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

August 2, 2013

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

Date:	August 14, 2013, 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: 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.

/S/Tanya Trujillo

Tanya M. Trujillo
Executive Director

attachment: Agenda

Regular Meeting
COLORADO RIVER BOARD OF CALIFORNIA
August 14, 2013, 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 June 12, 2013, Consideration and Approval **(Action)** …. TAB 1

4. Protection of Existing Rights
   a. Colorado River Water Report(s) ……. TAB 2
      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 3
      - Reports on current water supply and use conditions
   c. Colorado River Operations …….. TAB 4
      - Second Consultation Meeting of the 2014 Annual Operating Plan
   d. Basin States Discussions …… TAB 5
      - Minute 319 Update
      - Status of the Colorado River Basin Water Supply and Demand Study
      - Update regarding the LTEMP EIS and the Glen Canyon Dam Adaptive Management Program
      - Presentation Regarding the Status of the Weather Modification Projects

5. 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.

Agenda (continued)

6. Other Business
   a. Next Board Meeting: Regular Meeting
      September 11, 2013, 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 June 12, 2013, Board Meeting Minutes

Minutes of Regular Meeting
COLORADO RIVER BOARD OF CALIFORNIA
Wednesday, June 12, 2013

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, June 12, 2013.

Board Members and Alternates Present

Dana Bart Fisher, Jr., Chairman
Stephen Benson
Franz W. De Klotz
Michael T. Hogan
Henry Merle Kuiper
Glen D. Peterson
David R. Pettijohn

Jeanine Jones, Designee
Department of Water Resources

Board Members Absent

John V. Foley
Terese Maria Ghio
James B. McDaniel
James Hanks
Christopher G. Hayes, Designee
Department of Fish and Wildlife

Others Present

Steven B. Abbott
John Penn Carter
J.C. Jay Chen
Chuck Collum
Brian Daly
Dan Denham
Christopher S. Harris
William J. Hasencamp
Michael Hughes
Lisa Johansen
Lori A. Jones
Thomas E. Levy
Lindia Y. Liu
Jan P. Matusak
Carrie Oliphant
Antonio Ortega
Autumn Plourd
W.D. Bud Pocklington
Halla Razak
Tom Ryan
Jack Seiler
Tina L. A. Shields
Ed W. Smith
Joanna Smith
Mark Stuart
Gary Tavetian
Tanya M. Trujillo
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 to the next agenda item.

ADMINISTRATION

Approval of Minutes

Chairman Fisher asked if there was a motion to approve the March 13 minutes. Mr. Kuiper moved the minutes be approved. Seconded by Mr. Pettijohn and unanimously carried, the March 13 meeting minutes were approved.

Election of New Vice-Chairman

Mr. Kuiper nominated Franz De Klotz as the new vice-chairman. Mr. Kuiper moved and Mr. Pettijohn seconded the nomination of Franz De Klotz as vice-chairman of the Colorado River Board (CRB). The motion was approved on unanimous consent.

Colorado River Board Budget and Six Agency Committee Agreement

Ms. Trujillo stated that the Colorado River Board (CRB) budget, which is derived from the Governor's budget, is $1,618,000.00 for Fiscal Year 2013-2014. It has been approved through the state process and is one-hundred percent reimbursed by the Six Agency Committee (SAC). Ms. Trujillo requested approval of the budget and authorization to execute an agreement with the Six Agency Committee for that reimbursement.

Mr. Hogan moved to approve the CRB budget and authorized Ms. Trujillo to execute the SAC agreement. Mr. Kuiper seconded the motion. The motion was approved on unanimous consent.

Announcement of New Engineer at the Colorado River Board

Mr. Trujillo announced that the CRB hired a new engineer within the last month, Ms. Angela Rashid. Ms. Rashid is a civil engineer with several years of experience and has a masters degree from UCLA in urban planning.

PROTECTION OF EXISTING RIGHTS

Colorado River Water Report

Mr. Harris reported that the precipitation from October 1, 2012 through June 3, 2013 was 80% of average, and that the snowpack was approximately 64% of normal as of June 3. The U.S. Bureau of Reclamation's forecasted April through July 2013 unregulated inflow into Lake Powell is 3.0 million acre-feet, which is 42% of average. The unregulated inflow forecast for Lake Powell inflow for Water-Year 2013 has dropped from 48% of average last month to 45% as of June 3.

Mr. Harris reported that as of June 1, the storage in Lake Powell was 11.7 million acre-feet, at water surface elevation 3,599.4 feet, which is about 48% of capacity. The storage in Lake Mead on June 1 was 12.5 million acre-feet, at water surface elevation 1,108.4, also 48% capacity. The total system storage in the Colorado River Basin reservoir system as of June 1 is approximately 31.22 million acre-feet, or 52% of capacity, which is about 5.5 million acre-feet less than this time last year.

Mr. Harris reported that as of June 4, Reclamation has projected the consumptive use for the Lower Division States to be as follows: Nevada is expected to consume about 266,000 acre-feet in 2013; Arizona is projected to consume approximately 2.73 million acre-feet in 2013; and California is projected to consume approximately 4.28 million acre-feet in 2013. Consequently, the combined total for the Lower Division States in 2013 is projected to be 7.28 million acre-feet in 2013, compared to 7.45 million acre-feet in 2012.

State and Local Water Reports

Mr. Mark Stuart, of the California Department of Water Resources, reported that hydrologic and precipitation conditions within the State of California continue to be below normal at about 75% of average. The runoff from the Sierra Nevada is approximately 70% of average, but reservoir storage—statewide—is about 85% of capacity. Mr. Stuart observed that Northern California was actually just under normal with respect to precipitation, but that the southern portion of the state was in overall much worse condition. Finally, Mr. Stuart reported that as of June 1, the total State Water Project reservoir storage was approximately 3.87 million acre-feet, or 70% of capacity, and is about 1.19 million acre-feet less than this time last year.

Mr. Glen Peterson, the Board Member representing The Metropolitan Water District of Southern California, reported that MWD's total system storage was currently just under 835,000 acre-feet, or 81% of capacity. Mr. Peterson also reported that MWD had a couple of 6,000 acre-feet per day sales days in April. This volume of daily sales is more typical of July or August, so MWD is predicting that it will be delivering a lot of water to its customers during 2013.

COLORADO RIVER OPERATIONS

Development of the 2014 Annual Operating Plan

Mr. Trujillo reported that Reclamation has begun the process to develop the 2014 Annual Operating Plan. Reclamation held a webinar on May 30 to review the first draft. Reclamation has proposed a mid-elevation release tier for operations for Lake Powell. That estimate is based on the April run of their 24-month study. The tier concept relates back to the 2007 Guidelines that were adopted collectively amongst the Basin States and Reclamation and ratified by the Secretary of the Interior through a Record of Decision. Based on the April forecast, Reclamation is projected to be releasing 7.48 million acre feet from Lake Powell as opposed to an 8.23 million acre-feet release. That is a significant difference in terms of the amount of water that would be released down to the Lower Basin. Reclamation indicated this would be an historical occurrence. Reclamation also explained that depending on future hydrologic conditions, the release could be increased to 8.23 million acre-feet.

For the Lower Basin operations, based on the 2007 Guidelines, the operational status will be the "Intentionally Created Surplus Condition," which is a normal condition. The 2014 AOP projects the scheduled deliveries for Mexico to start with the standard 1.5 million acre-feet. The AOP acknowledges that based on Minute 319, the delivery to Mexico could fluctuate slightly up or slightly down. Reclamation has scheduled in-person follow-up meetings for the AOP development on July 30 and September 5 and will also inform the Basin States regarding the August forecast.

In response to a question from Chairman Fisher, Ms. Trujillo explained that a reduction in the allocations in the Lower Basin would occur if Reclamation determined that we were in a shortage condition based on the graphs presented earlier in the meeting. There is a potential for a shortage determination in the future. The shortage condition is affected by the amount of water that comes into Lake Mead from Lake Powell and how much is used out of Lake Mead. The shortage guidelines that the states have agreed to contemplate reductions in the allocations to Arizona and Nevada, and not to California. California would be affected by the inability to take ISC and to incur overruns.

In response to comments by Board Member Benson regarding tribal rights, Ms. Trujillo reported that the Navajo Nation recently filed a motion to amend the existing complaint in the pending court case that was filed in 2003. That existing court case challenged some of the Department of Interior's (DOI) operations dating back to 2003. In the Tribe's present motion to amend, the existing claims are expanded to be more inclusive and have been updated going forward.

Status of the Development of the Glen Canyon Dam Long-Term Experimental and Management Plan EIS Process

As has been previously reported, DOI is going through an EIS process to develop a new operations plan for Glen Canyon Dam. The Basin States submitted an alternative for consideration by Reclamation and DOI. On April 15, the Basin States submitted comments to DOI regarding proposed performance criteria for the Glen Canyon Dam Long Term Experimental Management Plan EIS (LTEMP EIS) process and also comments relating to a proposed Decision Analysis Program that DOI wants to run regarding the EIS process. The comments included a technical analysis and incorporated input from a panel of scientists that is advising the states. DOI is anticipating Adaptive Management Workgroup meetings in Phoenix in August 2013.

In May 2013, the National Park Service issued a "Comprehensive Fisheries Management Plan" (CFMP) to address long-term management of the fishery resources of Glen Canyon National Recreation Area and Grand Canyon National Park below Glen Canyon Dam. The CRB submitted comments on June 28, 2012 and emphasized that the Fisheries Management Plan should be coordinated with the other activities, including the AMWG and the LTEMP EIS process.

Colorado River Environmental Activities

Colorado River Board staff member, Lindia Liu, gave a presentation on the Salinity Control Forum Workgroup and Advisory Counsel meetings that were held on May 15, 16 and 17 in Grand Junction, Colorado. One of the major issues was a consideration of the options to replace the Paradox well, which has been preventing 110,000 tons of salt from entering the Colorado River system each year by capturing the brine water and injecting it 16,000 feet into the ground. The operations at the well have caused some earthquakes in the area, such as a 4.4 magnitude earthquake that happened on January 23, which occurred about 8.2 kilometers northwest of the injection site. As a result, Reclamation decreased the injection flow rate and increased the frequency of shutdowns until more information can be gathered on its correlation with the earthquake occurrences.

Reclamation is starting its NEPA EIS process to evaluate alternatives for the brine disposal at the Paradox well. The CRB is a cooperating agency for the EIS process. The EIS is anticipated to be completed in 2016. Reclamation is looking into the potential construction of a second well at the site. Several options were identified. One of them was to re-work the existing injection well rather than construct a new one in order to keep costs low. Experts will be convened to examine the feasibility of an evaporation pond. The same group will also review the potential limitations and restrictions that may be posed by the Migratory Bird Treaty Act.

The workgroup has been tasked to draft an emergency action plan in response to the potential failure of the Paradox well. The plan will include an educational document that will show the importance of the Paradox well to the Basin Salinity Program. Finally,

the workgroup is also working on a paper on the salinity control benefits to the Upper Basin. The main benefit is that the Upper Basin can develop its water resources without potentially impacting salinity in the Lower Basin. The next meetings of the Salinity Control Forum and Advisory Council have been scheduled for October 2013 and will held at The Metropolitan Water District's office in Los Angeles, California.

Status of the Lower Colorado River Multi-Species Conservation Program

Mr. Harris provided a presentation updating the status of the Lower Colorado River Multi-Species Conservation Program (LCR MSCP). Mr. Harris briefly described the goals and objectives of the LCR MSCP, the geographic extent of the Program, and the species currently being covered by the incidental take authorization permits issued by the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). Mr. Harris explained that the goal of the LCR MSCP is to provide 8,132 acres of new native riparian, marsh and backwater habitats along the Lower Colorado from Lake Mead to the Southerly International Boundary with Mexico. Of the 8,132 acres of new habitat, the terms and conditions of the CDFW permit requires that 3,056 acres of this new habitat must be within the State of California. Additionally, the LCR MSCP has the obligation to repatriate 1.2 million endangered razorback sucker and bonytail back into mainstream aquatic habitats below Hoover Dam.

Mr. Harris reported that through 2012, that over 2,400 acres of new habitat had been established under the Program, and of that over 1,000 has been established within California. Additionally, Mr. Harris reported that over 200,000 razorback sucker and 56,000 bonytail have been repatriated to LCR MSCP aquatic habitats.

Mr. Harris also provided an overview of how the LCR MSCP is funded on an annual basis, with Program implementation costs shared equally between the federal and non-federal participants. Among the non-federal participants, California's LCR MSCP participants fund 50% of the annual implementation costs. Mr. Harris explained how the LCR MSCP is administered on annual basis through the Steering Committee and Technical Work Group. Currently, the annual LCR MSCP implementation costs are approximately $35 million, but Mr. Harris noted that as the habitat is acquired and then restored that those annual costs will decrease over the 50-year life of the Program.

Mr. Harris concluded his presentation by highlighting some of the current "hot-button" issues of concern facing the Steering Committee in the context of long-term LCR MSCP implementation. These issues include the following: (1) non-native salt-cedar beetle defoliation of salt cedar habitats along the LCR utilized by the endangered southwestern willow flycatcher; (2) the probable listing of the Yellow-billed cuckoo as endangered with critical habitat designation; (3) the probable listing of the Northern Mexican garter snake as endangered with critical habitat designation; (4) the potential listing of the Townsend's big-eared bat as threatened or endangered by CDFW; and (5) that significant portion of the remaining LCR MSCP habitat restoration must be within the California-portion of the LCR MSCP planning area. With respect to the probable listings of the additional species, Mr. Harris reported that the additional conservation

measures for these species can be accomplished "seamlessly" through implementation of the LCR MSCP, as much of the current work being performed will directly benefit these species. With regard to finding the additional habitat restoration sites in California, Mr. Harris reported that Reclamation, the California participating agencies and CDFW are working in a coordinated fashion to identify these potential sites and bring them into the Program as soon as possible.

Mr. Harris answered several questions associated with the current status of the spread of the non-native salt-cedar beetle and its impact upon the breeding habitats of the endangered southwestern willow flycatcher. Mr. Harris reported that the salt-cedar beetle has defoliated much of the salt-cedar habitats along the Lower Virgin River, and is expected to be in the vicinity of Topock Marsh on the Havasu National Wildlife Refuge during the summer of 2013. Reclamation is monitoring the situation closely, and the potential effect upon the summer breeding of several neotropical migratory bird species that utilize riparian habitats along the Lower Colorado River.

Mr. Jerry Zimmerman pointed out that the implementation of the LCR MSCP, through 2055, is vitally important to California's long-term ability to efficiently manage and protect its valuable Colorado River resources. Under the terms and conditions of the federal and state endangered species permits, the California agencies, in concert with users in Arizona and Nevada, have the flexibility to change the points of diversions and volumes of water diverted annually up to a maximum of 1.574 million acre-feet on an annual basis. This permits the implementation of programs like water banking, water transfers, the creation and release of ICS, and other elements of California's Colorado River Water Use Plan.

BASIN STATES DISCUSSIONS

Minute 319 Updates and Next Steps

Ms. Trujillo reported on the status of the Minute 319 implementation efforts. A major focus relates to the small groups associated with the environmental flow component of Minute 319 that is focusing on restoration work in Mexico. Ms. Trujillo reported there are two major components that are under development. First, is the delivery plan component, which will figure out how to get water from Morelos Dam down to the different areas in Mexico. The second component is the monitoring plan. A meeting of science experts took place in San Diego at the end of May. The group of science experts will provide advice to the Mexican team. There has also been progress in connection with the small group associated with development of a proposed or potential turn-out off of the All-American Canal for Mexico that would be designed to accommodate additional deliveries to Mexico in case of an emergency. Reclamation and IBWC are setting up a team of water operation experts that will help to monitor the delivery flows and oversee other implementation issues related to Minute 319.

Ms. Trujillo reported on issues relating to the connection between the Rio Grande and the Colorado River and gave some background information on the subject. The 1944 treaty relates to the Rio Grande and the Colorado River with respect to international delivery obligations, both from the U.S. and from Mexico back to the U.S. On the Rio Grande, Texas has had longstanding concerns with Mexico's compliance or delivery obligations on that river system. Most recently, there has been some correspondence from the Texas Governor and from the Texas Commission on Environmental Quality, urging the Secretary of State and IBWC to be more proactive in terms of enforcing Mexican deliveries to the U.S. There have also been some legislative efforts that have come forward, including a proposed amendment to the WRDA bill that sought to require the Secretary of State to report to Congress on the status of compliance with respect to Mexico's Rio Grande deliveries and on the benefits to the U.S. associated with Minute 319. The legislation also sought to prohibit the Secretary of State from moving forward with any post-Minute 319 agreements with Mexico on the Colorado River if the Secretary of State did not comply with the prior two reporting requirements. As of today, there have been three pieces of legislation introduced, two house bills, and one senate bill. No hearings are set, and there has been no official administration position on those issues. The Colorado River Basin States are opposed to any linkage between Colorado River issues and Rio Grande issues, and the Basin states are in the process of developing correspondence to the Secretary of State to convey that message. We can keep our congressmen apprised of our positions on that point.

In response to Ms. Jones's question, Mr. Trujillo reported that, historically, for decades there has been an advocacy effort on behalf of the Texans with regard to improving deliveries from Mexico. The new issue is the linkage with Minute 319.

Colorado River Basin Water Supply and Demand Study Report Next Steps

Ms. Trujillo reported that workgroups have been established that will center on the evaluation of the assumptions associated with urban and agricultural conservation elements that are imbedded in the Study. The additional workgroup will relate to monitoring and modeling associated with environmental flows in the river system. This group is primarily focusing on particular Upper Basin reaches that are primarily within Colorado. Our member agencies are well-represented on all of the workgroups and will be active in terms of setting the agendas and developing the work product for those groups. The proposed schedule for the workgroups is to have reports prepared by the end of 2013.

Ms. Trujillo also reported that the Senate Energy and Natural Resources Committee is planning an oversight hearing relating to the Basin Study, probably in mid-July. This is still under development, but they're planning to have two panels. The first would be a governmental panel, which would have a federal witness, an Upper Basin witness, and a Lower Basin witness, and perhaps a tribal entity. The second panel is a non-state and non-federal panel that would include urban, agricultural, and environmental interests.

Basin States Technical Committee Meeting, April 17th, Las Vegas, Nevada

Ms. Trujillo reported that at the April 17 Technical Committee meeting Reclamation gave updates on the latest hydrologic conditions. They are working on refining the modeling assumptions and tools that they use to do their predictions. There is a need to work very closely with Reclamation on how they are doing their accounting and modeling. There were several presentations, including a short presentation by Ms. Trujillo on behalf of the California agencies regarding the status of California's compact compliance and QSA implementation issues. The CAWCD also gave a presentation regarding their new Welton-Mohawk drainage proposal. The next Technical Committee meeting is scheduled for October 16 in Las Vegas, Nevada.

Status of the Proposed Yuma-Area Drain Water Interceptor Project

Mr. Chuck Cullom, of the Central Arizona Water Conservation District (CAWCD), provided the Board with a short presentation and overview of CAWCD's proposed Drain Water Interceptor Project (Project) in the Yuma region. As Mr. Cullom explained, the primary purpose of the Project is reroute saline drainage flows (approximately 2,600 parts-per-million TDS) from the Wellton-Mohawk Irrigation and Drainage District (WMIDD) from the existing Main Outlet Drain Extension (MODE) to a new delivery point at the mainstream Colorado River just above Imperial Dam. Currently, the saline drainage flows are conveyed, via the MODE, to the Cienega de Santa Clara in Mexico, and do not count toward the annual Mexican Treaty delivery obligation. Mr. Cullom reported that by-passing approximately 100,000 acre-feet of saline drainage flows to the Cienega de Santa Clara on annual basis results in an additional 100,000 acre-feet of stored water being released from Lake Mead each year to satisfy the Mexican Treaty obligation. Obviously, this results in an additional 1.0 million acre-feet of stored water being released from Lake Mead over a ten-year period.

Mr. Cullom continued by explaining that by rerouting the saline drainage waters to a discharge point just above Imperial Dam, the saline water is effectively diluted and can be utilized as part of the Treaty delivery of 1.5 million acre-feet per year delivered to Mexico. Additionally, the preliminary analyses performed by CAWCD indicates that there might only be a modest increase in salinity at the Numeric Criteria measuring point at Imperial Dam and little impact to water users below Imperial Dam, including in Mexico. Mr. Cullom further indicated that in an effort to maintain the ecological health of the Cienega de Santa Clara wetlands (nearly 10,000 acres), the Drain Water Interceptor Project proposal would pump approximately 50,000 acre-feet of water per year from Minute 242 Wellfield along the Southerly International Boundary with Mexico. This pumped water would then be conveyed along the south boundary and put into the MODE Bypass Drain and conveyed south to the Cienega de Santa Clara.

