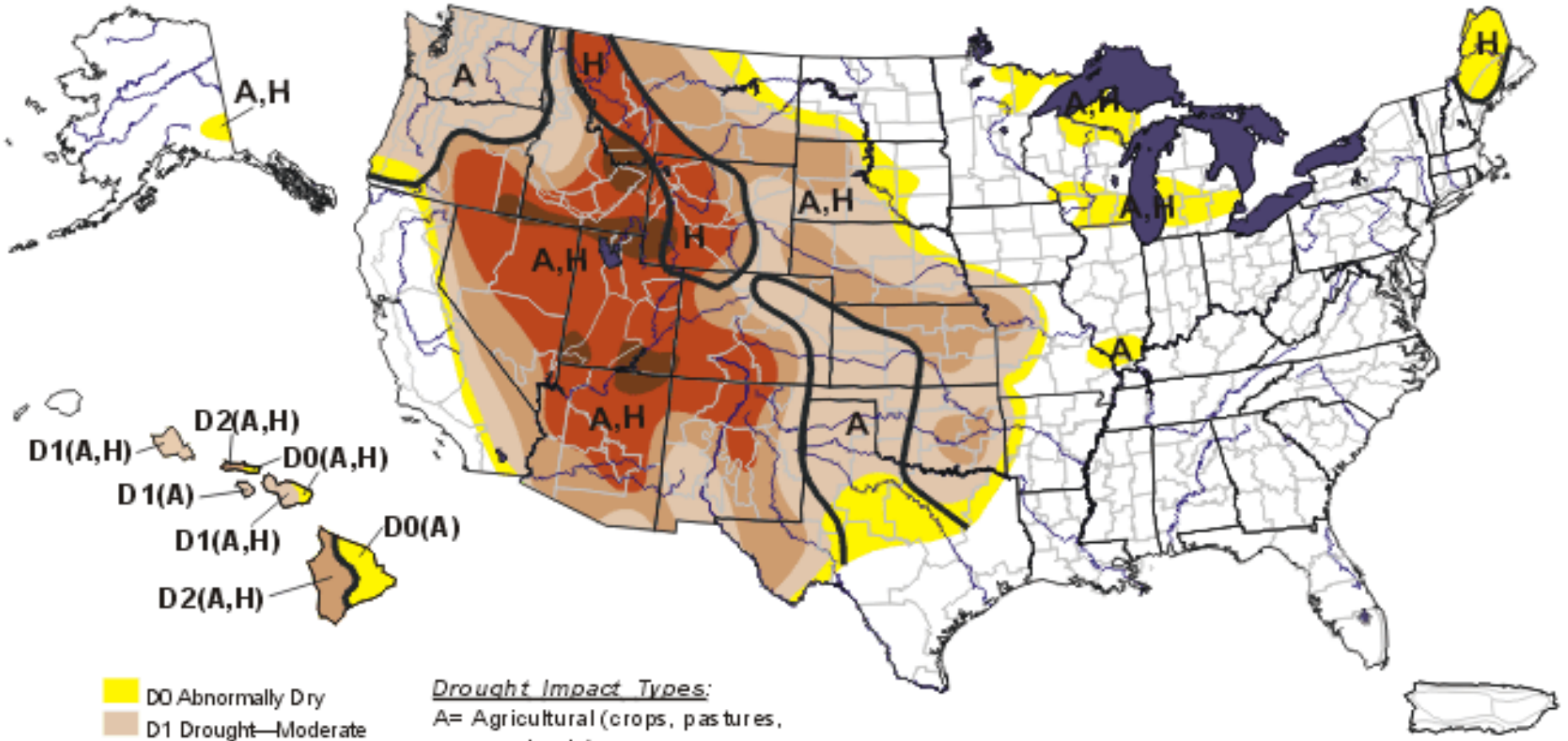
Upper Colorado River Basin Hydrology
Glen Canyon Dam Operations

Glen Canyon Dam
Adaptive Management Work Group
Phoenix, Arizona
August 14, 2003

U.S. Drought Monitor

July 29, 2003
Valid 8 a.m. EDT



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

Drought Impact Types:
A= Agricultural (crops, pastures, grasslands)
H= Hydrological (water)
No type = both impacts
Delineates dominant impacts

