



The Drought: 2007 Impacts, 2008 Outlook

March 13, 2008

Chuck Bach
River Operations

Reservoir operating objectives

- Navigation
- Flood-damage reduction
- Affordable and reliable electricity
- Water quality
- Water supply
- Recreational opportunities



Annual reservoir operating cycle

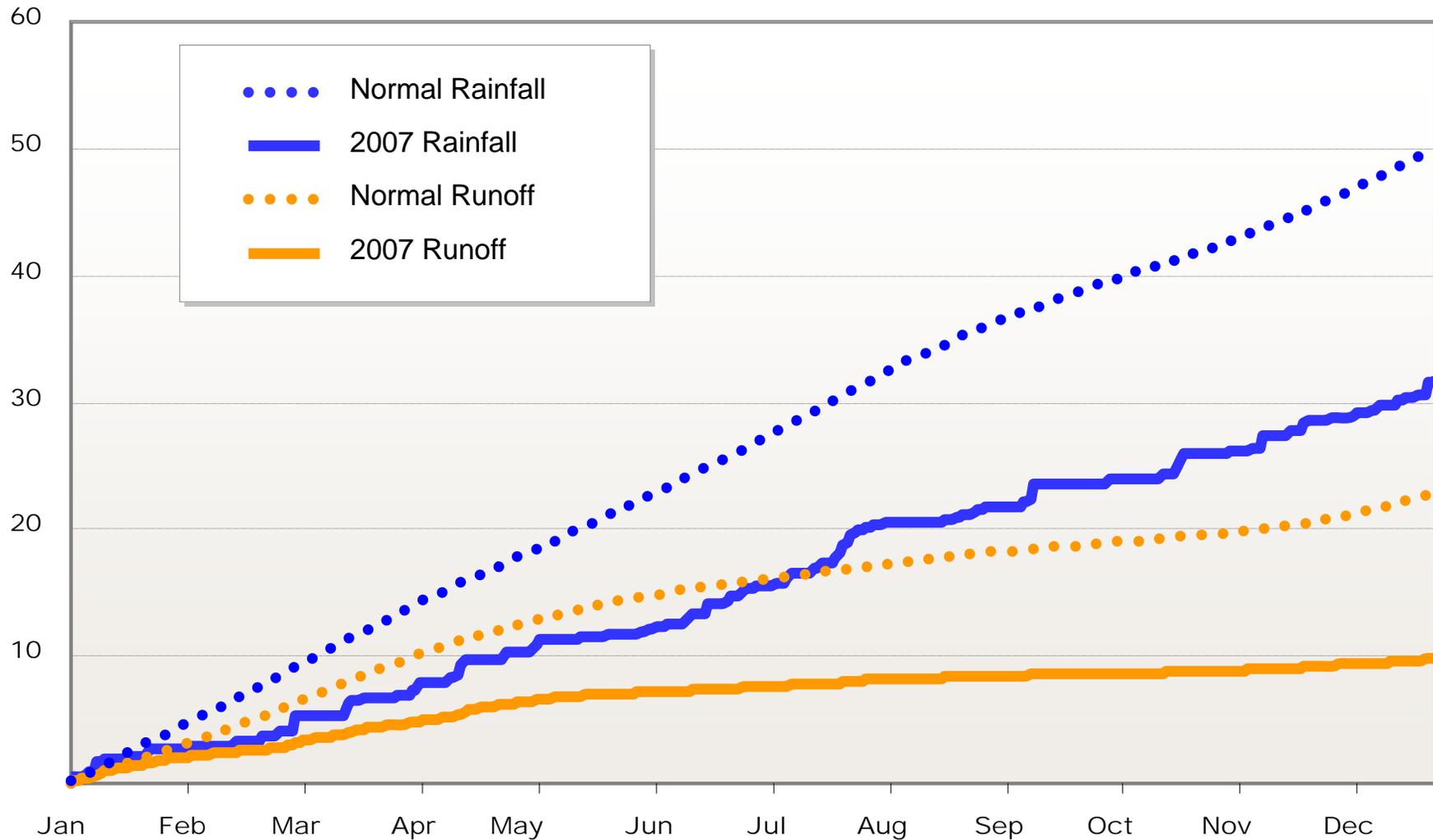
- January 1** Reservoirs are drawn to their lowest level to get ready for flood-producing storms.
- June 1** The spring fill, which typically begins in mid-March, is complete; and reservoirs are allowed to fill to their highest level. If water is limited, releases are restricted to the amount of water needed to meet reservoir-specific and system-flow requirements.
- Labor Day** Drawdown restrictions are lifted. Water is released, as needed, to meet power demands and provide other benefits.



