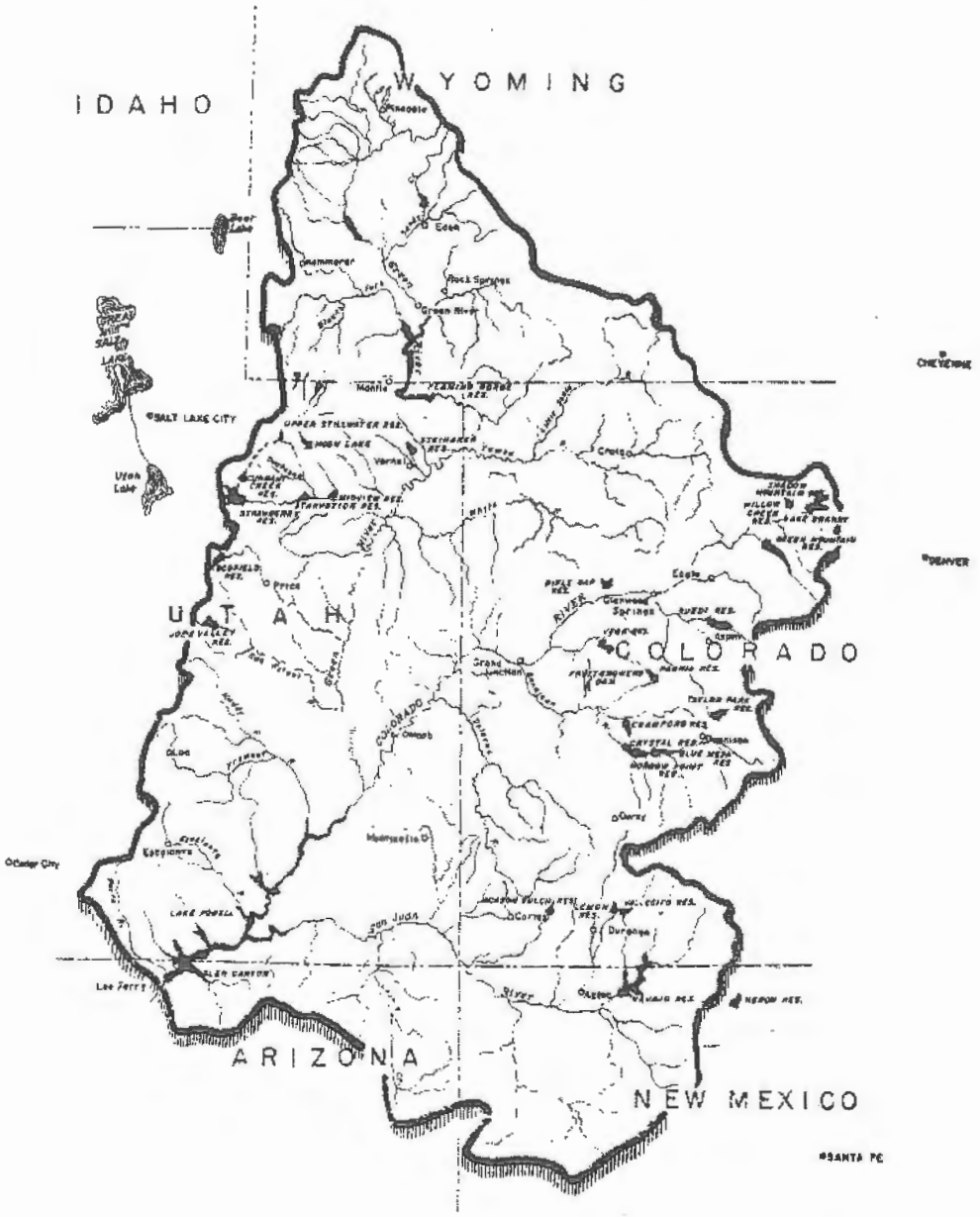
SIXTY-FIRST ANNUAL REPORT

OF THE

Upper Colorado River Commission

SALT LAKE CITY, UTAH

SEPTEMBER 30, 2009



UPPER COLORADO RIVER BASIN

UPPER COLORADO RIVER
COMMISSION

UPPER COLORADO
RIVER COMMISSION
355 South 400 East • Salt Lake City • Utah 84111 • 801-531-1150 • FAX 801-531-9705

April 1, 2010

President Barack H. Obama
The White House
Washington, D.C. 20500

Dear President Obama:

The Sixty-First Annual Report of the Upper Colorado River Commission, as required by Article VIII(d)(13) of the Upper Colorado River Basin Compact, is enclosed.

The budget of the Commission for fiscal year 2010 (July 1, 2009 – June 30, 2010) is included in this report as Appendix B.

This report has also been transmitted to the Governor of each State signatory to the Upper Colorado River Basin Compact, which includes Colorado, New Mexico, Utah, Wyoming and Arizona.

Respectfully yours,

Don A. Ostler, P.E.
Executive Director

Enclosure

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PREFACE

Article VIII(d)(13) of the Upper Colorado River Basin Compact requires the Upper Colorado River Commission to "make and transmit annually to the Governors of the signatory States and the President of the United States of America, with the estimated budget, a report covering the activities of the Commission for the preceding water year."

Article VIII(1) of the By-Laws of the Commission specifies that "the Commission shall make and transmit annually on or before April 1 to the Governors of the states signatory to the Upper Colorado River Basin Compact and to the President of the United States a report covering the activities of the Commission for the water year ending the preceding September 30."

This Sixtieth Annual Report of the Upper Colorado River Commission has been compiled pursuant to the above directives.

This Annual Report includes, among other things, the following:

- Membership of the Commission, its Committees, Advisers, and Staff;
- Roster of meetings of the Commission;
- Brief discussion of the activities of the Commission;
- Engineering and hydrologic data;
- Pertinent legal information;
- Information pertaining to congressional legislation;
- Map of the Upper Colorado River Basin;
- Status of the Storage Units and participating projects of the Colorado River Storage Project;
- Appendices containing:

Fiscal data, such as budget, balance sheet, statements of revenue and expense.

A special thanks is in order to the many staff of the U.S. Bureau of Reclamation who have contributed most significantly to the text and data presented herein.

COMMISSION

Jennifer L. Gimbel
Commissioner for
Colorado

John D'Antonio
Commissioner for
New Mexico

L. Richard Bratton
Chairman
Commissioner for
United States

Dennis J. Strong
Commissioner for
Utah

Patrick T. Tyrrell
Commissioner for
Wyoming

ALTERNATE COMMISSIONERS

Alexandra Davis	State of Colorado
Dallin W. Jensen	State of Utah
D. Larry Anderson	State of Utah
Dan S. Budd	State of Wyoming
Benjamin C. Bracken	State of Wyoming
Estevan Lopez	State of New Mexico

OFFICERS OF THE COMMISSION

Chairman	L. Richard Bratton
Vice Chairman	Patrick T. Tyrrell
Secretary	Don A. Ostler
Treasurer	Silvia Norman
Assistant Treasurer	Donna Roark

STAFF

Executive Director	Don A. Ostler
Assistant to the Executive Director and General Counsel	Jane Bird
Administrative Secretary	Teri Kay Gomm

COMMITTEES

The Committees of the Commission convened several times during the year. Committees and their membership at the date of this report are as follows (the Chairman and the Secretary of the Commissin are ex-officio members of all committees, Article V(4) of the By-Laws):

Legal Committee:

Norman K. Johnson, Chairman – Utah
Dallin W. Jensen – Utah
Scott Balcomb – Colorado
Jim Lochhead – Colorado
Peter Fleming – Colorado
Steve Farris – New Mexico
Peter Michael – Wyoming
Amy Haas – New Mexico
John W. Suthers – Colorado
Ted Kowalski – Colorado
Barry Spear – Colorado
Karen Kwon – Colorado
James Eklund – Colorado
Tanya Trujillo – New Mexico
Marion Yoder – Wyoming

Engineering Committee:

John W. Shields, Chairman – Wyoming
D. Randolph Seaholm – Colorado
Bruce Whitehead – Colorado
Eric Kuhn – Colorado
Dick Wolfe – Colorado
John Whipple – New Mexico
Robert King – Utah
Kent Jones – Utah

Budget Committee:

Jennifer L. Gimbel – Colorado
Dennis L. Strong – Utah
Patrick T. Tyrrell – Wyoming
John D'Antonio – New Mexico

GENERAL ADVISERS TO COMMISSIONERS

The following individuals serve as advisors to their respective Commissioner:

Utah:

Don A. Christiansen
Manager
Central Utah Water Conservancy District
Orem, Utah

Scott Ruppe
General Manager
Uintah Water Conservancy District
Vernal Utah

MEETINGS OF THE COMMISSION

During the Water Year ending September 30, 2009, the Commission met as follows:

Meeting No. 257 December 15, 2008	Las Vegas, Nevada
Meeting No. 258 June 10, 2009	Santa Fe, New Mexico

ACTIVITIES OF THE COMMISSION

General Activities:

Within the scope and limitations of Article 1(a) of the Upper Colorado River Basin Compact and under the powers conferred upon the Commission by Article VIII(d), the principal activities of the Commission have consisted of : (A) research and studies of an engineering and hydrologic nature of various facets of the water resources of the Colorado River Basin especially as related to operation of the Colorado River reservoirs; (B) collection and compilation of documents for the legal library relating to the utilization of waters of the Colorado River System for domestic, industrial and agricultural purposes, and the generation of hydroelectric power; (C) legal analyses of associated laws, court decisions, reports and problems; (D) participating in activities and providing comments on proposals that would increase the beneficial consumptive uses in the Upper Basin, including environmental, fish and wildlife, endangered species and water quality activities to the extent that they might impair Upper Basin development; (E) cooperation with water resources agencies of the Colorado River Basin States on water and water-related problems; (F) an education and information program designed to aid in securing planning and investigation of storage dams, reservoirs and water resource development projects of the Colorado River Storage Project that have been authorized for construction and to secure authorization for the construction of additional participating projects as the essential investigations and planning are completed; and (G) a legislative program consisting of the analysis and study of water resource bills introduced in the U.S. Congress for enactment, the preparation of evidence and argument and the presentation of testimony before the Committees of the Congress.

Specific Activities:

The Commission, its full-time staff and the Engineering and Legal Committees have been very actively involved in matters pertinent to the administration of the Colorado River. In addition to the above Commission meetings, at least 15 additional work meetings, Committees meetings, work groups and conference calls have been held under the authority of the Commission. Activities have included but are not limited to: Meetings regarding implementation of Coordinated Reservoir Operations and Shortage Management, environmental issues below Glen

Canyon Dam, Mexico shortage issues, augmentation of the Colorado River supply, climate change impacts to water supply, annual operations plans for Glen Canyon Dam, curtailment procedures, Lees Ferry gage flow measurements, Upper Basin water demand and depletion schedules, future water supply and demand studies and various legal matters.

Oversight and Administration of Implementation of the Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead:

The Commission and Upper Division States have been heavily involved during the first year of implementing the 2007 Interim Guidelines to assist Reclamation in operational procedures and decisions to put the Guidelines in practice. The Commission is also gathering information on possible future changes to the guidelines based upon operating experience that may improve the guidelines or may be needed if they are considered for extension beyond the year 2025.

Negotiations with Mexico Regarding Shortage Management and Augmentation of the Supply:

The Commission and Upper Division States have been actively involved with the Department of the Interior in discussions with Mexican counterparts on how to better manage future shortages and meet future demands for water. These discussions include conducting modeling to determine a course of operations that will benefit both countries in avoiding and minimizing shortages. This includes using storage more efficiently as well as implementing additional conservation measures within both nations. Considerable effort is also being expended to evaluate means of enhancing the supply and in evaluating possible changes in salinity and water quality.

Study of Upper Colorado River Basin Fund:

The Commission and Upper Division States have initiated efforts to analyze the operation of the Upper Colorado River Basin Fund and assess the availability of future funding promised to the States in the Colorado River Storage Project Act.

Lees Ferry Stream Gage on the Colorado River:

The Commission has studied the differences between flow measurements at Glen Canyon Dam and Lees Ferry, which is nearest to the Colorado River Compact measuring point at Lee Ferry. This flow measuring point is extremely important in administration of the 1922 Colorado River Compact. The USGS, after consultation with the Commission, has completed improvements to flow measuring equipment that will improve its accuracy. During Water Year 2009, the USGS conducted measurements of inflow between Glen Canyon Dam and Lees Ferry, which documented gains in flow. Efforts are continuing to determine how to incorporate actual flow data from Lees Ferry into River operations.

Upper Division States Curtailment Procedures and Policy:

The Commission and its advisors have spent considerable time in reviewing and establishing detailed procedures and policy for implementing curtailment of use in the Upper Basin to comply with provisions in the 1922 Colorado River Compact should that ever become necessary in the future. A Compact curtailment of uses has never occurred in the Upper Basin nor is such expected in the foreseeable future. However, because of uncertainty of future hydrology and increasing uses in both the Upper and Lower Basins, it is important that the Upper Colorado River Commission have clear procedures for such implementation. This work will continue during the next year.

Colorado River Basin Supply and Demand Study:

The Commission, all seven Colorado River Basin States, many large water users within the Basin and the Department of the Interior are engaged in a study to quantify current and future demand and supply using various assumptions for future hydrology to identify the imbalance. All methods to address the supply imbalance, including conservation, efficiency and augmentation, will be evaluated. The study is expected to last two years from April 1, 2010.

A. ENGINEERING-HYDROLOGY

1. Stream Flow and Hydrology Summary

The historical flow of the Colorado River at Lee Ferry for water year 2009 based upon USGS Streamflow records at the Lee's Ferry and Paria River gages was 8,406,000 acre-feet. The progressive 10-year total flow at Lee Ferry was 85,881,000 acre-feet.

The virgin or natural flow of the Colorado River at Lee Ferry was estimated to be 14.68 million acre-feet, which is slightly less than the average virgin flow for the period of record of 14.8 million acre-feet.

In the Upper Colorado River Basin during Water Year 2009, the overall precipitation accumulated through September 30, 2009 was approximately 95% of average based upon the 30 years of data between 1971 and the year 2000. Unregulated inflow to Lake Powell in Water Year 2009 was about 88 percent of the 30-year average, or 10.6 million acre-feet (maf).

The Upper Colorado River Basin continues to experience a protracted drought that began in October 1999. Unregulated inflow to Lake Powell has varied during this time as follows:

Unregulated Inflow to Lake Powell

2000 – 62%
2001 – 59%
2002 – 25%
2003 – 51%
2004 – 49%
2005 – 105%
2006 – 73%
2007 – 68%
2008 – 102%
2009 – 88%

Inflow has been below normal in 8 of the last 10 years, which is the lowest 10-year average in more than 100 years of recordkeeping.

Runoff adjusted for change in storage in Colorado River Storage Project reservoirs for the water year ending September 30, 2009 ranged from 71% of the long-term average at the San Juan River station near Bluff, Utah and 103% of the long-term average at the Colorado River station near Cisco, Utah. The volumes of runoff at these stations were 1,133,000 acre-feet and

5,610,000 acre-feet, respectively. Runoff at the Green River station near Green River, Utah was 93% of the long-term average and totaled 4,067,000 acre-feet.

2. Summary of Reservoir Levels and Contents

As of September 30, 2009, total system storage (Upper and Lower Basins) was 58 percent of capacity. For the period October 1, 2008 through September 30, 2009, the change in reservoir storage, excluding bank storage and evaporation, at selected Upper Basin reservoirs was as follows:

- Fontenelle decreased 8,421 acre-feet
- Flaming Gorge increased 368,444 acre-feet
- Taylor Park increased 1,763 acre-feet
- Blue Mesa increased 816 acre-feet
- Morrow Point decreased 6,908 acre-feet
- Crystal increased 1,318 acre-feet
- Navajo decreased 5,236 acre-feet
- Lake Powell increased 954,396 acre-feet

The virgin flow[a] of the Colorado River at Lee Ferry[b] for the 2009 water year was estimated to be 14.68 million acre-feet. [c]

Although observed inflows to Lake Powell during Water Year 2009 were below average (85%), Lake Powell storage increased by 0.95 maf and ended the water year at 64% of capacity, with 15.46 maf of storage at elevation 3635.4 feet. A more detailed description of Lake Powell conditions is found in section H of this report. The release from Lake Powell during Water Year 2009 was 8.236 maf.

Reservoir storage in Lake Mead declined during Water Year 2009 by 1.08 maf to 10,933,000 acre-feet, which is 42% of capacity. The total Colorado River System experienced a slight gain in storage during Water Year 2009 of approximately 160,000 acre-feet and ended the year at 58% of capacity.

Table 1 on page 10 shows the statistical data for principal reservoirs in the Upper Colorado River Basin. Table 2 on page 11 shows the same information for the Lower Colorado River Basin reservoirs.

The results of the long-range reservoir operation procedures and the Interim Guidelines for Lower Basin Shortage and Coordinated Reservoir Operating Criteria as adopted by the Secretary of the Interior for Powell, Flaming, Gorge, Fontenelle, Navajo and Blue Mesa Reservoirs in the Upper Colorado River Basin and Lake Mead in the Lower Basin are illustrated on pages 12 through 19 for the 2009 Water Year.

In Water Year 2009, there was no equalization or balancing of storage as dictated by the 2007 Interim Guidelines.

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[a] Virgin flow is the estimated flow of the stream if it were in its natural state and unaffected by the activities of man.

[b] Lee Ferry, Arizona is the division point between the upper and lower basins of the Colorado River as defined in the Colorado River Compact. It is located about one mile downstream from the mouth of the Paria River and about 16 miles downstream from Glen Canyon Dam.

[c] Based on provisional records subject to revision.

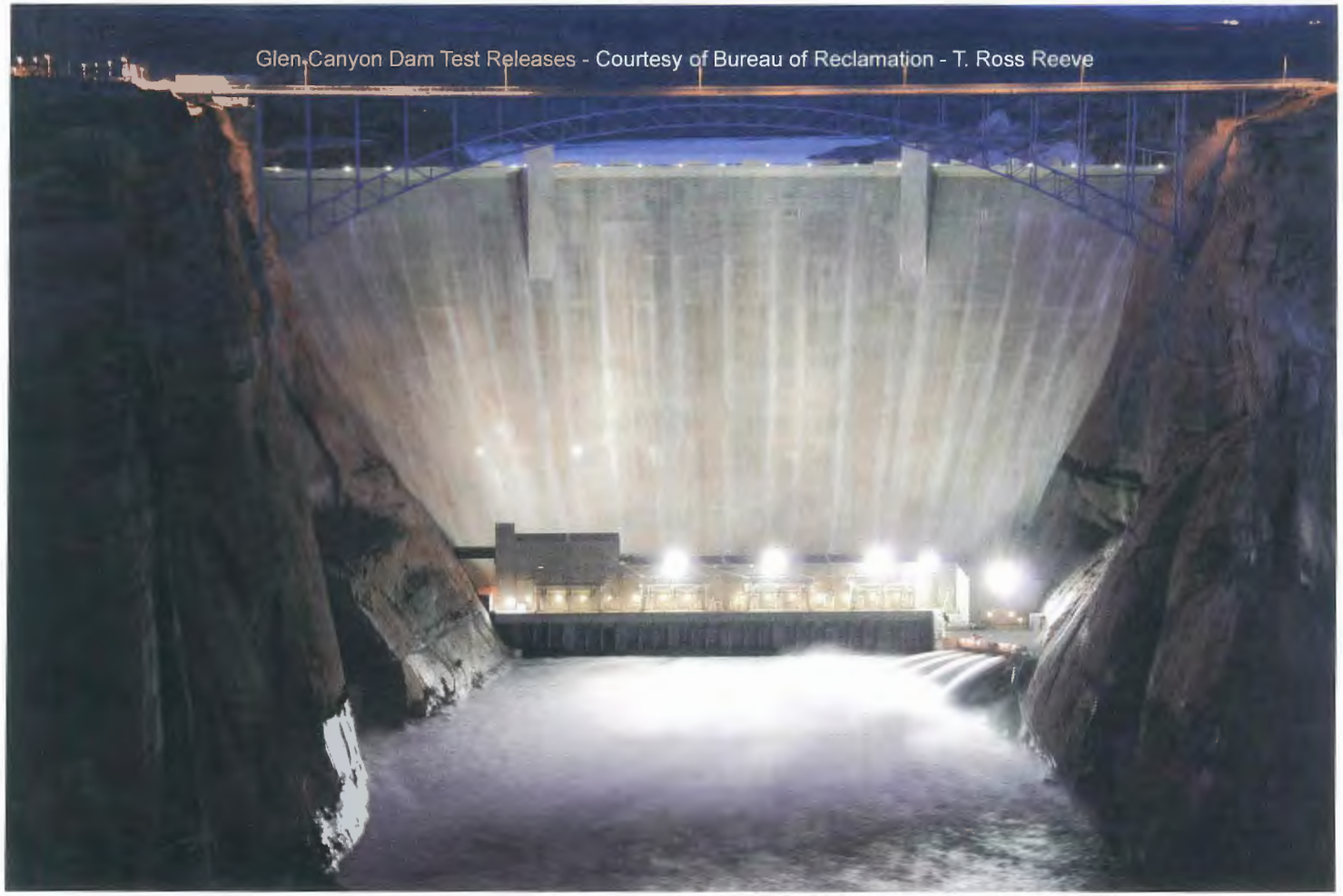

Glen Canyon Dam Test Releases - Courtesy of Bureau of Reclamation - T. Ross Reeve

Table 1
STATISTICAL DATA FOR PRINCIPAL RESERVIORS IN COLORADO RIVER BASIN
UPPER BASIN

Colorado River Storage Project
(Total Surface Capacity)

(Units: Elevation = feet; Capacity = 1,000 acre-feet)

	Fotenelle		Flaming Gorge		Taylor Park		Blue Mesa		Morrow Point		Crystal		Navajo		Lake Powell	
	Elev.	Cap	Elev.	Cap.	Elev.	Cap.	Elev.	Cap.	Elev.	Cap.	Elev.	Cap.	Elev.	Cap.	Elev.	Cap.
River elevation at dam (average tailwater)	—	—	5,603	0	9,174	0	7,160	0	6,775	0	6,534	0	5,720	0	3,138	0
Dead Storage	6,408	0.56	5,740	40	—	—	7,358	111	6,808	0	6,670	8	5,775	13	3,370	1,893
Inactive Storage (minimum power pool)	—	—	5,871	273	—	—	7,393	192	7,100	75	6,700	12	5,990[9]	673	3,490	5,890
Rated Head	6,491	234	5,946	1,102	—	—	7,438	361	7,108	80	6,740	20	—	—	3,570	11,000
Maximum Storage	6,506	345	6,040	3,789	9,330	106	7,519	941	7,160	117	6,755	25	6,085	1,709	3,700	26,215

[9] The elevation for inactive storage for Navajo Reservoir is required for the Navajo Indian Irrigation Project.

Table 2

STATISTICAL DATA FOR PRINCIPAL RESERVOIRS IN COLORADO RIVER BASIN
LOWER BASIN

(Usable Surface Capacity)

(Units: Elevation = feet; Capacity = 1,000 acre-feet)

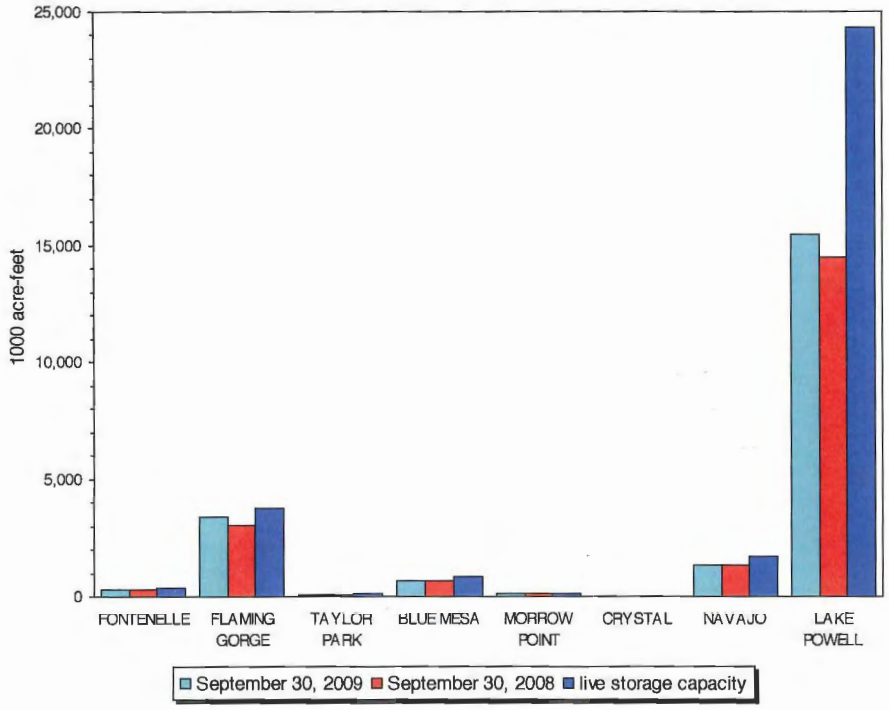
	Lake Mead		Lake Mohave		Lake Havasu	
	Elev.	Capacity	Elev.	Capacity	Elev.	Capacity
River elevation at dam (average tailwater)	646	-2,378	506	-8.5	370	-28.6
Dead Storage	895	0	533.39	0	400	0
Inactive Storage (minimum power pool)	1,050	7,471	570	217.5	44010	439.4
Rated Head	1,122.80	13,633	-	-	-	-
Maximum Storage (without surcharge)	1,221.40	26,159	647	1,809.80	450	619.4

[10] The elevation for inactive storage for Lake Havasu is the contractual minimum for delivery to Metropolitan Water District's Colorado River Aqueduct.

Storage in Principal Reservoirs at the End of Water Year 2009

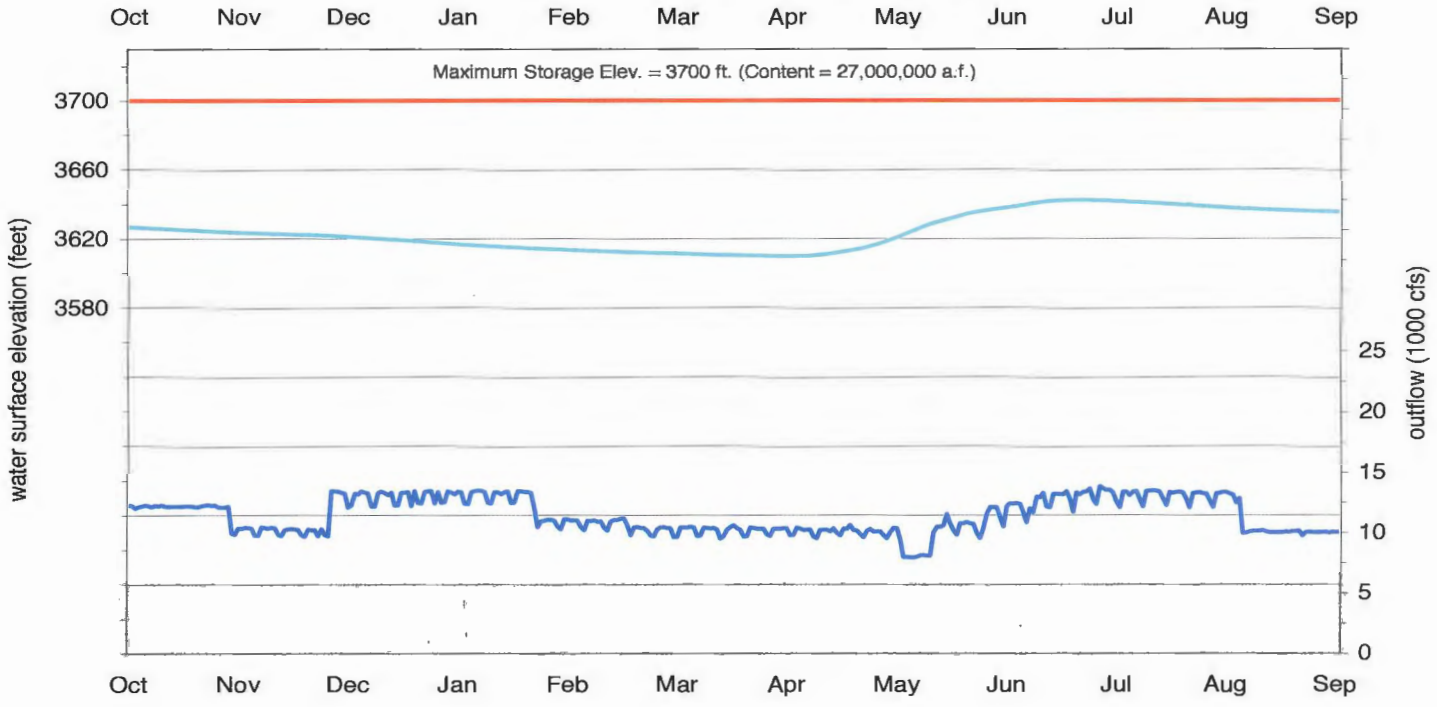
Upper Basin
Live Storage Contents

reservoir	Sept. 30, 2009 (acre-feet)	percent live capacity	Sept. 30, 2008 (acre-feet)	percent live capacity	change in contents (acre-feet)
FONTENELLE	275,579	79.9%	284,000	82.4%	-8,421
FLAMING GORGE	3,392,425	90.5%	3,023,981	80.7%	368,444
TAYLOR PARK	73,842	69.5%	72,079	67.9%	1,763
BLUE MESA	650,778	78.5%	649,962	78.4%	816
MORROW POINT	106,725	91.2%	113,633	97.1%	-6,908
CRYSTAL	15,110	86.2%	13,792	78.6%	1,318
NAVAJO	1,314,105	77.5%	1,319,341	77.8%	-5,236
LAKE POWELL	15,462,973	63.6%	14,508,577	59.7%	954,396
TOTAL	21,291,537		19,985,365		1,306,172



Lake Powell - Glen Canyon Dam

Live Storage Capacity - 24,322,000 acre-feet
Power Generation Capacity - 1,356,000 KW
Live Storage 9/30/09 - 11,929,382 acre-feet



Lake Powell
Water Year 2009

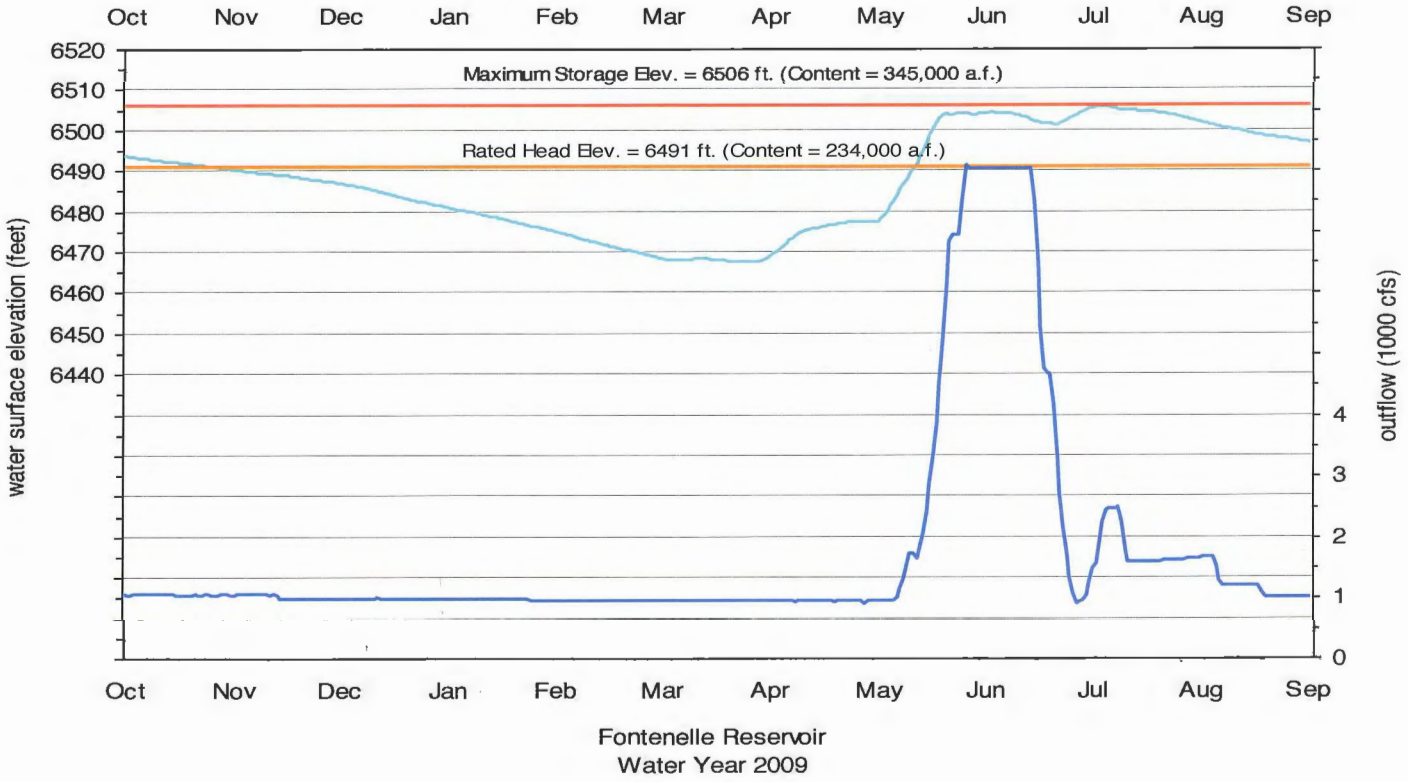
Flaming Gorge

Live Storage Capacity - 3,749,000 acre-feet
Power Generation Capacity - 144,000 KW
Live Storage 9/30/09 - 3,063,464 acre-feet

