Glen Canyon Dam Adaptive Management Work Group
Agenda Item Information
December 5-6, 2006

Agenda Item

Basin Hydrology

Action Requested

√ Information item only; we will answer questions but no action is requested.

Presenter

Tom Ryan, Regional Hydrologist, Upper Colorado Region, Bureau of Reclamation

Previous Action Taken

√ N/A

Relevant Science

√ N/A

Background Information

The presentation is intended to provide pertinent information to AMWG members on the hydrology of the Upper Colorado River Basin and projected reservoir operations at Lake Powell/Glen Canyon Dam. Such information is provided to assist the AMWG in developing recommendations to the Secretary on the operation of Glen Canyon Dam, particularly when such recommendations are near-term in nature.

The presentation will cover reservoir storage conditions in the Upper Colorado River Basin and drought status. The presentation will discuss the exceptional precipitation events that occurred in the Four Corners region in October 2006, and the projected operation of Glen Canyon Dam in 2007. The presentation will also discuss the probability of equalization releases (releases greater than 8.23 million acre-feet) from Lake Powell in 2007 and 2008.

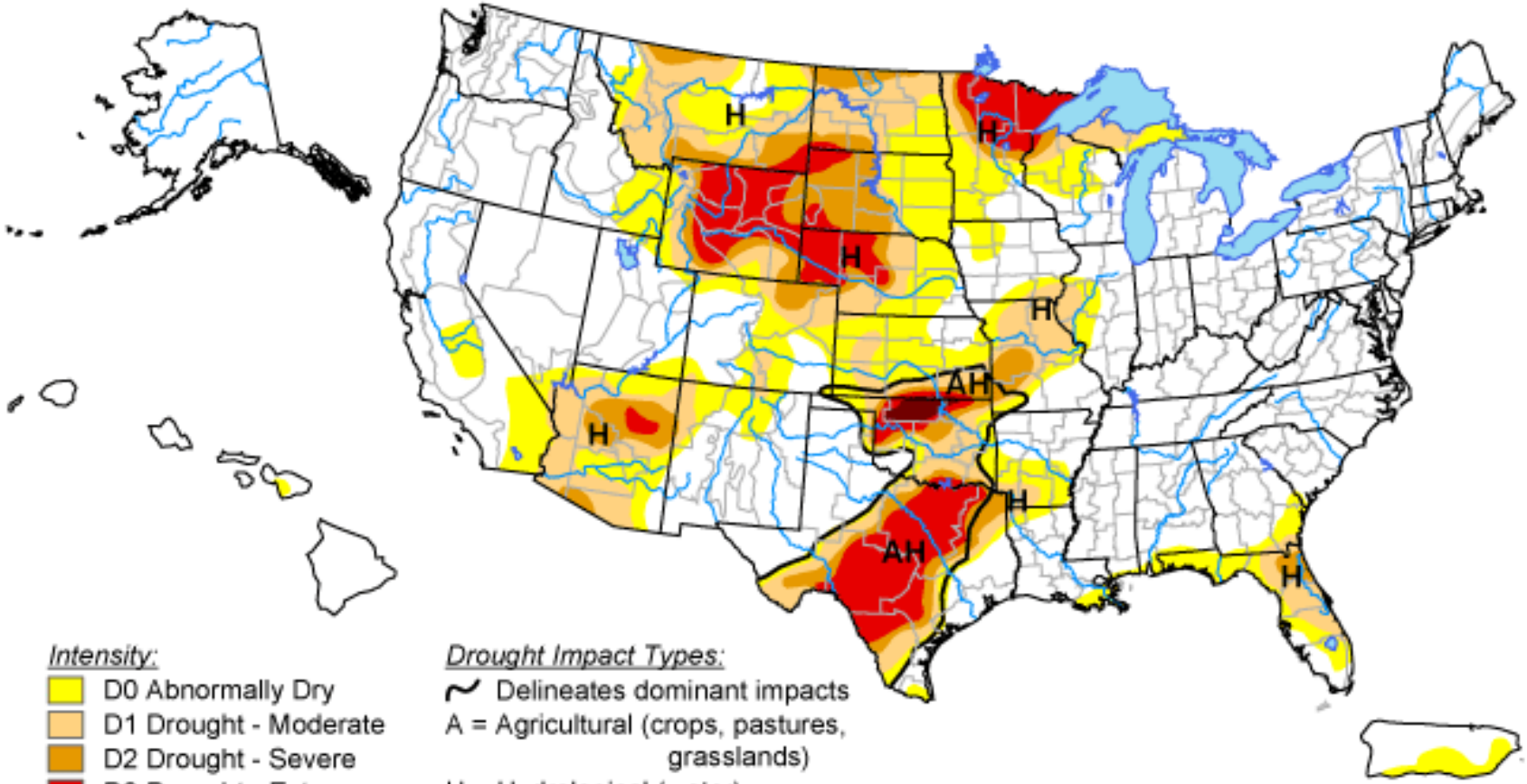
RECLAMATION
Managing Water in the West

Upper Basin Hydrology And Operations

Adaptive Management Work Group
December 6, 2006
Phoenix, Arizona

U.S. Drought Monitor

November 28, 2006
Valid 7 a.m. EST



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

Drought Impact Types:
- ~ Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)