Rainfall/runoff (eastern Valley), CY 2007

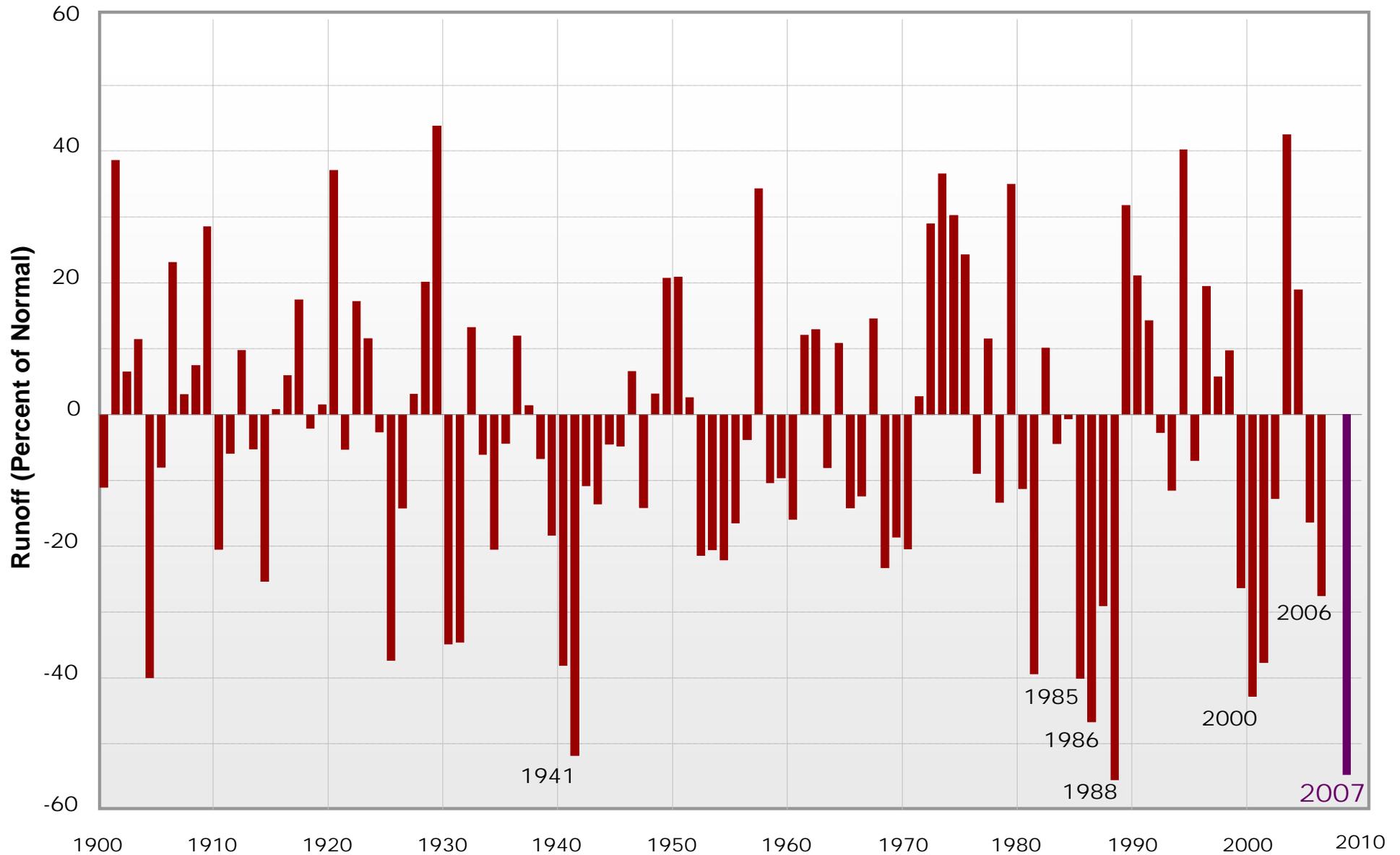
Rainfall: 33.1 inches, 16.9 inches below normal, or **66 percent of normal**.