Flaming Gorge Reservoir
Water Year 2009

Fontenelle

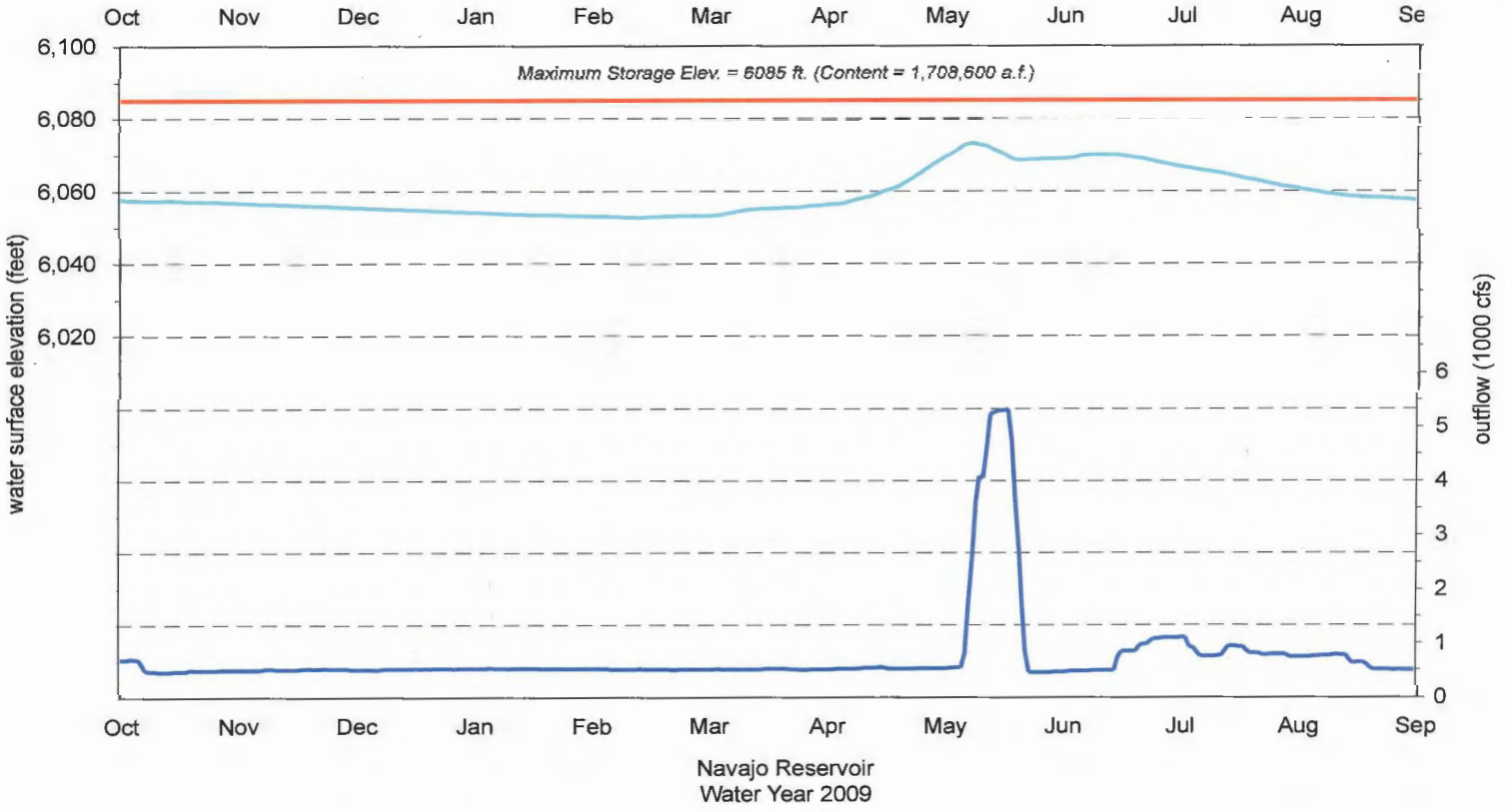
Live Storage Capacity - 344,800 acre-feet
Power Generation Capacity - 13,000 KW
Live Storage 9/30/09 - 186,294 acre-feet



Fontenelle Reservoir
Water Year 2009

Navajo

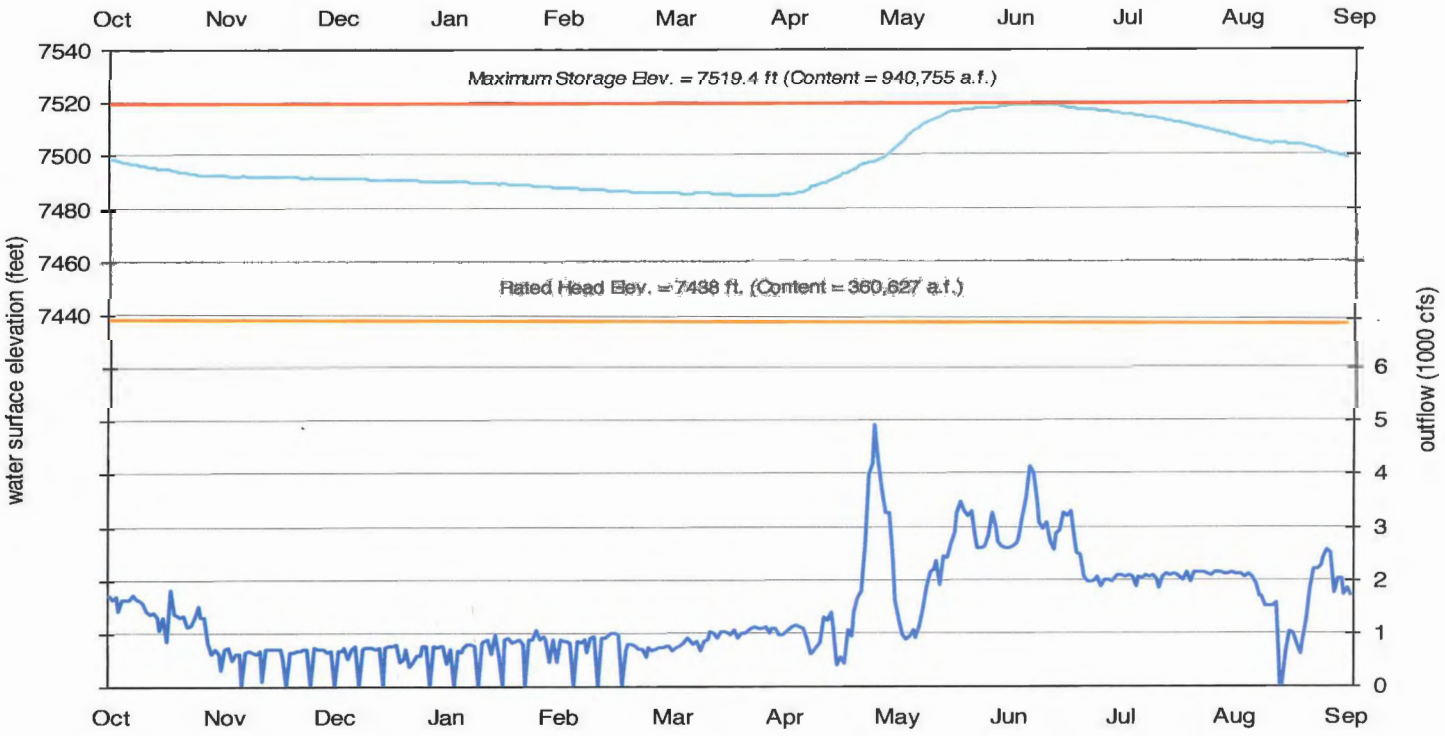
Live Storage Capacity - 1,695,900 acre-feet
Power Generation Capacity -0 KW
Live Storage 9/30/08 - 1,509,890 acre-feet



Navajo Reservoir
Water Year 2009

Blue Mesa

Live Storage Capacity - 829,000 acre-feet
Power Generation Capacity - 96,000 KW
Live Storage 9/30/09 - 686,714 acre-feet

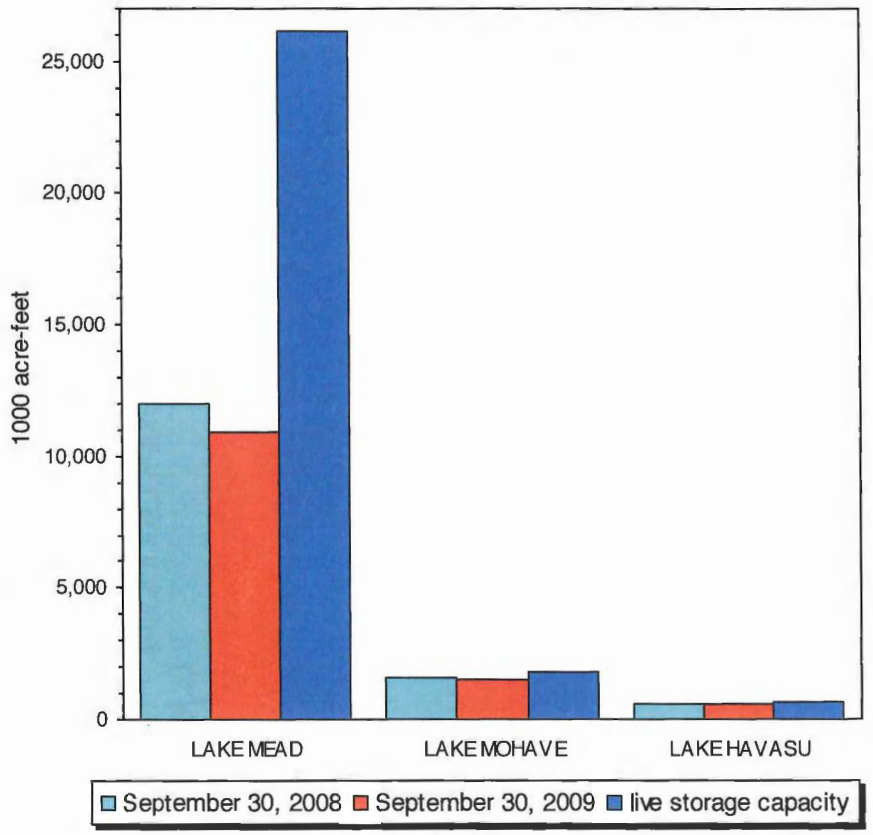


Blue Mesa Reservoir
Water Year 2009

Storage In Principal Reservoirs - Water Year 2009

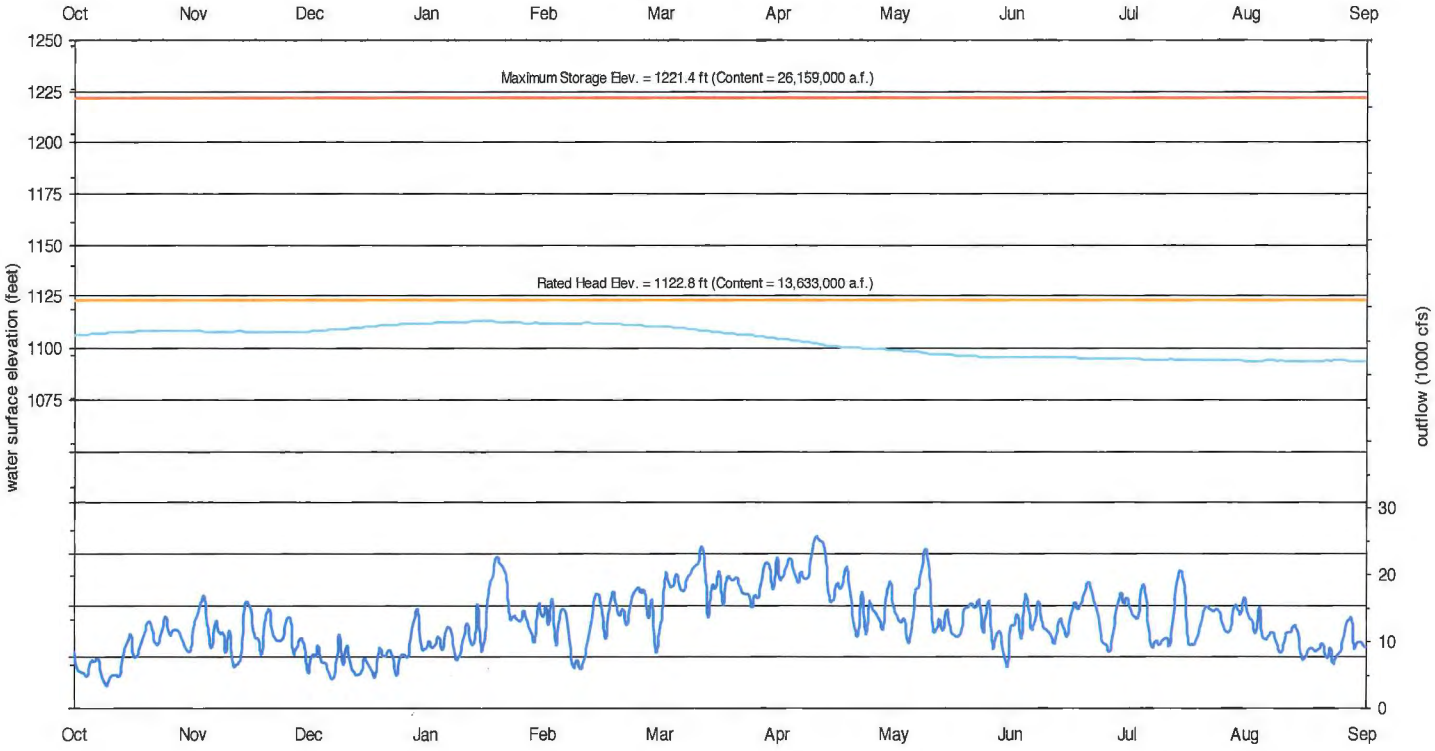
Lower Basin
Live Storage Contents

reservoir	Sept. 30, 2009 (acre-feet)	percent live capacity	Sept. 30, 2008 (acre-feet)	percent live capacity	change in contents (acre-feet)
LAKE MEAD	10,933,000	41.8%	12,013,000	45.9%	-1,080,000
LAKE MOHAVE	1,501,300	82.9%	1,585,500	87.6%	-84,200
LAKE HAVASU	564,100	91.1%	583,700	94.3%	-19,600
TOTAL	12,998,400		14,182,200		-1,183,800



Lake Mead - Hoover Dam

Live Storage Capacity - 26,159,000 acre feet
Power Generation Capacity - 1,914,000 KW
Live Storage 9/30/09 - 12,504,640 acre-feet



Lake Mead Reservoir
Water Year 2009

3. Flows of Colorado River

Table 3 on page 22 and 23 shows the estimated virgin flow of the Colorado River at Lee Ferry, Arizona for each water year from 1896 through 2009. Column (4) of the table shows the average virgin flow for any given year within the period computed through water year 2009. Column (5) shows the average virgin flow for a given year within the period computed since water year 1896. Column (6) shows the average virgin flow for each progressive ten-year period beginning with the ten-year period ending on September 30, 1905. The difference between the virgin flow for a given year and the average flow over the 113-year period, 1896 through 2009 is shown in column (7)

Article III (d) of the Colorado River compact stipulates that "the States of the Upper Division will not cause the flow of the river at Lee Ferry to be depleted below an aggregate of 75,000,000 acre-feet for any period of ten consecutive years reckoned in a continuing progressive series beginning with the first day of October next succeeding the ratification of this Compact." Prior to the storage of water in the Colorado River Storage Project reservoirs, which began in 1962, the flow of the river at Lee Ferry in any ten consecutive years was greatly in excess of the 75,000,000 acre-feet required by the Compact. Beginning in 1962, Colorado River Storage Project reservoirs have regulated the river above Glen Canyon Dam. Table 4 on page 24, shows the historic flow at Lee Ferry for the period 1954 through 2009. The historic flow for each progressive ten-year period from 1954 through 2009, beginning with the ten-year period ending September 30, 1962, the commencement of storage in Colorado River Storage Project reservoirs, is shown in Column (3).

In each consecutive ten-year period, the total flow equaled or exceeded the 75,000,000 acre-feet required by the Compact. The flow at Lee Ferry during the ten-year period ending September 30, 2009 was 85,881,000 acre-feet. The graphs on pages 25 and 26 illustrate some of the pertinent historical facts related to the amounts of water produced by the Colorado River System above Lee Ferry, Arizona, the compact division point between the Upper and Lower Colorado River Basins. The first graph on page 25 is entitled Colorado River Flow at Lee Ferry, Arizona. The top of each vertical bar represents the estimated virgin flow of the river, i.e., the flow of the river in million of acre-feet past Lee Ferry for a given year had it not been depleted by activities of man. Each vertical bar has two components: The lower shaded part represents the estimated or measured historic flow at Lee Ferry, and the difference between the two sections of the bar in any given year represents the stream depletion, or the amount of water estimated to have been removed by man from the virgin supply upstream from Lee Ferry. It is worth noting that in 1977, and again in 1981, the historic flow at Lee Ferry exceeded the virgin flow. Beginning in 1962, part of this depletion at Lee Ferry was caused by the retention and storage of water in storage units of the Colorado River Storage Project. The horizontal line (at approximately 14.8 million acre-feet) shows the long-term average virgin flow from 1896 through 2009. Because the Colorado River Compact is administered based on running averages covering periods of ten years, the progressive ten-year average historic and virgin flows are displayed on this graph.

The second graph on page 26, entitled Lee Ferry Average Annual Virgin Flow for Selected Periods, is a graphical representation of historic and virgin flow averages for several periods of record. The periods of water years selected were those to which reference is usually made for various purposes in documents pertaining to the Colorado River System.

Several important hydrologic facts are apparent from these two graphs on pages 25 and 26.

(1) A vast majority of the high flows occurred prior to 1929.

(2) Since the 1924-1933 decade, the progressive ten-year average virgin flow has not exceeded the average virgin flow except in the 1941-1950 and the exceptionally wet 1975-1984 through 1984-1993 decades.

(3) For the period 1896-1921, which is prior to the Colorado River Compact of 1922, the average virgin flow was estimated to be 16.8 million acre-feet per year, which is considerably greater than for any other period selected, including the long-term average. A stream-gaging station at Lees Ferry, Arizona was not installed until 1921. Thus, the virgin flow at Lees Ferry prior to the 1922 Compact is estimated based upon records obtained at other stations, e.g. the stream gage on the Colorado River at Yuma, Arizona for the period 1902-1921.

(4) For the longest period shown, 1896-2009, the estimated average annual virgin flow is 14.8 million acre-feet, and the average annual historic flow is 11.9 million acre-feet.

(5) For the next longest period, 1906-2009, the estimated average annual virgin flow is 14.8 million acre-feet, and the average annual historic flow is 11.7 million acre-feet. Many of the early records for this series of years as well as for the 1896-2009 period are based upon the estimates of flows made at other gaging stations, as mentioned in (3) above. This average is about equal to the 15.0 million acre-feet estimated for the 1906-1967 period, which was used as the basis for justification of a water supply for the Central Arizona Project authorized in 1968.

(6) The estimated average annual virgin flow during the 1914-2009 periods is 14.6 million acre-feet. This period is an extension of the 1914-1965 period used in the Upper Colorado Region Comprehensive Framework studies of 1971. The average annual virgin flow for the 1914-1965 periods is 14.6 million acre-feet.

(7) The average annual virgin flow for the period 1914-1945 is 15.6 million acre-feet. This was the period of record used by the negotiators of the Upper Colorado River Basin Compact of 1948.

(8) For the period 1922-2009, which is the period of record since the signing of the Colorado River Compact, the average annual virgin flow is 14.2 million acre-feet, and the average annual historic flow is 10.8 million acre-feet. Records for this series of years are based upon actual measurements of flows at Lees Ferry. The ten-year moving average flow since 1922 is considerably less than the ten-year moving average flow prior to 1922.

(9) Two completely unrelated ten-year periods of minimum flows have occurred since 1930. During these periods, 1931-1940 and 1954-1963, the average annual virgin flow amounts to only 11.8 million acre-feet and 11.6 million acre-feet.

(10) For a 12-year period, 1953-1964, the average annual virgin flow amounts to only 11.6 million acre-feet.

(11) Since Glen Canyon Dam's closure in 1963, the estimated virgin flow for the subsequent 46 years is 14.5 million acre-feet. The estimated historical flow for the same period (1964-2009) is 9.8 million acre-feet.

Table 3
ESTIMATED VIRGIN FLOW AT LEE FERRY
(million acre-feet)

(1) Years to 2008	(2) Year Ending Sept. 30	(3) Estimated Virgin Flow	(4) Average to 2008	(5) Average Since 1896	(6) Progressive 10-year Moving Average	(7) Virgin Flow Minus 112-year Average
113	1896	10.1	14.8	10.1	0.0	-4.7
112	1897	18.0	14.8	14.1	0.0	3.2
111	1898	13.8	14.8	14.0	0.0	-1.0
110	1899	15.9	14.8	14.5	0.0	1.1
109	1900	13.2	14.8	14.2	0.0	-1.6
108	1901	13.6	14.8	14.1	0.0	-1.2
107	1902	9.4	14.8	13.4	0.0	-5.4
106	1903	14.8	14.8	13.6	0.0	0.0
105	1904	15.6	14.8	13.8	0.0	0.8
104	1905	16.0	14.8	14.0	14.0	1.2
103	1906	19.1	14.8	14.5	14.9	4.3
102	1907	23.4	14.8	15.2	15.5	8.6
101	1908	12.9	14.7	15.1	15.4	-1.9
100	1909	23.3	14.7	15.7	16.1	8.5
99	1910	14.2	14.6	15.6	16.2	-0.6
98	1911	16.0	14.6	15.6	16.5	1.2
97	1912	20.5	14.6	15.9	17.6	5.7
96	1913	14.5	14.6	15.8	17.6	-0.3
95	1914	21.2	14.6	16.1	18.1	6.4
94	1915	14.0	14.5	16.0	17.9	-0.8
93	1916	19.2	14.5	16.1	17.9	4.4
92	1917	24.0	14.5	16.5	18.0	9.2
91	1918	15.4	14.3	16.4	18.2	0.6
90	1919	12.5	14.3	16.3	17.2	-2.3
89	1920	22.0	14.4	16.5	17.9	7.2
88	1921	23.0	14.3	16.8	18.6	8.2
87	1922	18.3	14.2	16.8	18.4	3.5
86	1923	18.3	14.1	16.9	18.8	3.5
85	1924	14.2	14.1	16.8	18.1	-0.6
84	1925	13.0	14.1	16.6	18.0	-1.8
83	1926	15.9	14.1	16.6	17.7	1.1
82	1927	18.6	14.1	16.7	17.1	3.8
81	1928	17.3	14.0	16.7	17.3	2.5
80	1929	21.4	14.0	16.8	18.2	6.6
79	1930	14.9	13.9	16.8	17.5	0.1
78	1931	7.8	13.9	16.5	16.0	-7.0
77	1932	17.2	13.9	16.6	15.9	2.4
76	1933	11.4	13.9	16.4	15.2	-3.4
75	1934	5.6	13.9	16.1	14.3	-9.2
74	1935	11.6	14.0	16.0	14.2	-3.2
73	1936	13.8	14.1	16.0	14.0	-1.0
72	1937	13.7	14.1	15.9	13.5	-1.1
71	1938	17.5	14.1	16.0	13.5	2.7
70	1939	11.1	14.0	15.8	12.5	-3.7
69	1940	8.6	14.1	15.7	11.8	-6.2
68	1941	18.1	14.2	15.7	12.9	3.3
67	1942	19.1	14.1	15.8	13.1	4.3
66	1943	13.1	14.0	15.7	13.4	-1.7
65	1944	15.2	14.0	15.7	14.1	0.4
64	1945	13.4	14.0	15.7	14.4	0.4
63	1946	10.4	14.0	15.6	14.0	-1.4
62	1947	15.5	14.1	15.6	14.2	-4.4
61	1948	15.6	14.1	15.6	14.0	0.7
60	1949	16.4	14.0	15.6	14.5	1.6
59	1950	12.9	14.0	15.6	15.0	-1.9
58	1951	11.6	14.0	15.5	14.3	-3.2
57	1952	20.7	14.1	15.6	14.5	5.9
56	1953	10.6	13.9	15.5	14.2	-4.2
55	1954	7.7	14.0	15.4	13.5	-7.1

Table 3
ESTIMATED VIRGIN FLOW AT LEE FERRY
(million acre-feet)

(1) Years to 2008	(2) Year Ending Sept. 30	(3) Estimated Virgin Flow	(4) Average to 2009	(5) Average Since 1896	(6) Progressive 10-year Moving Average	(7) Virgin Flow Minus 111-year Average
55	1955	9.2	14.1	15.3	13.1	-5.6
54	1956	10.7	14.2	15.2	13.1	-4.1
53	1957	20.1	14.3	15.3	13.6	5.3
52	1958	16.5	14.2	15.3	13.6	1.7
51	1959	8.6	14.1	15.2	12.9	-6.2
50	1960	11.3	14.2	15.1	12.7	-3.5
49	1961	8.5	14.3	15.0	12.4	-6.3
48	1962	17.3	14.4	15.0	12.1	2.5
47	1963	8.4	14.4	15.0	11.8	-6.4
46	1964	10.2	14.5	14.9	12.1	-4.6
45	1965	18.9	14.6	14.9	13.1	4.1
44	1966	11.2	14.5	14.9	13.1	-3.6
43	1967	11.9	14.6	14.8	12.3	-2.9
42	1968	13.7	14.6	14.8	12.0	-1.1
41	1969	14.4	14.6	14.8	12.6	-0.4
40	1970	15.4	14.6	14.8	13.0	0.6
39	1971	15.1	14.6	14.8	13.7	0.3
38	1972	12.2	14.6	14.8	13.1	-2.6
37	1973	19.4	14.7	14.9	14.2	4.6
36	1974	13.3	14.5	14.8	14.6	-1.5
35	1975	16.6	14.6	14.9	14.3	1.8
34	1976	11.6	14.5	14.8	14.4	-3.2
33	1977	5.8	14.6	14.7	13.8	-9.0
32	1978	15.2	14.9	14.7	13.9	0.4
31	1979	17.9	14.9	14.8	14.3	3.1
30	1980	17.5	14.8	14.8	14.5	2.7
29	1981	8.2	14.7	14.7	13.8	-6.6
28	1982	16.2	14.9	14.7	14.2	1.4
27	1983	24.0	14.9	14.8	14.6	9.2
26	1984	24.5	14.5	14.9	15.8	9.7
25	1985	20.8	14.1	15.0	16.2	6.0
24	1986	21.9	13.8	15.1	17.2	7.1
23	1987	16.9	13.5	15.1	18.3	2.1
22	1988	11.8	13.3	15.1	18.0	-3.0
21	1989	10.1	13.4	15.0	17.2	-4.7
20	1990	9.0	13.6	15.0	16.3	-5.8
19	1991	12.3	13.8	14.9	16.8	-2.5
18	1992	11.0	13.9	14.9	16.2	-3.8
17	1993	18.0	14.1	14.9	15.6	3.2
16	1994	10.5	13.8	14.9	14.2	-4.3
15	1995	20.1	14.0	14.9	14.2	5.3
14	1996	14.3	13.6	14.9	13.4	-0.5
13	1997	21.0	13.6	15.0	13.8	6.2
12	1998	16.9	12.9	15.0	14.3	2.1
11	1999	16.4	12.6	15.0	15.0	1.6
10	2000	10.9	12.2	15.0	15.1	-3.9
9	2001	11.0	12.3	14.9	15.0	-3.8
8	2002	6.4	12.5	14.9	14.6	-8.4
7	2003	11.1	13.4	14.8	13.9	-3.7
6	2004	10.9	13.8	14.8	13.9	-3.9
5	2005	17.7	14.3	14.8	13.7	2.9
4	2006	13.3	13.5	14.8	13.6	-1.5
3	2007	11.9	13.5	14.8	12.7	-2.9
2	2008	16.5	14.4	14.8	12.6	1.7
1	2009	14.69	14.7	14.8	12.4	-0.1
Maximum		24.5			18.8	
Minimum		5.6			11.8	
Average		14.8			14.9	

Table 4
HISTORIC FLOW AT LEE FERRY
1954-2009

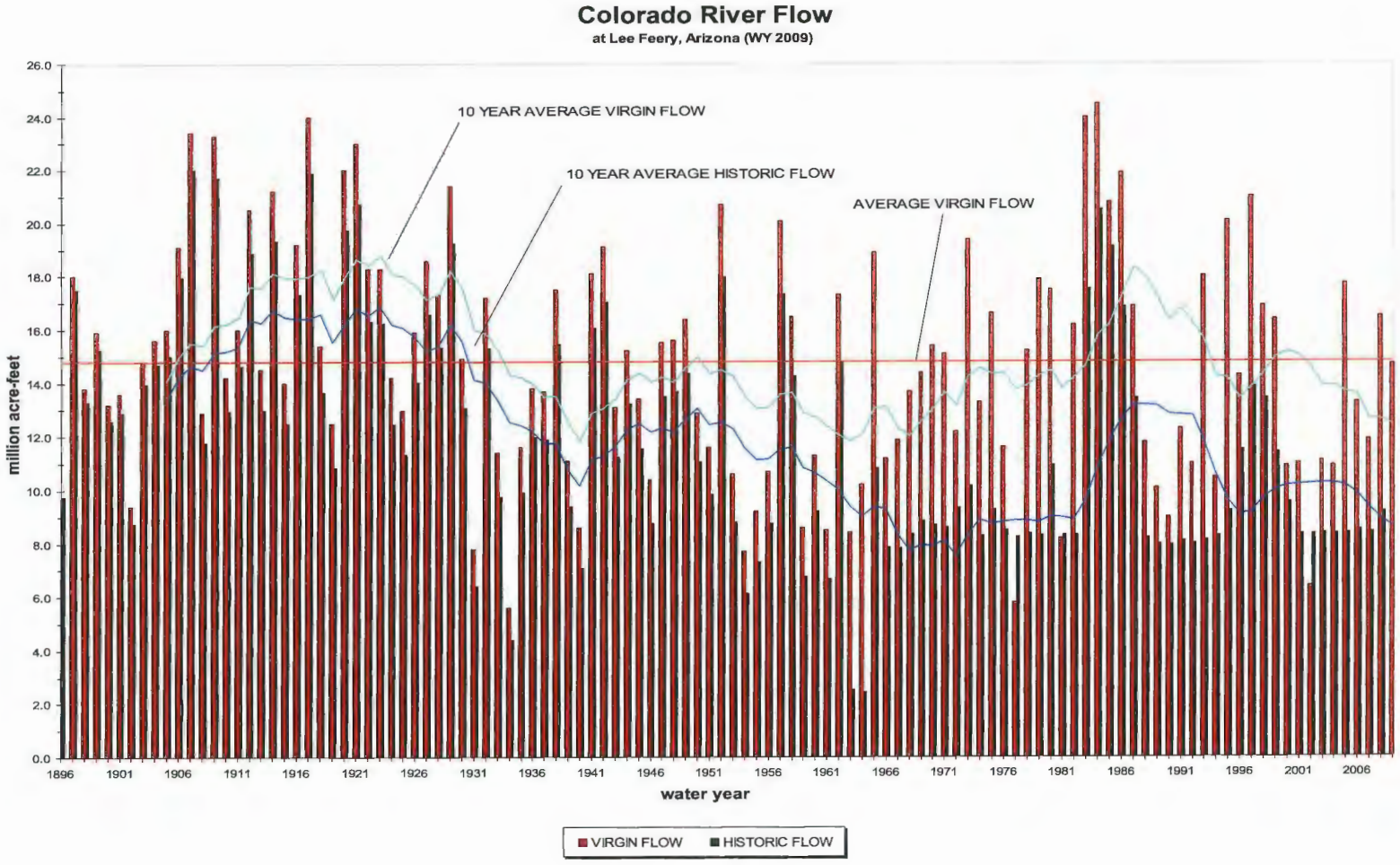
Water Year Ending Sept. 30	Historic Flow (1,000 a.f.)	Progressive 10- Year Total (1,000 a.f.)
1954	6,116	
1955	7,307	
1956	8,750	
1957	17,340	
1958	14,260	
1959	6,756	
1960	9,192	
1961	6,674	
1962	14,790	
1963	2,520	93,705
1964	2,427	90,016
1965	10,835	93,544
1966	7,870	92,664
1967	7,824	83,148
1968	8,358	77,246
1969	8,850	79,340
1970	8,688	78,836
1971	8,607	80,769
1972	9,330	75,309
1973	10,141	82,930
1974	8,277	88,780
1975	9,274	87,219
1976	8,494	87,843
1977	8,269	88,288
1978	8,369	88,299
1979	8,333	87,782
1980	10,950	90,044
1981	8,316	89,753
1982	8,323	88,746
1983	17,520	96,125
1984	20,518	108,366
1985	19,109	118,201
1986	16,866	126,573
1987	13,450	131,754
1988	8,160	131,545
1989	7,995	131,207
1990	8,125	128,382
1991	8,132	128,198
1992	8,023	127,898
1993	8,137	118,515
1994	8,306	106,303
1995	9,242	96,436
1996	11,530	91,100
1997	13,873	91,523
1998	13,441	96,804
1999	11,540	100,349
2000	9,530	101,754
2001	8,361	101,983
2002	8,348	102,308
2003	8,372	102,543
2004	8,348	102,585
2005	8,395	101,738
2006	8,508	98,716
2007	8,422	93,265
2008	9,191	89,015
2009	8,406	85,881

Storage in Flaming Gorge and Navajo Reservoirs began in 1962.

