

THE COLORADO RIVER TIME TO ACT

ADAPTING THE LAW OF THE COLORADO RIVER

32nd Annual Water Seminar
Southwestern Water Conservation District
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Colorado Commissioner, Upper Colorado River Commission

The Colorado River Basin



Colorado River Salinity Control Act (1974)

Supplemental *California v. Arizona*

Supreme Court Decrees (1968, 1979, 1983, 1984, 2000, 2006)

▼ Colorado River Compact (1922)

▼ United States-Mexico Treaty (1944)

▼ Upper Colorado River Basin Compact (1948)

California Colorado River Water Agreement (2003)

Boulder Canyon Project Act (1928)

Colorado River Storage Project Act (1956)

Arizona v. California (1963)

Colorado River Basin Project Act (1968)

La Plata River Compact (1922)

California Seven Party Agreement (1951)

Reservoir Operations (2007)

Interim Surplus Guidelines (2001)

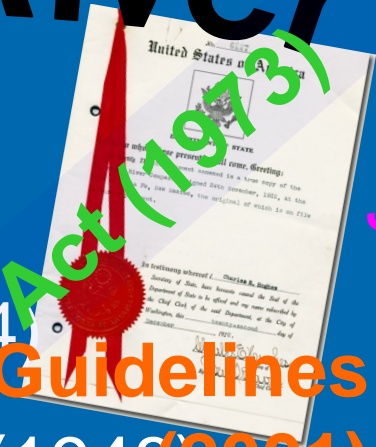
Interim Guidelines for Lower Basin

Shortages and Coordinated

Colorado Ute

Settlement Act

(2000)



Lower Colo River
Multi-Species
Conservation
Program (2005)

Grand Canyon Protection Act (1992)

Recovery Program
Endangered Fish
Colorado River

National Environmental Policy Act (1969)

Colorado River Compact



- Interstate Compact
- Contract among states
- Authorized by U. S. Constitution
- Ratified by
 - State Legislatures
 - U. S. Congress
- State Law (§ 37-61-101)
- Law of United States

Key Provisions of the Colorado River Compact

- **Article III(a)**

Apportions to Upper Basin and Lower Basin 7.5 million acre-feet per year in perpetuity

- **Article III(c)**

Defines obligations of Upper and Lower Basins for deliveries to Mexico

- **Article III(d)**

Upper Division will not deplete flows at Lee Ferry below an aggregate of 75 million acre-feet over any period of ten consecutive years

- **Article IV(c)**

No interference with state control of water within its boundaries

- **Article VIII**

Present perfected rights are unimpaired

Mexican Water Treaty

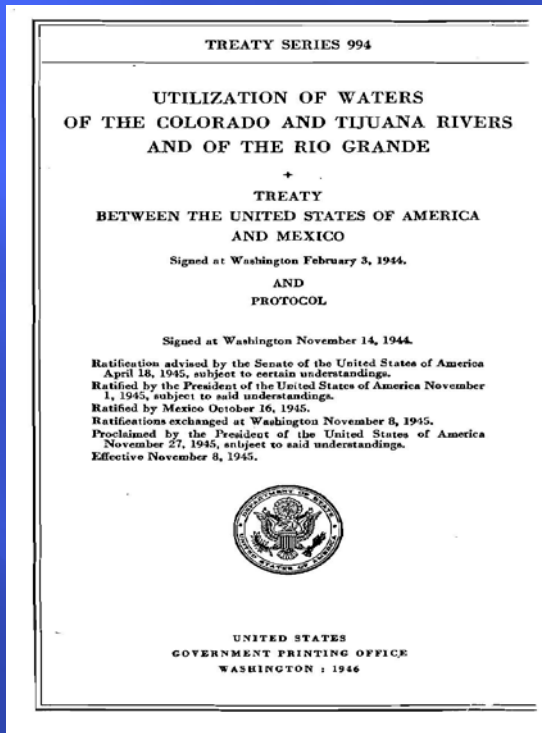


Signing of 1944 Treaty

- Article 10(a)
1.5 maf guaranteed to Mexico annually

- Article 10(b)
“surplus of waters” and
“extraordinary drought” provisions

- Recent Negotiations
Minute 319



Upper Colorado River Basin Compact

Article I

“equitable division and apportionment of the use of waters”