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

http://drought.unl.edu/dm

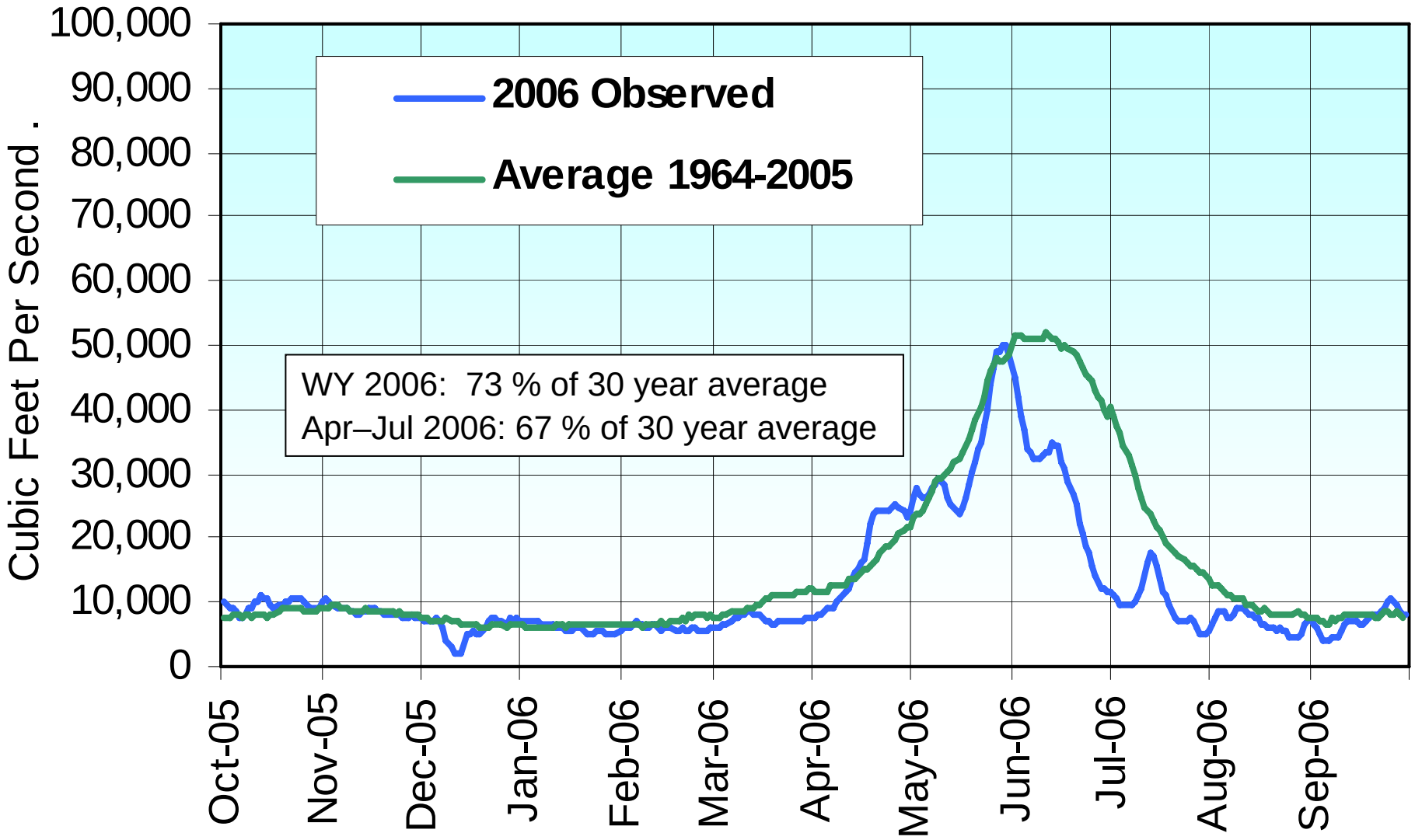
USDA National Drought Mitigation Center

Released Thursday, November 30, 2006

Author: Ned Guttman/Richard Heim, NOAA/NESDIS/NCDC

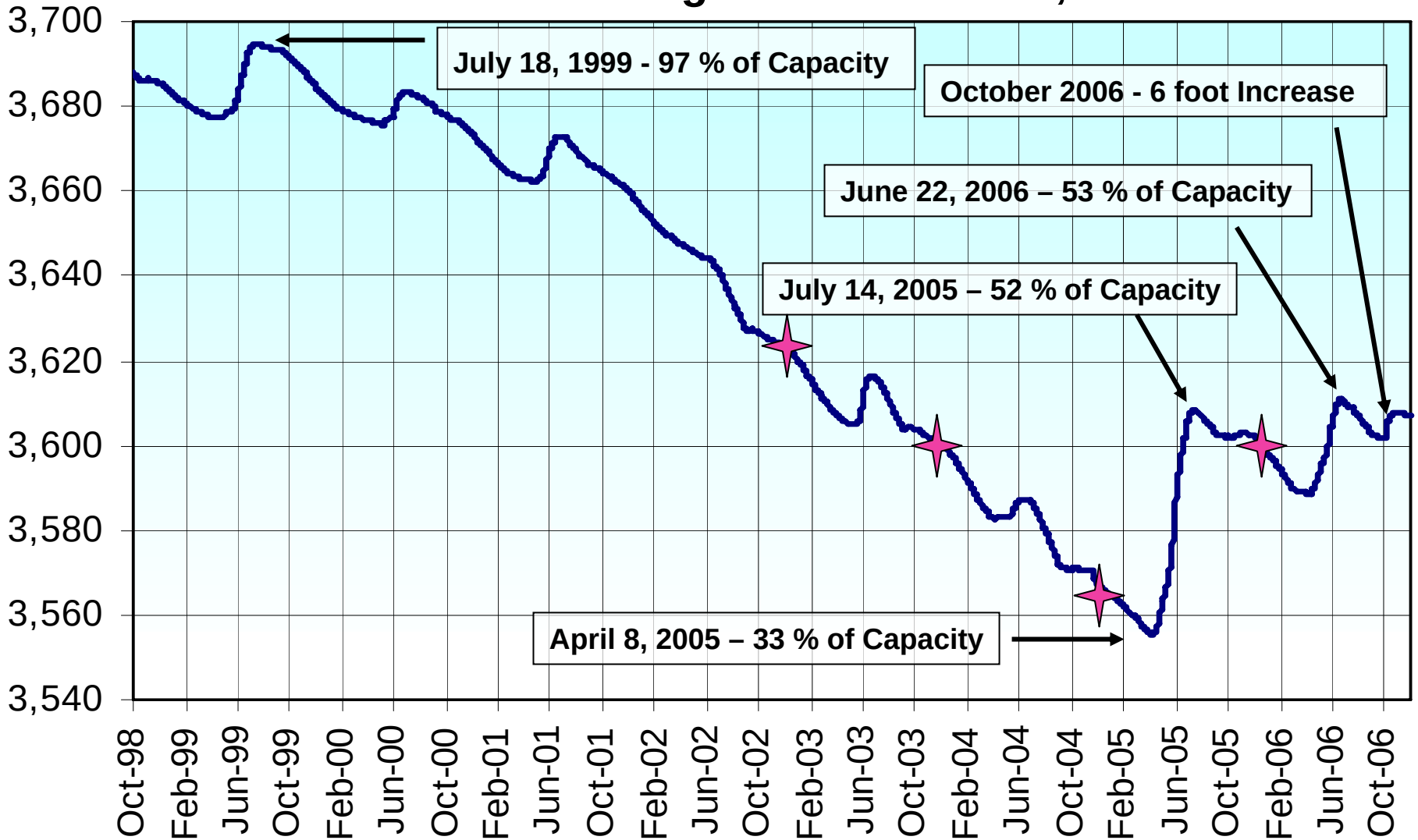
RECLAMATION

Lake Powell Unregulated Inflow
Water year 2006



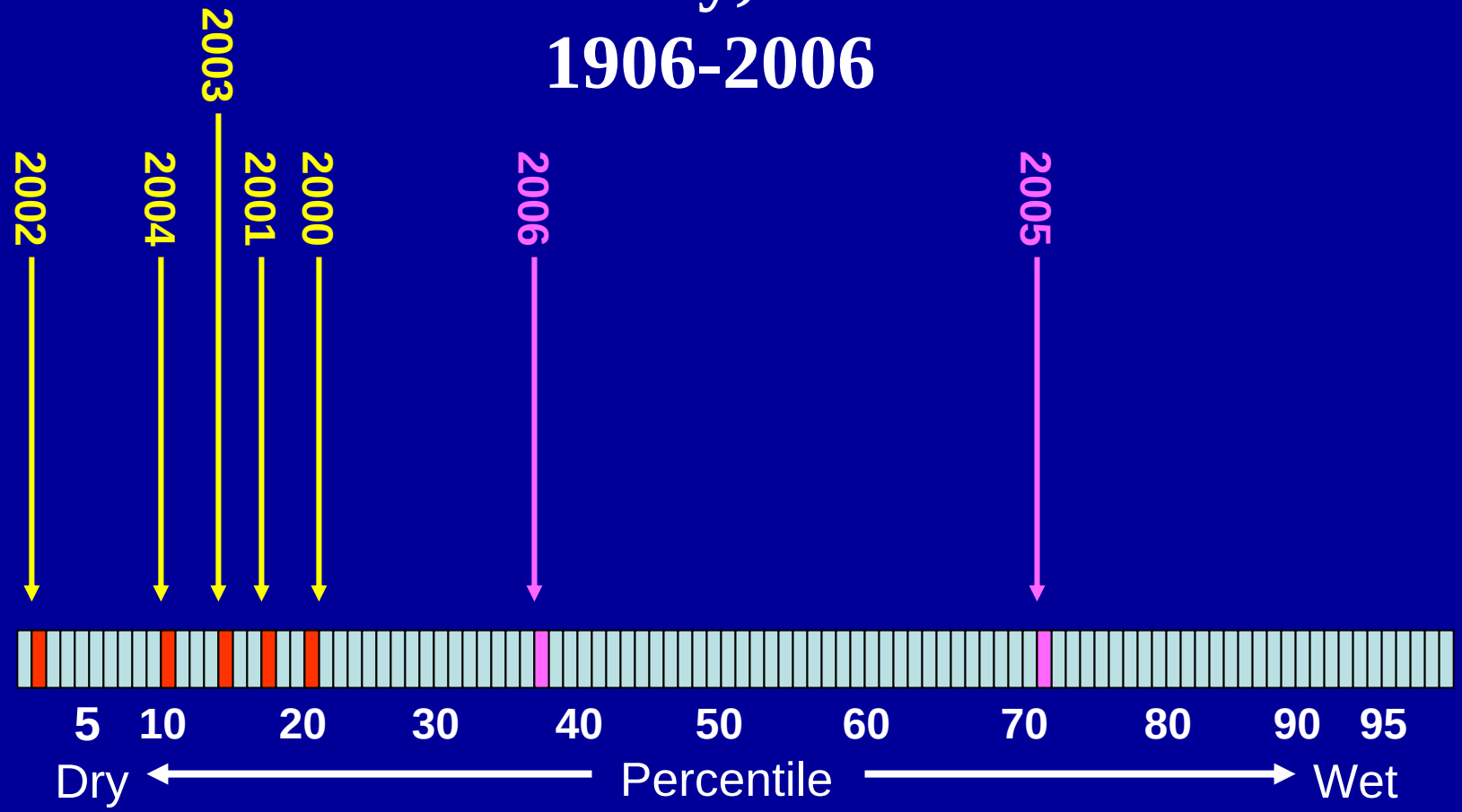
RECLAMATION

Lake Powell Water Surface Elevations
October 1998 through November 30, 2006



RECLAMATION

101 Years of Natural Flow