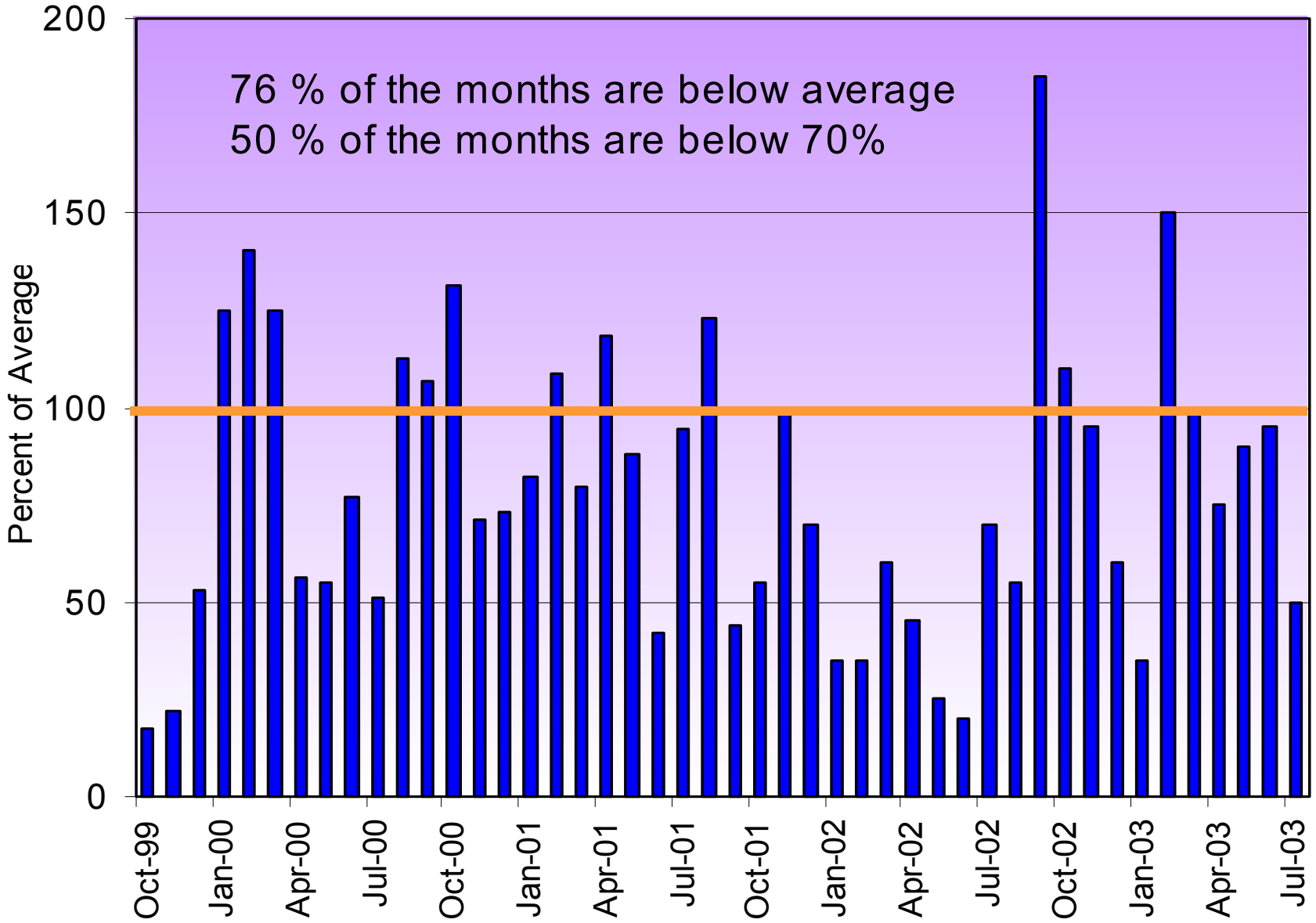
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://drought.unl.edu/dm