Storage in Glen Canyon Reservoir began in 1963.

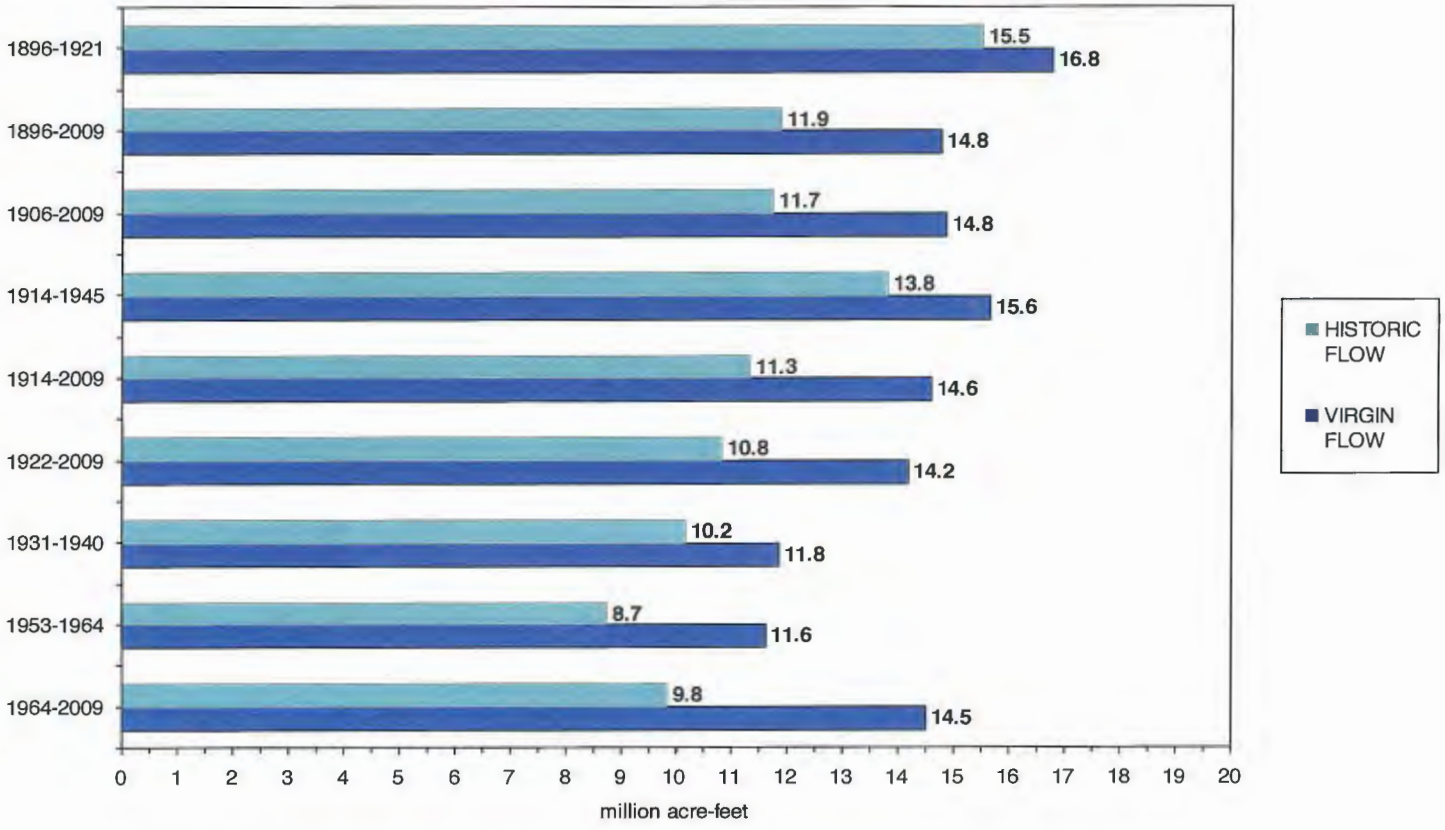
Storage in Fontenelle reservoir began in 1964.

*Based upon provisional streamflow records subject to revision.


Colorado River Flow
at Lee Feery, Arizona (WY 2009)
10 YEAR AVERAGE VIRGIN FLOW
10 YEAR AVERAGE HISTORIC FLOW
AVERAGE VIRGIN FLOW
million acre-feet
water year
VIRGIN FLOW
HISTORIC FLOW

Lee Ferry Average Annual Virgin Flow

For Selected Periods



4. Colorado River Salinity Program

The Upper Colorado River Commission has continued its interest and involvement in the Colorado River Basin salinity problem. The Commission staff has worked with representatives of the Commission's member States, particularly the Colorado River Basin Salinity Control Forum, which is composed of representatives from the seven Colorado River Basin States. The Forum has developed water quality standards and a plan of implementation to meet the Environmental Protection Agency Regulation (40 CFR Part 120 Water Quality Standards-Colorado River System: Salinity Control Policy and Standards Procedures).

Section 303 of the Clean Water Act requires that water quality standards be reviewed from time to time and at least once during each three-year period. The Forum in 2005 reviewed the existing State-adopted and Environmental Protection Agency-approved numeric salinity criteria and found no reason to recommend changes for the three lower mainstem stations.

The values are:

	Salinity in (mg/l)
Below Hoover Dam	723
Below Parker Dam	747
Imperial Dam	879

For several years, the States, the Upper Colorado River Commission and the Forum have been working with Reclamation as it attempts to create a river model that can reproduce flows and salinity concentrations of the past and predict probabilities of flows and salinity concentrations in the future. It now appears that this model has been developed sufficiently that it can be used as a tool in preparation of the reviews.

The Salinity Control Program has been successful in implementing controls that have reduced the average concentrations at Imperial Dam by 140 mg/l. The Forum's goals are based on long-term averages, and the river model can assist with the analysis of future salinity control needs. Currently it is felt that about as much salinity control will need to be implemented in future as has occurred in the past to meet water quality objectives. The Salinity Control Program cannot offset short-term variances caused by short-term hydrologic variances from the norm.

B. LEGAL

1. Water Newsletter

The legal staff continues to inform the Commissioners, their advisers and other interested parties about developments in the courts, Congress and certain Federal agencies through the Water Newsletter. Current information can be found in the newsletter. In addition, the legal staff has prepared legal memoranda on matters needing more detailed treatment.

2. Court Cases

Action has been taken in the following cases of importance to the Upper Colorado River Basin States:

Entergy Corporation v. Riverkeeper, Inc., 556 U.S. ___, 129 S.C. ___, 173 L.Ed.2d 369, 2009 U.S. LEXIS 2498.

These three consolidated cases concern a set of regulations adopted by the Environmental Protection Agency (EPA) pursuant to § 316(b) of the Clean Water Act, 33 U.S.C. § 1326(b) and published at 69 Fed. Reg. 41576 (2004). Respondents, environmental groups and various States, challenged those regulations, and the Second Circuit set them aside in *Riverkeeper, Inc. v. EPA*, 475 F.3d 83 (2007). Petitioners either operate or represent those who operate large powerplants. In the course of generating power, those plants generate large amounts of heat. To cool their facilities, petitioners use "cooling water intake structures" that extract water from nearby water sources. These structures pose various threats to the environment, the principal ones being the squashing against intake screens ("impingement") or suction into the cooling system ("entrainment") of aquatic organisms that live in the affected water sources. Therefore, the facilities are subject to regulation under the Clean Water Act. The issue before the Supreme Court is whether, as the Second Circuit held, EPA is not permitted to use a cost-benefit analysis in determining the content of regulations promulgated under §1326(b). The Court finds that EPA's view that § 1326(b)'s "best technology available for minimizing adverse environmental impact" standard permits consideration of the technology's costs and the relationship between those costs and the environmental benefits produced governs if it is a reasonable interpretation of the statute, not necessarily the only possible interpretation or even the interpretation deemed most reasonable by the courts. Other Clean Water Act provisions show that when Congress wanted to mandate the greatest feasible reduction in water pollution, it used plain language, such as "elimination of discharges of all pollutants" in § 1311(b)(2)(A). Therefore, the Court finds that § 1326(b)'s use of the less ambitious goal of "minimizing adverse environmental impact" suggests that EPA has some discretion to determine the extent of reduction warranted under the circumstances, plausibly involving a consideration of the benefits derived from reductions and the costs of achieving them. Considering the text of § 1326(b) and comparing it with the text and statutory factors applicable to parallel Clean Water Act provisions prompts the Court's conclusion that it was well within the bounds of reasonable interpretation for EPA to conclude that cost-benefit analysis is not categorically forbidden. Therefore, the majority concludes that EPA permissibly relied on cost-benefit analysis in setting the national performance standards and in providing for cost-benefit variances from those standards as part of the agency's Phase II regulations. The Court finds that the Court of Appeals' reliance in part on the agency's use of cost-benefit analysis in invalidating the site-specific cost-benefit variance provision was therefore in error, as was its remand of the national performance standards for clarification of whether cost-benefit analysis was impermissibly used.

Coeur Alaska, Inc. v. Southeast Alaska Conservation Council, 557 U.S. ___, 129 S.Ct. ___, 174 L.Ed. 2d 193, 2009 U.S. LEXIS 4730.

Petitioner Coeur Alaska, a mining company, decided to reopen a gold mine in Alaska using a "froth flotation" technique to extract gold. Coeur obtained permission from the Corps of Engineers (Corps) to dispose of a rock and water mixture called "slurry" by pumping it into a nearby lake. Respondent environmental groups challenged the Corps decision, claiming that the decision to issue a permit under §404 of the Clean Water Act (CWA) violated the law, because (1) the mining company should have sought a permit from the Environmental Protection Agency (EPA) under §402 of the CWA and (2) the slurry discharge would violate the "new source performance standard" the EPA had promulgated under §306(b) of the CWA. Reversing the judgment of the District Court, the U. S. Court of Appeals for the 9th Circuit held that EPA's performance standard applies to this discharge, so the permit from the Corps is unlawful. The Supreme Court reversed the decision of the circuit court, holding that the mining company proposed to discharge "fill material" into the lake, and the Corps, not the EPA, had the authority under §404 of the CWA to permit the discharge of fill material. Although EPA had the authority under §404(c) to veto the permit, it had not done so. EPA's new source performance standard implements Section 306(e) of the CWA by barring mines from discharging "process wastewater" into navigable waters such as the lake at issue. The Supreme Court gives deference to an informal EPA memorandum that interprets the agency's new source performance standard as being best read to not apply to discharges of "fill material" into a closed body of water such as the lake, on the grounds that the interpretation is not plainly erroneous or inconsistent with the regulations at 40 C.F.R. 440.104(b)(1).

3. Legislation

In the First Session of the 111th Congress (without regard to the water year), Congress enacted the following statutes that are important to the Upper Colorado River Basin States:

Public Law 111-88, approved October 30, 2009, making appropriations for the Department of the Interior, environment and related agencies for the fiscal year ending September 30, 2010.

Public Law 111-85, approved October 28, 2009, making appropriations for energy and water development and related agencies for the fiscal year ending September 30, 2010.

Public Law 111-80, approved October 21, 2009, making appropriations for Agriculture, Rural Development, Food and Drug Administration and Related Agencies programs for the fiscal year ending September 30, 2010, and for other purposes.

COLORADO RIVER STORAGE PROJECT AND PARTICIPATING PROJECTS

A. AUTHORIZED STORAGE UNITS

(Information relative to storage units and participating projects has been provided by the United States Department of the Interior, Bureau of Reclamation.)

The Colorado River Storage Project (CRSP) was authorized for construction by the United States Congress in the CRSP Act of April 11, 1956 (Public Law 485, 84th Congress, 70 Stat. 105). Four storage units were authorized by this Act: Glen Canyon Unit on the Colorado River in Utah and Arizona; Flaming Gorge Unit on the Green River in Utah and Wyoming; Navajo Unit on the San Juan River in New Mexico and Colorado; and the Wayne N. Aspinall Unit, formerly named the Curecanti Unit and rededicated in July 1981, on the Gunnison River in Colorado. The Aspinall Unit consists of three dams and reservoirs: Blue Mesa, Morrow Point, and Crystal. Combined, the four storage units provide about 30.6 million acre-feet of live water storage capacity. The initial CRSP Act also authorized the construction of 11 participating projects. Additional participating projects have been authorized by subsequent congressional legislation.

The storage units and participating projects are described in this 61st report and earlier annual reports of the Upper Colorado River Commission. Progress in construction, planning, operation, recreation, and investigation of the storage units and participating projects accomplished during the past water year (October 1 to September 30) is briefly outlined as follows:

1. Glen Canyon Unit

Glen Canyon Dam and Reservoir (Lake Powell) comprises the key storage unit of the CRSP and is the largest of the initial four, providing about 80 percent of the storage and generating capacity. Construction of the dam was completed in 1963. In addition to water storage for flood control and consumptive uses, Glen Canyon Dam was built as a hydroelectric peaking power facility, permitting it to move from low electrical output during low power demand to high electrical output in peak demand periods. To that extent, flow releases from the dam were adjusted daily, with smaller more frequent changes during the day, to respond to variances in electrical demand.

At optimum operations, the eight generators at Glen Canyon Dam are capable of producing 1,320 megawatts of power. Water releases from the dam occur at 200-230 feet below the surface of Lake Powell at full pool, which results in clear cold water with year-round temperatures of 45 degrees F to 50 degrees F. During protracted droughts, such as occurred from 2000-2008, Lake Powell elevations decline to levels where warmer water is drawn through the penstocks and released downstream. The recreation, irrigation, and hydropower benefits introduced to the southwest by Glen Canyon Dam are extensive and continue to expand.

Since the damming of the river in 1963, there has been only one flow release that approached average pre-dam spring floods. In 1983, a combination of unanticipated hydrologic events in the Upper Colorado River Basin, combined with a lack of available storage space in Lake Powell, resulted in emergency releases from Glen Canyon Dam that reached 93,000 cubic feet per second (cfs). Except for the flood events of the mid-1980s, historic daily releases prior to the

preparation of the final Glen Canyon Dam environmental impact statement (EIS) generally ranged between 1,000 cfs and 25,000 cfs, with flows averaging between 5,000 cfs and 20,000 cfs.

As a result of the construction and operation of Glen Canyon Dam, the Colorado River ecosystem below the dam has changed significantly from its pre-dam natural character. In addition, the dam's highly variable flow releases from 1964 to 1991 caused concern over resource degradation resulting from dam operations. Because of these concerns, the Secretary of the Interior (Secretary) adopted interim operating criteria in October 1991 that narrowed the range of daily powerplant fluctuations. Since the signing of the final operating criteria in February 1997, powerplant releases do not exceed 25,000 cfs, other than during occasional experimental flows or emergency situations, and have most often averaged between 10,000 cfs and 20,000 cfs.

Responding to concerns that changes to the Colorado River ecosystem were resulting from dam operations, Reclamation launched the Glen Canyon Environmental Studies program in 1982. The research program's first phase (1982-1988) focused on developing baseline resource assessments of physical and biotic resources. The second program phase (1989-1996) expanded research programs in native and non-native fishes, hydrology and aquatic habitats, terrestrial flora and fauna, cultural and ethnic resources, and social and economic impacts.

By the late 1980s, sufficient knowledge had been developed to raise concerns that downstream impacts were occurring, and that additional information needed to be developed to quantify the effects and to develop management actions that could avoid and/or mitigate the impacts. This collective information, and other factors, led to a July 1989 decision by the Secretary to direct Reclamation to prepare an EIS on the operation of Glen Canyon Dam. The intent was to evaluate alternative dam operation strategies to lessen the impacts of operations on downstream resources.

In October 1992, the President signed into law the Reclamation Projects Authorization and Adjustments Act, Public Law (P.L.) 102-575. Responding to continued concerns over potential impacts of Glen Canyon Dam operations on downstream resources, Congress included the Grand Canyon Protection Act (GCPA) as Title 18 of the Reclamation Projects Act. Section 1802(a) of the GCPA requires the Secretary to operate Glen Canyon Dam:

> . . . in accordance with the additional criteria and operating plans specified in Section 1804 and exercise other authorities under existing law in such a manner as to protect, mitigate adverse impacts to, and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established, including, but not limited to natural and cultural resources and visitor use.

The GCPA directs the Secretary to implement this section in a manner fully consistent with all existing laws that govern allocation, appropriation, development, and exportation of the waters of the Colorado River Basin.

Section 1804 of the GCPA required preparation of an EIS, adoption of operating criteria and plans, reports to Congress, and allocation of costs. The Operation of Glen Canyon Dam Final Environmental Impact Statement was filed with the Environmental Protection Agency in March 1995 and a Record of Decision (ROD) was signed in October 1996. The ROD changed two flow

parameters from those shown in the preferred alternative of the EIS. They were (1) increasing the normal maximum flow from 20,000 cfs to 25,000 cfs and (2) increasing the upramp rate from 2,500 cfs/hour to 4,000 cfs/hour. The ROD also changed the triggering mechanisms for conducting beach/habitat-building flows (experimental flows above powerplant capacity). Instead of conducting them in years when Lake Powell storage is low on January 1, they are to be conducted in years when Lake Powell storage is high and reservoir releases in excess of powerplant capacity are required for dam safety purposes. Following the signing of the ROD, the Secretary adopted a formal set of operating criteria (February 1997) and the 1997 Annual Plan of Operations. This action terminated the 1991 interim operating criteria.

The signing of the ROD began a new chapter in the history of Glen Canyon Dam. In addition to meeting traditional water and power needs, the dam is now being operated in a more environmentally sensitive manner. The EIS process demonstrated the value of a cooperative, integrative approach to dealing with complex environmental issues. The inclusion of stakeholders resulted in a process that will serve to guide future operations of Glen Canyon Dam and become a template for other river systems.

a. Adaptive Management

Section 1805 of the GCPA directs the Secretary to establish and implement long-term monitoring programs on the natural, recreational, and cultural resources of Grand Canyon National Park and Glen Canyon National Recreation Area. The Glen Canyon Dam Adaptive Management Program (AMP) is a key element of the preferred alternative outlined in the final EIS and implemented by the ROD. The program provides for operation of Glen Canyon Dam for environmental purposes in Glen and Grand Canyons in addition to traditional water and power generation.

The AMP provides a process to incorporate science into stakeholder recommendations to the Secretary on future dam operations. The AMP calls for the continued interaction of managers and scientists to both monitor the effects of current dam operations on the Colorado River ecosystem, and to conduct research on alternative dam operating criteria that may be necessary to ensure protection of resources and improve natural processes. The AMP identifies the following entities that contribute to the adaptive management process: (1) Adaptive Management Work Group (AMWG), (2) Technical Work Group (TWG), (3) Grand Canyon Monitoring and Research Center (GCMRC), and (4) independent review panels.

The AMWG is a Federal Advisory Committee Act committee chartered by the Secretary and consists of federal and state resource managers, Native American tribes, power marketers, environmental groups, recreationists, and representatives of other interest groups. The AMWG was established to develop, evaluate, and recommend alternative operations strategies for Glen Canyon Dam, and make recommendations to the Secretary. The AMWG does not displace federal agency, tribal, or state agency legal authority and responsibility to manage resources in the best interests of both the environment and society.

In addition to the AMWG, the TWG and GCMRC were created to play vital roles as part of the adaptive management process. The TWG is composed of technical representatives appointed by the AMWG. The TWG provides the AMWG detailed guidance on issues and objectives,

develops criteria and standards for research and monitoring programs, provides information for annual resource reports, and translates the AMWG's management objectives into research needs for the GCMRC. The GCMRC (now under the auspices of the United States Geological Survey) conducts the research and monitoring necessary to evaluate operations and the independent review panels provide outside review and credibility. The AMWG currently meets two to three times a year and the TWG currently meets about six times a year.

b. Glen Canyon Dam Operations During 2008 and 2009

In February 2008, Reclamation issued a Final Environmental Assessment on Experimental Releases from Glen Canyon Dam for 2008-2012. The U.S. Fish and Wildlife Service rendered a final biological opinion and Reclamation issued a Finding of No Significant Impact on the environmental assessment, also in February 2008. Pursuant to the determinations from that environmental compliance, Reclamation conducted a high flow experiment in March 2008 and released modified low fluctuating flows during the remainder of that month and during all other months except September and October. During September and October, steady flows were released form Glen Canyon Dam. During 2009, there was no high flow release experiment. The dam was operated under the Modified Low Fluctuating Flow Preferred Alternative of the 1996 Record of Decision and the 2007 Shortage Criteria Record of Decision, except for the months of September and October when steady flows were again released. Reclamation also continued to implement conservation measures from the 2007 and 2008 biological opinions that, in conjunction with these dam releases, would improve habitat conditions for endangered species and improve the understanding of resource responses to these actions through the research and monitoring conducted as part of the Glen Canyon Dam Adaptive Management Program.

c. Environmental Impact Statement for the Adoption of a Long-term Experimental Plan for the Future Operation of Glen Canyon Dam

In November 2006, Reclamation published a Notice of Intent in the *Federal Register* announcing Reclamation's intent to prepare and consider an EIS on a long-term experimental plan (LTEP) for the future operation of Glen Canyon Dam and other associated management activities. Likely considered actions would be dam operations, potential modifications to Glen Canyon Dam intake structures, and removal of non-native fish species in the Colorado River below Glen Canyon Dam.

Multiple factors, including extraordinarily large sediment inputs from Colorado River tributaries, new information on the endangered humpback chub population, and litigation led to a temporary suspension of work on the LTEP EIS. Instead, focus is being placed on Endangered Species Act (ESA) compliance on a five-year plan of experimental flows (2008-2012), including a high flow test completed in early March 2008, yearly fall steady flows to be completed in September and October, and implementing conservation measures from the February 2008 Biological Opinion for the Operation of Glen Canyon Dam.

In a February 12, 2008, *Federal Register* Notice, Reclamation committed to reassess the LTEP EIS and associated environmental compliance activities following completion of compliance on the 2008-2012 experimental flows. In addition, Reclamation is prioritizing work with the Grand Canyon Monitoring and Research Center and other Glen Canyon Dam Adaptive Management

Program participants on development of a science plan on the effects of steady and fluctuating flows on nearshore habitats used by the endangered humpback chub and other native fish. Further development of the LTEP will depend on outcomes of the ongoing experiment scheduled for 2008-2012 (for which there is both NEPA and ESA compliance), ongoing litigation with the Grand Canyon Trust, and the goals and objectives of the Department of the Interior.

Secretary Ken Salazar, in his speech at the Colorado River Water User Association conference on December 10, 2009, stated that the development of a long-term experimental and management plan for Glen Canyon Dam is needed. The Secretary emphasized the inclusion of stakeholders, particularly those in the Glen Canyon Dam Adaptive Management Program, in the development of the long-term experimental and management plan.

d. Colorado River Lower Basin Shortage Guidelines and Coordinated Management Strategies for the Operations of Lake Powell and Lake Mead

Against the backdrop of the worst drought in over a century on the Colorado River, and pursuant to a Secretarial directive to finish this effort by 2007, Reclamation worked through a National Environmental Policy Act process to develop interim operational guidelines for Lake Powell and Lake Mead to address drought and low reservoir conditions. These operational guidelines provide Colorado River water users and managers in the United States a greater degree of certainty about how the two large reservoirs on the Colorado River will be operated under low water conditions, and when – and by how much – water deliveries will be reduced in the Lower Basin to the states of Arizona, Nevada, and California in the event of drought or other low reservoir conditions. In a separate, cooperative process, Reclamation worked through the State Department to consult with Mexico regarding potential water delivery reductions to Mexico under the 1944 Treaty with the United States.

A Record of Decision was signed by the Secretary of the Interior at the Colorado River Users Association's Annual Conference in Las Vegas, Nevada, on December 13, 2007. The ROD implements the interim operational guidelines that will be in place through 2026. The key components of the guidelines are: (1) a shortage strategy for Lake Mead and the Lower Division states, (2) coordinated operations of Lakes Powell and Mead through a full-range of operations, (3) a mechanism for the creation and delivery of conserved system and non-system water in Lake Mead (Intentionally Created Surplus), and (4) the modification and extension of the existing Interim Surplus Guidelines.

e. Lake Powell Pipeline Project

The Utah State Legislature authorized the Lake Powell Pipeline Project in 2006. The proposed project would deliver approximately 100,000 acre-feet of water per year from Lake Powell, including 10,000 acre-feet to Kane County, 20,000 acre-feet to Iron County, and 70,000 acre-feet to Washington County, Utah, via a 135-mile pipeline, and would develop a portion of the State of Utah's Colorado River Compact allotment. Multiple energy generation components are proposed including a potential 300-megawatt pumped storage component and 51 megawatts of conventional hydro generating capacity. On March 4, 2008, the State of Utah submitted to the Federal Energy Regulatory Commission (FERC) its notice of intent to file an application for original license and the pre-application document required under the Integrated Licensing Process. Reclamation is working

with FERC as a cooperating agency for National Environmental Policy Act compliance, with initiation of an environmental impact statement scheduled to begin after the State of Utah files its license application in August 2010.

f. Recreational Use

The extensive recreational use of Glen Canyon National Recreation Area (NRA), which surrounds Lake Powell, is demonstrated by the visitation of 1,979,826 people at the end of calendar year 2009. This is an increase of 3 percent over visitation in 2008. The National Park Service has concession-operated facilities at Wahweap, Dangling Rope, Halls Crossing, Hite, and Bullfrog Basin on the reservoir, and at Lees Ferry located 16 miles below the dam on the Colorado River.

In July 2007, it appeared that non-native larval quagga (or zebra) mussels were detected in the waters of Lake Powell near Glen Canyon Dam and Wahweap Marina. Subsequent test results have not confirmed the presence of the invasive mussels. However, the National Park Service and the states of Utah and Arizona have instituted an aggressive prevention program. All visitors bringing a boat into the NRA must display a self-certification slip on their windshields proclaiming their boat is free of both zebra and quagga mussels. In addition, the National Park Service has increased the time, months, and hours that entrance booths are operated. During hours of operation, all operators of vehicles with boats are stopped and interviewed. If needed, boats may be required to be inspected and/or decontaminated. Boat ramps are closed after hours when booths are not operated. All vehicles with trailers that do not have a self-certification slip on their windshield may be ticketed. An interagency Zebra Mussel Prevention Task Force was also put in place and is meeting monthly to discuss strategies, gather information, and assess risks and pathways of potential infection. Reclamation is a part of that task force and the Glen Canyon NRA is coordinating efforts with a variety of partners to prevent invasive mussels in Lake Powell. In addition to inspection and decontamination procedures, the National Park Service and the Utah Division of Wildlife Resources have a vigorous public education and outreach program.

In October, volunteers from the Bureau of Reclamation, National Park Service, and the community of Page, Arizona, held the third CAST (Catch A Special Thrill) for Kids event at Lake Powell. Thirty-seven disadvantaged and disabled children and their families participated along with 70 volunteers.

Visitation at Rainbow Bridge as of December 2009 was reported by the National Park Service to be 113,448 (a 19 percent increase from 2008). The bridge is considered a sacred site by Native Americans and many go to the site to pray and hold religious ceremonies. The National Park Service has requested that visitors voluntarily respect the site and keep from approaching too closely or walking under the bridge. Personal watercraft use in the Rainbow Bridge area has been banned since 2000.

The Carl B. Hayden Visitor Center, adjacent to Glen Canyon Dam and powerplant in Page, Arizona, is owned and maintained by Reclamation and operated by the National Park Service. The Glen Canyon Natural History Association conducts public tours of the dam and operates the book sales area in the visitor center. Public guided tours are now ongoing as long as the security threat advisory stays at yellow or below. Self-guided tours of the dam and powerplant were discontinued after September 11, 2001. As of January 5, 2009, a fee for guided tours is being charged to offset,

in part, increased costs associated with public visitation to the visitor center. Fees at this time range from $5.00 per adult to $0.50 per child in a school group. Special group rates are available as are reduced rates for seniors and children ages 7-16. There is no fee charged for children younger than age 6.

2. Flaming Gorge Unit

Flaming Gorge Dam and powerplant were completed in 1963. Uprating of the units in 1992 increased the plant nameplate capacity from 108 megawatts to about 151 megawatts.

In September 2000, a final report entitled, *Flow and Temperature Recommendations for Endangered Fishes in the Green River Downstream of Flaming Gorge Dam* was published by the Upper Colorado River Endangered Fish Recovery Program (Upper Colorado Recovery Program). The report, prepared by a multi-disciplinary team, synthesizes research conducted on endangered fish in the Green River under the Upper Colorado Recovery Program and presents flow recommendations for three reaches of the Green River. In 2006, Reclamation completed the National Environmental Policy Act process for implementation of an operation at Flaming Gorge Dam that meets these flow recommendations. The draft EIS was published in September 2004, the final EIS was published in November 2005, and the ROD was signed in February 2006.

