Determination of City's Drought Response Level

Presentation to City Council

May 14, 2013

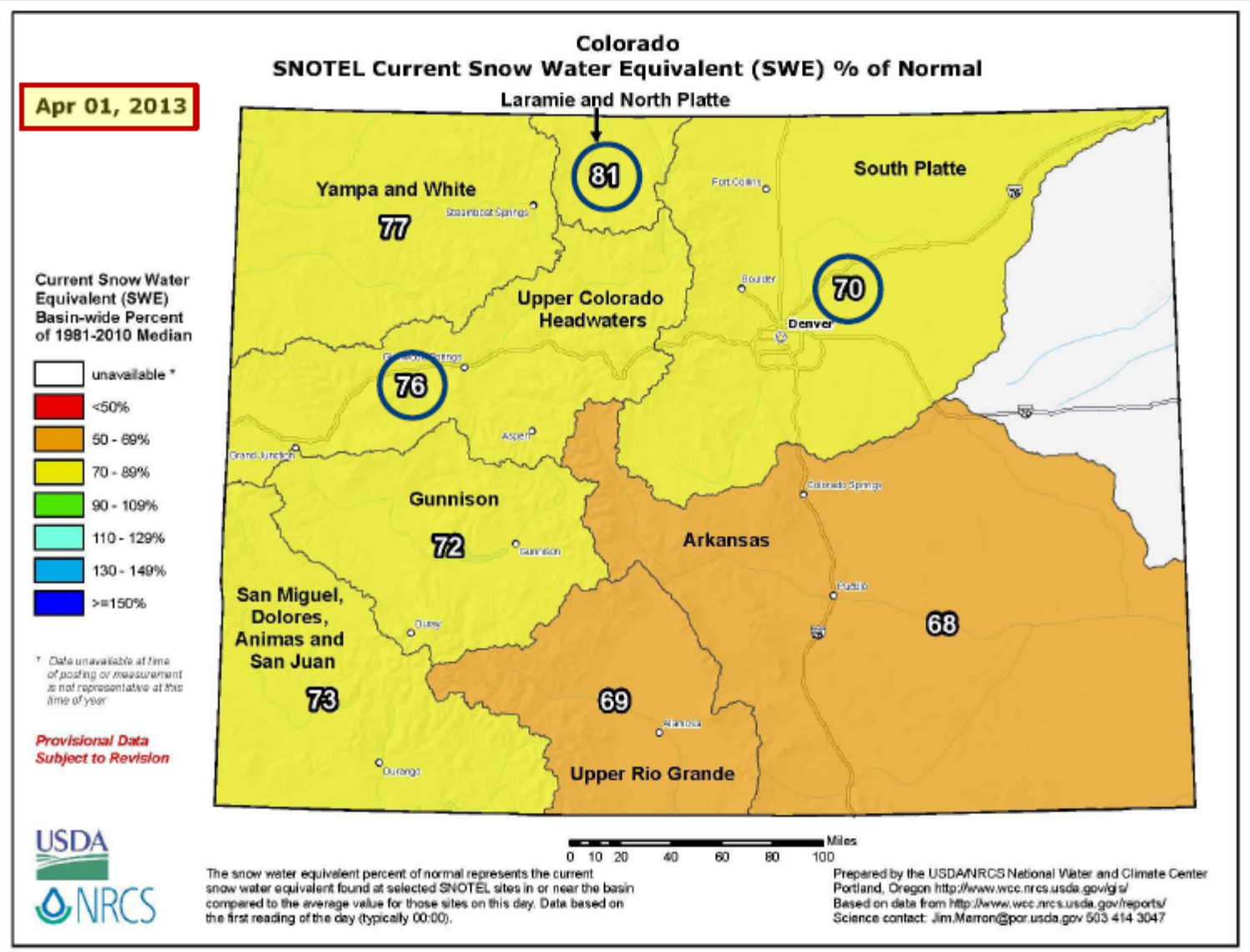
(Most recent projections in time for the meeting)

Specifics about 2013 Water Supply /Demand

- Snowpack
- Temperature
- Precipitation
- Water Demand
- Water Supplies
- Surplus (not deficit) in projected supplies for 2013

