



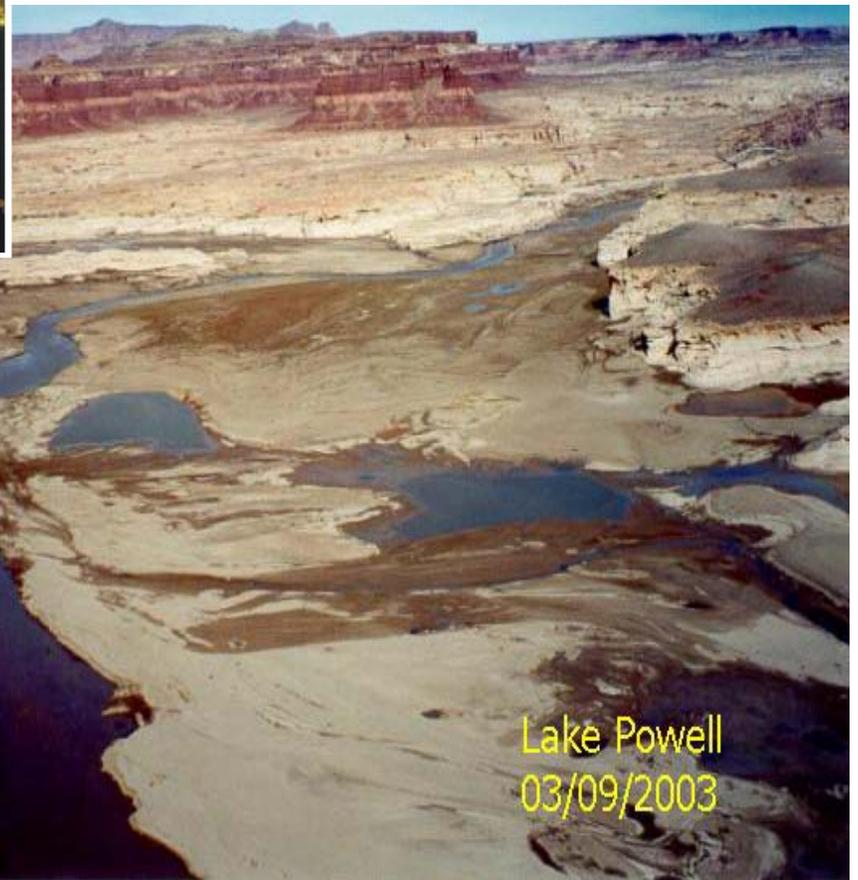
Colorado River Basin Hydrology

**Glen Canyon Adaptive Management Work Group Meeting
August 2004
Phoenix, Arizona**

Colorado River



Hite Bay looking upstream
Full Pool Elevation

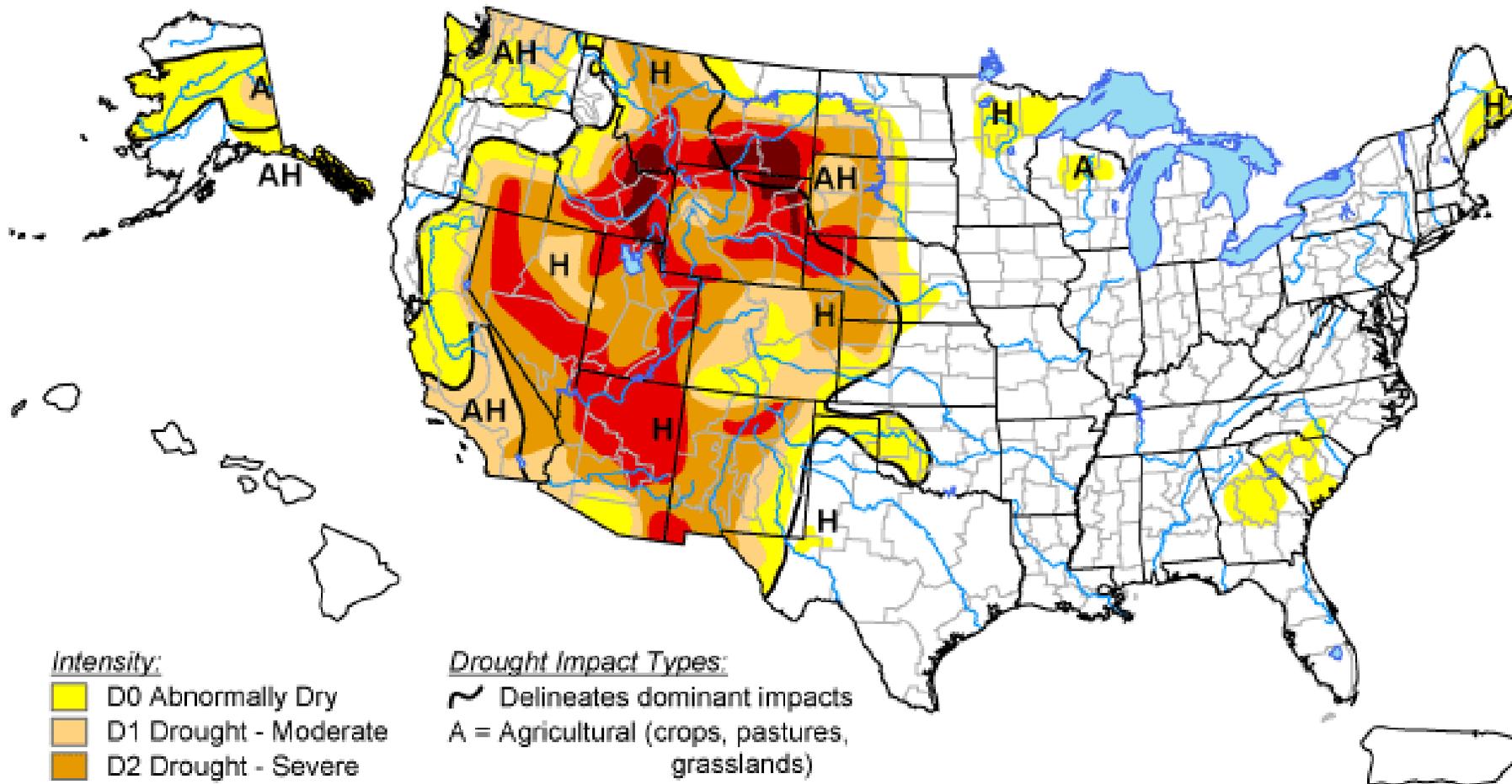


Lake Powell
03/09/2003

Five Year Drought

U.S. Drought Monitor

August 3, 2004
Valid 8 a.m. EDT



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)
- (No type = Both impacts)

