COLORADO RIVER BOARD OF CALIFORNIA
770 FAIRMONT AVENUE, SUITE 100
GLENDALE, CA 91203-1068
(818) 500-1625
(818) 543-4685 FAX

June 6, 2011

NOTICE OF REGULAR MEETING OF THE COLORADO RIVER BOARD

NOTICE IS HEREBY GIVEN pursuant to the call of the Chairperson, Dana B. Fisher, Jr., by the undersigned, the Acting Executive Director of the Colorado River Board of California, that a regular meeting of the Board Members is to be held as follows:

Date:	June 15, 2011, Wednesday
Time:	10:00 a.m.
Place:	Vineyard Room Holiday Inn Ontario Airport 2155 East Convention Center Way Ontario, CA 91764-4452 TEL: (909) 212-8000, FAX: (909) 418-6703

The Colorado River Board of California welcomes any comments from members of the public pertaining to items included on this agenda and related topics. Oral comments can be provided at the beginning of each Board meeting; while written comments may be sent to Mr. Dana B. Fisher, Jr., Chairperson, Colorado River Board of California, 770 Fairmont Avenue, Suite 100, Glendale, California, 91203-1068.

An Executive Session may be held in accordance with provisions of Article 9 (commencing with Section 11120) of Chapter 1 of Part 1 of Division 3 of Title 2 of the Government Code and in accordance with Sections 12516 and 12519 of the Water Code to discuss matters concerning interstate claims to the use of Colorado River System waters in judicial proceedings, administrative proceedings, and/or negotiations with representatives from other states or the federal government.

Requests for additional information may be directed to: Christopher S. Harris, Acting Executive Director, Colorado River Board of California, 770 Fairmont Avenue, Suite 100, Glendale, CA 91203-1068, or 818-500-1625. A copy of this Notice and Agenda may be found on the Colorado River Board's web page at www.crb.ca.gov.

A copy of the meeting agenda, showing the matters to be considered and transacted, is attached.

Christopher S. Harris
Acting Executive Director

attachment: Agenda

Regular Meeting
COLORADO RIVER BOARD OF CALIFORNIA
June 15, 2011, Wednesday
10:00 a.m.

Vineyard Room
Holiday Inn Ontario Airport
2155 East Convention Center Way
Ontario, CA 91764-4452

A G E N D A

At the discretion of the Board, all items appearing on this agenda, whether or not expressly listed for action, may be deliberated upon and may be subject to action by the Board. Items may not necessarily be taken up in the order shown.

1. Call to Order

2. Opportunity for the Public to Address the Board (Limited to 5 minutes)
   As required by Government Code, Section 54954.3(a)

3. Administration
   a. Minutes of the Meeting Held April 13, 2011, Consideration and Approval **(Action)** □ TAB 1
   b. Approval of Fiscal Year 2011-2012 Colorado River Board Budget **(Action)** □ □ □ ... TAB 2
   c. Ethics Orientation Training

4. Agency Managers Meetings

5. Protection of Existing Rights
   a. Colorado River Water Report(s) □ . TAB 3
      Report on current reservoir storage, reservoir releases, projected water use, forecasted river flows, scheduled deliveries to Mexico, and salinity
   b. State and Local Water Reports □ ... TAB 4
      Reports on current water supply and use conditions
   c. Colorado River Operations □ . TAB 5
      - Draft 2012 Colorado River Annual Operating Plan
      - The Associate Press□News Article Entitled □Feds stop work on Flaming Gorge pipeline study□
      - U.S. Department of Energy News Release, □Moab Mill Tailings Pile 25 Percent Disposed, DOE Moab Project Reaches Significant Milestone□
   d. Basin States Discussions □ . TAB 6
      - Status of the Colorado River Basin Water Supply and Demand Study
        - Commissioner of Reclamation□s Response Letter Regarding Basin Study
        - Reclamation□s News Release, □Colorado River Basin Water Supply and Demand Study Interim Report Available□
      - Status of U.S./Mexico Binational Discussions

Agenda (continued)

6. Water Quality
   a. Colorado River Bain Salinity Control Forum Meeting, Glenwood Springs, Colorado, May 23-26, 2011

7. Executive Session
   An Executive Session may be held by the Board pursuant to provisions of Article 9 (commencing with Section 11120) of Chapter 1 of Part 1 of Division 3 of Title 2 of the Government Code and Sections 12516 and 12519 of the Water Code to discuss matters concerning interstate claims to the use of Colorado River system waters in judicial proceedings, administrative proceedings, and/or negotiations with representatives from other states or the federal government.

8. Other Business
   a. Next Board Meeting: Regular Meeting
      July 13, 2011, Wednesday, starting 10:00 a.m.
      Holiday Inn Ontario Airport
      2155 East Convention Center Way
      Ontario, CA 91764-4452
      TEL: (909) 212-8000, FAX: (909) 418-6703

3.a. - Approval April 13, 2011, Board Meeting Minutes

Minutes of Regular Meeting
COLORADO RIVER BOARD OF CALIFORNIA
Wednesday, April 13, 2011

A Regular Meeting of the Colorado River Board of California (Board) was held in the Vineyard Room, of the Holiday Inn Ontario Airport, 2155 East Convention center Way, Ontario, California, Wednesday, April 13, 2011.

Board Members Present

Dana Bart Fisher, Jr., Chairman
Thomas M. Erb
John V. Foley
W.D. "Bill" Knutson
John Pierre Menvielle
John Palmer Powell, Jr.

Jeanine Jones, Designee
Department of Water Resources

Board Members and Alternate Absent

Terese Maria Ghio
Henry Merle Kuiper
James B. McDaniel

Christopher G. Hayes, Designee
Department of Fish and Game

Others Present

William S. Abbey
Steven B. Abbott
James H. Bond
John Penn Carter
T.T. Easterday
David Fogerson
Leslie M. Gallagher
Mark L. Johnson
Richard Johnson
Michael L. King
Jan P. Matusak
David R. Pettijohn
Halla Razak
Tina L. A. Shields
Jack Seiler
Catherine M. Stites
Douglas B. Noble
Carrie Oliphant
Ed W. Smith
Mark Stuart
Bill D. Wright
Michael Yu

Abbas Amirteymoori
J.C. Jay Chen
Christopher S. Harris
Lindia Y. Liu
Gary E. Tavetian
Mark Van Vlack
Gerald R. Zimmerman

CALL TO ORDER

Chairman Fisher announced the presence of a quorum and called the meeting to order at 10:07 a.m.

OPPORTUNITY FOR THE PUBLIC TO ADDRESS THE BOARD

Chairman Fisher asked if there was anyone in the audience who wished to address the Board on items on the agenda or matters related to the Board. Hearing none, Chairman Fisher moved the meeting to the next agenda item.

ADMINISTRATION

New Coachella Valley Water District Representative

Chairman Fisher announced that Mr. John Powell Jr. has been sworn in as the Board Member representing the Coachella Valley Water District (CVWD). The Board welcomed Mr. Powell.

Approval of Minutes

Chairman Fisher asked if there was a motion to approve the March 9th Board meeting minutes. Mr. Knutson moved the March 9th meeting minutes be approved. Mr. Menvielle seconded the motion. Unanimously carried, the Board approved the March 9th meeting minutes.

Cancelation of the May Board Meeting

Acting Executive Director Harris announced that there would not be a Board meeting in May.

Board Budget for Fiscal Year 2011-2012

Mr. Harris reported that a packet would be mailed out to the Board members, alternates and agency managers including a copy of the proposed budget for Fiscal Year 2011-2012. The proposed budget for Fiscal Year 2011-2012 will be mailed out in May with action anticipated at the June Board meeting.

Retirement of Board Principal Engineer

Mr. Harris reported that Mr. Amireteymoori, the principal engineer of the Board is retiring. Mr. Harris added that Mr. Amireteymoori has been with the Board for ten years and will be missed. The Board wished him well on his future retirement.

AGENCY MANAGERS MEETING

Mr. Harris reported that the Agency Managers have not met for awhile and asked that the Agency Managers meet following the Colorado River Authority meeting.

DRAFT

PROTECTION OF EXISTING RIGHTS

Colorado River Water Report

Mr. Harris reported that, October 1st to April 4th precipitation in the Upper Basin was 118 percent of normal, and the snowpack was about 115 percent of normal. The projected April through July runoff, as of April 1st, is 9.5 million acre-feet (maf), or 120 percent of normal. The anticipated 2011 water year runoff is about 13.1 maf, or 109 percent of normal.

Mr. Harris reported that Reclamation's April 2011, 24 month study indicated that if releases from Glen Canyon Dam remain at 8.23 maf, the projected water elevation behind Glen Canyon Dam would likely rise to over 3,662 feet, thus triggering equalization of the contents of Lakes Powell and Mead consistent with the 2007 Interim Guidelines. Consequently, Reclamation revised the releases from Glen Canyon Dam and increased the projected releases 8.23 maf to 11.56 maf for the remainder of Water-Year 2011. The releases from Glen Canyon Dam are subject to monthly updates reflecting the changing hydrology in order to achieve the operation specified by the Equalization Tier in the Guidelines.

Mr. Harris reported that precipitation in the southern Colorado River Basin has declined as expected, but the Upper Basin, particularly the Green River Basin, is still well above normal.

Mr. Harris reported that the storage in Lake Powell was 12.75 maf, or 52 percent of capacity. The water surface elevation was 3,610.2 feet. The storage in Lake Mead was 11.19 maf, or 43 percent of capacity, and water surface elevation of 1,096.6 feet. Total System storage was about 31.47 maf, or 53 percent of capacity. Last year at this time, there was 32.66 maf in storage, or 55 percent of capacity.

Mr. Harris reported that Reclamation's projected consumptive use (CU) for the State of Nevada was under its entitlement of 300,000 acre-feet (269,000 acre-feet); and for Arizona, the CU is projected to be below its basic entitlement of 2.8 maf (2.774 maf); and for California the CU is projected to be 4.103 maf. The total projected CU in the Lower Basin is estimated to be 7.146 maf.

State and Local Water Reports

Mr. Mark Stuart, of the California Department of Water Resources (DWR), reported on the climate conditions of California. In the Los Angeles Basin precipitation is way above normal for this time of year, as is much of the southland, except for the Colorado Desert Region where precipitation, to date, was about 87 percent or normal in Blythe. The current Statewide precipitation in California for 233 stations was 140 percent of normal, with runoff 120 percent of normal for thirty-one rivers in California. Reservoir storage was up to 110 percent of normal for 155 reservoirs in California. The Sacramento River Index Precipitation was above average for every month except January and February. January was dismal, about 25 percent of normal, February was about average, but March was about 250 percent of normal. The Sacramento River Index Precipitation, as of April 1st, was 146 percent of average. The snowpack in the Northern Sierra was about 165 percent of normal, the Central Sierra was about 155 percent of normal and the Southern Sierra was about 150 percent of

normal.

Mr. Stuart reported that storage in Lake Oroville was to 2.8 maf or 81 percent of capacity. Even though there is nearly 700,000 acre-feet of storage available in Lake Oroville, flood releases have been ordered in case there is a warm spell that might cause too much snow melt to overfill the reservoir. Several reservoirs in the Sierras have made slight increases in releases to create flood control space. Mr. Stuart reported that the San Luis Reservoir, south of the Delta, was holding just over a million acre-feet. The State Water Project (SWP) as of April 1st had nearly 4.7 maf, or 85 percent of capacity, and projected deliveries were 70 percent of Table A Entitlements.

There was a question regarding increasing projected deliveries above 70 percent. Ms. Jones responded that currently delivery is restricted in the Delta due to fishery issues, not hydrology.

Mr. Foley, of The Metropolitan Water District of Southern California (MWD), reported that overall storage in Lake Skinner, Lake Mathews and Diamond Valley Lake, as of April 1, was 942,100 acre-feet, or 91 percent of capacity. Diamond Valley Lake was about 736,600 acre-feet, or 91 percent of capacity. Lake Mathews was about 166,900 acre-feet, or 92 percent of capacity. Lake Skinner was about 38,600 acre-feet, or 88 percent of capacity. Mr. Foley reported that they're potentially a month away from nearly filling the Diamond Valley Reservoir, with SWP water, thus avoiding the Quagga mussel issue associated with Colorado River water.

Mr. Foley reported that within a month, they expect to bring Diamond Valley Lake to within 20,000 acre-feet of capacity. He added that they already have about 261,000 acre-feet of water stored in Lake Mead and expect to add an additional 200,000 acre-feet this year, and after accounting for system and storage losses, this would bring the total contents to about 448,000 acre-feet.

Mr. Erb, of the City of Los Angeles Department of Water and Power (LADWP), reported that as of April 12th, climate conditions had improved in the Eastern Sierra. The Mammoth Watershed represents about 25 percent of the Los Angeles Aqueduct flow, and as of April 12th was about 171 percent of normal. The April 1st snow survey for the Eastern Sierra was about 167 percent of normal, so it's been an excellent water year so far.

<u>Colorado River Operations</u>

News Release that "Reclamation Completes Successful Pilot Run of the Yuma Desalter Plant"

Mr. Harris reported that on March 13th Reclamation announced completion of its year-long demonstration project running the Yuma Desalting Plant. The project partners included MWD, Southern Nevada Water Authority, and the Central Arizona Water Conservation District (CAWCD). During the course of the demonstration project 30,000 acre-feet of water was produced and delivered as part of the Mexican Treaty Obligation and consequently 30,000 acre-feet of mainstream water was retained in storage in Lake Mead. The demonstration project is considered a success and is another tool that can be used to

conserve and increase the flows of mainstream Colorado River in the Lower Basin.

Miscellaneous News Articles-"New Colorado River Projection Good News for the CAP Water Supply" and "Lake Mead Levels on the Rise"

Mr. Harris reported that both of the news articles included in the Board folder reported on Reclamation's recent projections of water level rise in Lake Mead. The rise may be as much as 25 feet, from what the level would have been had the inflow into Lake Powell not been 16 percent greater than normal. Pursuant to the 2007 Interim Guidelines and the 2011 Annual Operation Plan, the "most probably inflow scenario" projects balancing the storage in Lakes Mead and Powell by increasing the releases from Glen Canyon Dam by as much as 11.5 maf over the 2011 water year.

Workshop on Remote Sensing Applications for U.S.-Mexico Border Water Management, June 8-9, 2011, San Diego, California

Mr. Harris reported that the California Department of Water Resources (DWR), Water Education Foundation, and National Aeronautic and Space Agency (NASA) are co-sponsoring a workshop to provide water managers with an overview of remote sensing data and tools that could be applied to binational water management issues. The workshop is to be held at the Doubletree Hotel in downtown San Diego, on June 8th and 9th, 2011.

Ms. Jones added that NASA had some stimulus funding for a project on Applications of Remote Sensing to Water Management in California. NASA has assembled some tools that collect data with the help of their satellite network, providing information where none had been before, particularly south of the border. NASA is looking to make some connections in the water community through this workshop and encourage the academic community to apply for some of the funding available to put the remote sensing data and tools to beneficial use on both sides of the border.

U.S. House Water and Power Subcommittee Oversight Hearing

Mr. Harris reported that on April 5th, the U.S. House Subcommittee on Water & Power held an oversight hearing entitled, "Creating Abundant Water and Power Supplies and Job Growth by Restoring Common Sense to Federal Regulations." Mr. Harris included copies of Chairman McClintock's opening statement, and testimony from the Family Farm Alliance, the National Water Resources Association, several Arizona Irrigation Districts, and the American Farmland Trust. Mr. Harris reported that witnesses supported a reassessment of federal laws and regulations that could contribute to a more balanced approach in addressing the needs of water and power resources users and the federal agencies with environmental stewardship responsibilities.

<u>Basin States Discussions</u>

Status of the Colorado River Basin Water Study Report

Mr. Harris reported that Technical Reports A-"Scenario Development", B-"Water Supply Assessment", and D-"System Reliability Metrics" were released in early March as

preliminary drafts. Mr. Harris reported that Technical Report C-Water Demand Assessment was recently released for review and comment by the Project Team participants. Mr. Harris reported that comments were provided by MWD and the Imperial Irrigation District (IID), and that those comments were circulated among the California agency members. Comments on all four Technical Reports are currently being reviewed by the Project Team. Mr. Harris asked that if the other California Agencies have commented on Technical Report C, to forward a copy to the other agencies and Board staff.

Status of Binational Negotiations

Chairman Fisher reported the Basin states are engaging in a process whereby they will jointly specify individuals who will be involved in the process to enter into negotiations with Mexico. Chairman Fisher added that during a call among the Basin states Principals, they decided to draft a letter to be sent jointly from all of the Basin states indicating their interests in the rights of the Colorado River and designating an individual and an alternate or two, to represent them at the future negotiations between the U.S. and Mexico. Reclamation Commissioner Conner has agreed to deliver the Basin states letter to IBWC Commissioner Drusina.

Chairman Fisher noted that Mexico s IBWC Commissioner Salmon has been empowered with the signing authority from the federal government of Mexico, as well as the Mexican States and Cities. In Mexico the rights of the Colorado River are held by the federal government of Mexico, where in the U.S. the rights of the Colorado River, though managed by the federal government, are held by the states and/or public agencies that use Colorado River water. Chairman Fisher added that as in previous minutes negotiated between the U.S. and Mexico, the states have facilitated the creation of the past couple of minutes. Chairman Fisher expects this process to include the states in the protocol of negotiations affecting the Colorado River to be accomplished in a matter of three or four weeks and that the negotiations should proceed quickly afterwards.

<u>Colorado River Environmental Activities</u>

Seven Basin States' Comment Letter on Reclamation's Draft Environmental Assessment for the "Development and Implementation of a Protocol for High-Flow Experimental Releases from Glen Canyon Dam, Arizona, 2011 through 2020"

Mr. Harris reported that the Board folder included the Seven Basin states letter sent to Reclamation commenting on the Draft Environmental Assessments (DEA) – Protocol for High-Flow Experimental Releases from Glen Canyon Dam, from 2011-2020, and Non-Native Fish Control Downstream from Glen Canyon Dam The comment letter included: A revised Purpose and Need statement for the DEA; Ensure that the High-Flow Experimental (HFE) Protocol is consistent with the 2007 Interim Guidelines; Ensure the National Environmental Policy Act (NEPA) assessment rigorously analyzes impacts to Humpback chub; Evaluate potential inclusion of a Rainbow Trout trigger as an indicator of status of the health of Humpback chub populations; Clarify that the proposed HFE protocol is experimental and not a management plan; Clarify the process for deciding when to conduct an HFE release and how to incorporate feedback from the states.

U.S. Fish and Wildlife Service and Reclamation – "Desert Landscape Conservation Cooperative" Initiative

Mr. Harris reported that the Department of the Interior (DOI) has initiated a new initiative called Landscape Cooperative Initiatives. The DOI have identified large eco-regions across all of North America and the one that includes most of the Colorado River Basin is known as the Desert Landscape Cooperative Initiative In March, the U.S. Fish and Wildlife Service and Reclamation announced the new initiative – Desert Landscape Conservation Cooperative This initiative is intended to provide a science based response to climate-change impacts on land, water, and wildlife resources. Each Landscape Conservation Cooperative (LCC) functions in a distinct geographic area. The Desert LCC covers portions of Arizona, California, Nevada, New Mexico, Texas and northern Mexico. The Desert LCC also includes the Mojave, Chihuahuan, and Sonoran Deserts. Mr. Harris reported that a Steering Committee is being created that will include representatives from federal, state, Tribal, academic institutions, and Mexico.