Article III(a)

- Arizona 50,000 af
- Colorado 51.75%
- Utah 23.00%
- Wyoming 14.00%
- New Mexico 11.25%

Article III(b)

- Apportionment of any and all man-made depletions
- Beneficial use is the basis, measure, and limit

Article IV

- In the event of curtailment Commission determines quantities
- Penalty for over use by any state

Upper Division States' Colorado River Compact Compliance

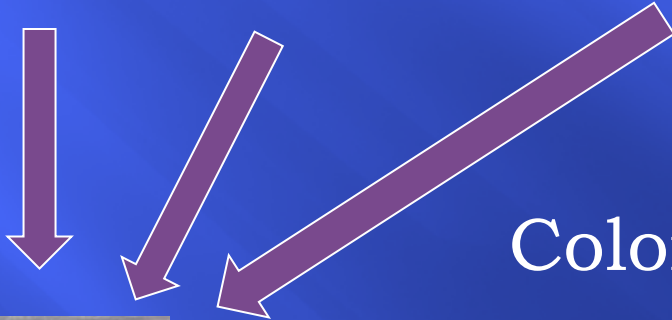
Navajo Reservoir



Flaming Gorge Reservoir



Blue Mesa Reservoir



Colorado River Storage Project

30.6 maf total storage

Objective Annual Release:
8.23 million acre-feet

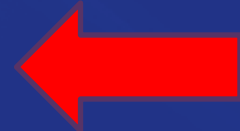


Lake Powell

Upper Division States' Colorado River Compact Compliance

Historic Flow at Lee Ferry (acre-feet)

	Annual	10 year avg.
2000	9,530	101,754
2001	8,361	101,983
2002	8,348	102,308
2003	8,372	102,543
2004	8,348	102,585
2005	8,395	101,738
2006	8,508	98,716
2007	8,422	93,265
2008	9,180	89,004
2009	8,406	85,870
2010	8,436	84,777
2011	13,227	89,643
2012	9,534	90,829