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



Released Thursday, August 5, 2004
Author: Mark Svoboda, NDMC

<http://drought.unl.edu/dm>

Lake Mead's "Bathtub Ring"



1998



2002

RECLAMATION



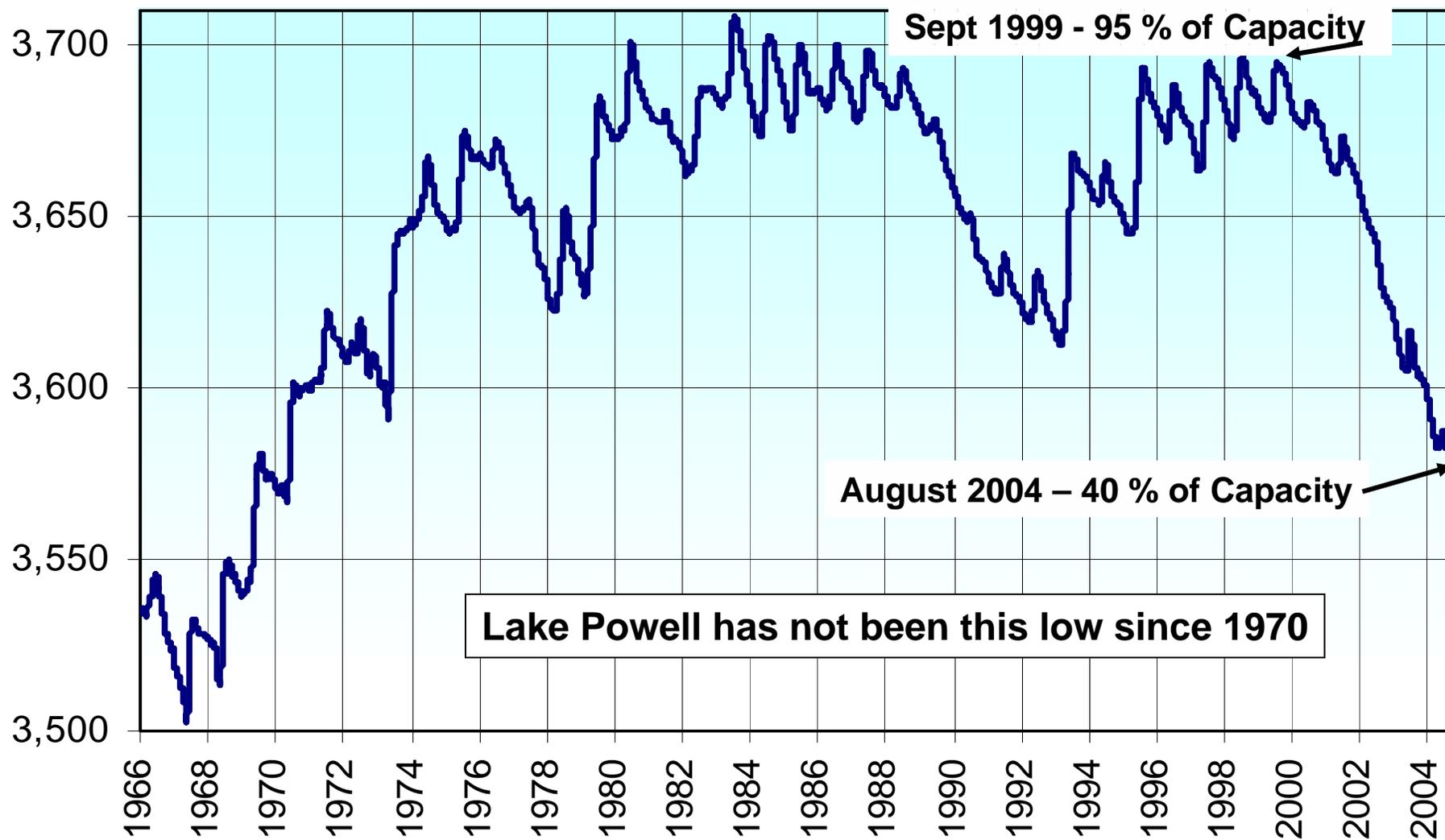
Lake Mead's Delta Area

2003

1999

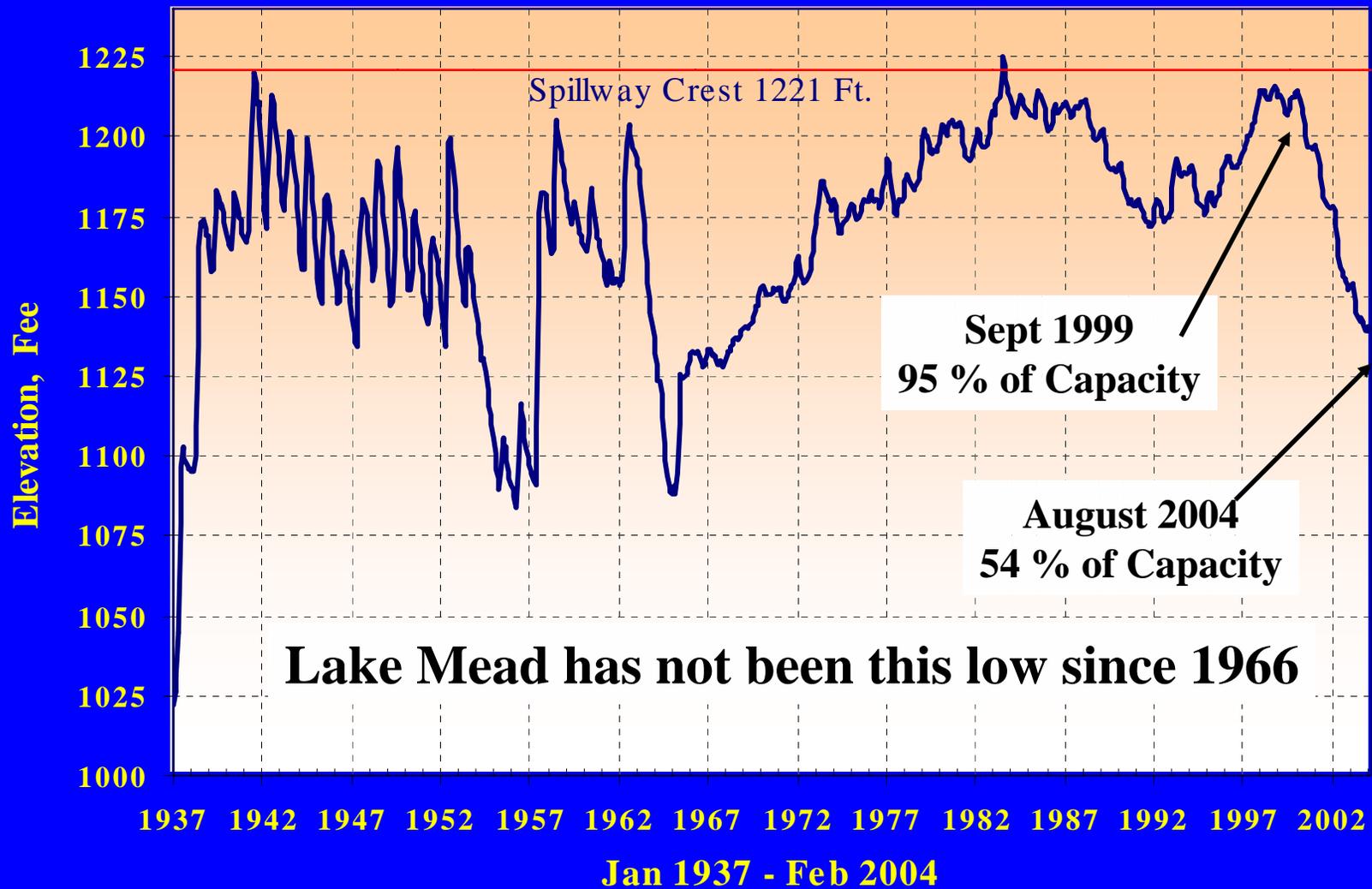


Lake Powell Water Surface Elevations 1966 through Present



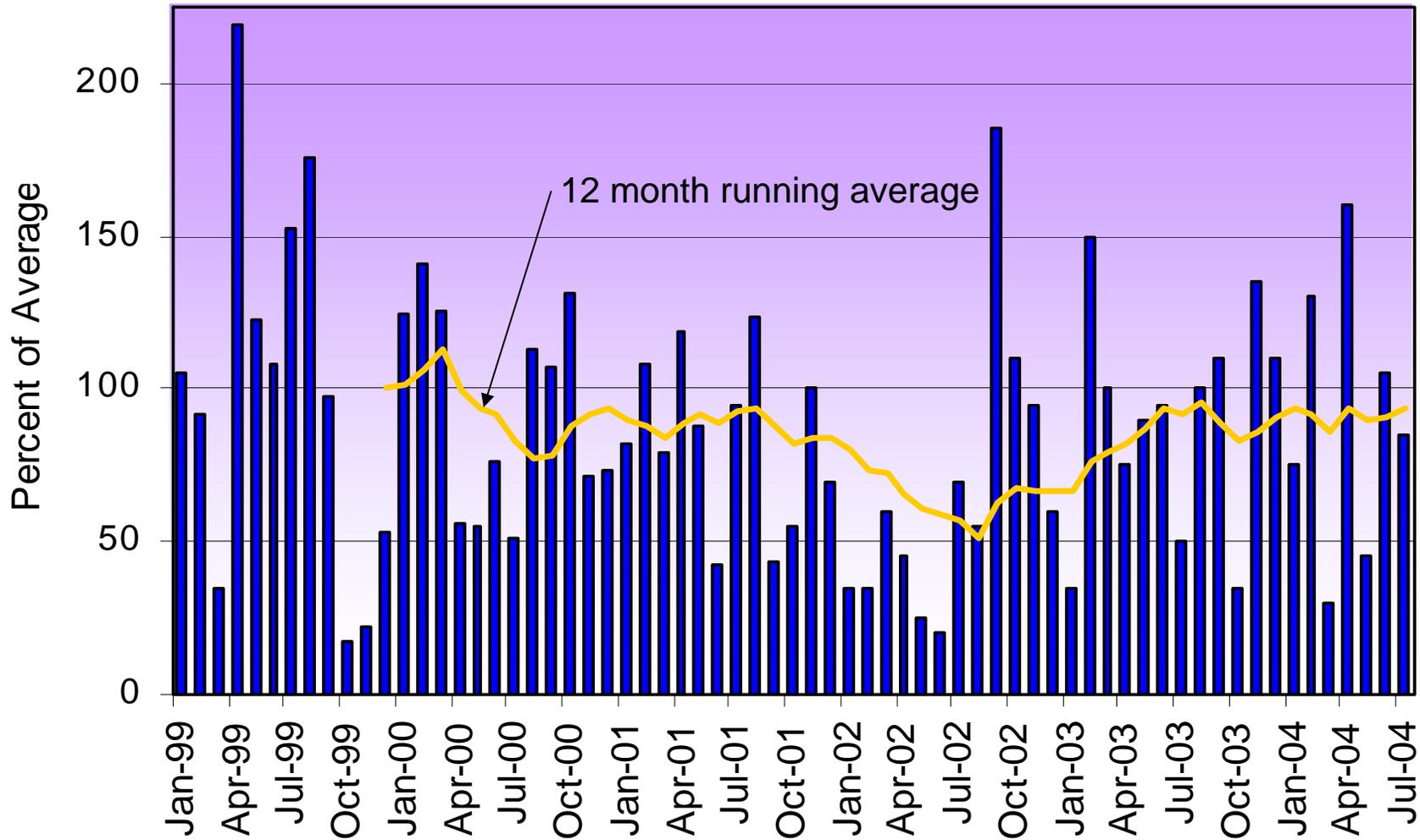
RECLAMATION