Mr. Cullom briefed the Board about the potential costs associated with the proposed Project. First, he indicated that it would take approximately $160-450 million to refurbish and improve the Yuma Desalting Plant (YDP), and an additional $25-40 annually to operate YDP to treat the saline drainage flows from the WMIDD. In contrast,

Mr. Cullom reported, it is estimated that the potential capital costs for the Drain Water Interceptor Project would be approximately $100 million, and then annual operating and maintenance costs of approximately $4 million. Mr. Cullom stated that implementation of the proposed Drain Water Interceptor Project would eliminate the need to operate YDP to treat the saline WMIDD drainage flows, and obviate the need to dispose of the reject brine stream for YDP. Pumping of the Minute 242 Wellfield the ecological values of the Cienega de Santa Clara could continue to be maintained. Mr. Cullom suggested that a potential timeline for the proposed project would consist of (1) refining the concept and conducting a fatal-flaw analysis during 2013; (2) in 2014, begin design, cost-refinement, and permitting processes; (3) undertaking construction from 2015 through 2017; and (4) begining operation of the Drain Water Interceptor Project in 2018.

Finally, Mr. Cullom indicated that CAWCD was continuing to meet with various stakeholder groups to provide more comprehensive briefings and overviews of the Drain Water Interceptor Project. Additionally, CAWCD staff will continue to refine modeling assumptions, and design concepts and cost estimates in order to provide more information for water users and agencies potentially affected by the Drain Water Interceptor Project.

OTHER BUSINESS

Next Board Meeting

Chairman Fisher announced that the next meeting of the Colorado River Board will be held on Wednesday, July 10, 2013, at 10:00 a.m. at the Holiday Inn, Ontario Airport, 2155 East 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. Pettijohn, seconded by Ms. Jones, and unanimously carried, the meeting was adjourned 12:33 p.m. on June 12, 2013.

Tanya M. Trujillo
Executive Director

4.a. - Colorado River Water Report

SUMMARY WATER REPORT
COLORADO RIVER BASIN
August 5, 2013

RESERVOIR STORAGE (as of July 31)	August 1, 2013 MAF	August 1, 2013 ELEV. IN FEET	August 1, 2013 % of Capacity	July 1, 2013 MAF	July 1, 2013 ELEV. IN FEET	July 1, 2013 % of Capacity
Lake Powell	11.202	3,594.2	**46**	11.757	3,600.1	**48**
Flaming Gorge	2.875	6,017.0	**77**	2.906	6,017.9	**78**
Navajo	0.889	6,017.5	**52**	0.958	6,024.9	**56**
Lake Mead	12.270	1,105.9	**47**	12.276	1,106.0	**47**
Lake Mohave	1.717	643.7	**95**	1.711	643.4	**95**
Lake Havasu	0.590	448.5	**95**	0.589	448.4	**95**
Total System Storage	30.304		**51**	30.990		**52**
System Storage Last Year	35.336		**59**	36.051		**60**

			July 1, 2013	
WY 2013 Precipitation (Basin Weighted Avg) 10/01/12 through 8/05/13	**81 percent (21.4")**		**76 percent (18.7")**	
WY 2013 Current Basin Snowpack (Basin Weighted Avg) on day of 8/05/13	NA		**NA**	
(Above two values based on average of data from 116 sites.)				
			June 17, 2013	
August 1, 2013 Forecast of Unregulated Lake Powell Inflow	MAF	% of Normal	MAF	% of Avg.
2013 April through July unregulated inflow	2.559	**36 %**	2.880	**40%**
2013 Water Year	4.328	**40 %**	4.646	**43%**

Basin Hydrology WY-2013 (10/1/12–8/05/13)

Precipitation	Current	Prev. Mo.
(Weighted Average 10/01/12 through 8/05/13)	81%	76%
Snowpack Water Equivalent		
(Weighted Average as of 8/05/13)	NA	NA

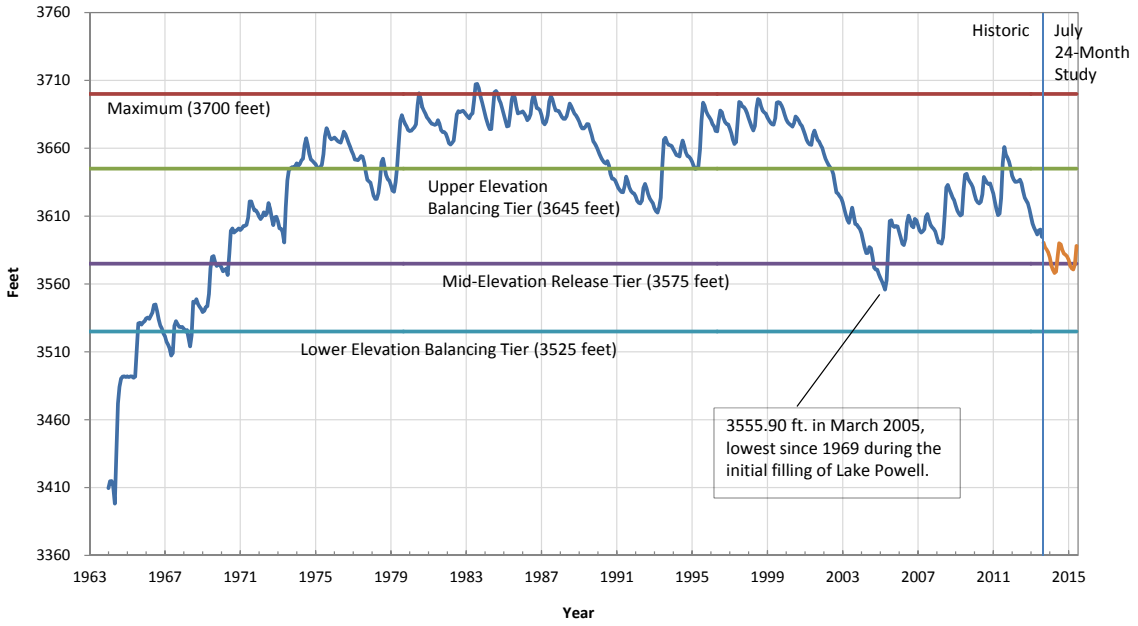
Unregulated Inflow into Lake Powell (August 1st Forecast)	MAF	% of Avg.
2013 Apr-Jul Forecast Inflow	2.56	36%
2013 WY Forecast	4.33	40%

Reservoir Storage

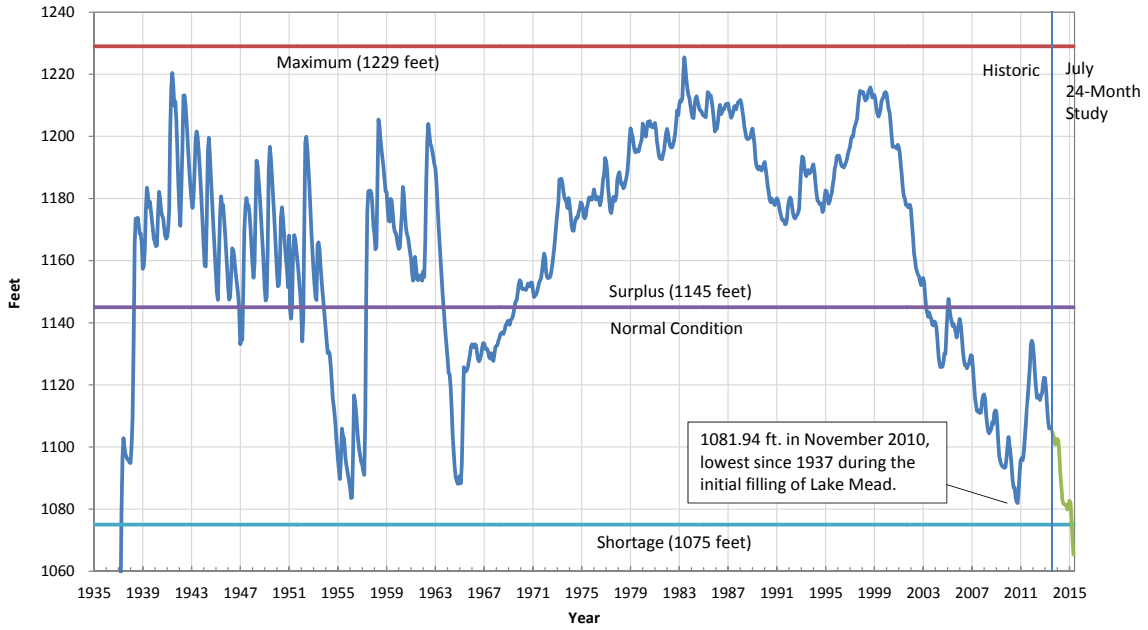
(As of August 1, 2013)

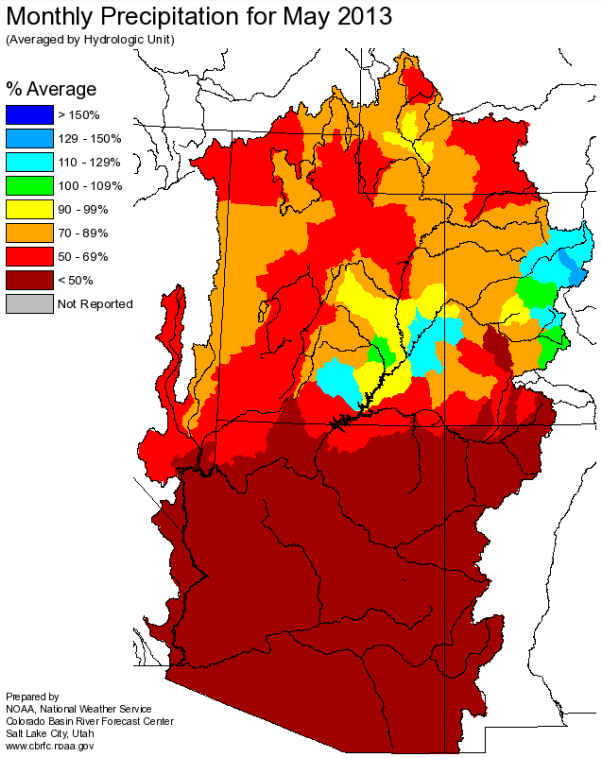
Reservoir	MAF	Elev. In Feet	% of Capacity
Lake Powell	11.20	3,594.2	46
Lake Mead	12.27	1,105.9	47
Total Sys. Storage	30.30	-	51
Sys. Storage Last Yr.	35.34	-	59

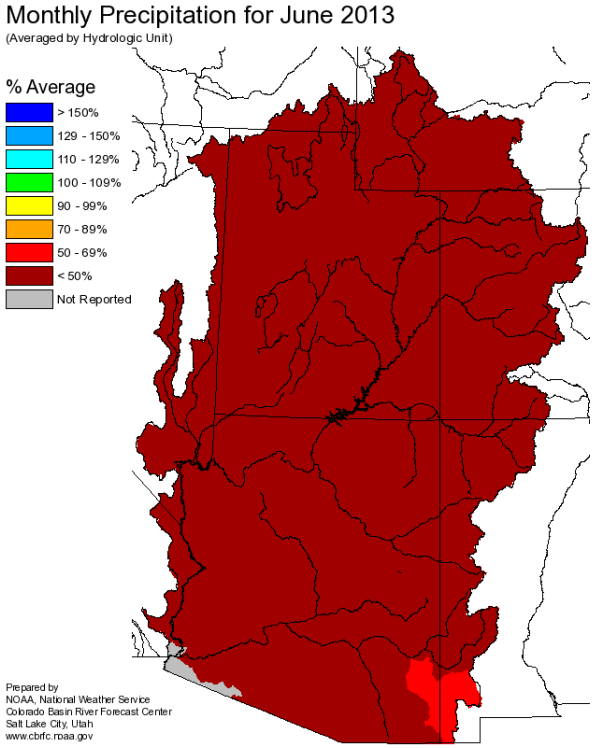
Lake Powell Elevation Levels



Lake Mead Elevation Levels

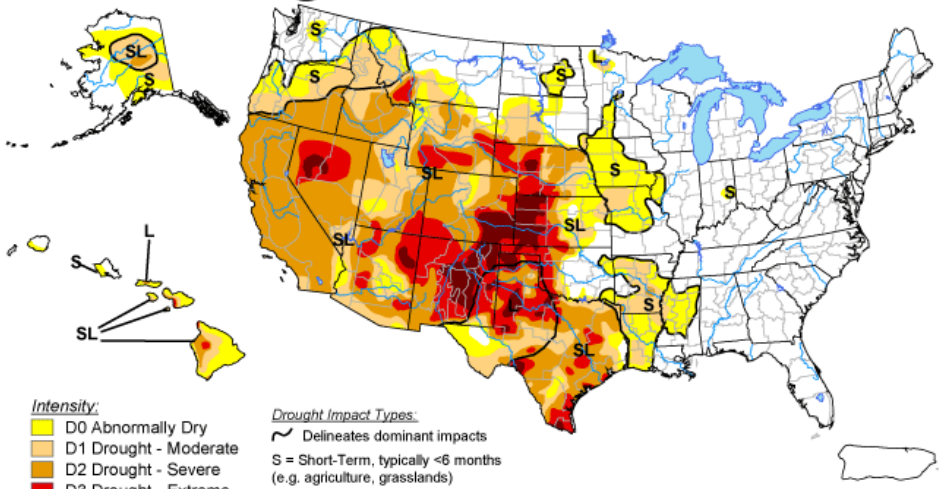



Monthly Precipitation for May 2013
(Averaged by Hydrologic Unit)
% Average
> 150%
129 - 150%
110 - 129%
100 - 109%
90 - 99%
70 - 89%
50 - 69%
< 50%
Not Reported
Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbrfc.noaa.gov


Monthly Precipitation for June 2013
(Averaged by Hydrologic Unit)
% Average
> 150%
129 - 150%
110 - 129%
100 - 109%
90 - 99%
70 - 89%
50 - 69%
< 50%
Not Reported
Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbrfc.noaa.gov

U.S. Drought Monitor

July 30, 2013
Valid 7 a.m. EDT



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

Drought Impact Types:
- Delineates dominant impacts
- S = Short-Term, typically <6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically >6 months (e.g. hydrology, ecology)

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

http://droughtmonitor.unl.edu/

Released Thursday, August 1, 2013
Author: Brian Fuchs, National Drought Mitigation Center

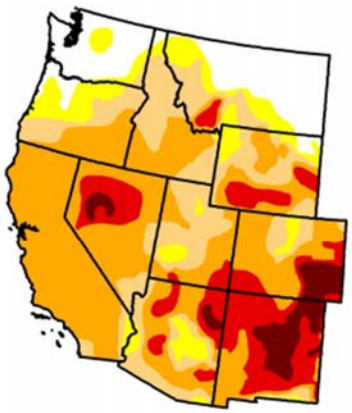
U.S. Drought Monitor

July 30, 2013
Valid 7 a.m. EST

West

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	12.95	87.05	77.52	57.26	17.59	4.68
Last Week (07/23/2013 map)	13.24	86.76	77.17	57.79	18.07	5.86
3 Months Ago (04/30/2013 map)	19.56	80.44	66.68	45.32	15.09	4.09
Start of Calendar Year (01/01/2013 map)	24.39	75.61	69.31	45.04	18.01	2.15
Start of Water Year (09/25/2012 map)	15.12	84.88	77.15	43.65	16.85	1.77
One Year Ago (07/24/2012 map)	20.07	79.93	68.22	50.19	17.53	0.25



Intensity:
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http://droughtmonitor.unl.edu

Released Thursday, August 1, 2013
Brian Fuchs, National Drought Mitigation Center

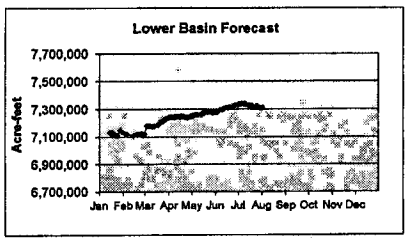
08/02/13 10:59 AM

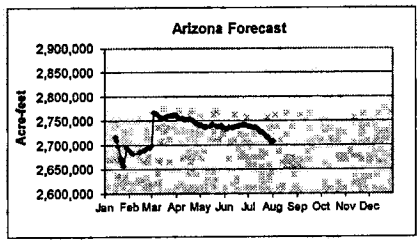
U.S. BUREAU OF RECLAMATION
LOWER COLORADO REGION
PROVISIONAL CY2013

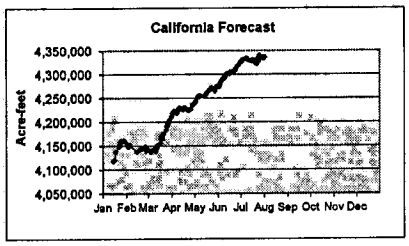
ARIZONA, CALIFORNIA, NEVADA, MEXICO
FORECAST OF END OF YEAR CONSUMPTIVE USE
FORECAST BASED ON USE TO DATE AND APPROVED ANNUAL WATER ORDERS /1
(ACRE-FEET)

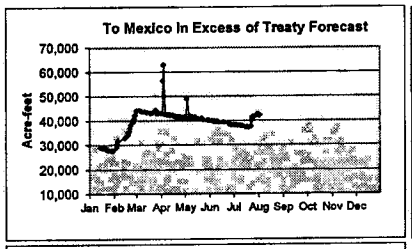
WATER USE SUMMARY	Use To Date CY2013	Forecast Use CY2013	Approved Use /2 CY2013	Excess to Approval CY2013
ARIZONA	1,715,517	2,707,731	2,799,604	-91,873
CALIFORNIA	2,792,106	4,335,683	4,119,207	216,476
NEVADA	141,926	265,080	300,000	-34,920
STATES TOTAL /3	4,649,549	7,308,494	7,218,811	89,683
MEXICO IN SATISFACTION OF TREATY (Including downward	1,058,866	1,542,114	1,500,000	42,114
TO MEXICO AS SCHEDULED	1,029,172	1,500,000		
MEXICO IN EXCESS OF TREATY	29,694	42,114		
BYPASS PURSUANT TO MINUTE 242	69,529	126,716		
TOTAL LOWER BASIN & MEXICO	5,777,944	8,977,324		

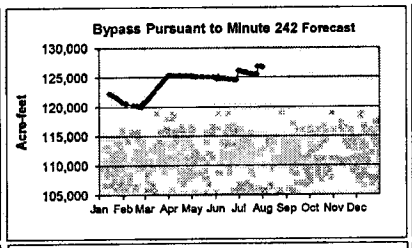
1/ Incorporates Jan-Jun USGS monthly data and 77 daily reporting stations which may be revised after provisional data reports are distributed by the USGS. Use to date estimated for users reporting monthly and annually.
2/ These values reflect adjusted apportionments. See Adjusted Apportionment calculation on eash state page.
3/ 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.

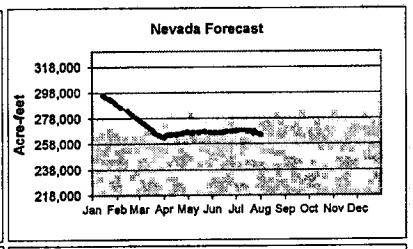


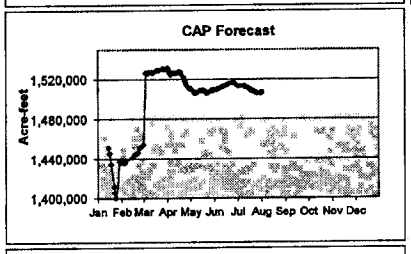


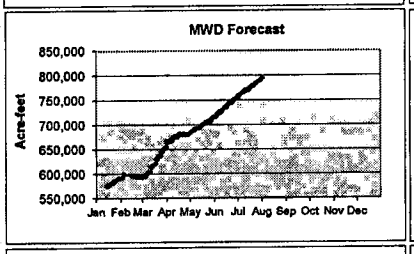


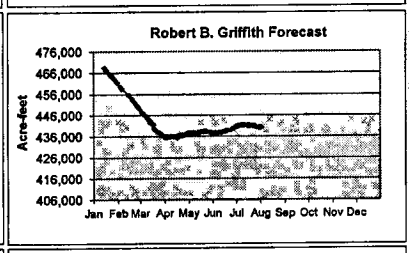


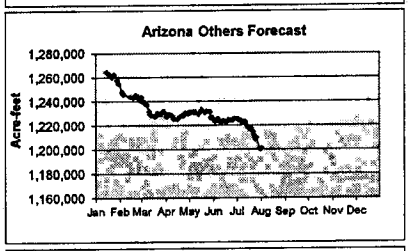


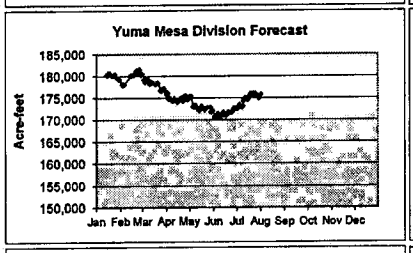


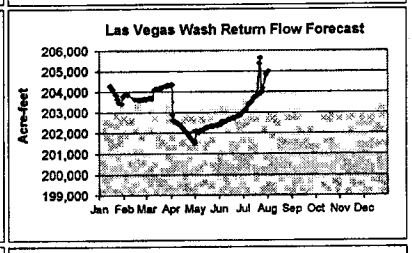


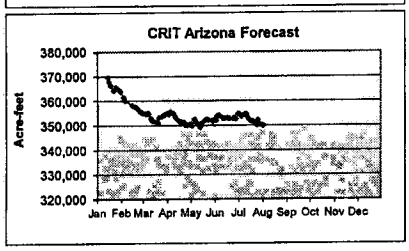


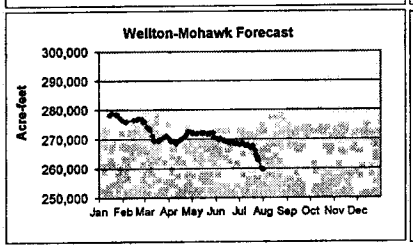


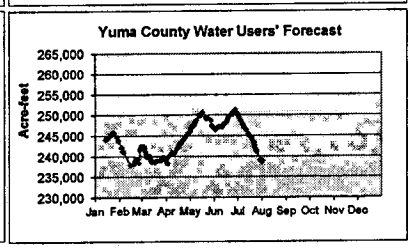












Graph notes: Jan 1 forecast use is scheduled use in accordance with the Annual Operating Plan's state entitlements, available unused entitlements, and over-run paybacks. A downward sloping line indicates use at a lower rate than scheduled, upward sloping is above schedule, and a flat line indicates a 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.