Runoff: 12.5 inches, 10.4 inches below normal, or **54 percent of normal**.





Annual runoff variability (eastern Valley)



A look back at the 2007 drought

- Navigation
- Flood-damage reduction
- Affordable and reliable electricity
- Water quality
- Water supply
- Recreational opportunities

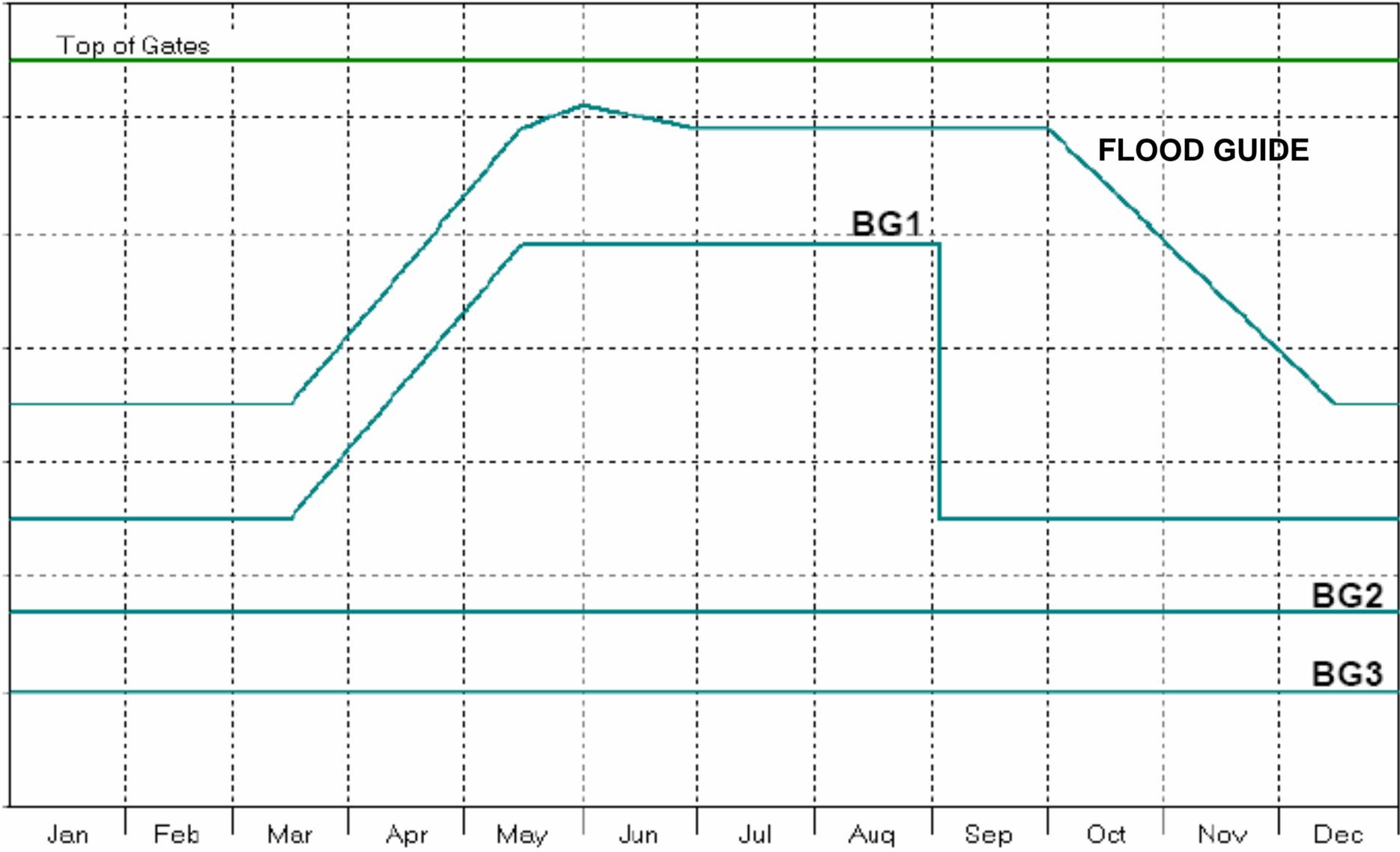


Lessons learned

- Communications
 - Weekly drought updates
 - Meetings with marina operators and other reservoir users
 - Biweekly teleconferences
- Reservoir balancing