Lake Mead End of Month Elevations

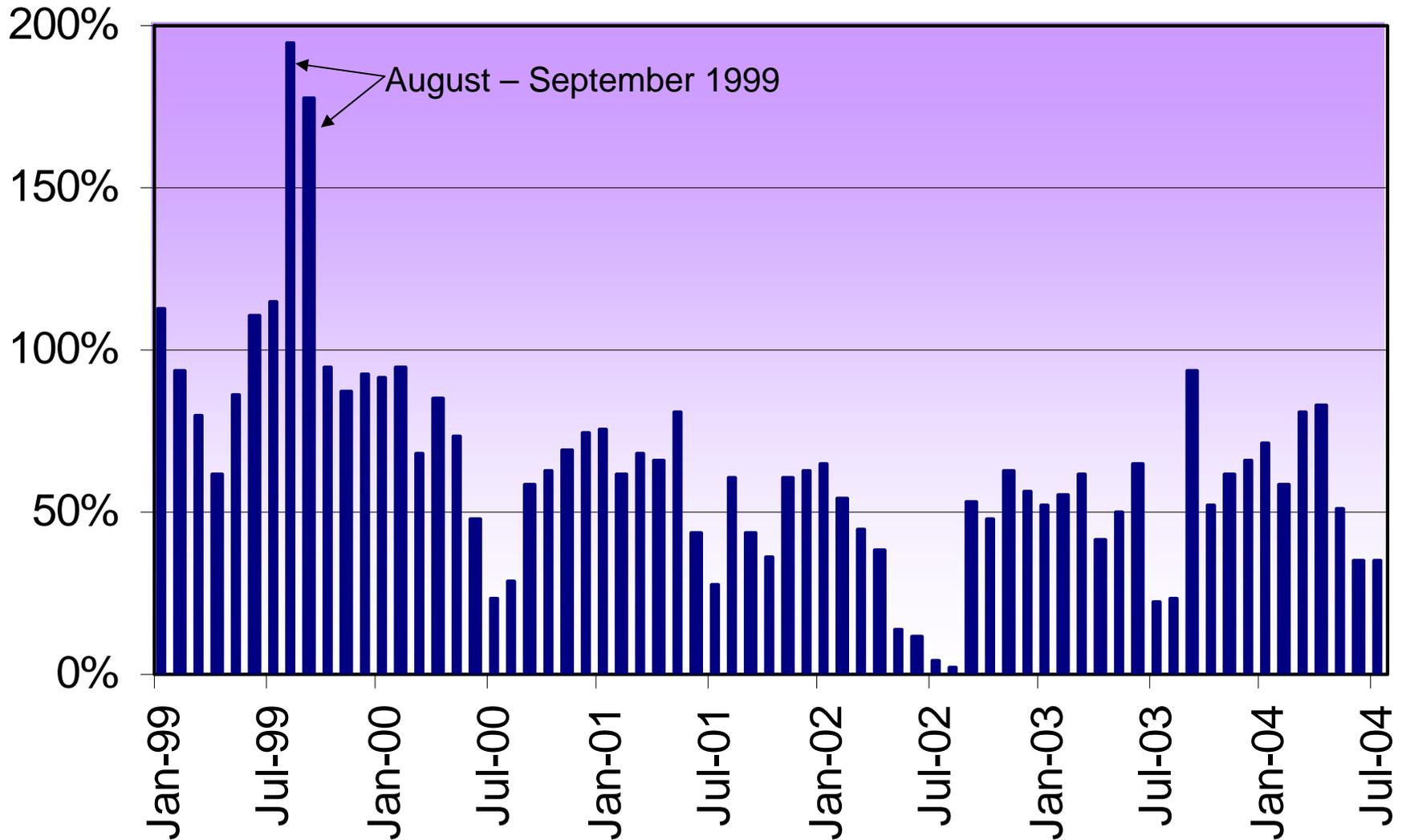


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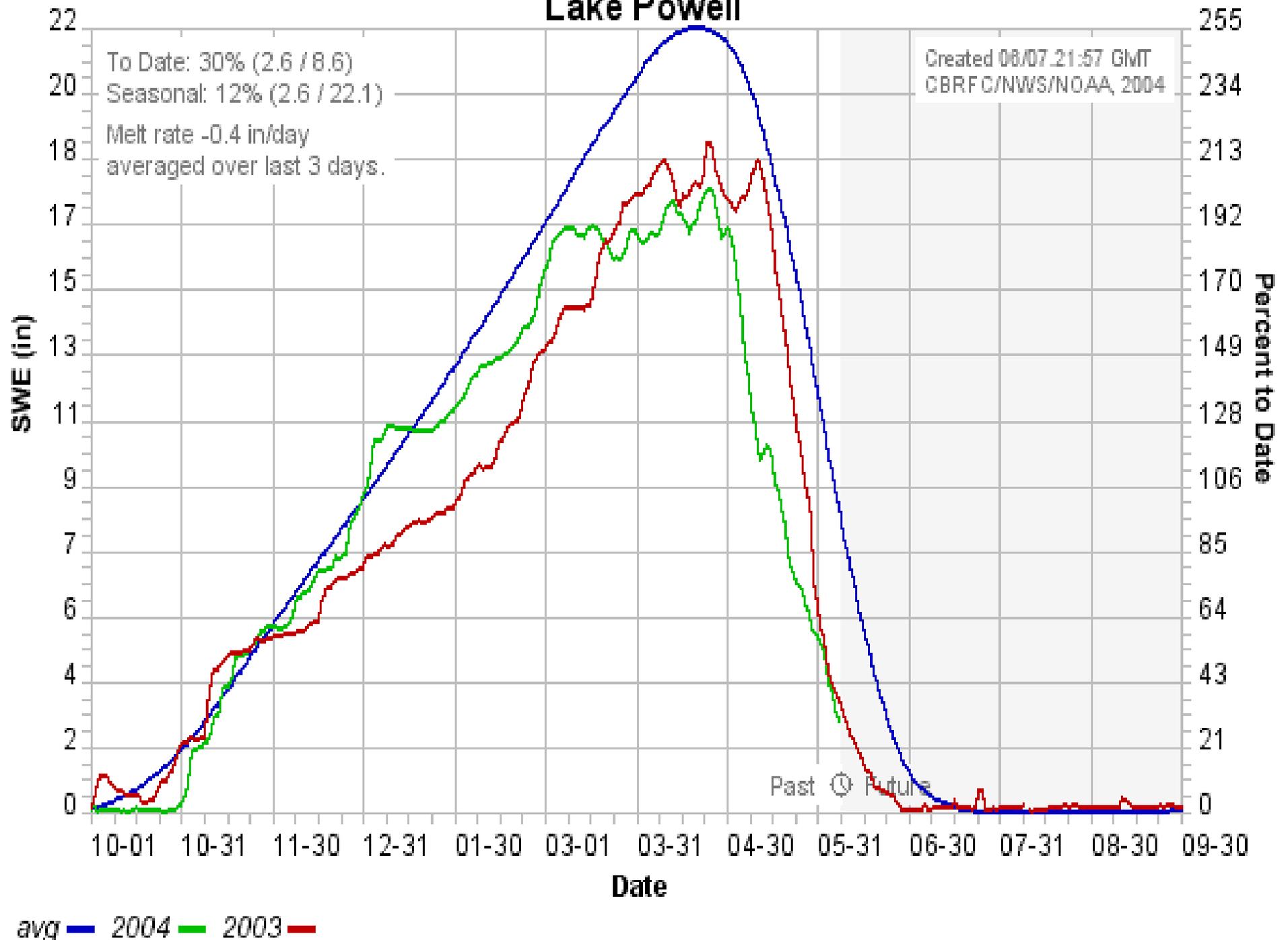
Upper Colorado River Basin Precipitation January 1999- July 2004