Lees Ferry, Arizona
1906-2006



Note: 2005 and 2006 are estimated values

RECLAMATION

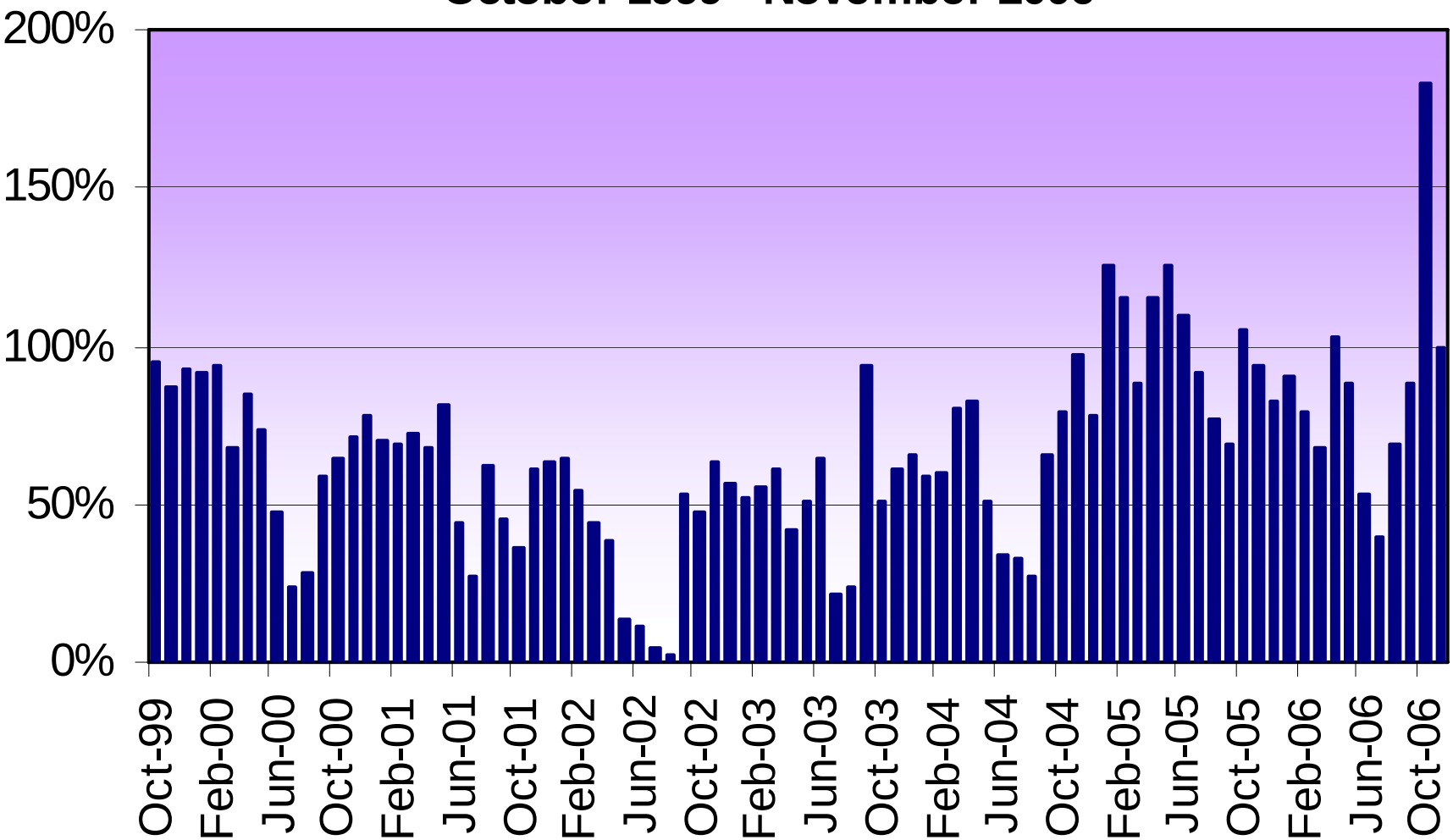
Lowest Consecutive Years of Natural Flow Lees Ferry, Arizona (average is 15.0 maf)

1906-2006

Consecutive Years	Driest Period (Natural flow)
2	2002-2003 (8.2 maf)
3	2002-2004 (8.8 maf)
4	2001-2004 (9.4 maf)
5	2000-2004 (9.7 maf)
6	1999-2004 (10.9 maf)
7	2000-2006 (11.2 maf)
8	1954-1961 (12.1 maf)*

* With an average or below average year in 2007, this will be replaced by 2000-2007