ADAPTING THE LAW OF THE RIVER

Drought

Shortage Guidelines

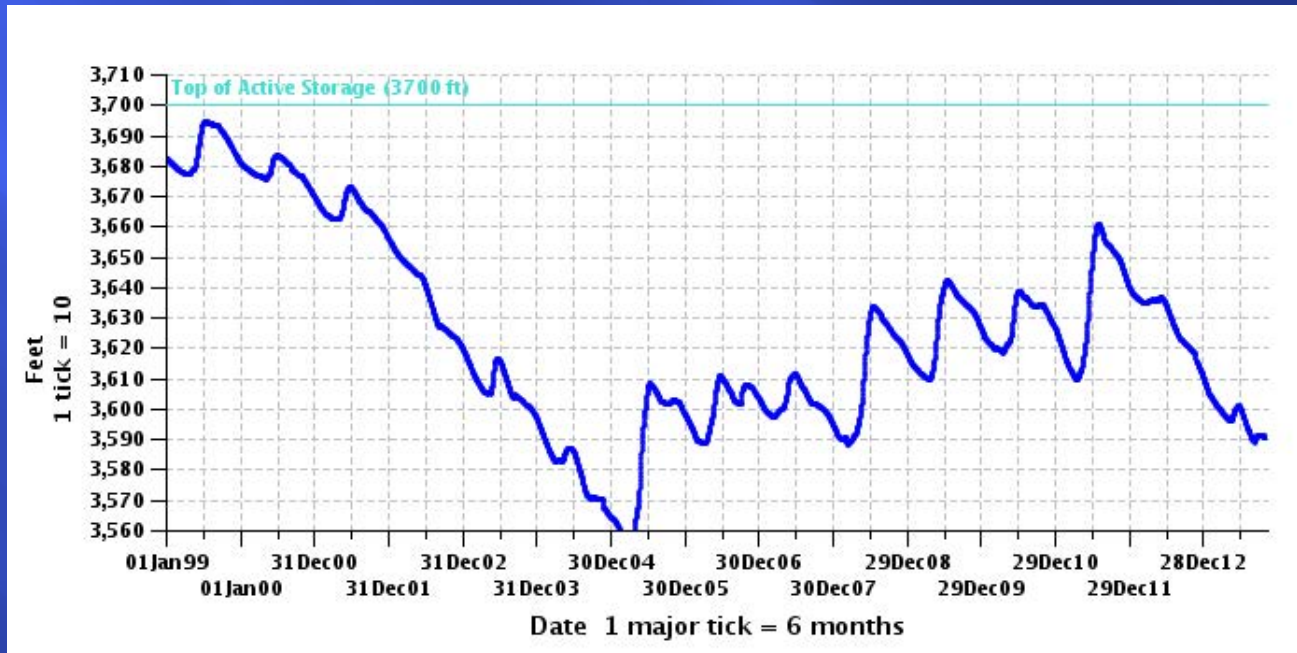
Contingency Planning

Sustained Drought

Inflows to Lake Powell

Percentage of 30-year average (1971-2000: 12.04 maf)

- 2000 – 7.32 maf (62%)
 - 2001 – 6.96 maf (59%)
 - 2002 – 3.06 maf (25%)
 - 2003 – 6.36 maf (51%)
 - 2004 – 6.13maf (49%)
 - 2005 – 12.62 maf (105%)
 - 2006 – 8.77 maf (71%)
 - 2007 – 8.23 maf (68%)
 - 2008 – 12.36 maf (102%)
 - 2009 – 10.36 maf (92%)
 - 2010 – 8.74 maf (73%)
 - 2011 – 16.79 maf (142%)
 - 2012 – 4.91 maf (29%)
 - 2013 – 5.12 maf (47%)
- (1981-2010: 10.83 maf)



Adapting the Law of the River

2007 Interim Shortage Guidelines

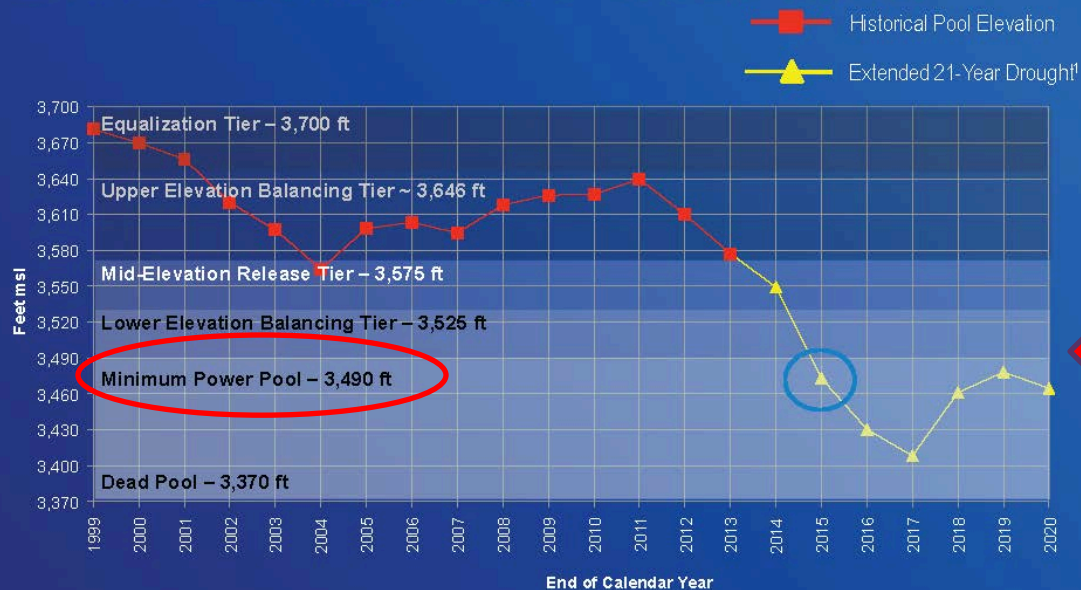
Lake Powell Operational Tiers (subject to April adjustments or mid-year review modifications)		
Lake Powell Elevation (feet)	Lake Powell Operational Tier	Lake Powell Active Storage (maf)
3,700	Equalization Tier equalize, avoid spills or release 8.23 maf	24.32
3,636 – 3,666 (see table below)	----- Upper Elevation Balancing Tier release 8.23 maf; if Lake Mead < 1,075 feet, balance contents with a min/max release of 7.0 and 9.0 maf	15.54 – 19.29 (2008 – 2026)
3,575	----- Mid-Elevation Release Tier release 7.48 maf; if Lake Mead < 1,025 feet, release 8.23 maf	9.52
3,525	----- Lower Elevation Balancing Tier balance contents with a min/max release of 7.0 and 9.5 maf	5.93
3,370		0