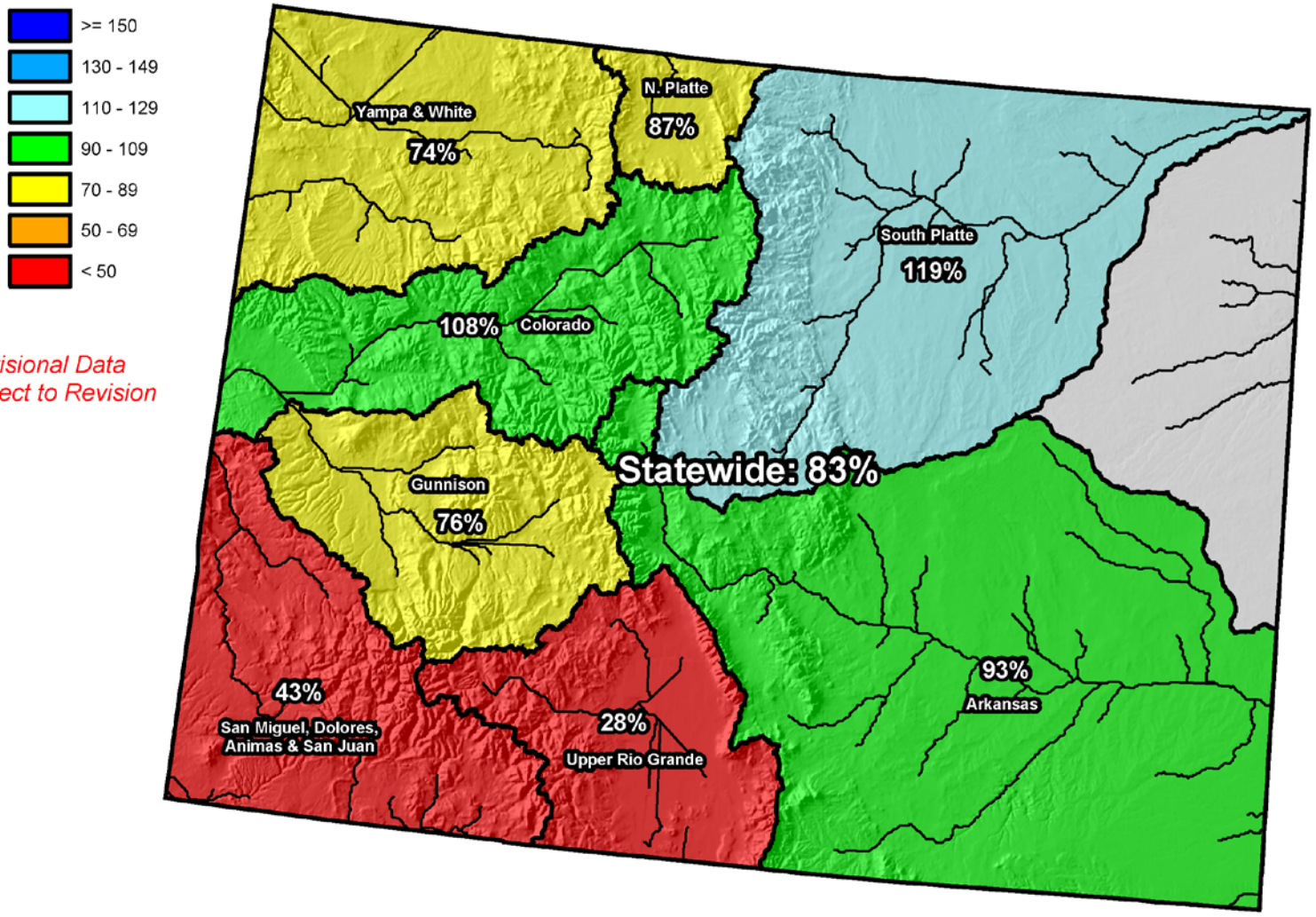
The Drought


The Weather Channel
SUMMER FACTORS
JET STREAM
DROUGHT
The Weather Channel
weather.com


Colorado
SNOTEL Current Snow Water Equivalent (SWE) % of Normal
Apr 01, 2013
Laramie and North Platte
81
Yampa and White
77
South Platte
70
Upper Colorado Headwaters
76
Gunnison
72
Arkansas
68
San Miguel, Dolores, Animas and San Juan
73
69
Upper Rio Grande
Fort Collins
Steamboat Springs
Boulder
Denver
Aspen
Grand Junction
Colorado Springs
Pueblo
Gunnison
Durango
Alamosa
Current Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median
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
0 10 20 40 60 80 100
Miles
The snow water equivalent percent of normal represents the current snow water equivalent 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

