

August 1, 2016

**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 Executive Director of the Colorado River Board of California that a regular meeting of the Board Members is to be held as follows:

Date: Thursday, August 11, 2016
Time: 10:30 a.m.
Place: Los Angeles Department of Water and Power Bishop Office 300 Mandich Street Bishop, CA 93514 (760) 872-1104

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: Ms. Tanya M. Trujillo, 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

Tanya M. Trujillo
Executive Director

attachment: Agenda

Regular Meeting
COLORADO RIVER BOARD OF CALIFORNIA
Thursday, August 11, 2016
10:30 a.m.

Los Angeles Department of Water and Power
Bishop Office
300 Mandich Street
Bishop, CA 93514
(760) 872-1104

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)
In accordance with California Government Code, Section 54954.3(a)
3. Administration
 - a. Consideration and approval of the minutes of the meeting held June 15, 2016
(Action)
4. Colorado River Basin Water Reports
 - a. Reports on current reservoir storage, reservoir releases, projected water use, and forecasted river flows
 - c. State and Local Water Reports
5. Update regarding the 2016 California Drought
6. Staff reports regarding Colorado River Basin Programs
 - a. Review status of Basin States drought contingency planning
 - b. Review status of the Colorado River Basin Water Supply and Demand Study
 - c. Review status of Minute 319 and Minute 32x
 - d. Review status of the Salinity Control Forum, Workgroup, and Advisory Council
 - e. Review status of the Glen Canyon Dam Adaptive Management Work Group and Long-Term Experimental Management Plan EIS
 - f. Review status of the Lower Colorado River Multi-Species Conservation Program
7. Announcements/Notices
8. 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.

9. Other Business

- a. Next Board Meeting: Regular Meeting
September 14, 2016
Hosted by The Metropolitan Water District of Southern California
La Verne Facility
700 N. Moreno Ave.
La Verne, CA 91750
1:00 p.m. (tentative)

Minutes of Meeting
COLORADO RIVER BOARD OF CALIFORNIA
Wednesday, June 15, 2016

A meeting of the Colorado River Board of California was held at the Holiday Inn Ontario Airport hotel, 2155 East Convention Center Way, Ontario, California, on Wednesday, June 15, 2016.

Committee Members and Alternates Present

Stephen Benson	John Powell, Jr.
Brian Brady	Jack Seiler
Dana Bart Fisher, Jr., Chairman	Michael Touhey
Jeanine Jones	David Vigil
Glen D. Peterson	Doug Wilson
David R. Pettijohn	

Committee Members and Alternates Absent

James Hanks
Hank Kuiper
Peter Nelson

Others Present

Steve Abbott	Joanna Smith-Hoff
Brian Brady	Philip Southard
Dan Denham	Gary Tavetian
Karen Donovan	Tanya Trujillo
Christopher Harris	Donnell Wilcox
Bill Hasencamp	Gerald Zimmerman
Michael Hughes	
Ned Hyduke	
Tom Levy	
Kara Matthews	
Vic Nguyen	
Autumn Plourd	
Angela Rashid	
Harry Ruzgerian	
Tom Ryan	

CALL TO ORDER

Chairman Fisher announced the presence of a quorum and called the meeting to order at 10:04 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.

Consideration and Approval of the Minutes

Chairman Fisher asked for a motion to approve the May 11, 2016 meeting minutes. Mr. Pettijohn moved that the minutes be approved, seconded by Mr. Peterson, and by unanimous support and an abstention by Mr. John Powell, the May 11, 2016 meeting minutes were approved.

Executive Director Trujillo explained the elements of the Colorado River Board's budget to include personnel expenses for 11 employees, general operating expenses such as rent and payment of the State's portion of certain expenses such as dues for the Salinity Control Forum and the MSCP program. Ms. Trujillo noted that the actual expenses for last fiscal year will be lower than the authorized level and that any unexpended funds will carry over for use in future budget years. Mr. Pettijohn moved that the 2016-17 Fiscal Year Budget be approved and to grant authorization to the Executive Director to execute the Standard Agreement with the Six Agency Committee, seconded by Mr. Peterson, and approved by unanimous support.

COLORADO RIVER BASIN WATER REPORTS

Colorado River Basin Water Reports and State and Local Water Reports

Ms. Trujillo reported that as of June 6 2016, the total Colorado River system storage was at 50% of capacity. Lake Mead's storage was at 36% of capacity, while storage in Lake Powell was 51% of capacity. Water Year 2016 precipitation to date is 100% and Upper Basin snowpack is 155% for this time of year. The unregulated inflow into Lake Powell forecasted for WY 2016 was 90% of normal. Ms. Trujillo noted that soil moisture levels have been low, contributing to the below average inflows to Lake Powell over the past few years. Precipitation in the Basin was above average in April but below average except for some of the western portions of Utah and southwestern portions of Arizona in May.

Ms. Trujillo reported that the Upper Basin has received good precipitation and storage levels are nearly full, with some of the reservoirs spilling for flood control purposes. As of June 5, 2016 Upper Basin reservoirs levels, other than Lake Powell were 76% of capacity at

Fontenelle and 91% of capacity at Flaming Gorge in Wyoming, 73% of capacity at Blue Mesa and 92% of capacity at Morrow Point in Colorado, and 92% of capacity at Navajo in New Mexico.

Ms. Trujillo reported that as of June 9, Brock and Senator Wash Reservoirs have captured up to 75,790 acre-feet and 29,580 acre-feet, respectively. As of June 8, bypass flows per Minute 242 were 38,904 acre-feet. As of June 13, excess flows to Mexico were 1,313 acre-feet.

2015 Accounting Review

Ms. Rashid provided an overview of the Colorado River Accounting and Water Use Report for the Lower Basin States of Arizona, California and Nevada. Ms. Rashid reported that the consumptive use for all three lower Basin states was 7.45 million acre-feet. The consumptive use for Arizona, California, and Nevada was 2.6 million acre-feet, 4.6 million acre-feet, and 222,729 acre-feet, respectively. Ms. Rashid provided a detailed overview of the consumptive use of each lower basin state, reporting on whether activities such as fallowing programs, interstate banking or ICS retrieval increased or decreased their consumptive use.

Update on the California Drought

Ms. Trujillo reported that 21% of the State was in the exceptional drought category. Board member Peterson noted that Oroville Reservoir was nearly full. Ms. Trujillo noted that the U.S. Drought Monitor maps are not the only method used to track the severity of drought in California, noting that reservoirs levels are also used. Ms. Jones added that the U.S. Drought Monitor maps focus on precipitation trends, soil moisture and temperature and do not account for stored water.

Vice Chairman Wilson added that some areas of Southern California received low precipitation but received imported water. Ms. Trujillo added that some areas have different sources of supply that include local and imported supply. For some areas, if the local supply is diminished, then imported supplies can be used to make up the difference.

Ms. Jones reported that much of the precipitation season is over, expect for potential monsoonal activity in the Southeast part of the State. Ms. Jones stated that there is no snowpack remaining in the Central and Southern Sierra and it is diminishing rapidly in the Northern Sierra. Ms. Jones reported that the San Joaquin reservoirs did not fare well but the Oroville reservoir is close to peaking. Runoff season is coming to its end and runoff forecasts have dropped over the last four to six weeks. Ms. Jones reported that inflow to the northern end of the system with Lake Shasta and Oroville has peaked and has begun to decline, noting that some of the runoff has been lost to dry soil and vegetation.

Vice Chairman Wilson reported that San Diego County's regional basins have reduced water use by more than 21%, noting that their conservation target has been reduced to 13% because of the credit given for the operation of the Carlsbad Desalination Plant. Mr. Wilson stated that SDCWA voted to set their own conservation target, which adheres with the State's new conservation rules. Mr. Wilson also stated that SDCWA's current conservation practices, IID water transfer, and Carlsbad Desal Project have put their water supplies in a good place.

Board member Peterson reported that as of June 1, total system storage, in Diamond Valley Lake and Lakes Mathews and Skinner is 55% of capacity. The Colorado River aqueduct is on a seven-pump flow and is on target to deliver 910,000 acre-feet. Currently, the aqueduct has delivered 425,000 acre-feet. Mr. Peterson noted that Metropolitan Water District (MWD) is still conserving water in response to the Governor's mandate. Mr. Peterson also reported that MWD celebrated the 75th anniversary of delivering water to the Colorado River Aqueduct to Southern California.

Board member Pettijohn reported that all the snow in the Eastern Sierra has melted and he will resume his snow reporting in fall. Mr. Pettijohn stated that conservation efforts in Los Angeles are being driven by the city's Sustainable City Plan. The plan calls for strong conservation targets and by January 1, 2017, the city's per capita water use must be reduced to 104 gallons per capita per day (gpcd), with a future reduction to 100 gpcd. Mr. Pettijohn stated that the Los Angeles Department of Water and Power (LADWP) has performed a stress test as required by the State's new conservation rules and can certify that they have enough stored water on-hand to meet the targets. He also noted that LADWP's conservation has exceeded the State's conservation target.

Board member Powell reported that the Coachella Valley Water District voted to adopt a domestic rate increase, which is the first increase in six years. Mr. Powell noted that there was great opposition to the increase. Mr. Powell stated that there was a large increase to the fixed meter charge, noting that CVWD has revised their budget based tiered rates that were implemented in 2009. He also stated that CVWD is working to make the Governor's 25% conservation mandate permanent within their budget based tiered rates. He noted that Colorado River water is used to continue to address the overdraft in the aquifer.

Ned Hyduke commented that PVID finished the installation of their second dam gate and is planning to install the new third gate next January or February. Director Hanks reported for IID that the current under-run level is approximately 82,000 acre-feet and that wheat harvest is almost completed.

Drought Contingency Planning Update

Ms. Trujillo provided additional background relating to the drought contingency planning discussions among the Lower Basin States. She presented background slides describing the current drought levels and explained that approximately 1.5 million acre-feet less inflow has been coming into the system on average over the past 16 years and the precipitation in most years has been below average. The framing question for the current drought contingency planning discussions has been whether additional tools are needed beyond the 2007 Interim Guidelines, which provided mechanisms and programs to utilize for 20 years through 2026. The 2007 Interim Guidelines did not address rules for withdrawal of Intentionally Created Surplus below Lake Mead's elevation at 1,075 feet, so in order to incentivize more creation of ICS, it would make sense to create rules for withdrawal of ICS under lower reservoir levels. For 2018, Reclamation is projecting a 50% chance of hitting the first shortage trigger under the 2007 Interim Guidelines, with increasing likelihood after that. The current round of Lower Basin drought contingency planning discussions began in 2013 after record low inflows in 2012-13, and included an agreement in 2014 among the municipal agencies to work with Reclamation to fund system conservation projects in both basins under the System Conservation Pilot Program. Phase 2 of that program is underway in the Lower Basin and there have been bills introduced in Congress to authorize additional funding for the program. In December 2014, the Lower Basin States, municipalities and Reclamation entered into a Memorandum of Understanding to support additional voluntary actions to store additional water in Lake Mead, with a goal of developing between 1.5 and 3 million acre-feet of storage over the next 5 years, and addressing the need for operational certainty at lower reservoir elevations, such as developing rules for the withdrawal of ICS, and confirming the goal to avoid letting Lake Mead hit critically low elevation levels. The States and agencies are encouraging Reclamation to be as efficient as possible with its operations in the Lower Basin and to decrease over deliveries to Mexico.

Current discussions have continued to stress the need to reduce the risk of Lake Mead dropping below the 1,020 feet elevation level. One of the concepts that is being discussed is the possibility of all three Lower Basin states voluntarily contributing additional water that can help maintain elevations in Lake Mead. California's senior priorities would be maintained through initial contributions from Arizona in larger volumes at higher elevations than provided in the 2007 Interim Guidelines. If those contributions were not sufficient to prevent Lake Mead's continued decline, California's contractors would supply additional contributions of water at lower elevation levels. The stored contributions would be recoverable when Lake Mead elevations reached higher levels. In order to incentivize additional storage, rules for the storage and release of ICS below elevation 1,075 would be developed. The US would be encouraged to continue to develop programs to generate water for the system such as constructing additional pumping capabilities at the Minute 242 wellfield and operating the Yuma Desalting Plant.

Contractors within each of the Lower Basin States are evaluating the feasibility of the proposed drought contingency plan elements. Considerations include the likelihood that Lake

Mead would reach the critically low elevation level of 1,020, which has approximately doubled since the adoption of the 2007 Interim Guidelines. Storage and recovery of the drought contingency planning contributions would be tied to the volumes associated with the ICS program in the 2007 Interim Guidelines. California's total available storage volume is 1.5 million acre-feet. Arizona and Nevada have smaller ICS accounts and would be contributing higher volumes of water under the drought contingency plan. Arizona has acknowledged the junior priority of the Central Arizona Project pursuant to the 1968 Act, and is motivated to avoid the uncertainty associated with leaving the decisions regarding allocations of water at low reservoir elevations to the Secretary of the Interior. Arizona is currently storing additional water in Lake Mead and has not been contributing water to the groundwater programs over the past few years to help protect Lake Mead elevations. Utilizing the existing conservation efforts and the planned drought contingency contributions, the probability of Lake Mead reaching elevation 1,020 would be reduced to approximately the level of risk that existed at the time of the 2007 Interim Guidelines. The planned contributions would be timed based on the potential continuing decline of Lake Mead, and initial modeling under the scenario under discussion indicates there is a 70% chance that no contributions would be needed from California. The timing and probability of recovery would be parallel to the recovery rules for ICS.

