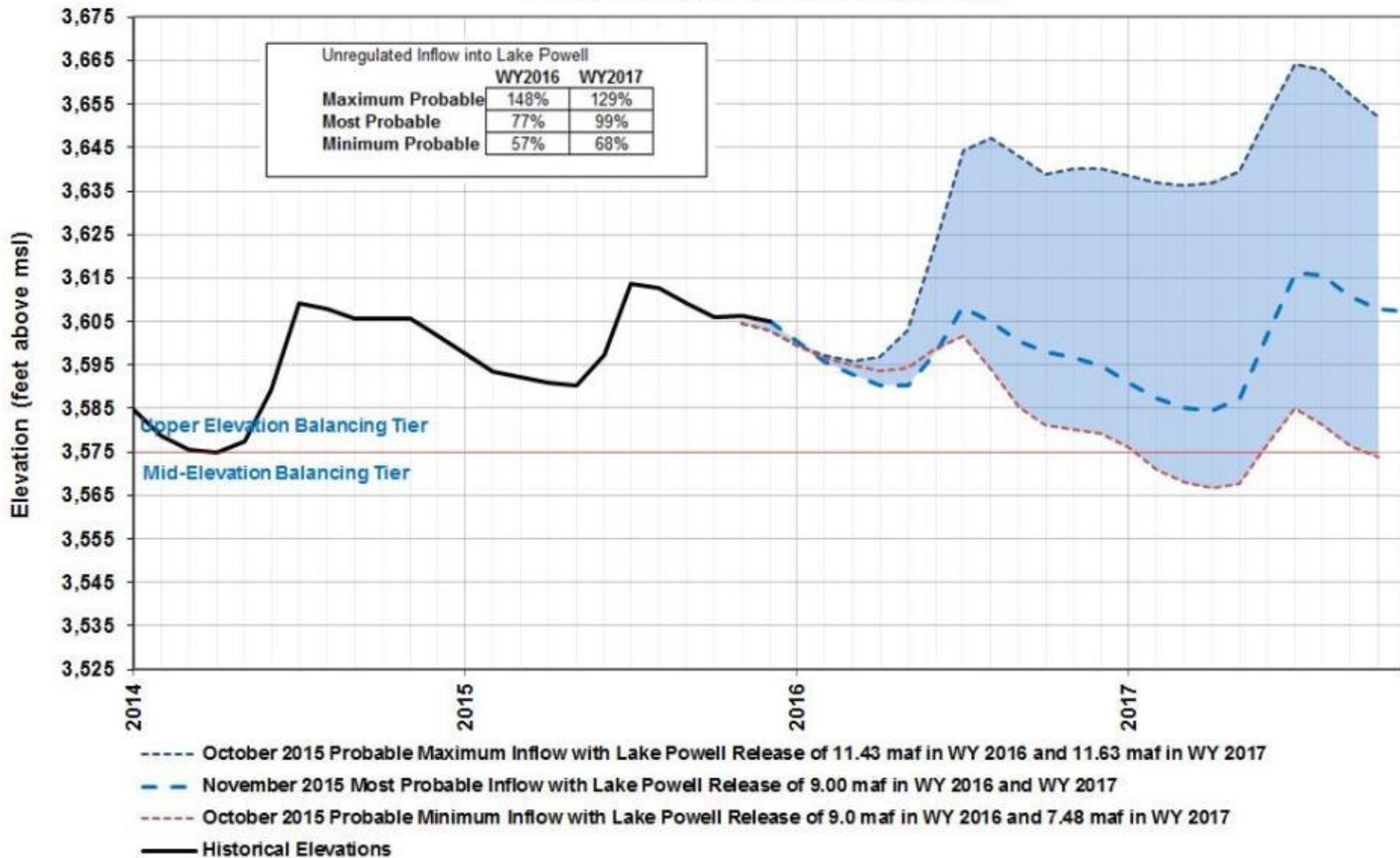
*Data current as 12/7/2015

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

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

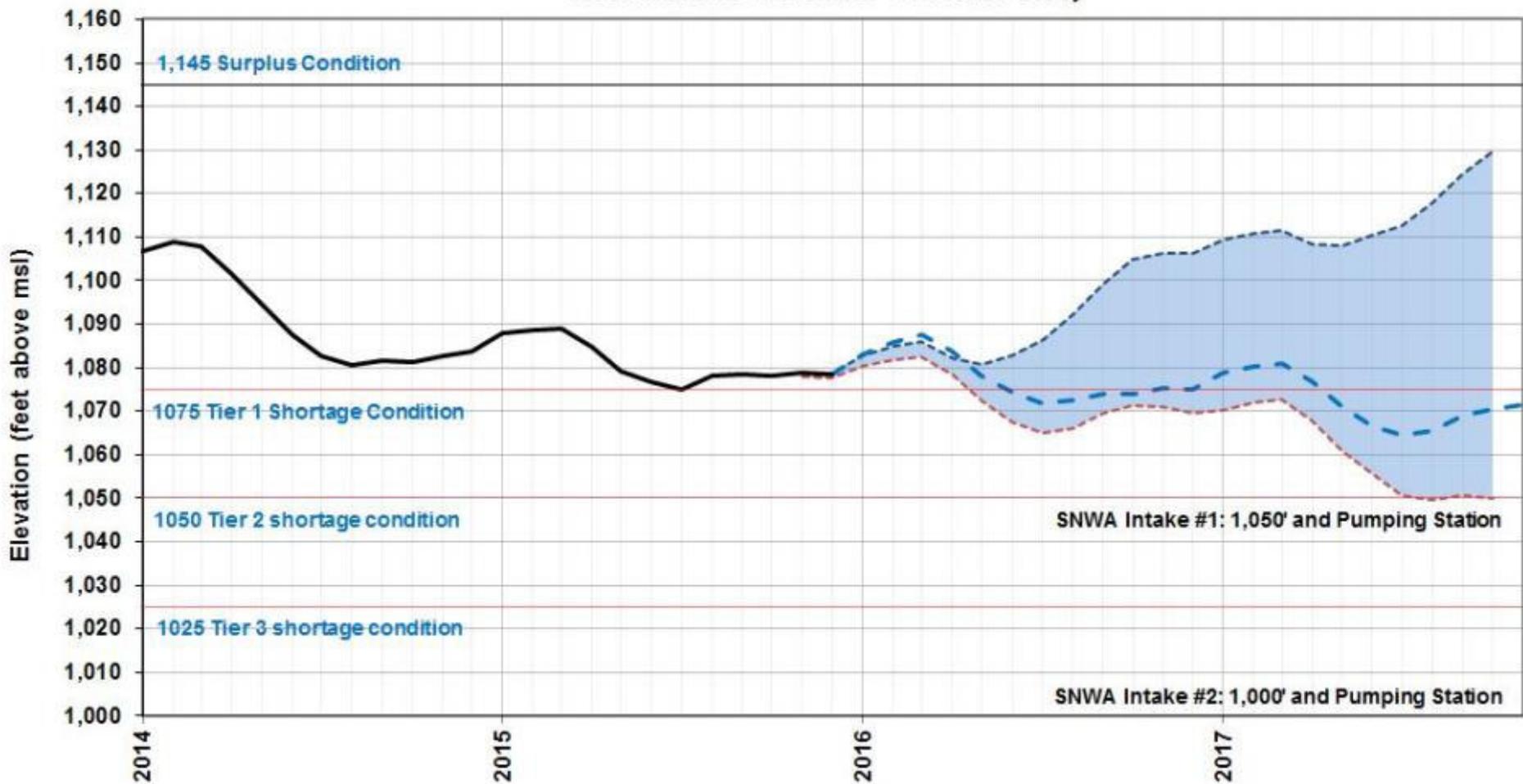
Lake Powell Projections

Reclamation's November 24-Month Study



Lake Mead Projections

Reclamation's November 24-Month Study



- October 2015 Probable Maximum Inflow with Lake Powell Release of 11.43 maf in WY 2016 and 11.63 maf in WY 2017
- - - - November 2015 Most Probable Inflow with Lake Powell Release of 9.00 maf in WY 2016 and WY 2017
- October 2015 Probable Minimum Inflow with Lake Powell Release of 9.0 maf in WY 2016 and 7.48 maf in WY 2017
- Historical Elevations