In water year 2009, Flaming Gorge Dam was operated in accordance with the February 2006 Record of Decision as well as the September 2005 Biological Opinion on the Operation of Flaming Gorge Dam. Operations include high spring releases to occur each year, timed with the peak of the Yampa River, so as to mimic historic Green River flows. Under the September 2005 biological opinion associated with the proposed action analyzed in the Operation of Flaming Gorge Dam Environmental Impact Statement and implemented under the Record of Decision, the four endangered fish species in the Colorado River system may be adversely affected, but would not be jeopardized.

a. Recreational Use

An interagency agreement between the Ashley National Forest and the Bureau of Reclamation for management of the primary jurisdiction area (visitor center, dam, Reclamation warehouses, and some water treatment facilities) was signed in 2004 and will be in effect for 10 years with a potential to renew after that time.

Public tours of the dam are conducted March 15 through October 15 of each year by the Intermountain Natural History Association, a non-profit partner at the visitor center. Tours of the inside of the dam are conducted when the security threat advisory is low. However, when the security threat advisory is high, tours of the inside of the dam are suspended and tourists are taken to a dam overlook area where guides present information about construction and operation of the dam.

A visitation estimate for the entire Ashley National Forest was compiled in 2007; it is estimated that visits totaled 962,000 for the year. The U.S. Forest Service does visitor statistics samplings at selected forests each year; the 2007 use figure is the latest number available. Separate figures for the Flaming Gorge National Recreation Area are not available.

Invasive mussel control at Flaming Gorge Reservoir is the responsibility of the states of Utah and Wyoming as well as marina owners. In April 2009, a conscientious boat owner and a protocol set up by the Utah Division of Wildlife Resources Aquatic Invasive Species Task Force prevented a boat from launching at Buckboard Marina in Wyoming that had invasive zebra mussels on board. The boat had come from a marina at Lake of the Ozarks in Missouri and the boat owner was aware of the potential threat. The boat was decontaminated and the owner voluntarily agreed to a five-day quarantine.

b. Regional Watershed Supply Project Environmental Impact Statement

In spring 2009, the U.S. Army Corps of Engineers began the process for preparation of an EIS to analyze the proposed Regional Watershed Supply Project, a water marketing proposal by Aaron Million to divert water from either the Green River or Flaming Gorge Reservoir in Wyoming and convey it by pipeline to the Front Range of Colorado. Reclamation is a cooperating agency on preparation of the EIS, having been initially approached by Mr. Million in 2006 regarding a potential water service contract for water from Flaming Gorge Reservoir. Mr. Million subsequently applied to the U.S. Army Corps of Engineers for a 404 permit pursuant to the Clean Water Act, hence their initiation of EIS preparation.

3. Navajo Unit

Navajo Dam was completed in 1963. The water stored behind Navajo Dam pursuant to the Colorado River Storage Project Act provides a water supply for the Navajo Indian Irrigation Project near Farmington, New Mexico, and the Hammond participating project. Part of the water is also used for municipal and industrial purposes in northwestern New Mexico.

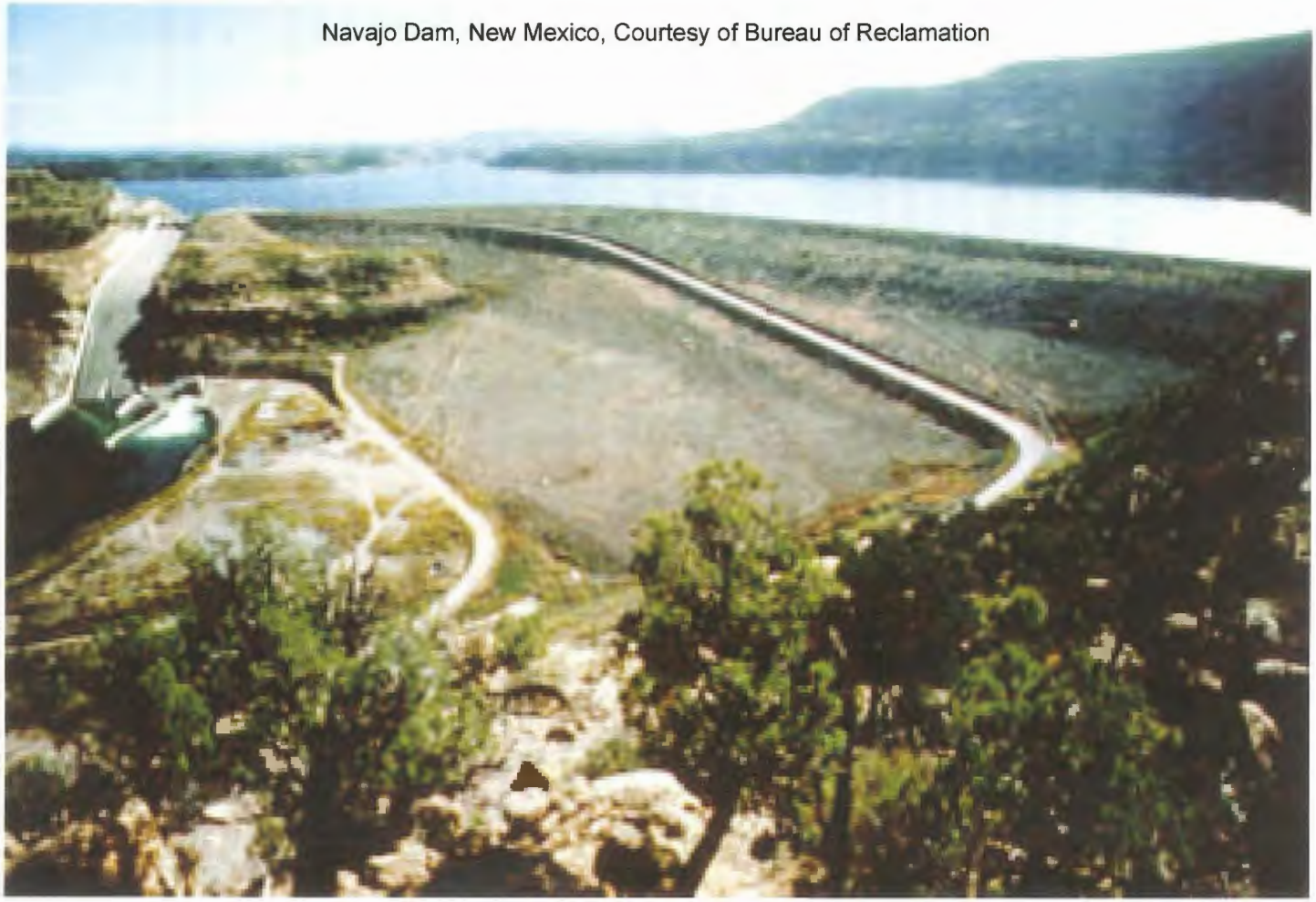
Between 2002 and 2005, Reclamation approved subcontracts between the Jicarilla Apache Nation and San Juan River Water Users to address severe drought conditions. A shortage sharing agreement was negotiated each year to protect water storage, water uses, and endangered species. Subcontracts were issued pursuant to the December 8, 1992, contract between the Jicarilla Apache Nation and the United States and the Jicarilla Apache Nation Water Rights Settlement Act of January 3, 1992 (P.L. 102-441).

Reclamation completed a Final Environmental Impact Statement on the Operations of Navajo Dam and Reservoir (Navajo Unit) on April 20, 2006, and the Record of Decision was signed on July 31, 2006. Reclamation's decision is to implement the preferred alternative that is identified in the July 2006 Record of Decision with reservoir releases ranging from 250 to 5,000 cubic feet per second. The preferred alternative, to the extent possible, implements criteria needed to assist in meeting flow recommendations for the endangered fish in the San Juan River while assisting both current and future water development in the San Juan River Basin to proceed in compliance with the Endangered Species Act and other state and federal laws.

a. Recreational Use

In June 2008, Reclamation released the Final Environmental Assessment and Resource Management Plan for Lands within the Navajo Reservoir area. Management alternatives were

Navajo Dam, New Mexico, Courtesy of Bureau of Reclamation



evaluated in cooperation with Colorado and New Mexico State Parks, the Bureau of Land Management, and other agencies. Reclamation selected the alternative that protects the purposes of the Navajo Unit, allows for other uses consistent with project purposes, provides for public recreation, and protects and enhances area resources. The plan will help direct resource related activities at Navajo Reservoir in the future.

Recreation at Navajo Reservoir is under the jurisdiction of the states of Colorado and New Mexico through contracts with Reclamation. The Colorado portion of the reservoir, or Navajo State Park, is managed by the Colorado Division of Parks and Outdoor Recreation (Colorado State Parks). The New Mexico portion of the reservoir, or Navajo Lake State Park, is managed by the New Mexico State Parks Division (New Mexico State Parks). The reservoir contains both cold- and warm-water fish species and offers a full range of recreation facilities and services.

Colorado State Parks is heralding the Colorado side of Navajo Reservoir as "Colorado's answer to Lake Powell" because of recent improvements and expansion of the recreation facilities and the Park-operated Twin Rivers Marina. The marina boasts a store, electricity, and water at most slips; mooring buoy rentals; two acres of dry storage; and a pump-out station for houseboats. There are 117 campsites near the visitor center, 15 sites at Windsurf Beach, and four sites at Arboles Point with electricity hook-ups, fresh water, and restrooms available throughout the recreation area. Other amenities include a visitor center, laundry and shower facilities, numerous day-use sites, and some cabin sites. While most of the facilities are accessible to visitors with disabilities, some additional work needs to be done before the park can be considered completely compliant with accessibility standards.

At Navajo Lake State Park, New Mexico State Parks continues its management and improvement of the recreation areas with some cost-share assistance from Reclamation as it becomes available. In 2009, Reclamation obligated $250,000 to the rehabilitation effort and work is continuing on reconstruction of the accessible fishing piers along the river. The water and wastewater system improvements at Pine River and Sims Mesa Recreation Areas have been delayed due to budget shortages.

Three separate recreation areas comprise Navajo Lake State Park: The Pine River Recreation Area, the largest developed area at the lake, includes a visitor center with interpretive exhibits, full service marina, 156 campsites, and day use areas. The Sims Mesa Recreation Area is across the lake and has a small visitor center with interpretive exhibits, full service marina, and 45 campsites. A new water treatment facility was installed at Sims Mesa during autumn 2007. The San Juan River Recreation Area below the dam is world renowned for excellent trout fishing and includes some wheelchair-accessible fishing facilities, 48 campsites, and day use areas. Navajo Lake State Park is New Mexico's second largest state park and all three recreation areas have been evaluated for compliance with accessibility laws and standards. Improvement projects to correct identified deficiencies are awaiting funding. Visitation at Navajo Lake State Park was estimated to be 855,412 in calendar year 2009 and is based on information received from both Colorado and New Mexico State Parks as part of the annual recreation review.

Reclamation is working closely with both recreation managing entities to develop effective solutions to manage the spread of invasive mussels including educating the public and providing educational materials such as signs and brochures. Colorado State Parks is conducting boat

inspections and has a portable boat wash and decontamination unit located at Arboles. New Mexico State Parks is conducting substrate sampling and periodic boat inspections and Reclamation's Navajo Dam operators plan to conduct plankton tow sampling in the reservoir during 2010. New Mexico is developing action plans for its highest risk reservoirs, especially Navajo. Last summer, Reclamation conducted a mussel facility risk assessment at the dam and the report will be available in spring 2010. No adult mussels have been found in Colorado or New Mexico. Veliger larvae have been found in some Colorado reservoirs, but are not living long enough to reach adulthood.

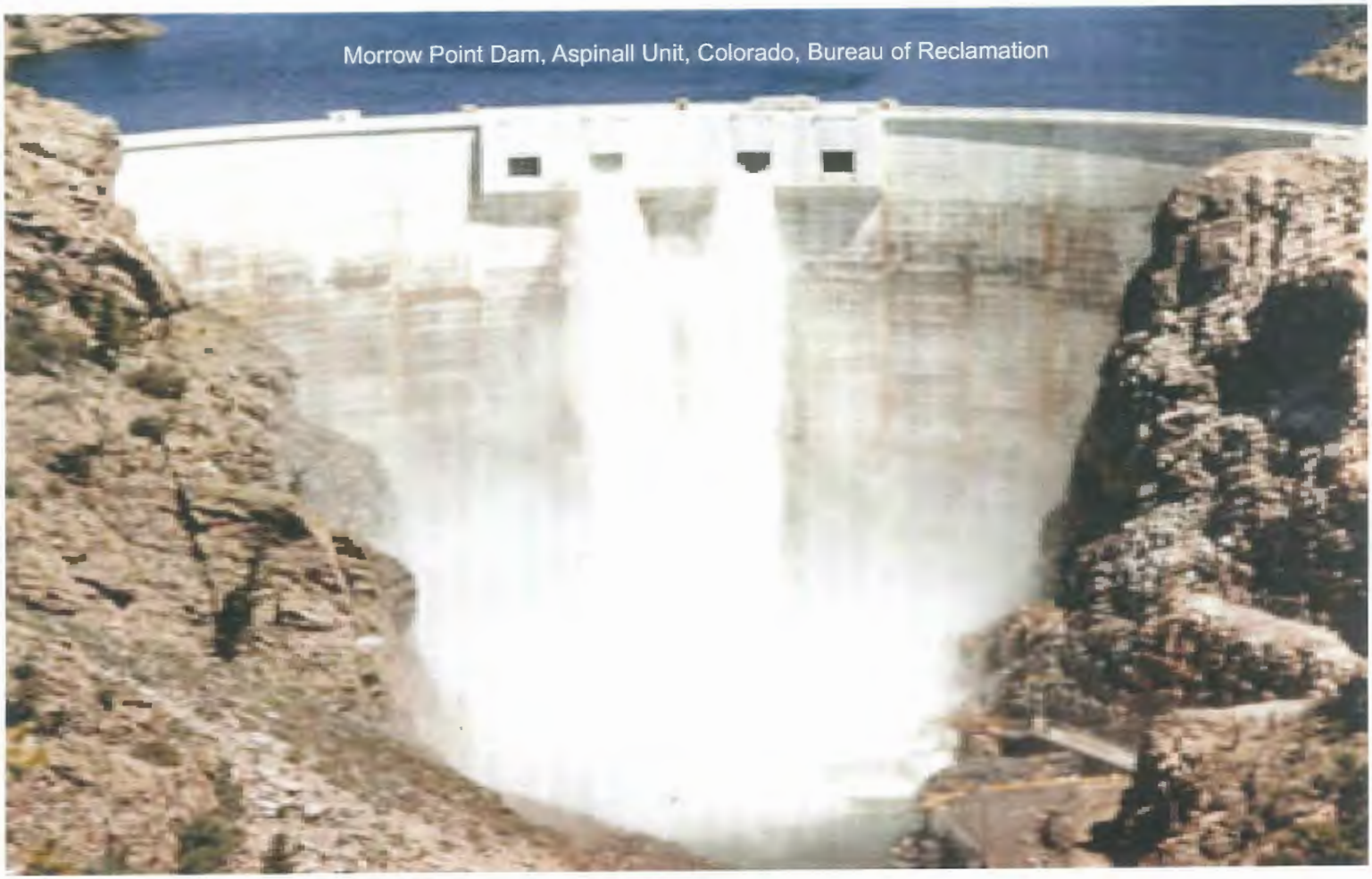
Every year, for the past 12 years, Reclamation's Four Corners Construction Office has sponsored a successful CAST (Catch A Special Thrill) for Kids fishing event. The event is accomplished with the assistance of local BASS organizations, private entities and volunteers, and the CAST for Kids Foundation. The CAST for Kids experience provides a one-day fishing and boating activity for children who have disabilities or who are otherwise disadvantaged. Seventy disabled and disadvantaged children participated in the 2009 event along with 200 volunteers.

4. Wayne N. Aspinall Unit

The Wayne N. Aspinall Unit (Aspinall Unit) includes Blue Mesa, Morrow Point, and Crystal dams, reservoirs, and powerplants. The Aspinall Unit is located in Gunnison and Montrose Counties, Colorado, on the Gunnison River upstream from the Black Canyon of the Gunnison National Park. At optimum operations, the generators at Blue Mesa, Morrow Point, and Crystal powerplants are capable of producing a total of 283 megawatts of power.

Similar to Glen Canyon, Flaming Gorge, and Navajo, the Aspinall Unit is being evaluated to determine how operations can be modified to assist downstream endangered fish. Flow recommendations for endangered fish in the Gunnison River were completed in 2003. Reclamation has prepared a draft EIS on Aspinall Unit operations to provide an operational pattern to assist in the conservation of endangered fish while continuing to meet Aspinall Unit purposes. The draft EIS was filed with the Environmental Protection Agency and released to the public on February 13, 2009. The preferred alternative calls for increased spring flows and moderate base flows. The U.S. Fish and Wildlife Service has completed a programmatic biological opinion for the EIS which addresses proposed operation changes as well as coverage of existing water uses in the Gunnison Basin. The biological opinion also completes ESA compliance for the Dallas Creek and Dolores projects. Completion of a final EIS and Record of Decision is scheduled for 2010.

On January 8, 2009, the Colorado Water Court issued a decree quantifying the 1933 federal reserved water right for the Gunnison River through the Black Canyon of the Gunnison National Park. The decree quantifies the March 2, 1933, priority date water right as a year-round minimum flow and variable peak and shoulder flows for each year, the magnitude of which are dependent upon current Gunnison River Basin hydrologic conditions. The negotiations for the right were discussed in the Aspinall Unit draft EIS. Now that the right is in place, additional detail will be included in the narrative of the final EIS. Reclamation will operate the Aspinall Unit with the intent of meeting the water right, the flow recommendations, and authorized Unit purposes every year. The reserved right will be considered equally along with flow recommendations and authorized purposes of the Aspinall Unit. Because the reserved right is now decreed, it is considered to be a common element in the No Action and Action alternatives cited in the final EIS.


Morrow Point Dam, Aspinall Unit, Colorado, Bureau of Reclamation

a. Recreational Use

Recreation use for the Aspinall Unit is managed by the National Park Service as the Curecanti National Recreation Area (NRA). Visitation to the NRA in 2009 was reported to be 953,163 as of December 31, which is a decrease of 5.39 percent over 2008's final numbers. In 1965, the National Park Service entered into an agreement with the Bureau of Reclamation to construct and manage recreational facilities and to manage natural and cultural resources and recreation on and adjacent to the three reservoirs. The area became known as the Curecanti National Recreation Area. The NRA is currently identified by an administrative boundary that has not been established by legislation. A Resource Protection Study and Record of Decision for the Curecanti NRA, released in April 2009, identified Alternative 2 as the selected action. In October 2009, a Report to Congress was transmitted to the House Subcommittee on National Parks, Forests, and Public Lands. Implementation of Alternative 2 will require enactment of legislation and appropriation of funding, so it is up to Congress to decide what actions to take, if any. Alternative 2 recommends that the Curecanti NRA be formally established through legislation, while also working with Reclamation to ensure that its project interests are protected.

Curecanti offers 10 campgrounds that include a variety of drive-in, boat-in, and hike-in experiences. Facilities range from Elk Creek Campground with showers, marina, restaurant, amphitheater, and visitor center to remote boat-in campsites on Blue Mesa Reservoir. The most popular activities at Curecanti include hiking, wildlife viewing, camping, picnicking, photography, boating, salmon and trout fishing, hunting, windsurfing, sailing, waterskiing, cross country skiing, and ice-fishing. In May 2007, the largest recorded lake trout in Colorado was taken from Blue Mesa Reservoir. It weighted 50+ pounds and measured 44 ¼ inches.

The State of Colorado has instituted an aggressive program to prevent the spread of zebra and quagga mussels into its waters. The three Aspinall Unit reservoirs are being treated under the state's containment protocol for watercraft inspection procedures which requires watercraft exiting the water to be inspected (in addition to the inspections required upon arrival). Any boats found to be suspicious will be decontaminated. In addition, all motorized watercraft leaving the Curecanti NRA will undergo a second inspection to ensure that the craft has been cleaned, drained, and dried according to Colorado's protocol. In May 2009, due to plankton sampling that indicated the presence of invasive mussels, the Colorado Division of Wildlife proclaimed Blue Mesa a "suspect reservoir." Increased sampling and monitoring for invasive mussels is scheduled for all three reservoirs.

B. STORAGE UNITS FISHERY INFORMATION

The Glen Canyon, Flaming Gorge, Navajo, and Wayne N. Aspinall storage units continue to provide excellent warm- and cold-water fishing both in the reservoirs and in the tailwater streams below the dams. Because of the differences in the way visitation data is gathered, and the disparate timeframes that it is gathered in, it is not possible to offer a true number of estimated visits for 2009. However, based on past trends, it is safe to say that Glen Canyon received the most visitors, followed by Flaming Gorge, Curecanti, and Navajo (both sides). Angling use on reservoirs appears to be constant, while demand and use for the tailwaters is increasing dramatically (Reclamation does not gather specific data on angler usage at its reservoirs).

Lake Powell is almost exclusively a warm-water fishery with bluegill, striped bass, crappie, walleye, channel catfish, and smallmouth and largemouth bass as the harvested species. Lake Powell is consistently a high-quality fishery, even during lower water elevations.

The cool, clear depths of Flaming Gorge Reservoir are ideal for trout. These famous angling waters have produced fish of state and world record size, including: lake trout (mackinaw) over 50 pounds, German brown trout over 30 pounds, and rainbow trout over 25 pounds. Flaming Gorge also supports numerous cutthroat trout, kokanee salmon, smallmouth bass, and channel catfish. While the reservoir claims the big ones, the Green River below Flaming Gorge Dam boasts one of the nation's finest "blue ribbon" trout streams. Fish populations in the river have been counted as high as 22,000 per river mile.

Navajo Reservoir provides both cold- and warm-water fisheries including catfish, crappie, and smallmouth bass in the shallows and near the lake surface. Kokanee salmon, northern pike, and many varieties of trout are found in the deeper, colder waters.

The Aspinall Unit reservoirs are almost exclusively cold-water fisheries with five species of sports fish available: rainbow, mackinaw, brown, and brook trout, as well as kokanee salmon. The Aspinall Unit reservoirs boast the largest kokanee salmon fishery in the United States.

The four tailwaters (the Colorado River below Glen Canyon Dam, the Green River below Flaming Gorge Dam, the San Juan River below Navajo Dam, and the Gunnison River below Crystal Dam) have provided "blue ribbon" trout fishing that many view as some of the best in the western United States. The Green River tailwater accounts for about one-half of the total use, with the Colorado River tailwater, San Juan River tailwater, and Gunnison River tailwater accounting for the remainder.

C. TRANSMISSION DIVISION

The storage units' power system includes high voltage transmission lines that interconnect to the Colorado River Storage Project hydro-powerplants and deliver power to major load centers or other delivery points. The system is interconnected with adjacent federal, public, and private utility transmission systems. The Transmission Division was transferred to the Department of Energy, Western Area Power Administration, in fiscal year 1978.

Generation at CRSP powerplants amounted to 5.02 billion kilowatt-hours during fiscal year 2009. The major portion, 3.67 billion kilowatt-hours, was produced at Glen Canyon Dam. The balance was produced at Flaming Gorge, Blue Mesa, Morrow Point, Crystal, Fontenelle, McPhee, and Towaoc powerplants.

Table 5 lists the gross generation for fiscal years 2008 and 2009 and the percentage of change:

Table 5
Gross Generation (Kilowatt-Hours)
and Percentage of Change for
Fiscal Years 2008 and 2009

Powerplant	Fiscal Year 2008	Fiscal Year 2009	Percent Change
Glen Canyon	3,788,414,000	3,672,257,400	-3.1
Flaming Gorge	342,654,429	415,591,000	+21.3
Blue Mesa	357,267,000	296,956,000	-16.9
Morrow Point	485,575,000	379,341,000	-21.9
Crystal	213,784,000	174,970,000	-18.2
Fontenelle	49,397,000	58,989,000	+19.4
McPhee	6,209,463	5,395,359	-13.1
Towaoc	19,541,869	15,046,220	-23.0
Total	5,262,842,761	5,018,545,979	-4.6

D. AUTHORIZED PARTICIPATING PROJECTS

Twenty-two participating projects were originally authorized by Congress. Eleven were authorized by the initial authorizing Act of April 11, 1956 (70 Stat. 105), one was authorized by the Act of June 28, 1949, two were authorized by the Act of June 13, 1962 (76 Stat. 96), three were authorized by the Act of September 2, 1964 (78 Stat. 852), and five were authorized by the Act of September 30, 1968 (82 Stat. 886). Ten are in Colorado, two in New Mexico, two in Utah, three in Wyoming, three in both Colorado and New Mexico, one in both Wyoming and Utah, and one in both Colorado and Wyoming. In the 1968 Act (82 Stat. 886), the Pine River Extension Project was deleted, leaving 21 participating projects authorized by Congress. In 2009, the Omnibus Public Land Management Act (P.L. 111-11) amended the Colorado River Storage Project Act of 1956 to include the Navajo-Gallup Water Supply Project in New Mexico as a participating project, increasing the number to 22 participating projects currently authorized by Congress. Participating projects develop, or would develop, water in the upper Colorado River system for irrigation, municipal and industrial uses, and other purposes, and participate in the use of revenues from the Upper Colorado River Basin Fund to help repay the costs of irrigation features that are beyond the ability of the water users to repay. The Basin Fund is provided revenues from hydropower and water service sales.

To date, 16 of the currently authorized 22 participating projects have been completed or are in the process of completion. Five of the remaining participating projects were deemed infeasible or economically unjustified and were never constructed, and the sixth was just recently authorized for construction.

A list of the 23 participating projects that have been authorized by Congress is shown below:

The 11 participating projects originally authorized in 1956 are:

1. Central Utah (Initial Phase), Utah,
2. Emery County, Utah,
3. Florida, Colorado,
4. Hammond, New Mexico,
5. La Barge, Wyoming,
6. Lyman, Wyoming and Utah,
7. Paonia, Colorado (works additional to existing project),
8. Pine River Extension, Colorado and New Mexico,
9. Seedskadee, Wyoming,
10. Silt, Colorado, and
11. Smith Fork, Colorado.

12. The Eden Project in Wyoming, by terms of its authorizing Act of June 28, 1949, became financially related to the Colorado River Storage Project as a participating project.

In 1962, authorizing legislation named the following two as participating projects:

13. Navajo Indian Irrigation, New Mexico (being constructed for the Bureau of Indian Affairs by the Bureau of Reclamation), and
14. San Juan-Chama, Colorado and New Mexico.

In 1964, the following three projects also were named:

15. Bostwick Park, Colorado,
16. Fruitland Mesa, Colorado, and
17. Savery-Pot Hook, Colorado and Wyoming.

The Colorado River Basin Project Act of September 30, 1968, authorized five additional projects as participating projects, but deleted the Pine River Extension Project as a participating project:

18. Animas-La Plata, Colorado and New Mexico,
19. Dallas Creek, Colorado,
20. Dolores, Colorado,
21. San Miguel, Colorado, and
22. West Divide, Colorado.

The Omnibus Public Land Management Act of 2009 amended the Colorado River Storage Project Act of 1956 to include the following as a participating project:

23. Navajo-Gallup Water Supply Project, New Mexico.

Table 6 shows the 16 completed participating projects:

Table 6
Completed Participating Projects

#	Project	State(s)	Dam	Year Completed
1.	Eden	Wyoming	Big Sandy	1952
---	Eden	Wyoming	Eden	1959
2.	Central Utah (Vernal Unit)	Utah	Steinaker	1962
3.	Hammond	New Mexico	---	1962
4.	Paonia	Colorado	Paonia	1962
5.	Smith Fork	Colorado	Crawford	1962
6.	Florida	Colorado	Lemon	1963
7.	Emery County	Utah	Joes Valley	1966
8.	Silt	Colorado	Rifle Gap	1966
9.	Seedskadee	Wyoming	Fontenelle	1968
---	*Central Utah (Bonneville Unit)	Utah	Starvation	1970
10.	Bostwick Park	Colorado	Silver Jack	1971
11.	Lyman	Wyoming and Utah	Meeks Cabin	1971
12.	San Juan-Chama	Colorado and New Mexico	Heron	1971
---	*Central Utah (Bonneville Unit)	Utah	Soldier Creek	1973
---	*Central Utah (Bonneville Unit)	Utah	Currant Creek	1975
---	Lyman	Wyoming and Utah	Stateline	1979
---	*Central Utah (Jensen Unit)	Utah	Red Fleet	1980
---	*Central Utah (Bonneville Unit)	Utah	Upper Stillwater	1987
13.	Dallas Creek	Colorado	Ridgway	1991
---	*Central Utah (Bonneville Unit)	Utah	Jordanelle	1993
14.	Dolores	Colorado	McPhee	1998
---	*Central Utah (Uintah Basin Replacement Project)	Utah	Big Sand Wash (enlarged)	2006
15.	*Animas-La Plata	Colorado and New Mexico	---	---
16.	*Navajo Indian Irrigation	New Mexico	---	---

*In the process of completion.

The present status of construction, investigation, and recreational facilities for the participating projects is as follows:

1. Colorado

a. Bostwick Park Project

The Bostwick Park Project is located in west-central Colorado near the City of Montrose. The project develops flows of Cimarron Creek, a tributary of the Gunnison River, for irrigation and for benefits to sport fishing and recreation. A full and supplemental supply of irrigation water is available for 6,100 acres of land. Silver Jack Dam (completed in 1971) is located on Cimarron Creek about 20 miles above the junction with the Gunnison River. Project water stored in Silver Jack Reservoir is released to Cimarron Creek. The releases, along with usable natural flows, are diverted from the creek into the existing Cimarron Canal 2.5 miles below the dam and conveyed 23 miles to the vicinity of the project land. The U.S. Forest Service developed recreation facilities under a cooperative arrangement with Reclamation. Facilities include access roads, campgrounds (60 units), two group areas, picnicking facilities, restrooms, a boat dock, trails, fences, landscaping, and an administration site. At 8,900 feet in elevation, use is seasonal. The reservoir is managed as a non-motorized boating lake with three species of trout. Access for anglers is fairly easy at designated access points around the 250-acre lake.

b. Dallas Creek Project

The Dallas Creek Project is located on the Uncompahgre River in west-central Colorado. The area served by the project comprises most of the Uncompahgre River Basin and includes lands in Montrose, Delta, and Ouray Counties. Ridgway Dam and Reservoir, the primary features of the project, are located on the Uncompahgre River a few miles north of the town of Ridgway.

Block notice number one was issued for the Dallas Creek Project on May 31, 1989, covering all municipal and industrial water use. The notice involved 28,100 acre-feet of water. Repayment on that notice began in 1990. Block notice number two was issued on March 21, 1990. The notice included all irrigation waters for the project, involving 11,200 acre-feet. The notice was issued to Tri-County Water Conservancy District. The first payment under the repayment contract was made in February 1993 and will continue until February 2042.

Recreation at Ridgway Reservoir is managed by the Colorado Division of Parks and Outdoor Recreation (Colorado State Parks) under an agreement with Reclamation. Boating, scuba diving, water skiing, windsurfing, and swimming are some of the offerings at the park. Colorado State Parks has assumed responsibility for the marina operations and has recently made significant boat related facility improvements. In addition, there are numerous picnicking and campsites available including miles of trails around the reservoir and downstream off Ridgway Dam.

Reclamation is working closely with Colorado State Parks to develop effective solutions to manage the spread of invasive mussels including educating the public and providing educational materials such as signs and brochures. Colorado State Parks is conduction mandatory boat inspections. Last summer, Reclamation conducted a mussel facility risk assessment at the dam and the report will be available in spring 2010. No adult mussels have been found in Colorado.

Veliger larvae have been found in some Colorado reservoirs, but are not living long enough to reach adulthood.

Reclamation's Western Colorado Area Office sponsored another successful CAST (Catch A Special Thrill) for Kids fishing event at Ridgway Reservoir in September 2009. Forty special needs children from the area fished the ponds below the dam and enjoyed lunch and gift handouts provided by volunteers and staff from the Friends of Ridgway State Park.

c. Dolores Project

The Dolores Project, located in the Dolores and San Juan River Basins in southwestern Colorado, uses water from the Dolores River for irrigation, municipal and industrial use, recreation, fish and wildlife, and production of hydroelectric power. Primary storage of Dolores River flows for all project purposes is provided by McPhee Reservoir, formed by McPhee Dam and Great Cut Dike. Dolores Project construction began in 1976. By fiscal year 1995, all primary project facilities were completed and in operation. In 1996, Reclamation signed petitions allocating the last approximately 1,800 acre-feet of full-service irrigation water to full-service users. Reclamation substantially completed construction of the Dolores Project in fiscal year 1998. The final cost allocation for the project was completed in October 2000 and approved by the Upper Colorado Regional Director by memorandum dated January 25, 2001.