Executive Director Trujillo stated she would continue to provide updates to the Board regarding the planning process and that any actual agreements would have to be agreed to and approved by the board of the various contractor agencies.

Salinity Control Forum

Ms. Trujillo noted that a Cooperating Agency meeting for the Paradox Valley Unit Alternative Study/EIS was held on June 1, 2016. Various alternatives are being considered including a replacement well, evaporation pond, and potential for commercial use from brine crystallization. A demonstration project for brine crystallization is being planned. The completion date for the EIS has been moved to September 2019. There is an emergency back-up plan to drill a new well in the event that the existing well fails prior to the completion of the EIS and Decision. A question was asked about where power supply would come from for the project and Ms. Trujillo replied that Reclamation is evaluating several options including the use of renewable energy from solar and geothermal resources. Four studies were conducted for the evaporation pond alternative and Ms. Trujillo stated that the major challenge related to the evaporation pond alternative is the potential impacts on wildlife.

A 20th anniversary celebration for the operation of the Paradox Valley Unit is being planned to coincide with the Salinity Control Forum meeting in October 2016. At the Salinity Control Forum meeting on June 8-9, 2016, Ms. Trujillo was selected as the new

Chairperson for the Forum, and Eric Millis, Director of the Utah Division of Water Resources, was selected as the Vice-Chair.

Minute 319/32x

Ms. Trujillo reported that the bi-national workgroup met in May in Mexico City, Mexico to continue discussions of Minute 32x, noting that recent changes in personnel within the Mexican negotiation team have slowed down the discussions. Ms. Trujillo reported that they have been working with Mexico to strengthen their knowledge of the legal framework regarding how the Colorado River System is operated and how the hydrology drives the 2007 Guidelines. She stated that the United States has set-up a primer on these topics with the Mexican delegation for on June 16-17 in Salt Lake City. The next negotiation meeting is scheduled for July 5-6 in Washington D.C. Ms. Trujillo added that Minute 319 will serve as a model for future agreements, as it contains components for potential projects constructed in Mexico, which translates into water savings for the U.S. and funding entities. Ms. Trujillo added that Minute 319 also includes a shortage sharing agreement and an environmental component that may be expanded to include additional habitat restoration.

Glen Canyon Dam Adaptive Management Program

Ms. Trujillo reported that the Board has been previously briefed on the EIS process for the Long Term Experimental Management Program (LTEMP). Reclamation has received 3,000 comments on the document and they are in the process of reviewing, documenting and addressing the comments. It is expected that the LTEMP EIS will be completed in the fall. Ms. Trujillo reported that Jessica Neuwerth, staff biologist at the Colorado River Board, is attending a Technical Workgroup meeting on June 14-15 in Salt Lake City, Utah. The next AMWG meeting is scheduled for August 24-25 in Flagstaff, Arizona.

Multiple Species Conservation Program

Mr. Harris reported that the Work Group met in Phoenix, Arizona to review the proposed work plan for the upcoming fiscal year. Mr. Harris stated that the monitoring is showing evidence that the yellow-billed cuckoo has been using the newly created and maintained habitats. He also reported that for the first time ever, a territorial southwestern willow flycatcher appeared in some of the MSCP habitat areas. Mr. Harris noted that the willow flycatcher is very territorial and will return to areas where they are born, reared, and fledged. Mr. Harris also stated that some of the birds are starting to shift out of the salt cedar and into cottonwood willow. Mr.

Harris reported that the Wildlife Service has initiated a status review of the southwestern willow flycatcher range-wide, which will affect the entire southwestern United States. Genetic evidence has indicated that the southwestern willow flycatchers may not be a distinct sub-species and would therefore fall back to the overall species of willow flycatcher, which is not threatened. Mr. Harris stated that if the Wildlife Service confirms this, they could move to de-list the southwestern willow flycatcher. Mr. Harris added that the Wildlife service is performing a similar review of the coastal sage scrub and the gnatcatcher.

Ms. Trujillo noted that the Western Governors Association has conducted a workshop associated with Endangered Species Act (ESA) issues. She stated that the workshop provided a good analysis of current policy and recommendations relating to ESA issues and species conservation. Mr. Harris stated that the flycatcher is still a covered species under the ESA program and will remain so through 2055. He noted that the work being doing for the flycatcher benefits other riparian obligate species. Mr. Harris reported that the MSCP is ahead of schedule with building out habitats along the Lower Colorado, including habitats in California. He noted that they have been working with the Blythe Field office to identify the last remaining batch of habitat needed in California which is approximately between 600 and 1,000 acres left pursuant to the CESA permit for the MSCP.

Mr. Harris reported that they are ready to start the planning for the conservation area on the newly acquired Planet Ranch property, which is located on the Lower Bill Williams River, east of the Bill Williams River National Wildlife Refuge. The conservation area will contain riparian, marsh and aquatic habitat as well as fishery ponds to raise razorback and bonytail.

The final budget approval call for the Steering Committee is scheduled for June 22.

Background Review and Updates Regarding the Lower Colorado River Water Supply Project and Desert Energy Projects

Deputy Director Harris gave an overview of the Lower Colorado River Water Supply Project (Project). California's basic mainstream apportionment of Colorado River water is fully apportioned and allocated, so the Project provides a mechanism for water users along the mainstream of the river who are either using or have the potential to impact Colorado River resources to legally use water. The Lower Colorado Water Supply Act (Act) was set up in 1986 to authorize the Project and establish a mechanism to bring non-contract users in California under contract. The Project water use is accounted for in the Decree Accounting Report. The Act also sets up a contracting process where the City of Needles would contract with the Secretary of the Interior on behalf of all users, and then the City of Needles would enter into and administer subcontracts with individual water users. The Act was amended in 2005 to authorize construction of Stage 2 of the Project to be able to deliver up to 10,000. Metropolitan Water

District (MWD) contracts for water that is not utilized by other users in accordance with the amended Act in 2005. Mr. Harris described the application and review process with the Colorado River Board. Stage 2 of the Project is currently under construction at about 70% completion with plans to have the additional wells completed by the end of 2017.

Mr. Harris also provided an overview of the status of desert energy projects in Riverside County that are operational, have been approved, or are under review. The U.S. Geological Survey Accounting Surface boundary is used to determine whether a project would be pumping water that would be impacting Colorado River water resources. The CRB staff continues to work with the California Energy Commission, Reclamation, MWD, and other stakeholders to identify feasible water conservation offset options for new projects. The goal is to support renewable energy policies while protecting Section 5 entitlement holders.

A question was asked regarding how the amended Water Supply Project Act allows MWD to take the excess water. Mr. Harris explained that MWD's provided funding for the Project in exchange for the ability to use the excess capacity. Mr. Peterson requested that future applications that are presented to the Board for approval include a map as an attachment. Ms. Plourd asked whether the Project would be an appropriate temporary water supply for transportation projects whose owner sometimes request water from IID.

ANNOUNCEMENTS

Ms. Trujillo reviewed the Bureau of Reclamation's recent announcements for the Title XVI Grant Program and other WaterSMART funding announcements. She also reminded the Board regarding the EIS process for the Lake Powell pipeline that will be starting soon.

ADJOURNMENT

With no further items to be brought before the Board, Chairman Fisher adjourned the meeting at 12:14 P.M.

Aug 01, 2016

LOWER COLORADO WATER SUPPLY REPORT

River Operations
Bureau of Reclamation

Questions: BCOOWaterops@usbr.gov

(702)293-8373

<http://www.usbr.gov/lc/region/g4000/weekly.pdf>

	PERCENT	Content 1000 ac-ft (kaf)	Elev. (Feet above mean sea level)	7-Day Release (CFS)
CURRENT STORAGE	FULL			
LAKE POWELL	56%	13,576	3618.22	15,600
* LAKE MEAD	36%	9,419	1072.75	12,200
LAKE MOHAVE	95%	1,719	643.75	11,600
LAKE HAVASU	97%	600	449.03	8,600
TOTAL SYSTEM CONTENTS **	52%	31,184		
As of 07/31/2016				
SYSTEM CONTENT LAST YEAR	53%	31,358		
* Percent based on capacity of 26,120 kaf or elevation 1219.6 feet.				
** TOTAL SYSTEM CONTENTS includes Upper & Lower Colorado River Reservoirs, less Lake Mead exclusive flood control space.				
Salt/Verde System	50%	1,140		
Painted Rock Dam	0%	0	535.10	0
Alamo Dam	4%	40	1081.48	25
Forecasted Water Use for Calendar Year 2016 (as of 08/01/2016) (values in kaf)				
NEVADA			250	
SOUTHERN NEVADA WATER SYSTEM				221
OTHERS				29
CALIFORNIA			4,163	
METROPOLITAN WATER DISTRICT OF CALIFORNIA				745
IRRIGATION DISTRICTS				3,273
OTHERS				145
ARIZONA			2,575	
CENTRAL ARIZONA PROJECT				1,435
OTHERS				1,140
TOTAL LOWER BASIN USE				6,988
DELIVERY TO MEXICO - 2016 (Mexico Scheduled Delivery + Preliminary Yearly Excess ¹)				1,515
OTHER SIGNIFICANT INFORMATION				
UNREGULATED INFLOW INTO LAKE POWELL - AUG FINAL FORECAST DATED 08/01/2016				
		MILLION ACRE-FEET	% of Normal	
FORECASTED WATER YEAR 2016		9.781	90%	
PRELIMINARY OBSERVED APRIL-JULY 2016		6.610	92%	
JULY OBSERVED INFLOW		0.595	55%	
AUGUST INFLOW FORECAST		0.350	70%	
		Upper Colorado Basin	Salt/Verde Basin	
WATER YEAR 2016 PRECIP TO DATE		95% (25.6")	86% (19.3")	
CURRENT BASIN SNOWPACK		NA% (NA)	NA% (NA)	

¹ Delivery to Mexico forecasted yearly excess calculated using year-to-date observed and projected excess.