Status of the Grand Canyon Trust Litigation

Ms. Cathy Stites, of the MWD, reported that on March 28th, Judge Campbell, of the U.S. District Court of Arizona issued a final ruling that the Annual Operating Plans (AOP) are not subject to Environmental Species Act (ESA) consultation or under the NEPA.

OTHER BUSINESS

Next Board Meeting

Chairman Fisher announced that the next meeting of the Colorado River Board will be held on June 15, 2010, 10:00 a.m., Holiday Inn Ontario Airport, 2155 E. Convention Center Way, Ontario, California.

There being no further items to be brought before the Board, Chairman Fisher asked for a motion to adjourn the meeting. Upon the motion of Mr. Knutson, seconded by Mr. Foley, and unanimously carried, the meeting was adjourned 10:42 a.m. on April 13, 2011.

Christopher S. Harris
Acting Executive Director

DRAFT

3.b. - Approval Fiscal Year 2011-2012 Colorado River Board Budget

STATE OF CALIFORNIA

STANDARD AGREEMENT

STD 213 (Rev 06/03)

AGREEMENT NUMBER
44
REGISTRATION NUMBER

1. This Agreement is entered into between the State Agency and the Contractor named below:

STATE AGENCY'S NAME

Colorado River Board of California

CONTRACTOR'S NAME

Six Agency Committee

2. The term of this Agreement is: July 1, 2011 through June 30, 2012

3. The maximum amount of this Agreement is: $ 1,587,000.00

4. The parties agree to comply with the terms and conditions of the following exhibits which are by this reference made a part of the Agreement.

Exhibit A – Scope of Work	1 page(s)
Exhibit B – Budget Detail and Payment Provisions	1 page(s)
Exhibit C* – General Terms and Conditions	
Check mark one item below as Exhibit D:	
☐ Exhibit - D Special Terms and Conditions (Attached hereto as part of this agreement)	NA page(s)
☐ Exhibit - D* Special Terms and Conditions	
Exhibit E – Additional Provisions	NA page(s)
NA	

Items shown with an Asterisk (*), are hereby incorporated by reference and made part of this agreement as if attached hereto. These documents can be viewed at www.ols.dgs.ca.gov/Standard+Language

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

CONTRACTOR		California Department of General Services Use Only
CONTRACTOR'S NAME *(if other than an individual, state whether a corporation, partnership, etc.)* Six Agency Committee		
BY *(Authorized Signature)*	DATE SIGNED *(Do not type)*	
PRINTED NAME AND TITLE OF PERSON SIGNING Dana B. Fisher, Jr., Chairman		
ADDRESS c/o 770 Fairmont Ave., Suite 100, Glendale, CA 91203-1068		
STATE OF CALIFORNIA		
AGENCY NAME Colorado River Board of California		
BY *(Authorized Signature)*	DATE SIGNED *(Do not type)*	
PRINTED NAME AND TITLE OF PERSON SIGNING Christopher S. Harris, Acting Executive Director		☐ Exempt per:
ADDRESS 770 Fairmont Ave., Suite 100, Glendale, CA 91203-1068		

EXHIBIT A

WHEREAS, pursuant to Part 5 of Division 6 of the California Water Code, the Colorado River Board of California has the duty and responsibility to protect the rights and interests of the State of California, its agencies and citizens in the water and power resources of the Colorado River System; and

WHEREAS, the 2011-12 State Budget sets forth an expenditure program for the Colorado River Board of California in the amount of $1,587,000.00; and

WHEREAS, the 2011-12 State Budget provides for neither General Fund nor California Environmental License Plate Fund support to the Board; and

WHEREAS, the State and Contractor consider that it is in the best interest of the people of the State of California to maintain the program set forth in the 2011-12 State Budget, and to carry out this objective, State and Contractor agree that the Contractor shall fund and the State shall accept the cost of said budget in the amount of $1,587,000.00, as modified by subsequent adjustments pursuant to the Budget Act of 2011 and Executive Orders of the Governor and in accordance with Exhibit B;

NOW, THEREFORE, State and Contractor hereby agree to the terms and conditions set forth in Exhibit B.

EXHIBIT B

The State shall provide the program set forth in the 2011-12 State Budget within the total expenditure of $1,587,000.00 as modified by subsequent adjustments pursuant to the Budget Act of 2011 and Executive Orders of the Governor;

The Contractor shall pay the sum of $1,587,000.00 toward said 2011-12 State Budget, such payment to be made no later than August 30, 2011. Said funds will be used to pay 100 percent of California's share of the funding of the seven-state Colorado River Basin Salinity Control Forum, the payee being the "Salinity Control Forum," and related activities; plus the remaining balance will be used to support activities of the Colorado River Board.

In the event at the end of the 2011-12 FY there remains an unexpended balance of the sum set forth in the 2011-12 State Budget for the Colorado River Board plus any additional funds advanced to the Board for Personal Services or other purposes, State shall pay to Contractor a sum equal to the said unexpended balance.

COLORADO RIVER BOARD OF CALIFORNIA
770 FAIRMONT AVENUE, SUITE 100
GLENDALE, CA 91203-1068
(818) 500-1625
(818) 543-4685 FAX

RESOLUTION

OF

COLORADO RIVER BOARD

MOTION: Upon motion of _____, seconded by _____, and unanimously carried, the Board authorizes the Acting Executive Director to execute Standard Agreement No. 44, dated July 1, 2011, between the Colorado River Board of California and the Six Agency Committee which will provide reimbursement of monies to the State s General Fund in support of the costs of the Colorado River Board of California s Fiscal Year 2011-12 budget, in accordance with the terms of said agreement, to wit: a total budget of $1,587,000.00 with the Six Agency Committee to pay 100 percent, pursuant to the Budget Act of 2011 and Executive Orders of the Governor.

State of California)
) ss.
County of Los Angeles)

I, Christopher S. Harris, Acting Executive Director of the Colorado River Board of California, do hereby certify that the foregoing is a true copy of a resolution adopted by said Board at a Regular Meeting thereof, duly convened and held in Ontario, California, on the fifteenth day of June, 2011, at which time a quorum of said Board was present and said Board was present and acting throughout.

Dated this fifteenth day of June, 2011.

_____
Christopher S. Harris
Acting Executive Director

COLORADO RIVER BOARD OF CALIFORNIA
FY 2011-12 BUDGET
(Budget Approved June 15, 2011; Assessments Approved June 15, 2011)

	Current Year Authorized FY 2010-11	Current Year Funded FY 2010-11		Anticipated Expenditures FY 2010-11	Budget FY 2011-12	
1. Colorado River Board Direct Support	$ 1,589,800	$ 1,589,800		$ 1,385,000	$ 1,546,800	
State Share(General Fund)	$ -	$ -	0.0%	$ -	$ -	0.0%
Six Agency Share	$ 1,589,800	$ 1,589,800	100.0%	$ 1,385,000	$ 1,546,800	100.0%
2. Colorado River Basin Salinity Control Forum Support	$ 40,200	$ 40,200		$ 40,200	$ 40,200	
State Share(CELPF)	$ -	$ -	0.0%	$ -	$ -	0.0%
Six Agency Share	$ 40,200	$ 40,200	100.0%	$ 40,200	$ 40,200	100.0%
3. Administrative Fee/Pro Rata	$ -	$ -		$ -	$ -	
State Share (CELPF)	$ -	$ -		$ -	$ -	NA
Six Agency Share	$ -	$ -		$ -	$ -	NA
4. Total Budget Estimate						
Colorado River Board	$ 1,630,000	$ 1,630,000		$ 1,425,200	$ 1,587,000	
State Share	$ -	$ -	0.0%	$ -	$ -	0.0%
Six Agency Share	$ 1,630,000	$ 1,630,000	100.0%	$ 1,425,200	$ 1,587,000	100.0%

5.a. - Colorado River Water Reports

SUMMARY WATER REPORT
COLORADO RIVER BASIN
June 6, 2011

RESERVOIR STORAGE (as of June 5)	MAF	ELEV. IN FEET	% of Capacity	May 16, 2011 MAF	ELEV. IN FEET	% of Capacity
Lake Powell	14.498	3,626.8	**60**	13.305	3,615.6	**55**
Flaming Gorge	3.188	6,025.8	**85**	3.074	6,022.6	**82**
Navajo	1.453	6,068.0	**86**	1.377	6,062.3	**81**
Lake Mead	11.382	1,098.8	**44**	11.088	1,095.4	**43**
Lake Mohave	1.715	643.6	**95**	1.704	643.2	**94**
Lake Havasu	0.589	448.5	**96**	0.595	448.8	**96**
Total System Storage	33.583		**56**	31.856		**53**
System Storage Last Year	33.505		**56**	32.880		**55**

			May 16, 2011	
WY 2011 Precipitation (Basin Weighted Avg) 10/01/10 through 6/06/11	**128 percent (32.5")**		**125 percent (29.8")**	
WY 2011 Snowpack Water Equivalent (Basin Weighted Avg) on day of 6/06/11	**264 percent (10.3")**		**109 percent (18.0")**	
(Above two values based on average of data from 116 sites.)				
			May 4, 2011	
June 3, 2011 Forecast of Unregulated Lake Powell Inflow	MAF	% of Normal	MAF	% of Avg.
2011 April through July unregulated inflow	12.600	**159 %**	11.500	**145%**
2011 Water Year forecast	16.598	**138 %**	15.384	**128%**

USBR Forecasted Year-End 2011 and 2010 Consum. Use, June 6, 2011 a. **MAF**

			2011 Diversion	- Return =	Net	2010
Nevada (Estimated Total)			0.479	0.216	0.263	0.243
Arizona (Total)			3.643	0.863	2.780	2.792
CAP Total					1.579	1.653
Az. Water Banking Authority					*0.134*	*0.134*
OTHERS					1.202	1.140
California (Total) b./			4.727	0.627	4.100	4.363
MWD					0.598	1.099
3.85 Agriculture	Total	Conserved			Forecasted	Estimated
IID c./	3.130	-0.360			2.770	2.547
CVWD d./	0.372	-0.031			0.341	0.304
PVID	0.324	0			0.324	0.274
YPRD	0.045	0			0.045	0.039
Island e./	0.007	0			0.007	0.006
Total Ag.	*3.878*	*-0.391*			*3.487*	*3.170*
Others					0.015	0.094
PVID-MWD fallowing to storage (to be determined)					--	0
Arizona, California, and Nevada Total f./			**8.849**	**1.706**	**7.143**	**7.399**

a./ Incorporates Jan.-Apr. USGS monthly data and 75 daily reporting stations which may be revised after provisiona data reports are distributed by USGS. Use to date estimated for users reporting monthly and annually.

b./ California 2011 basic use apportionment of 4.4 MAF has been adjusted to 4.174 MAFfor payback of Inadvertent Overrun and Payback Policy overruns (-1,213 AF), Intentionally Created Surplus Water by IID (-25,000 AF), Creation of Extraordinary Conservation ICS MWD (-200,000 AF)

c./ 0.105 MAF conserved by IID-MWD Agreement as amended in 2007: 105,000 AF conserved for SDCWA under the IID-SDCWA Transfer Agreement as amended, 80,000 AF of which is being diverted by MWD; 16,000 AF required to conserved for CVWD under the IID-CVWD Acquisition Agreement, 67,700 AF conserved by the All-American Canal Lining Project.

d./ 30,850 acre-feet conserved by the Coachella Canal Lining Project.

e./ Includes estimated amount of 6,530 acre-feet of disputed uses by Yuma Island pumpers and 0 acre-feet by Yuma Project Ranch 5 being charged by USBR to Priority 2.

f./ Includes unmeasured returns based on estimated consumptive use/diversion ratios by user from studies provided by Arizona Dept. of Water Resources, Colorado River Board of California, and Reclamation.

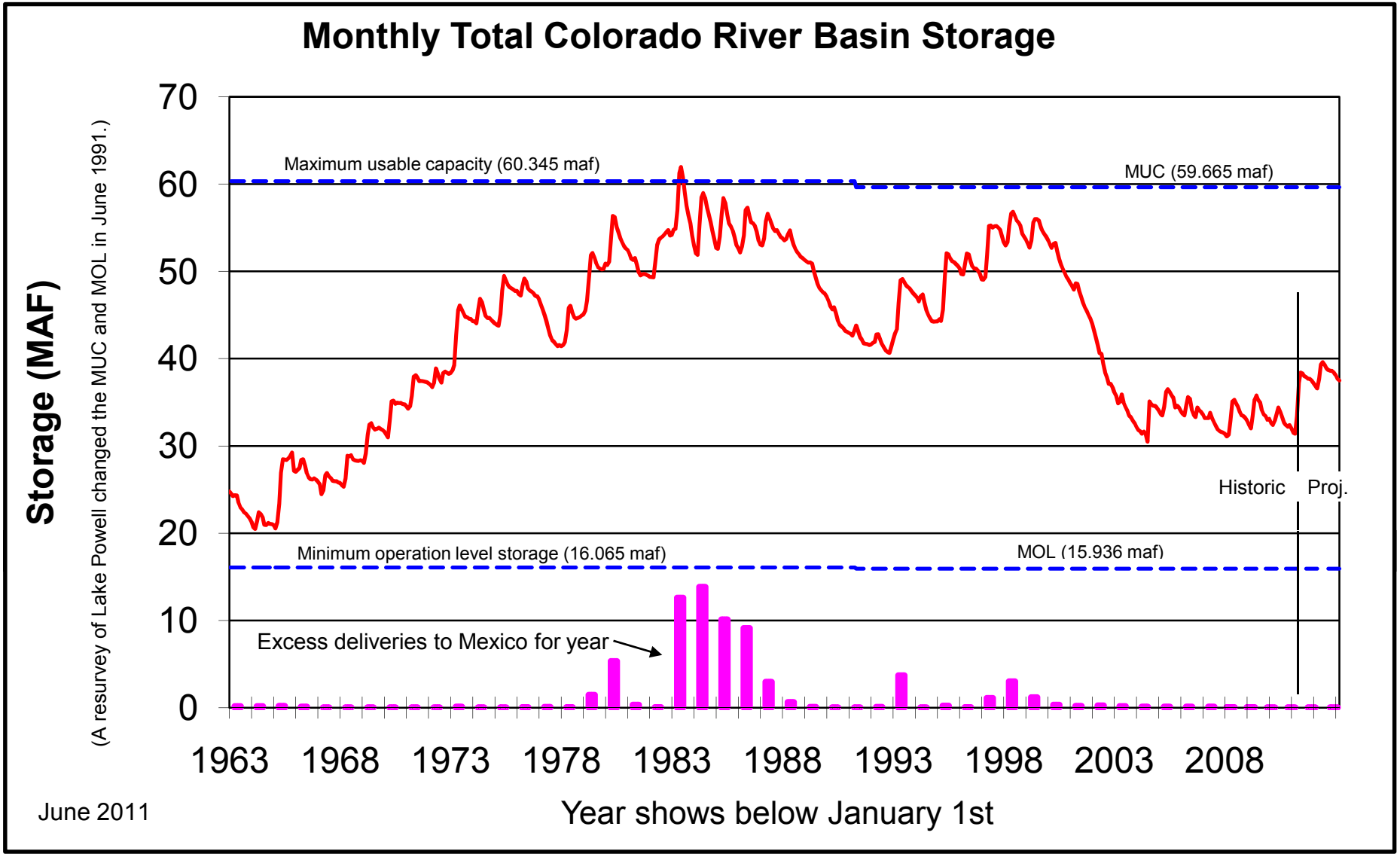
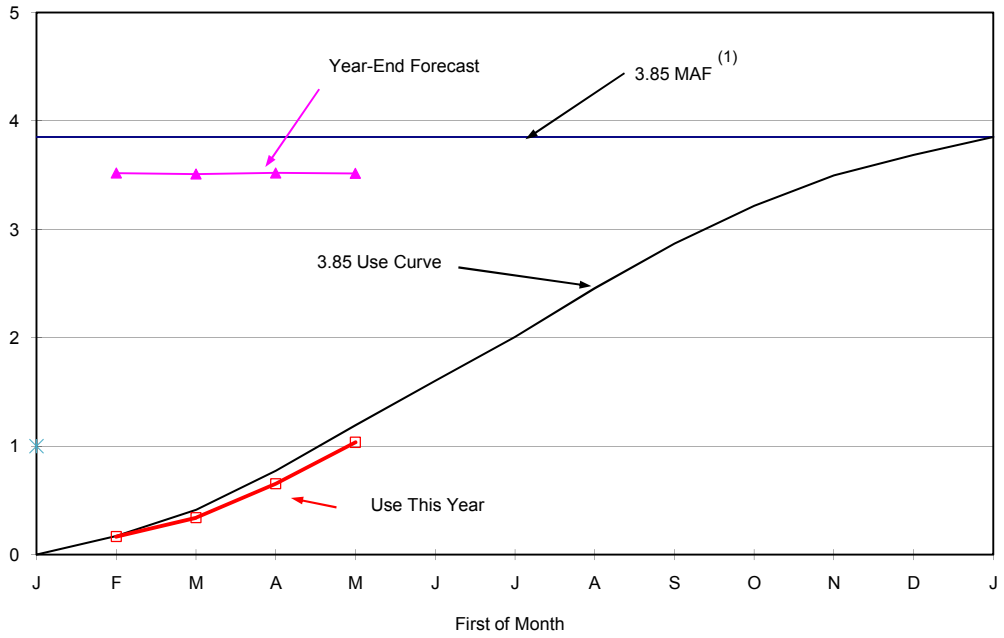

Monthly Total Colorado River Basin Storage
Storage (MAF)
(A resurvey of Lake Powell changed the MUC and MOL in June 1991.)
70
60
50
40
30
20
10
0
Maximum usable capacity (60.345 maf)
MUC (59.665 maf)
Historic
Proj.
Minimum operation level storage (16.065 maf)
MOL (15.936 maf)
Excess deliveries to Mexico for year
1963
1968
1973
1978
1983
1988
1993
1998
2003
2008
June 2011
Year shows below January 1st

FIGURE 1
JUNE 1, 2011 FORECAST OF 2011 YEAR-END COLORADO RIVER WATER USE BY THE CALIFORNIA AGRICULTURAL AGENCIES



Forecast of Colorado River Water Use
by the California Agricultural Agencies
(Millions of Acre-feet)