08/02/13

U.S. BUREAU OF RECLAMATION
LOWER COLORADO REGION
PROVISIONAL CY2013

NOTE:
- Diversions and uses that are pending approval are noted in *red italics*.
- Water users with a consumptive use entitlement - **Excess to Estimated Use** column indicates overrun/underrun of entitlement. Dash in this column indicates water user has a diversion entitlement.
- Water user with a diversion entitlement - **Excess to Approved Diversion** column indicates overrun/underrun of entitlement. Dash in this column indicates water user has a consumptive use entitlement.

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 CY2013	Forecast Use CY2013	Estimated Use CY2013	Excess to Estimated Use CY2013	Diversion To Date CY2013	Forecast Diversion CY2013	Approved Diversion CY2013	Excess To Approved Diversion CY2013
CALIFORNIA PUMPERS	1,135	1,725	1,725	---	2,052	3,119	3,119	0
FORT MOJAVE INDIAN RESERVATION, CA	5,558	7,960	8,910	---	10,333	14,799	16,565	-1,766
CITY OF NEEDLES (includes LCWSP use)	1,271	1,931	1,931	0	1,790	2,720	2,720	0
METROPOLITAN WATER DISTRICT	549,478	793,683	563,433	---	551,326	798,320	*566,534*	---
COLORADO RIVER INDIAN RESERVATION, CA	2,438	3,705	3,705	---	6,149	9,345	9,345	0
PALO VERDE IRRIGATION DISTRICT	303,438	438,170	437,084	---	615,323	964,238	947,155	**17,083**
YUMA PROJECT RESERVATION DIVISION	32,795	46,551	47,023	---	60,031	96,401	99,900	-3,499
YUMA PROJECT RESERVATION DIVISION - INDIAN UNIT	---	---	---	---	28,869	46,563	48,600	-2,037
YUMA PROJECT RESERVATION DIVISION - BARD UNIT	---	---	---	---	31,162	49,837	51,300	-1,463
YUMA ISLAND PUMPERS	2,530	3,845	3,845	---	4,573	6,950	6,950	0
FORT YUMA INDIAN RESERVATION - RANCH 5	0	361	1,046	---	0	654	1,891	-1,237
IMPERIAL IRRIGATION DISTRICT	1,679,404	2,633,047	2,632,629	**418**	1,661,160	2,662,740	*2,738,570*	---
SALTON SEA SALINITY MANAGEMENT	16,657	70,007	70,000	**7**	26,817	81,865	72,270	---
COACHELLA VALLEY WATER DISTRICT	196,964	333,835	347,000	-13,165	203,089	345,484	361,165	---
OTHER LCWSP CONTRACTORS	438	666	599	---	707	1,075	1,075	0
CITY OF WINTERHAVEN	0	69	69	---	0	104	104	0
CHEMEHUEVI INDIAN RESERVATION	0	128	6,101	---	7,462	11,340	11,340	0
TOTAL CALIFORNIA	2,792,106	4,335,683			3,210,843	4,999,154	4,838,703	
FORT YUMA INDIAN RESERVATION /1	---	---	---	---	30,898	50,336	53,610	-3,274

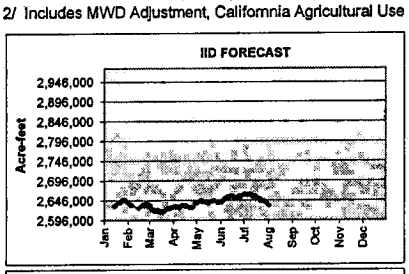
CALIFORNIA ADJUSTED APPORTIONMENT CALCULATION

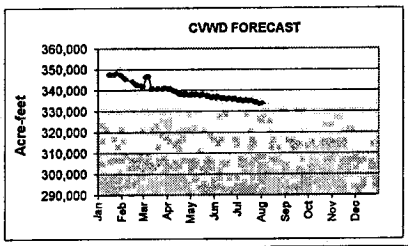
California Basic Apportionment	4,400,000
Payback of IOPP Overrun (IID, Ft Mojave)	*-55,793*
Intentionally Created Surplus Water (IID)	*-25,000*
Creation of Extraordinary Conservation ICS (MWD)	*-200,000*
Total State Adjusted Apportionment	4,119,207
Excess to Total State Adjusted Apportionment	216,476

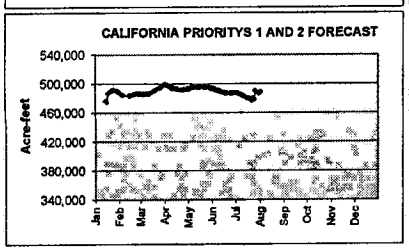
ISG ANNUAL TARGET COMPARISON CALCULATION

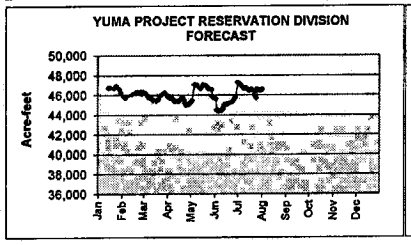
Priorities 1, 2, 3b Use (PVID+YPRD+Island+PVID Mesa)	488,566
MWD Adjustment	-68,566
Total California Agricultural Use (PVID+YPRD+Island+IID+CVWD)	3,455,448
California Agricultural Paybacks	-62,000
Misc. PPRs Covered by IID and CVWD	14,500
California ICS Creation (IID ICS)	25,000
Total Use for Target Comparison[2]	3,364,382
ISG Annual Target (Exhibit B)	3,462,000
Amount over/(under) ISG Annual Target	(97,618)

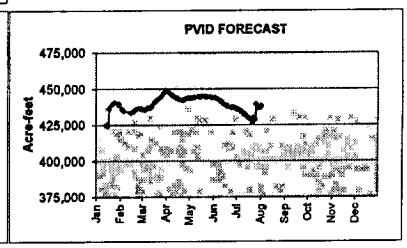
NOTES:
Ranch 5
Yuma Island assumed to be included in Priority 2.
Click on California Schedules and Approvals above for incoming diversion schedules and approvals.
1/ Fort Yuma Indian Reservation includes Yuma Project Reservation Division Indian Unit, Ranch 5, an estimate of domestic use and pumpers.
2/ Includes MWD Adjustment, California Agricultural Use and Paybacks, IID-CVWD covered PPRs, and taking out the MWD-CVWD Exchange





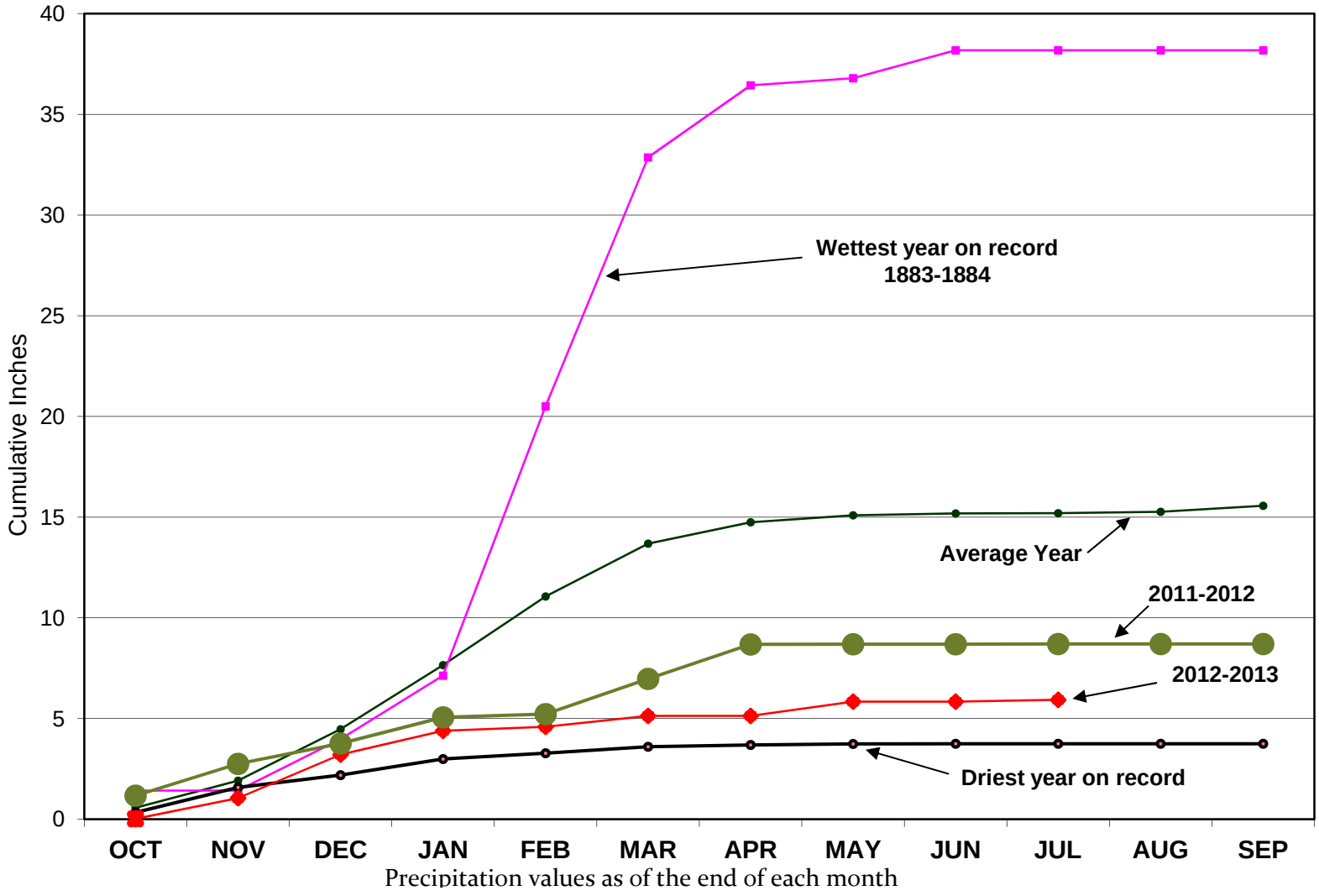






4.b. - State and Local Water Reports

Los Angeles Civic Center Precipitation

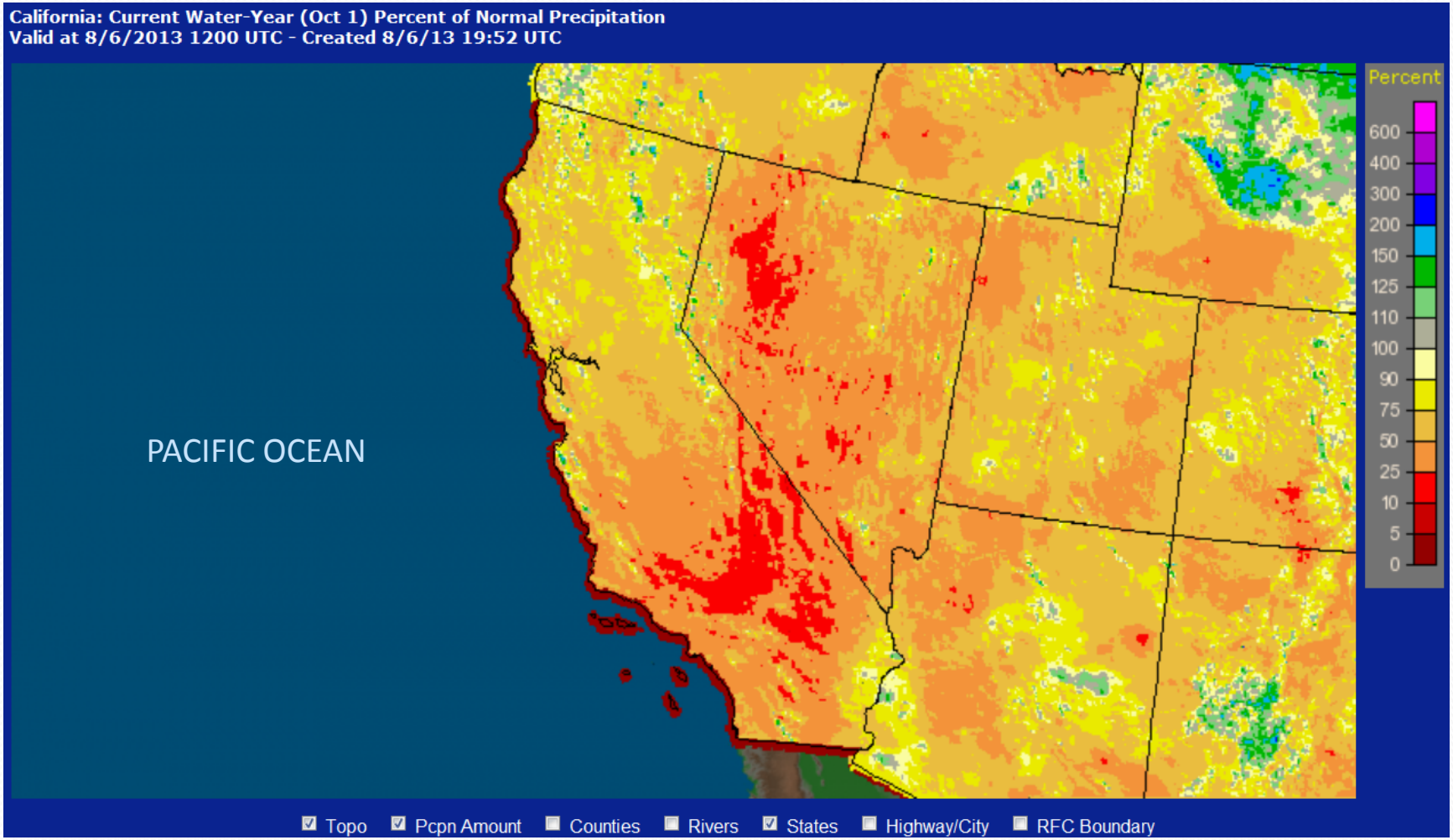


Precipitation at Six Major Stations in Southern California

From October 1, 2012 to August 1, 2013

Station	Precipitation in inches July	Precipitation in inches Oct 1 to August 1	Average to Date	Percent of Average
San Luis Obispo	0.00	7.91	22.14	36%
Santa Barbara	0.07	8.31	17.54	47%
Los Angeles	0.09	5.93	15.20	39%
San Diego	0.05	4.12	9.92	42%
Blythe	0.54	2.36	2.81	84%
Imperial	0.05	0.90	2.28	39%

CA Current Water Year - Percent of Normal Precipitation



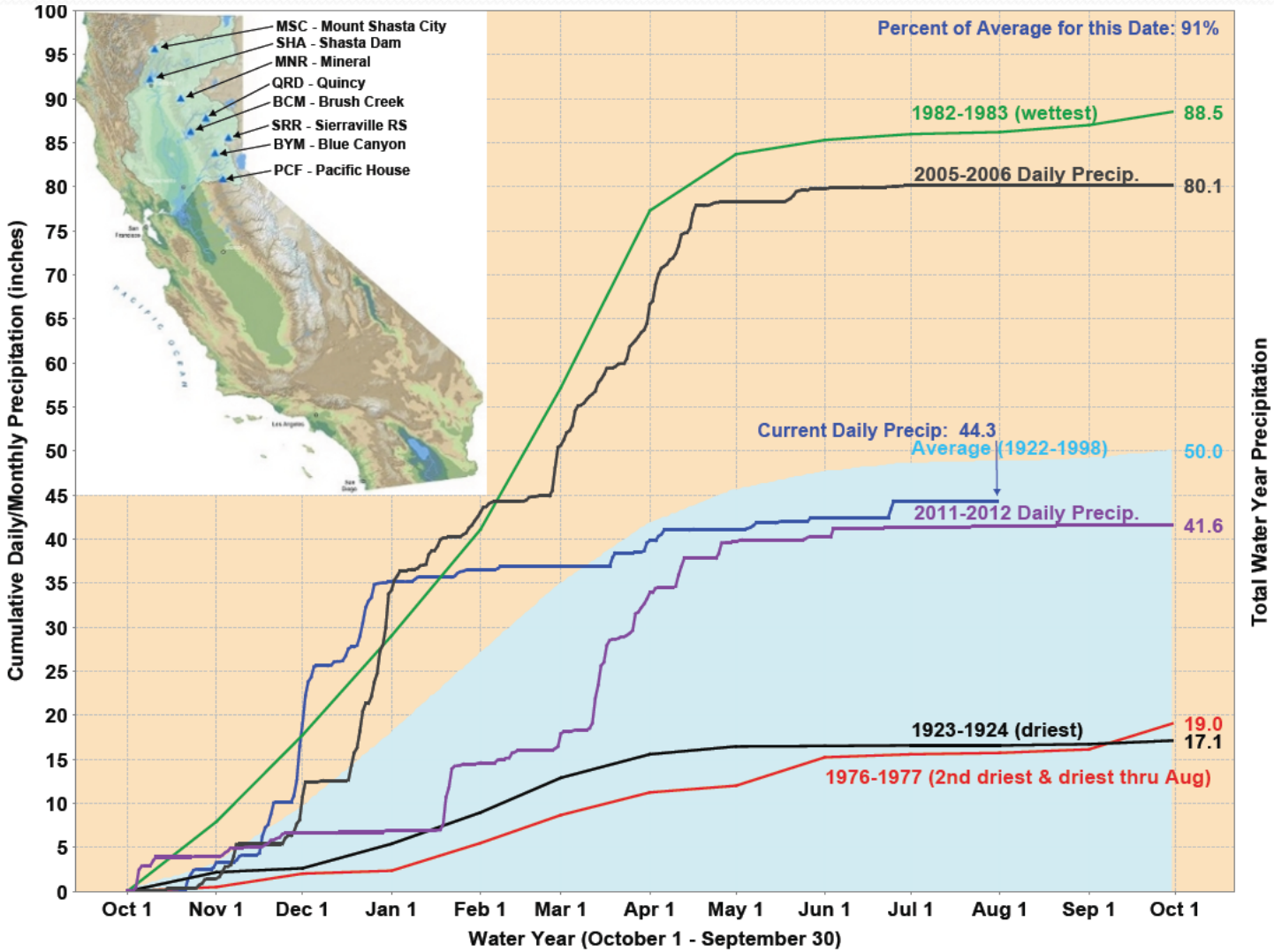
National Weather Service –Advance Hydrologic Prediction Center
http://water.weather.gov/precip/

Statewide Summary of Water-Year Data as of August 1, 2013

Water Year	Precipitation (233 Stations) % of avg.	Runoff (31 Rivers) % of avg.	Res. Storage (155 Reservoirs) % of avg.	Sacto. Riv. Run-off * (MAF)
2008-09	80	65	80	12.9
2009-10	110	90	105	15.9
2010-11	135	145	130	15.1
2011-12	75	60	95	11.8
Comparison of Water Year Data as of August 1				
2011-12	75	60	95	11.1
2012-13	75	60	80	11.2

* The Sacramento River Run-off is the sum of the unimpaired water year flow from the Sacramento River above Bend Bridge near Red Bluff, Feather River inflow to Oroville, Yuba River at Smartville, and American River inflow to Folsom. The average annual run-off is 18.4 MAF.