In order to mitigate construction of salinity control modifications to the Upper Hermana, Lone Pine, and Rocky Ford Laterals (parts of the Dolores Project), 55 acres of new wetlands were developed at the Lone Dome Wetlands Area below McPhee Dam. In order to complete the remaining 20 acres of mitigation, Reclamation developed Simon Draw wetlands near the Totten Reservoir area. A long-term management agreement between Reclamation and the Colorado Division of Wildlife for operation and maintenance of the Lome Dome Wetlands Area is in place. Reclamation's Western Colorado Area Office operates and maintains Simon Draw wetlands.

Hydroelectric power generation is a component of the Dolores Project with McPhee and Towaoc Canal powerplants. McPhee powerplant is located at the downstream toe of McPhee Dam along the left abutment with an installed capacity of 1.284 megawatts. Towaoc Canal powerplant is located on the Towaoc Canal, five miles north of Cortez, Colorado, in Montezuma County with an installed capacity of 11.495 megawatts.

Recreation at McPhee Reservoir is under the jurisdiction of the U.S. Forest Service, through a contract with Reclamation, and through legislation that expanded the boundary of the San Juan National Forest to include the reservoir. The reservoir has 50 miles of shoreline and 76 campsites on two loops as well as a six-lane boat launch ramp. In addition, there is a group area with posts for volleyball nets, horseshoe pits, and a ball field. There is also a small marina to serve visitors. The Lone Dome Recreation Area is located below McPhee Dam and includes 12 miles of public access to the Dolores River. This area is comprised of lands administered by the U.S. Forest Service, Bureau of Land Management, and Colorado Division of Wildlife. The campgrounds provide many services including a fish cleaning station, restrooms, and showers.

Reclamation is working with its recreation managing entities to develop effective solutions to manage the spread of invasive mussels. Last summer, Reclamation conducted a mussel facility

risk assessment at the dam and the report will be available in spring 2010. No adult mussels have been found in Colorado. Veliger larvae have been found in some Colorado reservoirs, but are not living long enough to reach adulthood.

d. Florida Project

Lemon Dam is the principal feature of the Florida Project. The dam, completed in 1963, is located in southwestern Colorado on the Florida River, approximately 14 miles northeast of the City of Durango in La Plata County. Floodwaters of the Florida River are stored in the reservoir formed by the dam, and regulated releases can provide supplemental irrigation water for 19,450 acres. In addition to the construction of Lemon Dam, Reclamation work included rebuilding the Florida Farmers Diversion Dam, enlarging 3.9 miles of the Florida Farmers Ditch to its junction with the Florida Canal, enlarging 1.8 miles of the Florida Canal, and building a new lateral system to serve about 3,360 acres of land on the southwest portion of Florida Mesa. Project funds were advanced to the Florida Water Conservancy District to rehabilitate, enlarge, and extend portions of the Florida Farmers Ditch and Florida Canal distribution systems that serve remaining lands on Florida Mesa. The 1,190 acres of project land located in the Florida River Valley will continue to be served by numerous small ditches without the expenditure of project funds.

Lemon Powerplant, completed in 1989, has a capacity of .12 megawatts. The powerplant was constructed and is operated by the Florida Water Conservancy District under a lease of power privilege contract.

Lemon Reservoir provides important recreation and fish and wildlife benefits; however, its primary purpose is to provide irrigation water and flood control. Recreation at Lemon Reservoir is under the jurisdiction of the U.S. Forest Service, through a contract with Reclamation. This is a high-elevation reservoir (8,500 feet) with seasonal use. The campground has 20 units and a group campground that can accommodate up to 100 people. Amenities include restrooms, picnic tables, and fire rings.

e. Fruitland Mesa Project

The Fruitland Mesa Project was found to be infeasible and was not constructed.

f. Fryingpan-Arkansas Project ("limited participating project")

The Fryingpan-Arkansas Project is a multipurpose transmountain, transbasin water diversion and delivery project located in Colorado. It makes possible an average annual diversion of 69,200 acre-feet of surplus water from the Fryingpan River and other tributaries of the Roaring Fork River, on the western slope of the Rocky Mountains, to the Arkansas River Basin on the eastern slope. The current average imports are 48,500 acre-feet. Water diverted from the western slope, together with available water supplies in the Arkansas River Basin, provides an average annual water supply of 87,600 acre-feet for both municipal and domestic use. The Fryingpan-Arkansas Project originally provided a supplemental supply of irrigation water for 280,600 acres of farmland and currently provides a supplemental supply of water for 200,000 acres in the Arkansas Valley. Total project supplies may be further increased through use and reuse of project water.

Although the Fryingpan-Arkansas Project is not a participating project of the CRSP because it does not participate in the Upper Colorado River Basin Fund, it is sometimes referred to as a "limited participating project" because it does utilize water diverted from the upper Colorado River system to the eastern slope of Colorado. The Eastern Colorado Area Office, located in Loveland, Colorado, directs the operation and maintenance activities of the Fryingpan-Arkansas Project. A field office in Pueblo, Colorado, coordinates with the Southeastern Colorado Water Conservancy District and the State Division Engineer.

National Environmental Policy Act compliance on the Ruedi Round II Water Marketing Program was completed on January 16, 1990, with the signing of a ROD on the proposed action. The proposed action made 46,500 acre-feet of water available for marketing to western slope contractors. In 1999, the U.S. Fish and Wildlife Service issued a Final Programmatic Biological Opinion for Reclamation's operations and depletions, other depletions, and funding and implementation of the Upper Colorado Recovery Program actions in the upper Colorado River above the confluence with the Gunnison River, which was accepted by Reclamation in January 2000. In 2003, Reclamation, the U.S. Fish and Wildlife Service, and the Colorado Water Conservation Board executed a long-term agreement (through the year 2012) described in the Final Programmatic Biological Opinion to make 10,825 acre-feet /year of water available to enhance flows in the 15-Mile Reach. This water is in addition to water made available as a result of earlier Endangered Species Act consultation on the Ruedi Round II Water Marketing Program (5,000 acre-feet/year withheld from water sales and 5,000 acre-feet made available in four out of five years through reoperation/retiming of releases).

Contents of reservoirs within the Fryingpan-Arkansas Project as of September 30, 2009, were as follows: Ruedi Reservoir, 77,675 acre-feet; Turquoise Lake, 120,900 acre-feet; combined Mt. Elbert Forebay and Twin Lakes Reservoir, 120,889 acre-feet; and Pueblo Reservoir, 193,160 acre-feet. During water year 2009 (October 1, 2008, through September 30, 2009), transmountain diversions from the Colorado River Basin in Colorado by the Fryingpan-Arkansas Project via the Charles H. Boustead Tunnel totaled 82,700 acre-feet.

g. Paonia Project

The Paonia Project, located in west-central Colorado, provides full and supplemental irrigation water supplies for 15,300 acres of land in the vicinity of Paonia and Hotchkiss. Project construction includes Paonia Dam and Reservoir and enlargement and extension of Fire Mountain Canal. Paonia Dam controls and regulates the runoff of Muddy Creek, a tributary of the North Fork of the Gunnison River.

Recreation at Paonia Reservoir is managed by the Colorado Division of Parks and Outdoor Recreation (Colorado State Parks) under an agreement with Reclamation. The original recreation facilities were built in 1963 and Colorado State Parks assumed management in 1965. There are two campgrounds (13 sites), a picnic area, and boat launching facilities. Recreational attractions at Paonia Reservoir include the landscape surrounding the park, waterskiing, and camping. The park's abundance of wildflowers makes it a destination for photographers and native plant hobbyists. The geology of the area includes fossilized palm fronds, willow, and elm leaves which can be seen in some of the boulders in the area. Paonia Reservoir is also known for northern pike fishing (best from late June through late August).

Reclamation is working closely with Colorado State Parks to develop effective solutions to manage the spread of invasive mussels including educating the public and providing educational materials such as signs and brochures. Colorado State Parks is conducting boat inspections. No adult mussels have been found in Colorado. Veliger larvae have been found in some Colorado reservoirs, but are not living long enough to reach adulthood.

h. San Miguel Project

The San Miguel Project was found to be economically unjustified and was not constructed.

i. Silt Project

The Silt Project is located in west-central Colorado near the towns of Rifle and Silt. The project stores the flows of Rifle Creek and pumps water from the Colorado River to supply irrigation water for approximately 7,000 acres of land. Principal features of the project are Rifle Gap Dam and Reservoir, a pumping plant, and a lateral system.

Recreation at the reservoir is managed by the Colorado Division of Parks and Outdoor Recreation (Colorado State Parks) under an agreement with Reclamation. Recreation facilities include numerous campgrounds, picnic sites, a boat ramp, group use area, restrooms, and parking areas. Recreation activities at Rifle Gap Reservoir include motorized water sports, swimming, sailing, windsurfing, and fishing. Although it is a small reservoir (350 surface acres), it is a popular one with five camp loops and 89 campsites; several campsites are accessible to persons with disabilities. Reservations are taken for the campsites from May 1 to October 31 of each year and the campgrounds remain open year round. Anglers take rainbow and German brown trout, walleye, pike, smallmouth and largemouth bass, and yellow perch from the reservoir's waters.

Reclamation is working closely with Colorado State Parks to develop effective solutions to manage the spread of invasive mussels including educating the public and providing educational materials such as signs and brochures. Colorado State Parks is conducting boat inspections. No adult mussels have been found in Colorado. Veliger larvae have been found in some Colorado reservoirs, but are not living long enough to reach adulthood.

j. Smith Fork Project

The Smith Fork Project, located about 30 miles southeast of Delta, Colorado, supplements the irrigation water supply for approximately 8,200 acres in Delta and Montrose counties and provides a full water supply for 1,423 acres of land previously not irrigated. Constructed features of the project include Crawford Dam and Reservoir, Smith Fork Diversion Dam, Smith Fork Feeder Canal, Aspen Canal, Clipper Canal, and recreation facilities. Recreation at Crawford Reservoir is managed by the Colorado Division of Parks and Outdoor Recreation (Colorado State Parks) under an agreement with Reclamation. Boating, scuba diving, water skiing, jet skiing, windsurfing, swimming, fishing, and camping are some of the offerings at the park. There are two campgrounds with 66 sites, a group day use area, and 30 sites for day use. Several years ago, the facilities were expanded and rehabilitated under the Rehabilitation Recreation Program. Several campsites are accessible to persons with disabilities.

Reclamation is working closely with Colorado State Parks to develop effective solutions to manage the spread of invasive mussels including educating the public and providing educational materials such as signs and brochures. Colorado State Parks is conducting boat inspections. No adult mussels have been found in Colorado. Veliger larvae have been found in some Colorado reservoirs, but are not living long enough to reach adulthood.

k. West Divide Project

The West Divide Project was found to be economically unjustified and was not constructed.

2. New Mexico

a. Hammond Project

The Hammond Project is located in northwestern New Mexico along the southern bank of the San Juan River and opposite the towns of Blanco, Bloomfield, and Farmington, New Mexico. The project provides an irrigation supply for 3,933 acres. Major project works consist of the Hammond Diversion Dam on the San Juan River (completed in 1962), the Main Gravity Canal, a hydraulic-turbine-driven pumping plant and an auxiliary pumping plant, three major laterals, minor distribution laterals, and the drainage system. Most of the irrigation supply is obtained from direct diversions of the natural streamflow of the San Juan River. When necessary, these flows are supplemented by storage releases from Navajo Reservoir, a major feature of the CRSP. Water is diverted from the river by the Hammond Diversion Dam and turned into the 27.4-mile-long Main Canal. Major diversions from the canal are made by the East and West Highline laterals, which are served by the Hammond Pumping Plant, and the Gravity Extension lateral. Small diversions are made by minor laterals.

b. Navajo-Gallup Water Supply Project

The Navajo-Gallup Water Supply Project was authorized for construction by P.L. 111-11 on March 30, 2009. The legislation defines prerequisites for construction that include completion of the final environmental impact statement (FEIS) and Record of Decision (ROD), execution of a water rights settlement agreement and contract with the Navajo Nation, execution of a cost share agreement with the State of New Mexico, and execution of repayment contracts with project beneficiaries. In addition, Section 10401 of P.L. 111-11 amended the Colorado River Storage Project Act of 1956 to include the Navajo-Gallup Water Supply Project as a participating project and to allow the Secretary of the Interior to create and operate a top water bank within the available capacity of Navajo Reservoir. Section 10602(e) of the Act directed the Secretary of the Interior to reserve, from existing reservations of Colorado River Storage Project power for Bureau of Reclamation projects, up to 26 megawatts of power for use by the Navajo-Gallup Water Supply Project.

The Planning Report and FEIS are complete and a ROD was signed by the Secretary of the Interior on October 1, 2009, approving Reclamation's decision to proceed with the preferred alternative presented in the report. The Upper Colorado Regional Director has been delegated authority to plan, design, construct, operate, and maintain the project in substantial accordance with the preferred alternative; negotiate and execute required contracts; and allocate project delivery

capacities and costs. Collection of design data for final design of selected facilities and tasks associated with the various contracts was initiated. Work on developing a timeline and budgetary framework in preparation for initiation of project construction in fiscal year 2012 was also initiated.

c. Navajo Indian Irrigation Project

The Navajo Indian Irrigation Project (NIIP) was authorized in 1962 by Public Law 87-483 to develop the necessary infrastructure to deliver San Juan River water to approximately 110,630 acres of farmland in the northeastern part of the Navajo Reservation near Farmington, New Mexico. In the 1962 Memorandum of Agreement (MOA), which defined the roles and responsibilities of the Bureau of Indian Affairs (BIA) and the Bureau of Reclamation, Reclamation was designated to design, construct, and initially operate and maintain the project. The 1962 MOA also required that construction funding for the project be sought by the BIA in its budget appropriation.

The project's facilities are, and will be, constructed in 11 blocks of approximately 10,000 acres each. Currently, NIIP is about 70 percent complete with blocks 1 through 8 constructed and block 9 at 28 percent complete. Approximately 77,685 acres are currently under irrigation. In fiscal year 2004, a moratorium on new construction was placed on NIIP until a Memorandum of Understanding between the Department of the Interior and the Navajo Nation is completed and signed. In fiscal year 2008, the BIA requested that final design begin on subsequent Block 9 features. Funds have been provided in the fiscal year 2009 BIA budget request to start block 9, stages 2 and 3 construction. On August 20, 2009, a contract was awarded for about $13 million to construct two pumping plants.

The farmland served by NIIP is operated by the Navajo Agricultural Products Industry (NAPI), an enterprise of the Navajo Nation, charged with managing and operating a commercial farm on lands held in trust for the Navajo Nation. During 2009, the farm produced high value crops including potatoes, wheat, corn, and beans processed and marketed under the "Navajo Pride" brand. NAPI also sold some crops to other companies under contract.

The fiscal year 2010 BIA appropriation that will be transferred to Reclamation is about $11 million. The fiscal year 2010 construction budget will be used to fund the correction of construction deficiencies, transfer inspection punch list items, and design and construction of some block 9 features.

3. Utah

a. Central Utah Project

The Central Utah Project (CUP), located in the central and east central part of Utah, was constructed in part by the Bureau of Reclamation and is now being completed by the Central Utah Water Conservancy District, or Orem, Utah, the local project sponsor. It is the largest water resources development program ever undertaken in the state of Utah. The CUP provides water for irrigation and municipal and industrial uses. In 2002, Congressional action restored hydropower generation as an authorized project purpose. Benefits include recreation, fish and wildlife, flood control, water conservation, water quality control, and area development. The Initial Phase, authorized in 1964, originally consisted of four units – Bonneville, Jensen, Vernal, and Upalco. An


Jordanelle Dam, Bonneville Unit, CUP, courtesy of Bureau of Reclamation

Ultimate Phase consisted of the Ute Indian Unit. A sixth unit – Uintah – was authorized by separate legislation in 1968. The largest of the six units is the Bonneville Unit that involves the diversion of water from the Uintah Basin, a part of the Colorado River Basin, to the Great Basin, with associated resource developments in both basins. The other units – Jensen, Vernal, Upalco, Ute Indian, and Uintah – were intended to provide for local development in the Uintah Basin. Work on the Uintah and Upalco units has been discontinued, in major part due to objections from the Ute Indian Tribe. The Ute Indian Unit was deauthorized by Congress in the Central Utah Project Completion Act (CUPCA) of 1992.

(i). Bonneville Unit

The completed Bonneville Unit will deliver a permanent supply of 42,000 acre-feet of irrigation water and 157,750 acre-feet of municipal and industrial water. A key feature of the Bonneville Unit is the trans-basin diversion of 101,900 (annual average) acre-feet of water from the Uintah Basin to the Wasatch Front (Utah County cities and the Salt Lake City metropolitan area).

Central Utah Project Completion Act. Legislation enacted in 1992 (P.L. 102-575, CUPCA), significantly reformed the planning process for the CUP. Among many changes, the Act increased the ceiling to allow completion of the Bonneville Unit of the CUP, authorized new portions and deauthorized old portions of the original plan, provided Indian water rights settlement benefits, and more. The legislation provides that the project's local sponsor, the Central Utah Water Conservancy District (District), will plan and construct the remaining CUP-Bonneville Unit features; the Utah Reclamation Mitigation and Conservation Commission, an independent federal commission created under CUPCA, will complete the associated fish and wildlife mitigation; the Secretary of the Interior will oversee implementation of CUPCA; and the District and/or Department of the Interior may contract with Reclamation for technical services. The Department of the Interior's CUPCA Office and the District completed a Definite Plan Report in 2004 that will ensure that the Bonneville Unit is completed under the remaining ceiling.

Utah Lake System. The final component of the Bonneville Unit to be constructed is the Utah Lake Drainage Basin Water Delivery System. The Department of the Interior filed the Utah Lake System Final Environmental Impact Statement on September 30, 2004, and on December 22, 2004, the Assistant Secretary for Water and Science signed the Record of Decision. The District completed a Supplement to the 1988 Definite Plan Report for the Bonneville Unit which was approved by the CUPCA Office and Reclamation on November 19, 2004. Construction of the first phase of the Utah Lake System Mapleton-Springville Pipeline began in September 2007 and was substantially completed in August 2008. The second phase of the Utah Lake System Mapleton-Springville Pipeline involves connection to the Utah Lake System Spanish Fork Canyon Pipeline, construction of which began in May 2008. Expected completion date of the Utah Lake Drainage Basin Water Delivery System is 2021.

Bonneville Unit Pilot Program. Public Law 107-366, enacted December 19, 2002, amended CUPCA and, among other things, authorized implementation of the Bonneville Unit Pilot Program (Pilot Program). The Pilot Program is intended to develop a relationship among the Secretary of the Interior, the Central Utah Water Conservancy District, and Reclamation for long-term management of the CUP.

Lease of Power Privilege at Jordanelle Dam. As early as 1979, Bonneville Unit environmental documents specifically described the construction and operation of a hydroelectric facility below Jordanelle Dam. By 1987, Reclamation had decided to defer construction of the Jordanelle Hydropower Project until the construction and operation could be accomplished under a lease of power privilege – a partnership among public and private entities to provide for the non-federal generation of power on Reclamation facilities. The general authority for lease of power privilege under Bureau of Reclamation law includes, among others, the Town Sites and Power Development Act of 1906 (43 U.S.C. 522) and the Reclamation Project Act of 1939 (43 U.S.C. 485h(c)). The lease of power privilege is an alternative to development of federal hydropower and grants the lessee the right to use, consistent with project purposes, a federal facility for non-federal electric power generation and sale by the lessee.

In 2000, through a competitive process of requesting and reviewing proposals, the Department of the Interior and the Western Area Power Administration selected the District and Heber Light & Power as joint potential lessees for power development at Jordanelle. Interior and the lessees executed a lease agreement in 2005, after approval of the environmental assessment for the project. Fabrication of the turbines and generators began late in 2005 and construction of the building began in late 2006. The hydropower facility, which has been certified by the Low Impact Hydropower Institute, began generating power on July 1, 2008.

Reservoirs. There are five reservoirs that are part of the Bonneville Unit where Reclamation has built facilities for recreational use. The five areas are Jordanelle, Strawberry, Starvation, Currant Creek, and Upper Stillwater.

Jordanelle Reservoir is the newest reservoir with recreation facilities completed in or about 1998. Recreation and public use is managed by the Utah Division of Parks and Recreation under an agreement with Reclamation. There are two main developed recreation areas: Hailstone and Rock Cliff. Hailstone is a large campground and day-use area on the west side of the reservoir. This is the side that experiences the most intensive use and includes walk-in tent and RV camping, motorized boating, personal watercraft launch area, three group use pavilions, 41 family picnic sites, a marina store and restaurant, and a visitor center with interpretive exhibits of the area's mining and agricultural past. Hailstone is the favored area for boaters and RV campers. Rock Cliff offers visitors a quieter experience than Hailstone. The Rock Cliff Nature Center, along the Upper Provo River, includes a wetlands boardwalk and interpretive walk, walk-in camping, picnicking, river fishing, a small boat launch, and bird watching in the riparian corridor. Bird watching is a popular sport and people come from all over the United States to enjoy the activity here. Jordanelle offers ongoing interpretive programs for school-age children, nature hikes, and boating safety programs throughout the recreation season.

The State of Utah has taken aggressive steps to prevent the spread of invasive mussel species (zebra and quagga) throughout its waters. The state has an active interdiction and inspection program and waters are regularly sampled and sent to Reclamation's laboratory in Denver, Colorado, for analysis to detect the presence of larval mussels. In 2009, at Jordanelle Reservoir, over 8,600 boats were interdicted, inspected, and owners educated about the threat of invasive quagga and zebra mussels. No boats were found to be contaminated.

Strawberry Reservoir was enlarged in 1974 under authority of the Colorado River Storage Project Act (before the enactment of CUPCA). As part of Reclamation's commitment to provide recreation opportunities, new facilities were built. There are four main developed areas, Strawberry Bay, Soldier Creek, Renegade Point, and Aspen Grove.

- Strawberry Bay features 345 campsites. The picnic areas have shelters and there are evening interpretive programs available in the summer. There is an interpretive trail from the visitor center. A fish-cleaning station is available near the reservoir. In the winter, there are groomed snowmobile trails and ice fishing access. There is also a gas station, restaurant, grocery store, and amphitheater.

- Soldier Creek has 166 campsites and three group picnic areas, some with shelters. Day use fishing is available on the northern and eastern sides of the lake and there is a scenic overlook for those who wish to make a loop drive.

- Renegade Point has 66 campsites and a trail from the campground leads to the eastern arm of the reservoir or south along Poison Ridge to Big Springs.

- Aspen Grove features 52 campsites and a trail follows the shoreline back to the main part of the reservoir and Renegade Point. There are day use areas nearby along the Strawberry River and at Soldier Creek near the dam. There is also a small marina store and fish cleaning station.

Recreation management at Strawberry Reservoir is under the jurisdiction of the U.S. Forest Service, Uinta National Forest. The managed recreation season is May through October and there is high use on holidays and weekends. Ice fishing is very popular during the winter months. Available fish species include rainbow and cutthroat trout, and kokanee salmon. Strawberry Reservoir is considered by many to be Utah's premier trout fishing lake, with trout up to 24 inches taken regularly. In 2009, at Strawberry Reservoir, over 12,800 boats were interdicted, inspected, and owners educated about the threat of invasive quagga and zebra mussels. No boats were found to be contaminated.

Starvation State Park was established in 1972, two years after construction of Starvation Dam. The Utah Division of Parks and Recreation manages recreation at the reservoir under agreement with Reclamation. Facilities include 54 RV sites (without utilities), 20 tent sites, group campsites, a group day use pavilion, RV waste disposal, showers, drinking water, and modern restrooms. There is an annual walleye fishing tournament that is very popular with trophy fish being caught each year. The park and reservoir offer numerous coves, remote beaches, and unusually blue water. Off-road vehicle use is allowed in some areas; however, visitors should consult with State Park employees on areas that are open to use. Planning for recreation facility rehabilitation is continuing and construction preparation has begun. In 2009, no boats entering Starvation Reservoir were found to be contaminated with quagga or zebra mussels.

Currant Creek Reservoir is a high elevation lake (7,680 feet) with a mixed open and timbered setting. Development began in 1977 with the construction of Currant Creek Dam, and the reservoir finished filling in 1982. The reservoir shoreline is 85 percent under the jurisdiction of the U.S. Forest Service, with the remaining 15 percent private with restricted access. Recreation

management at Currant Creek is also under the jurisdiction of the U.S. Forest Service, Uinta National Forest. There is a campground at the reservoir with 49 campsites, tent sites, picnic areas, swimming, restrooms, and a boat ramp. There is a fishing pier providing accessible fishing opportunities for persons with mobility impairments. Winter access is restricted as the canyon access road is not plowed.

Upper Stillwater is another high mountain reservoir that has one main campground, Rock Creek, with 19 campsites. The reservoir serves as a popular trailhead into the High Uintas Wilderness with the boundary only one mile north of the dam near the high water line for the reservoir. Recreation management is under the jurisdiction of the U.S. Forest Service, Ashley National Forest. A new memorandum of agreement between Reclamation and the U.S. Forest Service was signed in 2009. The managed recreation season at Upper Stillwater Reservoir is from June through September with high use on holidays and weekends. Available fish species include rainbow, brown, and brook trout. Boating use is restricted to non-motorized craft and fishing is not allowed from any watercraft.

(ii). Jensen Unit

The Jensen Unit in northeastern Utah provides about 5,300 acre-feet of water for municipal and industrial uses and 4,600 acre-feet for irrigation. Key project features include Red Fleet Dam and Reservoir, Tyzack Aqueduct Reach 1, and Tyzack Aqueduct Reach 2.

Recreation at Red Fleet Reservoir is managed by the Utah Division of Parks and Recreation under an agreement with Reclamation. Facilities include a small sandy beach, boat launching ramp, two modern restrooms, 29 campsites, 32 covered picnic tables, and fish cleaning and sewage disposal stations. The park is open year round. A dinosaur trackway, dating back 200 million years, was discovered on the east side of Red Fleet Reservoir. An interpretive exhibit about the trackway was installed in the campground in order to provide visitors an opportunity to experience the paleontological resources. In 2008, plankton sampling at Red Fleet Reservoir showed evidence of quagga mussels. In 2009, however, plankton samples showed no evidence of either quagga or zebra mussels. The lake is now treated as a "suspect water" and all boats are decontaminated prior to leaving.

(iii). Uintah and Upalco Units

Section 203(a) of CUPCA provided for the construction of the Uintah Basin Replacement Project to replace, in part, the Uintah and Upalco Units which had never been constructed. Public Law 107-366, enacted December 19, 2002, deauthorized the Uintah and Upalco Units, transferring the unexpended budget authority to units of the CUP for construction of the Uintah Basin Replacement Project, Utah Lake System, and other CUPCA purposes. The Central Utah Water Conservancy District has completed construction of the primary features (including the enlarged Big Sand Wash Dam) of the Uintah Basin Replacement Project. The Big Sand Wash Feeder Diversion and Pipeline was completed in March of 2004. The Big Sand Wash Reservoir enlargement was completed in September 2006 followed by completion of the Big Sand Wash Roosevelt Pipeline in September 2008.

(iv). Ute Indian Unit

The Ute Indian Unit was deauthorized by Section 201(b) of CUPCA in 1992.

(v). Vernal Unit

The Vernal Unit in northeastern Utah supplies supplemental irrigation water to about 14,700 acres and approximately 1,600 acre-feet of municipal and industrial water annually to the communities of Vernal, Naples, and Maeser. Key project features include Steinaker Dam and Reservoir, Forth Thornburgh Diversion Dam, Steinaker Service Canal, and Steinaker Feeder Canal.

Recreation at Steinaker Reservoir is managed by the Utah Division of Parks and Recreation under an agreement with the Bureau of Reclamation. The park was opened to the public in 1964. Sandy beaches, swimming, boating, and waterskiing top the list of activities. Year-round fishing is for rainbow trout and largemouth bass. Facilities include a boat launching ramp, modern restrooms, sewage disposal station, 31 individual campsites, and two group use pavilions. Steinaker's location makes it a popular base for exploring the surrounding geologic and paleontologic features of northeast Utah and Flaming Gorge National Recreation Area. Planning for recreation facility rehabilitation is underway and the State of Utah has paid for some improvements.

b. Emery County Project

The Emery County Project is located in east-central Utah near the towns of Huntington, Castle Dale, and Orangeville. The project, which includes an irrigable area of almost 19,000 acres, is in the Green River Basin. Principal construction features of the project are Joes Valley Dam and Reservoir on Seely Creek; Swasey Diversion Dam 10 miles downstream from Joes Valley Dam; Cottonwood Creek-Huntington Canal; Huntington North Service Canal; and Huntington North Dam and East and West Dikes, which form Huntington North Reservoir. The project provides an estimated average of 28,100 acre-feet of water annually for irrigation of 18,755 acres, of which 771 acres is land previously unirrigated. In the mid-1970s, the irrigable acreage was reduced to 14,171 with 4,604 acres designated "not for service." In 1981, the irrigable area was increased to 16,170 acres with 2,605 acres in the "not for service" category. The project supplies 6,000 acre-feet of water for industrial and municipal purposes.

Recreation facilities have been constructed at both Joes Valley and Huntington North Reservoirs. Recreation facilities at Joes Valley Reservoir are operated by the U.S. Forest Service. Fishing is a primary activity, with power boating, swimming, camping, cross-country skiing, and snowmobiling also part of the mix. Fishing is usually good and the lake has year-round access, providing ice fishing opportunities in the winter. Rainbow, cutthroat, brown, and lake trout are available species. Recreational facilities include two campsites, a boat launch ramp, restrooms, and some nearby private facilities. In 2009, at Joes Valley Reservoir, 627 boats were interdicted, inspected, and owners educated about the threat of invasive quagga and zebra mussels. No boats were found to be contaminated.

Recreation at Huntington North Reservoir is managed by the Utah Division of Parks and Recreation under an agreement with the Bureau of Reclamation. The State Park has 237 acres open to boating, swimming, and fishing. Facilities include 22 camping units, numerous picnic sites,

modern restrooms, showers, sewage disposal station, boat launching, and a large covered group use pavilion. Some recreation facilities enhancement at Huntington North Reservoir has taken place and will continue in the future as funding becomes available. Available fish species include largemouth bass and bluegill, sunfish, rainbow trout, and channel catfish. Crawdads are numerous because of the warm water and catching them is a favorite activity for kids visiting the area. Many migratory birds, particularly waterfowl, are present. In 2009, at Huntington North Reservoir, 987 boats were interdicted, inspected, and owners educated about the threat of invasive quagga and zebra mussels. No boats were found to be contaminated.

4. Wyoming

a. Eden Project

The Eden Project furnishes an irrigation water supply for 17,010 acres. Project lands are in the vicinity of the towns of Farson and Eden in southwestern Wyoming about 40 miles north of Rock Springs. Project features are Big Sandy Dam and Reservoir, Eden Dam and Reservoir, Little Sandy Canal, Means Canal, Eden Canal, and a lateral and drainage system. Big Sandy Dam (completed in 1952) was constructed to replace some storage in the existing off-stream Eden Reservoir and to supply water for additional project lands. The Means Canal conveys water from Big Sandy Reservoir to the Westside Lateral, which serves lands on the west side of Big Sandy Creek, and to the Eden Canal which serves lands east side of the creek. Little Sandy Diversion Dam diverts water into the Little Sandy Canal which also supplies water to the Eden Canal. Water is diverted from Big Sandy Dam to Eden Reservoir and from Little Sandy Canal into Eden Reservoir. Water is drawn from Eden Reservoir to serve Eden Canal and Farson Lateral.

Recreation facilities at Big Sandy Reservoir are administered by the Bureau of Reclamation, Provo Area Office. Recreation activities include camping, boating, fishing (brown and cutthroat trout and catfish), and picnicking. The State of Wyoming has not yet implemented a program to prevent the introduction of invasive quagga and zebra mussels into its waters.