Released Thursday, July 31, 2003

Authors: *David Miskus, NOAA/CPC/IAWF and Brad Rippey, USDA/IAWF*

Upper Colorado River Basin Precipitation
October 1999- July 2003



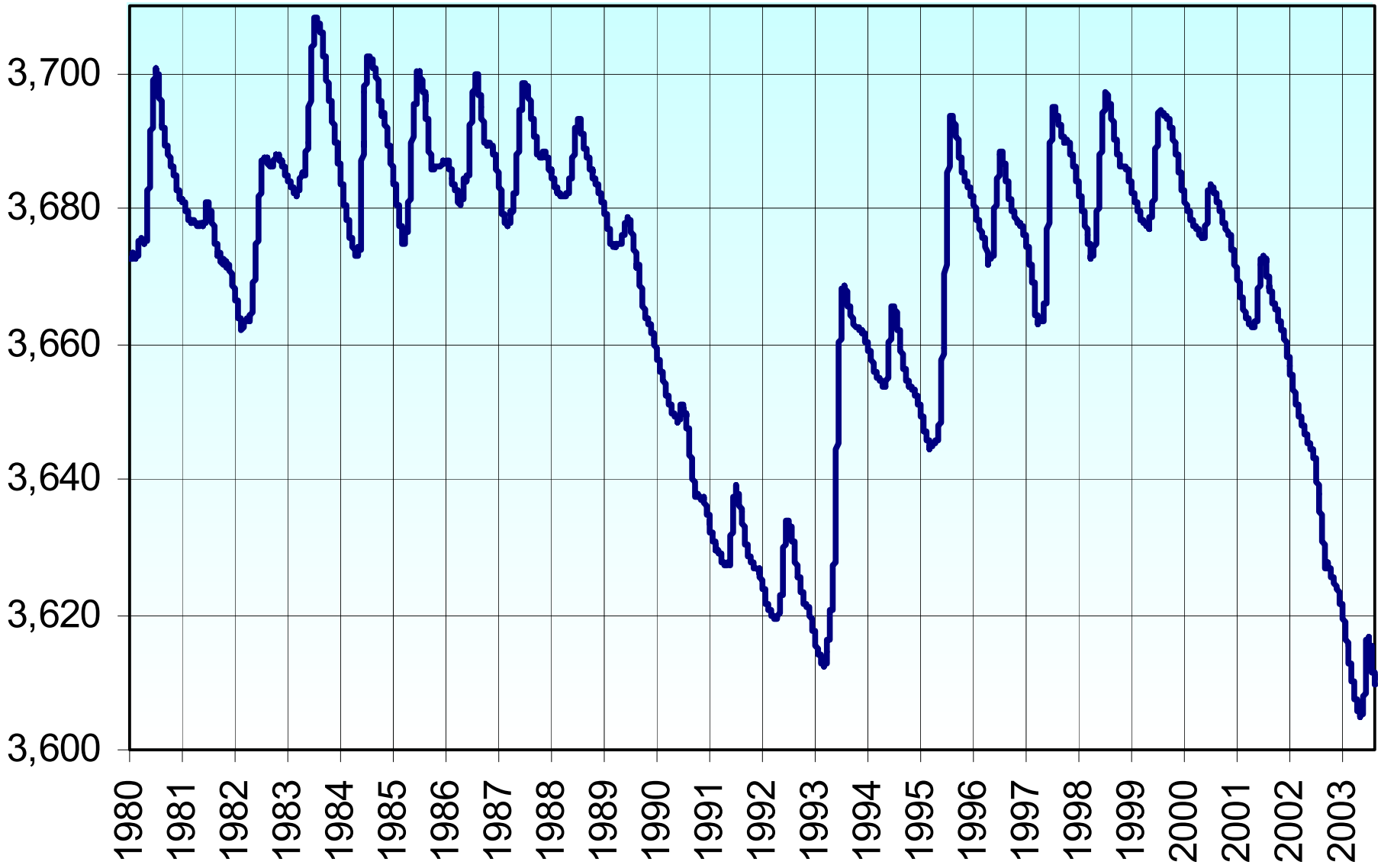
Droughts - Colorado River Natural Flow

(Average Natural Flow 15.0 maf)

Years	Duration	Average Flow
• 1931-1935	5 years	11.4 maf
• 1953-1956	4 years	10.2 maf
• 1959-1964	6 years	11.4 maf
• 1988-1992	5 years	10.5 maf
• 2000-2003*	4 years	10.5 maf