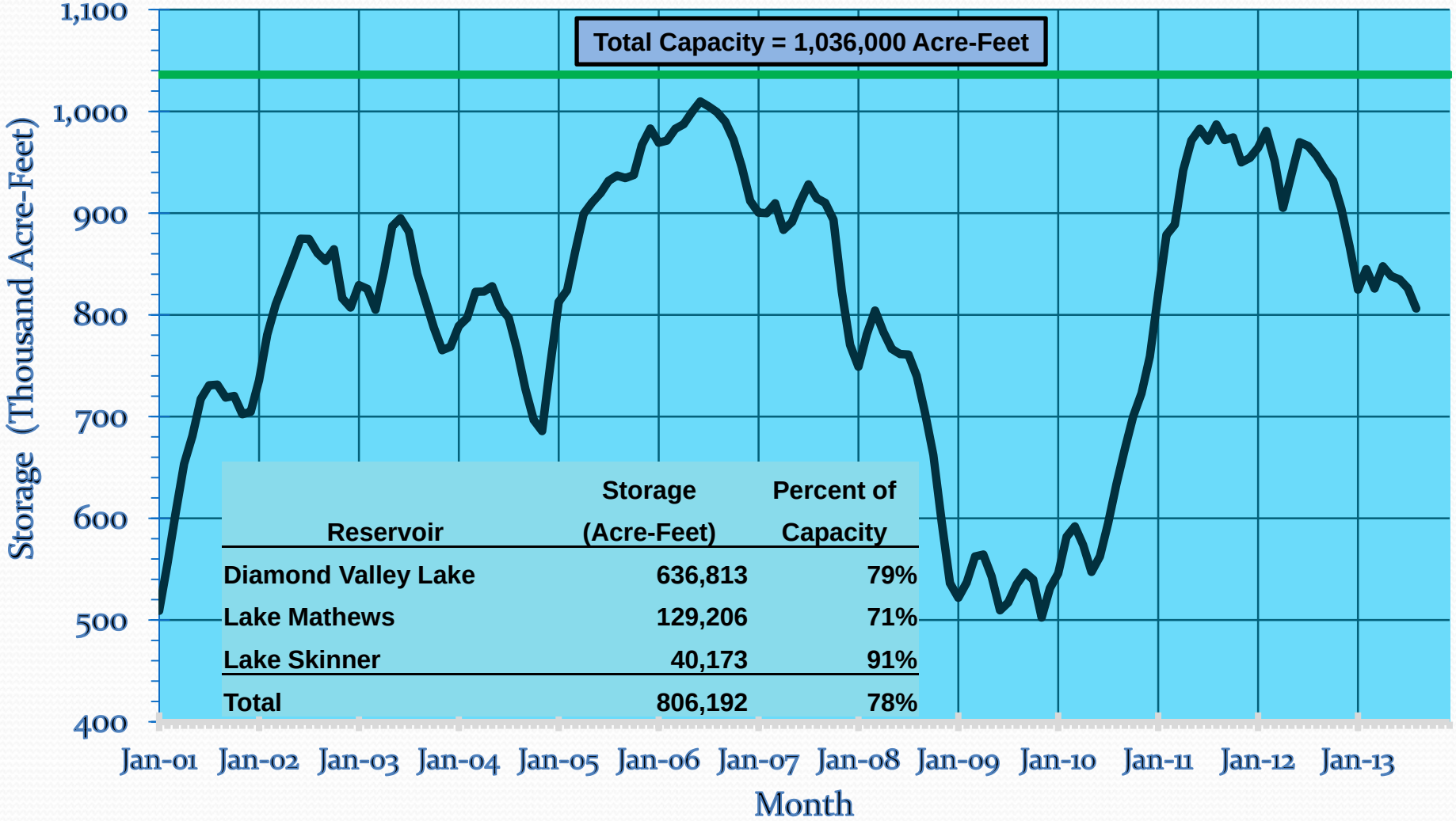
Northern Sierra Precipitation-8 Station Index - July 31, 2013



California Data Exchange Center
http://cdec.water.ca.gov/cgi-progs/products/PLOT_ESI.pdf

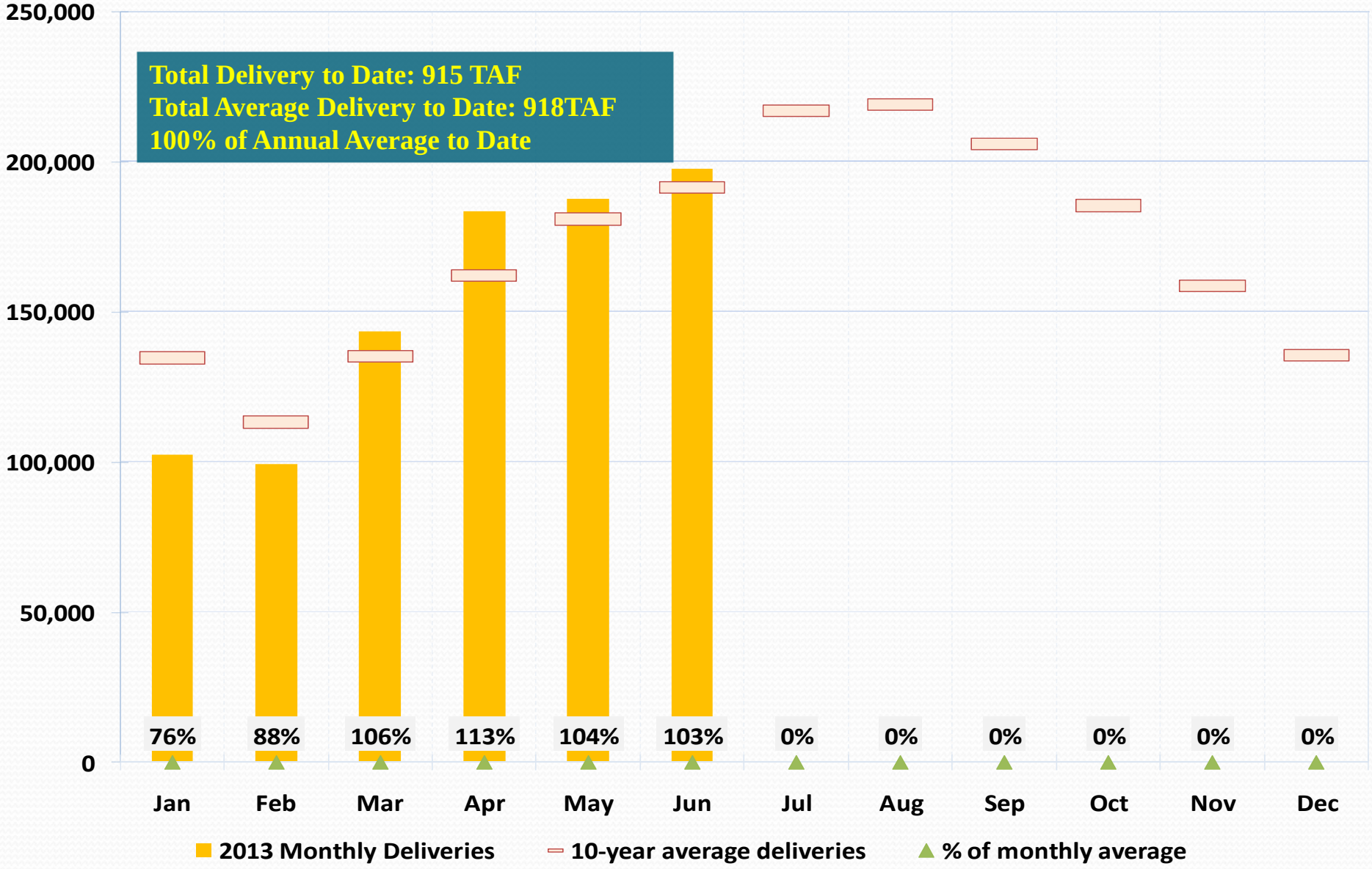
MWD's Combined Reservoir Storage as of August 1, 2013

Lake Skinner, Lake Mathews, and Diamond Valley Lake



Reservoir	Storage (Acre-Feet)	Percent of Capacity
Diamond Valley Lake	636,813	79%
Lake Mathews	129,206	71%
Lake Skinner	40,173	91%
Total	806,192	78%

2013 Water Deliveries to Member Agencies (AF)



RECLAMATION

Managing Water in the West

2014 Colorado River Annual Operating Plan

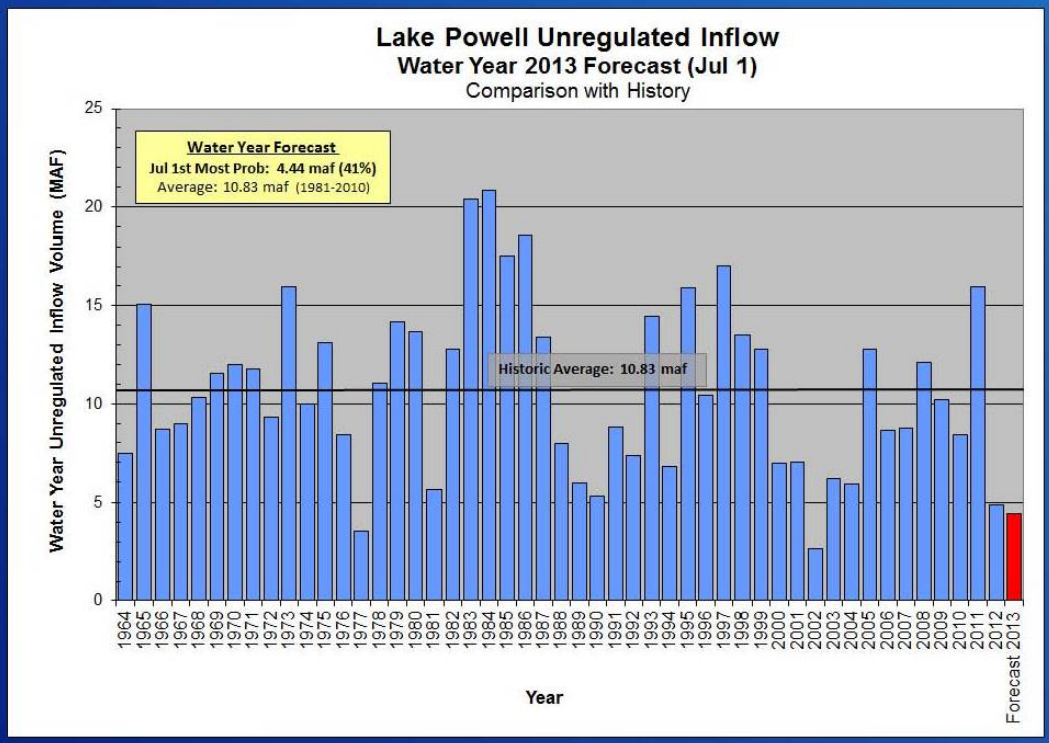
Colorado River Management Work Group Second Consultation July 30, 2013

U.S. Department of the Interior
Bureau of Reclamation

2014 Colorado River AOP Second Consultation Meeting

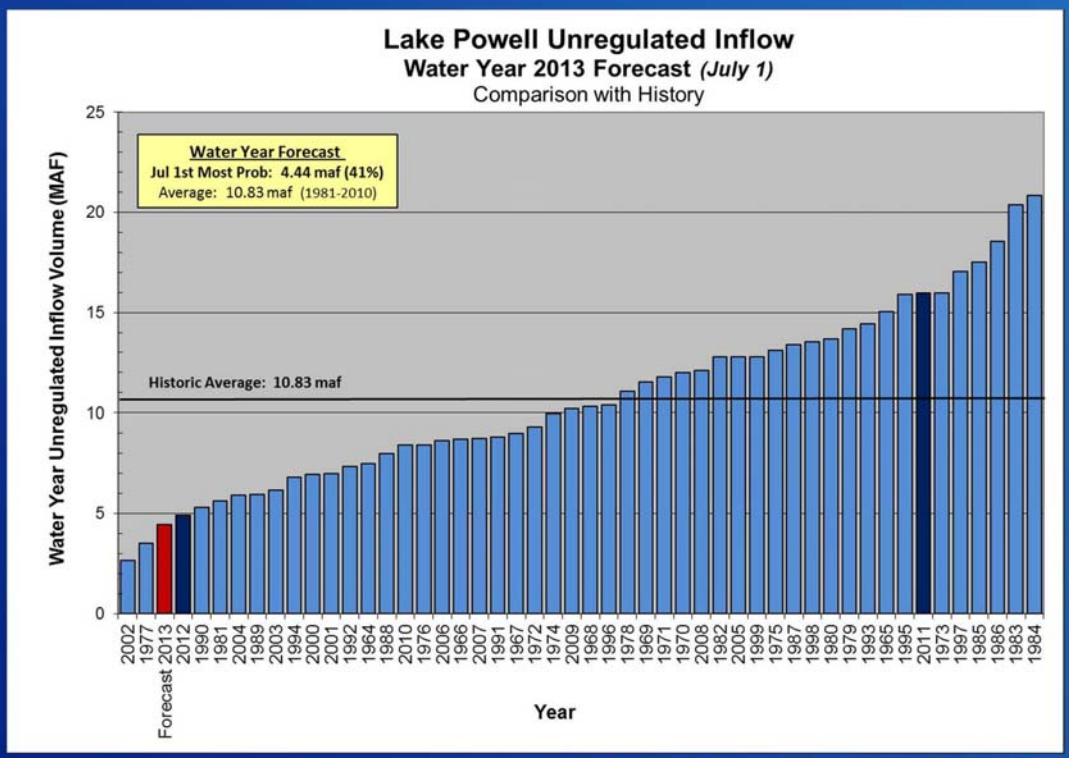
- Welcome and Introductions – *Steve Hvinden / Dave Trueman*
- Upper Basin Hydrology and Operations – *Katrina Grantz*
- Lower Basin Hydrology and Operations – *Dan Bunk*
- Report on Progress in Implementing the California Colorado River Water Use Plan – *Tanya Trujillo*
- 2014 AOP Review Process – *Steve Hvinden / Dave Trueman*
- Review of Draft 2014 AOP – CRMWG
- Conclusion, Wrap-up, Future Meeting Date

  - Final Consultation at McCarran Airport, Thursday, September 5, 2013



RECLAMATION

5



RECLAMATION

6

Lake Powell & Lake Mead Operational Table

Projected Operational Tiers for 2014 based on the July 2013 24-Month Study

Lake Powell

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
3,636 - 3,666 (2008-2026)	**Upper Elevation Balancing Tier**[3] 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)
3,575		9.5
	Mid-Elevation Release Tier Release 7.48 maf; if Lake Mead < 1,025 feet, release 8.23 maf	
3,525		5.9
	Lower Elevation Balancing Tier Balance contents with a min/max release of 7.0 and 9.5 maf	
3,490		4.0
3,370		0

Lake Mead

Elevation (feet)	Operation According to the Interim Guidelines	Live Storage (maf)[1]
1,220	**Flood Control Surplus or Quantified Surplus Condition** Deliver > 7.5 maf	25.9
1,200 (approx.)[2]	**Domestic Surplus or ICS Surplus Condition** Deliver > 7.5 maf	22.9 (approx.)[2]
1,145		15.9
1,105	**Normal or ICS Surplus Condition** Deliver ≥ 7.5 maf	11.9
1,075	**Shortage Condition** Deliver 7.167[4] maf	9.4
1,050	**Shortage Condition** Deliver 7.083[5] maf	7.5
1,025	**Shortage Condition** Deliver 7.0[6] maf Further measures may be undertaken[7]	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

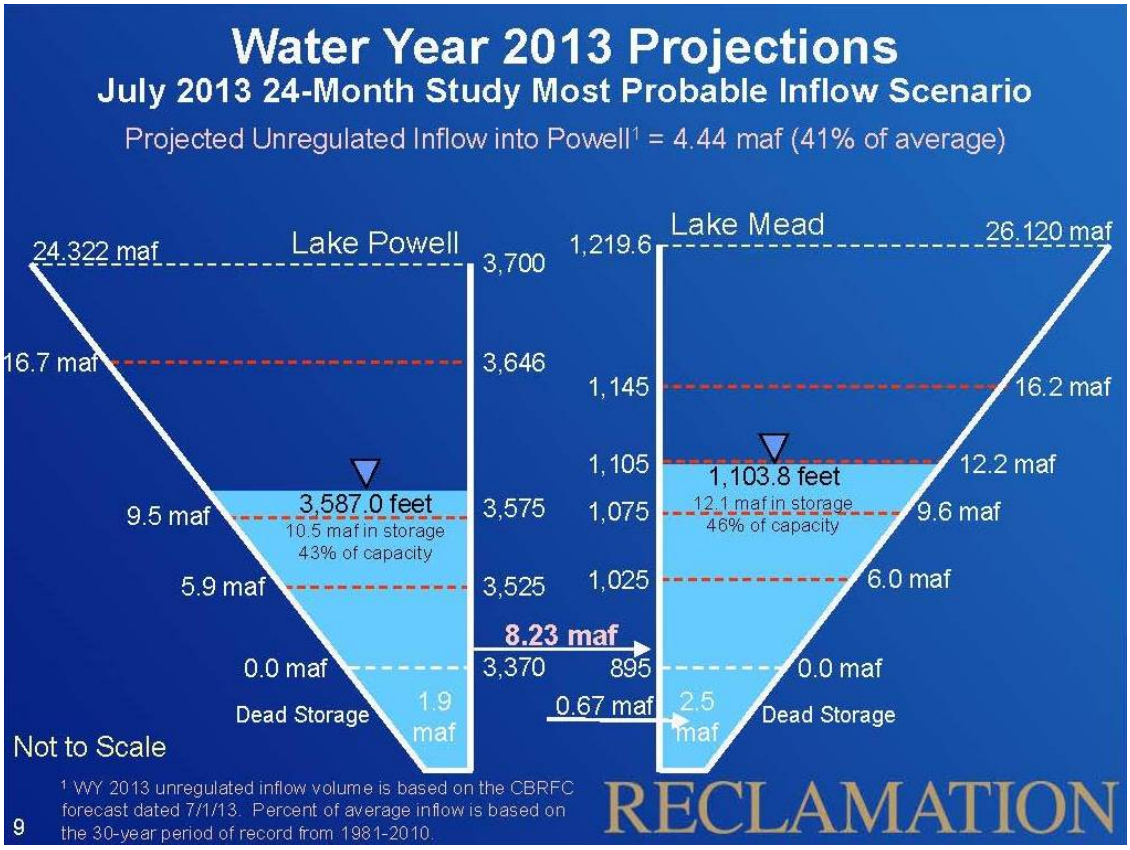
[5] Of which 2.40 maf is apportioned to Arizona, 4.4 maf to California, and 0.283 maf to Nevada

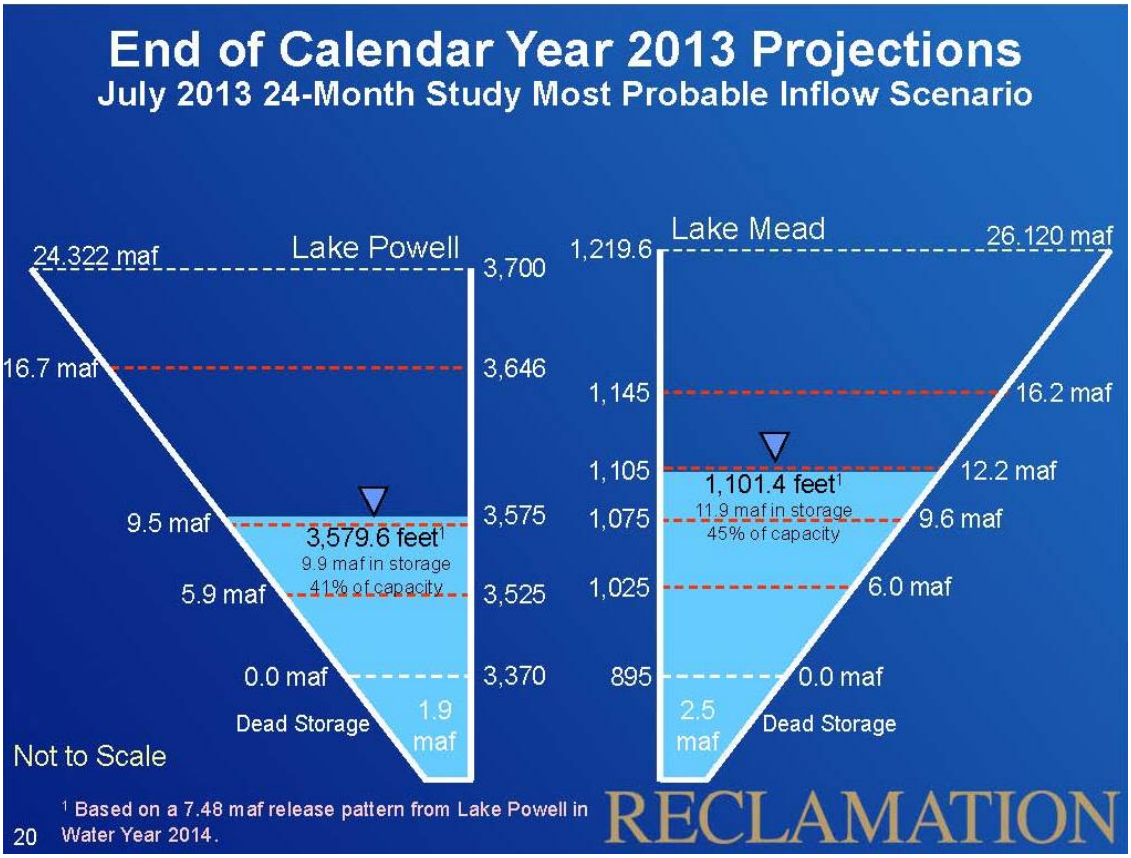
[6] Of which 2.32 maf is apportioned to Arizona, 4.4 maf to California, and 0.280 maf to Nevada

[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.