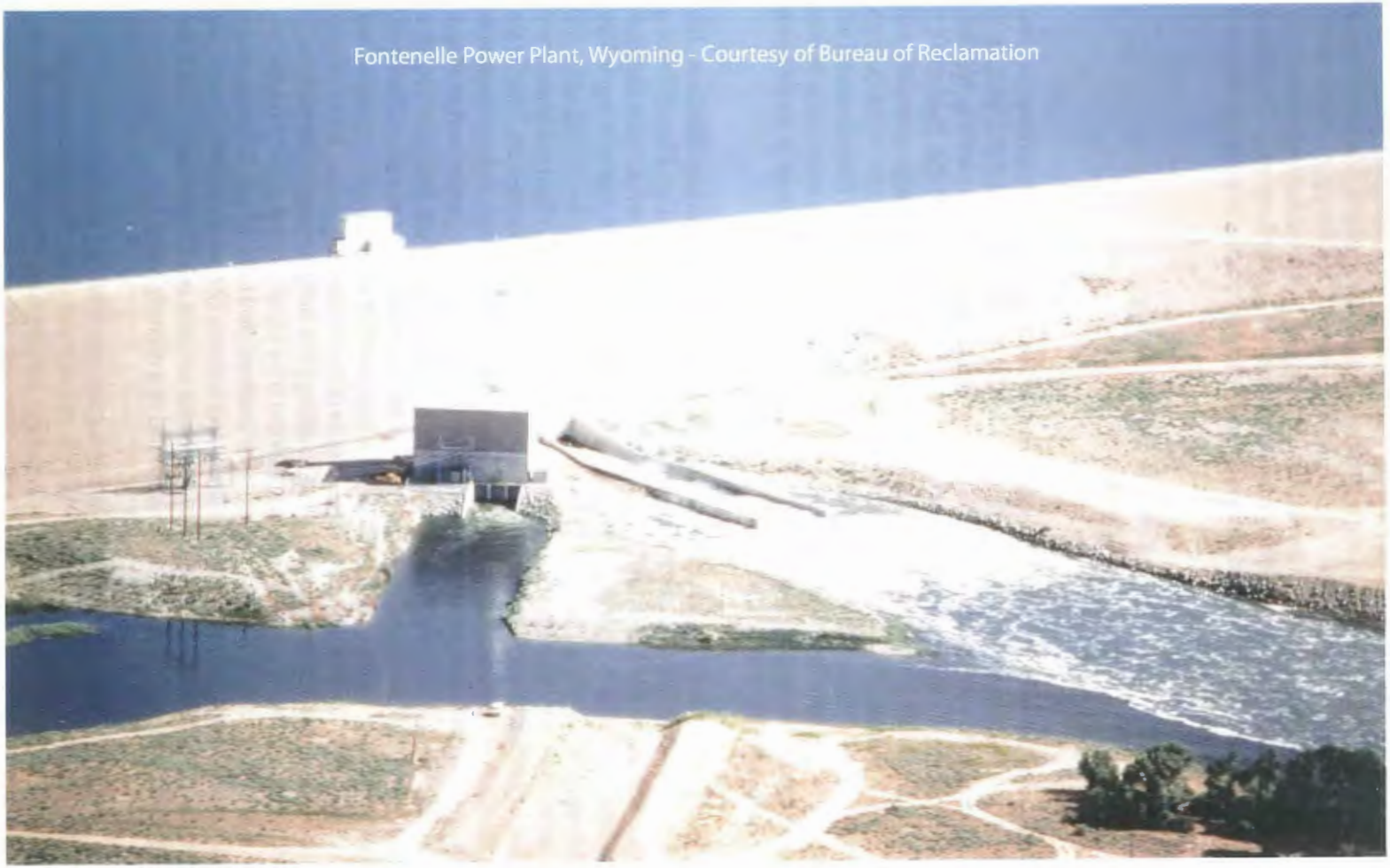
b. La Barge Project

The La Barge Project was found to be infeasible and was not constructed.

c. Seedskadee Project

The Seedskadee Project is located in the Upper Green River Basin in southwestern Wyoming. It provides storage and regulation of the flows of the Green River for power generation, municipal and industrial use, fish and wildlife, and recreation. Principal features of the project are the Fontenelle Dam, powerplant, and reservoir. The reservoir is operated for municipal and industrial water use, power production, flood control, and the downstream fishery and wildlife refuge.

Recreation facilities at Fontenelle Reservoir have been managed by the Bureau of Land Management under an agreement with the Bureau of Reclamation for the past 15 years. Fontenelle Creek Recreation Area is the only completely developed site on the reservoir and offers campsites with restrooms and running water. There is also a boat ramp and a group picnic area. There are



Fontenelle Power Plant, Wyoming - Courtesy of Bureau of Reclamation

three other campgrounds (Tailrace, Weeping Rock, and Slate Creek) located below Fontenelle Dam that are more primitive, although some developed facilities are available. Recreation use is extensive along the river below the dam and upgrades are needed at all campgrounds in order to better serve the public and protect the riverine resources. Fishing is the primary recreation activity and species in the reservoir and river include rainbow, brown, and cutthroat trout. The State of Wyoming has not yet implemented a program to prevent the introduction of invasive quagga and zebra mussels into its waters.

5. Colorado and New Mexico

a. Animas-La Plata Project

The Animas-La Plata Project is located in southwestern Colorado and northwestern New Mexico and was first authorized by the Colorado River Basin Project Act of 1968 (P.L. 90-537). In 1988, it was incorporated into the Colorado Ute Indian Water Rights Settlement Act (P.L. 100-585). The Colorado Ute Settlement Act Amendments of 2000 (Title III of P.L. 106-554, December 21, 2000) provide for implementation and completion of the project. Approval to begin construction was granted in October 2001 and initial site work started in April 2002. Construction of the Durango Pumping Plant, Ridges Basin Dam, and Lake Nighthorse (formerly Ridges Basin Reservoir) will provide the Southern Ute Indian and Ute Mountain Ute Tribes with a reliable water supply for their future needs, while protecting scarce water resources for existing water users in southwestern Colorado and northwestern New Mexico.

Sixteen contracts have been awarded for the construction of various project features. The Animas-La Plata Project consists of four major components. Ridges Basin Dam, Durango Pumping Plant, and Ridges Basin Inlet Conduit are located in Colorado; and the Navajo Nation Municipal Pipeline is located in New Mexico. The project includes various other activities including multiple utility and road relocations; fish, wildlife, and wetlands mitigation; a permanent operating facility; and cultural resources investigations. The reservoir formed by Ridges Basin Dam has been named Lake Nighthorse. Multiple contracts have been awarded to the Ute Mountain Ute Tribe for the construction of the Animas-La Plata Project features located in Colorado. Through September 2009, work on the Durango Pumping Plant is approximately 99 percent complete, work on Ridges Basin Dam is approximately 99 percent complete, and work on the Ridges Basin Inlet Conduit is nearly 100 percent complete. Three contracts have been awarded for the construction of the Navajo Nation Municipal Pipeline. Two contracts have been awarded to the Navajo Engineering and Construction Authority for the installation of 28 miles of 24-inch diameter pipeline. A third contract has been awarded for three horizontal direction drilling bores along the length of the pipeline. In addition, a cooperative agreement has been awarded to the City of Farmington for the construction of a connecting pipeline from Farmington's water treatment plant to the Navajo Nation boundary. Work on the Navajo Nation Municipal Pipeline is approximately 22 percent complete. Overall, the Animas-La Plata Project is approximately 71 percent complete as of September 30, 2009 (the overall percentage of project completion is updated on a quarterly basis).

Durango Pumping Plant pumping unit testing was completed April 25, 2009, and the first fill of Lake Nighthorse commenced on May 4, 2009. Issues raised during the commissioning of the Durango Pumping Plant have been typical for a major pumping plant. The pumps are performing satisfactorily with some corrective action required on some of the auxiliary mechanical systems.

Water stored to date is approximately 25,000 acre-feet. The first fill is anticipated to require between an additional 12 and 24 months, dependent upon hydrologic conditions in the Animas River and other factors such as filling criteria and downstream senior water rights.

The project sponsors have formed the Animas-La Plata Operations, Maintenance, and Replacement Association (Association) for the purpose of contracting with Reclamation for the operation of the Colorado features of the project. The operation and maintenance contract between Reclamation and the Association has been executed by all parties. This contract will become affective once the project has been transferred from construction status to operation, maintenance, and replacement status.

It remains a priority of the Department of the Interior to implement the Colorado Ute Settlement Act Amendments of 2000 by completing the Animas-La Plata Project in a cost effective and efficient manner. Projected completion of project construction, including reservoir filling, is currently scheduled for fiscal year 2012, with project closeout in fiscal year 2013.

Recreation development and management at Lake Nighthorse will be completed by a non-federal entity (i.e. Colorado State Parks). In May 2008, due to budget constraints, Colorado State Parks formally declined interest in development and management of recreation as part of the state park system (state estimated cost at $20 to $30 million). The City of Durango and La Plata County are not willing to develop and manage recreation; however, they were successful in collaborating support from the state to provide $3 million in federal Wallop-Breaux funding and non-federal state cost share funding for construction of a boat ramp, access road, and ancillary facilities. Pursuant to a grant agreement with Colorado Division of Wildlife, Reclamation has completed construction of the boat ramp, and the access road and ancillary facilities will be completed by 2012. A minimum pool in the reservoir will be provided to improve water quality and support a recreational fishery. Recreation development at Lake Nighthorse is envisioned to include facilities for camping, hiking, picnicking, boating, fishing, and sightseeing. Reclamation continues to explore options and ideas for recreation development and management, including limited efforts by the Animas-La Plata Water Conservancy District to initiate recreation planning and public outreach. The public will expect the reservoir to be open to public use upon completion of reservoir filling. Last summer, Reclamation conducted a mussel facility risk assessment at the dam and the report will be available in the summer of 2010.

Recreation development for the Animas-La Plata Project also includes the purchase (using project funds) of public access points along the Animas River. Reclamation completed those acquisitions in cooperation with the City of Durango, which subsequently developed river recreation facilities for public use.

In 2002, Reclamation completed the purchase of mitigation lands for wetland/riparian vegetation purposes as part of the commitment contained in the 2000 Final Supplemental Environmental Impact Statement (FSEIS) for the Animas-La Plata Project. The mitigation lands consist of three separate parcels which total nearly 6,000 acres. These lands also serve as the location for wildlife habitat mitigation and upland vegetation mitigation needs also identified in the FSEIS. A significant portion of the mitigation area contains segments of the La Plata River and its floodplain which contain approximately 232 acres of wetland/riparian vegetation.

Reclamation is discussing management of the mitigation lands with the Southern Ute Indian Tribe because they have expressed an interest and are also requesting eventual title transfer in order to return tribal homelands under Section 108 of P.L. 93-638. The title transfer would include all other rights as held by the United States such as minerals and water including any associated contracts or agreements.

b. Pine River Extension Project

The Pine River Extension Project was found to be infeasible and was deleted in the 1968 Colorado River Basin Project Act.

c. San Juan-Chama Project

The San Juan-Chama Project consists of a system of diversion structures and tunnels for transmountain movement of water from the San Juan River Basin to the Rio Grande Basin. Primary purposes of the San Juan-Chama Project are to furnish a water supply to the middle Rio Grande Valley for municipal, domestic, and industrial uses. The project is also authorized to provide supplemental irrigation water and incidental recreation and fish and wildlife benefits. The regulating and storage reservoir is formed by Heron Dam on Willow Creek just above the point where Willow Creek enters the Rio Chama. Heron Reservoir is operated by Reclamation in compliance with applicable federal and state laws, including the San Juan-Chama Project authorization and the Rio Grande and Colorado compacts. Under these laws, only imported San Juan-Chama Project water may be stored in Heron Reservoir; there are no provisions for storing native Rio Grande water. Thus, all native Rio Grande water is released to the river below Heron Dam.

Pojoaque Irrigation Unit, made up of Nambe Falls Dam and storage reservoir, provides supplemental irrigation water for about 2,800 acres in the Pojoaque Valley. It serves the Pojoaque Valley Irrigation District and Indian pueblos of San Ildefonso, Nambe, and Pojoaque.

Recreation at Heron Reservoir is managed by the New Mexico State Parks under an agreement with the Bureau of Reclamation. Camping, fishing, sailing, and hiking are popular summer activities while cross-country skiing and ice fishing are available during the winter. The lake is designated wakeless, so no motorized water sports are allowed. The Friends of Heron and El Vado Lakes hold an annual "Osprey Fest" at Heron Lake in July which draws bird lovers from throughout the region.

In April 2009, New Mexico's governor signed the Aquatic Invasive Species Control Act. The Act allows the New Mexico Department of Game and Fish to take actions to protect New Mexico's waters from negative impacts of aquatic invasive species. The Act requires that all boats, personal watercraft, and equipment used in waters infested with invasive species be certified as decontaminated before entering New Mexico waters. Plankton sampling is being conducted at each of the reservoirs and is sent to the Reclamation laboratory in Denver, Colorado, for analysis as part of a state-wide monitoring effort.

Recreation at Nambe Falls Reservoir is managed by the Nambe Pueblo under an agreement with Reclamation. Fishing is a popular activity on the lake and available species include rainbow and cutthroat trout and salmon. Other activities include motorized boating (electric motors

only), picnicking, and hiking. Fishing downstream from the dam is not allowed, although there is a small day-use area located there. In 2009, a recreation review was conducted with members of the Nambe Pueblo and the review showed an urgent need for additional funding to assist the Pueblo in managing and improving recreation opportunities. Nambe Falls Reservoir was not on the 2009 list to be sampled for the presence of invasive mussels.

6. Wyoming and Utah

a. Lyman Project

The Lyman Project lands are in southwestern Wyoming; however, much of the drainage area and one storage feature are in Utah, just across the Utah-Wyoming state line. The Lyman Project includes Meeks Cabin Dam and Reservoir and Stateline Dam and Reservoir. The project regulates the flows of Blacks Fork and the east fork of Smiths Fork for irrigation, municipal and industrial use, fish and wildlife conservation, and recreation.

Recreation at Meeks Cabin Dam is the responsibility of the U.S. Forest Service, Wasatch-Cache National Forest, under authority of Public Law 89-72, as amended. The managed recreation season is from June through October as the lake elevation is 8,720 feet. The area experiences moderate use by recreationists. Available fish species include cutthroat trout and whitefish. There are 24 campsites at the reservoir and drinking water and restrooms are provided. Preferred activities are camping, picnicking, and motorized boating. Reservations for the campsites are not needed.

Recreation at Stateline Dam and Reservoir is the responsibility of the U.S. Forest Service, Wasatch-Cache National Forest, under authority of Public Law 89-72, as amended. The managed recreation season is June through October with intensive use, particularly during the hot summer months and holiday weekends. It is a high elevation reservoir (approximately 9,000 feet). There is a campground with 41 campsites available as well as drinking water, restrooms, RV dump station, and a boat ramp. Some of the facilities are accessible to persons with mobility impairments. The most common fish species are rainbow, brook, and cutthroat trout. To the north and to the east of the campground are a number of multi-use trails and roads which loop among the many lakes in the forest.

7. Colorado and Wyoming

a. Savery-Pot Hook Project

The Savery-Pot Hook Project was found to be infeasible and was not constructed.

E. RECREATIONAL USE AT RESERVOIRS

A centralized data base has been developed to monitor recreation use at Reclamation reservoirs. Table 7 shows visitor use figures (most recent data where available) for CRSP and participating project reservoirs:

Table 7
Most Current Visitor Use Figures

Recreation Area	Estimated Visitation	Period of Data Collection
Crawford Reservoir	124,885	July 2006 through June 2007
Curecanti National Recreation Area (Aspinall Unit)	953,163	January 1 through December 31, 2009
Currant Creek Reservoir	10,001	Calendar year 2006
Flaming Gorge National Recreation Area	962,000	Forest-wide data, 2007
Fontenelle Reservoir	4,201	Fiscal year 2007
Fruitgrowers Reservoir	0	Data not available
Glen Canyon National Recreation Area	1,979,826	January 1 through December 31, 2009
Heron Reservoir	118,798	July 2004 through June 2005
Huntington North Reservoir	55,764	July 2008 through June 2009
Jackson Gulch Reservoir	43,681	July 2007 through June 2008
Joes Valley Reservoir	85,001	Fiscal year 2005
Jordanelle Reservoir	234,269	July 2008 through June 2009
Lemon Reservoir	7,325	Date of data collection unknown
McPhee Reservoir	0	Data not available
Meeks Cabin Reservoir	2,501	2009
Nambe Falls Reservoir	32,345	Calendar year 2005
Navajo Reservoir (Colorado)	307,807	January 1 through November 30, 2008
Navajo Reservoir (New Mexico)	547,605	Calendar year 2009
Paonia Reservoir	21,693	July 2006 through June 2007
Red Fleet Reservoir	36,000	July 2008 through June 2009
Ridgway Reservoir	332,433	July 2007 through June 2008
Rifle Gap Reservoir	207,323	July 2007 through June 2008
Silver Jack Reservoir	0	Data not available
Starvation Reservoir	60,998	July 2008 through June 2009
Stateline Reservoir	6,001	Calendar year 2009
Steinaker Reservoir	74,000	July 2008 through June 2009
Strawberry Reservoir	459,037	Calendar year 2009
Taylor Reservoir	16,000	2009
Upper Stillwater Reservoir	45,001	Calendar year 2009
Vallecito Reservoir	0	Data not available
Vega Reservoir	166,547	July 2007 through June 2008

F. STATUS OF OTHER RECLAMATION PROJECTS IN THE UPPER COLORADO RIVER BASIN

1. Colorado

a. Dominguez Project (Whitewater)

The Dominguez Project was found to be infeasible and was not constructed.

b. Fruitgrowers Dam Project

The Fruitgrowers Dam Project, located in southwestern Colorado, furnishes irrigation water to nearly 2,700 acres of land immediately downstream of Fruitgrowers Dam. Structures built by Reclamation are Fruitgrowers Dam, Dry Creek Diversion Dam, and Dry Creek Diversion Ditch. Other diversion structures and the canal and lateral system were constructed by private interests.

Reclamation manages the public use at Fruitgrowers Reservoir. The reservoir and surrounding area has been listed as an "important" bird site by the State of Colorado and it has been determined to be a "globally significant" area under the American Bird Conservancy criteria because of its importance to migrating sandhill cranes and white-faced ibis as well as the presence of some southwestern willow flycatchers. The International Birding Association has determined that the area is an important area for shorebirds as well. The reservoir also hosts the largest nesting colony of western grebes in Colorado and more than 200 species of birds have been sighted. It has been estimated by the Audubon Society that 26 percent of the greater sandhill crane stops at Fruitgrowers Reservoir during spring migration. A watchable wildlife trail and viewing area were constructed in 1993. However, water quality issues at Fruitgrowers Reservoir have been a concern in the past and, as a result, the public has been discouraged from using the reservoir for boating and swimming activities.

c. Mancos Project

The Mancos Project is an off-stream reservoir in southwestern Colorado, completed in 1948 at a cost of $3.9 million, of which $0.9 million is reimbursable and $0.75 million has been repaid by the Mancos Water Conservancy District (District). The project was authorized under the Water Conservation and Utilization Act (P.L. 76-398), as amended. It consists of Jackson Gulch Dam, a 10,000 acre-foot reservoir, an inlet canal, and an outlet canal. The District constructed and operates a 260-kilowatt powerplant at Jackson Gulch Dam under a lease of power privilege contract. The project provides supplementary irrigation water for approximately 13,746 acres and municipal and industrial water for the town of Mancos, the surrounding area, and Mesa Verde National Park. Responsibility for the operation and maintenance of project facilities was transferred to the District by contract in 1963. The term "operation and maintenance" includes replacement, as specified in Reclamation's "Report to the Congress, Annual Costs of Bureau of Reclamation Project Operation and Maintenance for Fiscal Years 1993-97," dated September 1998. The Mancos Project is more than 60 years old and many features are reaching the end of their design life. The canal system is in need of extraordinary maintenance and rehabilitation, and delivery of agricultural and municipal and industrial water could be affected if these repairs are not made. In 2004, the

Recreation at Vallecito Reservoir is under the jurisdiction of the Pine River Irrigation District (through a contract with Reclamation) with the exception of public campgrounds on the east side of the reservoir which are administered by the U.S. Forest Service. In partnership with the District, U.S. Forest Service, and local community, Reclamation has provided significant funding for public safety and resource restoration and rehabilitation following the devastating effects of the 2002 Missionary Ridge fire.

Reclamation is working closely with its recreation managing entities to develop effective solutions to manage the spread of invasive mussels including educating the public and providing educational material such as signs and brochures. At Vallecito Reservoir, Colorado Division of Wildlife is conducting periodic boat inspections, and plankton tow and substrate sampling. No adult mussels have been found in Colorado. Veliger larvae have been found in some Colorado reservoirs, but are not living long enough to reach adulthood.

e. Uncompahgre Project

The Uncompahgre Project is located on the western slope of the Rocky Mountains in west-central Colorado. Project lands surround the town of Montrose and extend 34 miles along both sides of the Uncompahgre River to Delta, Colorado. Project features include Taylor Park Dam and Reservoir, Gunnison Tunnel, seven diversion dams, 128 miles of main canals, 438 miles of laterals, and 216 miles of drains. The systems divert water from the Uncompahgre and Gunnison Rivers to serve over 76,000 acres of project land. The recreation facilities at Taylor Park Reservoir are managed by the U.S. Forest Service under a management agreement with Reclamation. The reservoir, with 2,400 acres of surface water, offers good fishing and includes trout species, northern pike, and kokanee salmon.

Reclamation is working with its recreation managing entities to develop effective solutions to manage the spread of invasive mussels including educating the public and providing educational material such as signs and brochures. No adult mussels have been found in Colorado. Veliger larvae have been bound in some Colorado reservoirs, but are not living long enough to reach adulthood.

G. PLANNING PROGRAM

The Upper Colorado Region Planning Program budget for fiscal year 2009 was about $4.372 million (which includes about $2.875 million in congressional write-ins), with approximately 34 percent being directed within the Upper Colorado River Basin. In early 2009, the Navajo-Gallup Water Supply Project was authorized for construction. Ongoing planning studies within the Upper Colorado River Basin include the Park City/Snyderville Basin Water Supply Study and the Rural Water Technology Alliance Cooperative Investigation. Planning investigations also continue under the Geographically Defined Program for northern Utah, southern Utah, Colorado, the San Juan River Basin, and the Navajo Nation. Reclamation continues to coordinate with other natural resource agencies on critical water resource related problems and issues with funds appropriated through the Environmental and Interagency Coordination account. Funds are also provided in the General Planning Activities account for Reclamation to conduct critical short-term investigation activities not funded by other programs.

1. Colorado

Reclamation, in cooperation with the Colorado River Water Conservation District and the Orchard Mesa Irrigation District (District), is conducting an evaluation of the District's irrigation delivery system (a component of Reclamation's Grand Valley Project). The objective of this evaluation is to improve the efficiency of this system, thus providing a more dependable water supply for District water users and potentially redirecting conserved water to address other human and/or environmental water needs. Reclamation, in cooperation with the Grand Valley Water Users Association (Association), recently completed a similar evaluation in the portion of the Grand Valley Project managed by the Association. Construction of the identified canal automation system was funded by the Upper Colorado Recovery Program. This effort has resulted in a 41,000 acre-foot average reduction in the Association's river diversions at an annual cost of approximately $15 per acre-foot. The reduced diversions provide a more dependable water supply for Colorado River water users within the State of Colorado and contribute to improved habitat conditions for endangered fish. Similar results are potentially available in the Orchard Mesa Irrigation District system.

In fiscal year 2009, the Upper Colorado Recovery Program agreed to fund construction ($16.5 million) of the canal automation system for the Orchard Mesa Irrigation District with the condition that an acceptable cost sharing arrangement be negotiated for the incremental operation and maintenance costs. Work is progressing on these negotiations. Additionally, the Colorado River Water Conservation District purchased approximately 15 acres of land on which a regulating reservoir will be constructed as part of the canal automation project. When completed, the project will redirect approximately 17,000 to 30,000 acre-feet of conserved water to enhance flow regimes in the Colorado River. The project will also provide a more secure water supply for human water uses during periods of severe drought.

2. New Mexico

a. Navajo-Gallup Water Supply Project

The Navajo-Gallup Water Supply Project was authorized for construction by P.L. 111-11 on March 30, 2009. The legislation defines prerequisites for construction that include completion of the final environmental impact statement (FEIS) and Record of Decision (ROD), execution of a water rights settlement agreement and contract with the Navajo Nation, execution of a cost share agreement with the State of New Mexico, and execution of repayment contracts with project beneficiaries.

In addition, Section 10401 of P.L. 111-11 amended the Colorado River Storage Project Act of 1956 to include the Navajo-Gallup Water Supply Project as a participating project and to allow the Secretary of the Interior to create and operate a top water bank within the available capacity of Navajo Reservoir. Section 10602(e) of the Act directed the Secretary of the Interior to reserve, from existing reservations of Colorado River Storage Project power for Bureau of Reclamation projects, up to 26 megawatts of power for use by the Navajo-Gallup Water Supply Project.

The Planning Report and FEIS are complete and a ROD was signed by the Secretary of the Interior on October 1, 2009, approving Reclamation's decision to proceed with the preferred alternative presented in the report. The Upper Colorado Regional Director has been delegated

authority to plan, design, construct, operate, and maintain the project in substantial accordance with the preferred alternative; negotiate and execute required contracts; and allocate project delivery capacities and costs. Collection of design data for final design of selected facilities and tasks associated with the various contracts was initiated. Work on developing a timeline and budgetary framework in preparation for initiation of project construction in fiscal year 2012 was also initiated.

The Navajo-Gallup Water Supply Project was authorized for feasibility study by P.L. 92-199 on December 15, 1971. The project is a key element in the settlement of the Navajo Nation water rights claims on the San Juan River in New Mexico. Navajo Nation communities and the City of Gallup rely on a rapidly depleting groundwater supply. Other water sources are needed to meet the current and future municipal and industrial demands of 43 Navajo Chapters including the communities of Fort Defiance and Window Rock, Arizona; the City of Gallup, New Mexico; and the Navajo Agricultural Products Industry. The Jicarilla Apache Nation's anticipated municipal and industrial water needs will also be met if they choose to participate in the project.

b. Navajo Nation Investigations Program (Arizona, New Mexico, and Utah)

In 2000, Reclamation signed a Memorandum of Understanding with the Navajo Nation to establish the foundation for a long-term partnership to provide assistance to the Nation in resolving its water resource-related problems. The water resources of the Nation are severely limited and the lack of infrastructure and infrastructure deficiencies adversely impact the health, economy, and welfare of the Navajo people. The lack of adequate domestic, municipal, and industrial water is currently the Nation's greatest water resource problem. This program is focusing on identifying the domestic, municipal, and industrial water needs of each region of the reservation; evaluating the available resources; and developing appraisal-level alternatives to meet those needs. Specific studies to be conducted under this program are determined by the Navajo Nation and Reclamation in consultation with participating agencies. Due to funding constraints in fiscal year 2009, funding under this program was used to complete the Navajo-Gallup Water Supply Project Planning Report and Final Environmental Impact Statement, initiate cultural resource and endangered plant surveys, and initiate and participate in other Navajo-Gallup Water Supply Project pre-construction activities.

c. San Juan River Basin Investigations Program (Arizona, Colorado, New Mexico, and Utah)

The purpose of this ongoing program is to provide the framework for Reclamation to participate with other state, federal, and local entities to conduct studies and develop alternatives to meet the long-term water needs of the San Juan River Basin. Development and population growth in the basin causes a continual increase in water demand and a general decrease in water quality. Growth in rural areas and on the Navajo and Southern Ute Indian Reservations has resulted in a large population without adequate domestic water supplies. During 2009, Reclamation continued to provide planning assistance to the La Plata West Water Authority to develop a rural domestic water system to supply the southwest portion of La Plata County, Colorado (including portions of the Ute Mountain and Southern Ute Indian Reservations), and a portion of San Juan County, New Mexico. All of the entities involved have Animas-La Plata Project water which will be stored in Lake Nighthorse, formed by the recently completed Ridges Basin Dam. Reclamation provided assistance to develop conceptual alternatives and appraisal level designs and cost estimates for an intake structure in the reservoir. The result was that an intake structure was designed and

constructed prior to encroachment of storage water. Reclamation also provided assistance to the Animas Watershed Group to identify and quantify nutrient loading to the Animas River, a major tributary to the San Juan River.

3. Utah

a. Rural Water Technology Alliance Investigation

Using monies from a congressional write-in, this investigation is initiating an applied research project on how to improve basinwide river operations through the selective use of technology. Participants in the investigation include the Emery Water Conservancy District, Duchesne County Water Conservancy District, and Sevier River Water Users Association. Also with an interest are the Bear River Commission, Strawberry Water Users Association, Scipio Irrigation Company, and the State of Wyoming (Upper Green River). The latter participants are funded through the "Water 2025" program and state appropriations.

b. San Juan River to Kayenta Pipeline Investigation

Using monies from a congressional write-in, this investigation is studying a pipeline system that extends from an existing pump on the San Juan River (at Mexican Hat, Utah) south to the community of Kayenta, Arizona. This multi-state system would also serve Navajo communities along the pipeline route (notably in the Monument Valley area in Utah).

c. Uintah Basin Water Supply/Quality Optimization Study

This study is investigating the operation of the various federal and non-federal water projects on the Duchesne River and its tributaries. The study involves the installation of a basinwide real-time monitoring and control system, the development of a basinwide website (www.duchesneriver.org) for displaying the real-time and historic information, and the development of an optimization plan to better utilize the existing water supplies through coordinated regional operation. During 2006, the monitoring and control system was extended into the Unita/Whiterocks River and Red Creek drainages. Plans are underway to incorporate water quality parameters into a monitoring system. The monitoring program is being partially funded through a "Water 2025" challenge grant. The Duchesne County Water Conservancy District, Duchesne/Strawberry Water Users Association, Moon Lake Water Users Association, and the Utah Division of Water Rights are cost sharing the project.

d. Utah Navajo Rural Water Investigation

Using monies from the Native American affairs program and the drought program, options are being developed to assist with water supply to isolated residential units on the Navajo Reservation. At present, 70,000 Navajos are without indoor water and commercial power. For their water supply, they are forced to haul water from sources located a great distance from their homes. This study is developing prototypes to help ameliorate this situation. Prototypes include: (1) solar-powered groundwater pumping, (2) rain harvesting, and (3) cistern systems plumbed into houses. Also being considered are several permutations of the above. The issue of water quality is also being addressed. Non-government organizations are also being sought to assist with this project.

H. RESERVOIR OPERATIONS

1. 2009 Hydrology Summary and Reservoir Status

Below average streamflows were observed throughout much of the Colorado River Basin during water year 2009. Unregulated[1] inflow to Lake Powell in water year 2009 was 10.632 million acre-feet (maf), or 88 percent of the 30-year average[2] which is 12.04 maf. Unregulated inflow to Flaming Gorge, Blue Mesa, and Navajo reservoirs was 91, 102, and 76 percent of average, respectively.

Basin-wide precipitation during water year 2009 was initially well below average during October and November 2008. In December, however, precipitation rebounded and was well above average bringing the cumulative water year-to-date precipitation on December 31, 2008, to 107 percent of average. The December conditions, however, did not continue and precipitation in January, February, and early March was slightly below average. Cumulative water year precipitation on March 1, 2009, was 102 percent of average. Average precipitation in March and April continued and by May 4, 2009, cumulative water year precipitation remained at 103 percent of average. Precipitation in June was well above average and on June 30, 2009, the cumulative precipitation for water year 2009 was 105 percent of average. Precipitation accounts for cumulative values of both snowmelt and rainfall captured at various mountain sites rather than actual streamflow values in rivers. The well below average precipitation conditions during the beginning of water year 2009 negatively impacted observed unregulated inflow into Lake Powell with observed volumes from October through April between 70 to 80 percent of average.