U.S. Drought Monitor

West

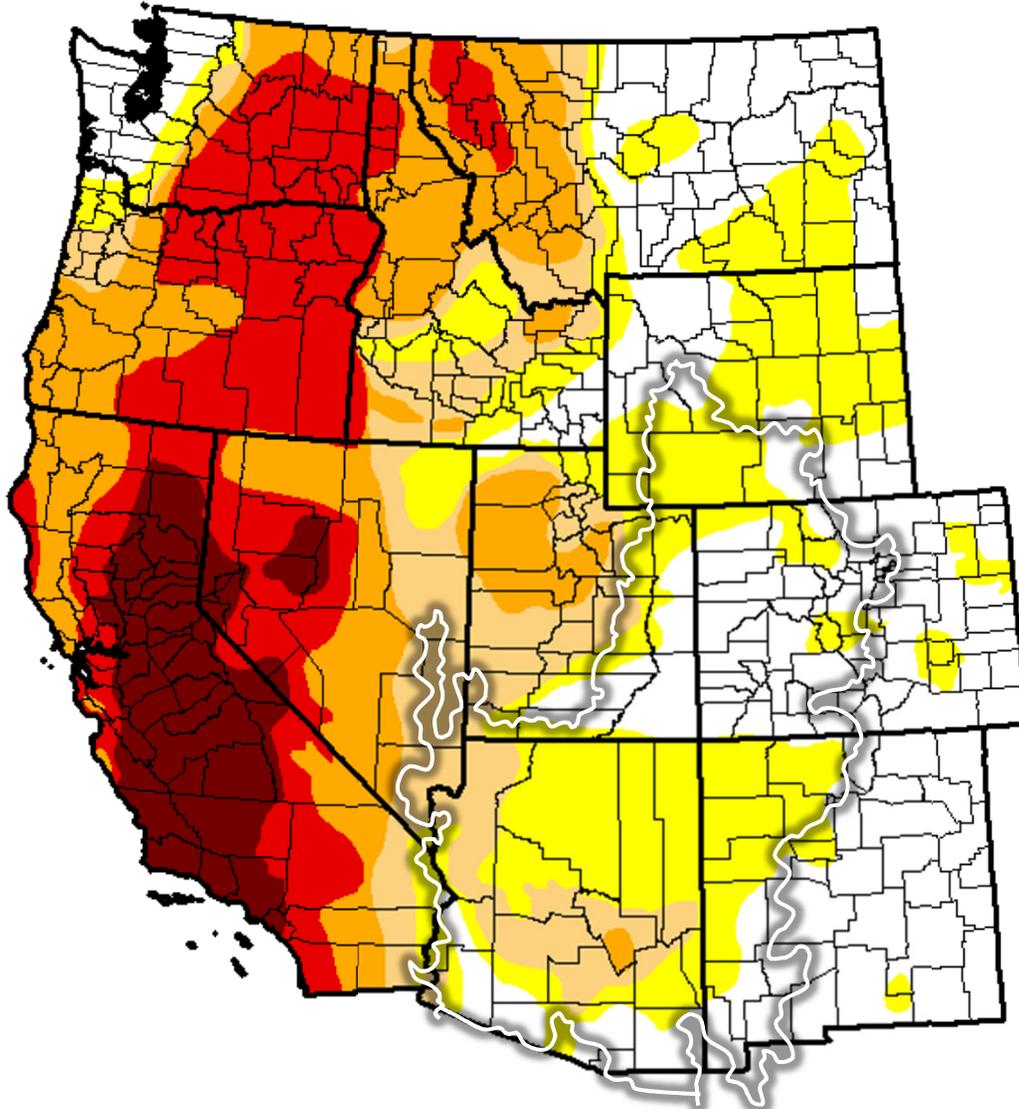
December 1, 2015

(Released Thursday, Dec. 3, 2015)

Valid 7 a.m. EST

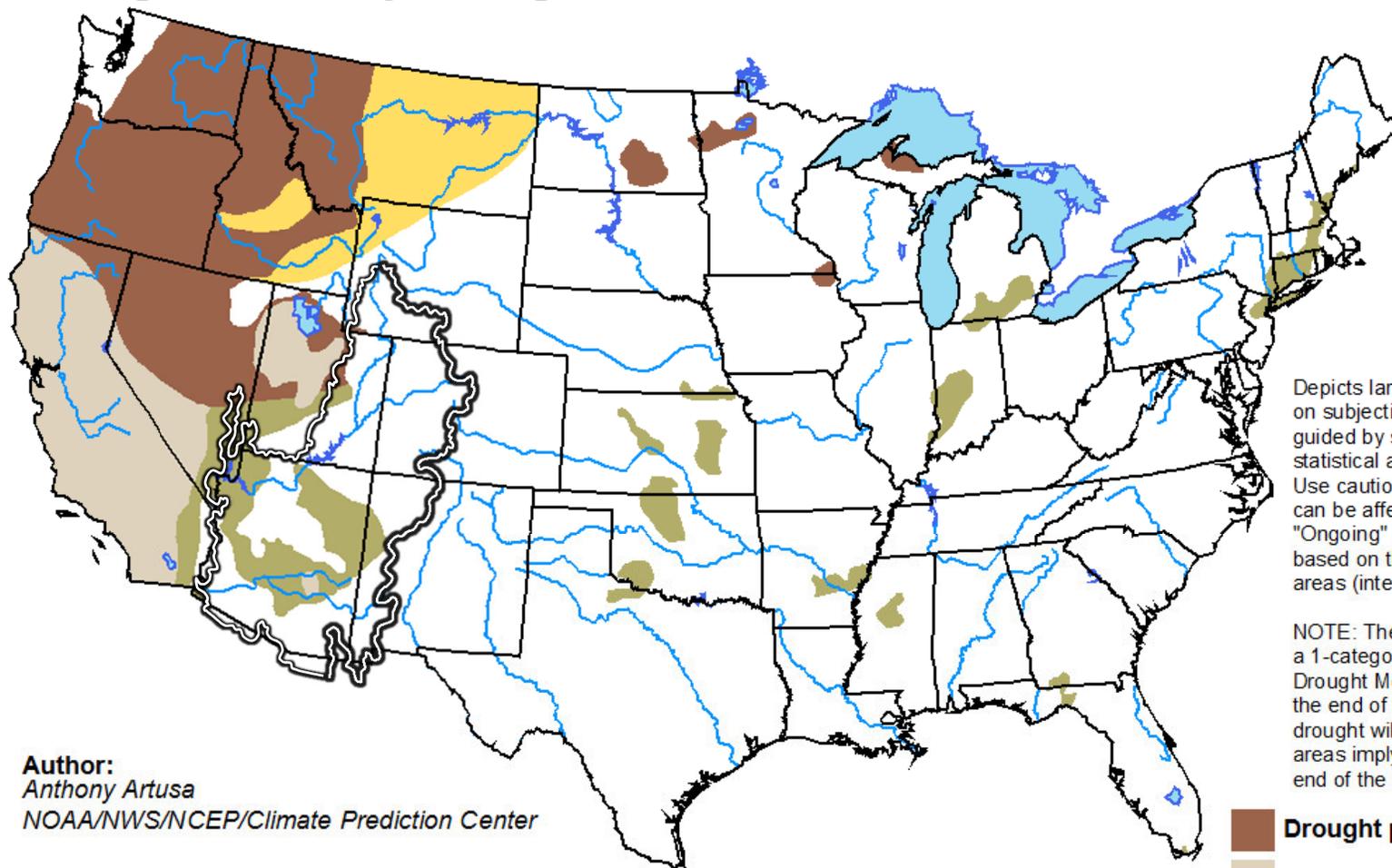
Intensity:

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



U.S. Seasonal Drought Outlook Valid for November 19 - February 29, 2016

Drought Tendency During the Valid Period Released November 19, 2015

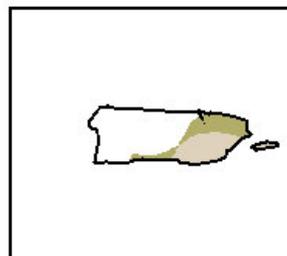
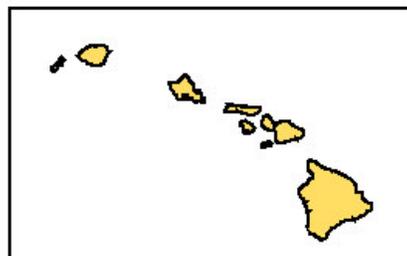
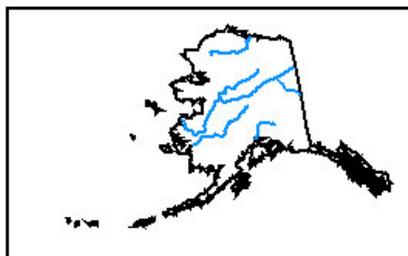