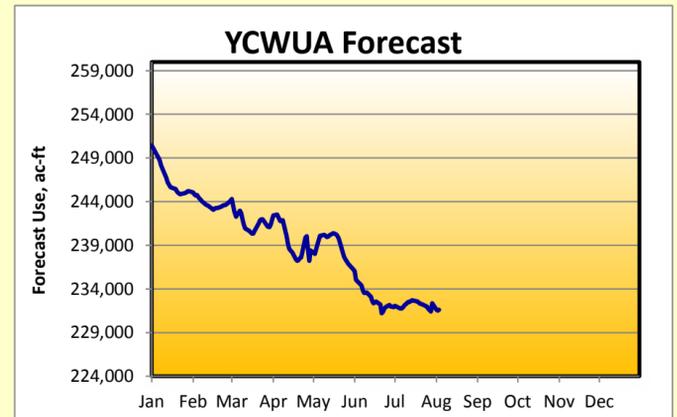
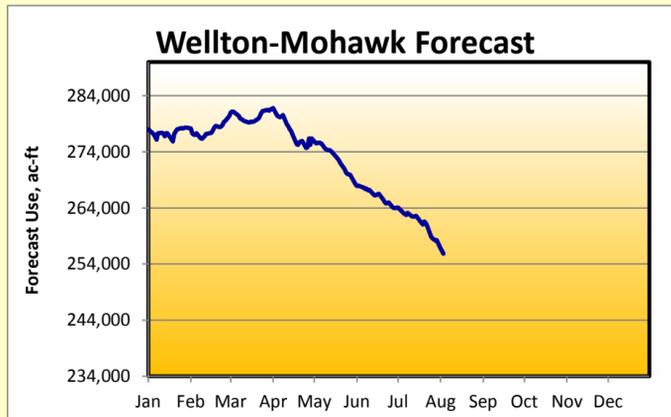
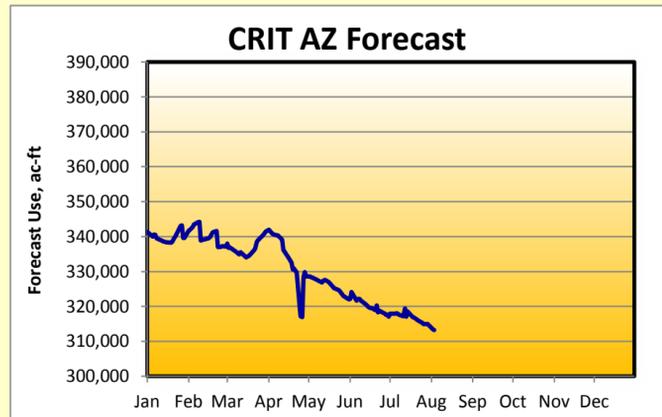
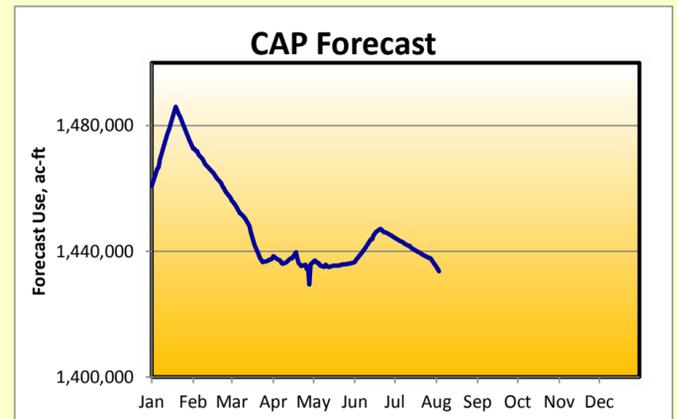
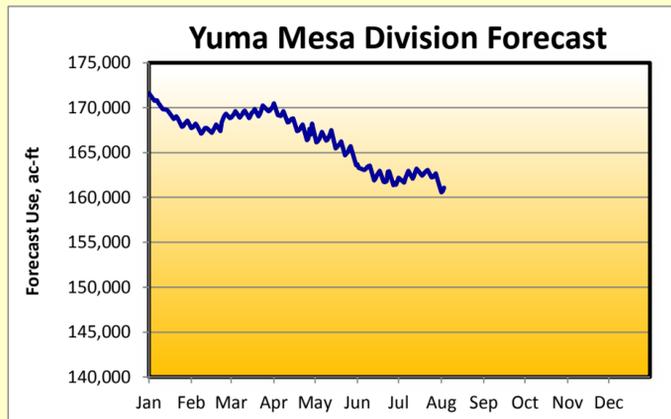
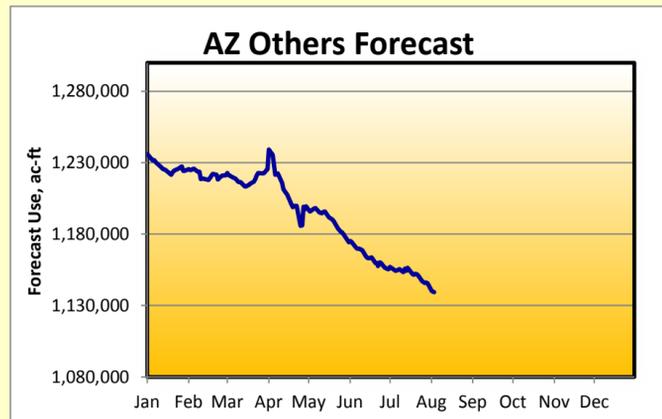
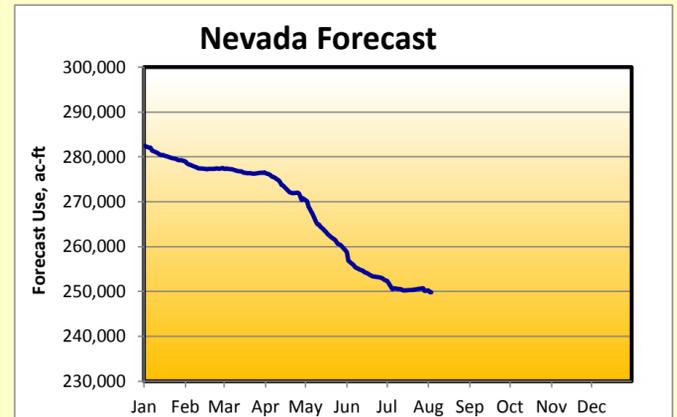
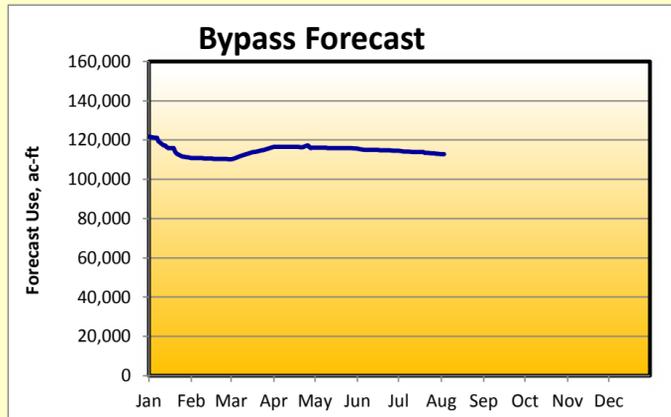
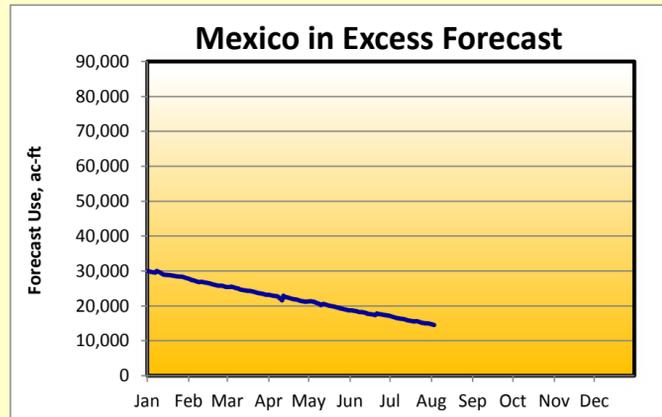
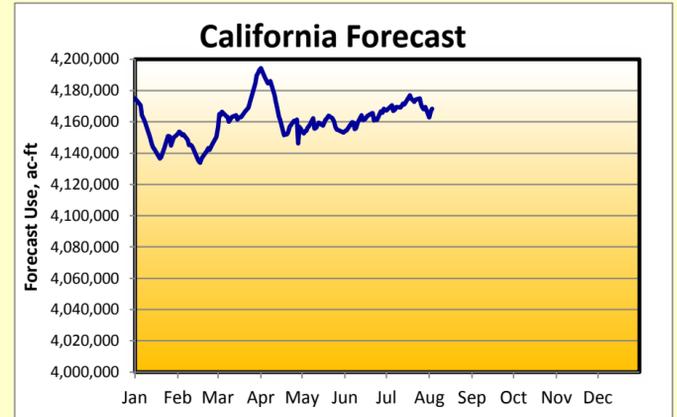
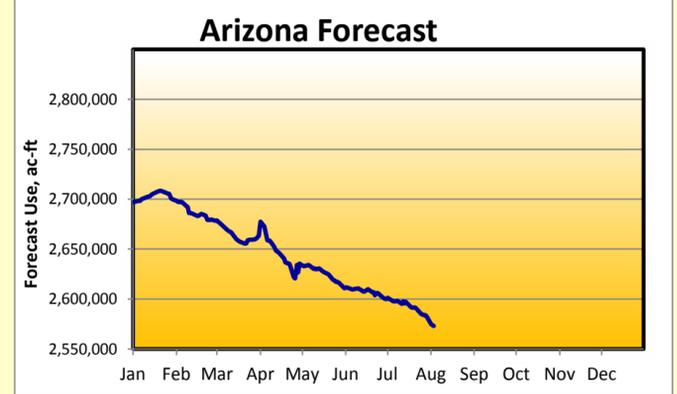
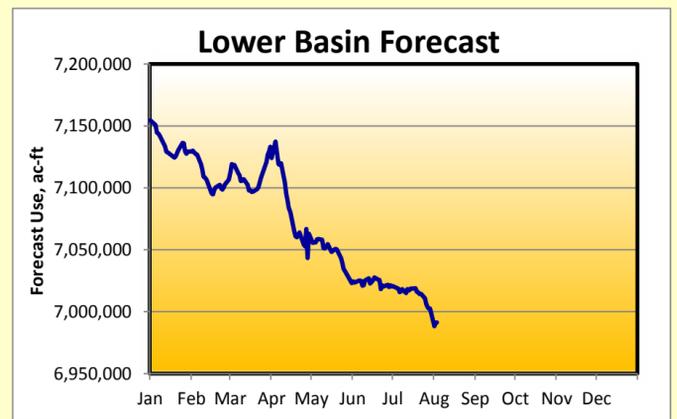
**U.S. BUREAU OF RECLAMATION
LOWER COLORADO REGION
CY 2016**

ARIZONA, CALIFORNIA, NEVADA, MEXICO
FORECAST OF END OF YEAR CONSUMPTIVE USE
FORECAST BASED ON USE TO DATE AND APPROVED ANNUAL WATER ORDERS ¹
(ACRE-FEET)

WATER USE SUMMARY

	Use To Date CY2016	Forecast Use CY2016	Approved Use ² CY2016	Excess to Approval CY2016
ARIZONA	1,641,388	2,573,119	2,625,942	-52,823
CALIFORNIA	2,754,585	4,168,471	4,175,000	-6,529
NEVADA	139,955	249,830	282,500	-32,670
STATES TOTAL ³	4,535,928	6,991,420	7,083,442	-92,022
MEXICO IN SATISFACTION OF TREATY (Including downward delivery)	1,045,350	1,514,524	1,500,000	14,524
TO MEXICO AS SCHEDULED	1,043,165	1,500,000		
MEXICO IN EXCESS OF TREATY	2,185	14,524		
BYPASS PURSUANT TO MINUTE 242	54,435	112,859		
TOTAL LOWER BASIN & MEXICO	5,635,713	8,618,803		

1/ Incorporates January through June USGS monthly data and 80 daily reporting stations which may be revised after provisional data reports are distributed by the USGS. Use to date estimated for users reporting monthly and annually.
2/ These values reflect adjusted apportionments. See Adjusted Apportionment calculation on each state page.
3/ Includes unmeasured returns based on estimated consumptive use/diversion ratios by user from studies provided by Arizona Department of Water Resources, Colorado River Board of California, and Reclamation.



Graph notes: Jan 1 forecast use is scheduled use in accordance with the Annual Operating Plan's state entitlements, available unused entitlements, and over-run paybacks. A downward sloping line indicates use at a lower rate than scheduled, upward sloping is above schedule, and a flat line indicates a use rate equal to schedule. Lower priority users such as CAP, MWD, and Robt.B.Griffith may adjust use rates to meet state entitlements as higher priority use deviates from schedule. Abrupt changes in the forecast use line may be due to a diversion schedule change or monthly updating of provisional realtime diversions.

**U.S. BUREAU OF RECLAMATION
LOWER COLORADO REGION
CY 2016**

NOTE:

- Diversions and uses that are pending approval are noted in *red italics*.
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**CALIFORNIA WATER USERS
FORECAST OF END OF YEAR CONSUMPTIVE USE
FORECAST BASED ON USE TO DATE AND APPROVED ANNUAL WATER ORDERS**

[California Schedules and Approvals](#)
[Historic Use Records \(Water Accounting Reports\)](#)

WATER USER	Use To Date CY2016	Forecast Use CY2016	Estimated Use CY2016	Excess to Estimated Use CY2016	Diversion To Date CY2016	Forecast Diversion CY2016	Approved Diversion CY2016	Excess to Approved Diversion CY2016
CALIFORNIA PUMPERS	1,170	1,761	1,761	---	2,120	3,191	3,191	0
FORT MOJAVE INDIAN RESERVATION, CA	3,987	6,511	8,995	---	7,411	12,102	16,720	-4,618
CITY OF NEEDLES (includes LCWSP use)	1,283	1,931	1,931	0	1,807	2,720	2,720	0
METROPOLITAN WATER DISTRICT	586,432	749,940	591,360	---	588,027	752,791	594,451	---
COLORADO RIVER INDIAN RESERVATION, CA	2,151	3,237	3,237	---	3,563	5,362	5,362	0
PALO VERDE IRRIGATION DISTRICT	234,450	379,008	400,192	---	482,106	818,977	868,000	-49,023
YUMA PROJECT RESERVATION DIVISION	31,987	49,733	57,009	---	59,774	98,126	107,359	-9,233
YUMA PROJECT RESERVATION DIVISION - INDIAN UNIT	---	---	---	---	30,802	49,751	52,359	-2,608
YUMA PROJECT RESERVATION DIVISION - BARD UNIT	---	---	---	---	28,972	48,375	55,000	-6,625
YUMA ISLAND PUMPERS	3,017	4,540	4,540	---	5,459	8,215	8,215	0
FORT YUMA INDIAN RESERVATION - RANCH 5	441	663	663	---	798	1,201	1,201	0
IMPERIAL IRRIGATION DISTRICT	1,594,308	2,480,003	<i>2,612,400</i>	-132,397	1,561,953	2,501,489	<i>2,727,875</i>	---
SALTON SEA SALINITY MANAGEMENT	78,134	130,000	130,000	0	80,360	136,420	136,420	---
COACHELLA VALLEY WATER DISTRICT	216,620	360,233	362,000	-1,767	224,444	376,942	378,869	---
OTHER LCWSP CONTRACTORS	484	728	728	---	765	1,152	1,152	0
CITY OF WINTERHAVEN	45	68	68	---	65	98	98	0
CHEMEHUEVI INDIAN RESERVATION	76	115	115	---	7,535	11,340	11,340	0
TOTAL CALIFORNIA	2,754,585	4,168,471			3,026,187	4,730,126	4,862,973	