Unregulated Inflow to Lake Powell
as a percentage of the 1971-2000 30-year average
October 1999 - November 2006



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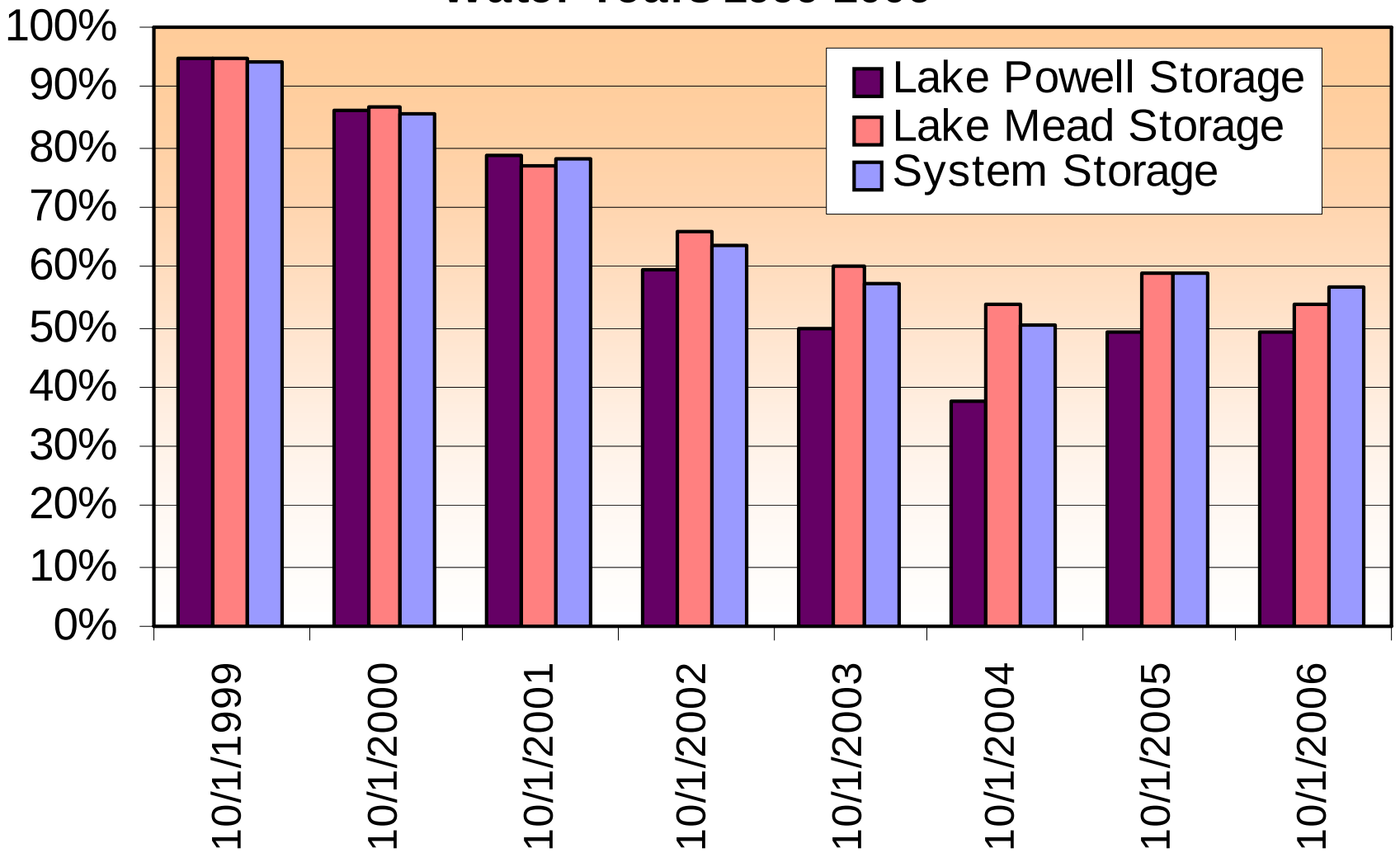
Lakes Powell and Mead - C.R. System Storage