Snowpack conditions trended slightly below average in the Upper Green River and San Juan River Basins during water year 2009, and slightly above average in the Upper Colorado River and Gunnison River Basins. On April 1, 2009, snowpack in the Upper Green River and San Juan River Basins measured 91 and 85 percent of average, respectively, while the Upper Colorado River and Gunnison River Basins measured 108 and 104 percent of average, respectively.

Inflows to Lake Powell during April were below forecasted levels while in May inflows were well above forecasted levels. By late May, inflows increased to more than 60,000 cubic feet per second (cfs) with Lake Powell elevations increasing by about 0.5 foot per day. The observed unregulated inflow volume to Lake Powell during the April through July period was 7.804 maf, or 98 percent of average.

Inflow to Lake Powell has been below average in eight out of the past ten years. Although slightly above average inflows occurred in 2005 and 2008, drought conditions in the Colorado River Basin persist. Provisional calculations of natural flow for the Colorado River at Lees Ferry, Arizona, show that the average natural flow since calendar year 2000 (2000-2009, inclusive) is 11.982 maf, the lowest ten-year average in over 100 years of record keeping on the Colorado River.

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[1] Unregulated inflow adjusts for the effects of operations at upstream reservoirs. It is computed by adding the change in storage and the evaporation losses from upstream reservoirs to the observed inflow. Unregulated inflow is used because it provides an inflow time series that is not biased by upstream reservoir operations.

[2] Inflow statistics throughout this document will be compared to the 30-year average, 1971-2000, unless otherwise noted.

Drought conditions persisted during water year 2009 throughout the Lower Basin and southwestern United States. Abnormally dry to moderate drought conditions persisted in southern California, southern Nevada, and far western Arizona and extended throughout the entire state of Arizona.[3]

There was above average snowfall in the Gila, Salt, and Verde River watersheds during much of the winter, with cumulative water year precipitation at 132 percent of average on December 29, 2008. Despite a wet winter, drier spring conditions developed and precipitation for water year 2009 in the Gila River Basin was 82 percent of average. During water year 2009, the Salt River Project released water from its system in excess of diversion requirements at Granite Reef Diversion Dam; however, none of this water reached Painted Rock Dam and no tributary inflow from the Gila River reached the mainstream of the Colorado River.[4]

Lower Basin tributary inflows into the mainstream were well below average for water year 2009. Tributary inflow from the Little Colorado for water year 2009 totaled 0.054 maf, or 30 percent of the long-term average.[5] Tributary inflow from the Bill Williams River totaled 0.036 maf for water year 2009, or 36 percent of the long-term average. Tributary inflow from the Virgin River for water year 2009 also experienced below average conditions, totaling 0.090 maf, or 52 percent of the long-term average.

The Colorado River total system storage experienced a net gain in water year 2009 in the amount of 0.160 maf. Reservoir storage in Lake Powell increased during water year 2009, increasing by 0.954 maf. Reservoir storage in Lake Mead declined during water year 2009 by 1.080 maf. At the beginning of water year 2009 (October 1, 2008), Colorado River total system storage was 57 percent of capacity. As of September 30, 2009, total system storage was 58 percent of capacity.

Table 8 lists the October 1, 2009, reservoir vacant space, live storage, water elevation, percent of capacity, change in storage, and change in water elevation during water year 2009.

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[3] From the U.S. Drought Monitor website: http://drought.unl.edu/dm/monitor.html, September 29, 2009.

[4] Tributary inflow from the Gila River to the mainstream is very sporadic. These flows occur very seldom and when they do they are typically of high magnitude.

[5] The basis for the long-term average of tributary inflows in the Lower Basin is natural flow data from 1906 to 2006. Additional information regarding natural flows may be found at http://www.usbr.gov/lc/region/g4000/NaturalFlow/current.html.

Table 8
Reservoir Conditions on October 1, 2009

Reservoir	Vacant Space (maf)	Live Storage (maf)	Water Elevation (feet)	Percent of Capacity (feet)	Change in * Storage (feet)	Change in * Elevation (feet)
Fontenelle	0.069	0.276	6,496.8	80	0.022	3.0
Flaming Gorge	0.358	3.392	6,031.1	90	0.370	9.9
Blue Mesa	0.178	0.651	7,498.7	79	0.001	0.1
Navajo	0.381	1.314	6,057.3	78	-0.004	-0.4
Lake Powell	8.857	15.463	3,635.4	64	0.954	8.5
Lake Mead	14.947	10.933	1,093.7	42	-1.080	-12.1
Lake Mohave	0.309	1.501	635.6	83	-0.084	-3.2
Lake Havasu	0.056	0.564	447.2	91	-0.020	-1.0
Totals	25.16	34.09		57.5	0.160	

*From October 1, 2008, to September 30, 2009.

2. Summary of Reservoir Operations in 2009

The operation of the Colorado River reservoirs has had effects on some aquatic and riparian resources. Controlled releases from dams have modified temperature, sediment load, and flow patterns, resulting in increased productivity of some riparian and non-native aquatic resources and the development of economically significant sport fisheries. However, these same releases have detrimental effects on endangered and other native species. Operating strategies designed to protect and enhance aquatic and riparian resources have been established after appropriate National Environmental Policy Act compliance at several locations in the Colorado River Basin.

In the Upper Basin, public stakeholder work groups have been established at Fontenelle Dam, Flaming Gorge Dam, the Aspinall Unit, and Navajo Dam. These work groups provide a public forum for dissemination of information regarding ongoing and projected reservoir operations throughout the year and allow stakeholders the opportunity to provide information and feedback with respect to ongoing reservoir operations. The Glen Canyon Dam Adaptive Management Work Group (AMWG)[6] was established in 1997 as a chartered committee under the Federal Advisory Committee Act of 1972 (Public Law 92-463).

Modifications to planned operations may be made based on changes in forecasted conditions or other relevant factors. Consistent with the Upper Colorado River Endangered Fish Recovery Program (Upper Colorado Recovery Program),[7] the San Juan River Basin Recovery Implementation Program (San Juan Recovery Program),[8] Section 7 consultations under the Endangered Species Act, and other downstream concerns, modifications to monthly operation plans may be based on other factors in addition to changes in streamflow forecasts. Decisions on

[6] Additional information on the AMWG can be found at www.usbr.gov/uc/rm/amp.

[7] Additional information on the Upper Colorado Recovery Program can be found at http://coloradoriverrecovery.fws.gov.

[8] Additional information on the San Juan Recovery Program can be found at www.fws.gov/southwest/sjrip.

spring peak releases and downstream habitat target flows may be made midway through the runoff season. Reclamation will conduct meetings with the U.S. Fish and Wildlife Service (Service), other Federal agencies, representatives of the Basin States, and with public stakeholder work groups to facilitate the discussions necessary to finalize site-specific operations plans.

In 1995, Reclamation and the Service formed a partnership with other federal, state, local public agencies and private organizations to develop the Lower Colorado River Multi-Species Conservation Program (LCR MSCP). This program includes both non-Federal and Federal parties and addresses ESA compliance requirements under Sections 7 and 10 of the ESA. In April 2005, the Secretary signed the ROD to begin implementation of the LCR MSCP.[9] Reclamation, in consultation and partnership with a Steering Committee made up of representatives from 57 participating entities, is the primary implementing agency. The LCR MSCP is currently meeting the goals outlined in the habitat conservation plan.

The following paragraphs discuss the 2009 operation of each of the reservoirs with respect to applicable provisions of compacts, statutes, regulations, contracts, and instream flow needs for maintaining or improving aquatic and riparian resources where appropriate.

a. Fontenelle Reservoir

Hydrologic conditions in water year 2009 in the Upper Green River Basin were slightly above average when compared to the historic record for the reservoir. The April through July inflow to Fontenelle Reservoir during water year 2009 was 0.967 maf, which was 113 percent of average. Snowpack conditions in the Upper Green River Basin were below average and the basin was classified as continuing to be in drought. Prior to 2009, inflow to Fontenelle Reservoir had been below average for nine consecutive years.

Fontenelle Reservoir filled in 2009 and bypass releases were necessary in order to safely route the spring runoff. Inflow peaked at 9,664 cfs on June 5, 2009. Releases from Fontenelle Reservoir increased from a baseflow of 950 cfs to powerplant capacity (approximately 1,700 cfs) during the spring runoff period. Bypass releases were sustained for a total of 55 days in June, July, and August, including ramping days. The resulting peak releases of 8,080 cfs occurred on June 16, 2009; 6,590 cfs of this was bypass water. The peak elevation of Fontenelle Reservoir during water year 2009 was 6,505.7 feet which occurred on July 27, 2009. This elevation is 0.3 feet below the spillway crest elevation.

b. Flaming Gorge Reservoir

Inflow to Flaming Gorge Reservoir during water year 2009 was below average. Unregulated inflow in water year 2009 was 1.564 maf, which is 91 percent of average. On October 1, 2008, the beginning of water year 2009, the reservoir elevation was 6,021.3 feet. The reservoir elevation showed an overall increase during water year 2009 with an ending water year (September 30, 2009) reservoir elevation of 6,031.12 feet corresponding to a volume of 3.392 maf. Flaming Gorge Reservoir reached a maximum elevation 6,033.7 feet or 3.494 maf on July 17, 2009. Precipitation in the Green River Basin above Flaming Gorge was 245 percent of average during the month of June 2009. The reservoir elevation increased 13.3 feet from June 1 to the maximum reservoir

[9] Additional information on the LCR MSCP can be found at http://www.lcrmscp.gov.

elevation on July 17, 2009. The end of water year reservoir elevation was 8.88 feet below the full pool elevation of 6,040.0 feet which corresponds to an available storage space of 0.358 maf.

Reclamation operated Flaming Gorge Dam in compliance with the Flaming Gorge ROD in 2009. The hydrologic conditions during the spring of 2009 were designated as average. Reclamation convened the Flaming Gorge Technical Working Group (FGTWG) comprised of the Service, Western Area Power Administration (Western), and Reclamation personnel. The FGTWG proposed Reclamation manage releases to the Green River to maintain flows at or above 15,000 cfs for at least five consecutive days during the Yampa River peak flows, and to create an instantaneous peak flow of 18,600 cfs as measured below the confluence with the Yampa River.

Releases from Flaming Gorge Reservoir were increased to powerplant capacity of 4,300 cfs on May 12, 2009, in anticipation of peak flows on the Yampa River. Releases were maintained at powerplant capacity until May 21, 2009. Green River flows at Jensen remained above 15,000 cfs from May 17, 2009, to May 29, 2009 (13 days). Flows at Jensen reached 18,600 cfs on May 22, 2009 for a single day as a result of releases from Flaming Gorge Dam and flows on the Yampa River. Releases from Flaming Gorge Reservoir were reduced by 500 cfs per day beginning on May 22, 2009. Both FGTWG proposed spring objectives were achieved by May 23, 2009. The use of the bypass tubes was not required to meet these flow objectives.

As of August 2009, the hydrologic classification as defined by the Flaming Gorge ROD was average. Reclamation received a request for base flow releases from both the Service and Western. The Service requested base flows at the higher end of the average range during the summer period (July through September). Western requested that base flow levels drop to the lowest possible base flows during the summer season and increase during the winter period (October through February). Reclamation convened the FGTWG to develop a flow proposal for the Green River during the base flow period (August through February of the following year). The FGTWG proposed to Reclamation that flows in the Green River, during the base flow period, should fall within the average range, as described in the Flaming Gorge Final Environmental Impact Statement for the Action Alternative. Because of the higher than anticipated precipitation in June 2009, Reclamation was able to meet the Service's request for higher summer flows and Western's request for higher base flow releases during the winter period. It is anticipated that 2009-2010 winter releases from Flaming Gorge Dam will follow a double peak pattern for hydropower purposes during the months of November through March.

c. Blue Mesa, Morrow Point, and Crystal Reservoirs (Aspinall Unit)

Average snowpack conditions prevailed in the Gunnison Basin during water year 2009. Snow measurement sites in the basin reported mostly average moisture throughout the winter and into the spring of 2009. The April through July unregulated runoff into Blue Mesa Reservoir in 2009 was 0.772 maf, which was 107 percent of average. Water year 2009 unregulated inflow into Blue Mesa Reservoir was 1.018 maf, which was 102 percent of average. Blue Mesa Reservoir effectively filled in 2009 reaching a peak elevation of 7,519.02 feet on June 30, 2009, 0.38 feet below full pool. Storage in Blue Mesa Reservoir increased during water year 2009 by 0.001 maf. Storage in Blue Mesa Reservoir on September 30, 2009, was 0.651 maf, or 79 percent of capacity.

Releases from Aspinall Unit reservoirs in 2009 were approximately average. Releases from the Aspinall Unit provided for a flow of 650 to 850 cfs from October 1, 2008, to February 11, 2009, in the Gunnison River through the Black Canyon (below the Gunnison Tunnel). On March 18, 2009, releases were decreased to 750 cfs in response to decreases in forecasted inflow. A week later on March 24, 2009, releases were again reduced by 200 cfs for the same reason.

Beginning May 7, 2009, releases from Crystal Reservoir were increased on a daily basis until reaching 7,500 cfs resulting in 6,700 cfs in the Black Canyon below the diversion tunnel on May 13, 2009. Releases were then ramped down on a daily basis starting the morning of May 15, 2009, and leveled off at 2,900 cfs from Crystal Dam resulting in 1,900 cfs in the Black Canyon below the diversion tunnel and Gunnison Gorge on May 23, 2009.

On August 16, 1995, Memorandum of Agreement (MOA) No. 95-07-40-R1760 was signed by Reclamation, the Service, and the Colorado Water Conservation Board. The purpose of the MOA was to provide water to the Redlands Fish Ladder, assure at least 300 cfs of flow in the 2-mile reach of the Gunnison River between the Redlands Fish Ladder and the confluence of the Gunnison and Colorado Rivers (2-mile reach), and to benefit Colorado River Basin endangered fish. This MOA was extended for an additional five years on June 30, 2000. A key provision of the MOA required that the parties adopt a plan to share water shortages in dry years, when total storage at Blue Mesa Reservoir is projected to drop below 0.40 maf by the end of calendar year 2008. However, the MOA was not renewed in 2005. Reclamation will continue to coordinate with the Aspinall Working Group as part of the operational planning process.

A significant consideration in developing Aspinall operations is the Black Canyon Water Right decree[10] which establishes a minimum base flow throughout the year with a one-day peak flow and shoulder flows. The decree states that the Secretary's exercise of the water right is subject to the Secretary's discretion and obligations as defined by applicable law and the terms and conditions set forth in the decree. The decree states that, to minimize downstream flooding, the United States shall continue to operate the Aspinall Unit to give the highest priority to flood control, subject to maintaining structural safety and integrity, and that the decree shall not be exercised to supersede flood control operations.

d. Navajo Reservoir

Inflow to Navajo Reservoir in water year 2009 was below the 30-year average. Water year 2009 unregulated inflow was 0.850 maf, or 76 percent of average. The April through July unregulated inflow into Navajo Reservoir in water year 2009 was 0.661 maf, or 84 percent of average. Unregulated inflow to Navajo Reservoir was below average for all water years from 2000 through 2009, except for 2005 which was 136 percent of average and 2008 which was 120 percent of average.

Navajo Reservoir reached a peak water surface elevation of 6,073.01 feet on May 28, 2009, 12 feet below full pool. The water surface elevation at Navajo Reservoir on September 30, 2009, was 6,057.32 feet, with reservoir storage at 78 percent of capacity.

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[10] Decree Quantifying the Federal Reserved Water Right for Black Canyon of the Gunnison National Park (State of Colorado District Court, Water Division Four, Case Number 01 CW 05), signed on January 8, 2009.

A final report which outlines flow recommendations for the San Juan River (San Juan Flow Recommendations) below Navajo Dam was completed by the San Juan Recovery Program in May 1999 after a seven-year research period.[11] The purpose of the report was to provide flow recommendations for the San Juan River that promote the recovery of the endangered Colorado River pikeminnow and razorback sucker, maintain important habitat for these two species as well as the other native species, and provide information for the evaluation of continued water development in the basin.

In 2006, Reclamation completed a NEPA process on the implementation of operations at Navajo Dam that meet the San Juan Flow Recommendations, or a reasonable alternative to them. The ROD for the Navajo Reservoir Operations Final EIS was signed by the Regional Director of Reclamation's Upper Colorado Region on July 31, 2006.

The San Juan Flow Recommendations called for a seven-day spring peak release of 5,000 cfs from Navajo Reservoir in 2009. The spring peak release began on May 26, 2009, with a release of 2,000 cfs ramping up to a release rate of 5,000 cfs reached on June 2, 2009, and maintained through June 7, 2009. The rampdown began on June 8, 2009, and the base summer release rate of 500 cfs was implemented on June 13, 2009.

In 2007, a two-year agreement was developed among major users to limit their water use to the rates/volumes indicated in the agreement.[12] The 2007-2008 agreement was similar to the agreements that were developed in 2003, 2004, 2005, and 2006. Ten major water users (the Jicarilla Apache and Navajo Nations, Hammond Conservancy District, Public Service Company of New Mexico, City of Farmington, Arizona Public Service Company, BHP-Billiton, Bloomfield Irrigation District, Farmers Mutual Ditch, and Jewett Valley Ditch) endorsed the recommendations. The recommendations included limitations on diversions for 2007-2008, criteria for determining a shortage, and shortage-sharing requirements in the event of a water supply shortfall, including sharing of shortages between the water users and the flow demands for endangered fish habitat. In addition to the ten major water users, the New Mexico Interstate Stream Commission, the Bureau of Indian Affairs, the Service, and the San Juan Recovery Program all provided input to the recommendations. The recommendations were acknowledged by Reclamation and the New Mexico State Engineer for reservoir operation and river administration purposes. A new multi-year agreement covering 2009 through 2012, similar to past years' agreements, has been executed.

e. Lake Powell

Reservoir storage in Lake Powell increased significantly in water year 2009. On October 1, 2008, the beginning of water year 2009, reservoir storage in Lake Powell was 60 percent of capacity at elevation 3,626.9 feet, or 14.51 maf in storage. Observed inflows to Lake Powell during water year 2009 were below average (85 percent of average); however, Lake Powell storage increased by 0.95 maf and ended the water year (September 30, 2009) at 64 percent of capacity at elevation 3,635.4 feet, or 15.46 maf in storage.

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[11] Flow Recommendations for the San Juan River, May 1999.

[12] Recommendations for San Juan River Operations and Administration for 2007 and 2008, December 15, 2006.

Based on the August 2008 24-Month Study projection of the January 1, 2009, reservoir elevation at Lake Powell and in accordance with Section 6.B (Upper Elevation Balancing Tier) of the Interim Guidelines, the annual release volume from Glen Canyon Dam in 2009 was initially scheduled to be 8.23 maf. Although the projected operations in August 2008 and in subsequent months projected that equalization was likely to occur, the April 24-Month Study for 2009 projected the September 30, 2009, Lake Powell elevation to be 3,637.13 feet, which was below the Equalization Level for water year 2009 (3,639.0 feet). Consistent with Section 6.B.3 of the Interim Guidelines, this condition did not trigger Section 6.A (Equalization Tier) of the Interim Guidelines to govern the operation of Glen Canyon Dam for the remainder of water year 2009. For this reason, the annual release volume during water year 2009 from Glen Canyon Dam was maintained at 8.23 maf.

April through July unregulated inflow to Lake Powell in water year 2009 was 7.804 maf, or 98 percent of average. Lake Powell reached a seasonal peak elevation of 3,642.3 feet, 57.7 feet below full pool, on July 13, 2009.

In addition to a spring high flow test conducted in March 2008, a five-year period of steady flows in September and October of each year is being implemented during the period from 2008 through 2012 with flows in accordance with the 1997 Glen Canyon Dam Operating Criteria (see Table 9) occurring during the other months of the year (November through August). A Final Biological Opinion on the Operation of Glen Canyon Dam was issued on February 27, 2008, and a final Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) were issued on February 29, 2008.

Table 9
Glen Canyon Dam Release Restrictions
(1997 Glen Canyon Dam Operating Criteria)

Parameter	(cfs)	(cms)	Conditions
Maximum Flow[13]	25,000	708	
Minimum Flow	5,000	142	7:00 p.m. to 7:00 a.m.
	8,000	227	7:00 a.m. to 7:00 p.m.
Ramp Rates			
Ascending	4,000	113	per hour
Descending	1,500	43	per hour
Daily Fluctuations[14]	5,000 / 8,000	142 / 227	

In September and October of 2009, a test of steady flows (steady daily releases), as described in the EA, was conducted consistent with Reclamation's February 29, 2008, decision.

[13] May be exceeded during beach/habitat-building flows, habitat maintenance flows, or when necessary to manage above average hydrologic conditions.

[14] Daily fluctuations limit is 5,000 cfs for months with release volumes less than 0.600 maf; 6,000 cfs for monthly release volumes of 0.600 to 0.800 maf; and 8,000 cfs for monthly release volumes over 0.800 maf.

Steady flows of 10,000 cfs were made during this two-month period in 2009. In 2010, steady flows will be repeated during September and October.

The ten-year total flow of the Colorado River at Lee Ferry[15] for water years 2000 through 2009 is 85.9 maf. This total is computed as the sum of the flow of the Colorado River at Lees Ferry, Arizona, and the Paria River at Lees Ferry, Arizona, surface water discharge stations which are operated and maintained by the United States Geological Survey.

I. FISH AND WILDLIFE

The Upper Colorado River Endangered Fish Recovery Program is in its 21st year of implementation. The program is a cooperative effort among program participants and stakeholders including the states of Colorado, New Mexico, Utah, and Wyoming; representatives from the water development, hydroelectric consumer, and environmental communities; Native American tribes and nations including the Jicarilla Apache, Navajo, Southern Ute Indian, and Ute Mountain Ute Indian; and affected federal agencies including the U.S. Fish and Wildlife Service, Western Area Power Administration, National Park Service, Bureau of Indian Affairs, Bureau of Land Management, and Bureau of Reclamation. The intent of the program is to recover the endangered Colorado River fish species (humpback chub, bonytail, Colorado pikeminnow, and razorback sucker) while the states continue to develop their Colorado River Compact entitlements. Program actions provide Endangered Species Act compliance for more than 1,600 federal, tribal, and non-federal water projects.

The Upper Colorado Recovery Program is one of the oldest basinwide recovery efforts and exemplifies successful cooperation among diverse stakeholders to recover endangered species while developing water and power projects. The program provides for collaborative problem solving and proactive efforts that reduce costly litigation. Due to its success, the program has served as a model for other similar programs in the West including the San Juan River Basin Recovery Implementation Program on the San Juan River in Colorado, New Mexico, and Utah; the Middle Rio Grande Endangered Species Act Collaborative Program on the Rio Grande in New Mexico; and the June Sucker Recovery Implementation Program on the Provo River/Utah Lake system in Utah. The Upper Colorado River Endangered Fish Recovery Program also served as a model for the Lower Colorado River Multi-Species Conservation Program.

The San Juan River Basin Recovery Implementation Program is ongoing in the San Juan River Basin with participation from the states of Colorado and New Mexico, four Native American tribes, the Bureau of Land Management, Reclamation, the U.S. Fish and Wildlife Service, and the Bureau of Indian Affairs. The goal of the program is to protect and recover the native fish communities in the San Juan River while providing for continued water development consistent with state and federal laws.

As a result of activities being conducted by both the Upper Colorado River Endangered Fish Recovery Program and the San Juan River Basin Recovery Implementation Program (Programs), the Colorado pikeminnow and humpback chub are establishing self-sustaining populations. Aggressive efforts are being made to stock sufficient numbers of Colorado pikeminnow, razorback

[15] A point in the mainstream of the Colorado River one mile below the mouth of the Paria River.

suckers, and bonytail chubs that will provide the basis for self-sustaining populations leading to down-listing and de-listing of the species. Capital projects constructed include fish ladders, fish screens, hatcheries, levee breeches, storage reservoirs, and irrigation system upgrades. Existing storage facilities are being re-operated to enhance flow regimes. To date, the Programs have served as the reasonable and prudent alternative for many water projects, depleting more than 3 million acre-feet of water annually while avoiding Endangered Species Act related litigation.

Currently, P.L.106-392 authorizes the Bureau of Reclamation to accept cost sharing for construction of capital projects including fish passages, fish screens, hatcheries, floodplain and instream habitat, and the enlargement of an existing reservoir. Through fiscal year 2010, the Programs will have expended $104 million for capital projects and acquisition of habitat leading to recovery of the four listed fish species. Authorization for Reclamation's support for capital construction was due to expire on September 30, 2010. Due to the sunset date of the legislation and success and strong support of and for these Programs, there has been a concerted effort on the part of many of the stakeholders to develop legislation to reauthorize these Programs. In March 2009, as part of P.L. 111-11, the authority to expend funds for capital projects was extended through fiscal year 2023 and the cost ceiling was increased by $27 million. Legislation has also been introduced in the House and Senate (H.R. 2288 and S.1453) to extend authority to use power revenues for base funding through 2023. There appears to be strong support for this legislation from the Programs' non-federal stakeholders and a legitimate need exists for this additional authority.

J. APPROPRIATIONS OF FUNDS BY THE UNITED STATES CONGRESS

The funds appropriated for fiscal year 2008 for construction of the CRSP, participating projects, and recreational and fish and wildlife activities totaled $65,175,000. Recreational and fish and wildlife activities received a total of $4,640,000.

In fiscal year 2008, appropriations for Reclamation's Colorado River Basinwide Salinity Control Program totaled $7.97 million, with $18 million for the Natural Resources Conservation Service's Colorado River Basin Salinity Program.

Table 10 is a summary of action by the 110th Congress pertaining to appropriations of funds for the construction program of the CRSP and participating projects.

Table 11 shows the total funds (rounded to the nearest $1,000) approved by the United States Congress for the CRSP and participating projects and chargeable against the limitations of various authorizing Acts (P.L. 485, 84th Congress, CRSP Act, as amended in 1972 by P.L. 32-370 and in 1988 by P.L. 100-563; P.L. 87-485, San Juan-Chama and Navajo Indian Irrigation Projects Act; P.L. 88-568, Savery-Pot Hook, Bostwick Park, and Fruitland Mesa Projects Act; and P.L. 90-537, Colorado River Basin Project Act).

Table 10
Colorado River Storage Project
Fiscal Year 2009 Program

Project and State	Budget Request	House Allowance	Senate Allowance	P.L. 111-8 March 11, 2009
Construction Program				
CRSP Participating Projects				
Animas-La Plata – Colorado	$50,000,000	$50,000,000	$50,000,000	$49,992,000
Bonneville Unit – Utah	0	0	0	0
Initial Units, CRSP	110,000	110,000	110,000	110,000
TOTAL – Upper Colorado River Basin Fund	$50,110,000	$50,110,000	$50,110,000	$50,102,000
Recreational and Fish and Wildlife Facilities (Section 5 & 8)				
Recreational Facilities	610,000	610,000	610,000	551,000
Fish and Wildlife Facilities	0	0	0	0
	$610,000	$610,000	$610,000	$551,000
TOTAL – Colorado River Storage Project	$50,720,000	$50,720,000	$50,720,000	$50,653,000

Table 11
Appropriations Approved by Congress for the Colorado River Storage Project and Participating Projects

Fiscal Year	Amount
1957	$ 13,000,000
1958	35,142,000
1959	68,033,335
1960	74,459,775
1961	58,700,000
1962	52,534,500
1963	108,576,000
1964	94,036,700
1965	55,800,000
1966	45,328,000
1967	46,648,000
1968	39,600,000
1969	27,700,000
1970	25,740,000
1971	24,230,000
1972	27,284,000
1973	45,770,000
1974	24,426,000
1975	22,967,000
1976	53,722,000
1977	55,200,000
1978	67,051,000
1979	76,799,000
1980	81,502,000
1981	125,686,000
1982	130,063,000
1983	132,942,000
1984	161,104,000
1985	163,503,000
1986	97,412,000
1987	110,929,000
1988	143,143,000
1989	174,005,000
1990	163,653,000
1991	145,063,000
1992	92,093,000
1993	69,333,000
1994	46,507,000
1995	23,272,000
1996	27,049,000
1997	22,410,000
1998	17,565,000
1999	4,655,000
2000	2,000,000
2001	2,000,000
2002	16,000,000
2003	35,000,000
2004	55,640,000
2005	57,512,000
2006	64,320,000
2007	69,815,000
2008	65,175,000
2009	50,653,000
TOTAL	**$3,492,751,000**
Plus: Navajo Indian Irrigation Project Appropriations (funds transferred to Reclamation only)	589,574,000
TOTAL APPROPRIATIONS	**$4,082,325,000**

Exclusive of non-reimbursable funds for fish and wildlife, recreation, etc., under Section 8 of Public Law 485, 84th Congress, and all underfinancing and rescission actions.

COLORADO RIVER BASIN
SALINITY CONTROL PROGRAM

(Information relative to the Colorado River Basin Salinity Control Program in the Colorado River Basin has been obtained from the United States Department of the Interior, Bureaus of Reclamation and Land Management, and the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). Additional information may be obtained at http://www.usbr.gov/uc/progact/salinity/index.html.

Title II of the Colorado River Basin Salinity Control Act, P.L. 93-320 (approved June 24, 1974), directs the Secretary of the Interior to expedite the investigation, planning, and implementation of the salinity control program. The program objective is to treat salinity as a basinwide problem in order to maintain salinity concentrations at or below 1972 levels in the lower mainstem of the river while the Basin States continue to develop their compact apportioned waters. Specifically, the Act authorizes the construction, operation, and maintenance of four salinity control projects (Paradox Valley, Grand Valley, Las Vegas Wash, and Crystal Geyser Units) and the expeditious completion of planning reports for 12 other projects. It also requires 25 percent reimbursement of the costs from the Basin Funds. The Secretary of the Interior, Secretary of Agriculture, and Administrator of the Environmental Protection Agency are directed to cooperate and coordinate their activities to meet the program objectives.

P.L. 98-569, signed into law on October 30, 1984, amends P.L. 93-320. This law amends the original salinity control program by authorizing construction of additional units by Reclamation and deauthorizing Crystal Geyser because of poor cost effectiveness. The Secretary of Agriculture is directed to establish a major voluntary on-farm cooperative salinity control program. The new units require 30 percent reimbursement of the costs from the Basin Funds. The authorizing legislation provides for cost sharing and technical assistance to participants for planning and installing needed salinity reduction practices, including voluntary replacement of incidental fish and wildlife values foregone. Participants pay at least 25 percent of the costs to install salinity reduction and wildlife habitat practices. P.L. 98-569 also directs the Bureau of Land Management (BLM) to develop a comprehensive program for minimizing salt contributions from the 48 million acres of basin lands that it administers.

P.L. 104-20 was signed into law on July 28, 1995. This law amends the Salinity Control Act to authorize a new approach to salinity control for Reclamation. Past authorities were unit specific. This amendment authorized Reclamation to pursue salinity control anywhere in the basin. The amendment increased Reclamation's appropriation ceiling by $75,000,000 to continue its ongoing efforts to control salinity.

The Federal Agriculture Improvement and Reform Act of 1996 (P.L. 104-127) was signed into law April 4, 1996. This Act combines the USDA's salinity control program and other programs into the Environmental Quality Incentives Program. The Act further amends the Salinity Control Act to authorize the Secretary of the Interior the option to expend funds available in the Basin Funds to carry out cost-shared salinity measures consistent with the 30 percent reimbursement authorized by P.L. 98-569. This cost-sharing option is available for both the USDA and Reclamation programs.

P.L. 106-459 was signed into law on November 7, 2000. This law amended the Salinity Control Act to increase the appropriation ceiling by an additional $100 million.

P.L. 106-459 also requires the Bureau of Land Management to prepare a report to Congress on the status of implementation of its comprehensive program for minimizing salt contributions to the Colorado River from lands administered by the Bureau of Land Management as directed by Section 203(b)(3) of P.L. 98-569 (1984).

P.L. 107-171, the Farm Security and Rural Investment Act of 2002, authorized and amended the Environmental Quality Incentives Program that had been added to the Food Security Act of 1985 by P.L. 104-127. Although P.L. 107-171 expired in 2007, the Environmental Quality Incentives Program maintains its authorization through 2012.