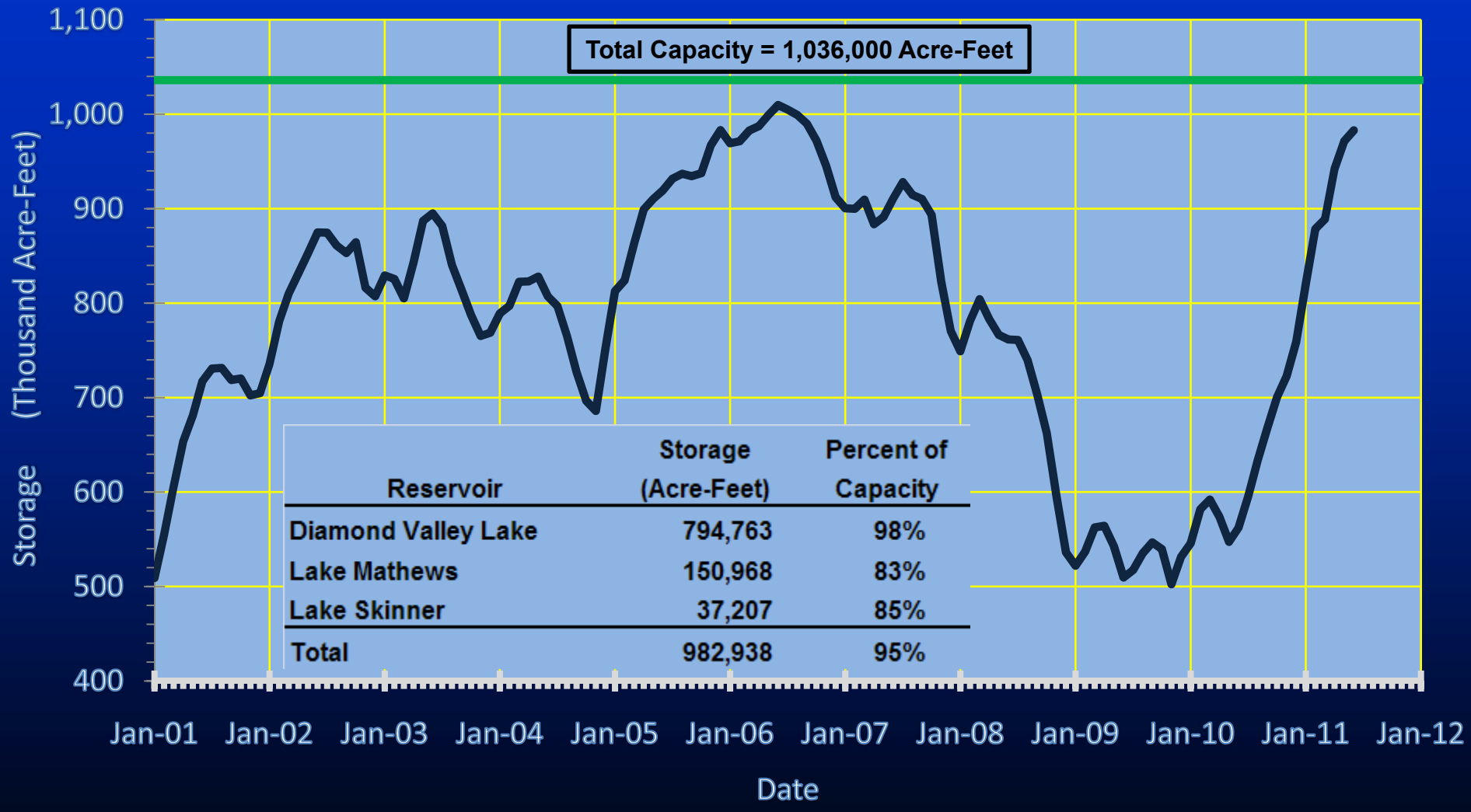
Month	Use as of First of Month	Forecast of Year End Use	Forecast of Unused Water (1)
Jan	0.000	--------	--------
Feb	0.167	3.519	0.023
Mar	0.340	3.510	0.032
Apr	0.653	3.520	0.022
May	1.036	3.516	0.027
Jun			
Jul			
Aug			
Sep			
Oct			
Nov			
Dec			
Jan			

(1) The forecast of unused water is based on the availability of 3.542 MAF under the first three priorities of the water delivery contracts. This accounts for the 85,000 af of conserved water available to MWD under the 1988 IID-MWD Conservation agreement and the 1988 IID-MWD-CVWD-PVID Agreement as amended; 80,000 AF of conserved water available to SDCWA under the IID-SDCWA Transfer Agreement as amended being diverted by MWD; as estimated 29,000 AF of conserved water available to SDCWA and MWD as a result of the Coachella Canal Lining Project, 67,700 AF of water available to SDCWA and MWD as a result of the All American Canal Lining Project; 14,500 AF of water IID and CVWD are forbearing to permit the Secretary of the Interior to satisfy a portion of Indian and miscellaneous present perfected rights use and 25,000 AF of water IID is conserving to create Extraordinary Conservation Intentionally Created Surplus. 0 AF has been subtracted for IID's Salton Sea Salinity Management in 2011. As USBR is charging uses by Yuma Island pumpers to priority 2, the amount of unused water has been reduced by those uses - 6,530 AF. The CRB does not concur with USBR's viewpoint on this matter.

5.b. - State and Local Water Reports

MWD's Combined Reservoir Storage as of June 1, 2011

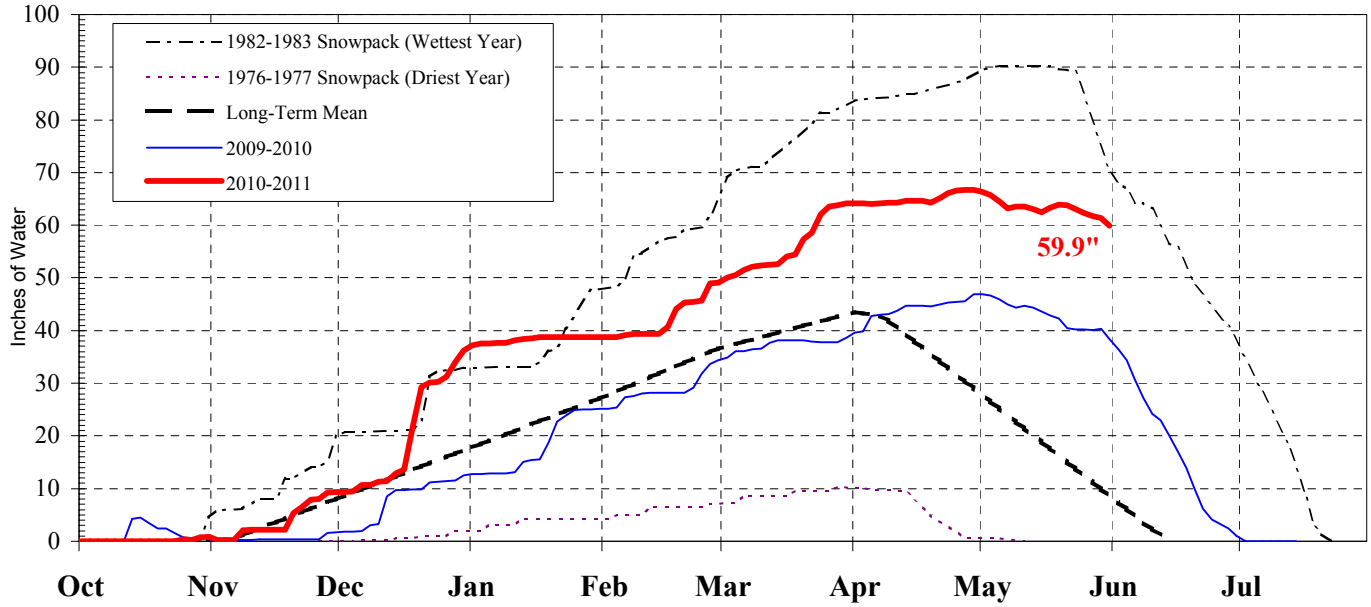
Lake Skinner, Lake Mathews, and Diamond Valley Lake



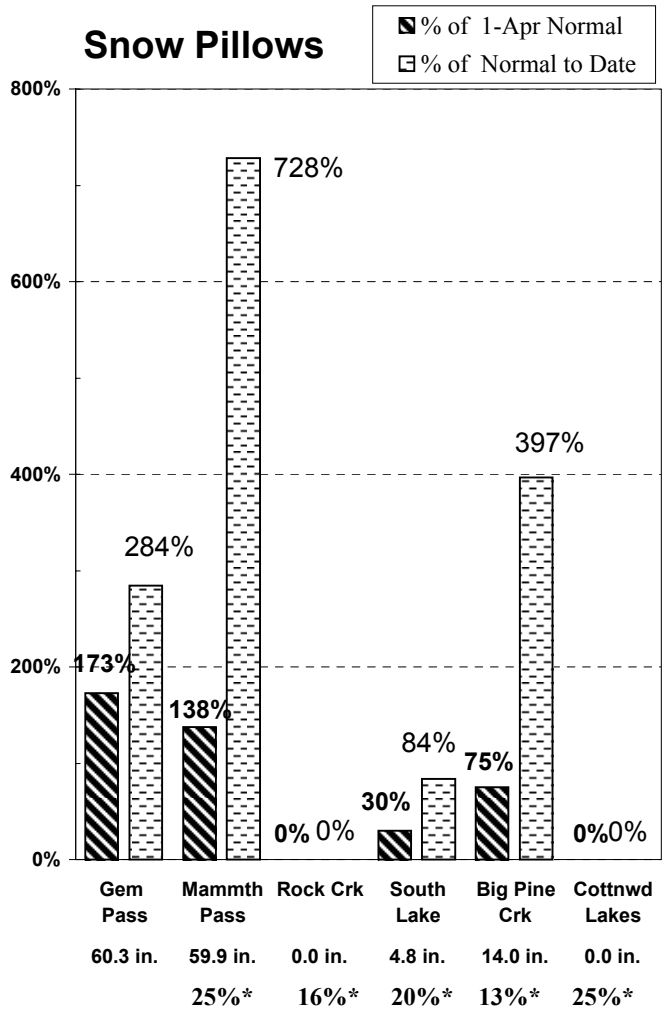
Reservoir	Storage (Acre-Feet)	Percent of Capacity
Diamond Valley Lake	794,763	98%
Lake Mathews	150,968	83%
Lake Skinner	37,207	85%
Total	982,938	95%

EASTERN SIERRA
CURRENT PRECIPITATION CONDITIONS
As of May 31, 2011

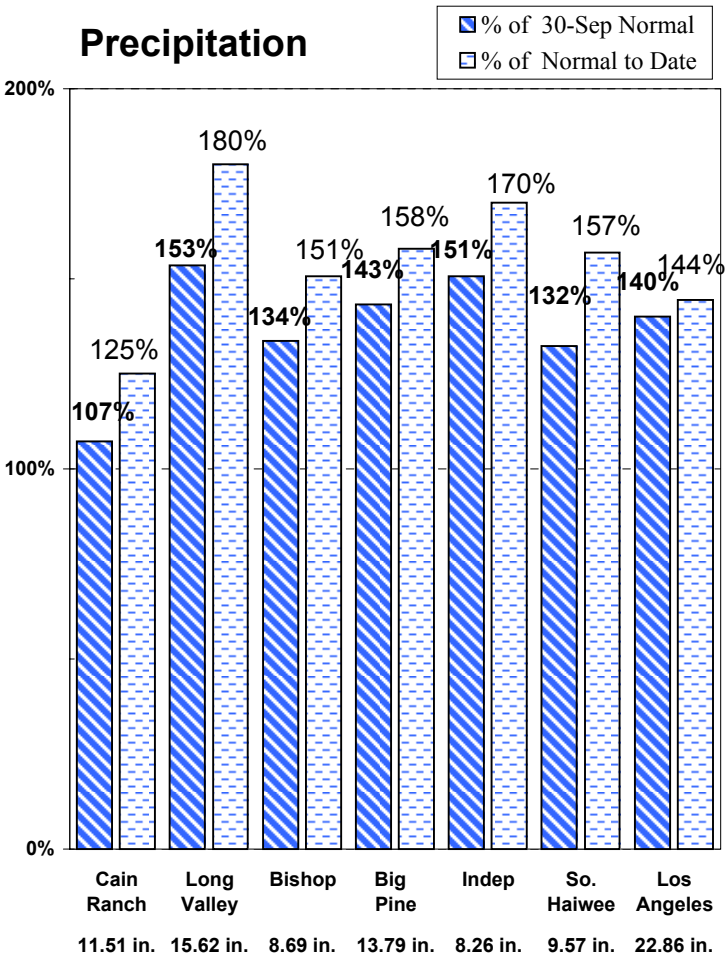
Mammoth Pass Snowpack



Snow Pillows



Precipitation



*** Individual snow pillow represents an area that contributes this percent of the total Owens River Basin runoff.**

Measurement as Inches Water Content; Precipitation totals are cumulative for water year beginning Oct 1

5.c. - Colorado River Operations

RECLAMATION

Managing Water in the West

DRAFT Annual Operating Plan for Colorado River Reservoirs 2012

This draft document of the 2012 AOP is based upon the published 2011 AOP. Edits, in red, indicate changes from the 2011 AOP.

Hydrologic projections in this draft document of the 2012 AOP are based on the ***April 2011 24-Month Study****. Subsequent drafts will be updated with contemporary projections of hydrology.*

Text and values highlighted in blue are provisional and subject to change.

DRAFT

U.S. Department of the Interior
Bureau of Reclamation

RECLAMATION

Managing Water in the West

2012 Colorado River Annual Operating Plan

Colorado River Management Work Group
First Consultation
May 31, 2011

U.S. Department of the Interior
Bureau of Reclamation

2012 Colorado River AOP First Consultation Meeting

- Welcome and Introductions – *Steve Hvinden / Dave Trueman*
- Upper Basin Hydrology and Operations – *Rick Clayton*
- Lower Basin Hydrology and Operations – *Dan Bunk / Hong Nguyen-DeCorse*
- 2012 AOP Review Process – *Steve Hvinden / Dave Trueman*
- Review of Draft 2012 AOP - CRMWG
- Conclusion, Wrap-up, Future Meeting Dates