*** Estimated**

Lake Powell Water Surface Elevations
1980 through Present

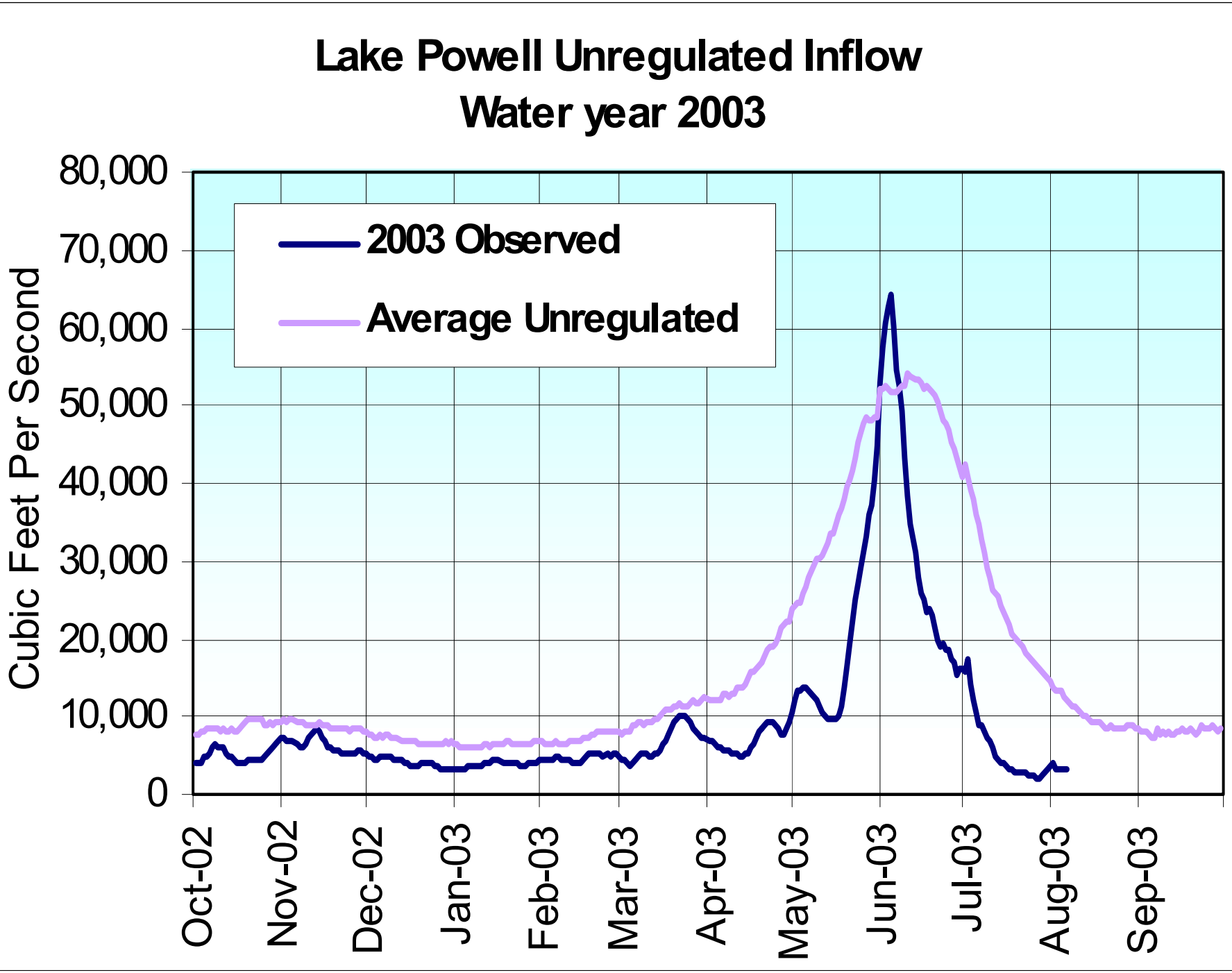


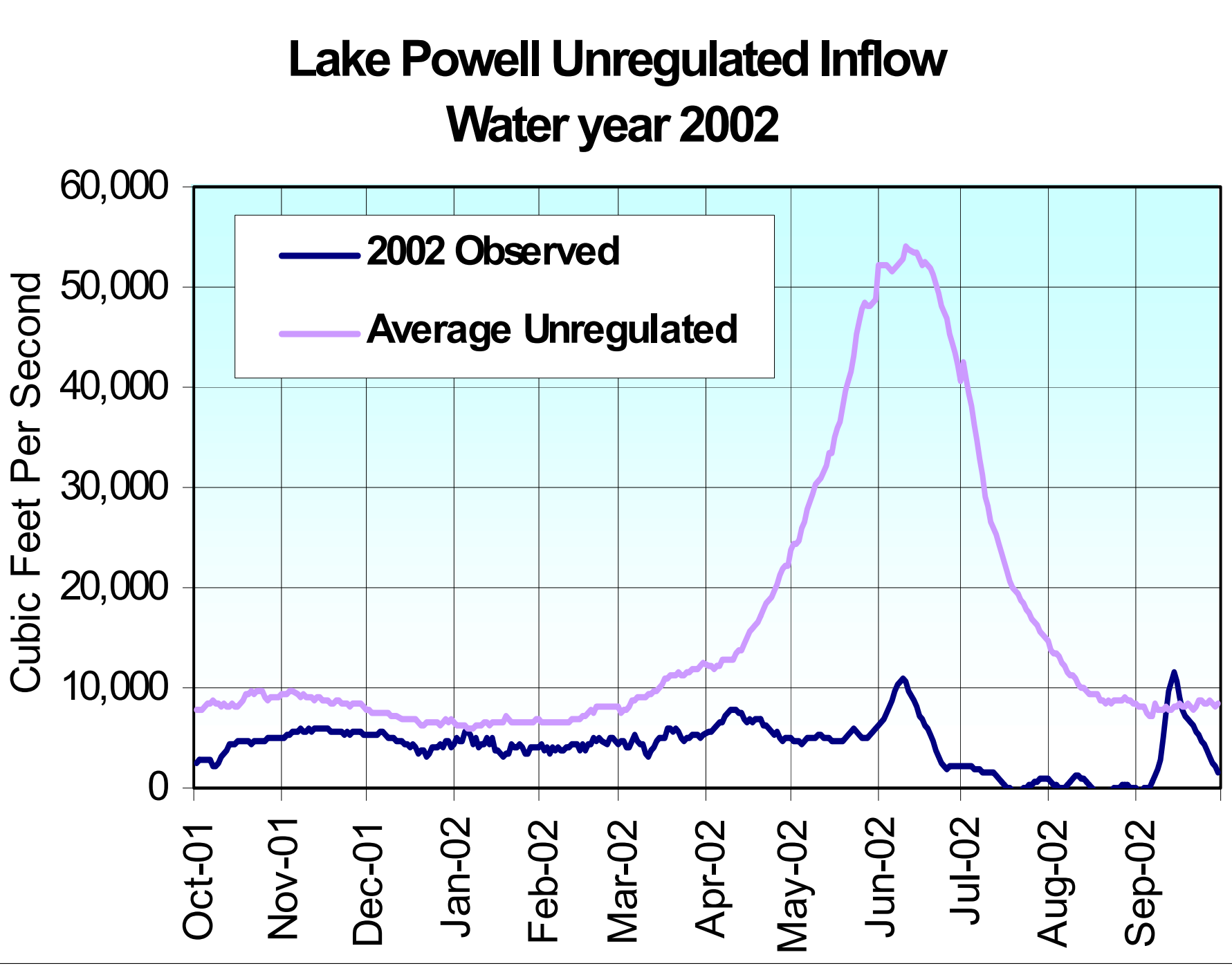
Four Years of Drought