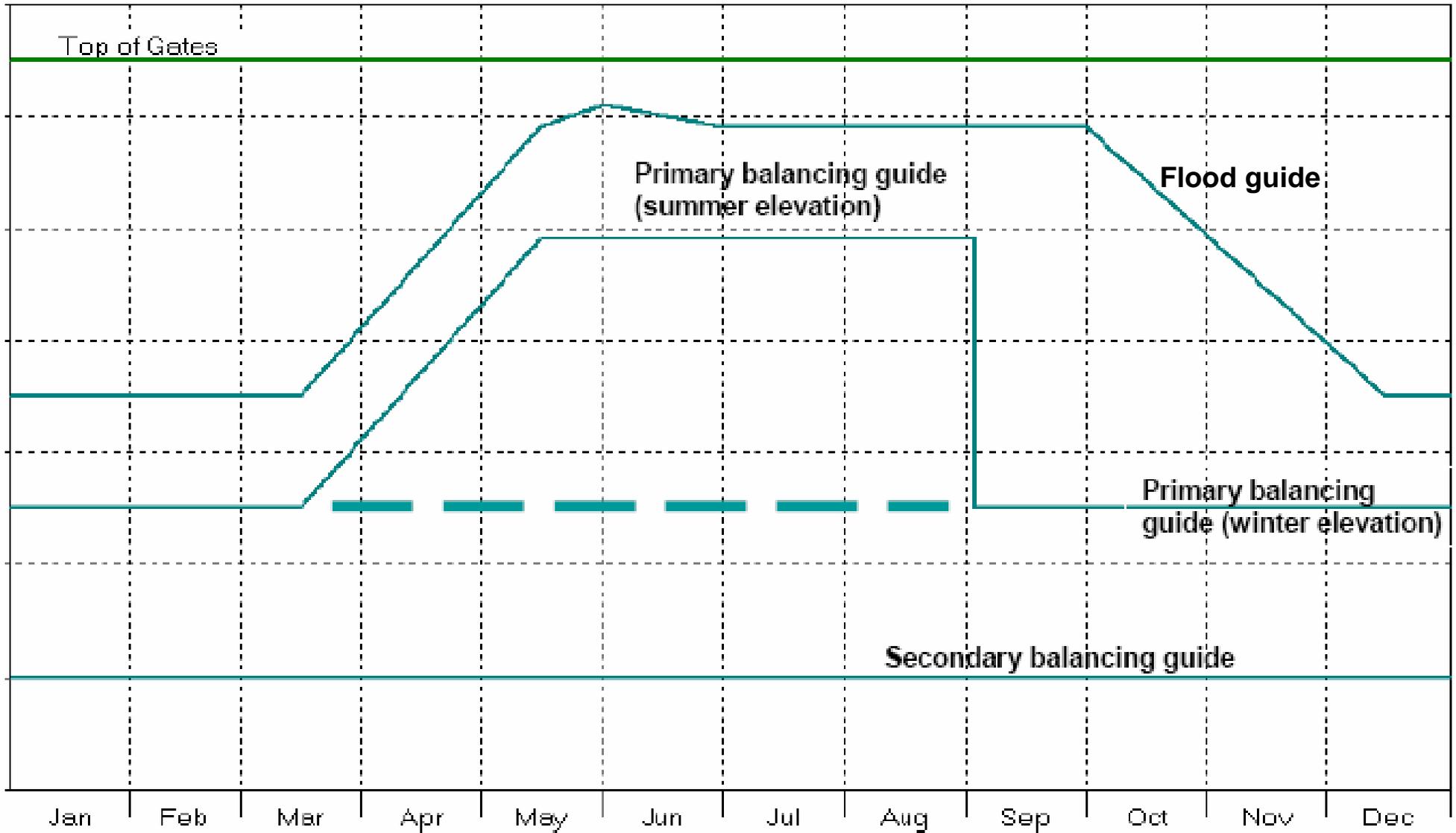


Reservoir balancing, 2004-2007





Reservoir balancing, 2008





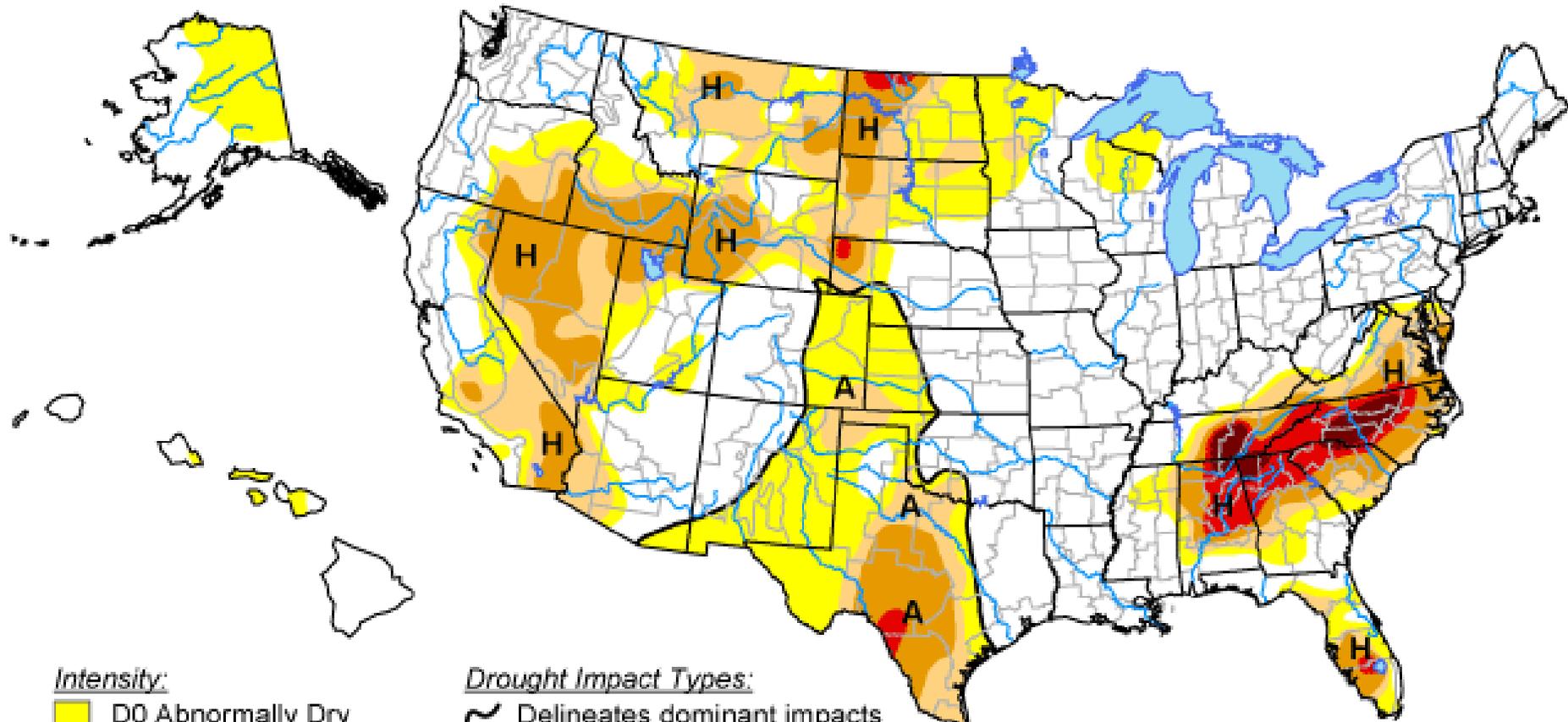
Current reservoir system status, CY to date

- Precipitation (above Chattanooga):
 - Rainfall: 88 percent of normal
 - Runoff: 53 percent of normal
- Reservoir elevations:
 - Nine tributary reservoirs are currently at or above winter target elevations: Fontana, Douglas, Cherokee, Norris, Hiwassee, Nottely, Chatuge, Blue Ridge, and Tims Ford
 - Main-river reservoirs are within their normal operating zones
- Hydroelectric generation: 49 percent of normal