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Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

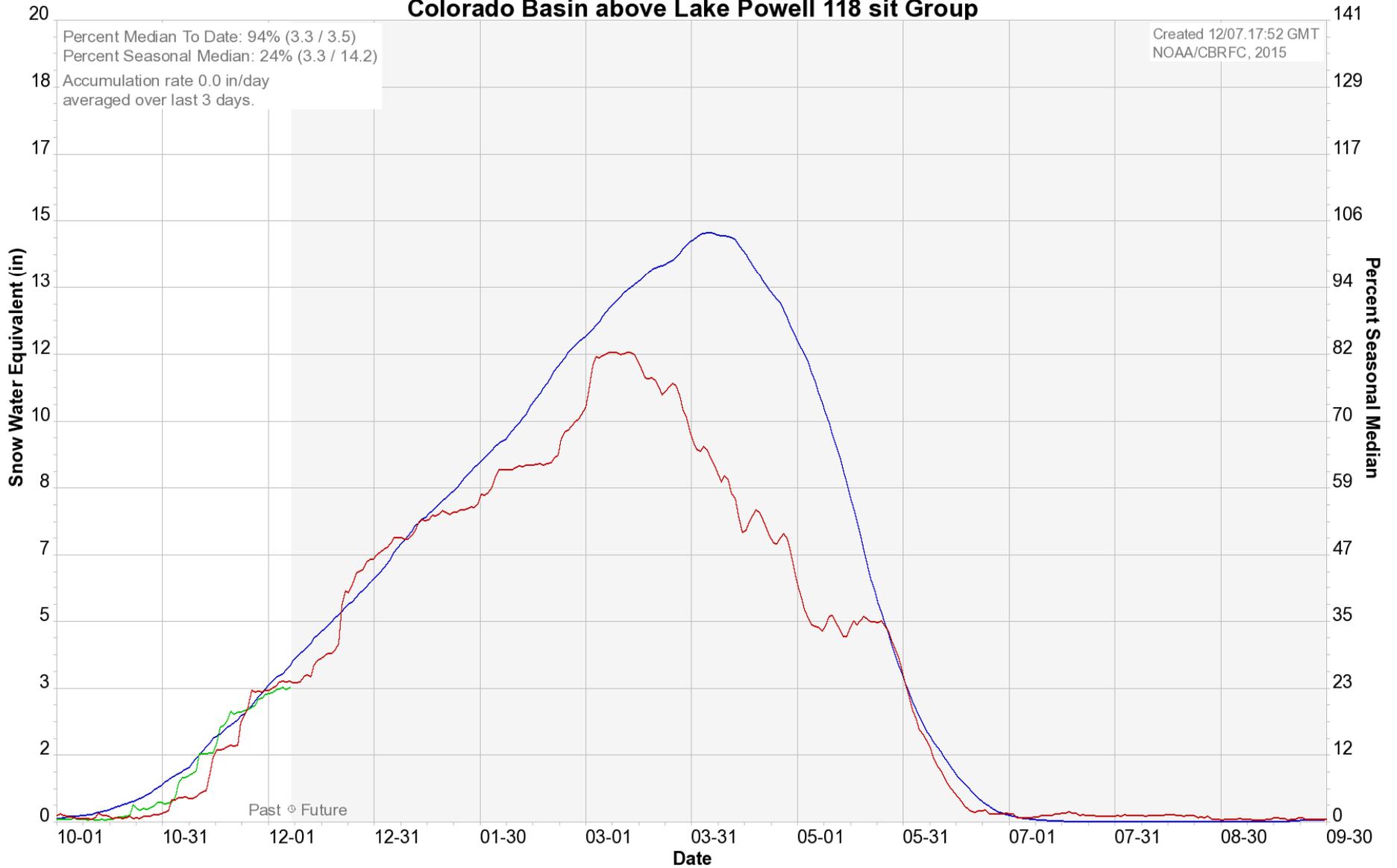
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

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



<http://go.usa.gov/3eZ73>

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



Precipitation – Colorado River Basin

As of December 7, 2015

Upper Colorado Basin

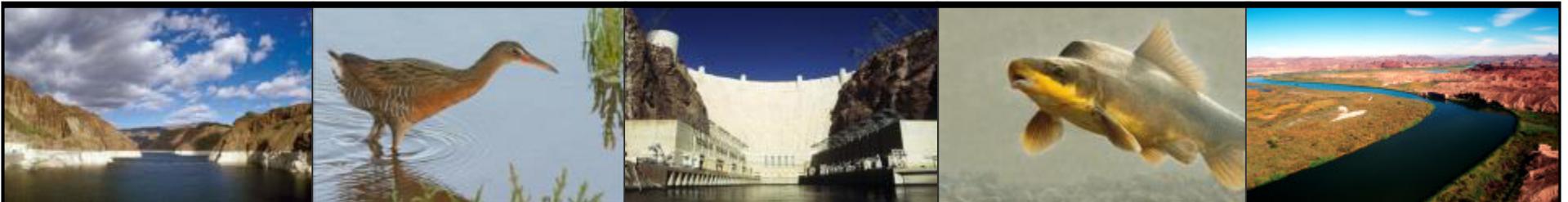
WY Precip to Date

90% (5.3")