RECLAMATION

July 24-Month Study for Water Year and End of Year 2013 Projections





Lake Powell Unregulated Inflow Projections

Based on forecast issued July 1, 2013

Scenario	WY 2013 Developed July 2013	WY 2014 Developed July 2013	Historic Average (1981-2010)
Current Most Probable	4.44 maf (41 %) [1]	8.21 maf (76 %)	10.83 maf (100 %)

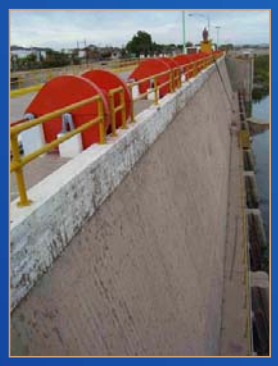
[1] Percentages and percent of average based on period of record from 1981-2010.

Note: The 2014 AOP will developed using the WY2014 forecast issued in August 2013

RECLAMATION

YAO Operations Update

- Brock Reservoir and Senator Wash 2013 YTD accumulated storage[1]
  - Brock 90,050 AF
  - Senator Wash 46,310 AF



- Excess Flows to Mexico

  2013 YTD total[2] 29,340 AF

[1] Provisional year-to-date totals through July 25, 2013
[2] Provisional year-to-date total through July 28, 2013

RECLAMATION

4.d. - Basin States Discussions

Governor's Representatives on Colorado River Operations
States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming

July 31, 2013

The Honorable John Kerry
Secretary of State
U.S. Department of State
2201 C Street NW
Washington, DC 20520

The Honorable Sally Jewell
Secretary of the Interior
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240

Dear Secretary Kerry and Secretary Jewell:

The seven Colorado River Basin States of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming are aware of recent concerns raised on behalf of the State of Texas regarding Mexico's water delivery obligations on the Rio Grande below Ft. Quitman, Texas, under the Treaty for the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande ("the 1944 Water Treaty"). The Colorado River Basin States recognize that issues surrounding water deliveries to the United States pursuant to the 1944 Water Treaty need to be resolved and support strong federal action to promptly address those issues. However, we understand that neither of you have supported any linkage between the Rio Grande and the Colorado River, including the linkage proposed through recently introduced legislation such as S. 1125, H.R. 1863 and H.R. 2307, and we would like to thank you for maintaining the long held policy of treating the two river systems distinctly.

For several years, the Colorado River Basin States have worked to develop a solid working relationship with the corresponding water managers in Mexico and with the appropriate federal officials in both countries. On November 20, 2012, after more than five years of negotiations, the United States and Mexico executed Minute 319 to the 1944 Water Treaty. By working together with our Mexican counterparts and the federal government, we were able to craft agreements designed to bring lasting benefits to the United States and all of our constituents who rely on the waters of the Colorado River system. Minute 319 is a landmark achievement on the Colorado River with substantial benefits for both countries, and is designed to avoid future disputes regarding Colorado River deliveries during an ongoing period of historic drought. The Colorado River Basin States believe that Minute 319 serves as a model for future accords on the Colorado River and other transboundary river systems.

The Colorado River Basin States continue to work collaboratively with our Mexican counterparts and the federal government to implement the programs outlined in Minute 319. As hydrologic conditions develop within the Colorado River Basin, the agreements developed through Minute 319 will function to keep more water in Lakes Mead and Powell and otherwise assist our countries in our collective water management efforts. Any threats to the implementation of these agreements may have significant detrimental impacts to water users throughout the Colorado River Basin in the United States. In addition, Minute 319 provides a

framework for discussions that may lead to the adoption of its key components for a longer period of time and successful implementation of the Minute is critical to that effort.

The Colorado River Basin States support the efforts of our counterparts in Texas to find a fair solution to address the important delivery obligations of Mexico on the lower Rio Grande under the 1944 Water Treaty. We urge the Administration to utilize the diplomatic tools available to improve the situation on the Rio Grande without undermining the successful cooperation that exists on the Colorado River. We are happy to provide any additional information that may be helpful.

Sincerely,

Sandra A. Fabritz-Whitney
Director
Arizona Department of Water Resources

Dana B. Fisher, Jr.
Colorado River Commissioner
Colorado River Board of California

John H. McClow
Governor's Representative
State of Colorado

Patricia Mulroy
General Manager
Southern Nevada Water Authority

Jayne Harkins
Executive Director
Colorado River Commission of Nevada

Estevan Lopez
Director
New Mexico Interstate Stream Commission

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State of Wyoming

Dennis J. Strong
Director
Utah Division of Water Resources
Utah Interstate Stream Commissioner

Don A. Ostler
Executive Director
Upper Colorado River Commission

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Statement of Tanya Trujillo, Executive Director
Colorado River Board of California

United States Senate
Energy and Natural Resources Committee
Subcommittee on Water and Power

Oversight Hearing Regarding the
Colorado River Basin Water Supply and Demand Study
July 16, 2013

Thank you for this opportunity to testify before the Subcommittee regarding the Colorado River Basin Water Supply and Demand Study. I am Tanya Trujillo, Executive Director of the Colorado River Board of California. I appreciate the interest of the Subcommittee regarding this important topic.

Background Regarding the Colorado River Basin Water Supply and Demand Study

The Colorado River Basin Water Supply and Demand Study (Basin Study) is the latest collaboration between the Department of the Interior's Bureau of Reclamation and the seven Colorado River Basin States of Arizona, California, Colorado, New Mexico, Nevada, Utah and Wyoming. Although this testimony will focus on the perspective of the Lower Division States of Arizona, California and Nevada, the Basin Study is a good example of coordination among all of the Basin States, interested water agencies, and others to collectively address the water supply challenges that the Basin may face in the future.

The Colorado River Board of California was established in 1937 to protect the interests and rights of the State of California, its agencies, and citizens, in the water and power resources of the Colorado River System. The Colorado River Board of California's member agencies are Palo Verde Irrigation District, Imperial Irrigation District, Coachella Valley Water District, the Metropolitan Water District of Southern California, the Department of Water and Power of the City of Los Angeles, and the San Diego County Water Authority. The Colorado River Board also includes two members of the public and the Directors of the California Water Resources and Fish and Wildlife Departments. California has a normal, annual allocation from the Colorado River of 4.4 million acre-feet of water. Water from the Colorado River is used to irrigate over 700,000 acres of some of the most productive farmland in the country, particularly during the winter. The Colorado River is also a very important component of the water supply for the municipalities in Southern California, which provide water service to around 20 million people.

The Colorado River provides similar benefits within Nevada, providing approximately 90% of the municipal water supply for member agencies of the Southern Nevada Water Authority (SNWA) which include the Cities of Las Vegas, North Las Vegas, and Henderson, as well as Clark County. SNWA has two intakes in Lake Mead at elevations

1,050 and 1,000 feet above sea level; therefore, the future levels of Lake Mead are critical to a continued supply of water for southern Nevada.

The Colorado River is also a vital resource for the State of Arizona. About 39% of Arizona's total water demand is met with Colorado River water. Colorado River water is used to meet municipal, agricultural, industrial and tribal water demands. It is stored underground to provide protection against future droughts and shortages and to conjunctively manage groundwater levels in central Arizona.

The communities that rely on Colorado River water in the Lower Division States are committed to ensuring that they utilize effective water management strategies and continue their ongoing planning efforts to protect and preserve Colorado River resources for many years.

The Colorado River Basin States and the Department of the Interior have worked collaboratively for many years to overcome challenges relating to water allocation and to balance the many interests that exist within the Colorado River Basin. The Basin Study is another example of this successful partnership. The Basin States contributed one-half of the funding to conduct the study and provided extensive background information and technical input during the study. Over a three-year period, the Basin States, individual water agencies, other interested parties and the Bureau of Reclamation worked hand-in-hand to produce the most comprehensive analysis of the Colorado River Basin's prospective water supply and demands to date. This collaborative effort compiled input from interested parties throughout the Basin including environmental organizations, Native American tribes and communities, hydroelectric power and recreational interests, and other federal agencies. The collaboration continues and the ongoing efforts will assist the Colorado River Basin managers in effectively addressing the challenges that lie ahead.

The Story of the Basin Study

The Basin Study is the most recent projection of the potential imbalances between water supply and demands in the Colorado River Basin and adjacent areas of the Basin States that receive Colorado River water. The Basin Study incorporates projections based on an evaluation of the potential effects of climate change on runoff within the Basin that may result in even more uncertainty regarding the potential future conditions the Basin may face. By analyzing four different supply scenarios and six different demand scenarios, the Basin Study projects that without continued proactive water management efforts in place, an overall average imbalance between available water supply and potential demands of about 3.2 million acre-feet by 2060, although the range of potential imbalances varied between 0 and almost 8 million acre-feet.

The Basin Study's analysis was not a new concept for the Basin States or the Bureau of Reclamation. Prior studies and analyses also concluded that without development of effective water management strategies to address growing demands for water, an imbalance between available water supply and projected demands could exist. For

decades, communities that rely on Colorado River water have made significant investments to conserve water, reuse water, develop supplemental water resources and construct infrastructure designed to efficiently utilize water. The Basin Study reinforces the continued need to implement programs and policies to address the water management challenges associated with the many competing needs for the river's waters.

Consistent with the ongoing practices and strategies for wise management of the Colorado River's resources, the Basin Study identified a broad range of options and strategies to address projected imbalances between supply and demands. The suggestions were gathered from hundreds of perspectives, including the general public. The Basin Study categorized the proposed options and strategies according to whether they were aimed at reducing demands, increasing supplies, or modifying existing operations. All of the recommended options and strategies will require additional review and analysis before any of them can be implemented. None of the recommended options, on their own, would be sufficient to address the projected imbalances, but by grouping options and ideas together and analyzing the effects of combined efforts, a future scenario that maintains the balance between potential future supplies and demands is possible.

The technical team that conducted the Basin Study should be complimented for their competent and professional approach to completing the Basin Study's Technical Reports. The technical work will continue to be essential as the Basin's water managers, agencies, businesses and individuals that rely on the Colorado River, progress forward. The Basin Study is an excellent example of a successful collaborative effort between the Federal Government and the Basin States that builds upon prior successful cooperation and hopefully will lead to successful continued coordination for decades to come. In this regard, the Colorado River Basin can be a model for other complex river systems.

Continued Efforts to Address the Projected Imbalance Between Supply and Demands

For more than 20 years, the Colorado River Basin States have been working with the Department of the Interior on ways to better manage the water supplies within the Colorado River Basin. The completion of the Basin Study in December 2012 was another step in the right direction. Since December, the Basin States and Interior have been collaborating with other interested participants to map out the next stages of cooperation. The Basin Study identifies several areas of potential future actions and the Basin States and the Bureau of Reclamation are working to implement each of the Basin Study's recommendations. To evaluate some of these future actions, three workgroups have been formed. The Municipal and Industrial Conservation and Reuse workgroup will evaluate existing programs to refine the estimate of potential water saved through conservation and reuse programs. The Agricultural Conservation and Transfers Workgroup will refine the estimated potential savings from agricultural conservation and transfers. The Healthy Flows workgroup will evaluate potential model improvements for simulating river flows and evaluate certain river reaches.

In conjunction with the release of the Basin Study, the Basin States released a statement confirming their ongoing commitments to future actions. Acknowledging the highly

variable nature of the Colorado River system and recognizing that no single solution will be sufficient to meet the future potential water demand and supply imbalances, the Basin States identified a series of local, regional and basin-wide projects that are underway or can be implemented to help meet future demands for water within the Basin. The Basin States confirmed the need to adhere to the "Law of the River", which has served the Basin well for over 90 years and has evolved to meet ever present challenges.

The Basin States recognize that successful ongoing water conservation and reuse efforts have been adopted by many municipal agencies in each State to reduce growing needs for water. In many areas, the per capita use of water is lower now than in the past despite higher populations. Municipalities within the Basin will continue to implement water conservation and reuse opportunities, and are working closely with the other members of the Basin Study's Municipal and Industrial Conservation and Reuse Workgroup to refine the Basin Study's assumptions.

Similarly, the Basin Study's Agricultural Conservation and Transfers Workgroup will document the existing conservation and transfers of Colorado River water throughout the Basin. Within California, significant amounts of water will continue to be transferred from agricultural to municipal uses pursuant to existing agreements between specific water users. These types of voluntary agreements are designed to provide mutual benefits to the participating agencies and are important tools available to help manage finite supplies of water.

Many of the water providers within the Lower Division States already have been very proactive in meeting existing water supply needs through wise management of the Colorado River's resources, and also have developed additional sources of water, recognizing that developing a balanced portfolio of water supply is a sound water management practice. California's municipal water providers serve close to 20 million of the more than 30 million people who receive at least part of their water supply from the Colorado River. California's municipal conservation efforts include conservation, water recycling and reuse and development of local groundwater resources to supplement water supplies. The Metropolitan Water District of Southern California's 2013 Annual Progress Report to the California State Legislature documents the agency's achievements in conservation, recycling and groundwater recharge. In Nevada, between 2002 and 2012, the Southern Nevada Water Authority's consumption of Colorado River water decreased by approximately 29 billion gallons, despite the addition of 400,000 residents. SNWA has implemented a broad range of education and incentive programs to encourage ongoing water conservation. Arizona has also developed programs to encourage efficient agricultural, industrial and residential water uses and has an extensive groundwater management system in place to try to balance the surface and groundwater uses in Active Management Areas that include the largest population centers of the state.

Water delivery contractors within the Lower Division States, such as the Southern Nevada Water Authority, the Metropolitan Water District of Southern California, and the Central Arizona Water Conservation District are allowed to bank portions of their conserved water supplies and have jointly funded projects to help increase the water

resources within the Basin. These States have developed proactive water management agreements regarding how to allocate surplus water when it is available under certain conditions and how to address shortage conditions if the water supply levels deteriorate. On a basin-wide level, all seven Basin States have agreed to coordinated operating guidelines that the Bureau of Reclamation uses to manage releases of water from Lake Powell to the Lower Basin. These types of agreements have set the stage for the continued cooperation that exists today.

The Basin States have also been working to develop basin-wide programs to support weather modification and vegetation management options, and have committed to evaluate additional water supply augmentation options such as large-scale desalination and importation projects that will require extensive planning and research prior to being considered for implementation. The Basin Study's "next steps" outline describes the ongoing commitments of the Basin States to lead efforts to explore additional water banking, water supply augmentation and watershed management options to address short-term and long-term needs for water.

The Basin States will also continue their efforts to assist in implementation of the International Boundary and Water Commission's Minute No. 319 to the 1944 Treaty for the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande between the United States and Mexico. Executed in November 2012, Minute No. 319 extends some of the water management flexibilities developed within the United States, such as water banking, to the context of the United States' Colorado River water delivery obligations to Mexico. Collaboration with federal, state, and local representatives in Mexico resulted in the development of this mutually beneficial agreement. Continuing to build off the success of Minute No. 319 would result in additional basin-wide benefits.

The collective management efforts among the Basin States, water agencies and the Federal Government have kept the water levels higher in Lake Mead than they otherwise would have been, despite having endured over 10 years of drought. In light of the looming possibility of continued drought and the Basin Study's recent projections of potential supply and demand imbalances, it is more important than ever that we continue to roll up our sleeves and work together to find creative, implementable solutions.

The Role of Congress

The SECURE Water Act, Subtitle F of P.L. 111-11, provided general authority for the Basin Study and provides continued authority for the federal agencies to work with State and local entities to plan for the future and develop water sustainability strategies. Ongoing Congressional support for funding for the Bureau of Reclamation's Water SMART and Title XVI Water Reclamation and Reuse programs would help continue the beneficial cooperation that currently exists within the Basin. The Water SMART programs are cost-shared by the non-federal participants and provide assistance to local water management entities that are attempting to conserve water and maximize water use efficiency. Investments in existing water supply infrastructure to ensure that the operation of existing facilities can be as efficient and secure as possible and continued

funding for water efficiency and conservation programs that are matched by or enhance the ongoing efforts at the state and local levels are helpful tools that should continue.

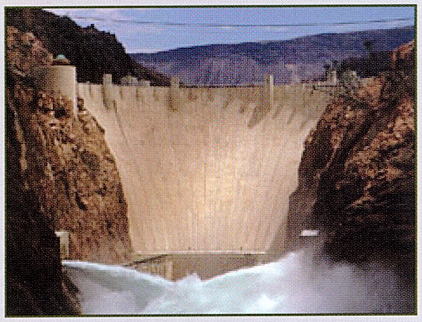
Conclusion

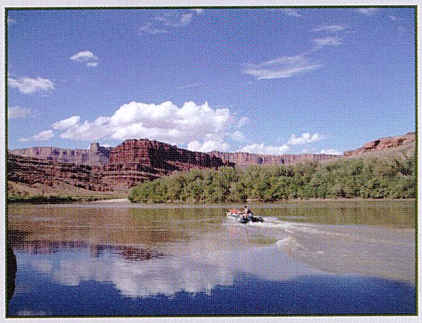
The Colorado River Basin States recognize that we are part of a complex community that relies on a vitally important shared natural resource and involves diverse areas of responsibility. The impacts of continued drought are being felt by all of the varied users of water within the Basin States. The Basin States plan to continue our successful collaborations, including the recent successes with Mexico, to develop tools and strategies to enable us to address ongoing challenges and meet the evolving demands on the Colorado River. The Basin Study's technical foundation will help support that process.

Thank you for the opportunity to provide testimony on this important topic.

USGS
science for a changing world

WaterSMART—The Colorado River Basin Focus-Area Study





Introduction

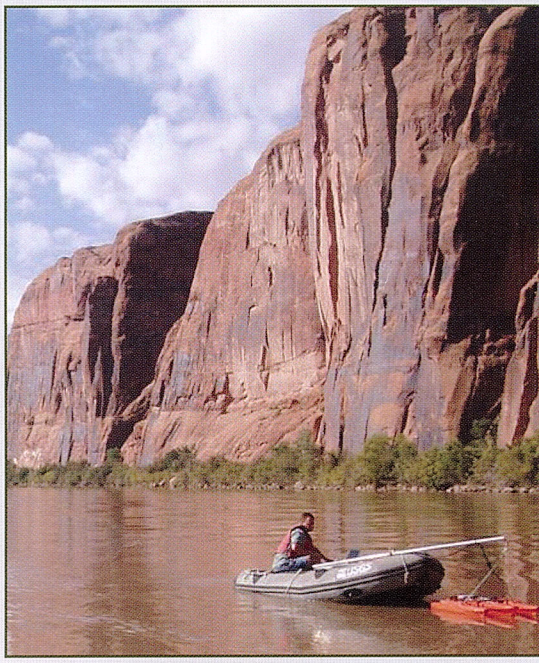
Increasing demand for the limited water resources of the United States continues to put pressure on water-resource agencies to balance the competing needs of ecosystem health with municipal, agricultural, and recreational uses. In 2007, the U.S. Geological Survey (USGS) identified a *National Water Census* as one of six pivotal future science directions for the USGS in the following decade (U.S. Geological Survey, 2007). The envisioned USGS National Water Census would evaluate large-scale effects of changes in land use and land cover, water use, and climate on water availability, water quality, and human and aquatic ecosystem health.

The passage of the SECURE (Science and Engineering to Comprehensively Understand and Responsibly Enhance) Water Act (SECURE Water Act, 2009) was a key step towards implementing the USGS National Water Census. Section 9508 of the Act authorizes a "national water availability and use assessment program" within the USGS (1) to provide a more accurate assessment of the status of the water resources of the United States; and (2) to develop the science for improved forecasts of the availability of water for future economic, energy production, and environmental uses.