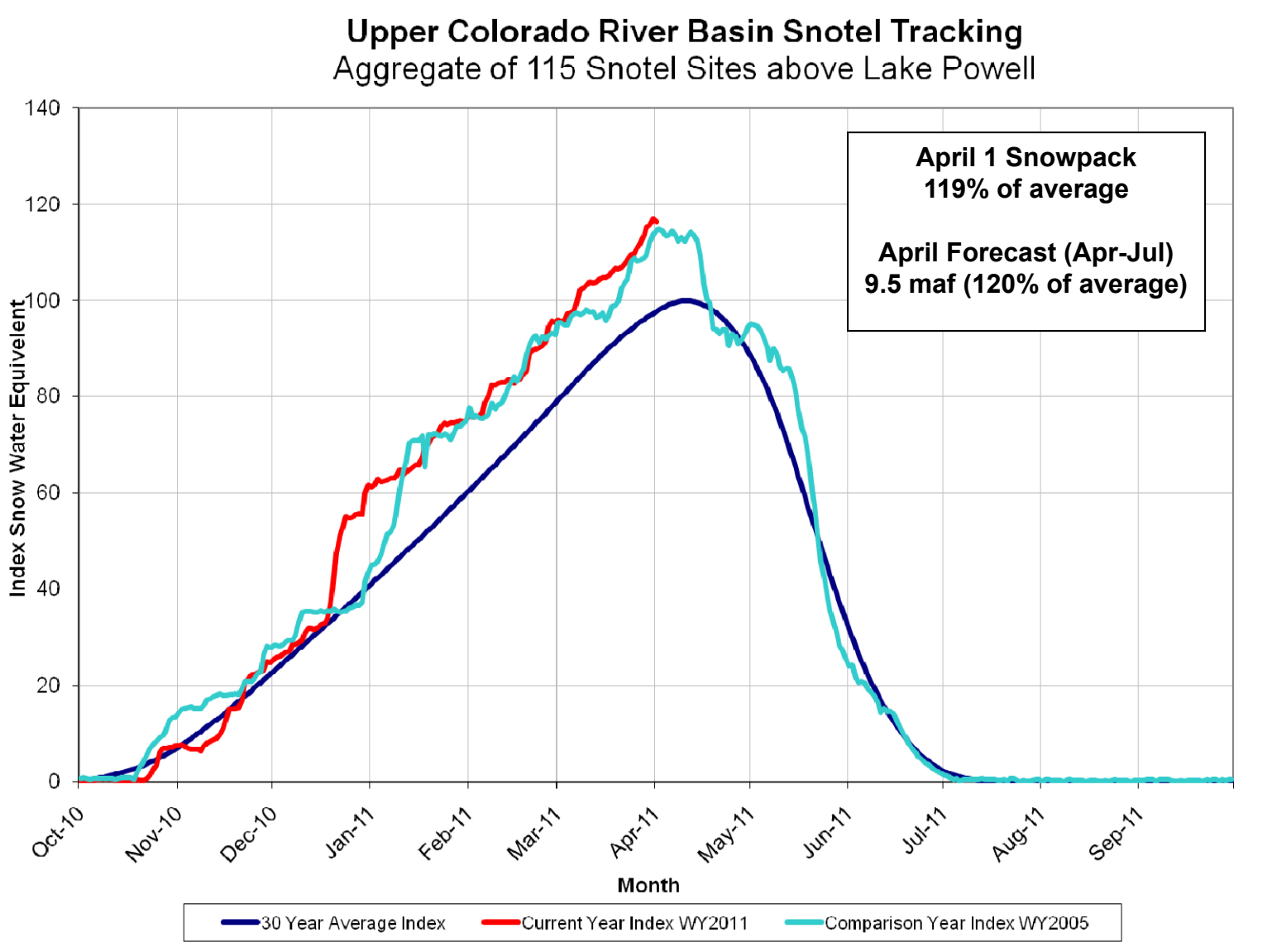
RECLAMATION

Upper Colorado River Basin

Hydrology and Operations

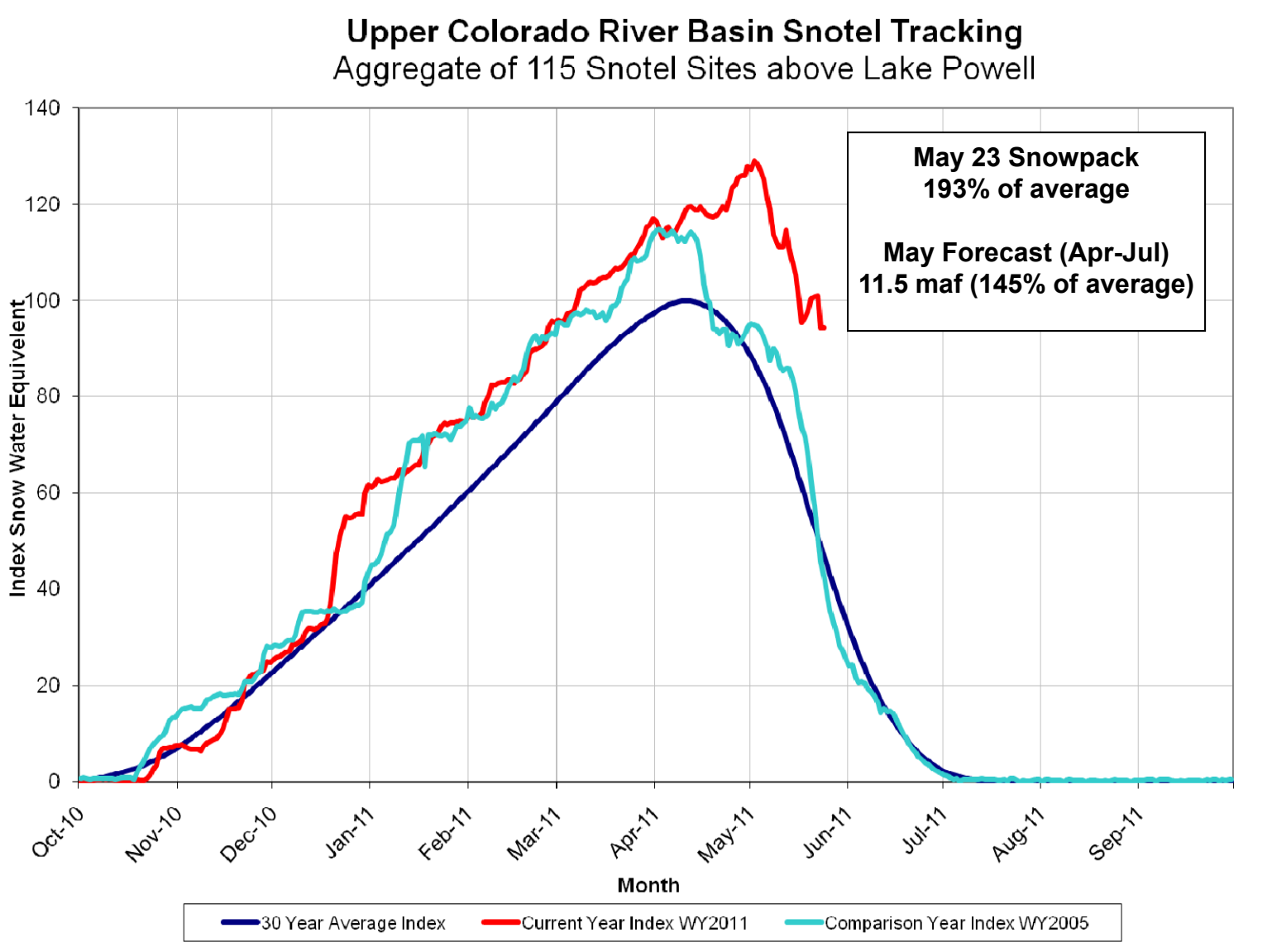
RECLAMATION

Upper Basin Hydrology Update



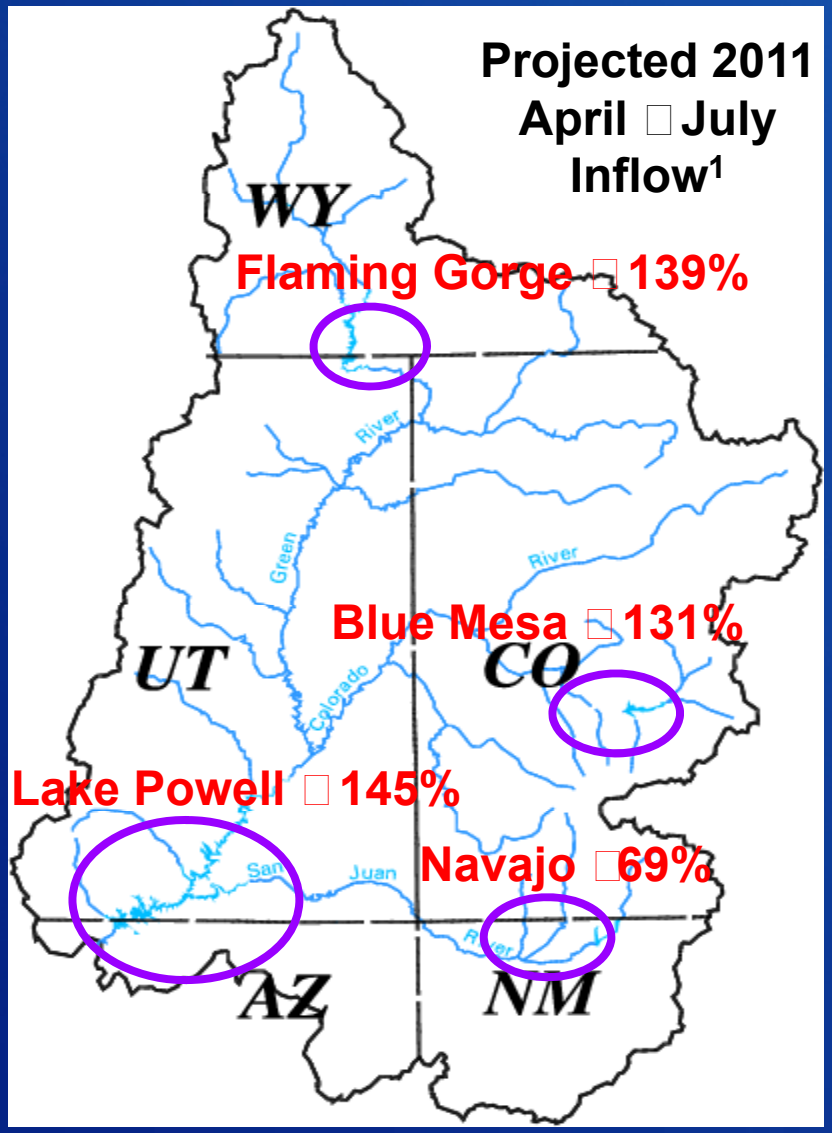
RECLAMATION

Upper Basin Hydrology Update



RECLAMATION

CBRFC Unregulated Inflow Forecasts
dated May 16, 2011



Period in 2011	Inflow (KAF)	Percent of Average[1]
April (observed)	983	100
May	2,200	95
June	5,600	181
July	2,700	173
April □ July	11,500	145
Water Year Projection	15,380	128

[1] Percentages and percent of average based on period of record from 1971-2000.

RECLAMATION

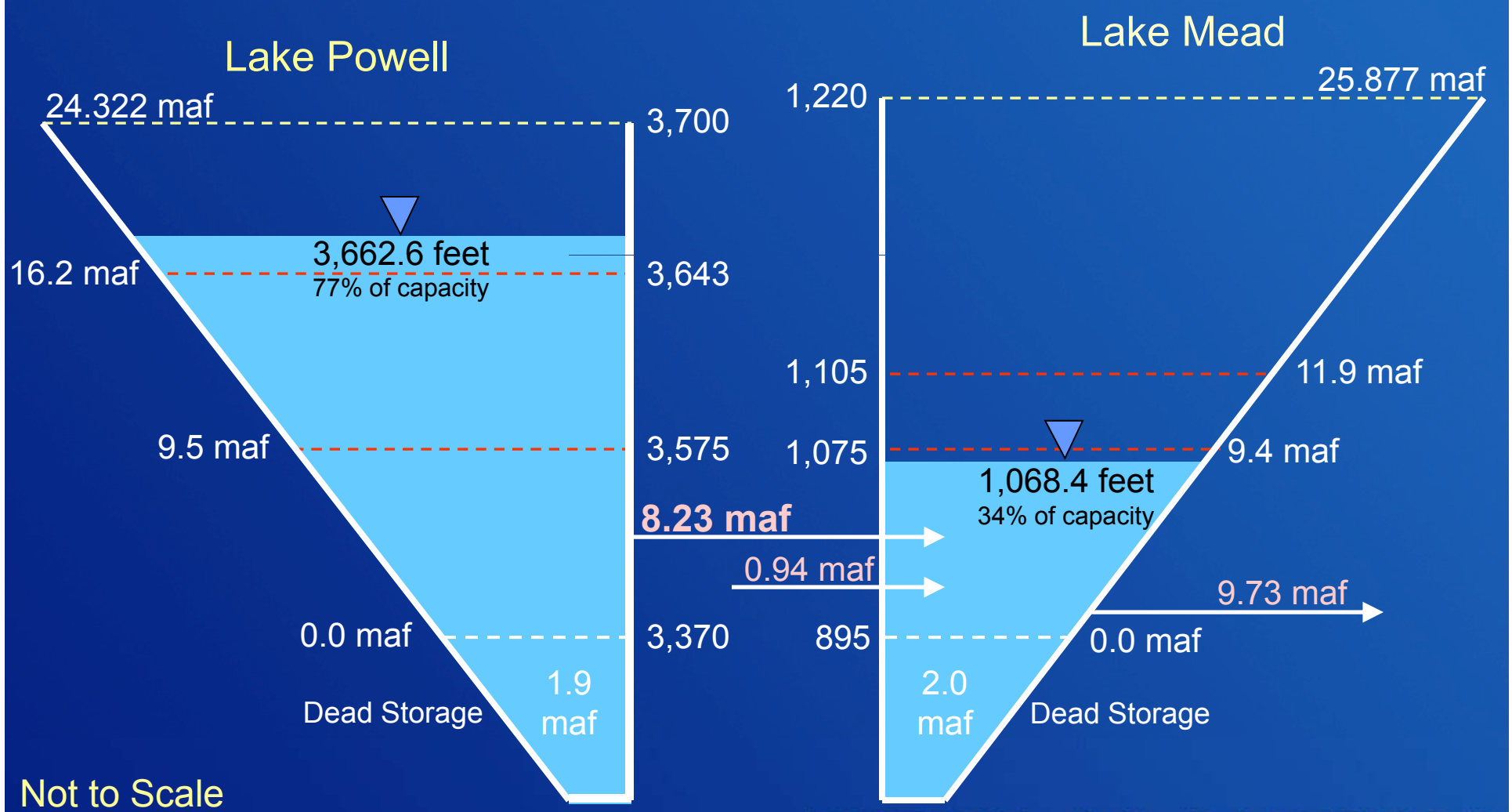
Projected Operations for the Remainder of WY 2011

RECLAMATION

Water Year 2011 Projections

April 2011 Most Probable Inflow Scenario

Projected Unregulated Inflow into Powell[1] = 13.11 maf (109% of average)



Not to Scale

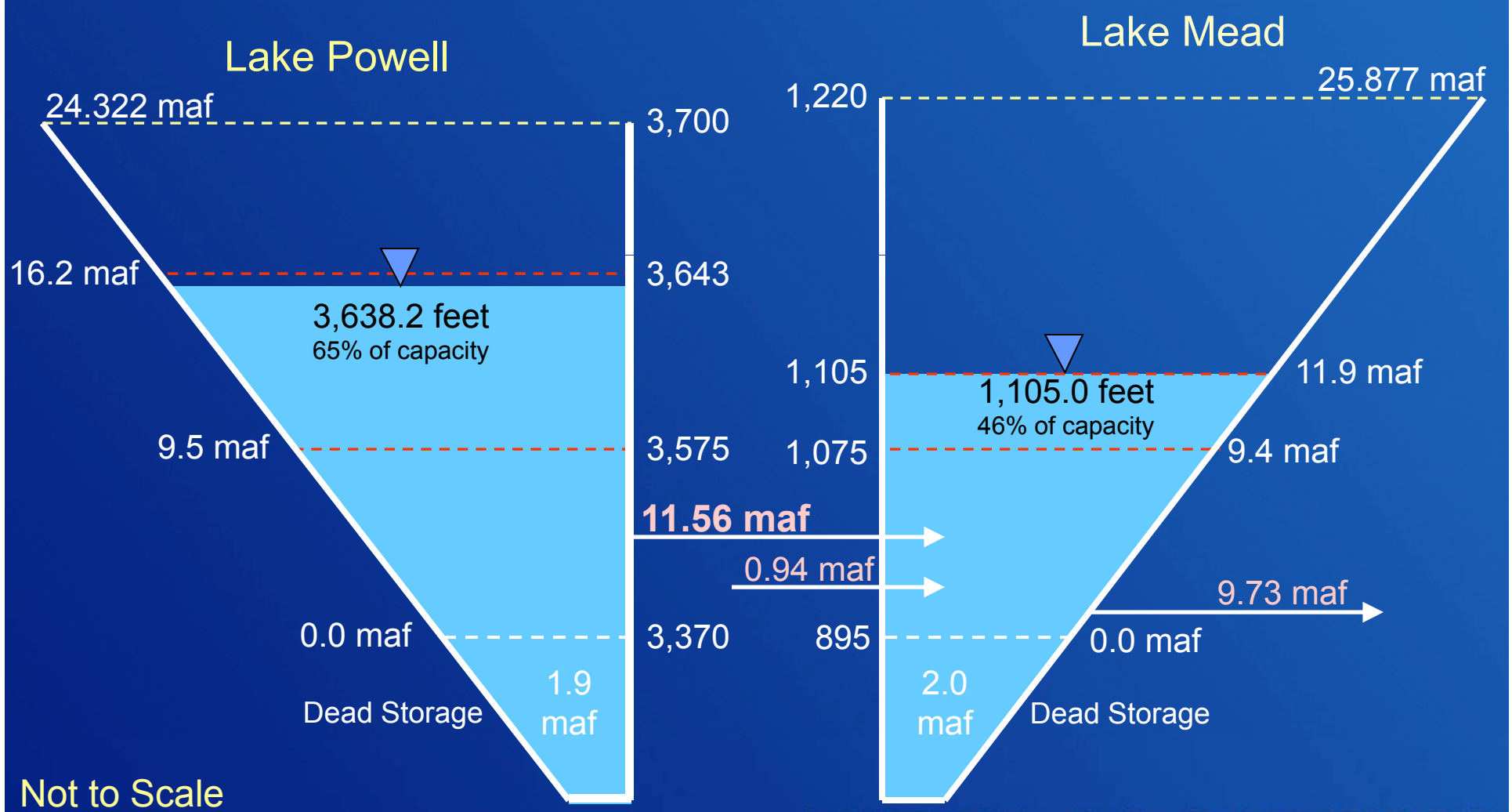
[1] Projected elevations from the April 2011 24-Month Study which is based on the CBRFC inflow forecast dated April 4, 2011

RECLAMATION

Water Year 2011 Projections

April 2011 Most Probable Inflow Scenario

Projected Unregulated Inflow into Powell[1] = 13.11 maf (109% of average)



Not to Scale

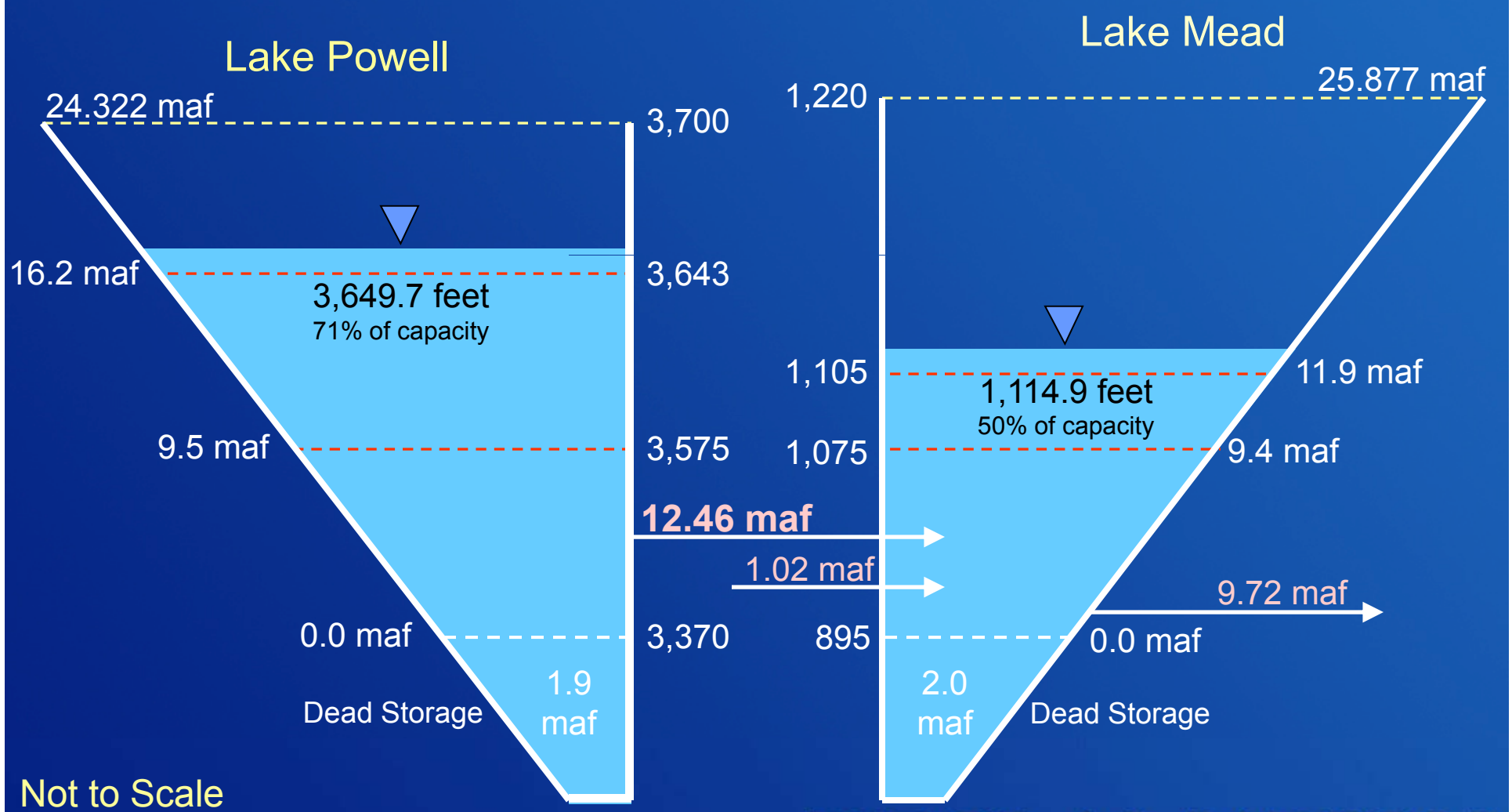
[1] Projected elevations from the April 2011 24-Month Study which is based on the CBRFC inflow forecast dated April 4, 2011

RECLAMATION

Water Year 2011 Projections

May 2011 Most Probable Inflow Scenario

Projected Unregulated Inflow into Powell[1] = 15.38 maf (128% of average)

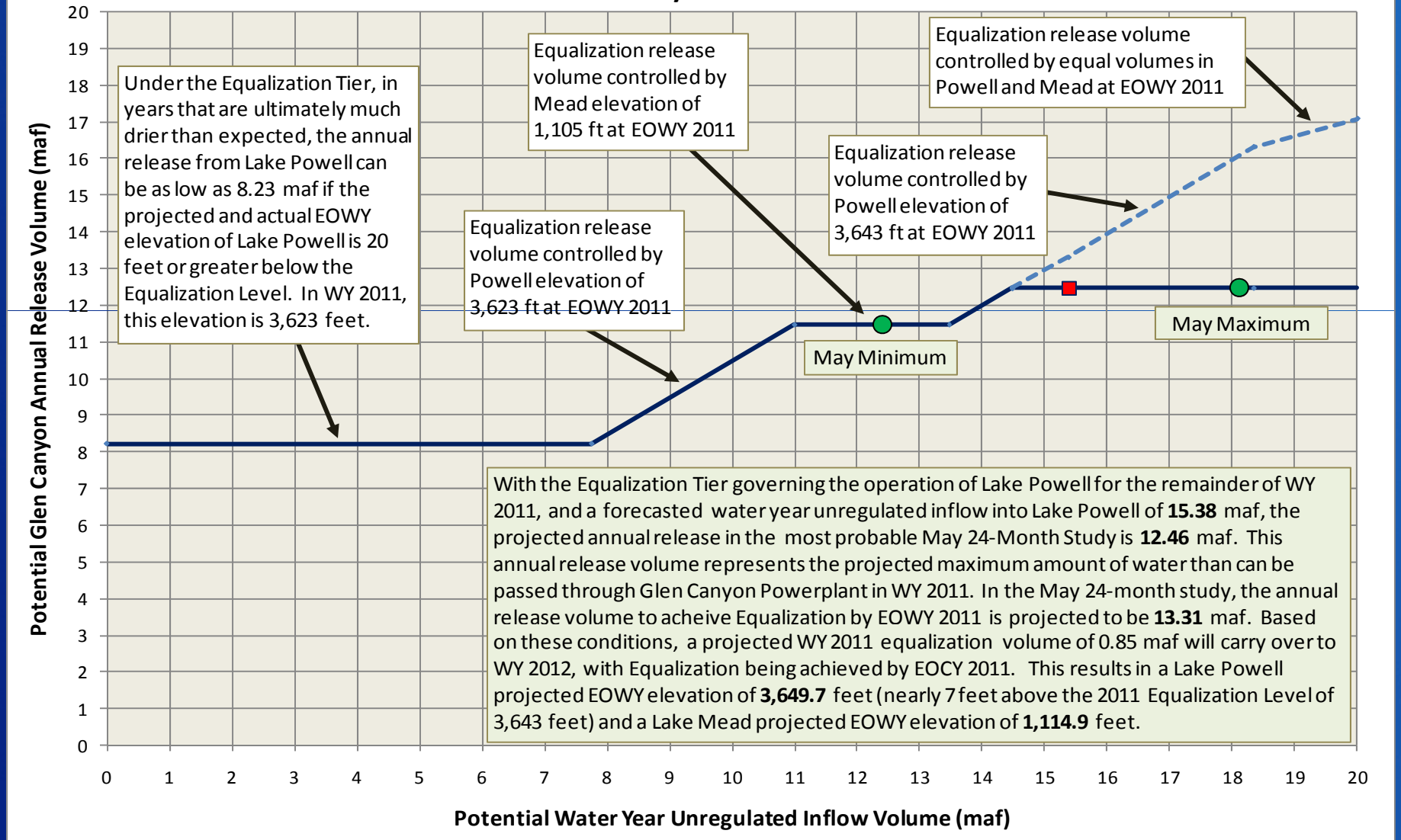


[1] Projected elevations from the May 2011 24-Month Study which is based on the CBRFC inflow forecast dated May 4, 2011