CALIFORNIA ADJUSTED APPORTIONMENT CALCULATION

California Basic Apportionment	4,400,000
Conservation for Salton Sea Restoration - 2010 ¹	
Creation of Extraordinary Conservation ICS (IID)	-25,000
Creation of Extraordinary Conservation ICS (MWD)	-200,000
Total State Adjusted Apportionment	4,175,000
Excess to Total State Adjusted Apportionment	-6,529

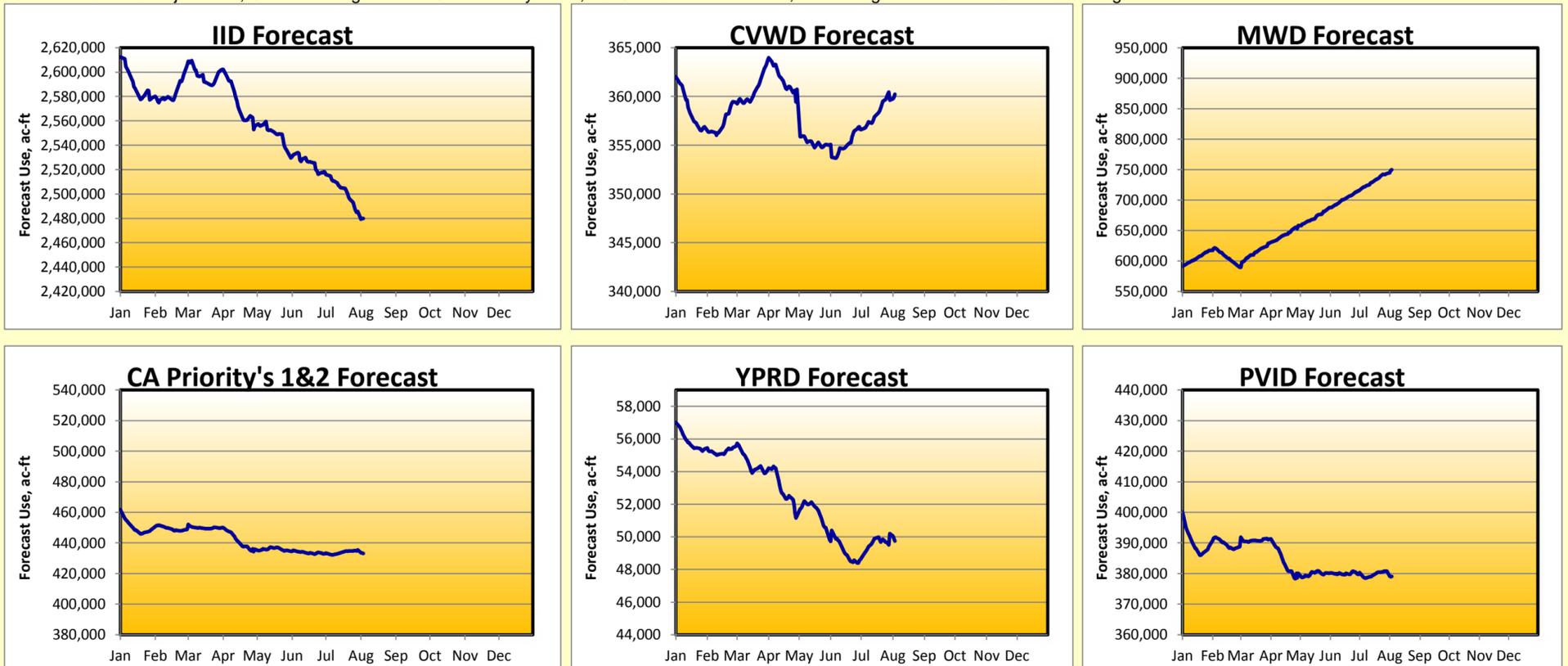
ISG ANNUAL TARGET COMPARISON CALCULATION

Priorities 1, 2, 3b Use (PVID+YPRD+Island+PVID Mesa)	433,281
MWD Adjustment	-13,281
Total California Agricultural Use (PVID+YPRD+Island+IID+CVWD)	3,273,517
California Agricultural Paybacks	0
Misc. PPRs Covered by IID and CVWD	14,500
California ICS Creation (IID ICS)	25,000
Total Use for Target Comparison ²	3,299,736
ISG Annual Target (Exhibit B)	3,440,000
Amount over/(under) ISG Annual Target	-140,264

NOTES: Click on California Schedules and Approvals above for incoming diversion schedules and approvals.

1/ Pending approval by Imperial Irrigation District's Board of Directors.

2/ Includes MWD Adjustment, California Agricultural Use and Paybacks, IID-CVWD covered PPRs, and taking out the MWD-CVWD Exchange



**U.S. BUREAU OF RECLAMATION
LOWER COLORADO REGION
CY 2016**

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ARIZONA WATER USERS
FORECAST OF END OF YEAR CONSUMPTIVE USE
FORECAST BASED ON USE TO DATE AND APPROVED ANNUAL WATER ORDERS

[Arizona Schedules and Approvals](#)
[Historic Use Records \(Water Accounting Reports\)](#)

WATER USER	Use To Date CY2016	Forecast Use CY2016	Estimated Use CY2016	Excess to Estimated Use CY2016	Diversion To Date CY2016	Forecast Diversion CY2016	Approved Diversion CY2016	Excess to Approved Diversion CY2016
ARIZONA PUMPERS	10,953	16,484	16,484	---	16,961	25,525	25,525	0
LAKE MEAD NRA, AZ - Diversions from Lake Mead	65	136	136	---	65	136	136	0
LAKE MEAD NRA, AZ - Diversions from Lake Mohave	94	171	171	---	94	171	171	0
DAVIS DAM PROJECT	1	2	2	---	37	56	56	0
BULLHEAD CITY	3,899	7,530	8,523	---	5,818	11,237	12,720	-1,483
MOHAVE WATER CONSERVATION	393	592	592	---	585	881	881	0
BROOKE WATER LLC	140	210	210	---	209	314	314	0
MOHAVE VALLEY IDD	11,836	20,588	21,549	---	21,918	38,125	39,905	-1,780
FORT MOJAVE INDIAN RESERVATION, AZ	22,704	38,451	47,790	---	42,044	71,206	88,500	-17,294
GOLDEN SHORES WATER CONSERVATION DISTRICT	210	316	316	---	314	472	472	0
HAVASU NATIONAL WILDLIFE REFUGE	3,251	4,210	3,563	---	27,101	38,342	41,820	-3,478
LAKE HAVASU CITY	4,584	8,124	8,370	---	7,395	13,104	13,500	-396
CENTRAL ARIZONA PROJECT	907,448	1,433,699	---	---	907,448	1,433,699	---	---
TOWN OF PARKER	196	360	392	---	470	853	916	-63
COLORADO RIVER INDIAN RESERVATION, AZ	213,672	313,224	341,393	---	371,845	608,910	662,402	-53,492
EHRENBURG IMPROVEMENT ASSOCIATION	150	226	226	---	211	318	318	0
CIBOLA VALLEY IRRIGATION DISTRICT	11,441	17,218	17,218	---	15,997	24,074	24,074	0
CIBOLA NATIONAL WILDLIFE REFUGE	8,466	12,741	12,741	0	13,655	20,550	20,550	0
IMPERIAL NATIONAL WILDLIFE REFUGE	2,006	3,019	3,019	0	3,235	4,868	4,868	0
BLM PERMITEES (PARKER DAM to IMPERIAL DAM)	654	984	984	---	1,007	1,516	1,516	---
YUMA PROVING GROUND	272	465	508	---	272	465	508	-43
GILA MONSTER FARMS	2,071	3,501	5,271	---	3,732	6,263	9,156	-2,893
WELLTON-MOHAWK IDD	163,210	255,841	278,000	-22,159	236,396	393,662	424,350	-30,688
BLM PERMITEES (BELOW IMPERIAL DAM)	57	86	86	0	88	132	132	0
CITY OF YUMA	8,208	14,650	16,036	-1,386	14,331	25,795	27,583	-1,788
MARINE CORPS AIR STATION YUMA	799	1,370	1,385	---	799	1,370	1,385	-15
UNION PACIFIC RAILROAD	14	24	24	---	28	48	48	0
UNIVERSITY OF ARIZONA	489	765	690	---	489	765	690	75
YUMA UNION HIGH SCHOOL DISTRICT	97	155	151	---	130	207	200	7
DESERT LAWN MEMORIAL	58	87	87	---	82	123	123	0
NORTH GILA VALLEY IDD	8,051	10,745	10,929	---	26,609	41,961	44,000	-2,039
YUMA IRRIGATION DISTRICT	24,471	38,460	40,822	---	45,027	71,633	75,100	-3,467
YUMA MESA IDD	68,360	111,895	119,859	---	118,616	191,360	202,464	-11,104
UNIT "B" IRRIGATION DISTRICT	11,836	20,078	21,037	---	17,024	28,479	29,800	-1,321
FORT YUMA INDIAN RESERVATION	925	1,392	1,392	---	1,422	2,140	2,140	0
YUMA COUNTY WATER USERS' ASSOCIATION	149,165	231,611	250,443	---	218,329	359,781	386,000	-26,219
COCOPA INDIAN RESERVATION	1,125	3,683	5,778	---	1,206	5,185	8,960	-3,775
RECLAMATION-YUMA AREA OFFICE	17	26	26	---	17	26	26	0
RETURN FROM SOUTH GILA WELLS	---	---	---	---	---	---	---	---
TOTAL ARIZONA	1,641,388	2,573,119	2,696,968		2,121,006	3,423,752	3,612,074	
CAP	907,448	1,433,699	---	---	---	1,433,699	---	---
ALL OTHERS	733,940	1,139,420	1,236,203	---	---	1,990,053	2,151,309	---
YUMA MESA DIVISION, GILA PROJECT	100,882	161,100	171,610	-10,510	---	304,954	---	---

ARIZONA ADJUSTED APPORTIONMENT CALCULATION

Arizona Basic Apportionment	2,800,000
Creation of Protection Volume - CAWCD ¹	-134,860
Creation of Protection Volume - Reclamation ²	-13,933
System Conservation Water - CAWCD ³	-25,265
Total State Adjusted Apportionment	2,625,942
Excess to Total State Adjusted Apportionment	-52,823
Estimated Allowable Use for CAP	1,487,248

1/ In 2016, CAWCD intends to conserve no less than *134,860* AF of Colorado River water as part of its commitment under the 2014 Memorandum of Understanding for Pilot Drought Response Actions
 2/ On October 6, 2015, the Fort McDowell Yavapai Nation (Nation) and Reclamation entered into a Drought Response Agreement in which the Nation agreed to forego delivery of 13,933 AF of the Nation's CAP water entitlement in 2016. Reclamation intends to apply this volume of water toward its commitment under the MOU.
 3/ On March 17, 2016, Reclamation and CAWCD entered into a System Conservation Implementation Agreement (SCIA) under the Pilot System Conservation Program. In accordance with the SCIA, CAWCD agreed to create System Conservation Water by forbearing from remarketing 25,265 AF of CAP water within the CAP service area for delivery in 2016.

NOTES: Click on Arizona Schedules and Approvals above for incoming diversion schedules and approvals.