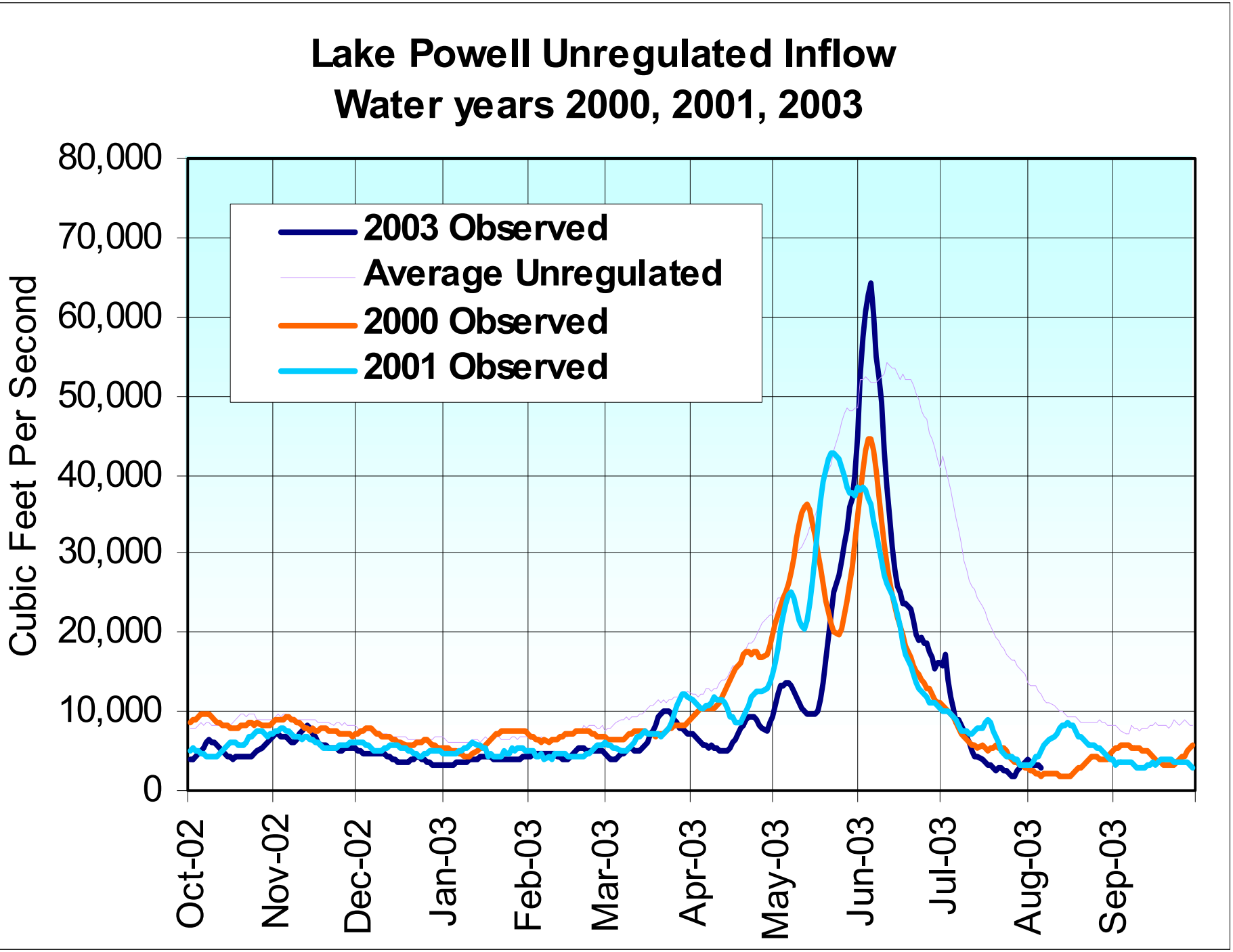
Lake Powell Unregulated Inflow 2000-2003