The USGS WaterSMART Program

Initial funding for the USGS to begin working on the National Water Census came with the approval of the U.S. Department of the Interior's WaterSMART (Sustain and Manage America's Resources for Tomorrow) Initiative (U.S. Department of the Interior, 2010). The WaterSMART Initiative provides funding to the USGS and the Bureau of Reclamation to achieve a sustainable water strategy to meet the Nation's water needs. WaterSMART funding also allowed the USGS to begin the national Water Availability and Use Assessment, as called for under the SECURE Water Act, for the purpose of:

- providing estimates of the distribution and abundance of freshwater resources, including assessments of water use for human, environmental, and wildlife needs;
- evaluating factors affecting water availability (for example, energy development, agricultural practices, increasing population, climate change);
- estimating undeveloped potential water resources, such as saline and brackish water and wastewater; and
- developing data and information needed to forecast likely outcomes of water availability, water quality, and aquatic ecosystem health due to changes in land use and cover, natural and engineered infrastructure, water use, and climate.



U.S. Department of the Interior
U.S. Geological Survey

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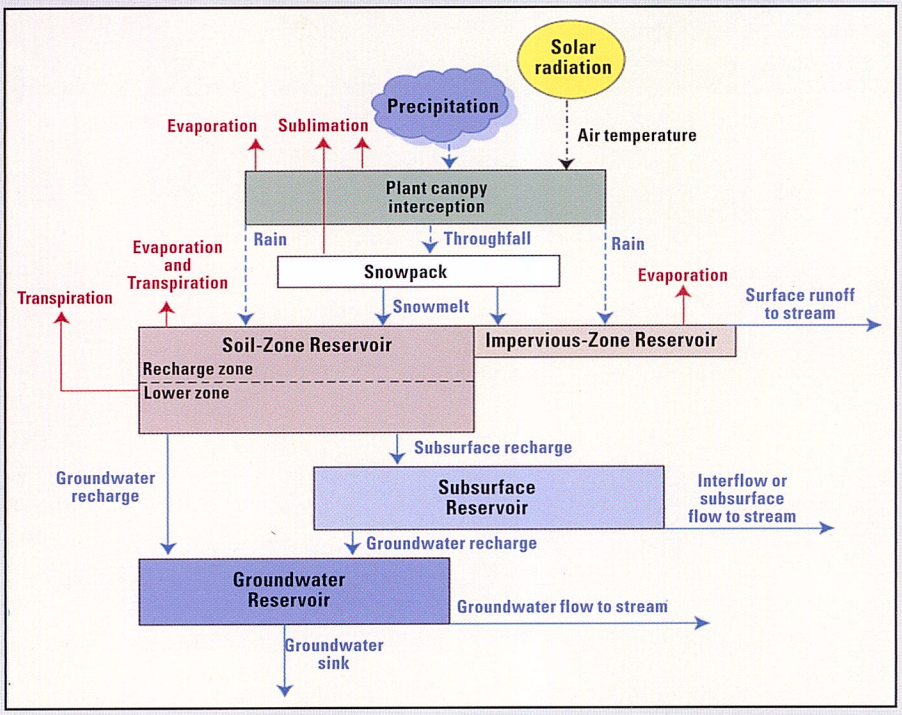
Fact Sheet 2012–3114
September 2012

WaterSMART Focus-Area Studies

To address the goals of the DOI WaterSMART Program, while at the same time moving the USGS toward a National Water Census, the USGS proposed to start three "focus-area" studies. The locations for the three studies were chosen by the DOI: the Delaware River Basin (Del., N.J., N.Y., Pa.), the Apalachicola–Chattahoochee–Flint River Basins (Ala., Ga., Fla.), and the Colorado River Basin (Ariz., Calif., Colo., Nev., N. Mex., Utah, Wyo.). The initial plan for each of these WaterSMART Focus-Area Studies is a 3-year effort, beginning in 2012, to develop and test methods and techniques for meeting the goals of the authorizing legislation. The remaining sections of this Fact Sheet address only those activities that are proposed for the Colorado River Basin Focus-Area Study.

The Colorado River Basin WaterSMART Focus-Area Study

The Colorado River is a critical water supply for much of the Southwestern United States. The River supplies water to more than 25 million people and irrigates more than 3 million acres of cropland across seven "basin states." Increasing population, decreasing streamflows, and the uncertain effects of a changing climate urge a better understanding of water use and water availability in the Colorado River Basin.



Conceptualized water budget (from Healy and others, 2007).

In keeping with the scientific, nonregulatory mission of the USGS, water availability in the Colorado River Basin will be assessed by investigating components of a regional "water budget." A water budget is analogous to a household budget or checking account where understanding the amount entering and leaving the account indicates the balance remaining in the account for other uses. In its simplest form, a water budget can be written as follows:

Waterflow In – Waterflow Out = Change in Water Storage

The water-budget components studied in the Colorado River Basin will be those where understanding and quantification are lacking, and the USGS can contribute the largest incremental increase in scientific knowledge. In consultation with basin stakeholders, the USGS has identified three water-budget components where understanding could be improved and the USGS has relevant expertise: (1) current water use—in particular the "consumptive" use of water; (2) regional and field scale assessments of water losses from evapotranspiration and snowpack sublimation; and (3) groundwater discharge to streams, and the relative importance of the regional groundwater flow system in annual streamflow volumes. Better quantification of these components of the basin water budget will contribute to the overall assessment of water availability in the Colorado River Basin, thereby complementing ongoing work by other agencies.

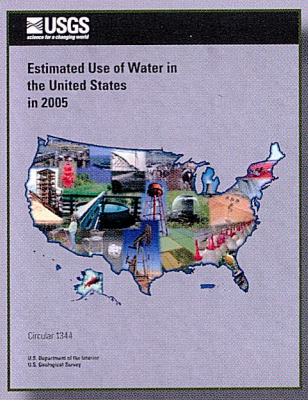
Extent of the Colorado River Basin. Upper Basin outlined in red.

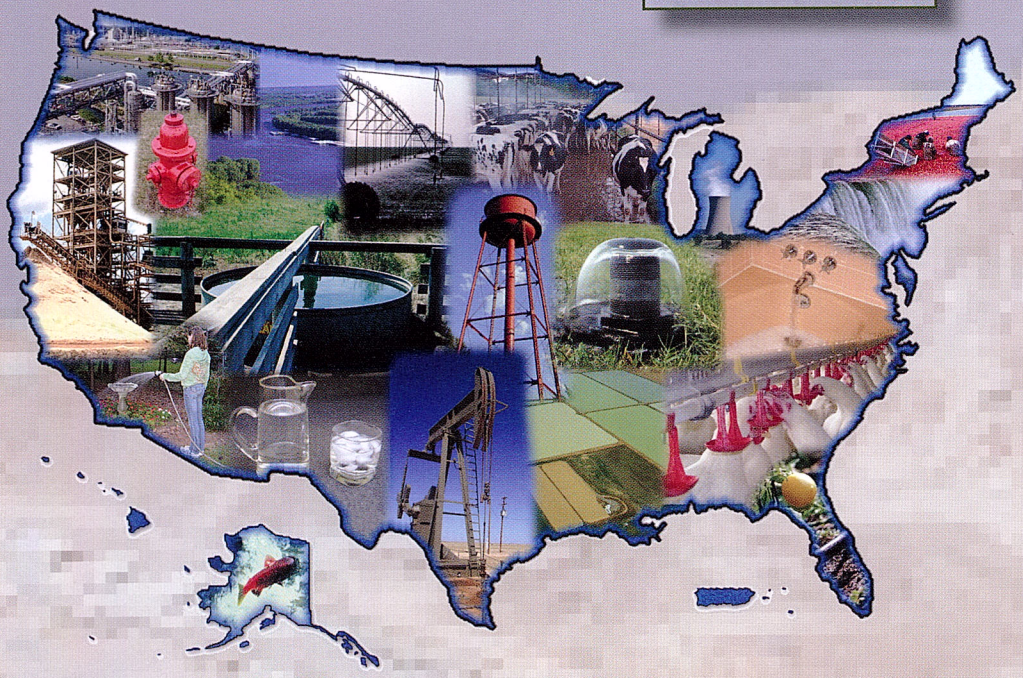
***Sublimation**: means a substance transforms from a solid to a gas without passing through a liquid stage. The classic example is the disappearance of dry ice (solid carbon dioxide to gaseous carbon dioxide). In many low humidity areas, snow and ice can sublimate leaving little if any water in the soil.*

Water Use in the Colorado River Basin

Many regional stakeholders and water-supply managers in the United States have indicated an important need for water-use data to implement their management strategies, yet there is a lack of information in this area (National Research Council, 2002). What data do exist are often inconsistent and out of date. Improved and regionally consistent databases of water-use information will be one of the most essential outcomes of the National Water Census and its geographic Focus-Area Studies.

By renewing effort on quantification of water use, the USGS will be better able to describe how humans move, use, consume, and dispose of the water they withdraw, divert, or impound and to integrate that information with our understanding of natural flows in the environment. Through this integrated approach, we hope to describe how human use of water and natural flows influence one another. This effort requires that we understand the sources from which water is withdrawn (both surface water and groundwater), the demand that the water is used to satisfy, the transport of the water to the demand location (including transportation losses), the amount of water that is "consumed" in satisfying the demand, and the volume and location of water returned to the environment, either as return flows to surface water or recharge to groundwater systems. Each of these steps has a strong geospatial component: We need to know which watersheds are losing flows, which are gaining flows, and the net exchange between watersheds.





Some of the many uses of water in the United States (from Kenny and others, 2009).

To integrate water-use data with natural-flow data, the USGS will strive to improve information on the location of the points of water withdrawal, the source from which the water is withdrawn, the location of the points of demand to which the water is delivered, and the transit losses of water on the way to that location. Finally, as this information improves nationally, it will allow a mass-balance estimation of the volume of the eventual "return flows" to the environment. Owing to the large area encompassed by the Colorado River Basin, the USGS intends to work at multiple spatial and temporal scales to develop information across the entire basin, as well as demonstrate analysis and interpretive capabilities at selected subbasin scales. The Focus-Area Study will compile and integrate location information for public supply (large and very large systems, which include population served greater than 10,000) and for irrigation water uses—the two largest water uses in the Colorado River Basin. Water-use information for the industrial, mining, and thermoelectric sectors will be compiled where available to provide as complete a summary as possible for the major water uses in the Colorado River Basin.

Evapotranspiration and Snowpack Sublimation in the Colorado River Basin

Two important water-budget components that are critical to understanding water supplies in the Colorado River Basin are evapotranspiration from natural and cultivated land, and loss of water storage from the mountain snowpack through sublimation. Despite their recognized importance, evapotranspiration (ET) and sublimation remain difficult to measure and are poorly quantified for the Colorado River Basin. An improved understanding of these processes in the varied landscapes of the Colorado River Basin will improve our ability to calculate water budgets across the region.

Developing a spatially explicit estimate of ET and sublimation across the region will reduce uncertainty in the estimated water budget and allow more accurate calculation of other residual terms in the equation (for example, consumptive use from agricultural irrigation, irrigation efficiency, surface-water return flows, or groundwater recharge). Methods that use satellite-based remotely sensed data will be developed and implemented, and these regional estimates will be compared to ground-based measurements for calibration and verification. Derivative products produced during this effort (for example, land-cover distribution) also can be integrated into the assessments of water use and groundwater that are additional goals for this Focus-Area Study.

Evapotranspiration

Evapotranspiration from irrigated croplands and native vegetation (for example, riparian ecosystems) is a significant component of the water budget in the Western United States. Its quantification across the landscape is essential for estimating regional water budgets and for calculating consumptive water use on agricultural lands. The USGS Focus-Area Study will apply remote sensing techniques for calculating the surface energy balance that will provide estimates of ET across the landscape. An assessment of the entire Colorado River Basin will use MODIS (1-kilometer resolution) to provide monthly and

seasonal ET estimates from 2000 to 2011. Estimates of ET for individual irrigated agricultural fields will be developed using LANDSAT thermal imagery (30-meter resolution) and will compare scenes from 2005 and 2010. This approach has many advantages over statistical interpolation between flux towers and climate stations, or estimates made from indirect proxies like consumption of electricity by irrigation pumps. The WaterSMART Colorado River Basin Focus-Area Study provides the opportunity to develop, test, and evaluate remote-sensing techniques before performing other regional or national applications. Maps and on-line datasets will be made available to the public.

Snow-Water Assessment

Snow accumulation in high elevation settings of the Western United States is an integral component of the western regional water cycle providing water for drinking, irrigation, industry, energy production, and ecosystems. In the mountains of the Western United States, seasonal snowpacks act as a large natural water-storage reservoir providing, on average, 70 to 80 percent of annual surface-water runoff (Doesken and Judson, 1996). In the Upper Colorado River Basin, the percentage is even higher, with 85 percent of streamflow derived from melting snow (Edwards and Redmond, 2005). The quantity of water stored in seasonal snowpacks is expressed as the snow water equivalent (SWE). Springtime SWE is one of the most important data inputs to hydrologic models used to forecast runoff in the Western United States because it is the main source of water to streams during late spring and early summer (Clark and Hay, 2004; Slater and Clark, 2006). Snowpack sublimation, which is analogous to evaporation from land surfaces or water bodies, represents an important, but poorly quantified, loss of water from the snowpack (Hood and others, 1999). Sublimation represents one of the major uncertainties in runoff forecast models, and is thought to be particularly important during drought years, when water is scarce. As part of the WaterSMART Focus-Area Study in the Colorado River Basin, the USGS intends to develop regional SWE and sublimation estimates using moderate- and high-resolution gridded models and ground-based validation measurements to inform hydrologic modeling studies, water availability studies, and water-use assessments.

Groundwater Discharge to Surface Water

Groundwater is an important resource influencing water availability in the Colorado River Basin. Aquifers store water during rainfall and snowmelt (aquifer recharge), thus providing a reliable source of often high-quality water. Groundwater discharge to streams and wetlands is a critical component of regional water supply in that it supports year-round surface-water flows (baseflows) for multiple uses and sustains ecosystems and aquatic environments in the Colorado River Basin. Compared to surface water, however, groundwater storage and flow are difficult to measure, so that the groundwater components of the Colorado River Basin water budget are less well understood. The rate and spatial distribution of aquifer recharge, discharge, and use are critical for understanding long-term water availability in the basin.

In many areas, groundwater and surface water are hydraulically connected and can be considered a single resource (Winter and others, 1998). Drought, climate change, and human manipulations, such as surface-water regulation or groundwater pumping, can have major effects on the linkage between groundwater and surface water, resulting in changes in the direction and volumes of flow. Thus, the groundwater source and flow paths for discharge to streams can be an important component of the water budget and can be critical to water avail ability in times of small surface-water runoff. Fundamental to understanding and managing water resources in the Colorado River Basin is an understanding of groundwater discharge to surface water in the basin (Rosenberry, 2008).

Groundwater discharging to streams arrives at the stream interface via local, intermediate and regional groundwater flow paths (Freeze and Cherry, 1979; Winter and others, 1998; Stolp and others, 2010; Gardner and others, 2011) and is often a mix of water from multiple flow paths. During times of drought, surface water often has a greater component of discharge from regional groundwater flow paths with longer residence times and often differing geochemistry (Hornberger and others, 1998).

Understanding groundwater flow paths and residence times provide important information about vulnerability of water resources to natural and anthropogenic changes. Local groundwater flow systems with shorter residence times are more immediately susceptible to water-quality effects related to changing surface conditions and human activities. Conversely, discharge volumes from regional flow systems with long groundwater flow paths and residence times of possibly 1,000s of years would respond much more slowly to short-term hydrologic or climate changes and surface-related influences (Tetzlaff and Soulsby, 2008; Gardner and others, 2011). Effective management of water resources in support of ecosystem health requires an understanding of groundwater and surface-water interactions over a range of spatial and temporal scales.

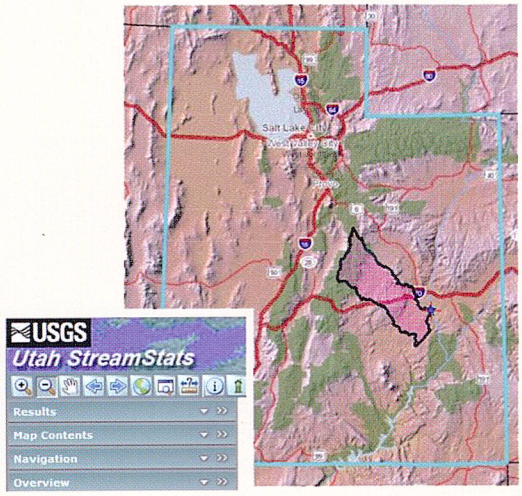
Due to the large areal extent of the Colorado River Basin, the initial groundwater investigation in the Focus-Area Study will evaluate only the groundwater systems of the Upper Colorado River Basin (UCRB). Indeed, less work has been done to understand the groundwater/surface-water interactions in the upper basin. For understanding groundwater discharge at the scale of the UCRB, two components need to be considered: (1) identifying key stream reaches where substantial groundwater discharge occurs, from what aquifers, and how discharge varies temporally and spatially; and (2) understanding the groundwater flow paths supplying water to these discharge points.

The proposed approach for the groundwater assessment in the UCRB is a hierarchical, nested approach applying multiple techniques and tracers to estimate groundwater discharge to specific stream reaches. The study will have three significant components: (1) to revise our understanding of the hydrogeologic framework controlling groundwater movement and to identify locations where local groundwater discharge is likely to be a significant source of surface water in rivers and streams; (2) to determine groundwater ages, residence times, and flow paths in selected stream reaches, which will require a geochemical reconnaissance survey of the main tributaries in areas identified as having substantial groundwater discharge to streams; and (3) to develop modeled estimates of groundwater discharge to streams and to map these discharges at a subwatershed scale across the entire UCRB.

Information Delivery

The results of the Colorado River Basin Focus-Area Study will be distributed publicly in topic-specific databases, maps, and published information products. The long-term vision for delivering water budget information from the USGS National Water Census is to develop an interactive map-based internet application that would allow user-defined queries of nationally consistent data. This application is currently (2012) under development but will await the broad application of methods and data collection activities being piloted in the WaterSMART Focus-Area Studies. The activities and methods being pursued in the Colorado River Basin and the other Focus-Area Studies will be evaluated for regional and national application and may be implemented nationwide as part of the National Water Census.

A Web application is under development as part of the USGS National Water Census, modeled on the USGS StreamStats platform, for delivering water availability information at scales that are relevant to the user.



Vision: Select a stream location where information is desired and automatically generate the contributing surface-water basin boundary.

Compile data on water-accounting components for delineated area.

Work with the online tool to construct your local water budget.

Access and analyze available trend information.

Goal: To provide detailed water budget information for any user-defined drainage basin nationwide.

Screen capture of USGS StreamStats Web interface from Utah.