**U.S. BUREAU OF RECLAMATION
LOWER COLORADO REGION
CY 2016**

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NEVADA WATER USERS
FORECAST OF END OF YEAR CONSUMPTIVE USE
FORECAST BASED ON USE TO DATE AND APPROVED ANNUAL WATER ORDERS

[Nevada Schedules and Approvals](#)
[Historic Use Records \(Water Accounting Reports\)](#)

<u>WATER USER</u>	<u>Use To Date CY2016</u>	<u>Forecast Use CY2016</u>	<u>Estimated Use CY2016</u>	<u>Excess to Estimated Use CY2016</u>	<u>Diversion To Date CY2016</u>	<u>Forecast Diversion CY2016</u>	<u>Approved Diversion CY2016</u>	<u>Excess to Approved Diversion CY2016</u>
ROBERT B. GRIFFITH WATER PROJECT (SNWS)	250,035	425,340	438,176	-12,836	250,035	425,340	438,176	-12,836
LAKE MEAD NRA, NV - Diversions from Lake Mead	212	362	403	---	212	362	403	-41
LAKE MEAD NRA, NV - Diversions from Lake Mohave	91	154	152	---	91	154	152	2
BASIC MANAGEMENT INC.	3,256	6,984	8,208	---	3,256	6,984	8,208	-1,224
CITY OF HENDERSON (BMI DELIVERY)	7,493	14,037	15,878	---	7,493	14,037	15,878	-1,841
NEVADA STATE DEPT. OF FISH & GAME	6	11	12	-1	326	479	405	---
PACIFIC COAST BUILDING PRODUCTS INC.	541	936	928	---	541	936	928	8
BOULDER CANYON PROJECT	115	173	173	---	199	300	300	0
BIG BEND WATER DISTRICT	1,398	3,552	5,355	---	2,916	6,952	10,000	-3,048
FORT MOJAVE INDIAN TRIBE	1,875	3,189	3,886	---	2,798	4,760	5,800	-1,040
LAS VEGAS WASH RETURN FLOWS	-125,067	-204,908	-190,671	---				
TOTAL NEVADA	139,955	249,830	282,500	-12,837	267,867	460,304	480,250	-20,020
SOUTHERN NEVADA WATER SYSTEM (SNWS)	124,968	220,432				425,340		
ALL OTHERS	14,987	29,398				34,964		
NEVADA USES ABOVE HOOVER	136,682	243,089				448,592		
NEVADA USES BELOW HOOVER	3,273	6,741				11,712		

Tributary Conservation & Imported Intentionally Created Surplus

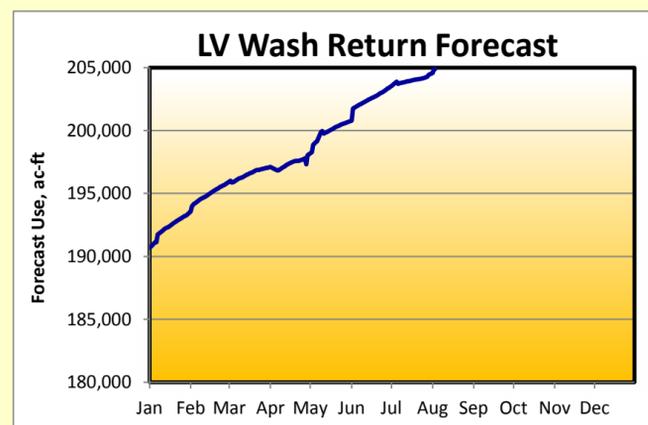
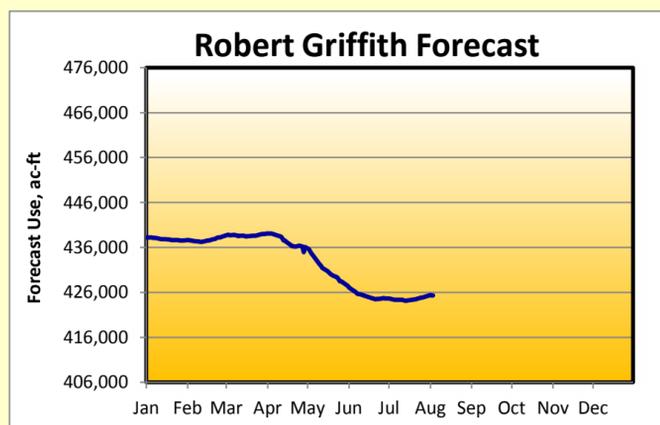
Total Requested Tributary Conservation Intentionally Created Surplus	29,500
Total Requested Imported Conservation Intentionally Created Surplus	9,000
5% System Cut for Creation of Intentionally Created Surplus	-1,925
Total Intentionally Created Surplus Left in Lake Mead	36,575

Pilot System Conservation Program

Tributary Conservation - Left in Lake Mead ¹	7,500
---	-------

NEVADA ADJUSTED APPORTIONMENT CALCULATION

Nevada Basic Apportionment	300,000
Creation of Protection Volume ²	-17,500
Total State Adjusted Apportionment	282,500
Excess to Total State Adjusted Apportionment	-32,670



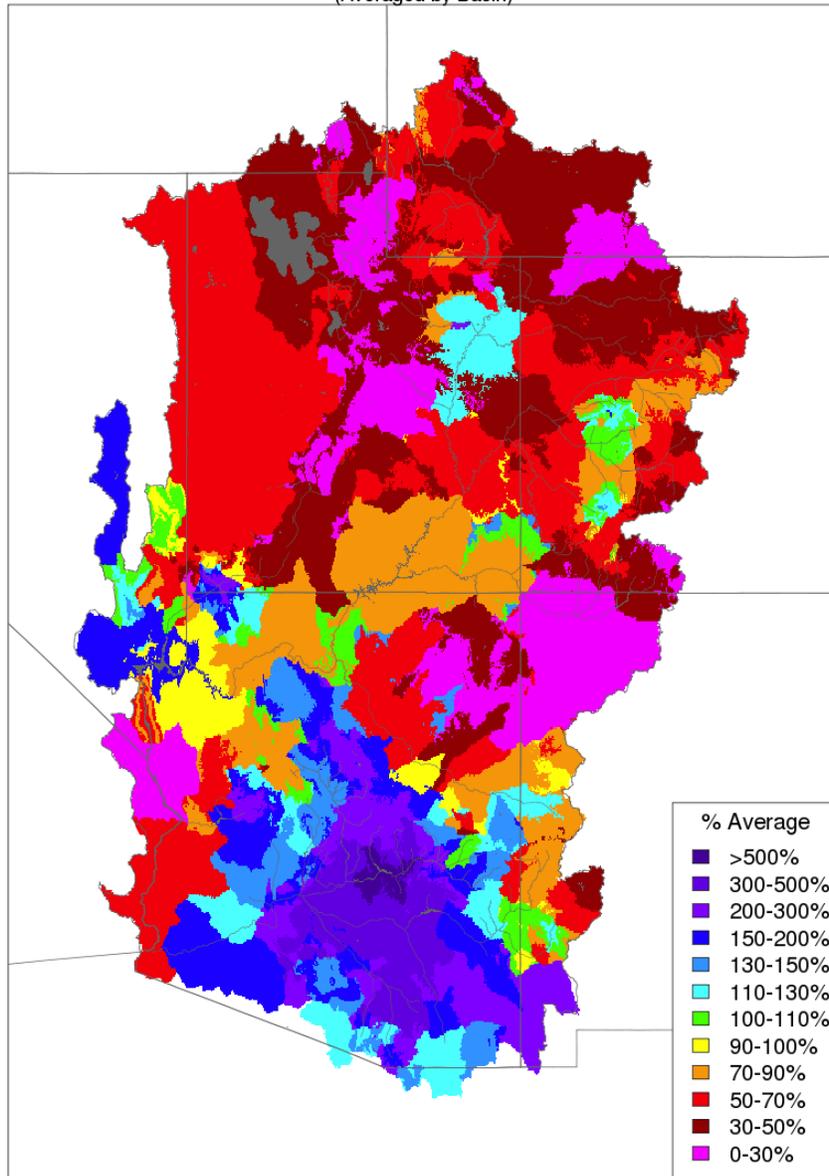
1/ On June 4, 2015, Reclamation and SNWA entered into a System Conservation Implementation Agreement in which SNWA agreed to conserve 7,500 AF of Colorado River water from its Tributary Conservation projects to create System Conservation Water.

2/ In 2016, Nevada anticipates leaving 17,500 AF of its basic apportionment in Lake Mead by forgoing off-stream storage as part of SNWA's commitment under the 2014 Memorandum of Understanding for Pilot Drought Response Actions.

NOTES: Click on Nevada Schedules and Approvals above for incoming diversion schedules and approvals.

Monthly Precipitation - June 2016

(Averaged by Basin)



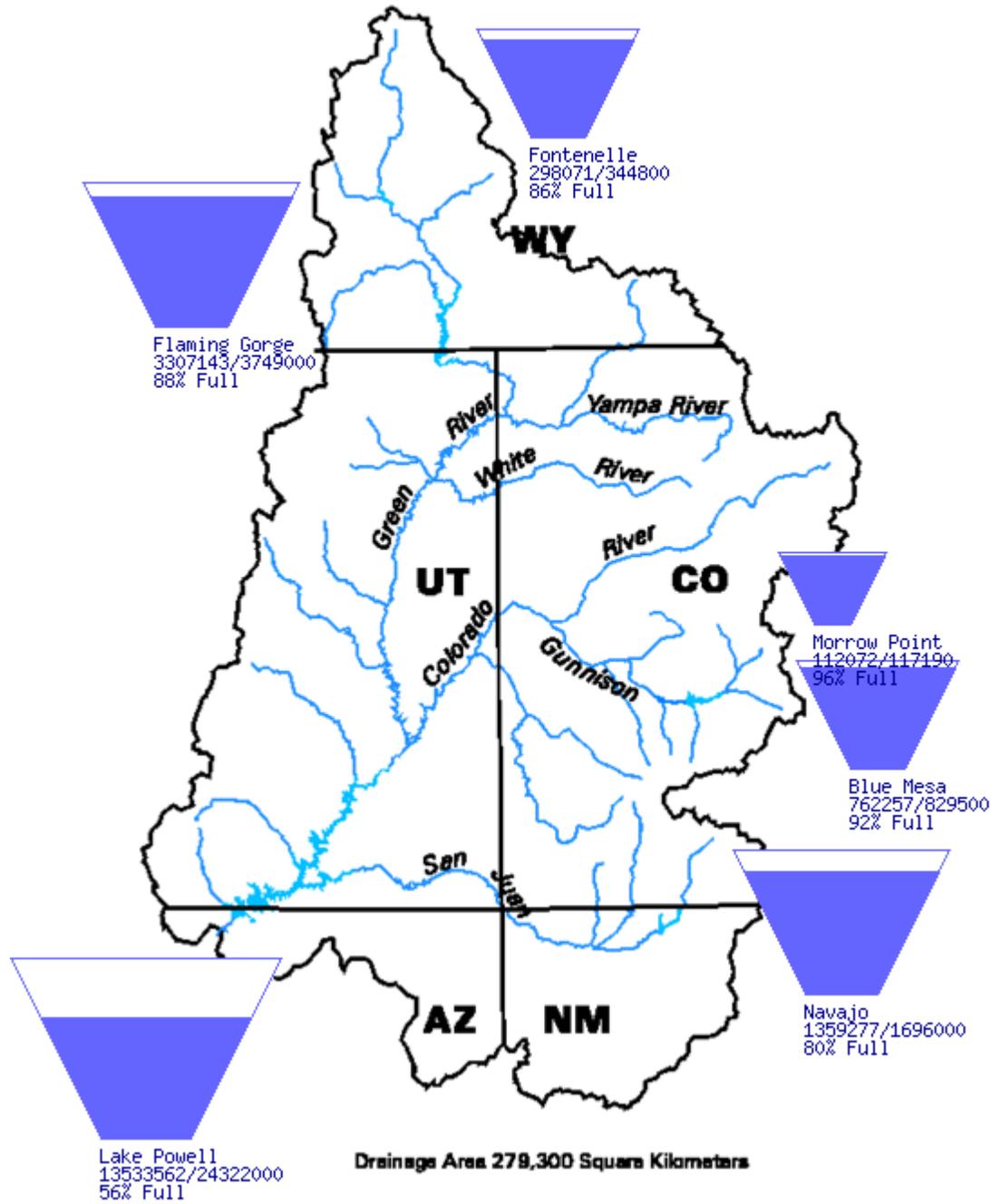
Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

Upper Colorado Region Water Resources Group

River Basin Tea-Cup Diagrams

Data Current as of:
08/02/2016

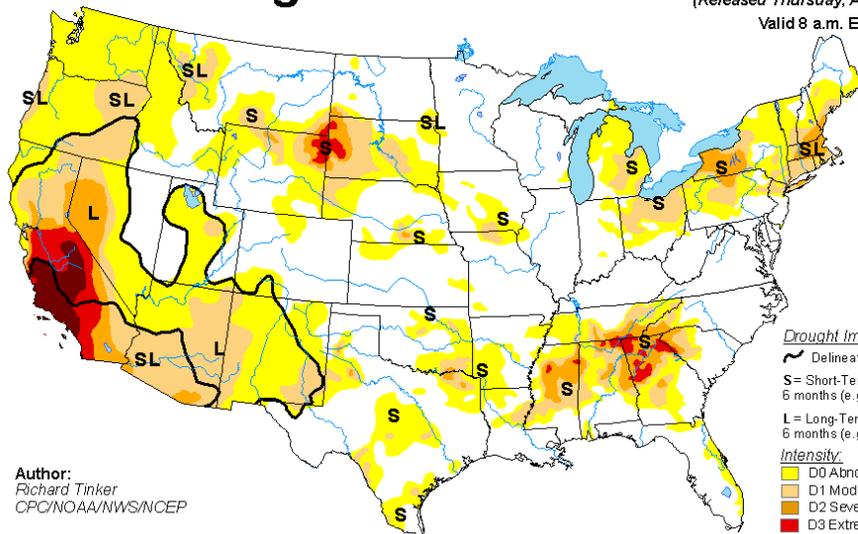
Upper Colorado River Drainage Basin



USDA United States Drought Monitor Map

U.S. Drought Monitor

August 2, 2016
 (Released Thursday, Aug. 4, 2016)
 Valid 8 a.m. EDT



Author:
 Richard Tinker
 CPC/NOAA/NWS/NCEP

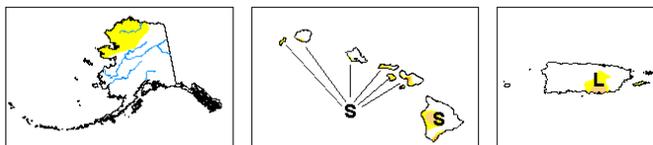
Drought Impact Types:

- ~ Delineates dominant impacts
- S= Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L= Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

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

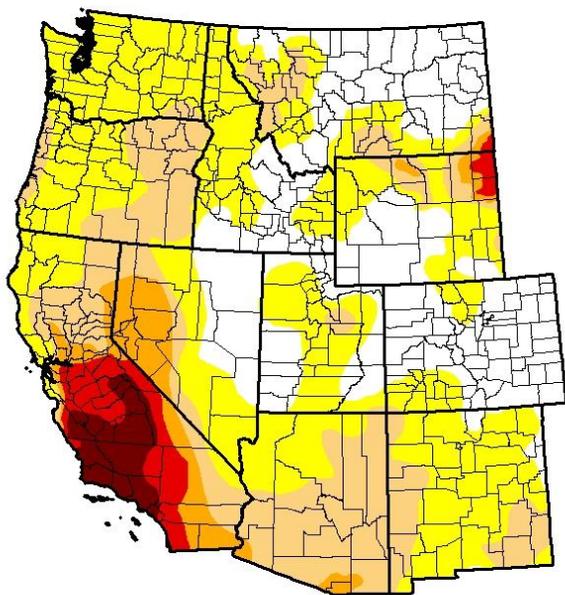
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor West

August 2, 2016
 (Released Thursday, Aug. 4, 2016)
 Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	27.57	72.43	32.16	11.10	6.09	2.81
Last Week 7/26/2016	27.68	72.32	31.64	11.60	6.18	2.81
3 Months Ago 5/5/2016	43.75	56.25	33.05	13.85	8.71	2.81
Start of Calendar Year 12/29/2015	33.17	66.83	45.07	29.30	15.92	6.85
Start of Water Year 9/29/2015	22.77	77.23	57.81	42.42	26.50	7.62
One Year Ago 8/4/2015	26.53	73.47	60.09	42.99	22.24	7.17

Intensity:

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

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

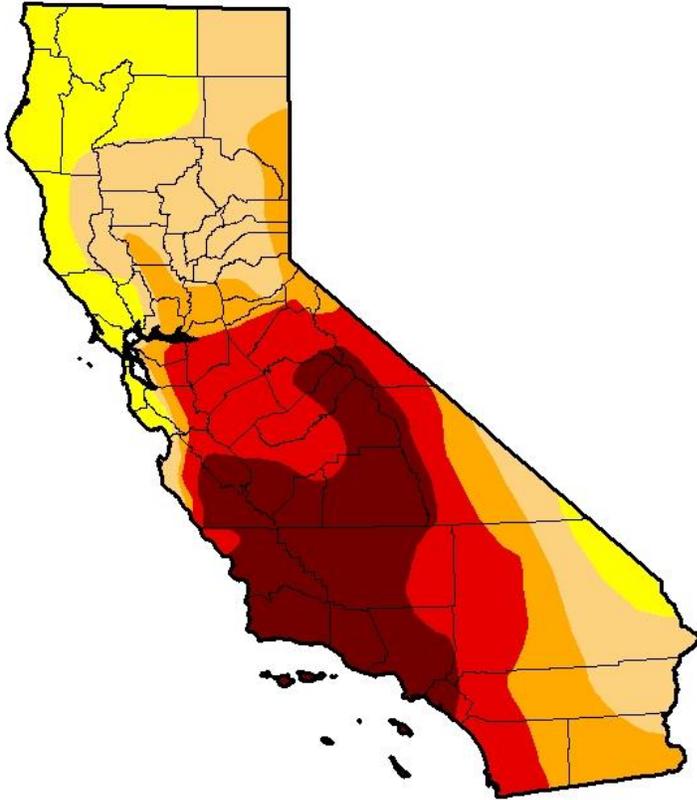
Author:
 Richard Tinker
 CPC/NOAA/NWS/NCEP



<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor California

August 2, 2016
(Released Thursday, Aug. 4, 2016)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	83.59	59.02	42.80	21.04
Last Week <i>7/26/2016</i>	0.00	100.00	83.59	59.02	42.80	21.04
3 Months Ago <i>5/3/2016</i>	4.27	95.73	89.68	74.37	49.15	21.04
Start of Calendar Year <i>12/29/2015</i>	0.00	100.00	97.33	87.55	69.07	44.84
Start of Water Year <i>8/29/2015</i>	0.14	99.86	97.33	92.36	71.08	46.00
One Year Ago <i>8/4/2015</i>	0.14	99.86	97.35	94.59	71.08	46.00

Intensity:

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

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

Author:
Richard Tinker
CPC/NOAA/NWS/NCEP



<http://droughtmonitor.unl.edu/>

RECLAMATION

Managing Water in the West

2017 Colorado River Annual Operating Plan

**Colorado River Management Work Group
Second Consultation
July 28, 2016**



U.S. Department of the Interior
Bureau of Reclamation

Projected Operations Water Years 2016 and 2017

RECLAMATION

Lake Powell & Lake Mead Operational Table

Operational Tiers for Water Year/Calendar Year 2016¹

Lake Powell			Lake Mead		
Elevation (feet)	Operation According to the Interim Guidelines	Live Storage (maf) ¹	Elevation (feet)	Operation According to the Interim Guidelines	Live Storage (maf) ¹
3,700	Equalization Tier Equalize, avoid spills or release 8.23 maf	24.3	1,220	Flood Control Surplus or Quantified Surplus Condition Deliver > 7.5 maf	25.9
3,636 - 3,666 (2008-2026)	Upper Elevation Balancing Tier ² Release 8.23 maf; if Lake Mead < 1,075 feet, balance contents with a min/max release of 7.0 and 9.0 maf	15.5 - 19.3 (2008-2026)	1,200 (approx.) ²	Domestic Surplus or ICS Surplus Condition Deliver > 7.5 maf	22.9 (approx.) ²
3,575	Mid-Elevation Release Tier Release 7.48 maf; if Lake Mead < 1,025 feet, release 8.23 maf	9.5	1,145	Normal or ICS Surplus Condition Deliver ≥ 7.5 maf	15.9
3,525	Lower Elevation Balancing Tier Balance contents with a min/max release of 7.0 and 9.5 maf	5.9	1,105	Shortage Condition Deliver 7.167 ³ maf	11.9
3,490		4.0	1,075	Shortage Condition Deliver 7.083 ³ maf	9.4
3,370		0	1,050	Shortage Condition Deliver 7.0 ⁴ maf Further measures may be undertaken ⁷	7.5
			1,025		5.8
			1,000		4.3
			895		0

Diagram not to scale

¹ Acronym for million acre-feet

² This elevation is shown as approximate as it is determined each year by considering several factors including Lake Powell and Lake Mead storage, projected Upper Basin and Lower Basin demands, and an assumed inflow.

³ Subject to April adjustments which may result in a release according to the Equalization Tier

⁴ Of which 2.48 maf is apportioned to Arizona, 4.4 maf to California, and 0.287 maf to Nevada

⁵ Of which 2.40 maf is apportioned to Arizona, 4.4 maf to California, and 0.283 maf to Nevada

⁶ Of which 2.32 maf is apportioned to Arizona, 4.4 maf to California, and 0.280 maf to Nevada

⁷ Whenever Lake Mead is below elevation 1,025 feet, the Secretary shall consider whether hydrologic conditions together with anticipated deliveries to the Lower Division States and Mexico is likely to cause the elevation at Lake Mead to fall below 1,000 feet. Such consideration, in consultation with the Basin States, may result in the undertaking of further measures, consistent with applicable Federal law.

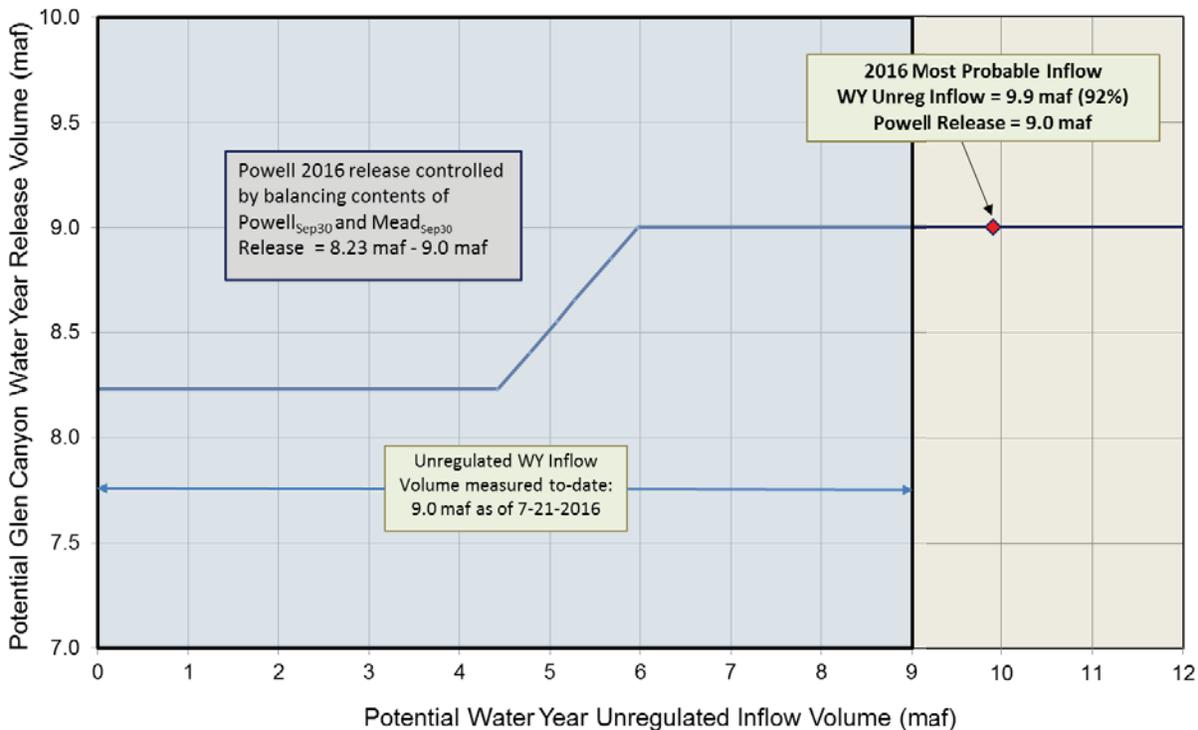
¹ Lake Powell and Lake Mead operational tier determinations were based on August 2015 24-Month Study projections and documented in the 2016 AOP.