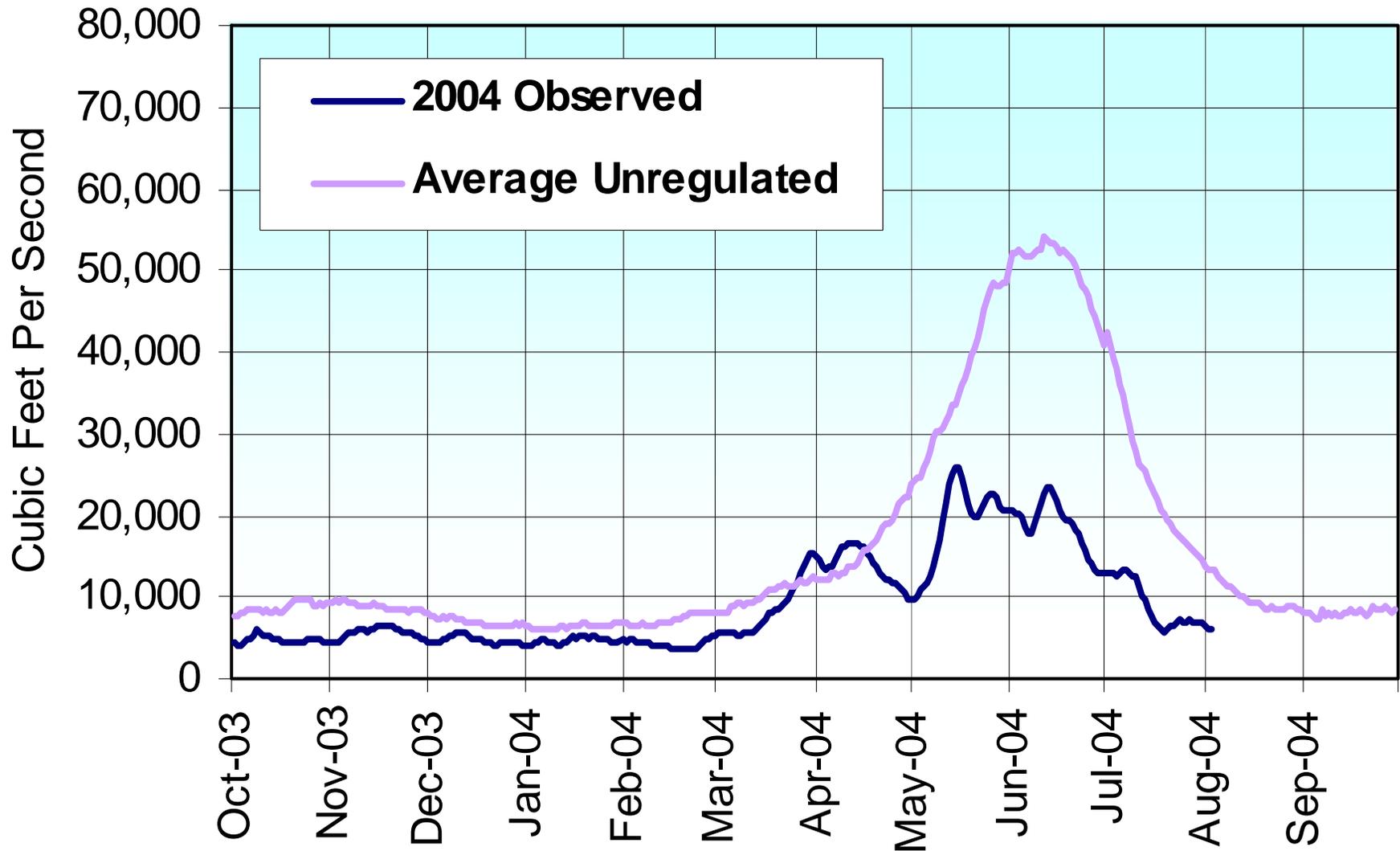
Unregulated Inflow to Lake Powell 1999-2004