RECLAMATION

Coordinated Operations of Lake Powell and Lake Mead

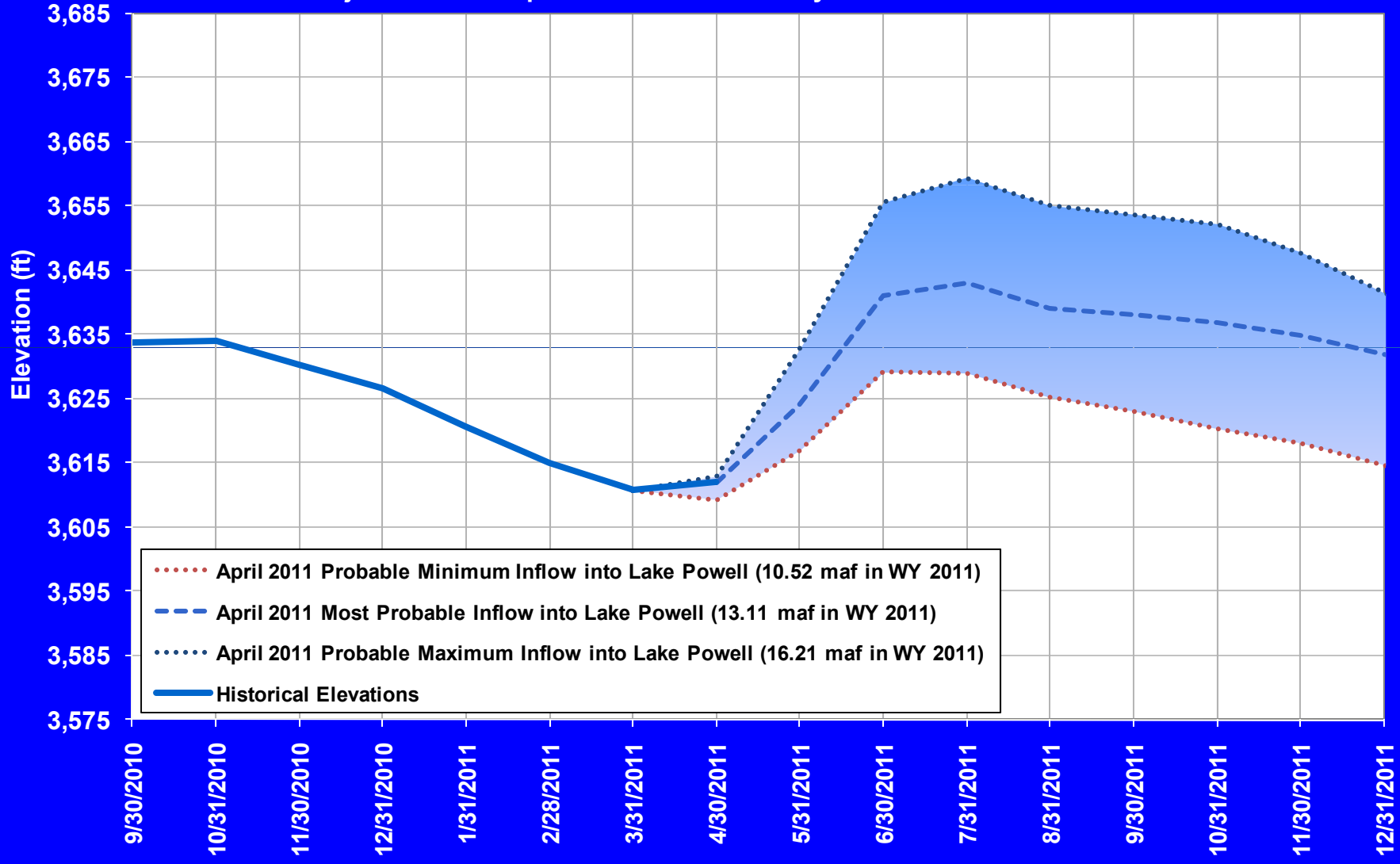
Annual Release Volume as a Function of Unregulated Inflow Volume based on May 2011 Conditions



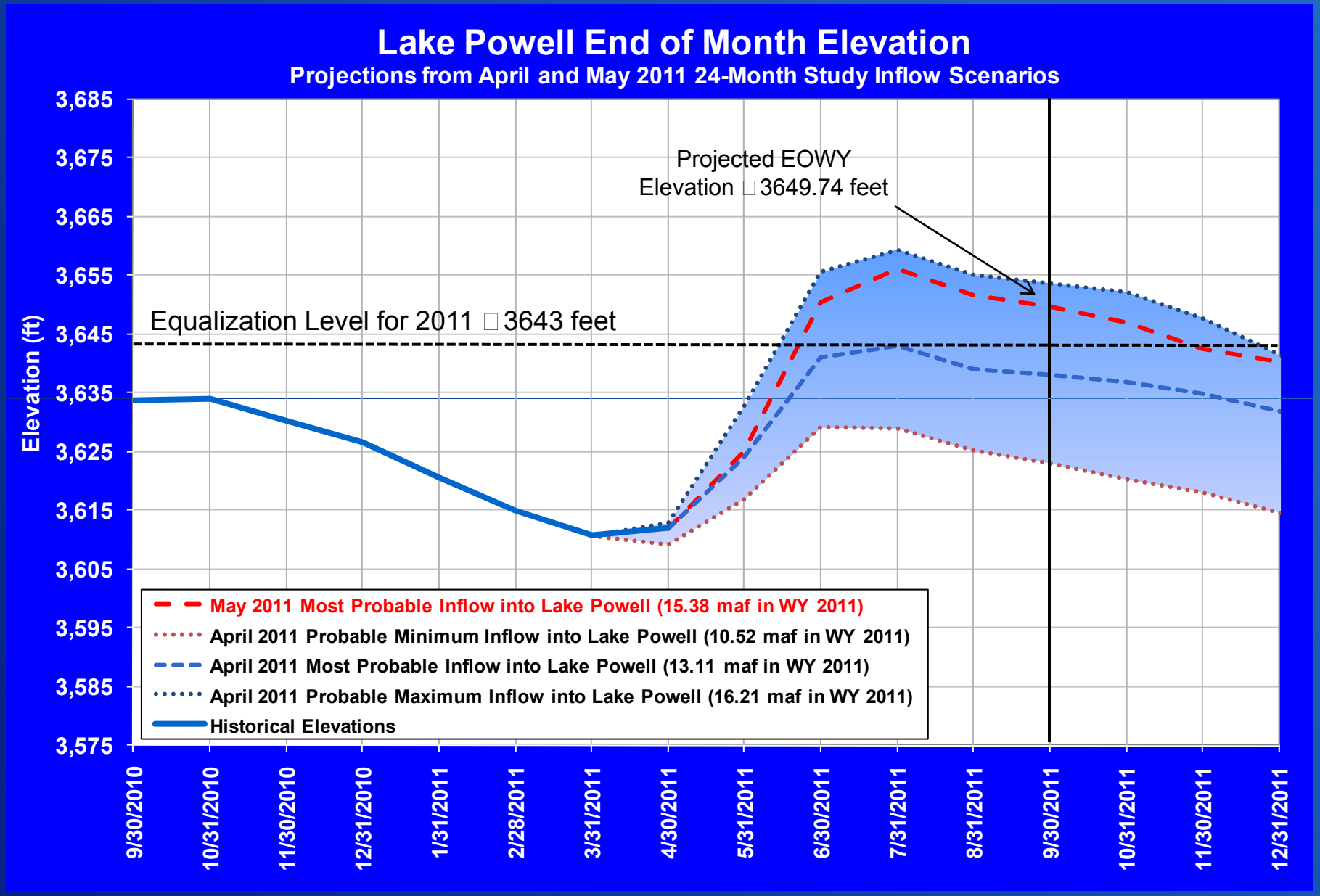
RECLAMATION

Lake Powell End of Month Elevation

Projections from April 2011 24-Month Study Inflow Scenarios



RECLAMATION



RECLAMATION

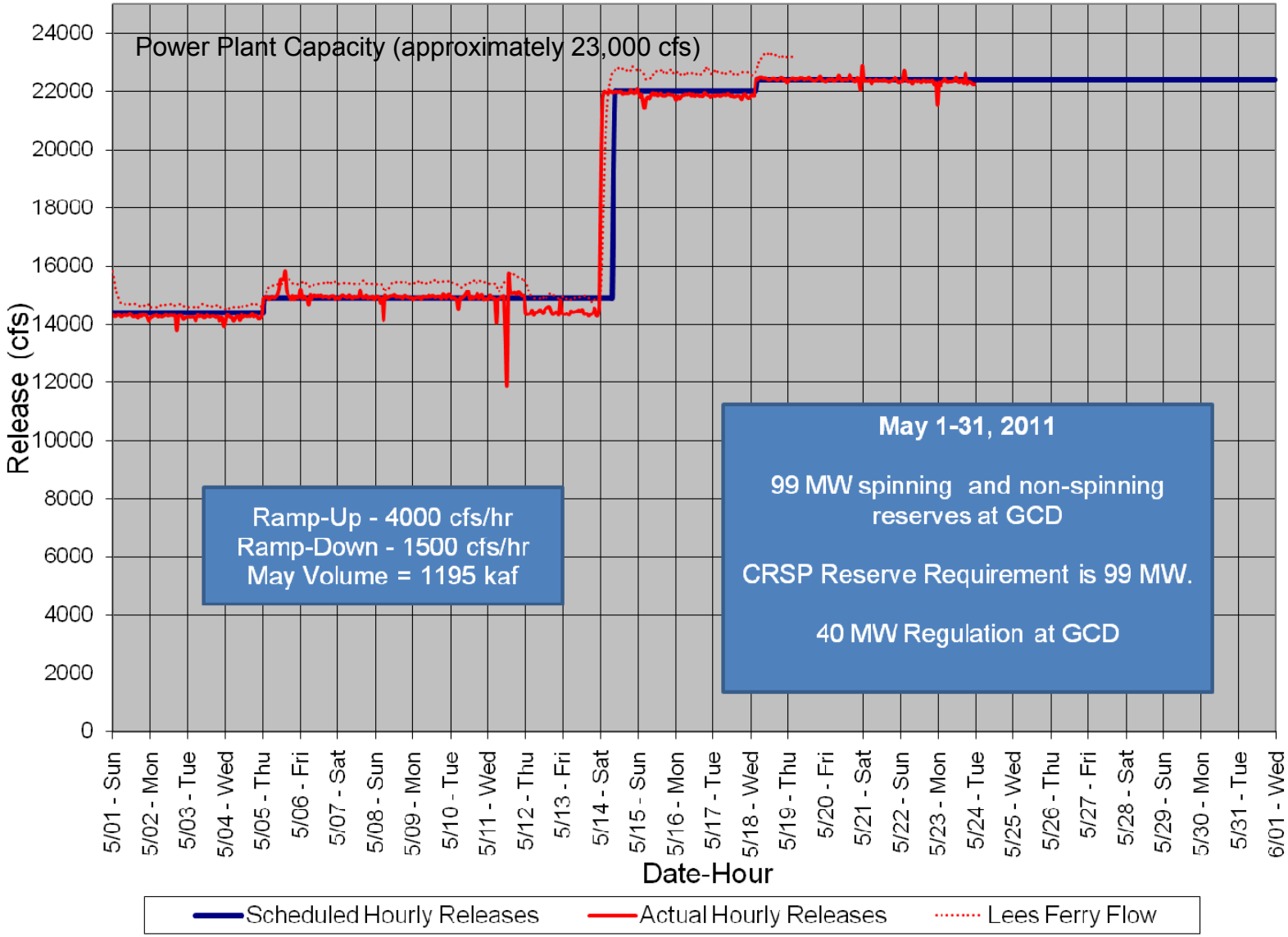
Glen Canyon Power Plant Planned Unit Outage Schedule for Water Year 2011

(updated 5-9-2011)

Unit Number	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011
1												
2												
3												
4												
5												
6 (3/4 Unit)												
7												
8												
Units Available	4.75	5.75	6.75	6.75	4.75	4.75	4.75	4.75 / 6.75	6.75	6.75	6.75	5
Capacity (cfs)								14,400 / 23,000	23,000	23,825	23,825	14,840
Capacity (kaf/month)	990	1180	1350	1350	1080	1036	944	1195	1369	1465	1465	883
Max (kaf)	495	810	847	997	964	1033	940	1195	1369	1465	1465	883
Most (kaf)	495	810	847	997	964	1033	940	1195	1369	1465	1465	883
Min (kaf)	495	810	847	997	964	1033	940	1195	1179	1226	1037	714