RECLAMATION

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Potential Lake Powell Release Scenarios

Water Year 2016 Release Volume as a Function of Unregulated Inflow Volume based on July 2016 24-Month Study Conditions

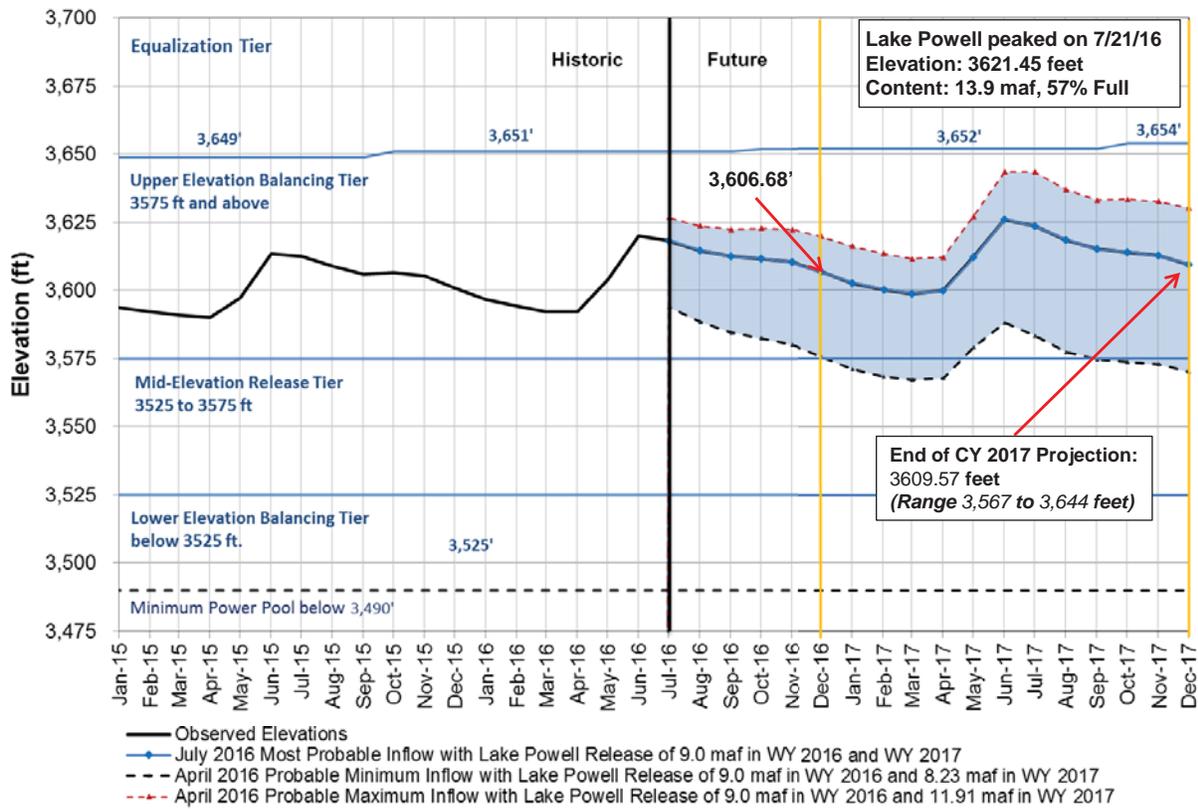


RECLAMATION

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Lake Powell End of Month Elevations

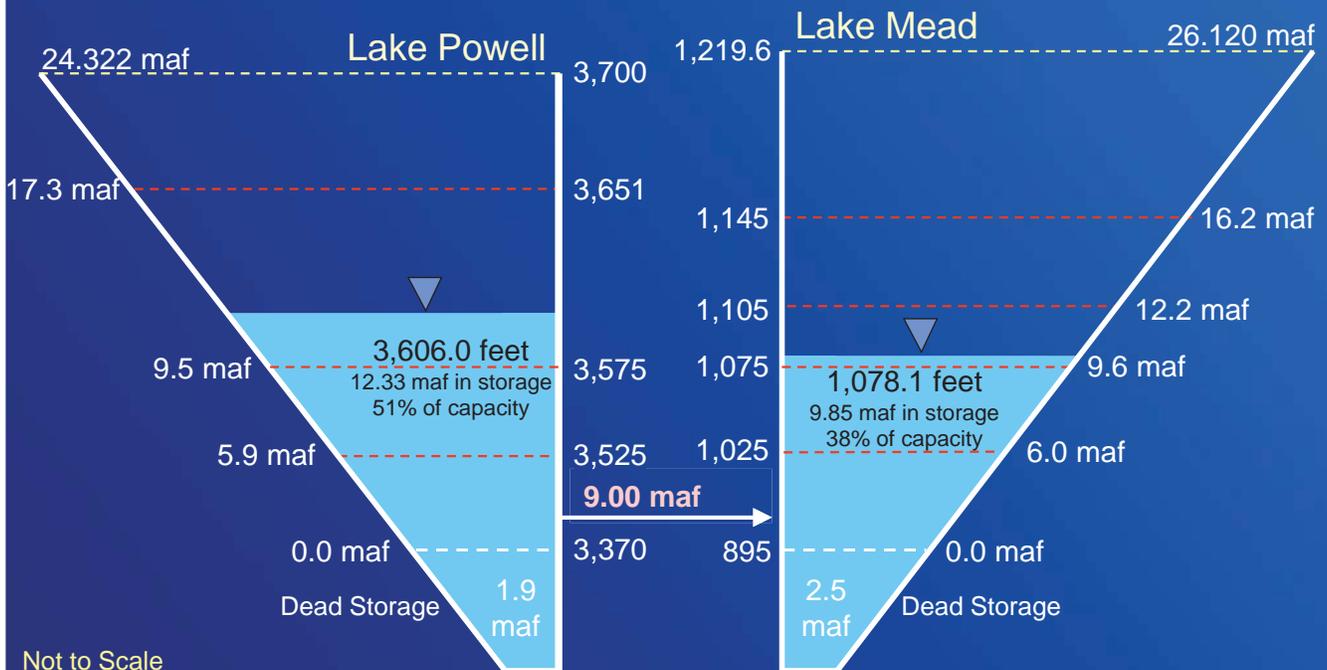
Historic and Projected based on July 2016 Modeling



End of Water Year 2015

September 30, 2015

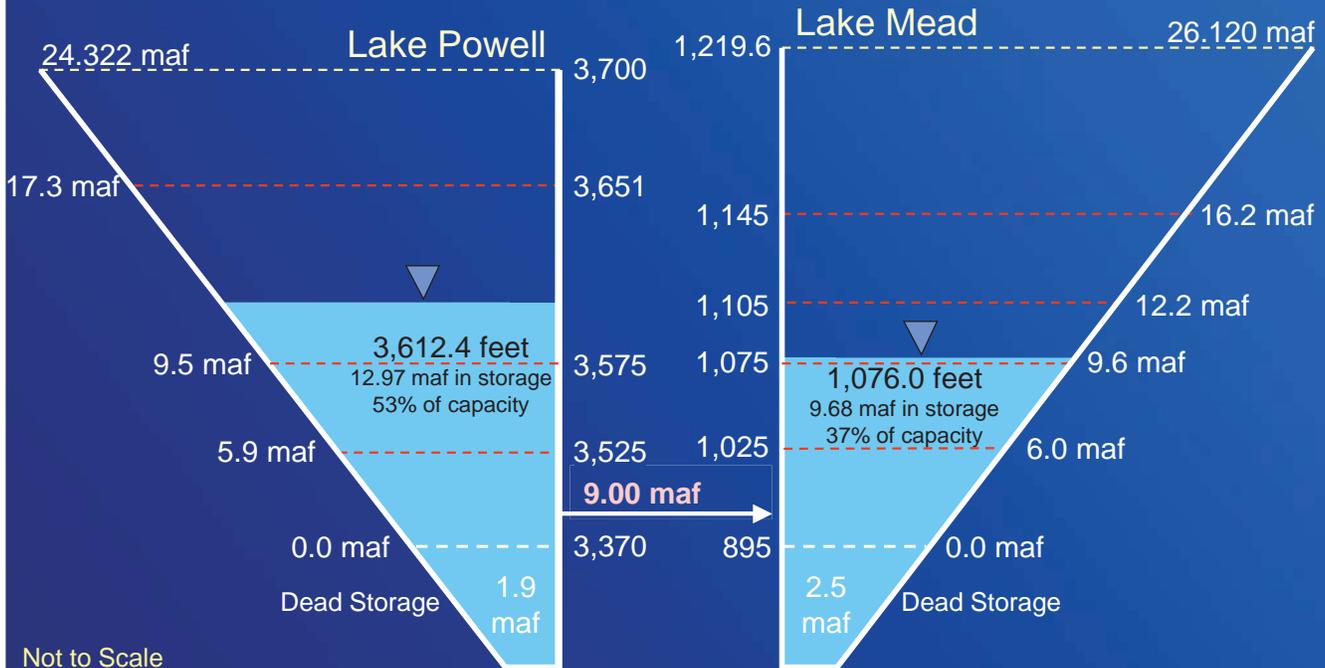
Unregulated Inflow into Powell = 10.17 maf (94% of average)



End of Water Year 2016 Projections

July 2016 24-Month Study Most Probable Inflow Scenario¹

Projected Unregulated Inflow into Powell¹ = 9.92 maf (92% of average)



Not to Scale

¹ WY 2016 unregulated inflow into Lake Powell is based on the CBRFC forecast dated 7/1/16.

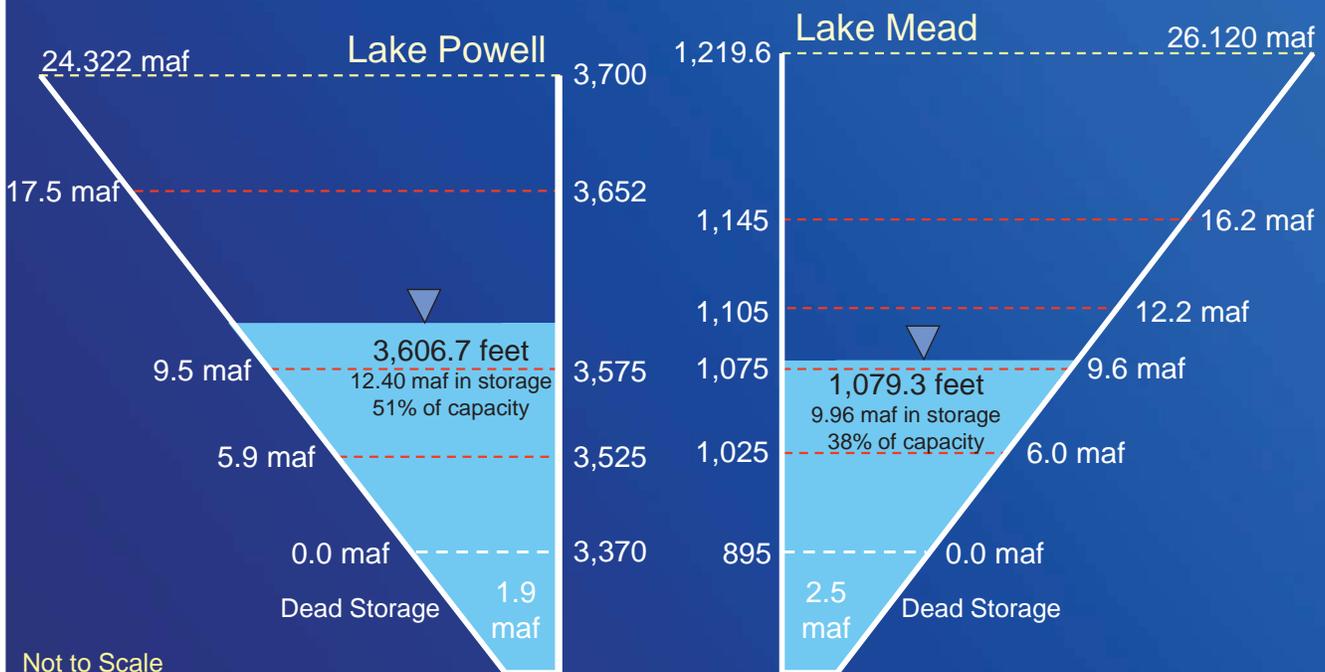
13

RECLAMATION

End of Calendar Year 2016 Projections

July 2016 24-Month Study Most Probable Inflow Scenario¹

Based on a 9.00 maf release pattern from Lake Powell in Water Year 2017



Not to Scale

¹ WY 2016 unregulated inflow into Lake Powell is based on the CBRFC forecast dated 7/1/16.