U.S. Drought Monitor

March 4, 2008

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>



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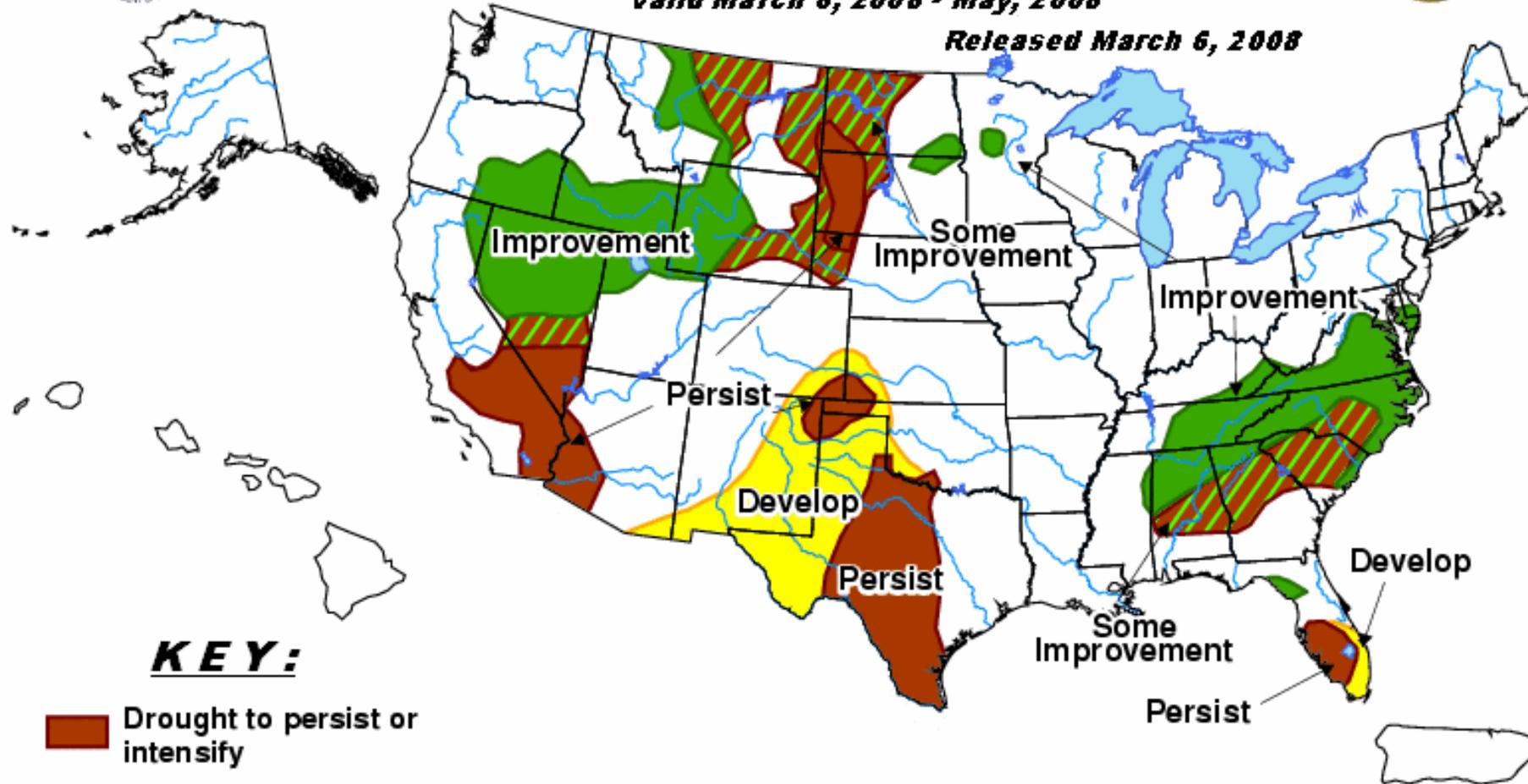


U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid March 6, 2008 - May, 2008

Released March 6, 2008



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.



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