Lake Powell

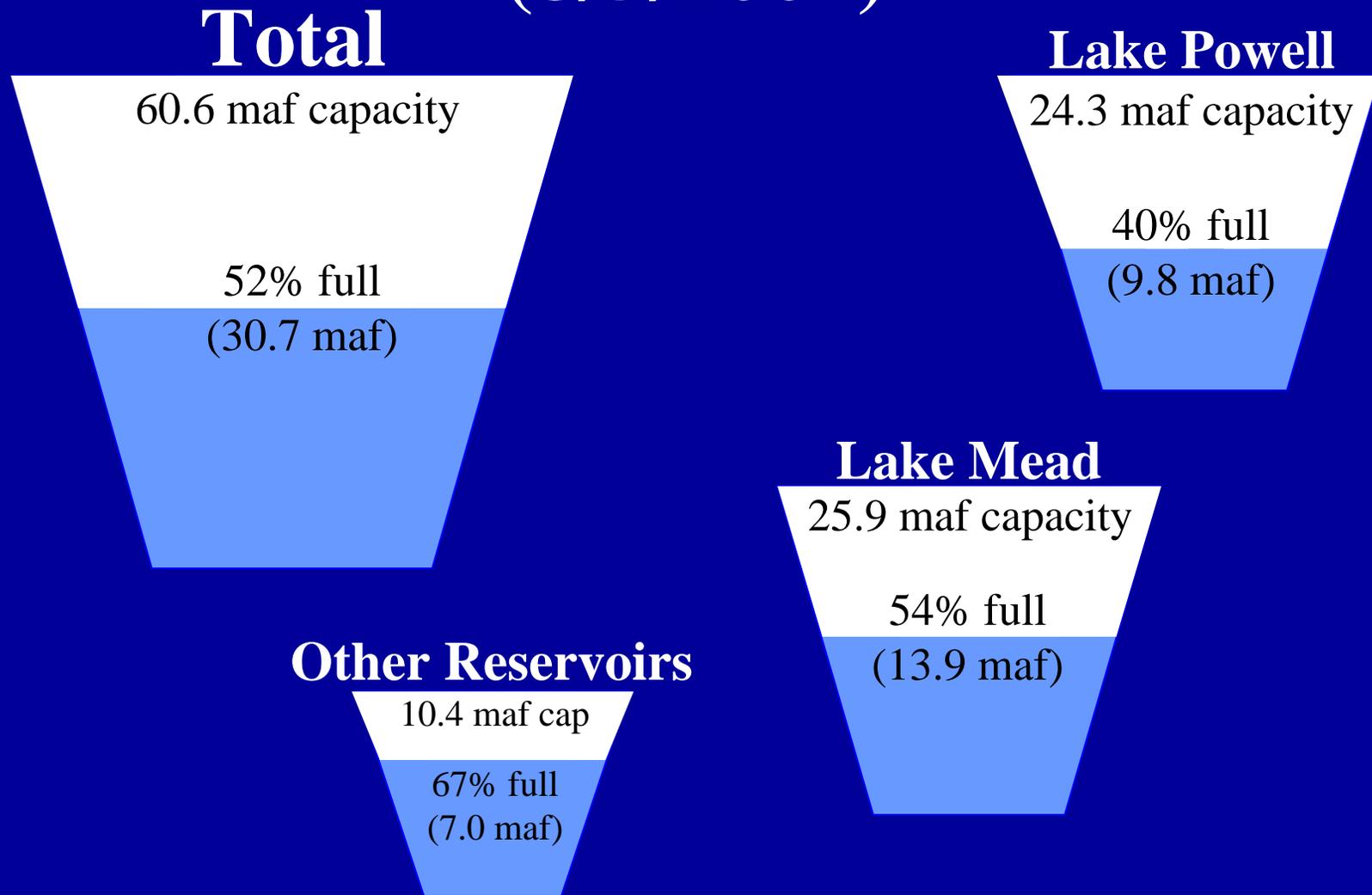


Lake Powell Unregulated Inflow Water year 2004



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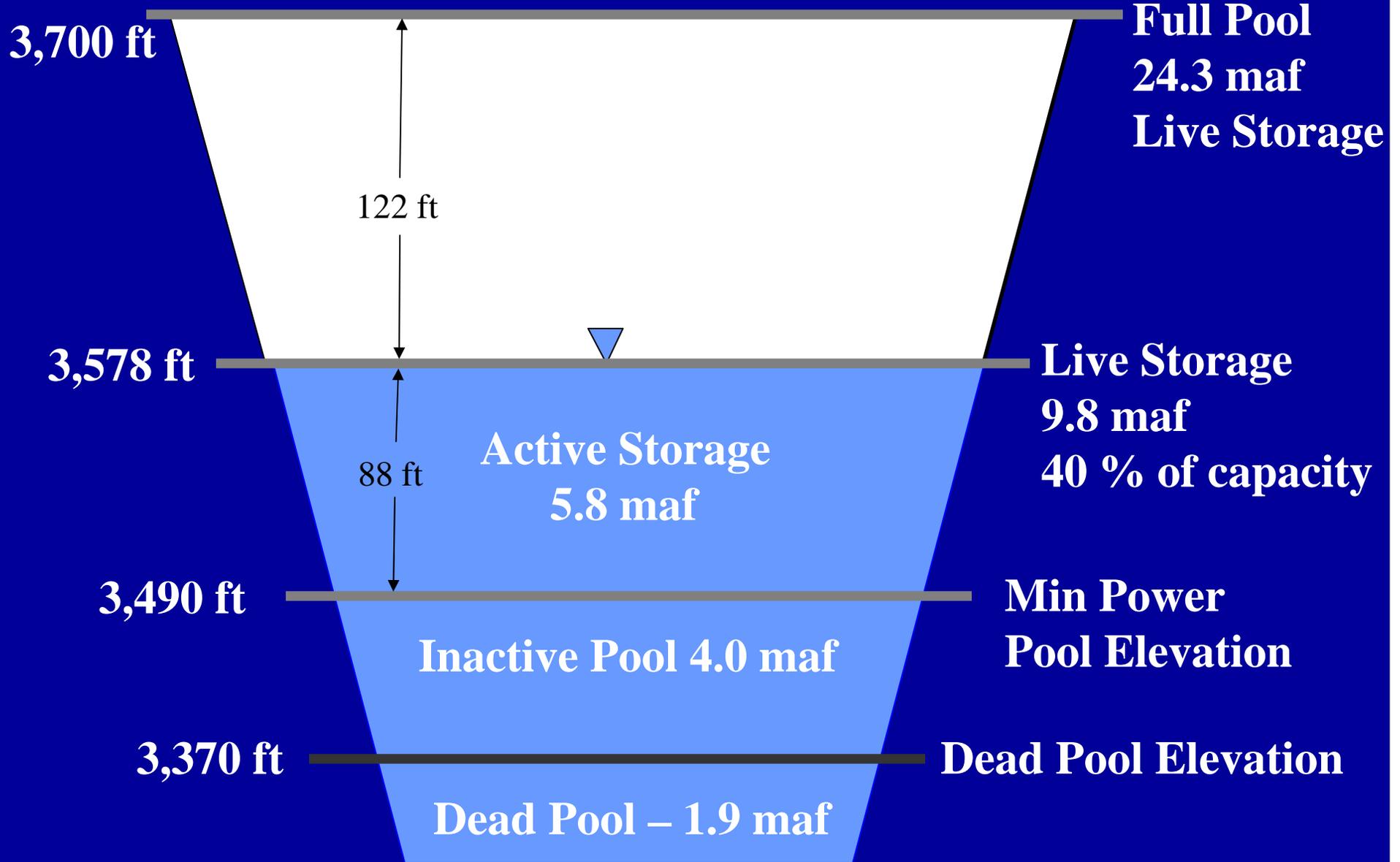
Colorado River Basin Storage (8/5/2004)