Colorado SNOTEL Snowpack Update Map

Percent of Average

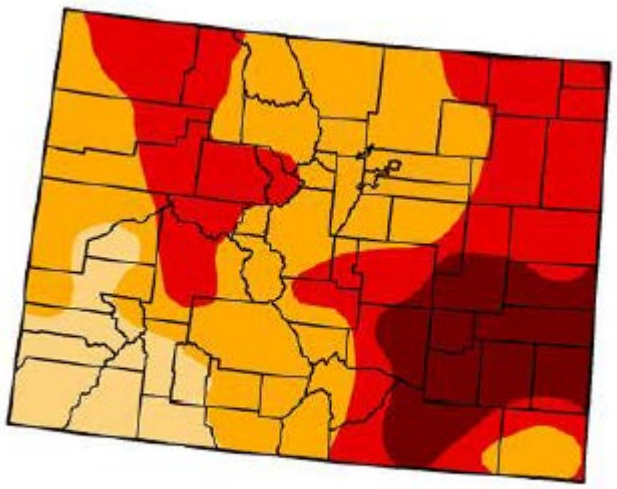


Provisional Data Subject to Revision

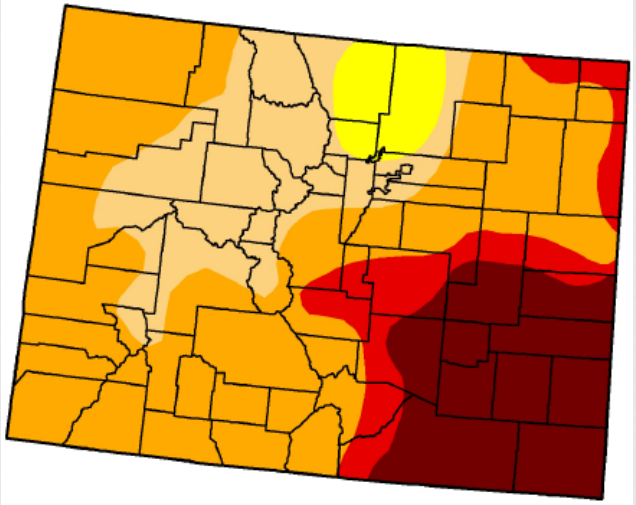
Current as of May 14, 2013

*Data may not provide a valid measure of conditions