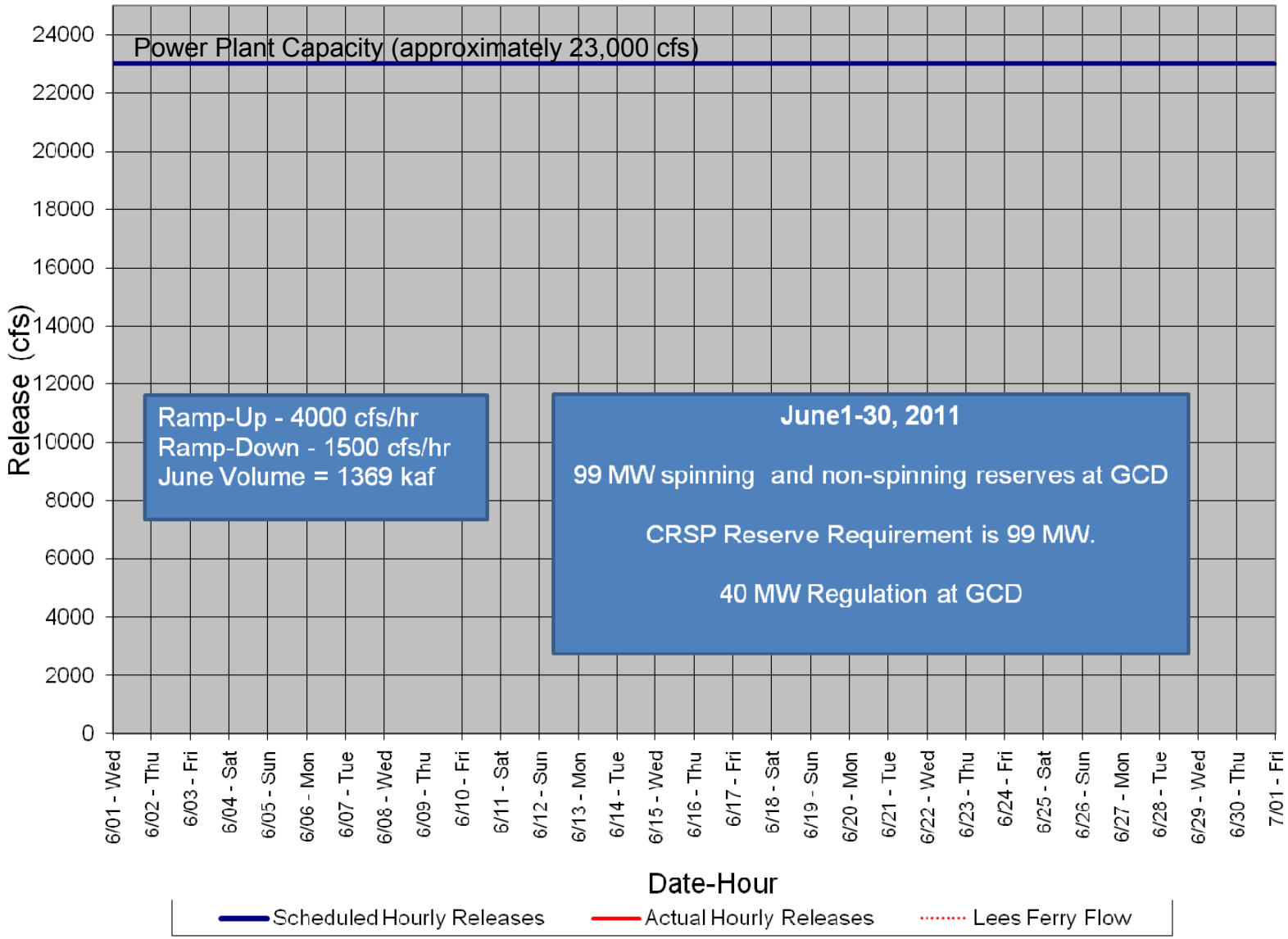
RECLAMATION

Glen Canyon Dam Hourly Release Pattern MAY 2011



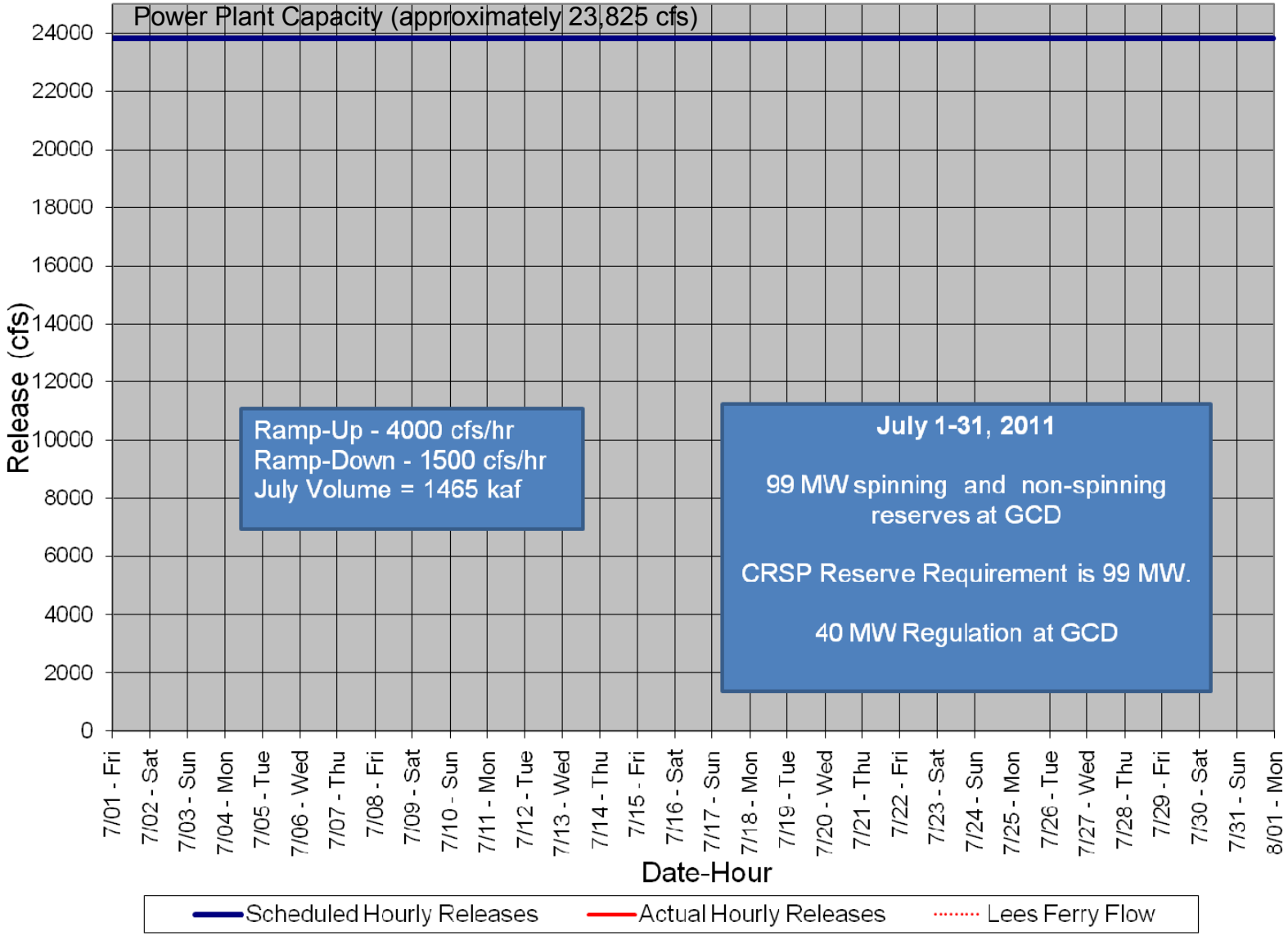
RECLAMATION

Glen Canyon Dam Hourly Release Pattern JUN 2011



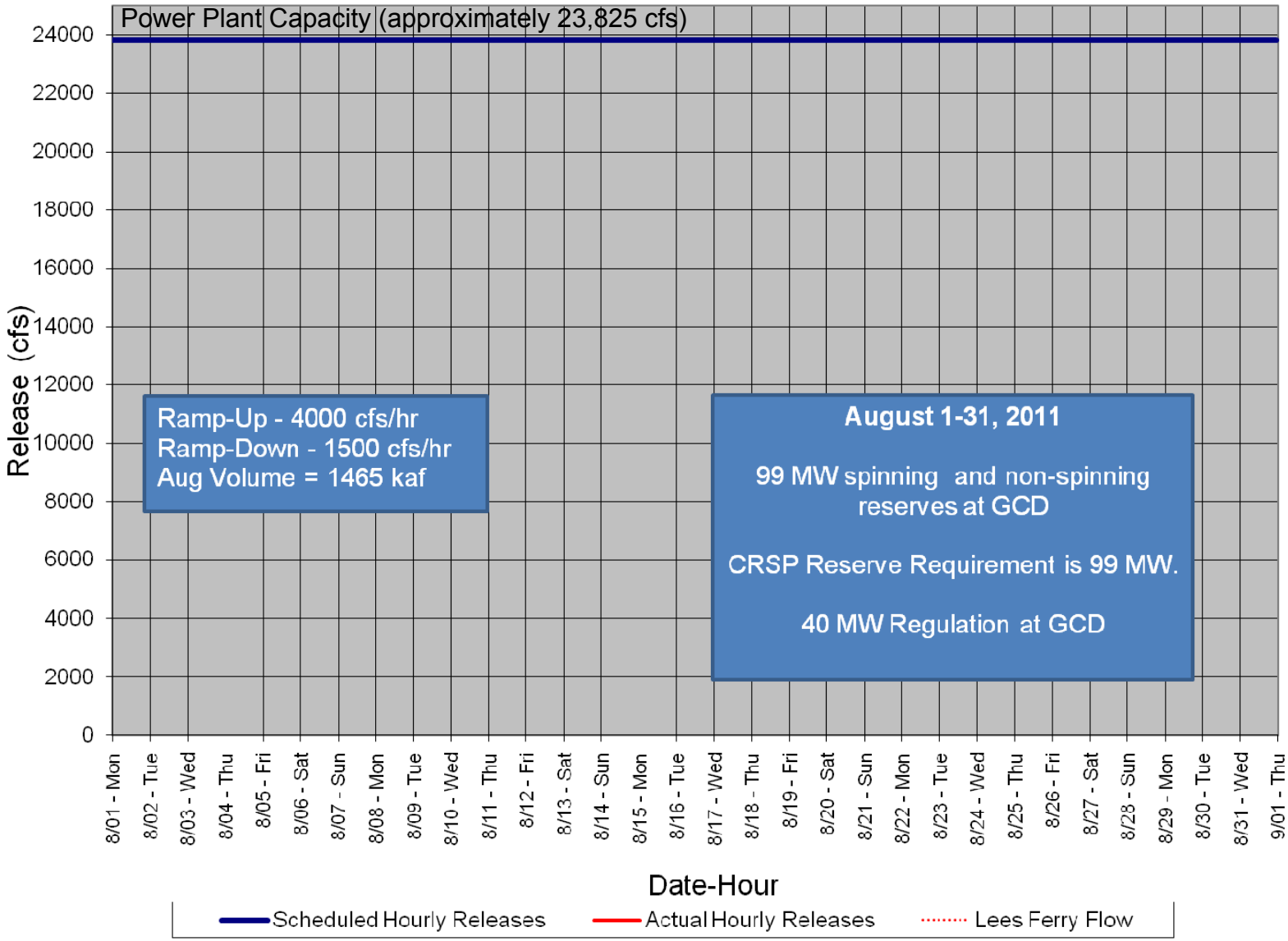
RECLAMATION

Glen Canyon Dam Hourly Release Pattern JUL 2011



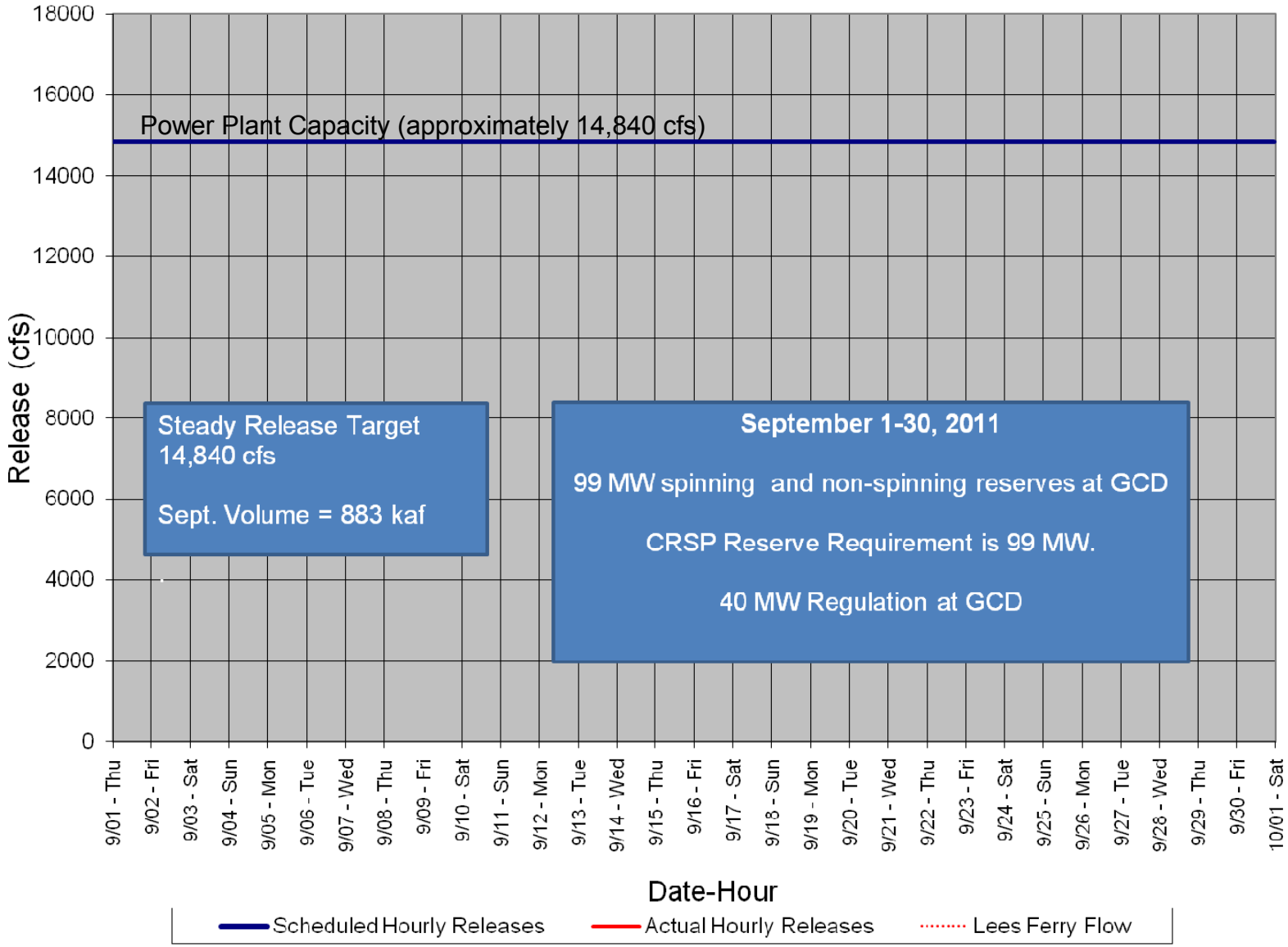
RECLAMATION

Glen Canyon Dam Hourly Release Pattern AUG 2011



RECLAMATION

Glen Canyon Dam Hourly Release Pattern SEP 2011



RECLAMATION

Glen Canyon Power Plant Planned Unit Outage Schedule for Water Year 2012

(updated 5-13-2011)

Unit Number	Oct 2011	Nov 2011	Dec 2011	Jan 2012	Feb 2012	Mar 2012	Apr 2012	May 2012	Jun 2012	Jul 2012	Aug 2012	Sep 2012
1												
2												
3												
4												
5												
6 (3/4 Unit)												
7												
8												
Units Available	5	6.75	6.75	6.75	4.75	4.75 / 6.75	6.75	6.75	6.75	6.75	6.75	4.75
Capacity (cfs)	14,800	23,800	23,800	23,000	14,400	14,400 / 23,800	23,000	23,000	23,000	23,800	23,800	14,800
Capacity (kaf/month)	1000	1160	1370	1370	940	1110	1300	1370	1370	1460	1460	880
Max (kaf)	912	1138	800	800	900	1110	1300	1370	1370	1460	1460	880
Most (kaf)	912	1138	800	800	800	800	800	950	1100	1165	1109	714
Min (kaf)	912	1138	800	800	700	600	600	600	600	860	834	476

RECLAMATION

Lower Colorado River Basin

Hydrology and Operations

RECLAMATION

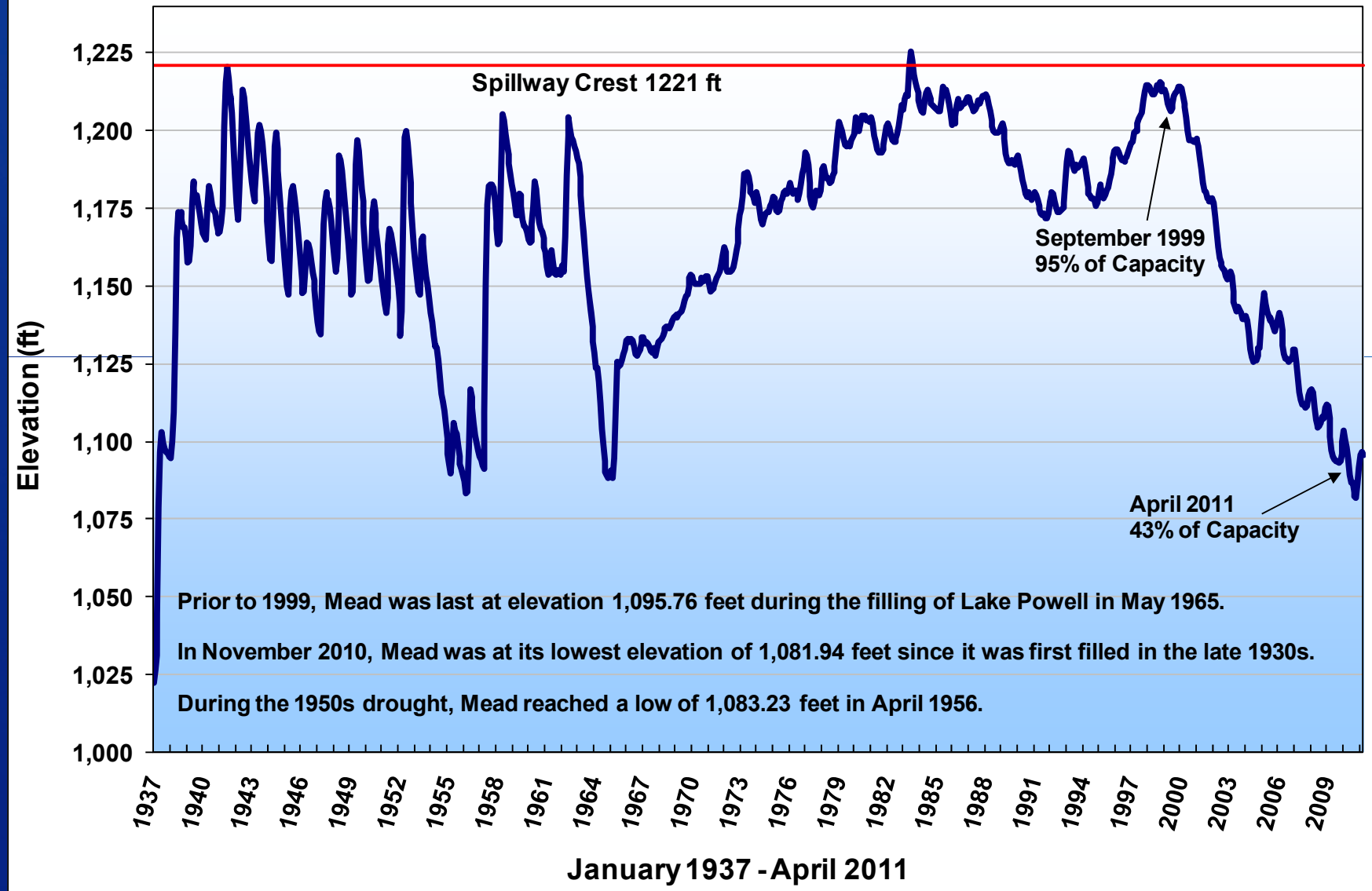
Colorado River Basin Storage
(as of May 30, 2011)

Current Storage	Percent Full	MAF	Elevation (Feet)
Lake Powell	58%	14.02	3,622
Lake Mead	44%	11.29	1,098
Total System Storage	55%	32.94	NA

Total system storage was 33.17 maf or 56% this time last year

RECLAMATION

Lake Mead End of Month Elevation

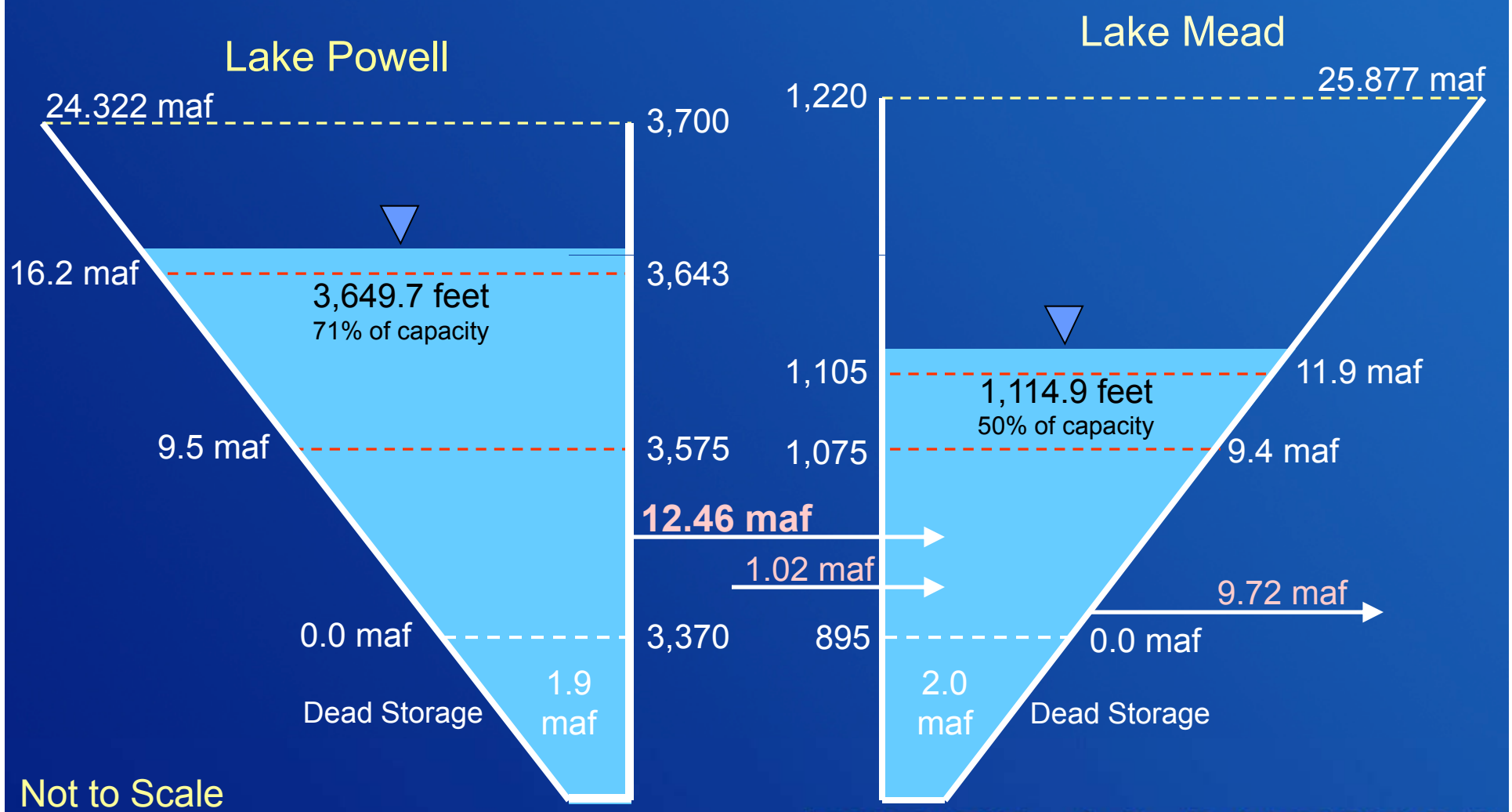


RECLAMATION

Water Year 2011 Projections

Published May 2011 Most Probable Inflow Scenario

Projected Unregulated Inflow into Powell[1] = 15.38 maf (128% of average)