Current Basin Snowpack

89% (3.2")

(Avg 1981-2010)

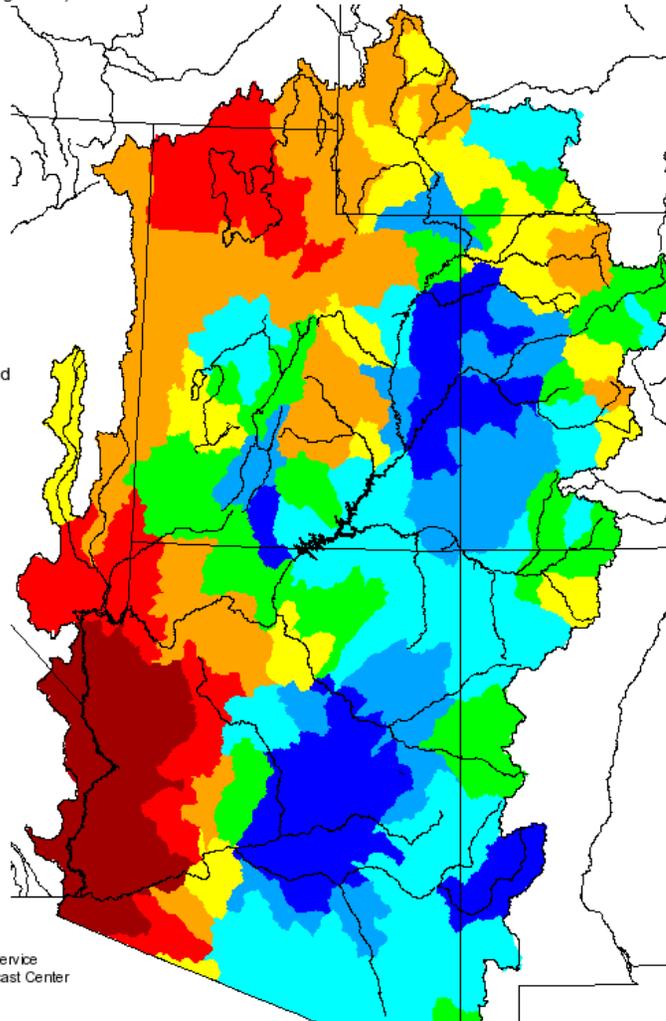
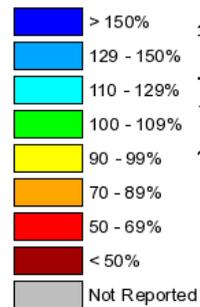


Precipitation

Monthly Precipitation for November 2015

(Averaged by Hydrologic Unit)