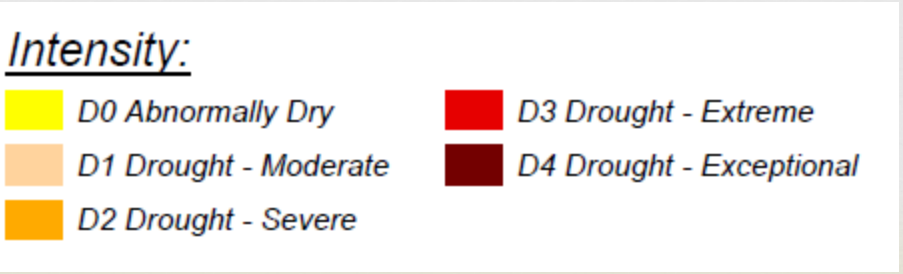
The Drought



April 2, 2013



May 7, 2013

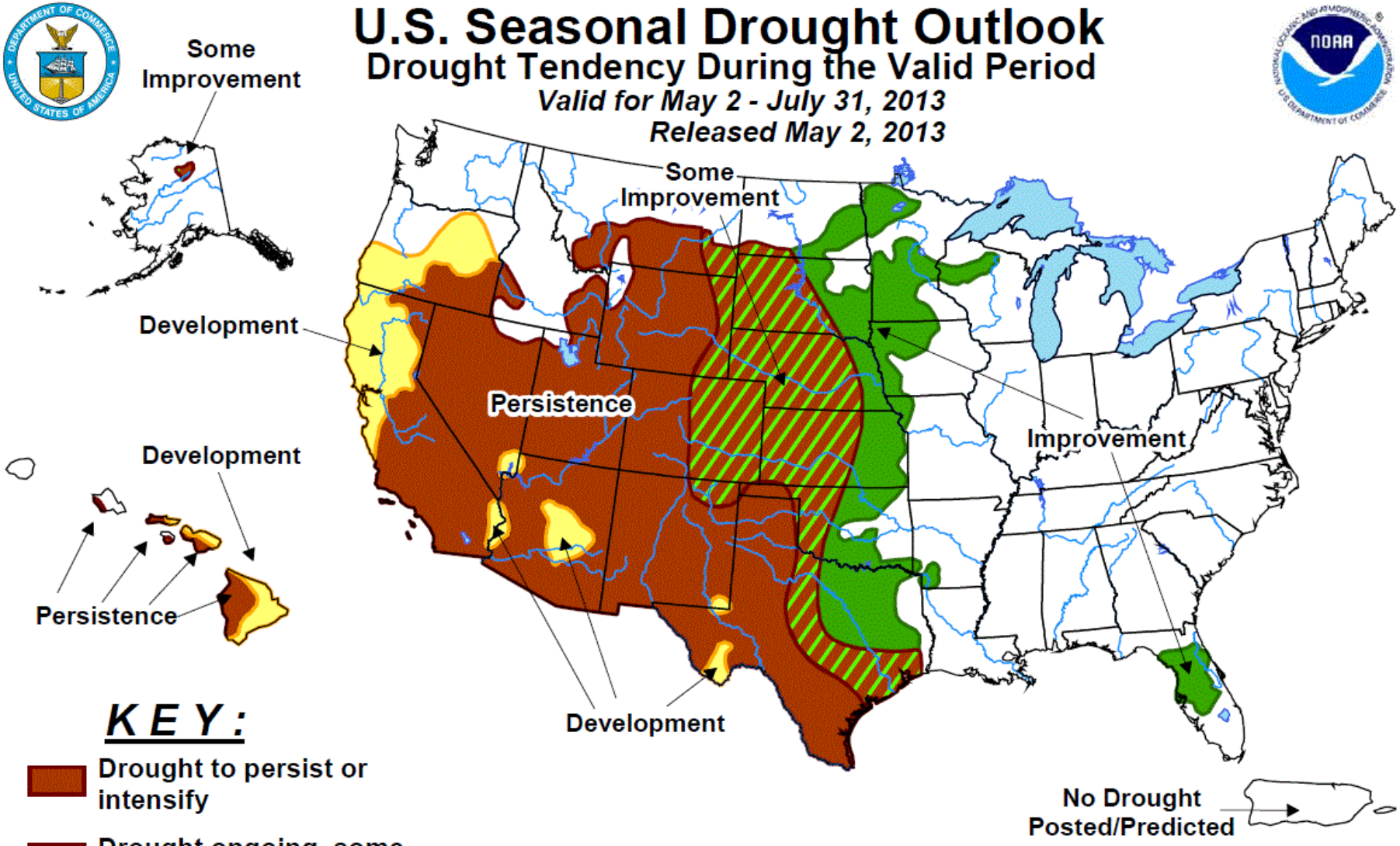


U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for May 2 - July 31, 2013

Released May 2, 2013



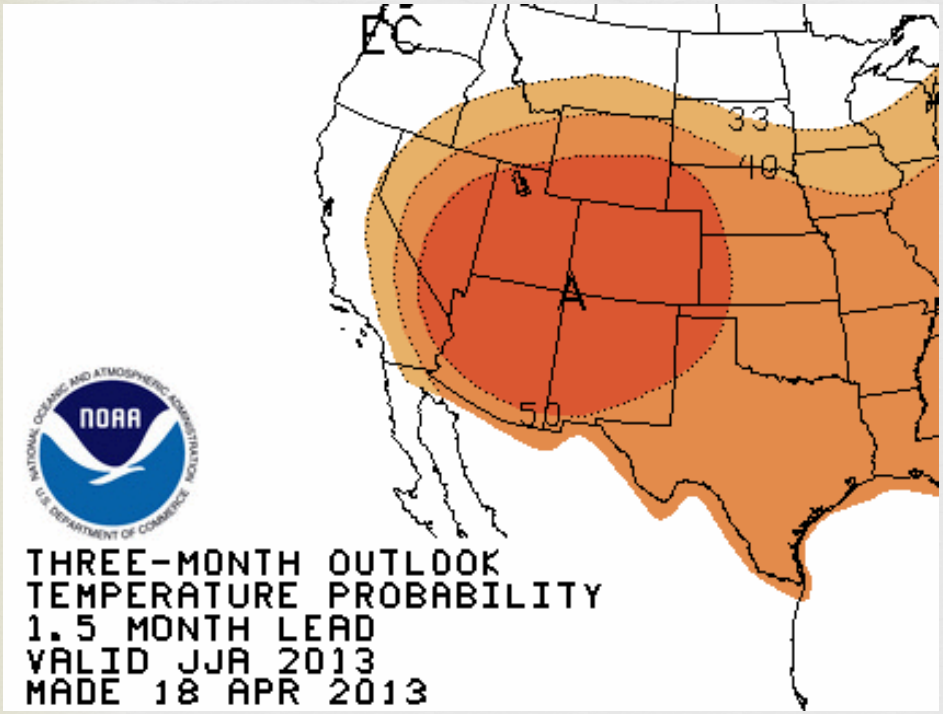
KEY:

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

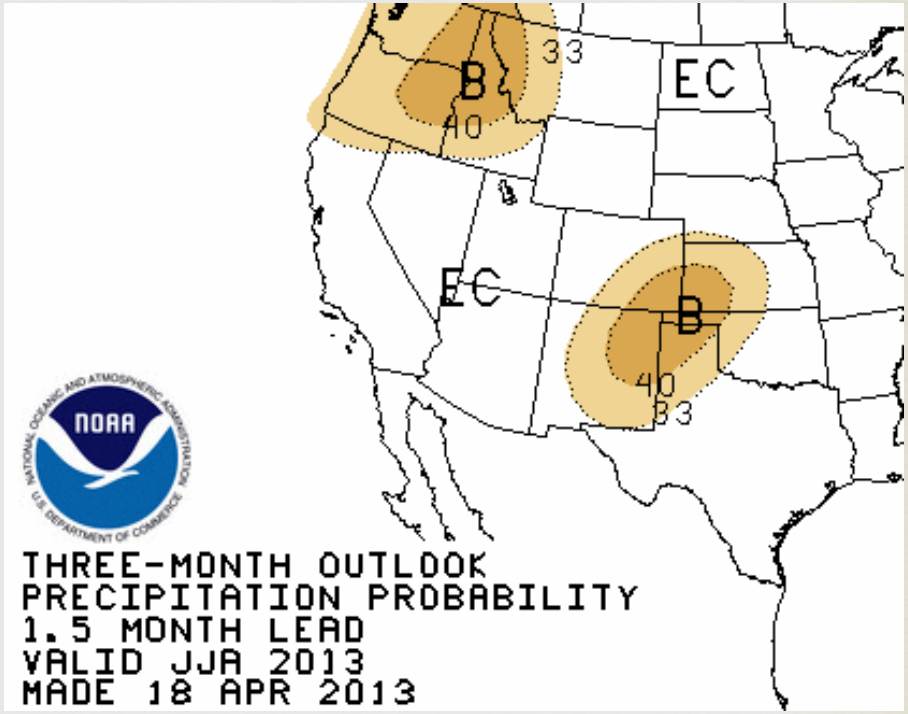
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- 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.