Water Years 1999-2006



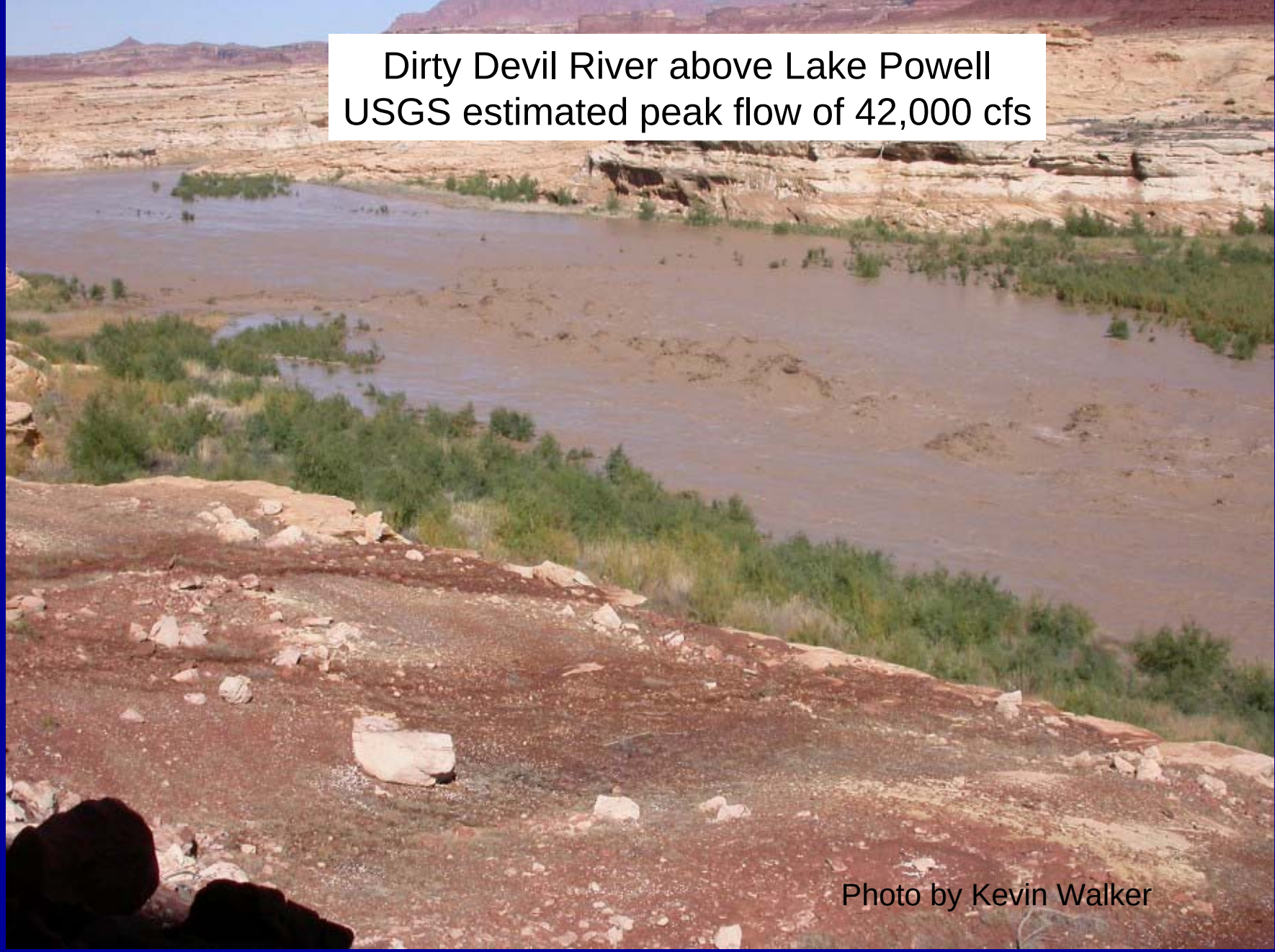
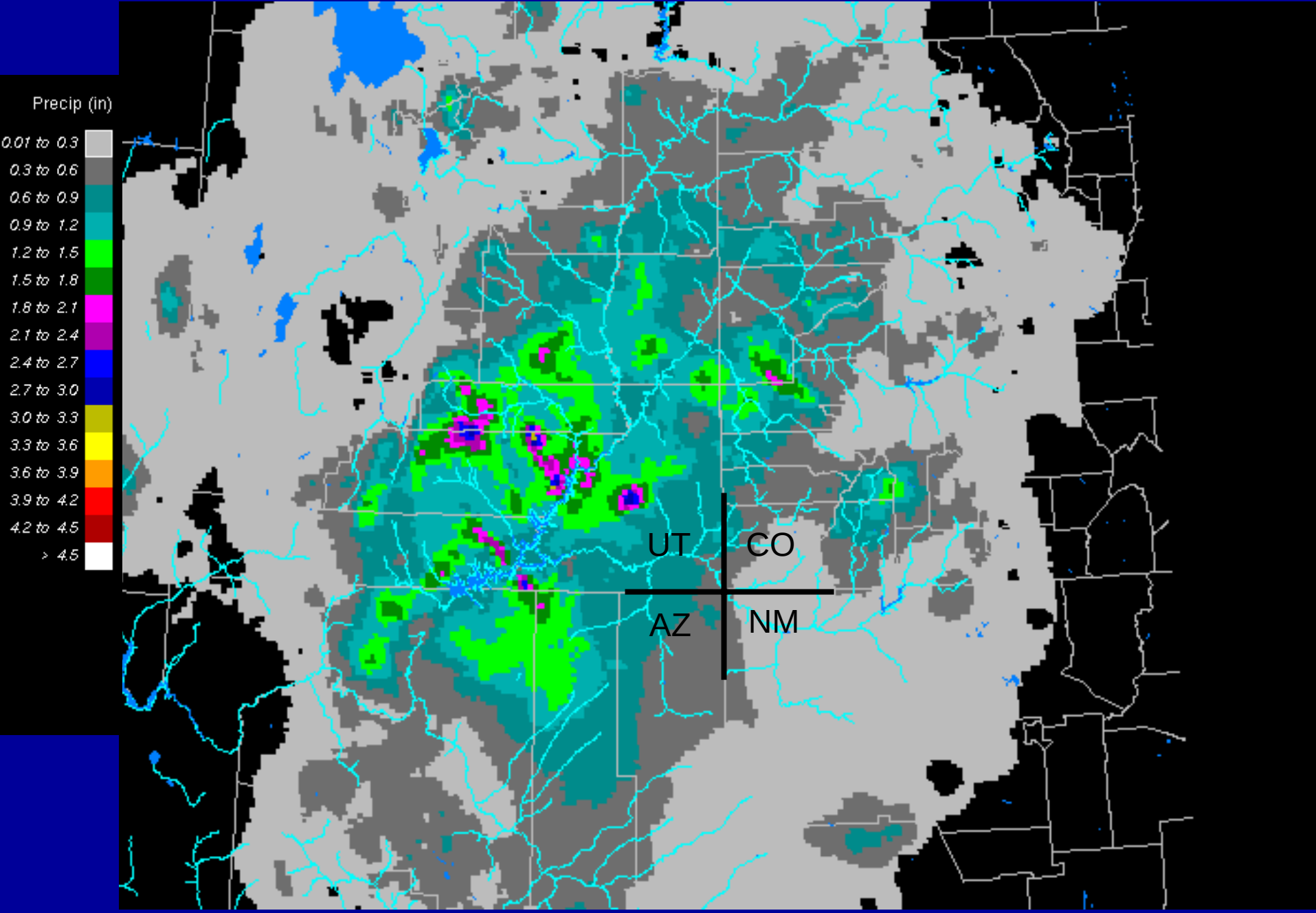
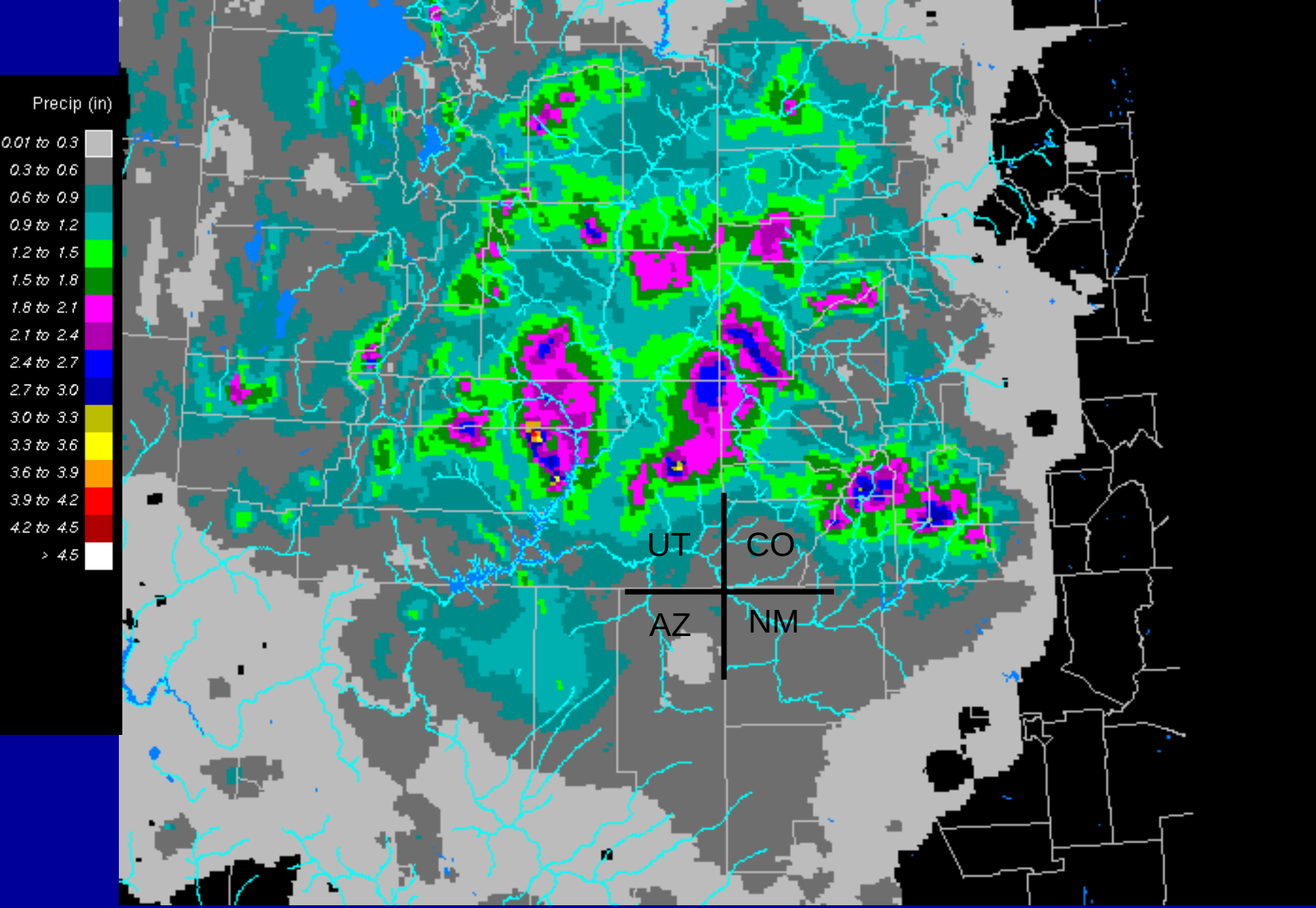