Not to scale

RECLAMATION

Lake Powell Capacity



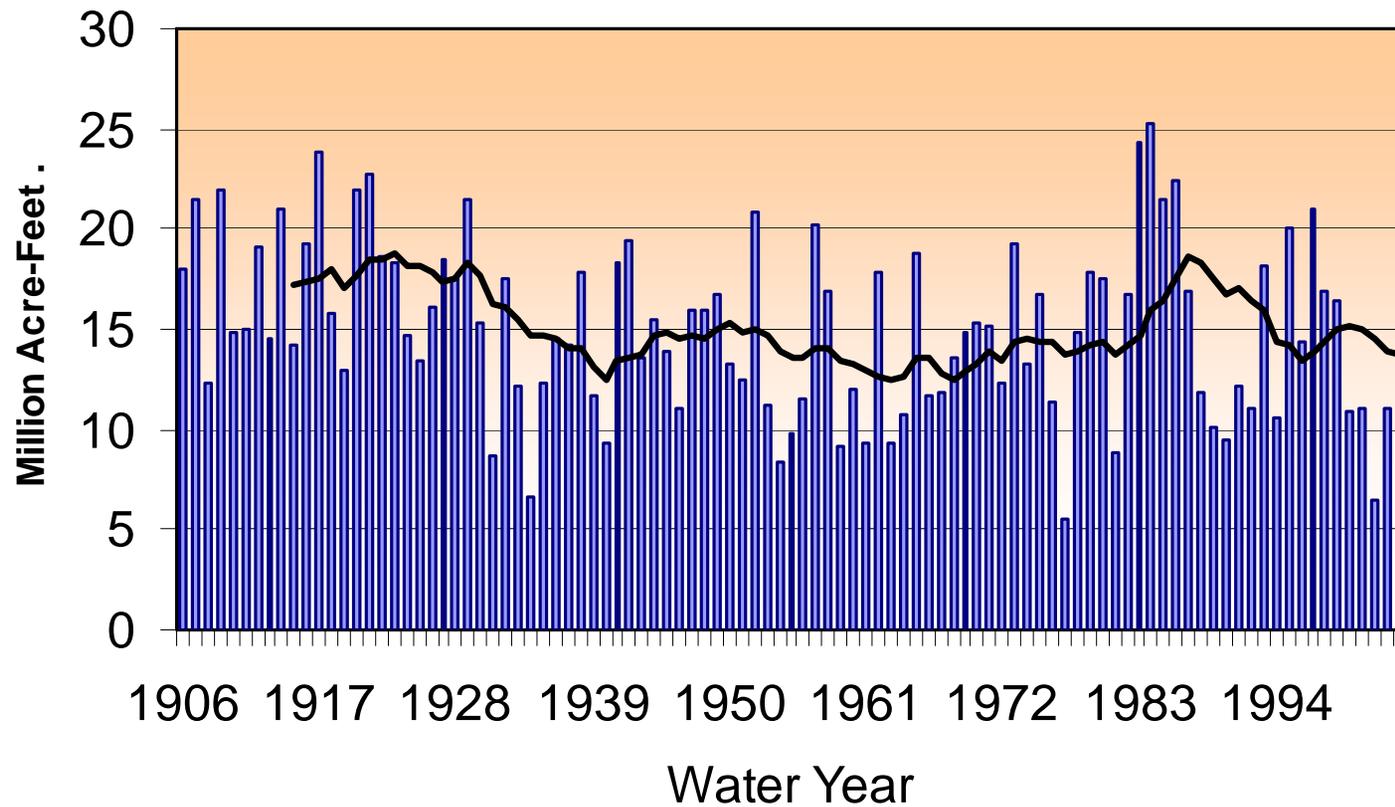
Not to scale

August 5, 2004

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Colorado River Runoff

Natural Flow at Lees Ferry, Arizona 1906-2004



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How long will it take to refill Lakes Powell and Mead?

- We can not predict annual runoff given current science
 - Currently, there is estimated 80% probability that unregulated inflow to Lake Powell in 2005 will be between 3.8 maf and 15.3 maf
- Most Probable inflow to Lake Powell in 2005 is 9.4 maf (79 percent of average)
- It would take about 20 normal years to fill both Lake Powell and Lake Mead
- Even back to back 1983-1984 - the two wettest years on record - would not refill the system – about 85-90 percent full