2014 Release: 7.48 maf

Contingency Planning

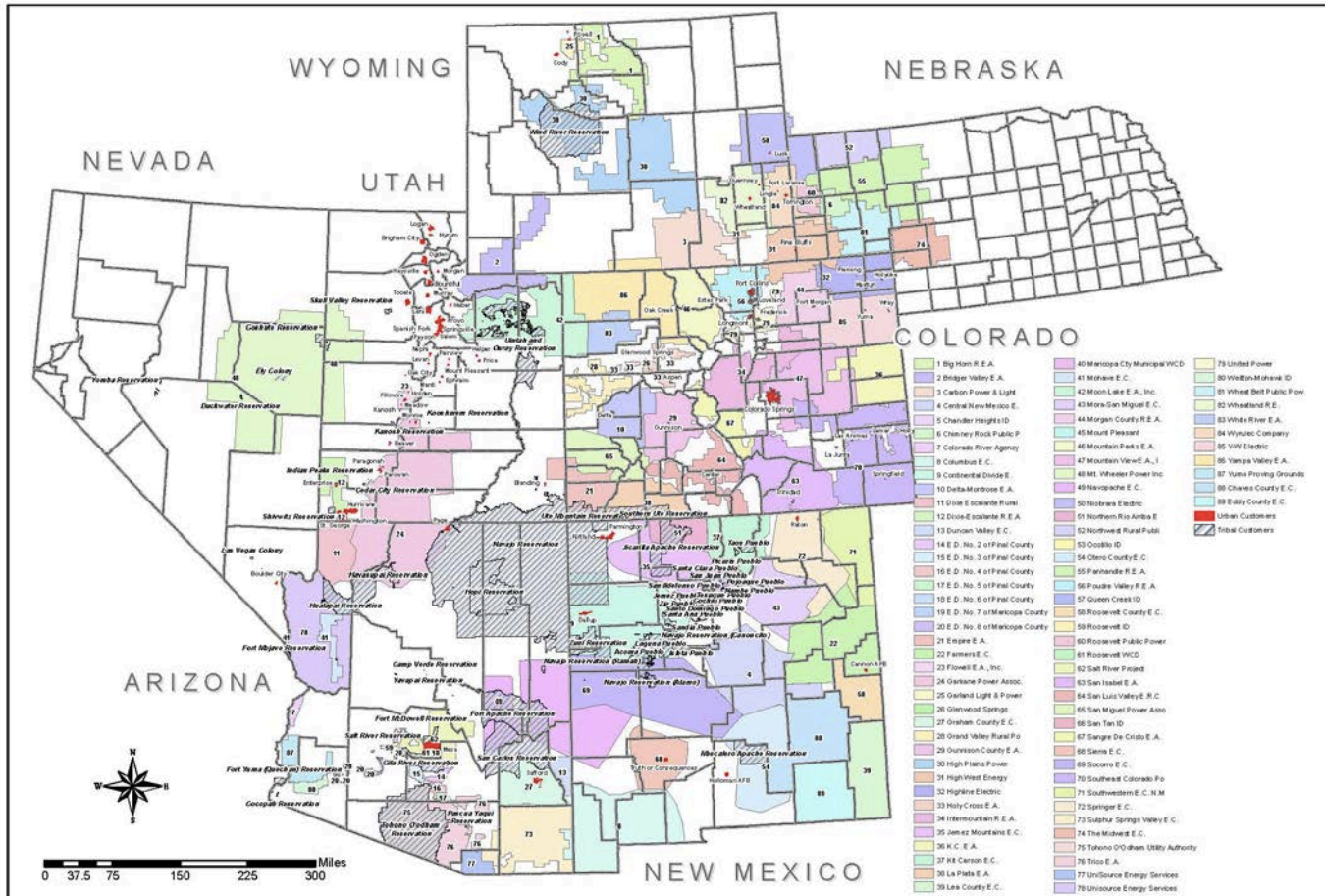
Lake Powell End of Calendar Year Pool Elevation