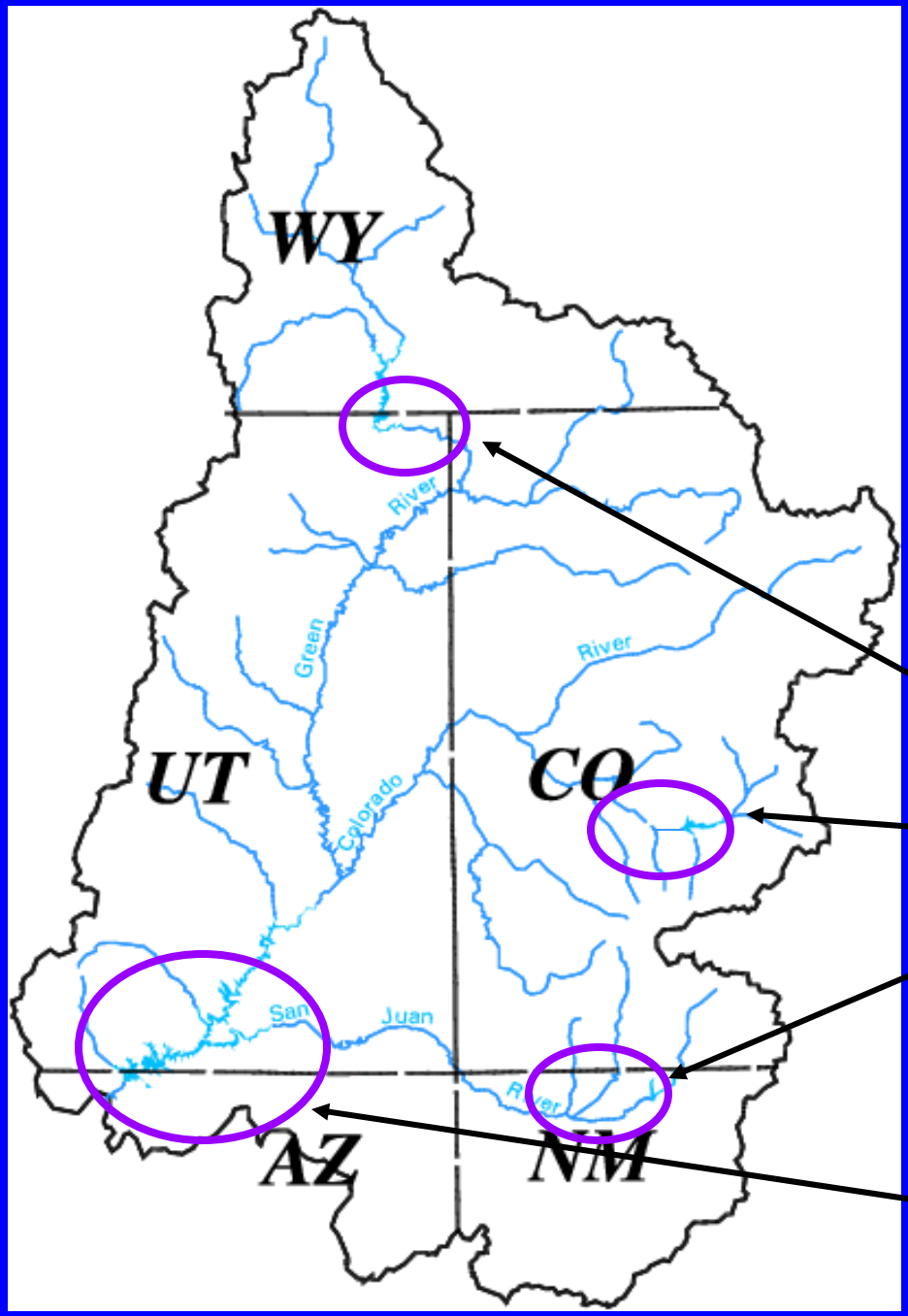
- WY 2000 — 62 percent of average
- WY 2001 — 59 percent of average
- WY 2002 — 25 percent of average
- WY 2003 — 52 percent of average*

*** Estimated**


Lake Powell Unregulated Inflow
Water year 2003
Cubic Feet Per Second
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
2003 Observed
Average Unregulated
Oct-02
Nov-02
Dec-02
Jan-03
Feb-03
Mar-03
Apr-03
May-03
Jun-03
Jul-03
Aug-03
Sep-03


Lake Powell Unregulated Inflow
Water year 2002
Cubic Feet Per Second
60,000
50,000
40,000
30,000
20,000
10,000
0
2002 Observed
Average Unregulated
Oct-01
Nov-01
Dec-01
Jan-02
Feb-02
Mar-02
Apr-02
May-02
Jun-02
Jul-02
Aug-02
Sep-02


Lake Powell Unregulated Inflow
Water years 2000, 2001, 2003
Cubic Feet Per Second
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
2003 Observed
Average Unregulated
2000 Observed
2001 Observed
Oct-02
Nov-02
Dec-02
Jan-03
Feb-03
Mar-03
Apr-03
May-03
Jun-03
Jul-03
Aug-03
Sep-03