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Factoid

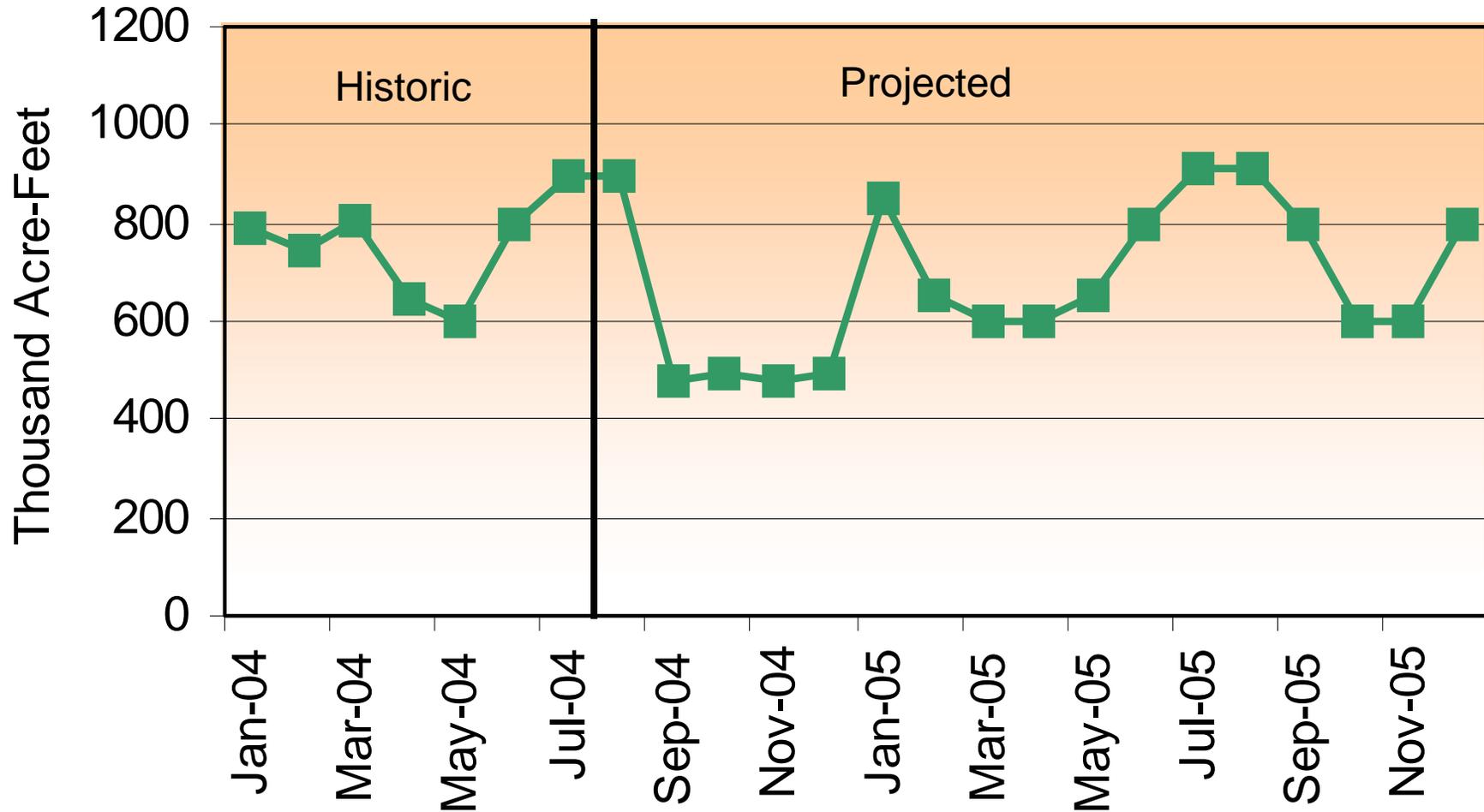
The flow of the Colorado River has never been below average for more than 6 consecutive years in the past 100 years of record keeping

On two occasions there have been 5 consecutive years of below average runoff (1988-1992 and 2000-2004)

RECLAMATION

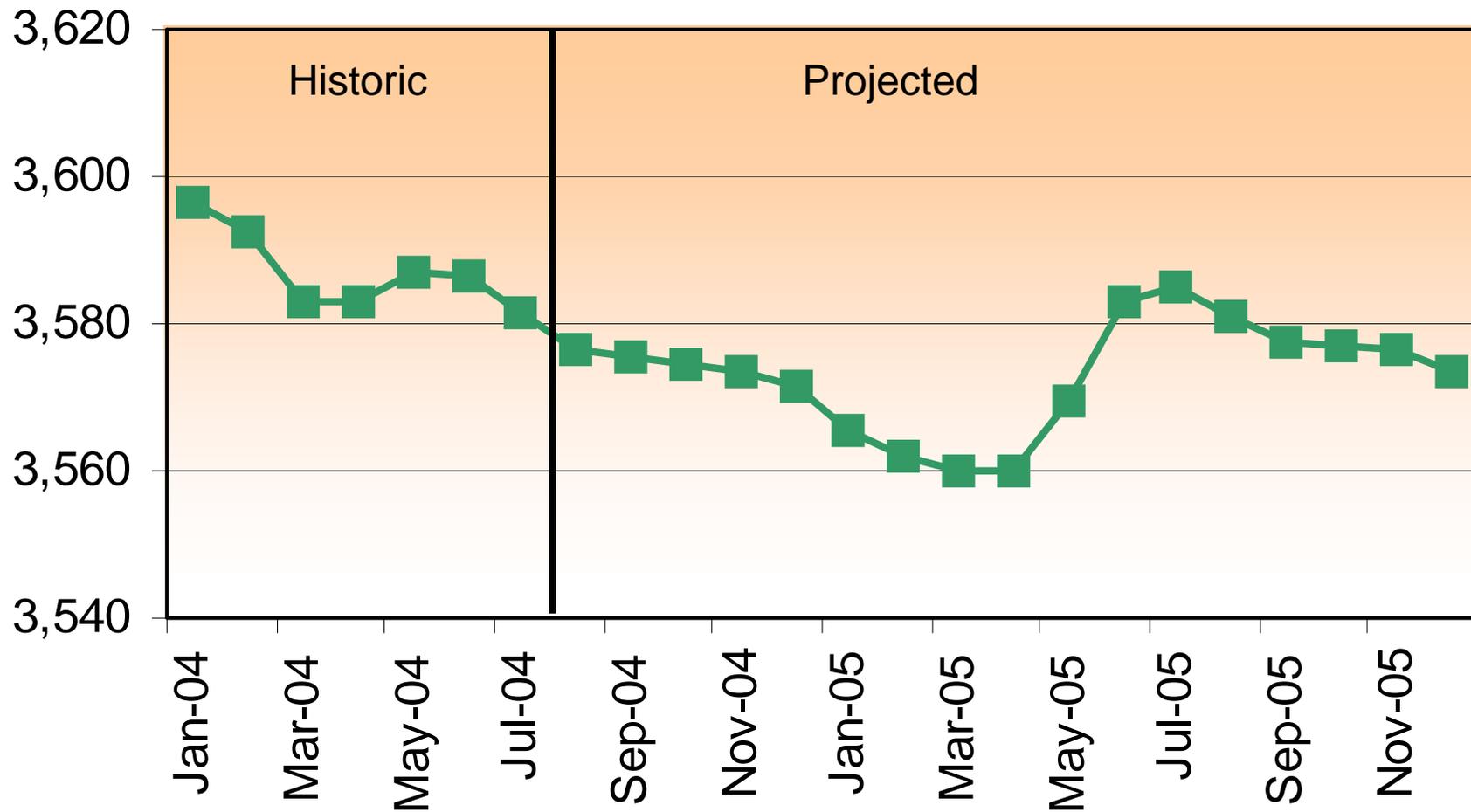
Projected Lake Powell Releases

Most Probable (based on July, 2004 inflow forecast)



Projected Lake Powell Water Surface Elevations

Most Probable (based on July, 2004 inflow forecast)



Closing Comments

- Storage system is working as designed
- Even with unprecedented 5 years of drought, the system is still half full
- Drought is serious, but not a crisis
- Reclamation and Interior are working with the Basin States to analyze options

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