Dirty Devil River above Lake Powell
USGS estimated peak flow of 42,000 cfs
Photo by Kevin Walker


Photo by Kevin Walker



October 6, 2006

RECLAMATION



October 7, 2006

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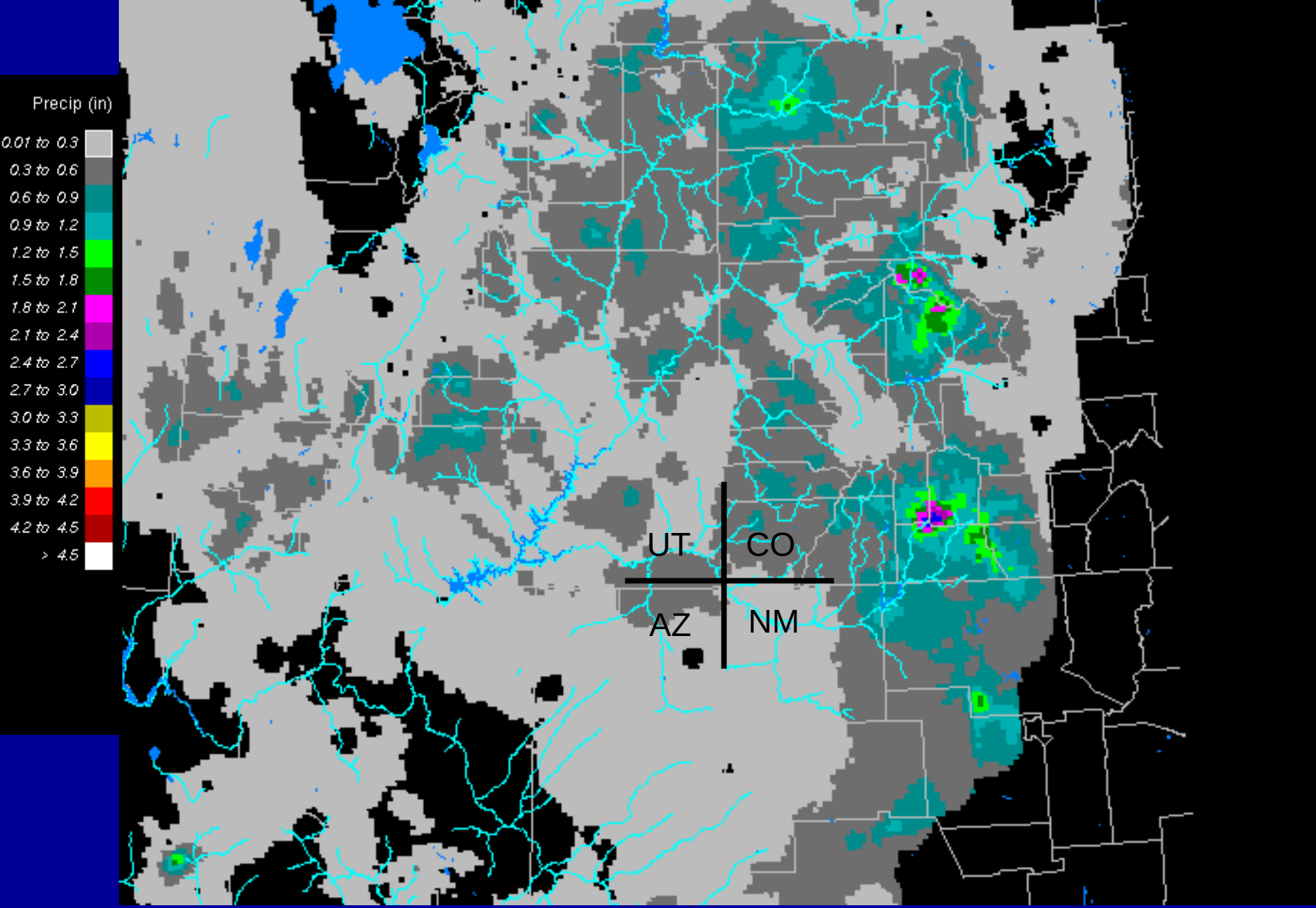
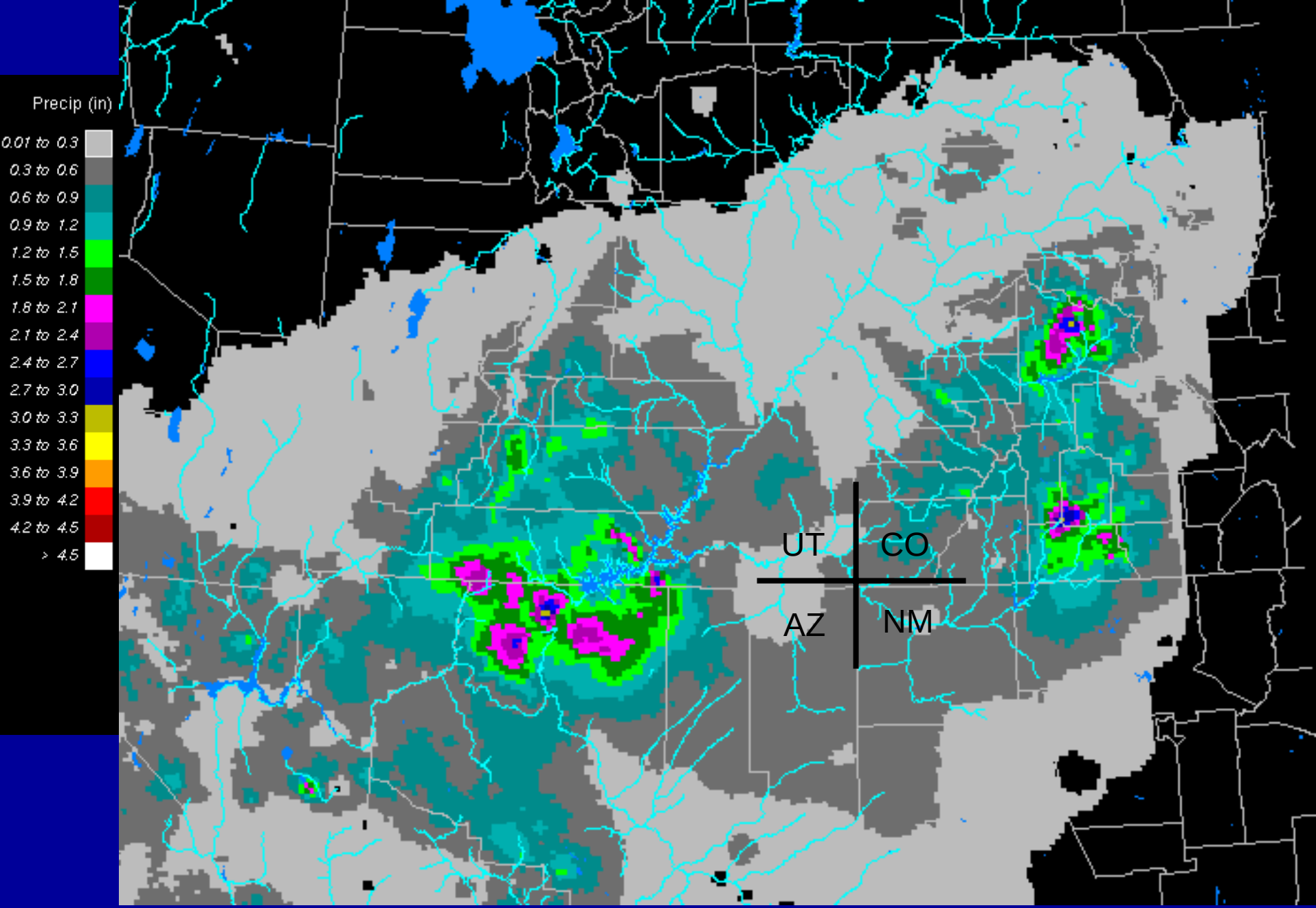