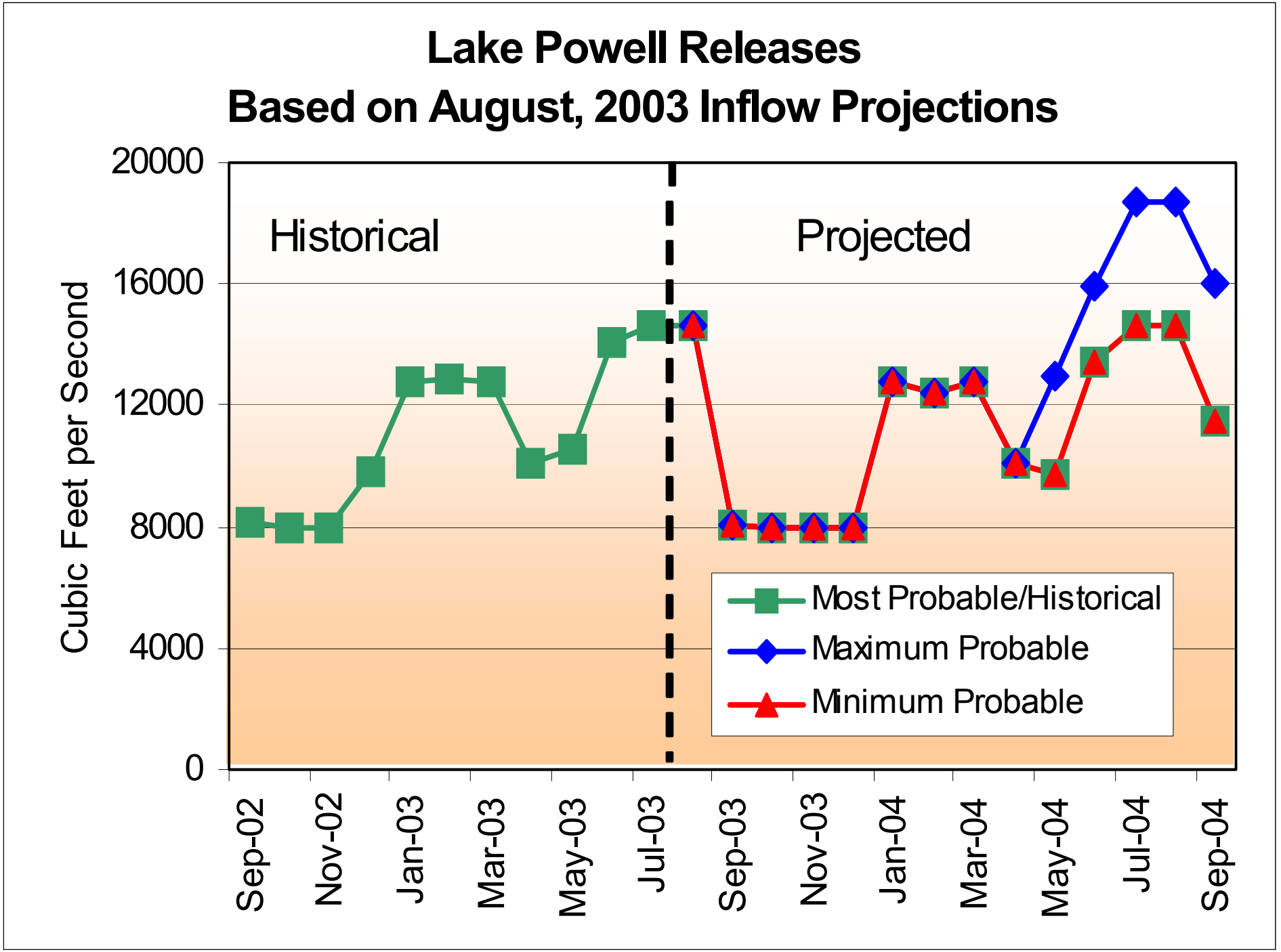
2003 Upper Colorado Apr–Jul Inflow

Flaming Gorge – 40 %

Blue Mesa – 60 %

Navajo – 39 %

Lake Powell – 49 %


Lake Powell Releases
Based on August, 2003 Inflow Projections
Historical
Projected
Cubic Feet per Second
20000
16000
12000
8000
4000
0
Sep-02
Nov-02
Jan-03
Mar-03
May-03
Jul-03
Sep-03
Nov-03
Jan-04
Mar-04
May-04
Jul-04
Sep-04
Most Probable/Historical
Maximum Probable
Minimum Probable

Lake Powell Water Surface Elevations
Based on August, 2003 Inflow Projections