% Average

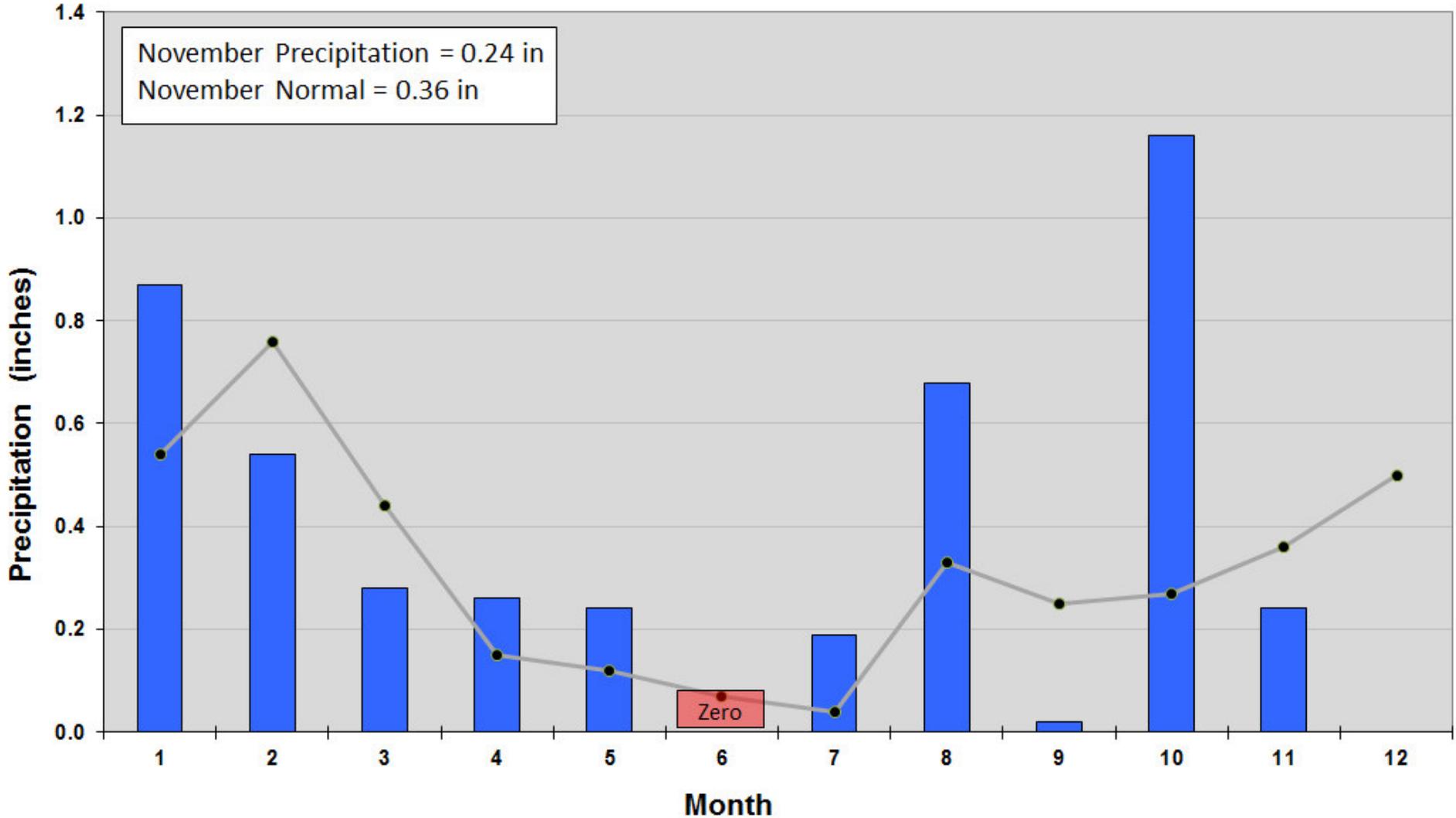


Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbffc.noaa.gov

Monthly Precipitation at McCarran International Airport, Las Vegas, NV

January - November 2015

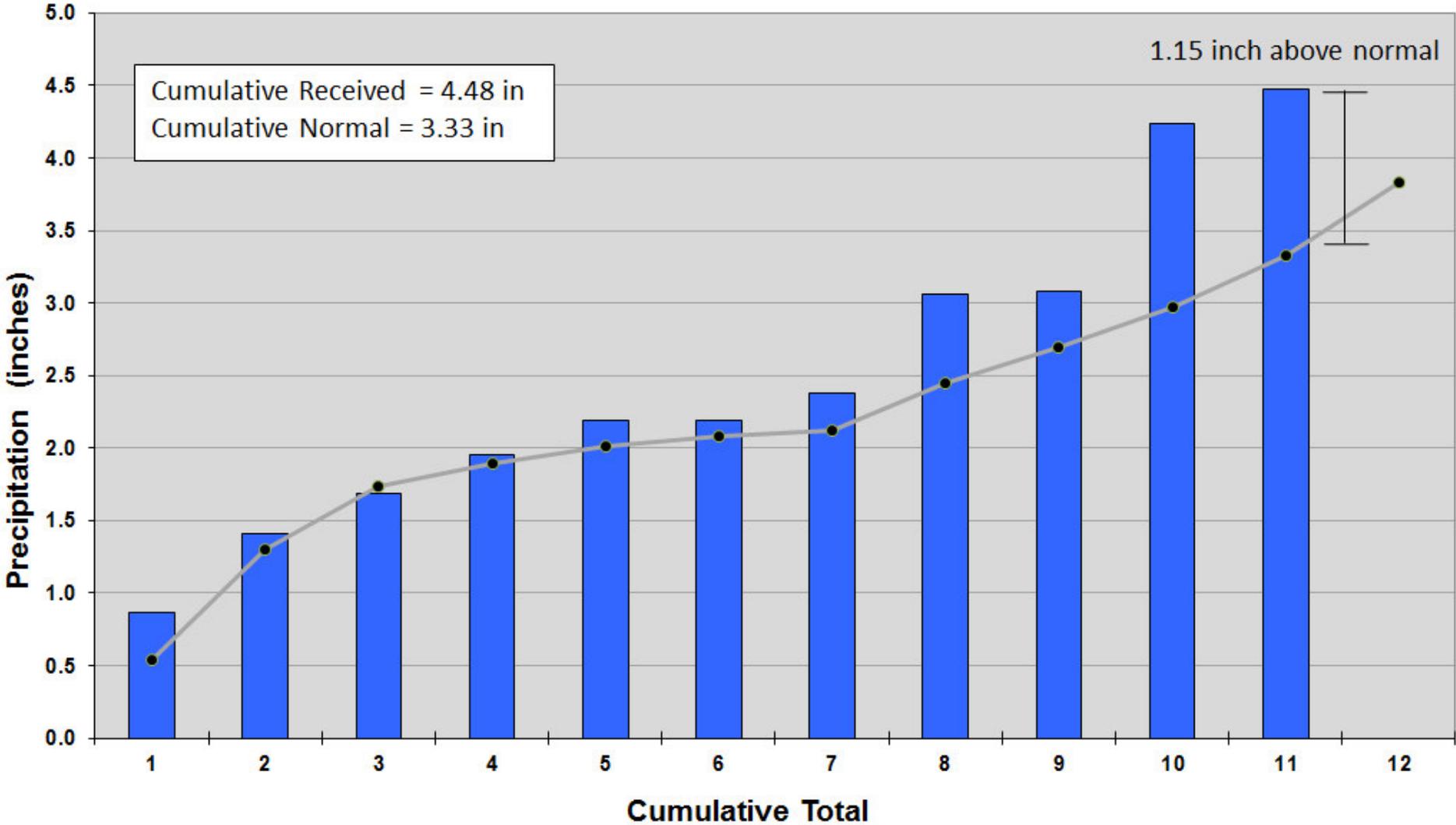
Recorded Value (inches)
Normal (inches)