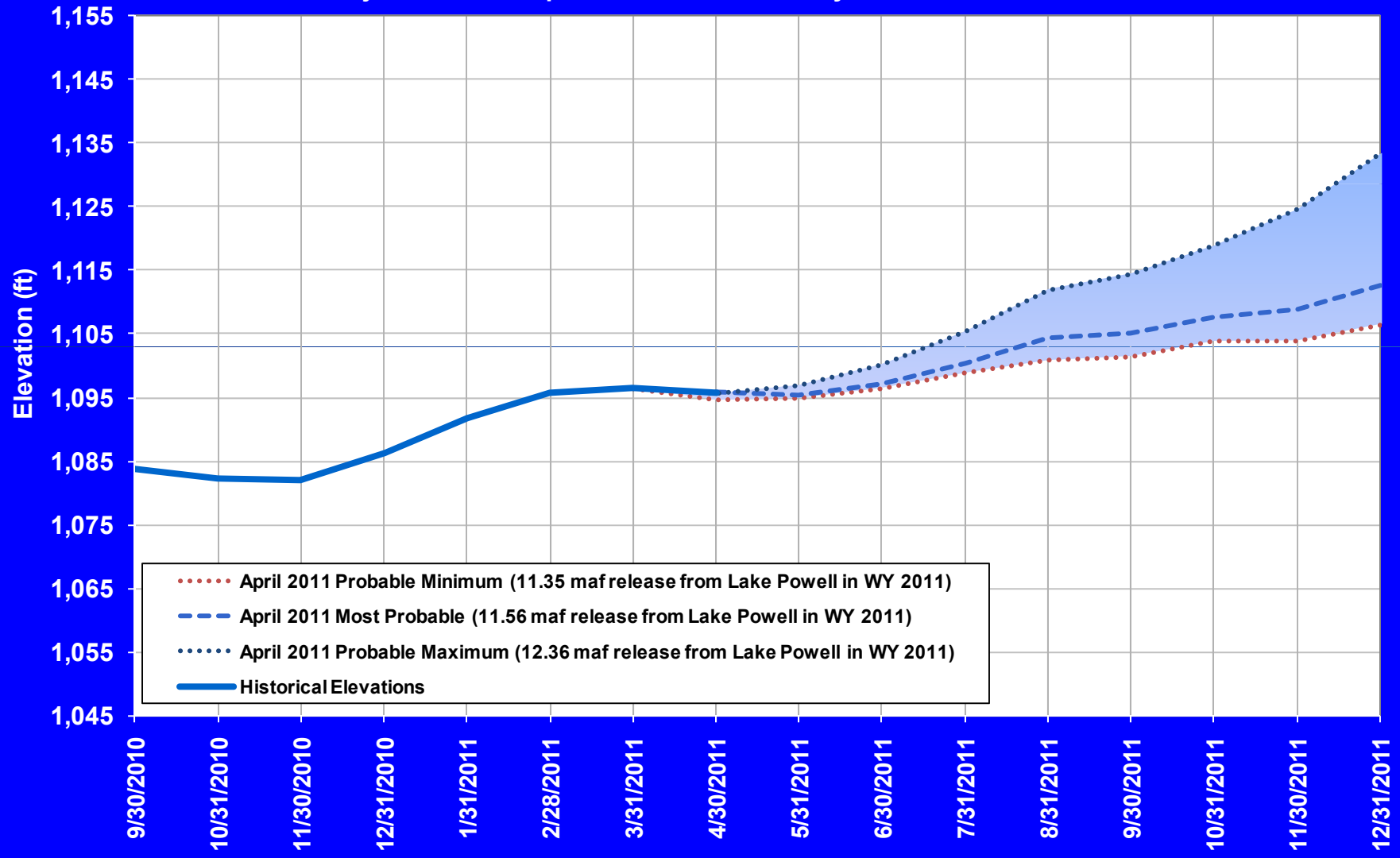


[1] Projected elevations from the May 2011 24-Month Study which is based on the CBRFC inflow forecast dated May 4, 2011

RECLAMATION

Lake Mead End of Month Elevation

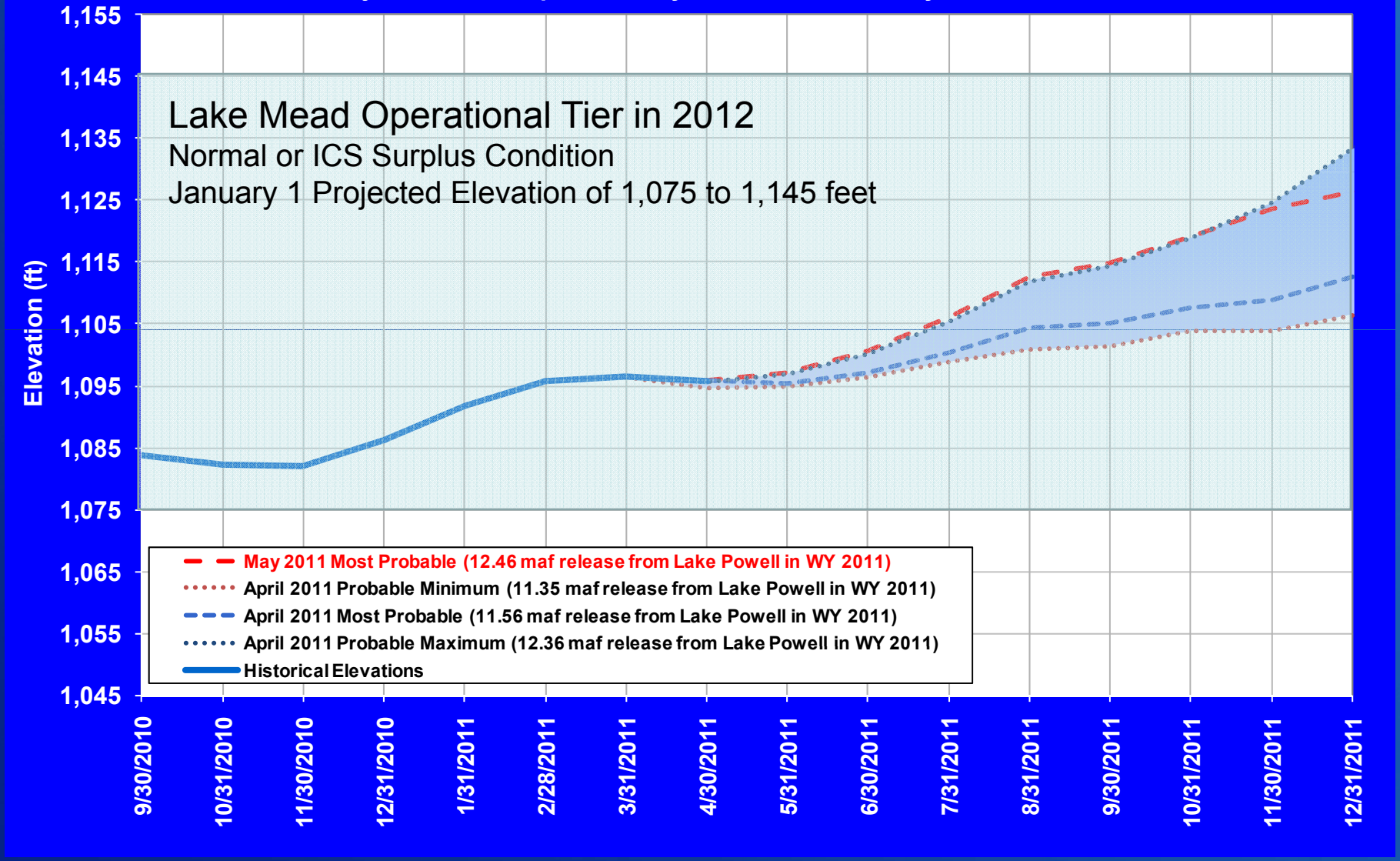
Projections from April 2011 24-Month Study Inflow Scenarios



RECLAMATION

Lake Mead End of Month Elevation

Projections from April and May 2011 24-Month Study Inflow Scenarios



RECLAMATION

Lower Basin Side Inflows

Glen Canyon to Hoover in WY/CY 2011[1,2]

	Month in WY/CY 2011	Intervening Flow Glen Canyon to Hoover (KAF)	Intervening Flow Glen Canyon to Hoover (% of Average)	Difference From 5-Year Average (KAF)
HISTORY	October 2010	80	136%	+21
	November 2010	13	27%	-35
	December 2010	248	251%	+149
	January 2011	75	99%	-1
	February 2011	84	91%	-8
	March 2011	77	96%	-3
	April 2011	141	235%	+81
PROJECTED	May 2011	49		
	June 2011	23		
	July 2011	50		
	August 2011	109		
	September 2011	70		
	October 2011	59		
	November 2011	48		
	December 2011	99		
	WY11 Totals	**1,019**	**125%**	**+204**
	CY11 Totals	**884**	**108%**	**+69**

[1] Values were computed with the LC's gain-loss model for the March 2011 24-month study.

[2] Percent of average are based on the 5-year mean from 2006-2010 in CY 2011.

RECLAMATION

YAO Operations Update

- Excess Flows to Mexico
  - Total excess flows to Mexico from January through May 19, 2011, was 47,131 AF
- Pumped drainage return flows from the Wellton-Mohawk Irrigation and Drainage District
  - Flow at station 0+00 on the Main Outlet Drain from January through March 2011 was 25,038 AF at 2,816 ppm

RECLAMATION

YAO Operations Update

- Drainage Flows to the Colorado River
  - From the South Gila Drainage Wells January through April 2011 was 13,629 AF at 1,695 ppm
  - From the Yuma Mesa Conduit January through April 2011 was 6,727 AF at 1,521 ppm

RECLAMATION

YAO Operations Update

- YDP Pilot Run operation started on May 3, 2010 and operated for 328 days (March 23, 2011) at 1/3 capacity
  - Approximately 30,000 AF of product water blended with drainage flows was delivered to Mexico at NIB
- Brock reservoir has conserved 43,500 AF as of May 22, 2011

RECLAMATION

2012 Colorado River AOP First Consultation Meeting

- Welcome and Introductions – *Steve Hvinden / Dave Trueman*
- Upper Basin Hydrology and Operations – *Rick Clayton*
- Lower Basin Hydrology and Operations – *Dan Bunk / Hong Nguyen-DeCorse*
- 2012 AOP Review Process – *Steve Hvinden / Dave Trueman*
- Review of Draft 2012 AOP - CRMWG
- Conclusion, Wrap-up, Future Meeting Dates

RECLAMATION

2012 Colorado River Annual Operating Plan

Colorado River Management Work Group

First Consultation

May 31, 2011

RECLAMATION

Feds stop work on Flaming Gorge pipeline study

Associated Press | Posted: Thursday, May 26, 2011

CAT URBIGKIT Star-Tribune correspondent Fort Collins, Colo., water developer Aaron Million speaks about his then-water pipeline proposal at a 2007 meeting in Rock Springs.

CHEYENNE — The U.S. Army Corps of Engineers has suspended its evaluation of a proposed pipeline to carry water from southwestern Wyoming to the Front Range of Colorado while the developer apparently considers whether to ask a different federal agency to carry on the work.

Aaron Million of Fort Collins has applied to pipe up to 250,000 acre feet of water a year several hundred miles from the Green River at Flaming Gorge Reservoir to as far south as Pueblo, Colo.

The pipeline proposal has met with strong opposition from Wyoming state government and several communities and groups in Wyoming and Utah that rely on the Green River. Yet some Colorado irrigators and municipalities have expressed interest in the pipeline concept in the face of increasing population projections on the Front Range and heavy water demand there.

The Corps of Engineers has been overseeing a detailed environmental study of Million's proposal for the past couple of years while he's been footing the bills for a consultant who's been working with the federal agency. The Corps of Engineers had been scheduled to release a draft study in 2016.

Rena Brand, project manager for the Corps of Engineers in Littleton, Colo., said Wednesday that Million wrote to her agency last month asking it to suspend its environmental review of his pipeline proposal. She says Million wants to consider whether his project could generate electricity and, if so, whether the Federal Energy Regulatory Commission should be leading the review.

"The alternative energy produced from the project may become a major focus and benefit," Million wrote in an email to the Corps of Engineers last month. "Discussions with other federal agencies indicate that there may need to be a realignment of the lead federal agency."

The Corps of Engineers responded to Million early this month and agreed to stop work on the study for 60 days. Brand said that if her agency doesn't hear back from Million in that time, it will have to decide whether to drop the study entirely.

The proposed pipeline would have to lift water over the Continental Divide. Brand said Million hasn't given her agency any details about how the project could possibly produce a net energy gain.

The Corps of Engineers has been conducting interviews with Colorado irrigators and others who expressed interest in using water from the pipeline to assess the need for the project, Brand said. She said that work has now stopped.

Attempts to reach Million for comment on Wednesday were unsuccessful. The Coloradoan newspaper reported this week that Million was arrested Saturday on a Texas warrant accusing him of stalking an ex-girlfriend.

John Schulz, public information officer with the Larimer County Sheriff's Office, said Wednesday that Million was being held without bail in jail in Fort Collins until Texas authorities come to pick him up. Schulz said his agency's policies prohibited Million from talking with a reporter.

Mike Purcell, director of the Wyoming Water Development Commission, is the state of Wyoming's contact for the Corps of Engineers on the pipeline project.

Purcell said Wednesday he hasn't received any notice from the Corps of Engineers in 18 months about meetings concerning the project. "I can only conclude that things are being slowed down by Mr. Million himself, and for what reasons I can't really tell you," he said.

Purcell said that the long-standing conceptual design of the pipeline project has called for installing small turbines to generate electricity in locations where the water would flow downhill to help defray pumping costs.

"That has been a concept for I believe quite a while," Purcell said. "But if he's now saying it would generate power over and above the demands of the project, I would find that unlikely."

U.S. DEPARTMENT OF
ENERGY

For Immediate Release
June 3, 2011

Moab Mill Tailings Pile 25 Percent Disposed
DOE Moab Project Reaches Significant Milestone

(Grand Junction, CO) — One quarter of the uranium mill tailings pile located in Moab, Utah, has been relocated to the Crescent Junction, Utah, site for permanent disposal. Four million tons of the 16 million tons total has been relocated under the Uranium Mill Tailings Remedial Action Project managed by the U.S. Department of Energy (DOE).

A little over 2 years ago, Remedial Action Contractor Energy*Solutions* began shipping the tailings by rail away from their current location next to the Colorado River, to Crescent Junction 30 miles north. The project received a boost in funding from the American Recovery and Reinvestment Act that increased the weekly train shipments from four to 10.

"To be a quarter of the way done in about 2 years was unthinkable when we first started shipping in April 2009," recollects Federal Project Director Donald Metzler. "We have surpassed every goal for tailings disposal we have set," added a proud Metzler.

With the remaining Recovery Act funding being expended by early summer, the shipping schedule will revert to the original schedule of one daily train, 4 days a week.

At Crescent Junction, the tailings are placed in a DOE-constructed disposal cell that is excavated 25 feet below grade. The tailings material in the cell is a total of 50 feet thick, reaching 25 feet aboveground. The tailings are then capped with a 10-foot-thick, multi-layered cover composed of native soils and rock. Last summer, the project began placing final cover material on the portion of the compacted tailings that had met the final grade.

Through use of extraction and freshwater injection, the project continues to protect the Colorado River by minimizing the discharge of elevated concentrations of ammonia and uranium. These ground water contaminants, which resulted from the processing of uranium ore, can be harmful to young-of-year fish that use the backwater channels as habitat during late summer.

– DOE –

Contacts:

Donald Metzler	Moab Federal Project Director	(970) 257-2115
Wendee Ryan	S&K Aerospace Public Affairs Manager	(970) 257-2145

5.d. - Basin States Discussions

United States Department of the Interior

BUREAU OF RECLAMATION
Washington, DC 20240

IN REPLY REFER TO:

JUN 06 2011

Via E-Mail

Mr. James D. Salo
Executive Director
Colorado River Commission of Nevada
555 E. Washington Avenue, Suite 3100
Las Vegas, NV 89101

Ms. Patricia Mulroy
General Manager
Southern Nevada Water Authority
1001 S. Valley View Boulevard
Las Vegas, NV 89153

Ms. Jennifer Gimbel
Director
Administration and Management Section
Colorado Water Conservation Board
1313 Sherman Street
Denver, CO 80203

Mr. Patrick Tyrrell
Wyoming State Engineer
State Engineer's Office
122 W. 25th Street
4th Floor East
Cheyenne, WY 82202

Mr. John D'Antonio
New Mexico State Engineer
Interstate Stream Commission
407 Galisteo Street
Bataan Memorial Building
Santa Fe, NM 87504

Mr. Dana "Bart" Fisher, Jr.
Chairman
Colorado River Board of California
180 W. 14th Avenue
Blythe, CA 92225

Mr. Dennis Strong
Director
Division of Water Resources
State of Utah
1594 West North Temple
Salt Lake City, UT 84116

Ms. Sandra Fabritz-Whitney
Acting Director
Arizona Department of Water Resources
3550 North Central Avenue
Phoenix, AZ 85012

Re: Intent of the Colorado River Basin Water Supply and Demand Study

Dear Mr. Salo, Mr. Antonio, Ms. Mulroy, Mr. Fisher, Ms. Gimbel, Mr. Strong, Mr. Tyrrell, Ms. Fabritz-Whitney:

I am writing in response to your letter of June 03, 2011, concerning the ongoing work of the Colorado River Basin Water Supply and Demand Study (Basin Study). This Basin Study is underway in partnership between the Bureau of Reclamation, the seven Colorado River Basin States, and a number of water management authorities and irrigation and water districts in the Basin. Your letter recounts the recent period of cooperation among the Colorado River Basin states and highlights the importance of the collaborative partnerships that have proven essential in recent years to addressing the multi-faceted challenges of Colorado River management.

Further, your letter recognizes the future challenges from drought and climate change on the hydrology of the Colorado River Basin. Your letter also requests that Reclamation confirm that the purpose and function of the Basin Study is technical in nature, and more specifically, that the content of the Basin Study and its constituent reports do not provide or constitute a legal interpretation or determination of any applicable provision of the Law of the River.

Reclamation fully agrees with the characterization of the Basin Study, and each of its reports, as technical and non-interpretive in nature, and confirms that any reports generated as part of this process are not prepared to, and do not represent a legal interpretation of any entity's rights, authorities, or obligations under the Law of the River. In this regard, we have included detailed language in the Basin Study that clearly states the non-interpretative nature of the Basin Study from the perspective of the Law of the River. Moreover, as we stated in the Basin Study Framework, issued in December 2009, "Through the Basin Study Program, Reclamation will partner with basin stakeholders to conduct comprehensive studies to *define options for meeting future water demands* in river basins in the West where imbalances in supply and demand exist or are projected." The work of the Basin Study, therefore, is forward-looking and intended to utilize the best available scientific and technical information to assist in future planning. Given this fundamental approach, we are in full agreement that the Basin Study is intended to be a technical investigation of water management approaches that can be considered in coming years to meet the Basin's future water management challenges, and that nothing in the Basin Study (or its component reports) is intended to be utilized against the Basin States or Federal Government in any subsequent dispute to establish legal or factual positions or interpretations regarding the Law of the River.