Summer Temperature Projections

June-July-August Forecast

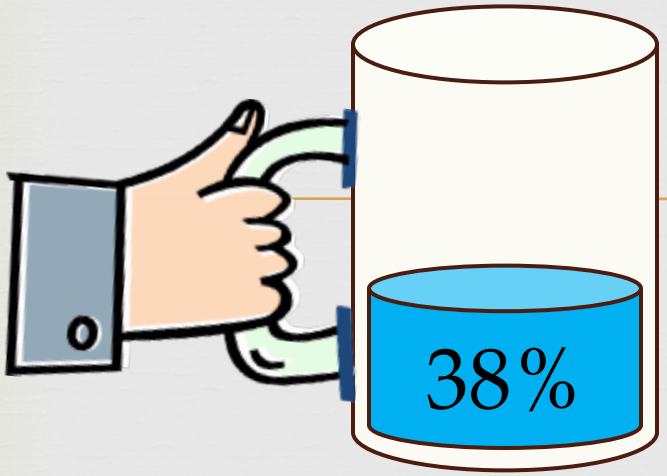


Temperature

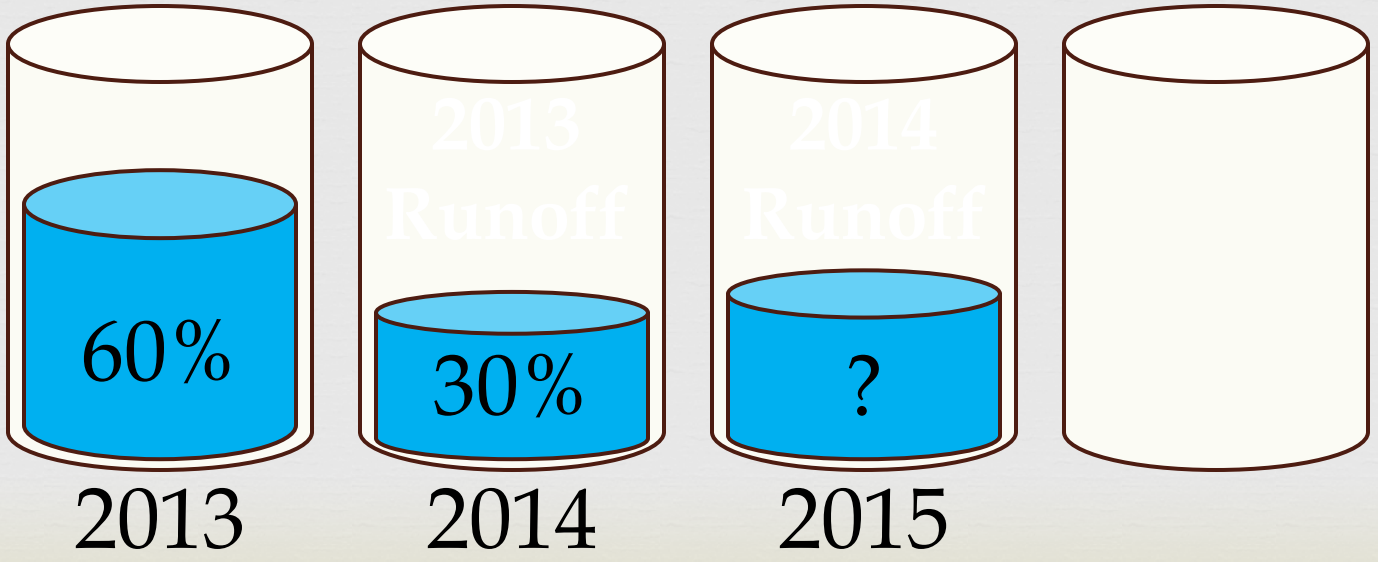


Precipitation