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Contact Information

For additional information about the USGS WaterSMART Program or the Colorado River Basin Focus-Area Study, contact:

Eric J. Evenson, Coordinator
National Water Census
Water Mission Area
U.S. Geological Survey
810 Bear Tavern Road, Suite 206
West Trenton, NJ 08628
Phone: 609-771-3904
Email: *eevenson@usgs.gov*

Bret Bruce, Coordinator
Colorado River Basin Focus-Area Study
U.S. Geological Survey
Rocky Mountain Regional Executive's Office
P.O. Box 25046, MS911
Denver, CO 80225
Phone: 303-236-4902
Email: *bbruce@usgs.gov*

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Version July 23, 2013

Glen Canyon Dam Adaptive Management Program
Adaptive Management Work Group Meeting, August 8-9, 2013

LITTLE AMERICA HOTEL (BALLROOM B)
2515 E. BUTLER AVENUE
FLAGSTAFF, ARIZONA

DRAFT AGENDA

DAY 1

START TIME[1] (Duration)	Thursday, August 8, 2013 Topic, Presenter, and Purpose[2]	Materials/ Tabs
9:30 a.m. (:45)	**Welcome and Administrative** – Anne Castle, Secretary's Designee *Information, discussion, and possible action* • Introductions and Determination of Quorum (15 members) • Approval of May 8, 2013 Meeting Minutes • Action Item Tracking Report • Progress on Nominations and Reappointments • TWG Chair and Vice Chair for FY 2014 • AMWG Charter Renewal	**Agenda** **Draft Minutes/ Action Items**
10:15 a.m. (:30)	**Basin Hydrology and Operations** – Katrina Grantz, Reclamation *Information, discussion* • Presentation (15 minutes) • Q&A, discussion (15 minutes)	**Hydrology & Hydrograph**
10:45 a.m. (:45)	**Water Year 2014 Hydrograph** *Information, discussion, and possible motion* **Proposed Motion:** Recommend Proposed Hydrograph (Due to its length, please see the motion in the Agenda Item Form) • DOI-DOE Recommendation – Dave Trueman, Reclamation (15 minutes) • TWG Report – John Jordan, TWG Chair (15 minutes) • Q&A, discussion, and possible action (15 minutes)	**Hydrology & Hydrograph**
11:30 a.m. (:30)	**AMP Tribal Liaison Report** – Sarah Rinkevich, AMP Federal Tribal Liaison *Information, discussion* • Presentation (15 minutes) • Q&A, discussion (15 minutes)	**Cultural Updates**
12:00 noon (1:00)	LUNCH	

START TIME[1] (Duration)	Thursday, August 8, 2013 Topic, Presenter, and Purpose[2]	Materials/ Tabs
1:00 p.m. (1:00)	**Science Updates: Overflights, Riparian Vegetation, and Sediment** – Jack Schmidt and staff, Grand Canyon Monitoring and Research Center (GCMRC) *Information, discussion* • 2013 Overflight Mission Update, Phil Davis GCMRC (10 minutes) • Changes in Riparian Vegetation in the Colorado River Corridor, 1965-present, Joel Sankey and Barb Ralston GCMRC (20 minutes) • Present Status of Sediment Resources, Paul Grams GCMRC (15 Minutes) • Questions, responses, and discussion (15 minutes)	**Science Documents**
2:00 p.m. (:25)	**Technical Work Group Chair Report** – John Jordan, TWG Chair, Federation of Fly Fishers *Information, discussion* • Revised TWG Operating Procedures (5 minutes) • Administrative History Update, Jason Thiriot Nevada (5 minutes) • Socioeconomics Ad Hoc Group Update, Dave Garrett Science Advisors (5 minutes) • Q&A, discussion (10 minutes)	**TWG Chair Report**
2:25 p.m. (:50)	**Science Update: Fisheries** – Scott VanderKooi and staff, Grand Canyon Monitoring and Research Center *Information, discussion* • Status and Trends in Rainbow Trout and Humpback Chub Populations in Glen, Marble, and eastern Grand Canyon (30 minutes) • Questions, responses, and discussion (20 minutes)	**Science Documents**
3:15 p.m. (:15)	BREAK	
3:30 p.m. (:45)	**Planning for a Fall 2013 HFE** – Glen Knowles, Reclamation, Jack Schmidt, Chief, Grand Canyon Monitoring and Research Center *Information, discussion* • HFE Protocol Technical Team Report, Glen Knowles (15 minutes) • Considerations in Developing a Hydrograph Recommendation for a 2013 Fall HFE, Jack Schmidt (15 minutes) • Questions, responses, and discussion (15 minutes)	**Science Documents**

START TIME (Duration)	Thursday, August 8, 2013 Topic, Presenter, and Purpose[2]	Materials/ Tabs
4:15 p.m. (1:00)	**FY 2013-14 Budget and Work Plan** *Information, discussion, and possible action* • Bureau of Reclamation Proposed Changes to FY 13-14 Budget and Work Plan – Glen Knowles, Reclamation (15 minutes) • FY 14 budget considerations – Jack Schmidt, GCMRC and Glen Knowles, Reclamation (15 minutes) • TWG and Budget Ad Hoc Group budget report – John Jordan, TWG Chair and Shane Capron, Western Area Power Administration (10 Minutes) • Q&A, discussion (20 minutes)	**Budget**
5:15 p.m. (:05)	**Public Comment**	
5:20 p.m.	ADJOURN FOR THE DAY	

Version July 23, 2013

Glen Canyon Dam Adaptive Management Program
Adaptive Management Work Group Meeting, August 8-9, 2013

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DRAFT AGENDA

DAY 2

START TIME[1] (Duration)	Friday, August 9, 2013 Topic, Presenter, and Purpose[2]	Materials/ Tabs
8:00 a.m. (:05)	**Welcome and Administrative** – Anne Castle, Secretary's Designee • Introductions and Determination of Quorum (15 members)	**Agenda**
8:05 a.m. (1:00)	**FY 2013-14 Budget and Work Plan (Continued)** *Information, discussion, and possible action* **Proposed Motion:** AMWG recommends the revised FY2013-14 Biennial Budget and Work Plan from the Bureau of Reclamation and Grand Canyon Monitoring and Research Center, as reviewed by TWG on June 26, 2013 and as revised by Reclamation and presented at the August 2013 AMWG meeting, to the Secretary of the Interior for approval.	**Budget**
9:05 a.m. (1:05)	**Long-Term Experimental and Management Plan EIS** – Anne Castle, Secretary's Designee; Glen Knowles, Reclamation; Rob Billerbeck, NPS, and Mike Runge, USGS *Information, discussion* • Summary of Stakeholder Tradeoff Analysis Workshop (15 minutes) • Relationship of NPS Comprehensive Fisheries Management Plan (15 minutes) • Update on Process and Schedule (15 minutes) • Q&A and Discussion (20 minutes)	**Updates**
10:10 (:45)	**The Desert Landscape Conservation Cooperative (LCC)** Aimee Roberson, Desert LCC Science Coordinator, USFWS Genevieve Johnson, Desert LCC Coordinator, Reclamation *Information, discussion* • Presentation (30 minutes) • Q&A, discussion (15 minutes)	
10:55 a.m. (:15)	BREAK	

START TIME[1] (Duration)	Friday, August 9, 2013 Topic, Presenter, and Purpose[2]	Materials/ Tabs
11:10 a.m. (:45)	**Who is CRSP?** – Lynn Jeka, Western Area Power Administration *Information, discussion* • Presentation (30 minutes) • Q&A and Discussion (15 minutes)	**Updates**
11:55 p.m. (:05)	**Public Comment**	
12:00 p.m.	WRAP-UP AND ADJOURN: Anne Castle, Secretary's Designee	

[1] Every effort will be made to adhere to the schedule and agenda, but on occasion, for unforeseen reasons, some modifications may occur.
[2] Action may be by consensus or a vote; and either may be a recommendation to the Secretary of the Interior or feedback to presenter(s) or to subordinate groups.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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SOUTHERN NEVADA WATER AUTHORITY

Contacts: Armando Acuña, Metropolitan, (213) 217-6853; (530) 574-3111, mobile
Crystal Thompson, CAP, (623) 869-2138; (602) 321-9349, mobile
Scott Huntley, SNWA, (702) 258-7258; (702) 249-4453, mobile
Rose Davis, Reclamation, (702) 293-8421; (702) 591-0029, mobile

Aug. 1, 2013

WESTERN WATER AGENCIES TEAM WITH BUREAU OF RECLAMATION ON GRANT PROGRAM SEEKING WATER-SAVING DEVICES OF TOMORROW

Next round of Innovative Conservation Program grants focuses on landscape irrigation as well as commercial, industrial sectors

The latest round of an expanded competitive grant program aimed at discovering the next generation of water-saving devices and technologies was launched today by three of the West's largest municipal water agencies in partnership with the Bureau of Reclamation.

For the first time, the Central Arizona Project and Southern Nevada Water Authority are participating with the Metropolitan Water District of Southern California and Reclamation in the Innovative Conservation Program, which looks to advance water-saving efforts by finding new and innovative methods for using supplies more efficiently.

This year's $450,000 ICP cycle focuses on water savings devices, technologies and strategy proposals for landscape irrigation and the commercial, institutional and industrial sectors. Awards of up to $50,000 per selected project are available. Proposals that address other aspects of water-use efficiency also will be considered. All proposals are due Oct. 15.

"This program fosters fresh and innovative approaches and inspires creative ideas and strategies to reduce water use," said Metropolitan General Manager Jeffrey Kightlinger. "More than half the water used in Southern California is imported to our region, and with dry conditions and regulatory restrictions reducing those supplies, it is important that we continue to make water conservation a way of life."

Central Arizona Project General Manager David Modeer noted the backdrop for the next cycle of grants is occurring while the Colorado River is in the midst of a 12-year drought, reducing storage levels in both Lake Powell and Lake Mead to 47 percent of their capacity. In addition, the *Colorado River Basin Water Supply & Demand Study* released by Reclamation last December foresees a possible long-term resource imbalance that could seriously affect both the region's economy and the more than 30 million people who rely upon the Colorado River.

more . . . . .

"The Innovative Conservation research grant program represents an important step to cooperatively work together to make the Colorado River system resilient in the face of drought and increasing water demands," Modeer said.

"We are proud to collaborate and expand the scope of this successful program so we can identify new, promising water efficiency technologies and programs. CAP is committed to developing water conservation and new water supplies as vital components of our future water supply," he added.

Pat Mulroy, SNWA general manager, said her agency was grateful for an opportunity to participate in this important cutting-edge program.

"We are facing difficult times on the Colorado River, and urban users have a responsibility to do all we can to optimize our use of this resource. By spurring technological advancement and essentially serving as an 'incubator' for water-saving innovations, this program will accelerate the development and adoption of conservation-oriented devices," Mulroy said.

Since Metropolitan and Reclamation unveiled the ICP in 2001, the program has awarded 44 grants totaling $1.4 million during the first four two-year funding cycles. Overall, the ICP has yielded 212 proposals totaling $25 million in funding requests from public agencies, community-based organizations, private companies, entrepreneurs, research institutes and equipment manufacturers.

Among the inventive approaches funded in previous cycles were the development of a pressurized water broom that replaces the need to use a hose to clean patios, driveways and other large surface areas, saving up to 250,000 gallons of water over its lifetime, and an X-ray film-processing unit that recycles more than 90 percent of the 1 million gallons a typical machine uses in a year in a hospital or medical center.

The last ICP round helped develop a mobile application for smart phones and tablets on water-saving plants that enables consumers to make informed decisions on climate-appropriate plants for home landscapes.

"Many of the innovative projects that are funded today will be the new water conservation technologies of tomorrow," said Bill Steele, Reclamation's Southern California Area Office manager. "Reclamation is excited about expanding the program to include the CAP and the SNWA, which will broaden the range and potential for future water conservation projects throughout the lower Basin states of the Colorado River and the entire arid West."

Proposals will be evaluated through a competitive review process based on project innovations; a water/energy saving and research plan; market impact potential; cost effectiveness; ICP focus and project preparedness.

more . . . . .

A non-mandatory pre-proposal ICP workshop will be held Aug. 21, from 9:30 to 11:30 a.m., at Metropolitan's headquarters building at 700 North Alameda St., adjacent to historic Union Station in downtown Los Angeles.

More information on the Innovative Conservation Program, including proposal submission instructions and a list of past projects is available at www.bewaterwise.com.

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Description of the need for the information and proposed use: The Real Estate Settlement Procedures Act of 1974, (RESPA), 12 U.S.C. 2601 *et. seq.*, and Regulation X, codified at 24 CFR 3500, require real estate settlement service providers to give homebuyers certain disclosure information at and before settlement, and pursuant to the servicing of the loan and escrow account. This includes a Special Information Booklet, a Good Faith Estimate, a Servicing Disclosure Statement, the Form HUD–1 or Form HUD–1A, and when applicable an Initial Escrow Account Statement, an Annual Escrow Account Statement, a Consumer Disclosure for Voluntary Escrow Account Payments, an Affiliated Business Arrangement Disclosure, and a Servicing Transfer Disclosure.

Under the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), rulemaking authority for and certain enforcement authorities with respect to the Real Estate Settlement Procedures Act (RESPA) of 1974, as amended by Section 461 of the Housing and Urban-Rural Recovery Act of 1983 (HURRA), and other various amendments, transferred from the Department of Housing and Urban Development (HUD) to the Consumer Financial Protection Bureau (CFPB) on July 21, 2011. The Dodd-Frank Act also directed the CFPB to integrate certain disclosures required by the Truth in Lending Act (TILA) with certain disclosures required by the Real Estate Settlement Procedures Act (RESPA) of 1974. The CFPB expects the content and format of information collection forms under this clearance, HUD's existing HUD–1/1A and GFE forms, to be significantly revised or replaced by rulemaking. The CFPB published proposed rules in July and August of 2012 to that effect.

Historically, in order to satisfy information collection requirements under the Paperwork Reduction Act (PRA), the HUD–1/1A and GFE listed HUD's Office of Management and Budget (OMB) control number, 2502–0265. While the CFPB will be, upon OMB approval of this information collection request, the "owner" of this information collection, the CFPB believes that requiring covered persons to modify existing forms solely to replace HUD's OMB control number with the Bureau's OMB control number would impose substantial burden on covered persons with limited or no net benefit to consumers. Accordingly, the CFPB has reached an agreement with OMB and HUD whereby covered persons may continue to list HUD's OMB control number on the HUD–1/1A and GFE forms until a final rule to the contrary takes effect. Covered persons also have the option of replacing HUD's OMB control number with the Bureau's OMB control number on the HUD–1/1A and GFE forms until a final rule to the contrary takes effect. Once the CFPB's final rule takes effect, regulated industry will no longer be able to use the HUD control number.

Estimation of the total numbers of hours needed to prepare the information collection including number of respondents, frequency of response, and hours of response: The total number of annual burden hours needed to prepare the information is 17,183,450; the number of respondents is estimated to be 50,000 generating approximately 149,589,500 responses annually; these are third party disclosures, the frequency of response is annually for one disclosure and as required for others; and the estimated time per response varies from 2 minutes to 35 minutes.

B. Solicitation of Public Comment

This notice is soliciting comments from members of the public and affected parties concerning the collection of information described in Section A on the following:

(1) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) The accuracy of the agency's estimate of the burden of the proposed collection of information;

(3) Ways to enhance the quality, utility, and clarity of the information to be collected; and

(4) Ways to minimize the burden of the collection of information on those who are to respond; including through the use of appropriate automated collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

HUD encourages interested parties to submit comment in response to these questions.

Authority: Section 3507 of the Paperwork Reduction Act of 1995, 44 U.S.C. Chapter 35.

Date: June 25, 2013.

Colette Pollard,

Department Reports Management Officer, Office of the Chief Information Officer.

[FR Doc. 2013–15690 Filed 6–28–13; 8:45 am]

BILLING CODE 4210–67–P

DEPARTMENT OF THE INTERIOR

Office of the Secretary

[FWS–HQ–FHC–2013–N044; FXFR13360900000–134–FF09F14000]

National Environmental Policy Act: Implementing Procedures; Addition to Categorical Exclusions for U.S. Fish and Wildlife Service

AGENCY: Department of the Interior.

ACTION: Notice; request for comments.

SUMMARY: This notice announces a proposed categorical exclusion under the National Environmental Policy Act (NEPA) for the U.S. Fish and Wildlife Service. The proposed categorical exclusion pertains to adding species to the injurious wildlife list under the Lacey Act. The addition of this categorical exclusion to the Department of the Interior's Departmental Manual will improve conservation activities by making the NEPA process for listing injurious species more efficient.

DATES: We will consider comments we receive on or before July 31, 2013.

ADDRESSES: *Comment submission:* Send comments to Susan Jewell, by one of the following methods:

- *U.S. mail or hand delivery:* U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, Suite 700, Arlington, VA 22203; or
- *Email: prevent_invasives@fws.gov* (emails must have "Categorical Exclusion" in the subject line).

Document availability: You may view the Departmental Manual at *http://elips.doi.gov/elips/.*

FOR FURTHER INFORMATION CONTACT: Susan Jewell, U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, Arlington, VA 22203; telephone 703–358–2416. If you use a telecommunications device for the deaf, please call the Federal Information Relay Service at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Background

Under the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*, NEPA), Federal agencies are required to consider the potential environmental impact of agency actions prior to implementation. Agencies are then generally required to prepare either an Environmental Assessment (EA) or an Environmental Impact Statement (EIS). However, when a Federal agency identifies classes of actions that under normal circumstances do not have a potentially significant environmental impact, either individually or cumulatively, Council on

Environmental Quality (CEQ) regulations allow the agency to establish a categorical exclusion and to bypass the completion of an EA or an EIS when undertaking those actions (40 CFR 1507.3(b); 40 CFR 1508.4). When appropriately established and applied, categorical exclusions serve a beneficial purpose. They allow Federal agencies to expedite the environmental review process for proposals that typically do not require more resource-intensive EAs or EISs (CEQ 2010).

The U.S. Fish and Wildlife Service (Service) has identified that it would be appropriate to provide for a categorical exclusion for the Federal action of adding species to the list of injurious wildlife under the Lacey Act (18 U.S.C. 42, as amended; the Act). The Act authorizes the Secretary of the Interior, as delegated to the Service, to prescribe by regulation those wild mammals, wild birds, fish, mollusks, crustaceans, amphibians, and reptiles, and the offspring or eggs of any of the aforementioned, that are injurious to human beings, or to the interests of agriculture, horticulture, or forestry, or to the wildlife or wildlife resources of the United States. The provisions of the Act regarding injurious species are intended to protect human health and welfare and the human and natural environments of the United States by identifying and reducing the threat posed by certain wildlife species. Listing these species as injurious under the Act subsequently prohibits the species from being imported into the United States or transported across State lines.

The listing of species as injurious is, as an agency action, subject to environmental review under NEPA procedures. The Service has generally prepared EAs for listing rules. A categorical exclusion would allow the Service to exercise its authority to protect human health and welfare, certain human environments, and trust resources from harm caused by injurious species more effectively and efficiently by precluding the need to conduct redundant environmental analyses.

In 2002, the Service used an existing departmental categorical exclusion ("Policies, directives, regulations, and guidelines: that are of an administrative, financial, legal, technical, or procedural nature; or whose environmental effects are too broad, speculative, or conjectural to lend themselves to meaningful analysis and will later be subject to the NEPA process, either collectively or case-by-case" (43 CFR 46.210(i)) in two listing actions. Upon further review, the Service believes that this is not the best description of why injurious species listings do not have a significant effect on the human environment. Therefore, the Service is pursuing the addition of a new categorical exclusion for the listing of injurious species under the Act.

Proposed Categorical Exclusion

The Department of the Interior is proposing to add a categorical exclusion to the Department Manual at 516 DM 8.5 C, which covers "Permit and Regulatory Functions." This section includes approved categorical exclusions that address, among other things, the issuance of regulations pertaining to wildlife. This proposed addition would provide for a categorical exclusion for only the regulatory action of listing species as injurious (that is, adding a species to the list). The regulatory listing action places the species on a prohibited list, which prohibits their importation into the United States and interstate transportation. Thus, the activities covered under the categorical exclusion are simply to keep species out of the country that are injurious or to prevent their spread across State lines.

The categorical exclusion would not cover, for example, control actions (such as constructing barriers) or eradication actions (such as applying pesticides). Any such injurious species management measures conducted by any Federal agency would undergo appropriate NEPA analysis and documentation prior to implementation of the action. The categorical exclusion would also not cover the issuance of permits (available for individual specimens intended for zoological, educational, medical, or scientific use), which is already covered under an existing categorical exclusion (516 DM 8.5 C(1)). The categorical exclusion would not cover the removal of species from the injurious wildlife list under the Act.

Additionally, application of the proposed categorical exclusion would be subject to a review of extraordinary circumstances established in regulation by the Department of the Interior (see 50 CFR 46.215). Extraordinary circumstances would be subject to the factors or circumstances that would cause an otherwise categorically excludable action to require further analysis in an EA or EIS. Thus, notwithstanding the existence of this categorical exclusion, the Service would have to develop an EA or EIS if it found the extraordinary circumstances applied to the listing of a particular injurious species.

Analysis

The intent of the proposed categorical exclusion is to more effectively protect the human and natural environments of the United States from injurious species by making the listing process under the Act more efficient. The following three justifications support the categorical exclusion:

(1) Maintaining the environmental status quo. The listing action preserves the environmental status quo. That is, these listings ensure that certain potential effects associated with introduction of species that have been found to be injurious do not occur. In this way, injurious wildlife listings maintain the state of the affected environment into the future—the state of the environment prior to listing or potential introduction in the absence of a listing. Thus, prohibiting a nonindigenous injurious species from being introduced into an area in which it does not naturally occur cannot have a significant effect on the human environment.

Because the proposed categorical exclusion also serves to make the listing process under the Act more efficient, and the listing process is designed to limit undesirable environmental effects in the future, the categorical exclusion itself supports maintenance of the environmental status quo.

(2) History of findings of no significant impact. Every EA prepared for an injurious species listing under the Act since 1982 (the first rule promulgated after environmental-assessment guidance was established under NEPA) as part of a formal NEPA analysis has resulted in a finding of no significant impact (FONSI) without requiring mitigation measures, and, therefore, did not necessitate the preparation of an EIS.