Cumulative Precipitation at McCarran International Airport, Las Vegas, NV

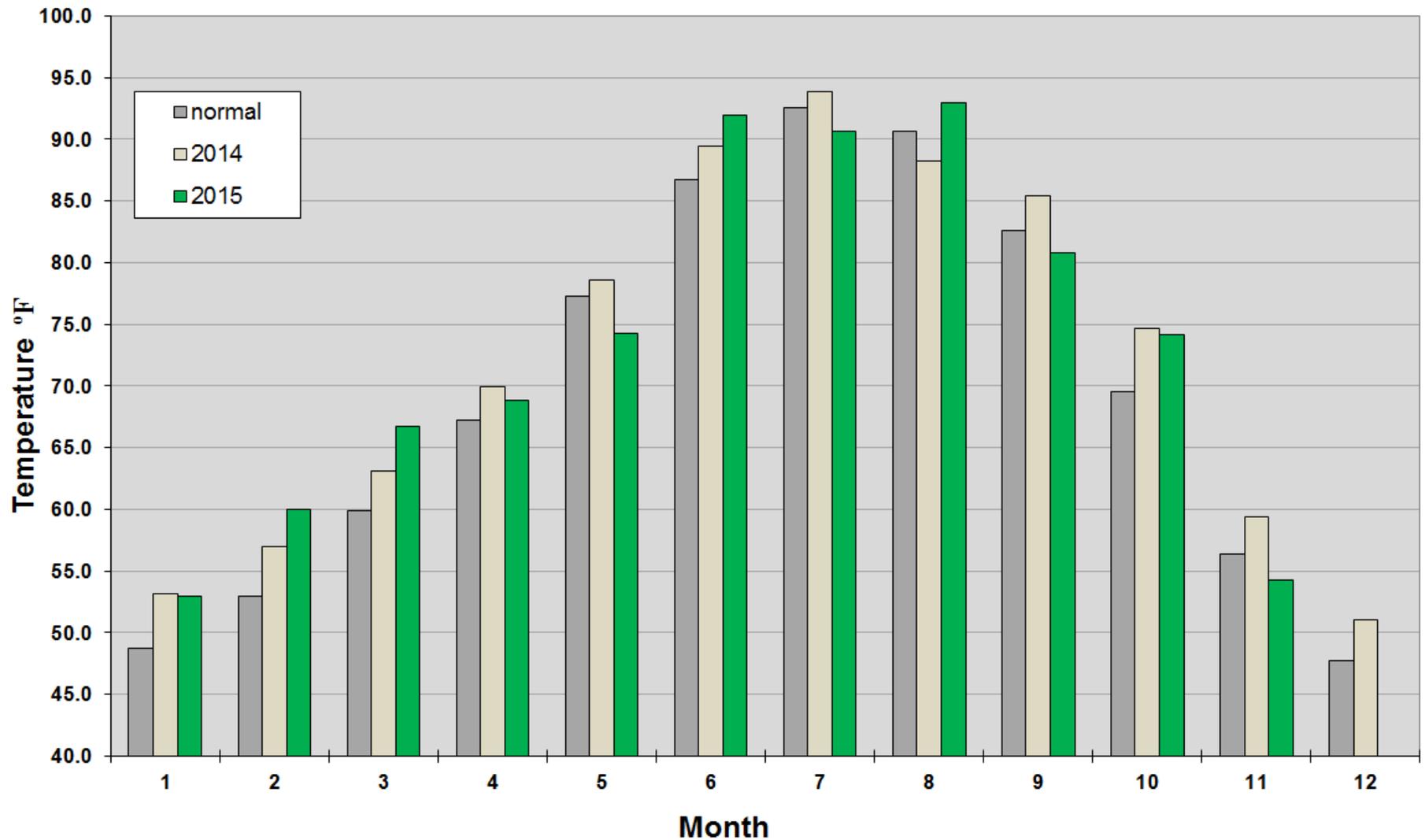
Cumulative Value (inches)
Normal (inches)

January - November 2015



Las Vegas Average Temperature

Average Monthly Temperature at McCarran Airport, Las Vegas, NV



Water Use in Southern Nevada



Water Use in Southern Nevada

January – November 2015

2015*: Consumptive Use = 213,808 af

2014: Consumptive Use = 215,926 af

November consumptive use is preliminary.

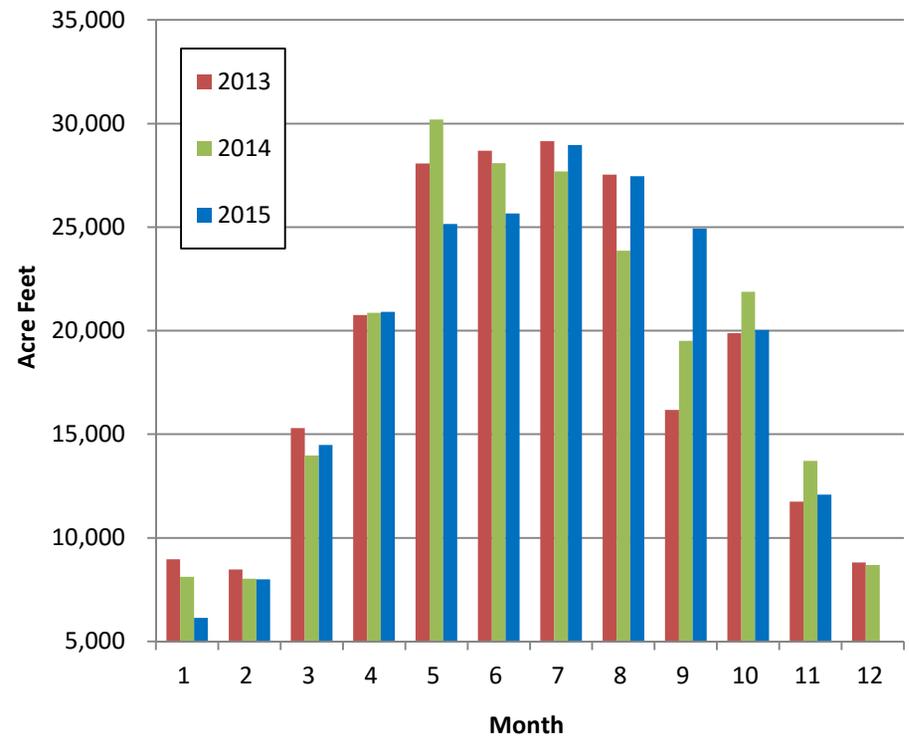
Difference = - 2,118 af

*Subject to final accounting.