¹May 2013 CRSS trace 96; 2014-2020 uses 2001-2007 hydrology

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WAPA Service Territory

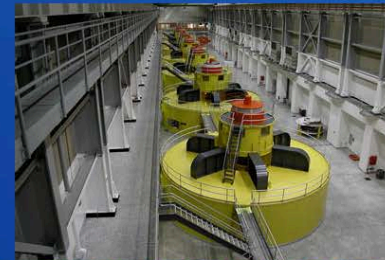
DISCLAIMER:
 The data represented on this map has been developed from the best available sources. Although efforts have been made to ensure that the data are accurate and reliable, errors and variable conditions originating from physical sources used to develop the data may be reflected in the data supplied. Users must be aware of these conditions and bear responsibility for the appropriate use of the information with respect to possible errors, scale, positional accuracy, development methodology, and other circumstances specific to this data. The user is responsible for understanding the accuracy limitations of the data provided herein. The burden for determining fitness for use lies entirely with the user. The data on this map is for reference use only.

United States Department of Energy
Western Area Power Administration
Colorado River Storage Project

Contingency Planning

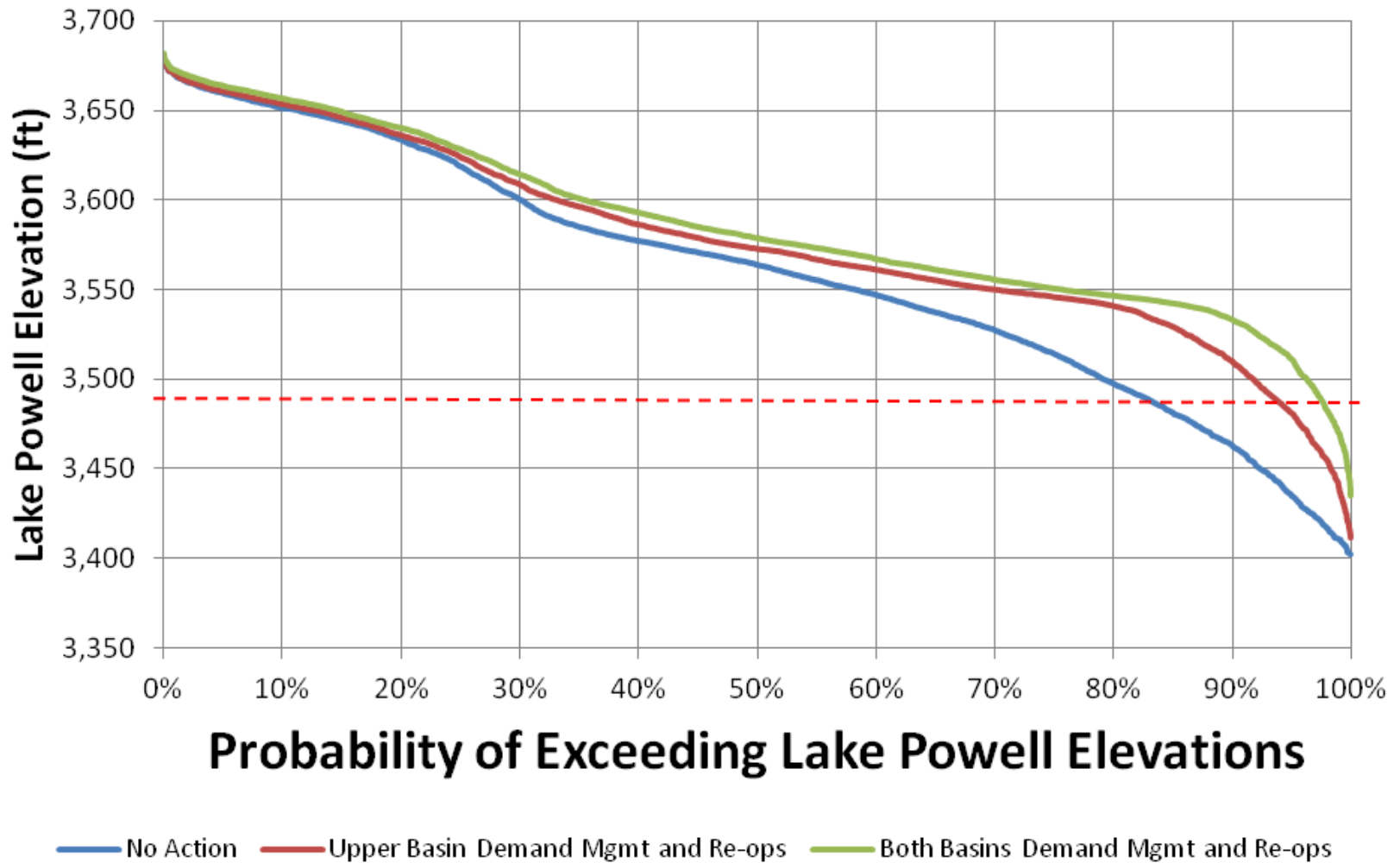
Hydropower Impacts

- Lower inflows to Lake Powell → lower releases → less hydropower generation
- Lower reservoir elevation → less “head” (pressure) → less hydropower generation
- Hydropower at Glen Canyon: ~80% of SLCA/IP total generation
 - Reductions in hydropower at Glen Canyon Powerplant significantly impact revenues available to the Upper Colorado Basin Fund
 - Glen Canyon hydropower generation pays for: reservoir and powerplant maintenance, security, salaries, environmental related costs (AMP, UCRIP, SJRIP), salinity program, and other repayment obligations
- Glen Canyon Dam cannot generate power below 3,490 ft
 - Would be a significant loss of revenue
 - could potentially affect hydropower rates (Western)



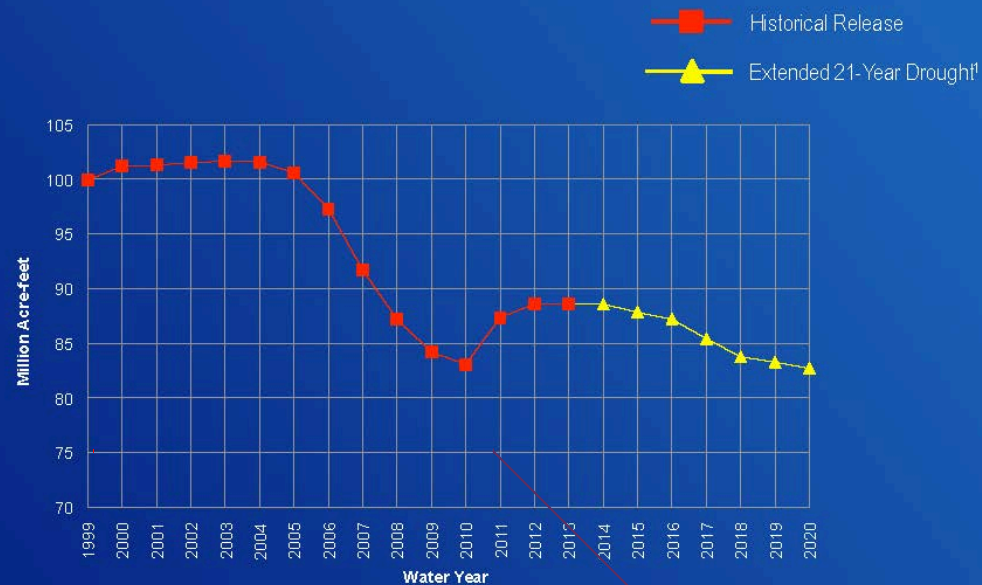
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Contingency Planning