The species listed for which an EA was prepared include the raccoon dog (*Nyctereutes procyonoides*, 1983), the Chinese mitten crab (genus *Eriocheir*, 1989), the brown treesnake (*Boiga irregularis*, 1990), the silver carp (*Hypophthalmichthys molitrix*, 2007), the black carp (*Mylopharyngodon piceus*, 2007), the largescale silver carp (*Mylopharyngodon piceus*, 2007), and four species of large constrictor snakes (Burmese python (*Python molurus*), Northern African python (*Python sebae*), Southern African python (*Python natalensis*), and yellow anaconda (*Eunectes notaeus*), 2012).

The issues addressed in the EAs that were prepared for these species include the biology of the species (countries of origin, native range, habitat requirements, and food species),

introduction and dispersal pathways (how a species was transported), ecological impacts (including effects on native, threatened, and endangered species), human impacts (including effects on recreation and water quality), economic impacts (including industry and agriculture), and cumulative impacts. While these species, when present in a nonnative range, can have a significant effect on the environment, the regulatory action (listing) has no significant effect. That each EA resulted in a FONSI strongly suggests that subsequent listings will also have no significant environmental impacts.

(3) Consistent with existing approved categorical exclusions. A categorical exclusion for the injurious listing process is consistent with the Service's existing approved categorical exclusions. Categorical exclusions have been approved that address preventing the introduction of nonindigenous species. For example, research, inventory, and information activities directly related to the conservation of fish and wildlife resources are categorically excluded as long as they do not involve, among other things, "introduction of organisms not indigenous to the affected ecosystem" (516 DM 8.5 B(1)).

Next Steps

The establishment of the categorical exclusion is open to public comment. Following review of the comments, the Service will submit the final categorical exclusion to CEQ, which will review it and our responses to public comments for conformity with NEPA and make a recommendation regarding approval of the categorical exclusion. If the categorical exclusion is approved by the Department, the Service will review each subsequent listing rule for the DOI-established extraordinary circumstances that would necessitate the preparation of an EA or an EIS. The Administrative Procedure Act rulemaking procedures and the review of extraordinary circumstances both ensure that the decision to apply the categorical exclusion as part of the NEPA environmental review is informed by input from other Federal agencies, other governmental and Tribal entities, and the public.

Public Comments

Any comments to be considered on this proposed addition to the list of categorical exclusions in the Departmental Manual must be received by the date listed in **DATES** at the location listed in **ADDRESSES**. Comments received after that date will be considered only to the extent practicable. Comments, including names and addresses of respondents, will be posted at *http://www.fws.gov/injuriouswildlife*. Before including your address, telephone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment, including your personal identifying information, may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Proposed Text for the Departmental Manual

The text we propose to add to 516 DM (see **ADDRESSES**) is set forth below:

Part 516: National Environmental Policy Act of 1969

Chapter 8: Managing the NEPA Process—U.S. Fish and Wildlife Service

* * * * *

8.5 Categorical Exclusions.

* * * * *

C. *Permit and Regulatory Functions.*

* * * * *

(9) The adding of species to the list of injurious wildlife regulated under 50 CFR subchapter B, part 16, which prohibits the importation into the United States and interstate transportation of wildlife found to be injurious.

Dated: May 31, 2013.

Willie R. Taylor.

Director, Office of Environmental Policy and Compliance.

[FR Doc. 2013–15707 Filed 6–28–13; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS—HQ—MB—2013—N144; F09M29000—134—FXMB12320900000]

Proposed Information Collection; Depredation Order for Blackbirds, Grackles, Cowbirds, Magpies, and Crows

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice; request for comments.

SUMMARY: We (U.S. Fish and Wildlife Service) will ask the Office of Management and Budget (OMB) to approve the information collection (IC) described below. As required by the Paperwork Reduction Act of 1995 and as part of our continuing efforts to reduce paperwork and respondent burden, we invite the general public and other Federal agencies to take this opportunity to comment on this IC. This IC is scheduled to expire on November 30, 2013. We may not conduct or sponsor and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number.

DATES: To ensure that we are able to consider your comments on this IC, we must receive them by August 30, 2013.

ADDRESSES: Send your comments on the IC to the Service Information Collection Clearance Officer, U.S. Fish and Wildlife Service, MS 2042—PDM, 4401 North Fairfax Drive, Arlington, VA 22203 (mail); or *hope_grey@fws.gov* (email). Please include "1018–0146" in the subject line of your comments.

FOR FURTHER INFORMATION CONTACT: To request additional information about this IC, contact Hope Grey at *hope_grey@fws.gov* (email) or 703–358–2482 (telephone).

SUPPLEMENTARY INFORMATION:

I. Abstract

The Migratory Bird Treaty Act (MBTA; 16 U.S.C. 703 *et seq.*) implements four treaties concerning migratory birds that the United States has signed with Canada, Mexico, Japan, and Russia. Under the treaties, we must preserve most species of birds in the United States, and activities involving migratory birds are prohibited except as authorized by regulation.

This information collection is associated with our regulations that implement the MBTA. In the Code of Federal Regulations (CFR), 50 CFR 21.43 is a depredation order for blackbirds, cowbirds, grackles, crows, and magpies that authorizes take of these birds "when found committing or about to commit depredations upon ornamental or shade trees, agricultural crops, livestock, or wildlife, or when concentrated in such numbers and manner as to constitute a health hazard or other nuisance."

All persons or entities acting under this depredation order must provide an annual report containing the following information for each species:

- Number of birds taken.
- Months and years in which the birds were taken.
- State(s) and county(ies) in which the birds were taken.
- General purpose for which the birds were taken (such as for protection of agriculture, human health and safety, property, or natural resources).

We collect this information so that we will be able to determine how many

Colorado River Basin States
Cooperative Weather Modification Programs

Six Agency Committee Meeting
August 14, 2013
Tom Ryan, Metropolitan

Presentation Outline

- Introduction
- Basin States Agreements
- Partners & Projects
- Next Steps

Basin States Process

- 2004 - States drought options
- 2005 - Secretary to States
  - Shortage guidelines, coord. ops.
- 2005-06 - States to Secretary
  - Conceptual agreement
    - Coordinated reservoir management
    - Improve system efficiency
    - Supply augmentation

Agreements

- Principles
  - Among Lower Basin and CO, UT, WY
  - Local control, regulatory safeguards
  - Local, regional, basinwide benefits
  - Yield is Colorado River system water
- Mechanics
  - Cost-shared, no fund shifting
  - Data sharing, deliverables

Six Agency / Lower Basin Funding

(dollars, actual)

- 2006 - 15,000 / 45,000
- 2007 - 39,187 / 117,162
- 2008 - 82,321 / 246,965
- 2009 - 99,998 / 299,996
- 2010 - 121,056 / 363,170
- 2011 - 131,511 / 394,534
- 2012 - 140,750 / 422,251
- 2013 - 143,496 / 430,490

Total 773,322 / 2,319,968

- 2014 - 150,000 / 450,000 proposed

Cooperators

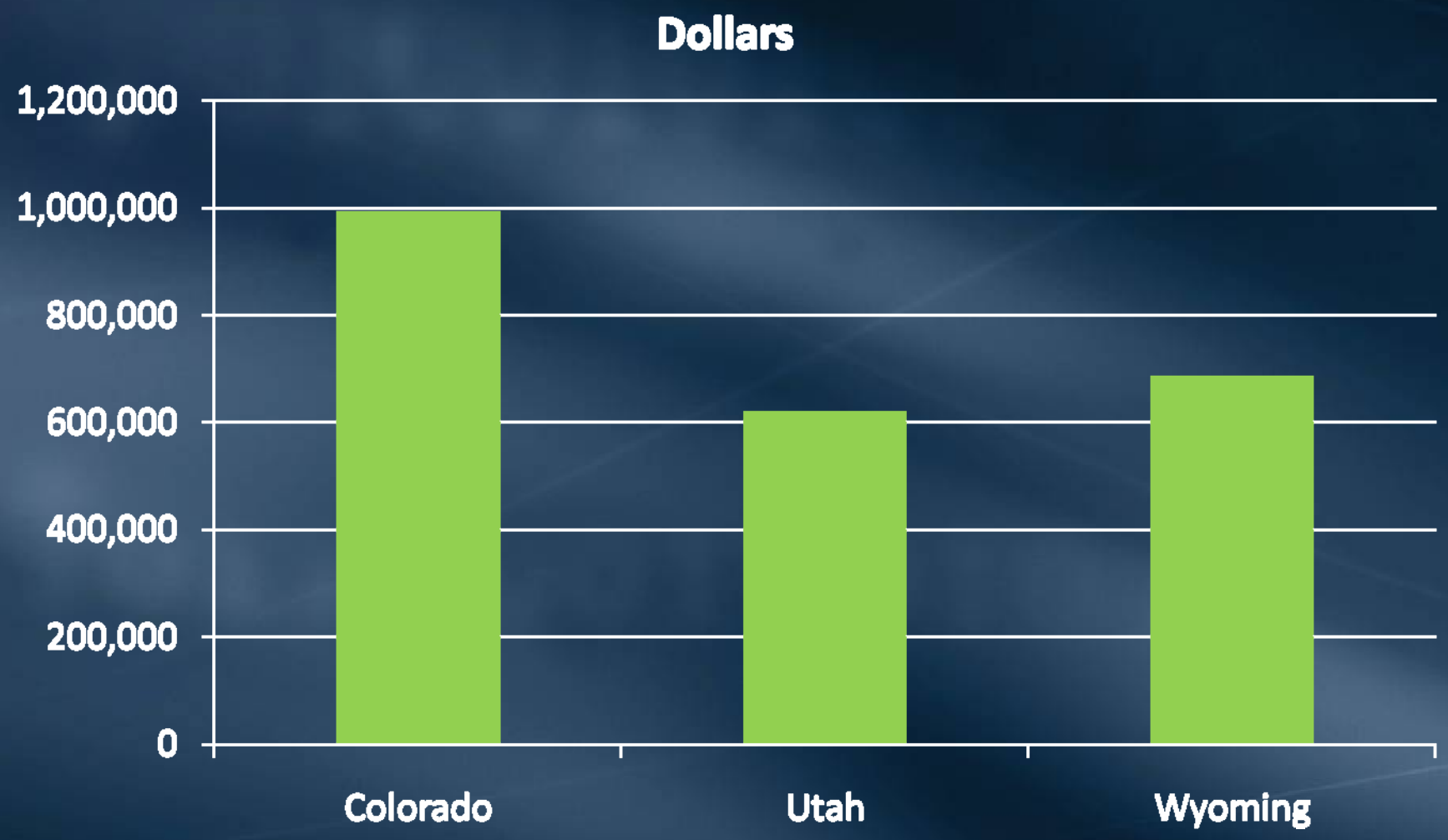
- Southwestern Water Conservation District
- Denver Water
- Desert Research Institute
- Durango Mountain Resort
- Grand Mesa Water Enhancement Authority
- University of Wyoming
- Duchesne County Water Conservancy District
- Central Utah Water Conservancy District
- Brian Head Ski Area

Cooperators

- National Center for Atmospheric Research
- Colorado Springs Utilities
- Gunnison County
- Winter Park Ski Area
- San Juan Resource Conservation & Devel. Council
- Telluride Ski and Golf Company
- Utah Water Resources Development Corp.
- Uintah Water Conservancy District
- Emery Water Conservancy District

Locations of Expenditures

Totals by State 2006-2013



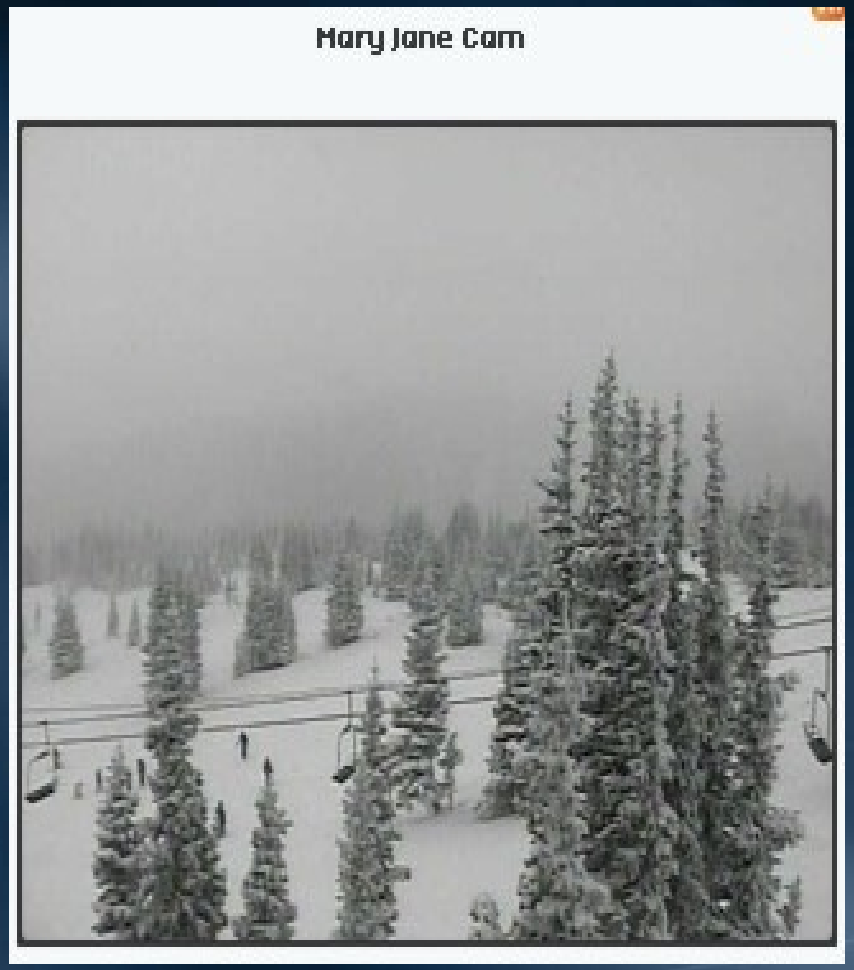
Target Areas

Upper Basin Partners

- Colorado – Water Conservation Board
  - 9 programs, 38 yrs, 106 generators, $650,000 yr.
  - 74% ops, 26% modernizing equipment
  - Purchase and leasing generators, equip
- Utah – Division of Water Resources
  - 6 operational programs, 29 yrs, 137 generators, $400,000 yr.
  - Operations, minor equipment purchase

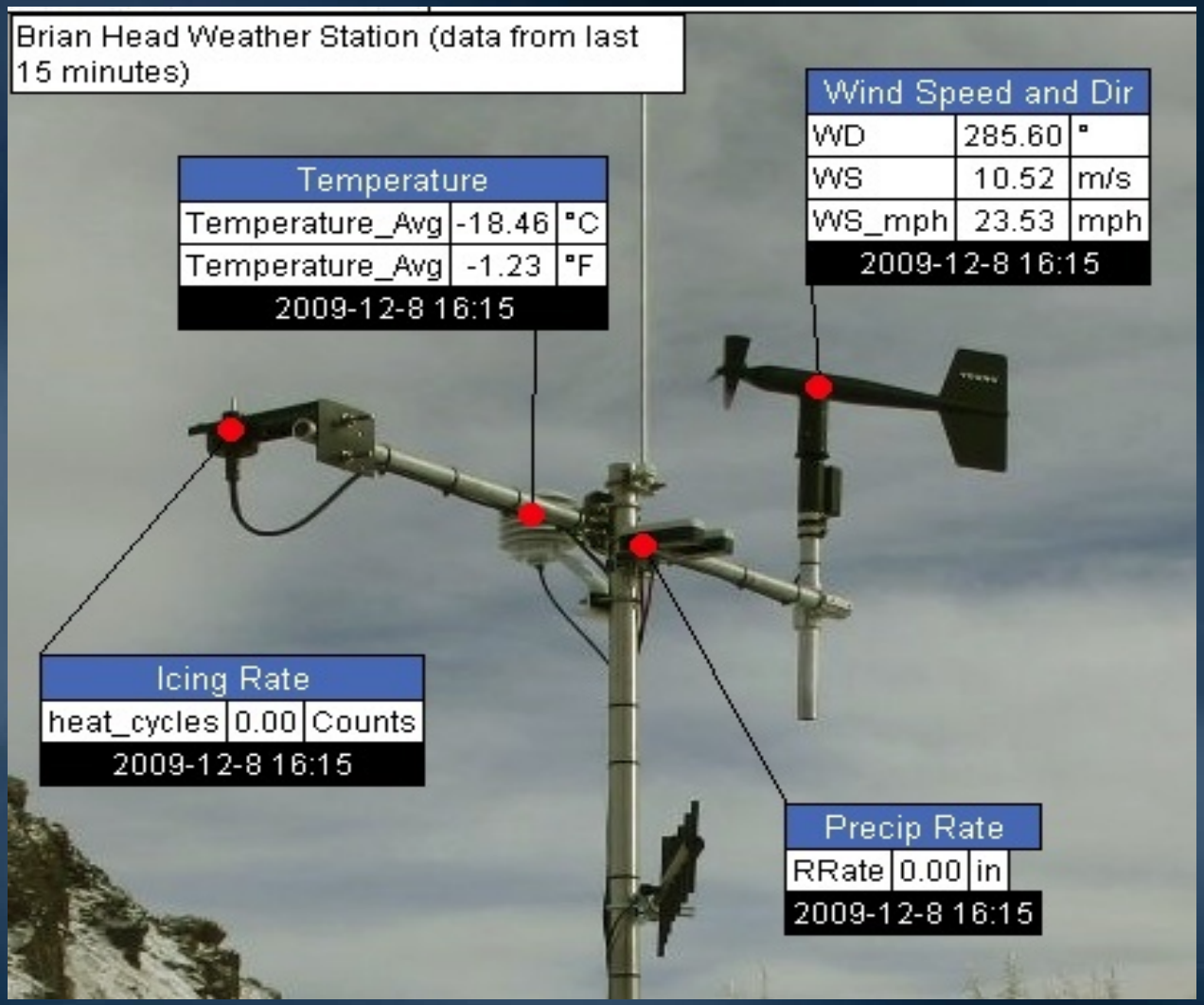
Colorado - Grand Mesa

Colorado - Winter Park Ski Area



Utah – Brian Head Ski Area

Brian Head Ski Area



Wyoming WxMod Pilot Project

- 10 yr. pilot project in two ranges answers key questions, $15 million
- Double-blind randomized study
- 26 generators & equipment in three target areas
- Real-time numerical modeling, soundings, radiometer, radar
- Evaluation, snow chemistry, hydrologic studies
- Lower Basin contribution:
  - Equipment leases for operations

Wyoming - Wind River Range

Wind River Range

Wyoming Pilot Project (cont')

- Higher precipitation rates while seeding
- 165 cases required for 95% confidence of 10% increase
- Current total of 125
- Experiment ends April 2014
- Lower Basin assistance may be requested based on decision of final confidence level

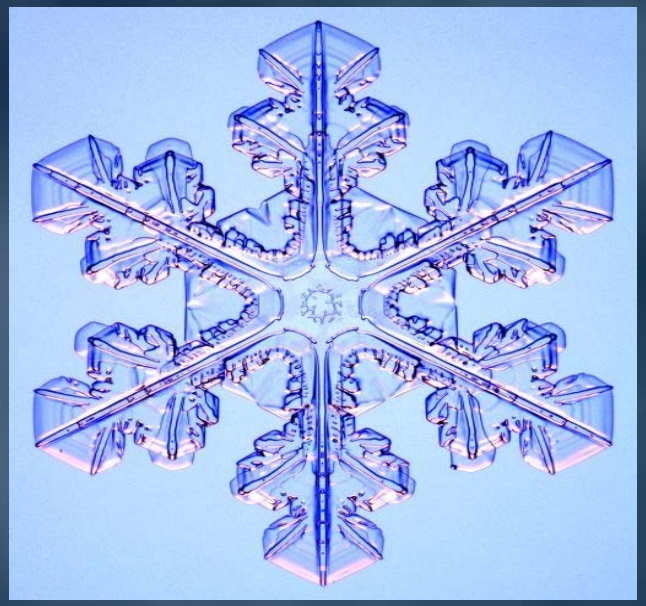
Next Steps - Long-Term Plan

- Existing – 11,700 sq. mi.
- Potential – 5,200 sq. mi.
- Additional 900,000 AF yield
- Colorado
  - Park, Elkhead, Uncompahgre, Ski areas
- Utah
  - High Uintas, LaSal, Abajo, Henry
- Wyoming
  - Salt River and Wyoming, Wind Rivers

Next Steps - Basin Study

- Snowpack augmentation was explored
- A basin-wide program using current state of the science is a viable approach
- The Basin States current program could serve as a template to expand into a basin-wide program

Conclusions

- 2014 is 9th season
- Total $923,000 expenditure
- 20 projects, 12 pieces of equipment
- Collaborating with 30+ partners
- Wyoming may need assistance in 2015
- Long-Term Plan and Basin Study will guide future

Questions?