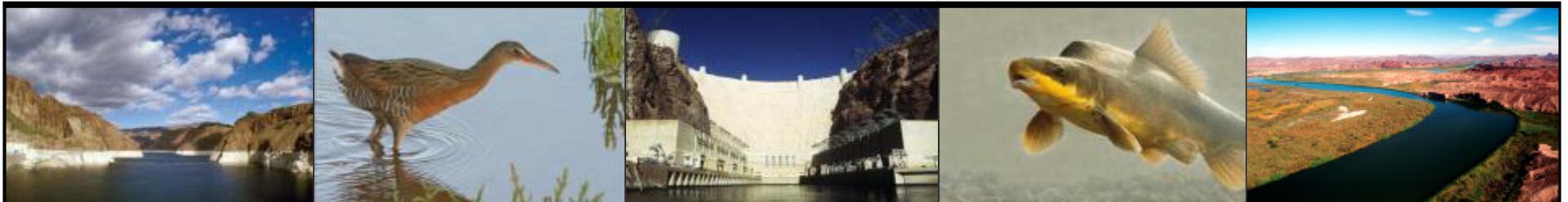


Monthly Consumptive Use Comparison

	2012	2013	2014	2015
jan	8,924	8,965	8,128	6,146
feb	10,735	8,470	8,027	7,994
mar	16,487	15,300	13,981	14,490
apr	20,784	20,750	20,871	20,902
may	31,053	28,076	30,199	25,153
jun	29,004	28,679	28,079	25,653
jul	29,362	29,150	27,686	28,968
aug	24,230	27,538	23,856	27,450
sep	19,065	16,179	19,514	24,940
oct	20,872	19,884	21,871	20,026
nov	15,406	11,754	13,714	12,085
dec	11,239	8,818	8,697	8,697
total	237,161	223,563	224,622	222,505



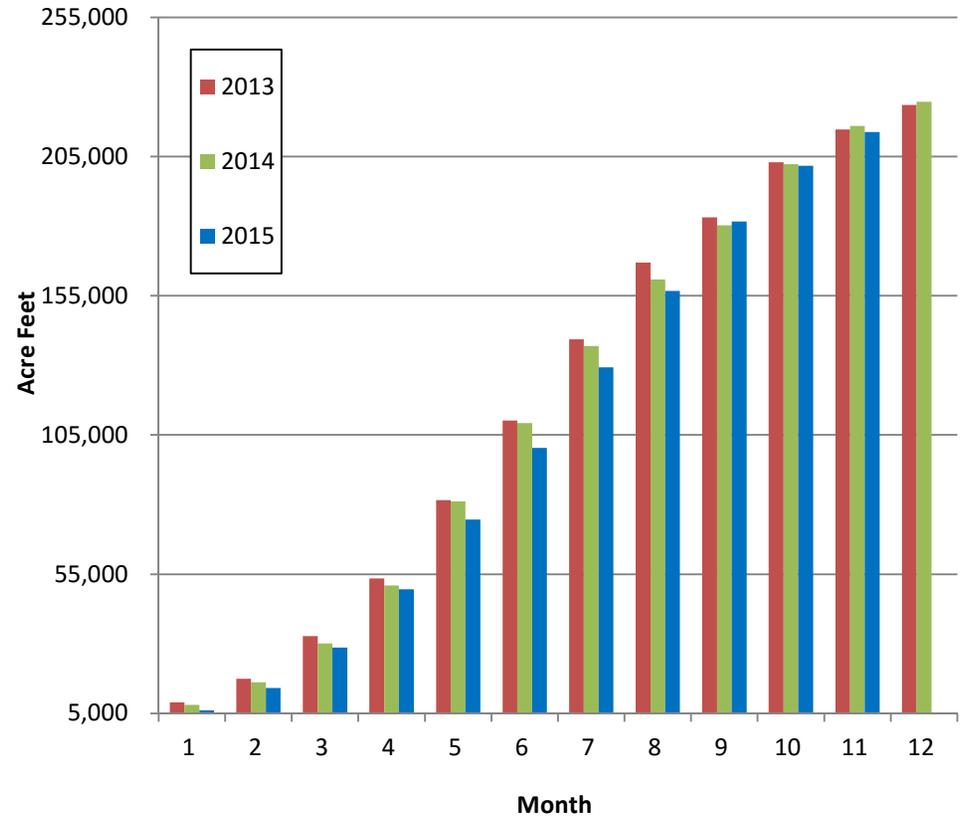
November consumptive use is preliminary.
 December projected use is based on last years consumptive use.



Cumulative Consumptive Use Comparison

	2012	2013	2014	2015
jan	8,924	8,965	8,128	6,146
feb	19,659	17,435	16,155	14,140
mar	36,146	32,735	30,136	28,630
apr	56,930	53,485	51,006	49,532
may	87,983	81,561	81,206	74,685
jun	116,987	110,240	109,285	100,338
jul	146,349	139,390	136,971	129,307
aug	170,579	166,928	160,827	156,757
sep	189,644	183,107	180,341	181,697
oct	210,516	202,991	202,212	201,723
nov	225,922	214,745	215,926	213,808
dec	237,161	223,563	224,622	
total	237,161	223,563	224,622	

November consumptive use is preliminary.



Colorado River Commission of Nevada

Questions?

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