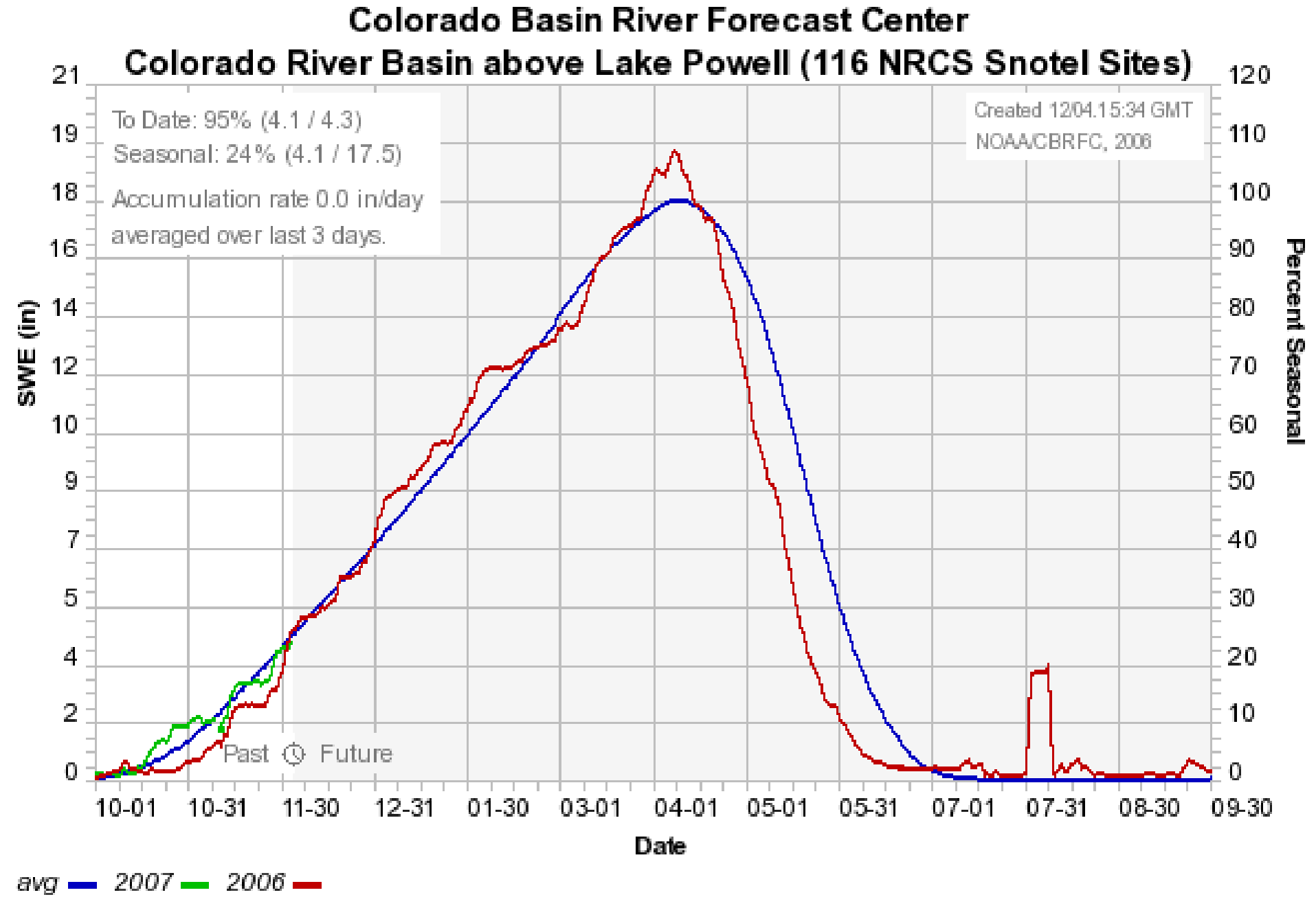
October 10, 2006

RECLAMATION

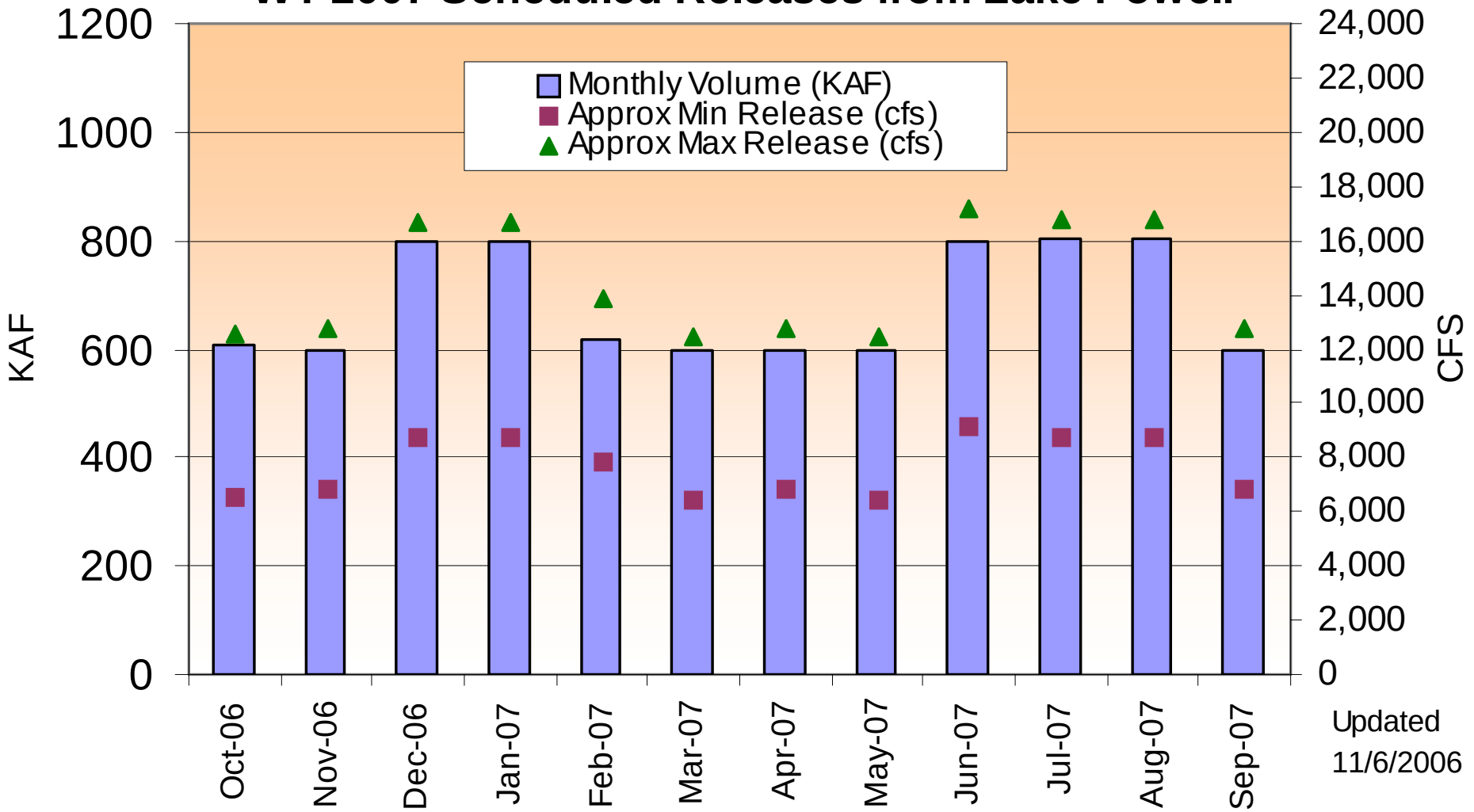


October 15, 2006

RECLAMATION

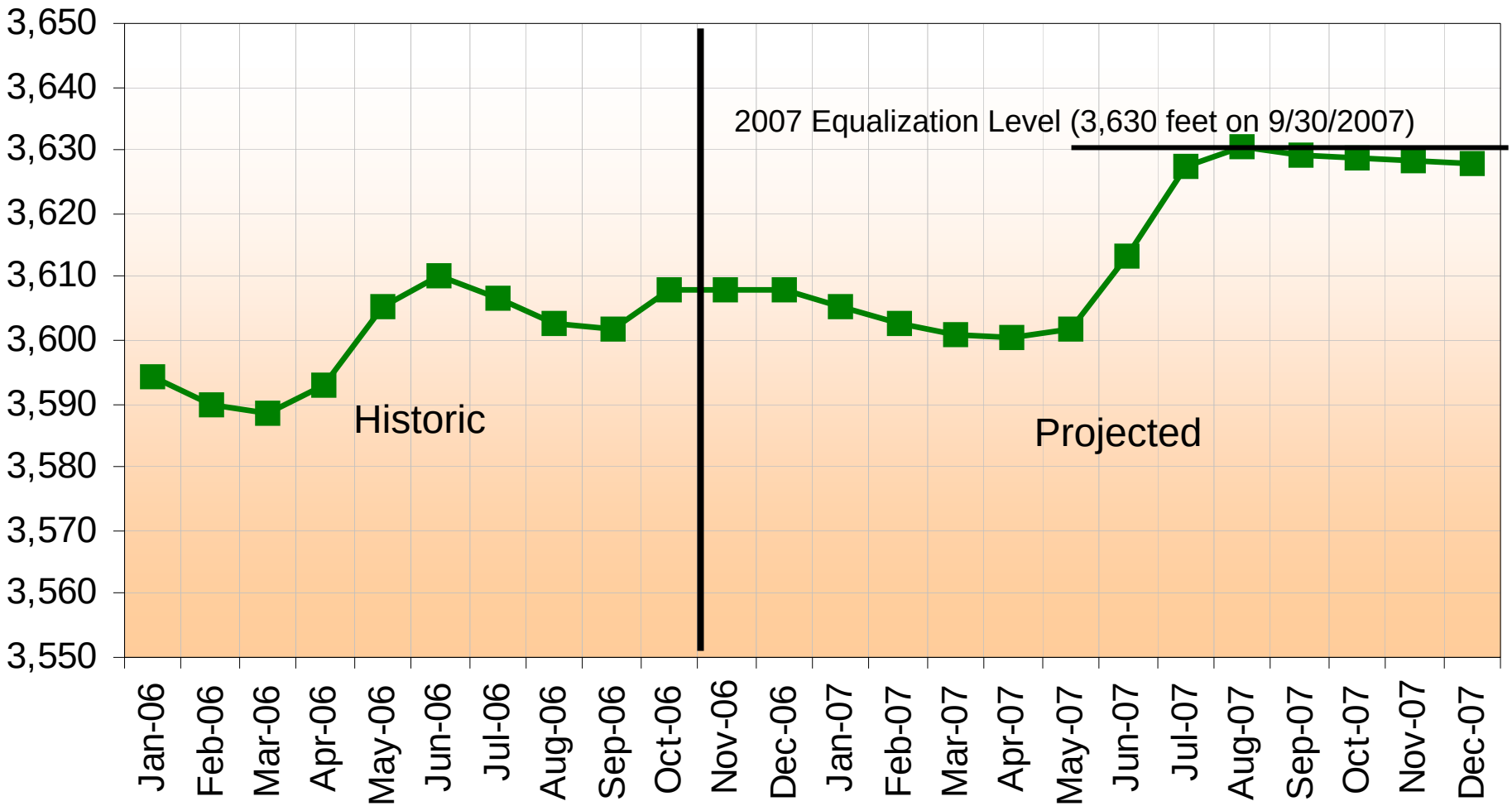

Colorado Basin River Forecast Center
Colorado River Basin above Lake Powell (116 NRCS Snotel Sites)
To Date: 95% (4.1 / 4.3)
Seasonal: 24% (4.1 / 17.5)
Accumulation rate 0.0 in/day
averaged over last 3 days.
Created 12/04.15:34 GMT
NOAA/CBRFC, 2006
Past
Future
SWE (in)
Percent Seasonal
Date
10-01
10-31
11-30
12-31
01-30
03-01
04-01
05-01
05-31
07-01
07-31
08-30
09-30
avg
2007
2006

WY 2007 Scheduled Releases from Lake Powell



RECLAMATION

Lake Powell Most Probable End of Month Elevation (Feet)
Based on November 2006 Inflow Projections



RECLAMATION