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RECLAMATION

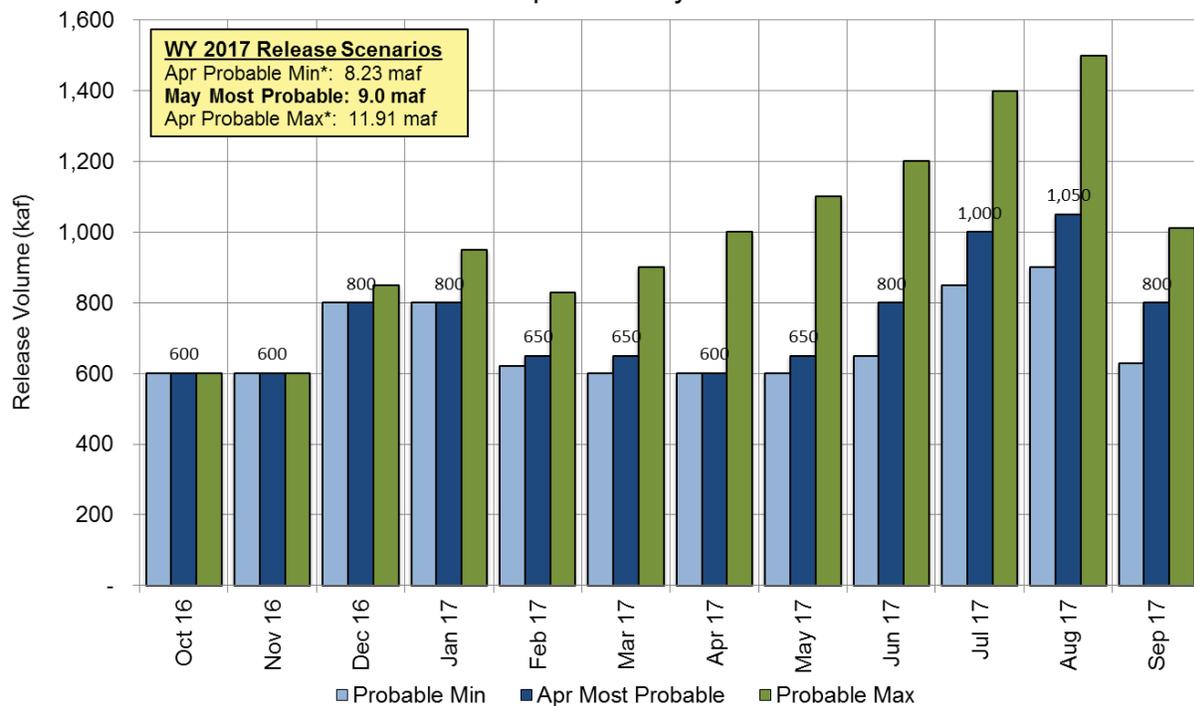
Lake Powell 2017 Operating Tier Scenarios

Based on April and July 2016 modeling

Inflow Scenario	Operating Tier Release Volume
Minimum Probable	Upper Elevation Balancing 8.23 maf
Most Probable	Upper Elevation Balancing 9.0 maf
Maximum Probable	Upper Elevation Balancing 11.91 maf

Projected Lake Powell Monthly Release Volume Distribution

Release Scenarios for Water Year 2017
Updated May 2016



* Probable Min and Max annual release volume is based on April Min and Max inflow forecasts



Lower Colorado River Basin Hydrology and Operations

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Lake Powell & Lake Mead Operational Table

Operational Tiers for Water Year/Calendar Year 2016¹

Lake Powell			Lake Mead		
Elevation (feet)	Operation According to the Interim Guidelines	Live Storage (maf) ¹	Elevation (feet)	Operation According to the Interim Guidelines	Live Storage (maf) ¹
3,700	Equalization Tier Equalize, avoid spills or release 8.23 maf	24.3	1,220	Flood Control Surplus or Quantified Surplus Condition Deliver > 7.5 maf	25.9
3,636 - 3,666 (2008-2026)	Upper Elevation Balancing Tier ² Release 8.23 maf; if Lake Mead < 1,075 feet, balance contents with a min/max release of 7.0 and 9.0 maf	15.5 - 19.3 (2008-2026)	1,200 (approx.) ²	Domestic Surplus or ICS Surplus Condition Deliver > 7.5 maf	22.9 (approx.) ²
			1,145	Normal or ICS Surplus Condition Deliver ≥ 7.5 maf	15.9
3,675	Mid-Elevation Release Tier Release 7.48 maf; if Lake Mead < 1,025 feet, release 8.23 maf	9.5	1,105		11.9
3,625	Lower Elevation Balancing Tier Balance contents with a min/max release of 7.0 and 9.5 maf	5.9	1,075	Shortage Condition Deliver 7.167 ³ maf	9.4
			1,050	Shortage Condition Deliver 7.083 ³ maf	7.5
3,490		4.0	1,025	Shortage Condition Deliver 7.0 ⁴ maf Further measures may be undertaken ⁷	5.8
3,370		0	1,000		4.3
			895		0

Diagram not to scale

¹ Acronym for million acre-feet

² This elevation is shown as approximate as it is determined each year by considering several factors including Lake Powell and Lake Mead storage, projected Upper Basin and Lower Basin demands, and an assumed inflow.

³ Subject to April adjustments which may result in a release according to the Equalization Tier

⁴ Of which 2.48 maf is apportioned to Arizona, 4.4 maf to California, and 0.287 maf to Nevada

⁵ Of which 2.40 maf is apportioned to Arizona, 4.4 maf to California, and 0.283 maf to Nevada

⁶ Of which 2.32 maf is apportioned to Arizona, 4.4 maf to California, and 0.280 maf to Nevada

⁷ Whenever Lake Mead is below elevation 1,025 feet, the Secretary shall consider whether hydrologic conditions together with anticipated deliveries to the Lower Division States and Mexico is likely to cause the elevation at Lake Mead to fall below 1,000 feet. Such consideration, in consultation with the Basin States, may result in the undertaking of further measures, consistent with applicable Federal law.

¹ Lake Powell and Lake Mead operational tier determinations were based on August 2015 24-Month Study projections and documented in the 2016 AOP.

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Colorado River Basin Storage (as of July 24, 2016)

Current Storage	Percent Full	MAF	Elevation (Feet)
Lake Powell	56%	13.70	3,619.4
Lake Mead	36%	9.38	1,072.2
Total System Storage*	53%	31.31	NA

*Total system storage was 31.45 maf or 53% this time last year

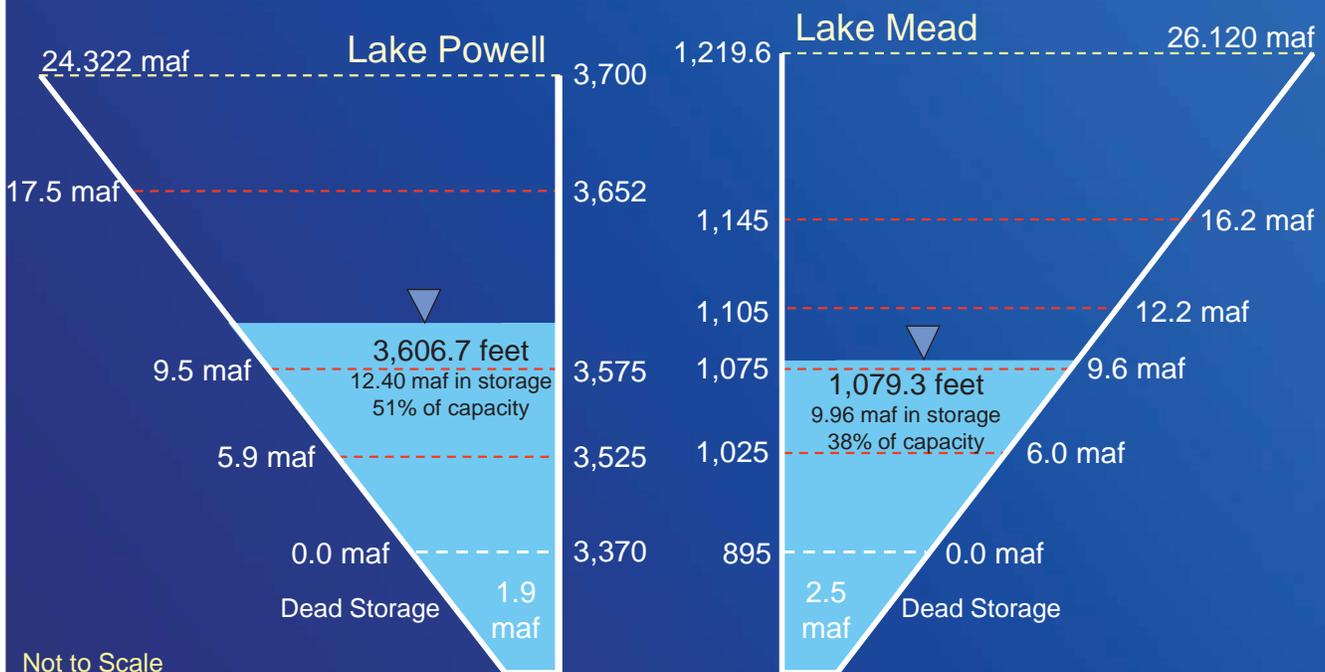
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End of Calendar Year 2016 Projections

July 2016 24-Month Study Most Probable Inflow Scenario¹

Based on a 9.00 maf release pattern from Lake Powell in Water Year 2017



Not to Scale

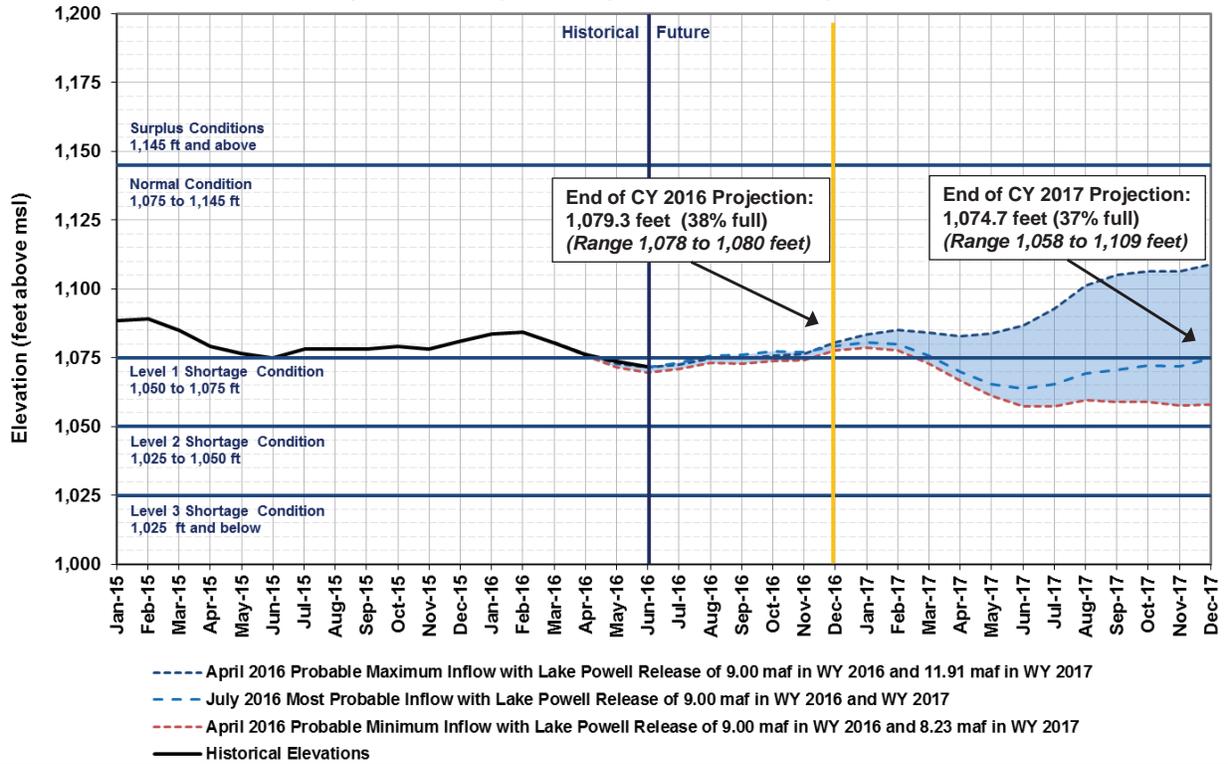
¹ WY 2016 unregulated inflow into Lake Powell is based on the CBRFC forecast dated 7/1/16.

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Lake Mead End of Month Elevations

Projections from April and July 2016 24-Month Study Inflow Scenarios



Lower Basin Side Inflows – WY/CY 2016^{1,2} Intervening Flow from Glen Canyon to Hoover Dam

Month in WY/CY 2015		5-Year Average Intervening Flow (KAF)	Observed Intervening Flow (KAF)	Observed Intervening Flow (% of Average)	Difference From 5-Year Average (KAF)
HISTORICAL	October 2015	69	118	171%	49
	November 2015	56	41	73%	-15
	December 2015	54	43	79%	-12
	January 2016	62	89	145%	28
	February 2016	73	81	111%	8
	March 2016	55	31	56%	-24
	April 2016	53	68	127%	14
	May 2016	37	50	134%	13
FUTURE	June 2016	21	15	70%	-6
	July 2016	78			
	August 2016	124			
	September 2016	112			
	October 2016	69			
	November 2016	56			
December 2016	54				
WY 2016 Totals		795	849	107%	54
CY 2016 Totals		795	827	104%	32

¹ Values were computed with the LC's gain-loss model for the most recent 24-month study.

² Percents of average are based on the 5-year mean from 2011-2015.

YAO Operations Update

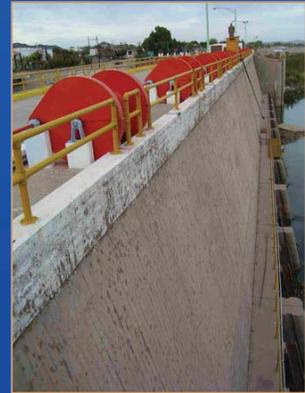
- Brock Reservoir and Senator Wash
2016 YTD accumulated storage¹

– Brock	95,093 AF
– Senator Wash	37,039 AF



- Excess Flows to Mexico

2016 YTD total² 2,069 AF



¹ Provisional year-to-date totals through July 23, 2016

² Provisional year-to-date total through July 24, 2016

YAO Operations Update

- 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 June 2016 was 46,190 AF at 2,640 ppm
- Provisional drainage Flows to the Colorado River
 - From the South Gila Drainage Wells January through June 2016 was 12,010 AF at 1,670 ppm
 - From the Yuma Mesa Conduit January through June 2016 was 0 AF