The core analysis of the Basin Study and its various reports begins with an assessment of water supply and demand and how water supply will change over time, including an assessment of the impacts of climate change on water resources. The Basin Study also includes analysis of how the basin's existing water and power operations and infrastructure will perform in the face of changing water realities. Finally, the Basin Study will also integrate recommendations on how to optimize operations and infrastructure to supply adequate water and power in the future, while accounting for environmental values. The Basin Study program is not a legal analysis of existing law or legal obligations, nor does it represent legal analysis, conclusions or findings in any manner with respect to any existing obligation under applicable law.

As you know, after a competitive review process, the Colorado River Basin was selected as one of the first three basin studies approved by Reclamation in September 2009. Reclamation views the technical, planning and analytical efforts of the Basin Study to be a critical element of the Department of the Interior's WaterSMART Program and a key element of Reclamation's implementation of the SECURE Water Act, which was enacted into law as part of the Omnibus Public Land Management Act of 2009. The reports and analysis prepared as components of the Basin Study will better define options for future water management of Western river basins where climate change, record drought, population increases and environmental needs have heightened competition for scarce water supplies.

In recent years, through the leadership and collaborative efforts of federal and state officials over succeeding administrations, the Department and the Basin States have identified, analyzed and

implemented creative and innovative approaches to address Colorado River management issues, while working *within* the framework of the Law of the River. These successful efforts have allowed all parties to work together to advance water management, operational and environmental actions on the River while avoiding prolonged and destabilizing multi-party or multi-state litigation on the River. We recognize that an essential element to this period of cooperation is the willingness of the Basin States to identify and implement innovative water management actions with a foundational principal that all parties have fully reserved all legal rights and positions on the various elements that comprise the Law of the River. Nothing in the preparation, analysis, documentation or implementation of the Basin Study should be viewed as inconsistent with that critical element of recent successes in any manner. To the contrary, in order for any of the technical and planning strategies identified in the Basin Study to be successful, we will need to continue to respect and foster a culture of engaged collaboration on the Colorado River.

Thank you for your continued efforts in this important endeavor. I look forward to continuing to work with each of you in our continued efforts as part of the Basin Study program, as well as our other work on the Colorado River.

Sincerely,

Michael L. Connor
Commissioner

News Release

RECLAMATION
Managing Water in the West

Lower Colorado Region
Boulder City, NV

Media Contact: Rose Davis, jdavis@usbr.gov
702-293-8421
702-591-0029 – Cell

Lisa Iams, liams@usbr.gov
801-524-3673
801-891-3951 – Cell

Kip White, cwhite@usbr.gov
202-513-0684
202-271-8577 – Cell

For Immediate Release: June 6, 2011

Colorado River Basin Water Supply and Demand Study Interim Report Available

The Bureau of Reclamation today released a report titled "Colorado River Basin Water Supply and Demand Study Interim Report No. 1." The reports and analysis prepared as components of the Study will better define options for future water management of the Colorado River Basin where climate change, record drought, population increases and environmental needs have heightened competition for scarce water supplies. The Colorado River Basin (Basin) was selected as one of the first three basin studies approved by the Bureau of Reclamation in September 2009.

"The Colorado River Basin Study is a feature of the Department of the Interior's WaterSMART program and is an integral part of our implementation of the SECURE Water Act," Reclamation Commissioner Michael L. Connor said today. "We are partnering on this valuable study with the seven Colorado River Basin States, in collaboration with other interested parties throughout the basin. Our goal is to provide detailed information for water resource managers, who face a complex future of increasing pressures on water supply matched with escalating demand for these finite water resources."

Reclamation's manager for the Study, Lower Colorado Region deputy regional director Terry Fulp, says the effort is significant and will consider multiple factors which will impact water supply and drive future demand: "In this study, we are considering the needs of all of the resources that are dependent upon a healthy river system, including water for municipal, industrial and agricultural use, hydroelectric power generation, recreation, fish and wildlife and water dependent ecological systems, under a broad range of conditions that could occur over the next 50 years," Fulp said today.

Given the high degree of uncertainty regarding future water supply and demand, a scenario planning process guided the development of scenarios to provide a broad range of future conditions. The interim report provides a quantified assessment of four water supply scenarios. These include scenarios based on historical observed and paleo-reconstructed streamflow records as well as future climate projections from global climate models. Consistent with Reclamation's recent report to Congress pursuant to the SECURE Water Act of 2009, this Study finds that for the climate change scenario, the mean natural

flow of the Colorado River as measured at Lees Ferry, Arizona is projected to decrease by approximately nine percent over the next 50 years.

The Study also anticipates increases in the frequency and severity of droughts. Further review and investigations of these results will be conducted as the Study progresses.

The four water demand scenarios were developed to incorporate plausible future trends related to demographics and land use, technology and economics, and socio-political factors.

Preliminary metrics were also developed for assessing the Colorado River system's future reliability under the four water supply and demand scenarios.

The next phases of the ongoing study will be directed toward quantifying the demand scenarios, assessing future system reliability, and the development and evaluation of opportunities for balancing supply and demand. Additional interim reports will be published with a final report targeted for summer of 2012.

The interim report provides a comprehensive snapshot of the initial effort to define current and future imbalances in Colorado River water supply and demand over the next 50 years in the Colorado River Basin and the adjacent areas of the seven Colorado River Basin States that receive Colorado River water.

Comments are welcome through the process described at the web page listed below.

The report is available online at http://www.usbr.gov/lc/region/programs/crbstudy.html

# # #

Reclamation is the largest wholesale water supplier in the United States, and the nation's second largest producer of hydroelectric power. Its facilities also provide substantial flood control, recreation, and fish and wildlife benefits. Visit our website at http://www.usbr.gov.

RECLAMATION

Managing Water in the West

Interim Report No. 1

Colorado River Basin Water Supply and Demand Study

U.S. Department of the Interior
Bureau of Reclamation

June 2011

Mission Statements

Protecting America's Great Outdoors and Powering Our Future
The U.S. Department of the Interior protects America's natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Interim Report No. 1

Colorado River Basin Water Supply and Demand Study

Executive Summary

Prepared by:

Colorado River Basin Water Supply and Demand Study Study Team

U. S. Department of the Interior
Bureau of Reclamation

June 2011

Executive Summary

Spanning parts of the seven states of Arizona, California, Colorado, New Mexico, Nevada, Utah, and Wyoming (Basin States), the Colorado River Basin (Basin) is one of the most critical sources of water in the western United States (West). The Colorado River and its tributaries provide water to over 30 million people for municipal use, supply water used to irrigate nearly 4 million acres of land, and are also the lifeblood for at least 15 Native American tribes, 7 National Wildlife Refuges, 4 National Recreation Areas, and 11 National Parks. Hydropower facilities along the Colorado River provide more than 4,200 megawatts of generating capacity, helping meet the power needs of the West and offset use of fossil fuels. The Colorado River is vital to Mexico to meet both agricultural and municipal water needs. It is essential to understand that the natural water supply of the Basin is highly variable year to year. The ability to capture water Basin-wide during years in which supply is greater than demand has resulted in meeting most of the resource needs throughout the 20th- century, although localized shortages routinely occur, particularly in the headwaters areas during times of drought.

Throughout the 20th-century, the challenges and complexities of ensuring a sustainable water supply and meeting future demand in the over-allocated Colorado River system have been recognized. These challenges have been systematically documented in studies conducted by the Bureau of Reclamation and the Basin States over the past 60 years. Concerns regarding the reliability of the Colorado River system to meet the future needs of Basin resources[1] in the 21st-century are heightened, given the likelihood of increasing demand for water throughout the Basin, coupled with projections of reduced supply due to climate change.

Funded through the Basin Study Program under the Department of the Interior's WaterSMART Program, the Colorado River Basin Water Supply and Demand Study (Study) is being conducted by the Bureau of Reclamation's Upper Colorado and Lower Colorado Regions and agencies representing the Basin States. The purpose of the Study is to define current and future imbalances in water supply and demand in the Basin and the adjacent areas of the Basin States that receive Colorado River water over the next 50 years (through 2060), and to develop and evaluate adaptation and mitigation strategies to resolve those imbalances. The Study contains four major phases to accomplish this goal: Water Supply Assessment, Water Demand Assessment, System Reliability Analysis, and Development and Evaluation of Opportunities for Balancing Supply and Demand.

The Study is being conducted in collaboration with stakeholders throughout the Basin whose participation and input are critical to the Study's success. Interests are broad and include Native American tribes and communities, agricultural users, purveyors of municipal and industrial water, power users, and environmental groups. Through the Study's outreach efforts, many interested parties have been involved and others are encouraged to do so. A

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[1] Resources include water allocations and deliveries for municipal, industrial, and agricultural use; hydroelectric power generation; recreation; fish, wildlife, and their habitats (including candidate, threatened, and endangered species); water quality including salinity; flow and water-dependent ecological systems; and flood control.

variety of options for involvement exist and range from attending public meetings and informational webinars to participating directly in the development of work products through the Study's technical sub-teams. Additional information is provided on the Study website at: http://www.usbr.gov/lc/region/programs/crbstudy.html.

Due to the inherent complexities of the Study and the many diverse interests and perspectives throughout the Basin, a dynamic reporting approach reflecting continuous technical developments and the ongoing input of stakeholders has been adopted. This approach consists of the issuance of interim reports, which are "snapshots" of the Study's progress as of a particular date. Interim Report No. 1, which documents the Study progress through January 31, 2011, is the first interim report to be issued for the Study and is available for download from the Study website (provided above). Project participants and stakeholders are encouraged to review and comment on the information provided in this report. Written comments should be submitted within 30 days following its release and will be incorporated into subsequent interim reports, as appropriate. Instructions for submitting comments are provided on the Study website.

The status of the Study as of January 31, 2011 is presented in the following sections. Ongoing work from February 1, 2011 will be documented in the next interim report.

1.0 Scenario Development

The amount of water available and changes in the demand for water throughout the Basin over the next 50 years are highly uncertain and dependent upon a number of factors. The potential impacts of future climate variability and climate change further contribute to these uncertainties. Nevertheless, projections of future supply and demand are needed to assess the future reliability of the Colorado River system to meet the needs of Basin resources and to identify options and strategies to mitigate future risks to those resources. These projections must be sufficiently broad to capture the plausible ranges of uncertainty in future water supply and demand. A scenario planning and development process has been used to guide the development of a broad range of future water supply and demand projections, resulting in four scenarios related to future water supply, and four scenarios related to future water demand. The extent to which these scenarios have been fully defined and quantified varies. Work is ongoing to complete this effort and will be included in subsequent interim reports.

2.0 Water Supply Assessment

In 2004, Reclamation initiated a multi-faceted research and development program to investigate and implement a variety of methods for projecting plausible future inflow sequences for Colorado River planning studies. Based on this work and the information gathered in the scenario planning process, four water supply scenarios have been quantified and analyzed. These four scenarios are titled Observed Resampled, Paleo Resampled, Paleo Conditioned, and Downscaled Global Climate Model (GCM) Projected, and are based on information from three sources—the observed historical streamflow record, the paleo-reconstructed streamflow record, and projections of streamflow using future climate projections from GCMs.

Under the Downscaled GCM Projected scenario, the mean natural flow as measured at Lees Ferry over the next 50 years is projected to decrease by approximately 9 percent, along with a projected increase in both drought frequency and duration as compared to the observed historical streamflow record. Droughts lasting 5 or more years are projected to occur 40 percent of the time over the next 50 years. Projected changes in climate and hydrologic processes include continued warming across the Basin, a trend toward drying, although precipitation patterns continue to be spatially and temporally complex, and increases in evapotranspiration and decreases in snowpack, as more precipitation falls as rain rather than snow.

Although some minor methodological and reporting differences exist, the results presented in this report are consistent with Reclamation's report to Congress published in March 2011, in fulfillment of the requirements within Section (§) 9503 of the SECURE Water Act (enacted into law as part of the Omnibus Public Land Management Act of 2009, Public Law 111-11). That report[2] provides information on the future risks to water supply throughout the eight major Reclamation river basins, whereas this Study is focused on a more detailed, Basin-wide risk assessment with a focus on the development and evaluation of opportunities to mitigate and adapt to those risks.

A review of the data and tools used to quantify the Downscaled GCM Projected scenario is ongoing. As a result, the streamflow projections under this scenario may be updated and included in the next interim report.

3.0 Water Demand Assessment

Historically, Reclamation has considered a single projection of future demands in long-term Basin planning studies based on data and information provided by the Basin States, Native American tribes and communities, federal agencies, and other water entitlement holders. The Study considers additional projections of demand, a significant and important advancement in long-term Basin planning. Through the scenario planning process, the most critical uncertainties affecting future demand were identified (e.g., changes in population and water use efficiency) and were combined into four scenarios, titled Current Trends, Economic Slowdown, Expansive Growth, and Enhanced Environment and Healthy Economy.

The Current Trends scenario is the first scenario that is being quantified and will be used as a starting point for quantifying the remaining scenarios. Although the Current Trends scenario is not a direct mathematical projection of historical data, it relies on knowledge of historical consumptive uses and losses, as well as planning data and expertise to estimate future trends in water demands. As such, historical consumptive uses and losses data were compiled and are presented in this report. From 1971-1999 (just prior to the start of the recent drought in 2000), consumptive uses and losses in the Basin have increased from approximately 13 million acre-feet (maf) to 16 maf per year, an increase of about 23 percent.

[2] Available at: http://www.usbr.gov/climate/SECURE/docs/SECUREWaterReport.pdf.

4.0 System Reliability Metrics

System reliability metrics (metrics) are measures that indicate the ability of the Colorado River system to meet the needs of Basin resources under multiple future conditions. Metrics will be used to measure the potential impacts to Basin resources resulting from future supply and demand imbalances, and to measure the effectiveness of options and strategies to address those imbalances.

A process was developed for metric identification and used to craft a detailed set of metrics for the Basin resources. Based on the *Plan of Study* and working closely with stakeholders, resource categories were identified (Water Deliveries, Electrical Power Resources, Water Quality, Flood Control, Recreational Resources, and Ecological Resources), followed by identification of attributes of interest associated with each category (e.g., shoreline public use facilities is an attribute of interest under the Recreational Resources category). Metrics were defined for each attribute of interest, depending on the location of the attribute and the availability of data and/or tools.

In some cases, the spatial and temporal detail of the data and/or tools available will limit the ability to quantitatively assess the potential resource impacts. In these cases, impacts will either be assessed in a qualitative manner or, where time and resources permit, additional analysis may be performed to enable a quantitative assessment.

Metrics have been defined for each of the identified resource categories; however, additional metrics for the Ecological Resources category are currently under consideration. Refinement of the metrics will be documented in subsequent interim reports.

5.0 Next Steps

This Interim Report No. 1 documents the progress of the Study through January 31, 2011. Ongoing work from February 1, 2011 will be documented in the next interim report and will include:

- Completion of the quantification of the Downscaled GCM Projected scenario
- Quantification of the water demand scenarios, including the effects of climate change on demand
- Refinement of system reliability metrics
- Assessment of system reliability to determine the magnitude and location of future supply and demand imbalances and the impacts to Basin resources
- Initiation of the development and evaluation of opportunities for resolving supply and demand imbalances

An updated timeline for the Study, outlining the major activities through the end of the Study in July 2012, is provided in Table 1. As the Study progresses, opportunities for stakeholder participation will continue to be provided through a variety of outreach activities, particularly with respect to the development and evaluation of opportunities for resolving supply and demand imbalances.

TABLE 1
Updated Study Timeline

Timeframe	Activity
February – August 2011	Quantify Demand Scenarios
July – September 2011	Perform Baseline System Reliability Analysis
September – December 2011	Develop Options and Strategies
October 2011	Publish Interim Report Number 2
November 2011 – February 2012	Perform System Reliability Analysis with Options and Strategies
March 2012	Publish Interim Report Number 3
April – May 2012	Finalize and Evaluate Options and Strategies
June 2012	Publish Draft Final Study Report for Comment
July 2012	Publish Final Study Report

Disclaimer

The Colorado River Basin Water Supply and Demand Study (Study) is funded jointly by the Bureau of Reclamation (Reclamation) and the seven Colorado River Basin States (Basin States). The purpose of the Study is to analyze water supply and demand imbalances throughout the Colorado River Basin and those adjacent areas of the Basin States that receive Colorado River water through 2060; and develop, assess and evaluate options and strategies to address the current and projected imbalances.

Reclamation and the Basin States intend that this Study will promote and facilitate cooperation and communication throughout the Basin regarding the reliability of the system to continue to meet Basin needs and the strategies that may be considered to ensure that reliability. Reclamation and the Basin States recognize the Study will have to be constrained by funding, timing and technological and other limitations, which may present specific policy questions and issues, particularly related to modeling and interpretation of the provisions of the Law of the River during the course of the Study. In such cases, Reclamation and the Basin States will develop and incorporate assumptions to further complete the Study. Where possible, a range of assumptions will typically be used to identify the sensitivity of the results to those assumptions.

Nothing in the Study, however, is intended for use against any Basin State, the Federal government or the Upper Colorado River Commission in administrative, judicial or other proceedings to evidence legal interpretations of the law of the river. As such, assumptions contained in the Study or any reports generated during the Study do not, and shall not, represent a legal position or interpretation by the Basin States, Federal government or Upper Colorado River Commission as it relates to the law of the river. Furthermore, nothing in this Study is intended to, nor shall this Study be construed so as to, interpret, diminish or modify the rights of any Basin State, the Federal government, or the Upper Colorado River Commission under federal or state law or administrative rule, regulation or guideline, including without limitation the Colorado River Compact, (45 Stat. 1057), the Upper Colorado River Basin Compact (63 Stat. 31), the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, Treaty Between the United States of America and Mexico (Treaty Series 994, 59 Stat. 1219), the United States/Mexico agreement in Minute No. 242 of August 30, 1973, (Treaty Series 7708; 24 UST 1968) or Minute No. 314 of November 26, 2008, or Minute No. 318 of December 17, 2010, the Consolidated Decree entered by the Supreme Court of the United States in Arizona v. California (547 U.S 150 (2006)), the Boulder Canyon Project Act (45 Stat. 1057), the Boulder Canyon Project Adjustment Act (54 Stat. 774; 43 U.S.C. 618a), the Colorado River Storage Project Act of 1956 (70 Stat. 105; 43 U.S.C. 620), the Colorado River Basin Project Act of 1968 (82 Stat. 885; 43 U.S.C. 1501), the Colorado River Basin Salinity Control Act (88 Stat. 266; 43 U.S.C. 1951), the Hoover Power Plant Act of 1984 (98 Stat. 1333), the Colorado River Floodway Protection Act (100 Stat. 1129; 43 U.S.C. 1600), or the Grand Canyon Protection Act of 1992 (Title XVIII of Public Law 102-575, 106 Stat. 4669). Reclamation and the Basin States continue to recognize the entitlement and right of each State under existing law to use and develop the water of the Colorado River system.[3]

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[3] Reclamation and the Basin States have exchanged letters and are in the process of amending the Contributors' funding agreement to, among other things, document and clarify the intent of the Parties consistent with the above disclaimer.