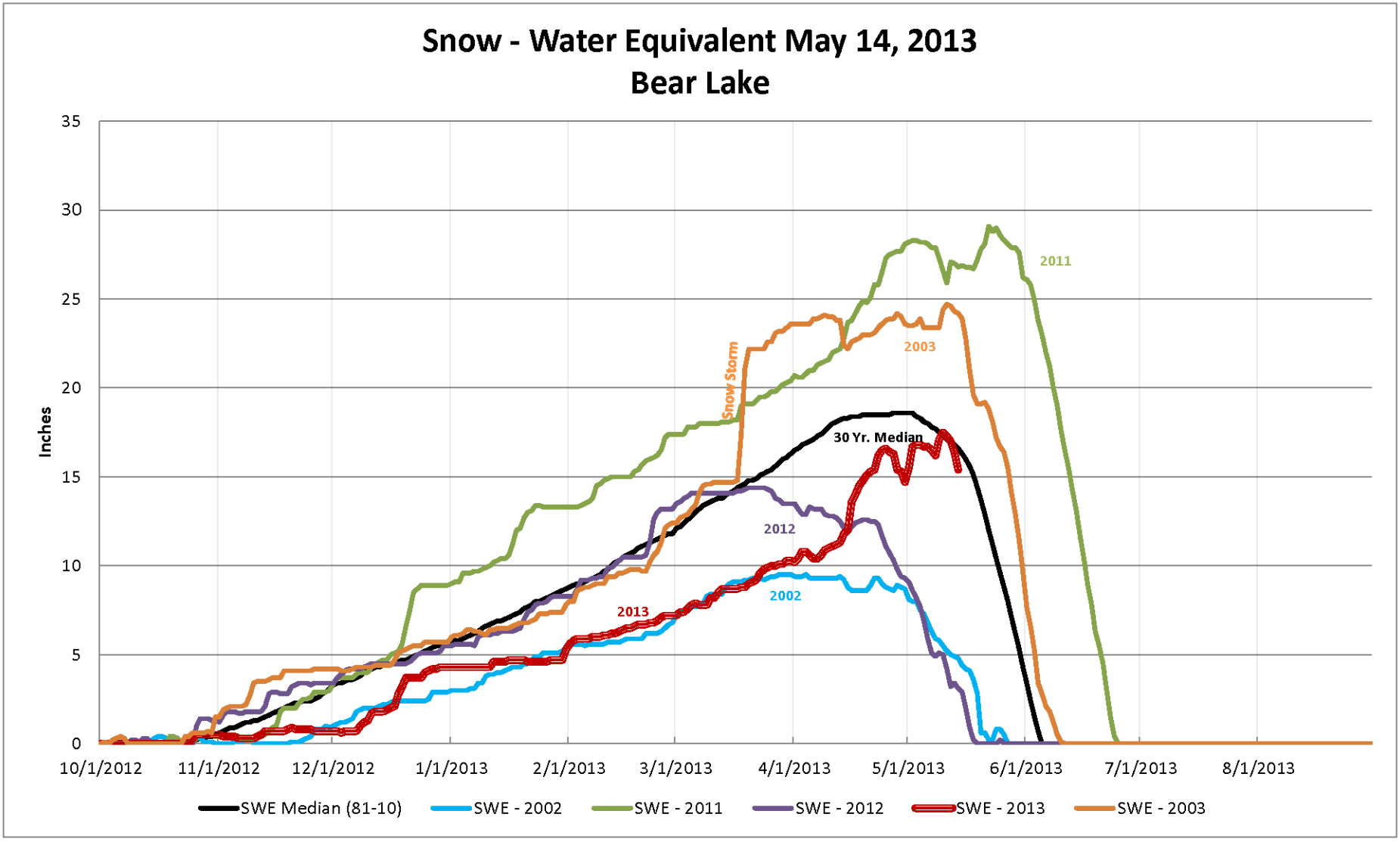
CBT-System
April 1, 2013



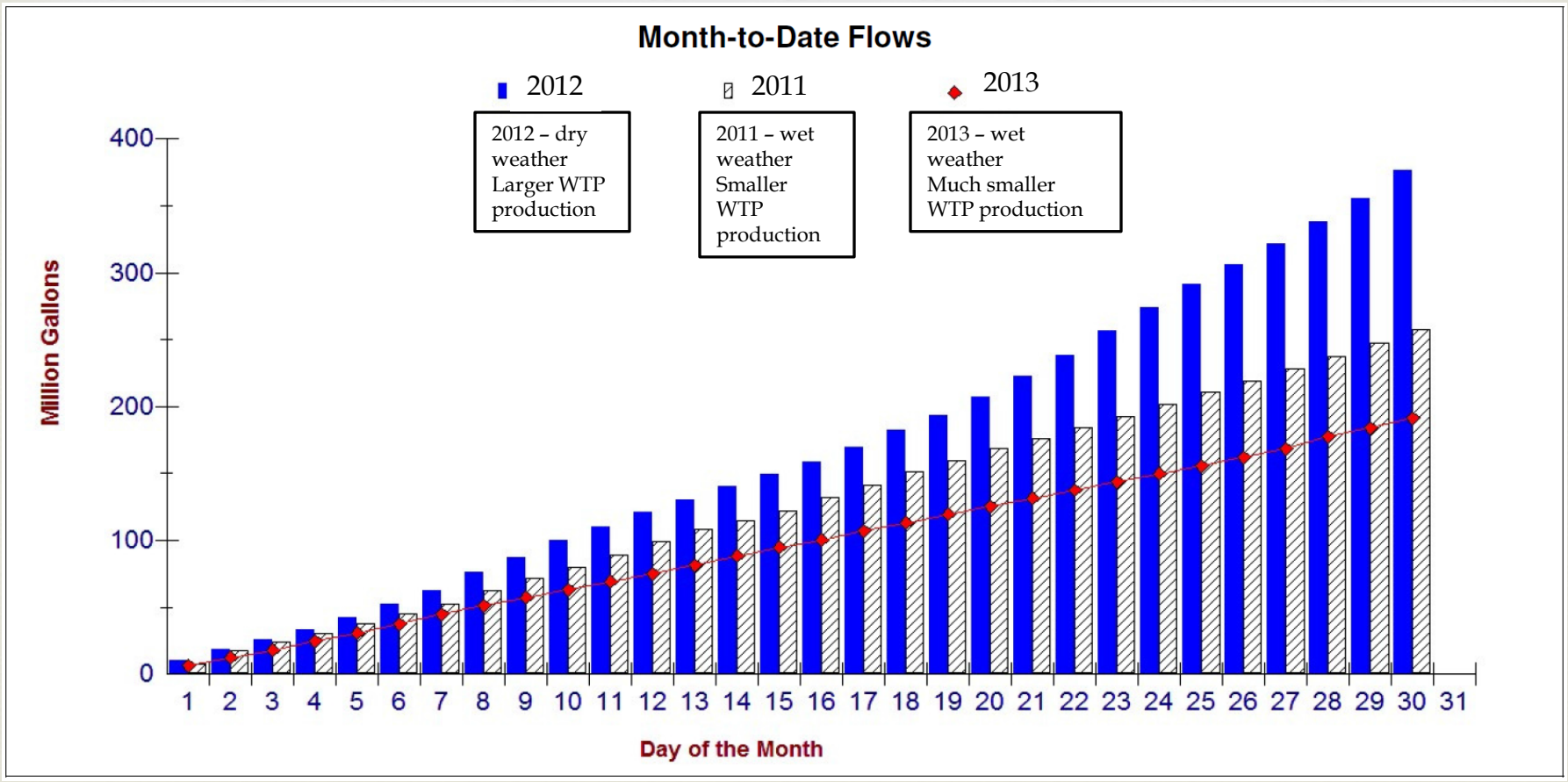
April 1, 2013
Project Reserves



Big Thompson Basin
Snow-Water Equivalent (SWE)