Lake Powell 10-Year Cumulative Water Year Release

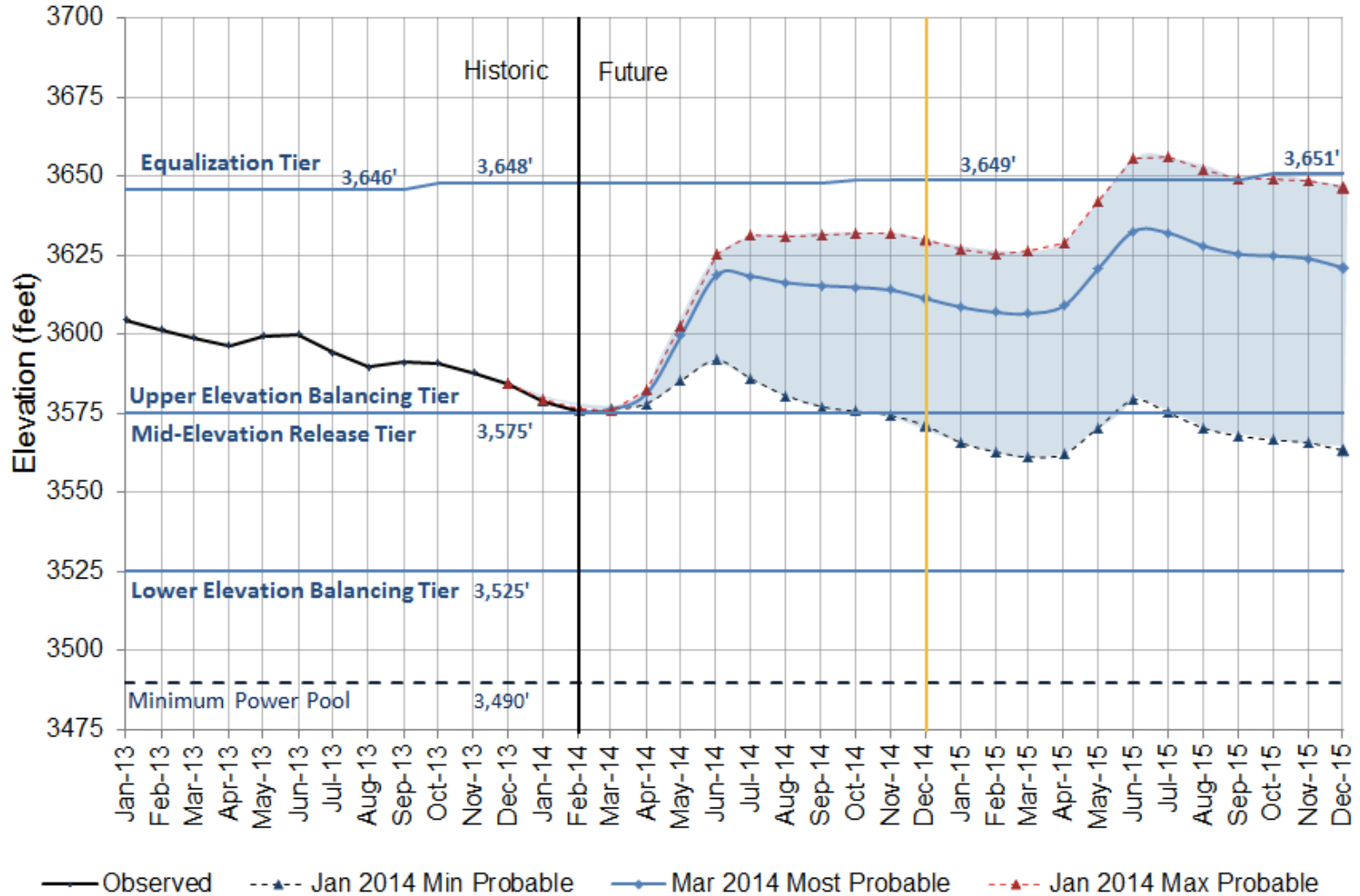


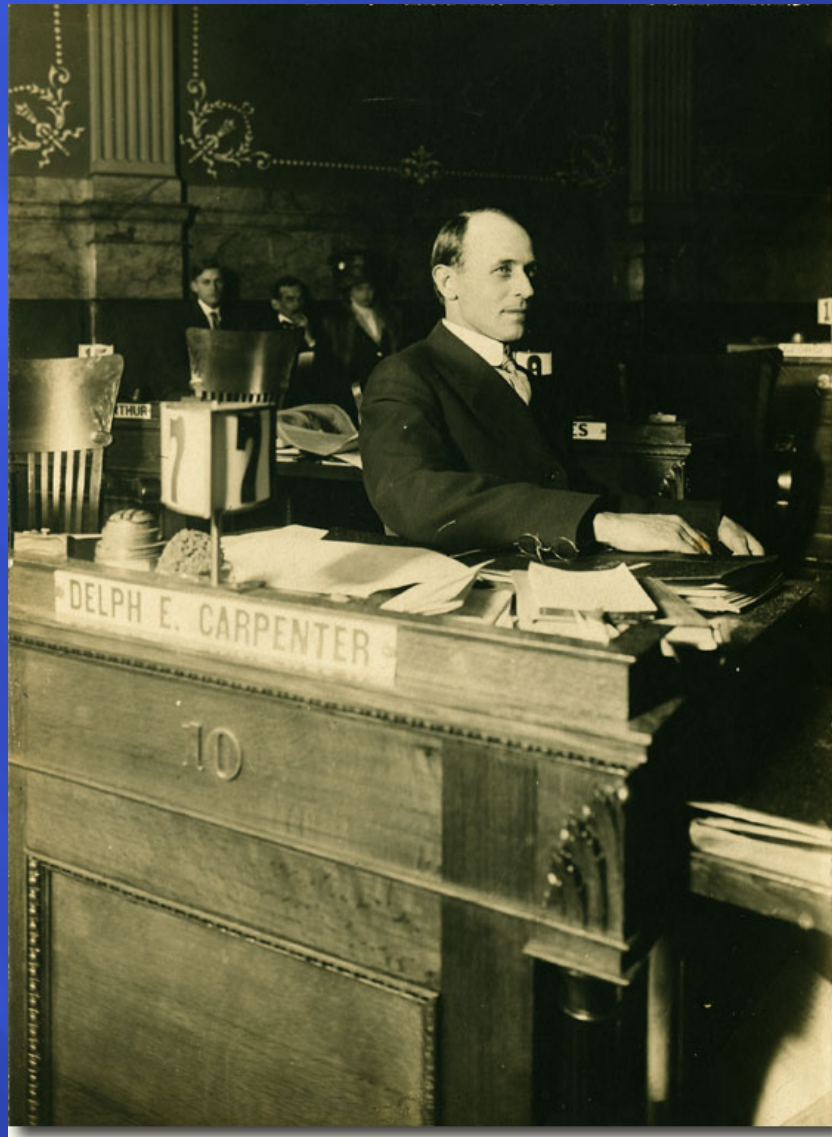
¹May 2013 CRSS trace 96: 2014-2020 uses 2001-2007 hydrology

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Lake Powell End of Month Elevations

Historic and Projected based on March modeling





Delphus E. Carpenter