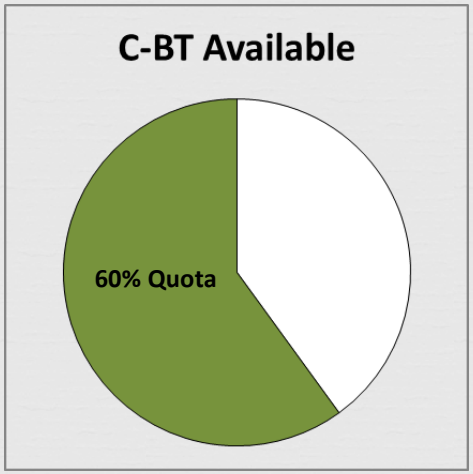


April 2013 WTP Production

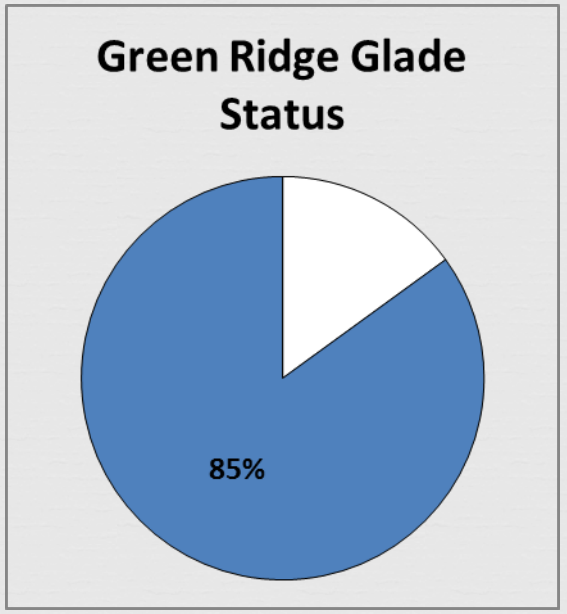


Loveland's Current Supply

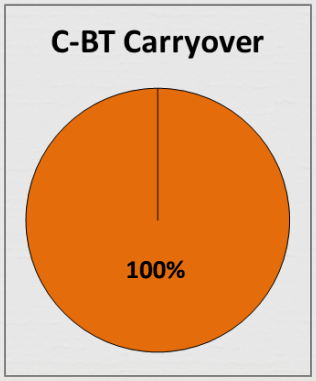
May 14, 2013



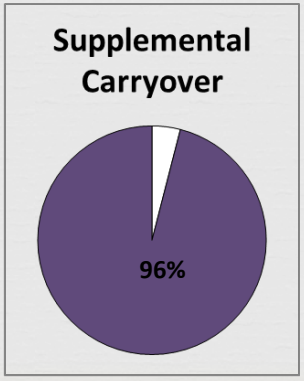
7,241 ac-ft



5,843 ac-ft



2,651 ac-ft



1,497ac-ft

Water Supply Projection Changes April 1st through May 14th

- Projected river availability was increased based on the most recent snowpack information as well as current river flow.
- In early April, projections showed not much, if any, Windy Gap Project Water pumping this year. As of May 10, Windy Gap is projected to pump close to 25,000 acre-ft. This means Loveland should have at least 1,500 acre-ft of Windy Gap available if needed.
- Projected demand was lowered due to cooler temperatures and increased precipitation.
- This report is considered mildly conservative and will be updated often throughout the spring and summer.

Loveland's Water Supply Projection for 2013

(all values in acre-feet)

May 14, 2013	Demand	Supply	Totals
Storage			
GRG Reservoir			
Volume Necessary to Fill	(992)		
C-BT System			
Eureka Ditch Available		0	
Balance Carried Over		3,081	
Quota Water Available		7,241	
Estimated Windy Gap		1,500	
Carryover for Next Year	(2,651)		
Supplemental Carryover	(1,566)		
Net Storage Available			**6,614**
Big Thompson River Rights			
Net River Rights Available			**8,050**
System Demands			
Remaining Demand	(10,202)		
Remaining Parks Leases	(700)		
Net Remaining Demands			**(10,902)**
Water Supply Status November 1, 2013			**3,761**
Water Year is from November 1 through October 31			
Projected Demand Based on 2010 Production			

Summary

- The City of Loveland has developed a robust water supply over many decades.
- This water supply offers a very high degree of stability during periods of uncertain drought.
- Loveland is fortunate and has not endured any extraordinary challenges to our watershed, such as a forest fire, that could impact our water supply.
- Should additional impacts to our water supply occur, the Drought Management Plan allows for a quick response.

City Council Recommendation

- Current water supplies are adequate to satisfy this year's projected demands without restrictions.
- Focus on education and voluntary participation in wise use of water at this time.
- Should conditions change, Staff will return to city council and recommend implementing one of the four mandatory restriction levels included in the Drought Management Plan to curtail demand.