Section 2806 of P.L. 110-246, the Food, Conservation, and Energy Act of 2008, signed into law on June 18, 2008, amends P.L. 93-320 and establishes the Basin States Program (BSP). Amounts from the Basin Funds used for cost-sharing, not just those associated with the NRCS salinity program, will now be administered through the BSP. The Act requires a planning report to be submitted to Congress before Reclamation implements the BSP. Reclamation, with input from the Colorado River Basin Salinity Control Advisory Council, prepared a planning report that was submitted to Congress in September 2009.

A. PROGRAM STATUS

1. Bureau of Reclamation and USDA-Natural Resources Conservation Service Salinity Control Program

Reclamation's Basinwide Salinity Program is currently being implemented under the authorities provided in 1995 by P.L. 104-20. Through this program projects have been awarded to various non-federal entities through a competitive Request for Proposal (RFP) process. Projects have been ranked based on cost effectiveness and performance risk factors by a committee chaired by the program manager along with representatives from the Salinity Forum and Reclamation area offices. Individual projects are constructed by local entities through cooperative agreements with Reclamation. Solicitations (RFPs) have been issued by Reclamation in 1996, 1997, 1998, 2001, 2004, and 2006. To date, a total of 36 project contracts have been awarded totaling over $170 million.

Beginning in 2008, instead of soliciting proposals through the RFP process, they are solicited through a process for financial assistance agreements called Funding Opportunity Announcements (FOA). In 2009, $11.1 million of funds from the American Recovery and Reinvestment Act (ARRA or "stimulus") was received into Reclamation's Basinwide Program. A FOA was released in March and closed in May. Applications were received totaling more than $100 million worth of salinity projects. Applications were ranked based on cost effectiveness and performance risk factors by a committee chaired by the Program Manager along with representatives from the Salinity Forum and Reclamation area offices. Five projects were selected to utilize the $11.1 million of ARRA funds plus about $4.8 million in cost sharing from the Basin Funds. Agreements and funding were awarded and the projects are expected to be completed by September 30, 2010. Another FOA (non-ARRA) is anticipated in the fall of 2010.

In 2009, $6.166 million of appropriations was received into Reclamation's Basinwide Program and $2.6 was received from the Basin Funds for a total program amount of $8.8 million. This amount was expended through eight ongoing salinity projects located in Colorado, Utah, and Wyoming.

Subsection 208(b) of the Salinity Control Act authorized the sum of $125,100,000 to be appropriated for construction of salinity control units. The appropriation ceiling was based on April 1973 prices and the Salinity Control Act provided for indexing of the cost ceiling. Section 208(c) of the Salinity Control Act was amended by the 1995 and 2000 amendments authorizing an additional $175,000,000 to be appropriated. As of September 30 2009, Reclamation calculates the appropriation ceiling, utilizing cost indices, to be $615,271,000; total expenditures are $411,261,000; and the remaining ceiling balance is $204,010,000.

The USDA's Environmental Quality Incentives Program (EQIP), that currently provides the vehicle for USDA salinity control activities in the Colorado River Basin, is administered by the Natural Resources Conservation Service. In fiscal year 2009, $13.1 million was obligated into new EQIP contracts with individuals to install salinity control measures. An additional $5.4 million was used to provide technical assistance (planning, engineering design, construction inspections, etc.) to these individuals. Cost sharing from the Basin Funds is also available to assist producers. In 2009, approximately $7.9 million was provided from the Basin Funds. Salinity control is currently being implemented in the following project areas:

a. Grand Valley Unit, Colorado – Implementation has been underway on this unit since 1979. The application of salinity control measures and wildlife habitat replacement practices continues. Reclamation has completed its planned project to line and pipe major portions of the irrigation delivery system. In 2009, producers installed sprinkler systems on 198 acres, improved surface systems on 349 acres, and installed drip or micro-spray systems on 32 acres of irrigated lands. An increased number of producers are installing sprinkler systems and the orchard and vineyard operators, in particular, are installing more drip and micro-spray irrigation systems which greatly reduce salt loading. Currently, over 94,000 tons of on-farm salt control occurs annually due to the salinity control program. The Grand Valley project is about 72 percent completed. An additional area adjacent to and upstream from the Grand Valley Unit, drained by Plateau Creek, was initiated as a pilot salinity control project area using a new approach that provides financial incentives proportional to the amount of salt control. There are 15,000 to 20,000 acres that have the potential for implementation of salt control measures. Progress has been slow due to current economic conditions.

b. Lower Gunnison Basin Unit, Colorado – This is the largest of the USDA salinity control units and is located in Delta and Montrose counties. Over 171,000 acres are planned for treatment. Implementation was initiated in 1988 on this unit. The application of salinity reduction and wildlife habitat replacement practices continues to be an integral part of implementation of the Lower Gunnison Unit. In 2008, about 3,000 acres of improved irrigation systems were installed. The acreage was equally divided between sprinkler systems and surface systems with a small addition of a drip and micro-spray system. The project is about 53 percent complete and annually controls about 98,000 tons of salt. Reclamation has installed livestock watering systems to eliminate canal and lateral use during the winter months. Under its Basinwide Salinity Control authorities and the

National Irrigation Water Quality Program, Reclamation has funded the lining of a portion of the Uncompahgre Valley Water Users' irrigation delivery system. Data indicate that salinity improvements also reduce selenium loading.

c. McElmo Creek Unit, Colorado – Implementation was initiated on this unit in 1990. Application of salinity reduction and wildlife habitat replacement practices continues to be implemented in this area, but the NRCS is serving more small agricultural units as urbanization is occurring. In 2008, 320 acres of sprinkler systems and 444 acres of surface systems were installed, bringing the annual on-farm salt control to about 25,000 tons. Reclamation's salinity control activities were combined into the construction of the Dolores Project (which has been completed).

d. Uintah Basin Unit, Utah – Implementation of the USDA on-farm portion of this unit started in 1980. Side-roll and center pivot sprinkler systems predominate in the project area. In 2009, sprinkler systems were installed on 2,600 acres, surface systems were installed on 33 acres, and one drip system was installed on 7 acres. Landowner participation has exceeded expectations to such an extent that the original salt control goal has been nearly attained. Currently, over 140,000 tons of annual salt control occurs on the irrigated agricultural lands making the Uintah Basin Unit the largest project in terms of total control. Starting in 1997, Reclamation's Basinwide Program has been replacing earthen canals and laterals with pipelines to provide gravity pressure for on-farm sprinkler systems.

e. Big Sandy River Unit, Wyoming – On-farm salinity control implementation has been underway on this unit since 1988. The original goal for salinity reduction is 67 percent complete and wildlife habitat replacement is complete. Consequently, more than 56,000 tons of annual salt control has been achieved. In this project, where practical, farmers have converted nearly all of the surface flood irrigation to low-pressure sprinkler irrigation systems for salinity control. The Eden Valley Irrigation Company is replacing a significant portion of the canal delivery system with buried pipeline. Phase 1 was initiated in 2007 and Phase 2 is under construction. Completion of these phases may allow further implementation of on-farm system improvements to occur.

f. Price-San Rafael Unit, Utah – The Bureau of Reclamation and the Soil Conservation Service (now NRCS) issued a joint environmental impact statement for the Price-San Rafael Rivers Salinity Control Unit in December of 1993. The Record of Decision indicated that more than 36,000 acres of irrigated lands would receive salt control measures and that several hundred miles of earthen canals and laterals would be replaced with buried pipelines. Each agency has proceeded to implement control measures as its funding and authority allows. Some of the larger units (Ferron, Wellington, Moore Group, Carbon Canal) have been substantially implemented; both on-farm and off-farm. The Huntington-Cleveland area, which constitutes nearly half of the Unit, is currently being implemented. At the end of 2009, nearly 58,300 tons of on-farm salt control (40 percent of the goal) had been achieved.

g. San Juan River Unit, New Mexico – The USDA has completed salinity investigations on irrigated lands along the San Juan River in New Mexico from the vicinity of Fruitland westward to Cudei. This area consists of approximately 8,400 irrigated acres within the boundaries of the Navajo Nation. Findings from the investigation were published in a verification report in July 1993. The findings indicated that irrigation on the unit is contributing to increased salt loading in the San

Juan River that ultimately flows into the Colorado River. Reclamation and the NRCS are working with the San Juan River Dineh Water Users, Inc., to develop a pilot salinity control project that would pipe a significant lateral and provide on-farm irrigation improvements and salinity control measures with 8 to 10 Navajo farmers.

h. Hammond Project, New Mexico – The Hammond Project was authorized as one of the initial participating projects of the CRSP and was constructed in the early 1960s. The project is located in northeastern New Mexico along the southern banks of the San Juan River opposite the towns of Blanco, Bloomfield, and Farmington, New Mexico. The Hammond Conservancy District, under a cooperative agreement with the Bureau of Reclamation, has constructed the Hammond Salinity Project under the authority of the Basinwide Program. The Hammond Conservancy District has concrete lined and piped approximately 26 miles of the irrigation delivery system in the project area. It is estimated that the lining will help remove at least 27,700 tons to as much as 68,560 tons of salt from the San Juan River.

i. Mancos Valley Unit, Colorado - The Mancos Valley Project, initiated in 2004, is bounded by the San Juan National Forest to the north, Mesa Verde National Park to the east, and the Southern Ute Indian Reservation to the south. The project is now in its third full year of implementation. The project will reduce salt loading by 15,500 tons by increasing the irrigation application efficiency on 5,400 acres and by reducing seepage in 27 ditches. The total estimated project cost is $12,500,000. Currently, about 3,400 tons of salt have been controlled out of a goal of 12,000 tons.

j. Muddy Creek Unit, Utah – In 2003-2004, the Natural Resources Conservation Service conducted planning activities for salt control in cropland areas irrigated from Muddy Creek near the town of Emery. The Muddy Creek Project was officially approved in 2005. Plans are to install high efficiency sprinkler irrigation systems on some 6,000 acres of poorly irrigated cropland which will result in some 12,000 tons of annual salt control. The total estimated project cost would be approximately $11.6 million. While nearly $1 million in applications have been received, the local irrigation company needs to improve the inlet conditions to make a large piped distribution system feasible. A large settling and water control basin is being planned with technical and financial assistance from the U.S. Army Corps of Engineers. It is hoped that construction of the control basin can begin within the near future to allow the salinity project to move forward.

k. Silt Area, Colorado – The NRCS conducted planning and evaluation of the irrigated cropland in the area around the community of Silt and determined that cost effective salt control could be implemented. Project activity was approved for fiscal year 2006 and several contracts to implement salinity control measures have been developed. When fully implemented, the Silt Project will control about 4,000 tons of salt annually. About 2,441 tons of salt control have been achieved through 2009, making the project about 61 percent complete.

l. Tropic Area, Utah – The project is a relatively small project in the upper Paria drainage located near Tropic, Utah. The project consists of replacing approximately 5.5 miles of open irrigation canal with approximately 4 miles of pressure pipeline with funding from Reclamation's Basinwide Salinity Control Program. Reclamation has approved National Environmental Policy Act compliance documentation and a Habitat Replacement Plan. Construction activities by the Tropic and East Fork Irrigation Company associated with this project were completed in 2008.

m. Manila-Washam, Utah – In 2006, a salinity control plan and environmental assessment was completed by the NRCS on irrigated lands near the community of Manila, Utah, along the border with Wyoming. The project would ultimately treat about 11,000 acres and result in reduction of salt loading by 25,000 tons annually. Landowner interest has been high in the project area and a significant number of applications for financial assistance have been received. Through 2009, over 5,700 tons of salt control had been implemented, which is 33 percent of the salt reduction goal.

Additional projects are being assessed and evaluated for salinity control implementation in the following locations: Green River, Utah; Blacks Fork (of the Green River) near Lyman, Wyoming, and the Henrys Fork of the Green River near the communities of Burnt Fork and McKinnon, Wyoming; and in the Plateau Creek, White River, and Yampa River drainages in Colorado. These evaluations are in various stages of completion and might ultimately result in an additional 35,000 acres of on-farm salinity control.

2. Bureau of Land Management Salinity Control Program

The Bureau of Land Management remains committed to its role in reducing the contribution of salts to the Colorado River system from public lands. The agency has undertaken this responsibility by designating a full-time salinity coordinator that is housed with the Bureau of Reclamation along with the USDA NRCS salinity coordinator. Salinity is affected by almost all land management decisions that are made. Progress in salt reduction is achieved through efforts to minimize the impacts of grazing, protect riparian areas, reduce off-road vehicle impacts, conduct prescribed burns and reseedings, and generally manage vegetative cover and reduce erosion on public lands.

The natural salt load from the Colorado River at Lees Ferry, Arizona, is estimated to be about 4.4 million tons per year. Contributions from BLM lands are included in this estimate. Surface runoff from BLM-administered lands above Lees Ferry is estimated to contribute about 700,000 tons per year, or about 16 percent. The remaining 3.7 million tons are contributed primarily by groundwater inflow and saline springs as well as runoff from federal, tribal, state, and private land.

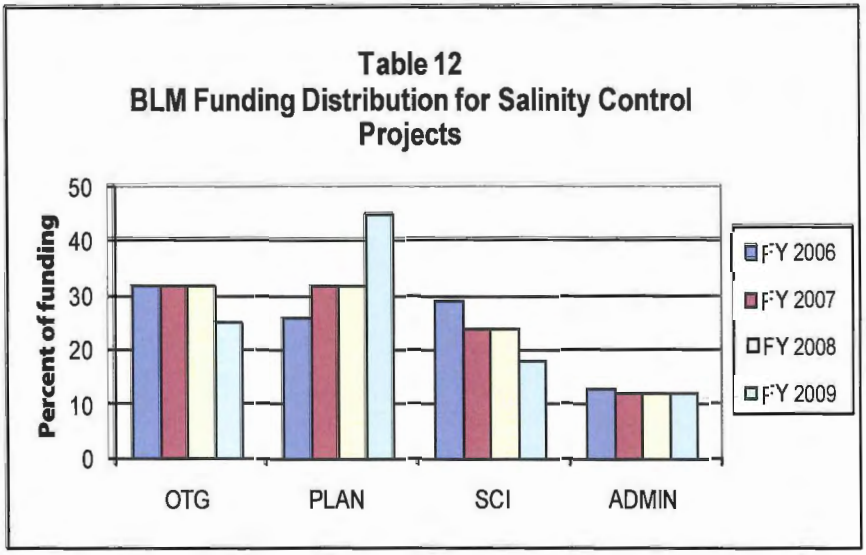
It is difficult to estimate the actual reduction in the salinity of the Colorado River that may be attributed to BLM management activities. There are many physical, chemical, and biological processes that affect the movement of salt from an upland project area to the Colorado River or a perennial tributary to the Colorado River. As the distance between a project and the nearest perennial flow increases, it quickly becomes difficult to quantify the amount of salt that would reach the perennial flow and the amount of time required for the salt to arrive at the perennial flow. For these reasons, the BLM estimates the amount of salt that is retained on the project site by

management actions. It is assumed that the salt retained would have been moved off site by surface runoff if the project had not been implemented.

In a step to strengthen the reporting effort, during fiscal year 2003 the BLM created a new salinity coordinator position. The salinity coordinator began work in fiscal year 2004. A restructuring of the program took place in fiscal year 2006 and plans were finalized and communicated to BLM offices that compete for salinity funding. Projects in areas with higher potential for salt loading are being targeted for funding. During fiscal years 2007 through 2009, the new program to track and report dollars spent was repeated. The focus in fiscal year 2009 was to capture more projects, either ongoing or new, that result in salt control savings and attempt to quantify those savings. The BLM salinity coordinator is actively working with colleagues in the Bureau of Reclamation and Natural Resources Conservation Service to control salt loading in the Colorado River Basin.

For fiscal year 2009, $800,000 (same as fiscal year 2008) was allocated for BLM's salinity control program. Funding goes to four major areas: (1) program administration (ADMIN), (2) planning (PLAN), (3) science (SCI), and (4) on-the-ground implementation projects (OTG). See Table 12 below for BLM funding distribution for salinity control projects for fiscal years 2006-2009.

Table 12
BLM Funding Distribution for Salinity Control Projects



Tons of salt retained cannot be calculated for program administration, planning, and science projects. However, one of the goals for the restructured program in fiscal year 2006 was to develop an accounting system to begin calculating more reliable "tons of salt retained" for on-the-ground implementation projects (see Table 13 below).

Table 13
Tons of Salt Retained
Fiscal Years 2006-2009

Project Category	Salt retained in tons/year[1]			
	FY 2006	FY 2007	FY 2008	FY 2009
Point Source[2]	14,600	14,600	14,600	14.600
Nonpoint Source[3]	3,300	26,000	81,900	71,900
All Projects	17,900	40,600	96,500	86,500

[1] Rounded to the nearest 100 tons.
[2] BLM's Report to Congress through the year 2002, plus the two plugged wells in Utah.
[3] Amount that could be estimated, i.e., this is possibly a minimum.

Upper Colorado River Commission

APPENDIX A

ANNUAL FINANCIAL REPORT

For the Year Ended
June 30, 2009

Ulrich & Associates, P.C.
Certified Public Accountants

UPPER COLORADO RIVER COMMISSION

Annual Financial Report

June 30, 2009

Table of Contents

Ulrich & Associates, PC
Certified Public Accountants

INDEPENDENT AUDITORS' REPORT

The Commissioners of the
Upper Colorado River Commission
Salt Lake City, Utah

We have audited the accompanying financial statements of the governmental activities of Upper Colorado River Commission as of and for the year ended June 30, 2009, which comprise the Commission's basic financial statements as listed in the table of contents. These financial statements are the responsibility of Upper Colorado River Commission's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards,* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities of Upper Colorado River Commission as of June 30, 2009, and the respective changes in financial position thereof for the year then ended in conformity with accounting principles generally accepted in the United States of America.

The Management's Discussion and Analysis on pages 4-6, is not a required part of the basic financial statements but is supplementary information required by the Governmental Accounting Standards Board. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the supplementary information. However, we did not audit the information and express no opinion on it.

Members of Utah Association of CPA's | American Institute of CPA's

Charles E. Ulrich, CPA | Michael E. Ulrich, CPA
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Our audit was conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedule of cash receipts and disbursements, and the supplemental schedule of expenses – budget to actual, are presented for purposes of additional analysis and are not a required part of the basic financial statements of Upper Colorado River Commission. Such information has been subjected to the auditing procedures applied in the audit of the general purpose financial statements and, in our opinion, is fairly presented in all material respects in relation to the general purpose financial statements taken as a whole.

Ulrich & Associates, P.C.

August 13, 2009

Management Discussion and Analysis

This discussion and analysis is intended to be an easily readable analysis of the Upper Colorado River Commission (the Commission) financial activities based on currently known facts, decisions or conditions. This analysis focuses on current year activities and should be read in conjunction with the financial statements that follow.

Report Layout

Besides this Management's Discussion and Analysis (MD&A), the report consists of government-wide statements, fund financial statements, and the notes to the financial statements. The first two statements are condensed and present a government-wide view of the Commission's finances. Within this view, all Commission operations are categorized and reported as governmental activities. Governmental activities include basic services and administration. The Commission does not have any business-type activities. These government-wide statements are designed to be more corporate-like in that all activities are consolidated into a total for the Commission.

Basic Financial Statements

The Statement of Net Assets focuses on resources available for future operations. In simple terms, this statement presents a snap-shot view of the assets the Commission, the liabilities it owes and the net difference. The net difference is further separated into amounts restricted for specific purposes and unrestricted amounts. For the first time, governmental activities are reported on the accrual basis of accounting.

The Statement of Activities focuses gross and net costs of the Commission's programs and the extent to which such programs rely upon general revenues. This statement summarizes and simplifies the user's analysis to determine the extent to which programs are self-supporting and/or subsidized by general revenues.

The notes to the financial statements provide additional disclosures required by governmental accounting standards and provide information to assist the reader in understanding the Commission's financial condition

The MD&A is intended to explain the significant changes in financial position and differences in operation between the current and prior years. Significant changes from the prior year are explained in the following paragraphs.

Commission as a Whole

Government-wide Financial Statements

A condensed version of the Statement of Net Assets at June 30, 2009 follows:

Net Assets at Year-end

		2009	2008
Cash & investments	$	422,476	409,389
Receivables		-	-
Capital assets (net)		56,555	57,861
Total assets		479,031	467,250
Other liabilities		48,066	38,300
Total liabilities		48,066	38,300
Net assets:			
Invested in capital assets		56,555	57,861
Unrestricted		374,410	371,089
Total net assets	$	430,965	428,950

During the year ended June 30, 2009 the change in net assets occurred in capital assets. The commission also purchased office equipment (computer & audio equipment).

A condensed version of the Statement Activities follows:

Governmental Activities
For the year ended June 30

Revenues		2009	2008
Program Revenues			
Charges for Services	$	939	978
Assessments		329,000	329,000
General Revenues			
Interest		10,260	18,792
Total Revenues		340,199	348,770
Expenses			
Administration		338,184	322,822
Change in net assets		2,015	25,948
Beginning net assets		428,950	403,002
Ending net assets	$	430,965	428,950

The Commission had normal yearly increases in salary for employees. Health insurance for the employees also increased in the current year.

Capital Assets

At June 30, 2009 the Commission had $56,555 invested in capital assets, consisting primarily of a building and furniture & equipment. The change in capital assets during the year consisted of purchases of new computers.

Capital Assets at Year-end

	2009	2008
Land	$ 24,159	24,159
Building	79,827	79,827
Improvements	2,207	2,207
Furniture & equipment	73,407	70,450
Subtotal	179,600	176,643
Accumulated Depreciation	123,045	118,782
Capital assets, net	$ 56,555	57,861

Financial Contact

The Commission's financial statements are designed to present users (citizens, taxpayers, state governments) with a general overview of the Commission's finances and to demonstrate the Commission's accountability. If you have questions about the report or need additional financial information, please contact the Commission's secretary at 355 South 400 East, Salt Lake City, UT 84111.

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Basic Financial Statements

UPPER COLORADO RIVER COMMISSION

Statement of Net Assets

June 30, 2009

	Governmental Activities
ASSETS	
Cash & cash equivalents	$ 422,476
Capital assets:	
Land	24,159
Building	79,827
Improvements other than building	2,207
Furniture & equipment	73,407
Less: accumulated depreciation	(123,045)
Total Assets	479,031
LIABILITIES	
Accounts payable	6,573
Retirement payable	9,371
Total current liabilities	15,944
Noncurrent liabilities:	
Accrued compensated absences	32,122
Total noncurrent liabilities	32,122
Total Liabilities	48,066
NET ASSETS	
Invested in capital assets	56,555
Unrestricted	374,410
Total Net Assets	430,965
Total Liabilities and Net Assets	$ 479,031

See accompanying notes to the basic financial statements

UPPER COLORADO RIVER COMMISSION

Statement of Activities

For the year ended June 30, 2009

		Program Revenues		Net Revenue and Changes in Net Assets
	Expenses	Charges for services	Operating grants and contributions	Total
Governmental activities:				
General administration	$ 338,184	939	329,000	(8,245)
Total governmental activities	$ 338,184	939	329,000	(8,245)
General revenues:				
Interest				10,260
Total General revenues				10,260
Change in Net Assets				2,015
Net Assets - Beginning of Year				428,950
Net Assets - Ending of Year				$ 430,965

See accompanying notes to the basic financial statements

UPPER COLORADO RIVER COMMISSION

Balance Sheet
Governmental Funds
June 30, 2009

	General Fund
Assets	
Petty cash	$ 25
Cash in bank	25,650
Utah public treasurers' investment pool	396,801
Total Assets	422,476
Liabilities	
Accounts payable	6,573
Accrued liabilities	9,371
Accrued benefits	1,492
Total Liabilities	17,436
Fund Balance	
Unreserved	405,040
Total Liabilities and Fund Balance	$ 422,476

Reconciliation of the Statement of Net Assets to the Balance Sheet

Amounts reported for governmental activities in the statement of net assets are different because:	
Total fund balance reported above	$ 405,040
Capital assets used in governmental activities are not financial resources and, therefore, are not reported in the funds	56,555
Compensated absences are not due and payable in in the current period and therefore, are not reported in the funds	(30,630)
Net assets of governmental activities	$ 430,965

See accompanying notes to the basic financial statements

UPPER COLORADO RIVER COMMISSION

Statement of Revenues, Expenditures and Changes in Fund Balance Governmental Funds for the Year Ended June 30, 2009

	Budget	General Fund	Variance Favorable (Unfavorable)
Revenues:			
Assessments	$ 329,000	329,000	-
Interest	-	10,260	10,260
Waternews subscriptions & refunds	-	939	939
Total Revenues	329,000	340,199	11,199
Expenditures:			
Personal services	314,547	276,029	38,518
Travel	25,500	24,606	894
Current operating	34,900	31,545	3,355
Capital outlay	4,200	3,538	662
Contingencies	5,000	-	5,000
Total Expenditures	384,147	335,718	48,429
Excess of revenues over expenditures	(55,147)	4,481	59,628
Fund Balance - June 30, 2008	400,559	400,559	-
Fund Balance - June 30, 2009	$ 345,412	405,040	59,628

Reconciliation of the statement of Revenues, Expenditures and Changes in Fund Balances of Governmental Funds to the Statement of Activities

Net change in fund balance (as reported above)	$ 4,481
Governmental funds report capital outlays as expenditures. However, in the statement of activities, the cost of those assets is allocated over their estimated useful lives as depreciation expense. This is the amount by which depreciation exceeded capital outlays in the current period.	(1,306)
The expense for accrued compensated absences reported in the statement of activities does not require the use of current financial resources and, therefore, are not reported as expenditures in governmental funds.	(1,160)
Change in net assets of governmental activities (page 9)	$ 2,015

See accompanying notes to the basic financial statements

UPPER COLORADO RIVER COMMISSION

Notes to Basic Financial Statements
June 30, 2009

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Reporting entity

The Commission was formed pursuant to the terms of the Upper Colorado River Basin Compact on October 11, 1948, and consented to by the Congress of the Unites States of America by Act on April 6, 1949, as an administrative agency representing the Upper Division States of the Colorado Basin, namely Colorado, New Mexico, Utah, and Wyoming. The Commission consists of one commissioner representing each of the four states and one representing the United States of America. The activities of the commission are conducted for the purpose of promoting and securing agricultural and industrial development of the Upper Basin's water resources.

The commission has no component units that are included with this report.

B. Basis of Presentation - Fund Accounting

The accounting system is organized and operated on a fund basis. A fund is defined as a fiscal and accounting entity with a self balancing set of accounts, which are segregated for the purpose of carrying on specific activities or attaining certain objectives in accordance with special regulations, restrictions or limitations.

The Commission's funds are grouped into two broad categories and one generic fund type for financial statement presentation purposes. The general fund is the only governmental fund. The Commission has no proprietary funds or fiduciary funds.

C. Basis of Accounting

GOVERNMENT WIDE FINANCIAL STATEMENTS

The statement of net assets and the statement of activities display information about the Commission. These statements distinguish between activities that are considered governmental activities and those that are considered business-type activities.

The government-wide statements are prepared using the economic resources measurement focus and the accrual basis of accounting. This is the same approach used in the preparation of the proprietary fund financial statements but differs from the manner in which governmental fund financial statements are prepared. Therefore, governmental fund financial statements include a reconciliation with brief explanations to better identify the relationship between the government-wide statements and the statements for governmental funds.

The government-wide statement of activities presents a comparison between expenses and program revenues for the governmental activity. Direct expenses are those that are specifically associated with the service provided by the Commission. Program revenues include charges paid by recipients of the goods or services offered by the Commission and contributions that are restricted to meeting the operational or capital requirements of the Commission. Revenues which are not classified as program revenues are presented as general revenues. The comparison of program revenues and expenses identifies the extent to which the Commission is self financing.

FUND FINANCIAL STATEMENTS

Fund financial statements report detailed information about the Commission. The focus of governmental financial statements is on major funds rather than reporting funds by type. Each major fund is presented in a separate column. The only major fund is the general fund with no other nonmajor funds.

GOVERNMENTAL FUNDS

The Commission accounts its general fund using the modified accrual basis of accounting and the current financial resources measurement focus. Under this basis revenues are recognized in the accounting period in which they become measurable and available. Expenditures are recognized in the accounting period in which the fund liability is incurred, if measurable.

Revenue Recognition

In applying the susceptible to accrual concept under the modified accrual basis, the following revenue sources are deemed both measurable and available (i.e., collectible within the current year or within two months of year-end and available to pay obligations of the current period). This includes interest earnings and waternews subscriptions. Assessments from the four states are recorded as revenue in the year assessed to pay for operations or if received in advance, deferred until the year assessed.

Expenditure Recognition

The measurement focus of governmental fund accounting is on decreases in net financial resources (expenditures) rather than expenses. Most expenditures are measurable and are recorded when the related fund liability is incurred. Allocations of costs, such as depreciation, are not recognized in the governmental funds.

Capital Assets and Depreciation

All assets of the Commission are considered general capital assets. When purchased, such assets are recorded as expenditures in the governmental funds and capitalized (recorded and accounted for) in the General Capital Asset Account Group. The valuation basis for general capital assets are historical cost.

Depreciation of capital assets is computed and recorded by the straight-line method. Estimated useful lives of the various classes of depreciable capital assets are as follows: buildings, 30 years; improvements, 10 to 15 years; furniture and equipment, 3 to 15 years.

Unpaid Compensated Absences

According to Commission policy each employee accrues annual leave based on years of service with the commission. Employees may accumulate a maximum of 30 days of unused annual leave, which is paid in cash upon termination of employment. The Commission's secretary may grant additional carryover to employees provided that: (1) the employee requests the carryover in writing prior to June 30, and (2) the employee uses the additional carryover within 90 days of the start of the fiscal year.

The Obligation for Compensated Absences has been broken down into two components; current and non-current. The current portion is classified as part of the general fund and is an estimate of the amounts that will be paid within the next operating year. The non-current portion is maintained separately and represents a reconciling item between the fund and government-wide presentations.

Net Assets

Net assets is the difference between assets and liabilities. Net assets invested in capital assets, are capital assets less accumulated depreciation. The commission has no debt related to the acquisition of capital assets.

NOTE 2 COMPLIANCE AND ACCOUNTABILITY

Budgets

Annual budgets are prepared on the modified accrual basis of accounting and adopted as required by the compact. The Commission approves the annual budget in total and by major sub-items as identified in the statement of revenues, expenditures and changes in fund balance - budget and actual. The Executive Director has authority to transfer budget accounts within the sub-items with Commissioner approval required to transfer monies between expenditure categories.

Accounting and Reporting

The commission is not required to report to any individual state or federal agency. Financial reports are given to each commissioner and is review by them. The commission is exempt from federal income tax reporting under 501(c) (1) of the internal revenue code.

NOTE 3 DETAIL NOTES ON TRANSACTION ACCOUNTS

Cash and Cash Equivalents

The Commissioners have authorized the Commission to deposit funds in demand accounts at First Security Bank and deposit funds with the Utah Public Treasurers' Investment Pool.

As of June 30, 2009, the Commission had the following deposits and investments:

	Fair Value
Cash on deposit	$ 37,207
Utah Public Treasurers' Investment Pool	396,801
	$ 434,008

Interest rate risk. The Commission manages its exposure to declines in fair value by only investing in the Utah Public Treasurers Investment Fund.

Credit risk. As of June 30, 2009, the Utah Public Treasurer's Investment Fund was unrated.

Concentration of credit risk. The Commission's investment in the Utah Public Treasurer's Investment Fund has no concentration of credit risk.

Cash and Cash Equivalents (Continued)

Custodial credit risk - Deposits. In the case of deposits, this is the risk that in the event of a bank failure, the government's deposits may not be returned to it. As of June 30, 2009, none of the $37,207 balance of deposits was exposed to custodial credit risk because it was insured.

Custodial credit risk - Investments. For an investment, this is the risk that, in the event of the failure of the counterparty, the Commission will not be able to recover the value of its investments that are in the possession of an outside party. The Commission's investment in the Utah Public Treasurer's Investment Fund has no custodial credit risk.

Components of cash and investments (including interest earning deposits) at June 30, 2009, are as follows:

Cash on deposit	$ 25,675
Utah State Treasurer's Investment Pool	396,801
	$ 422,476

Capital Assets

Capital asset activity for the year ended June 30, 2009, is as follows:

	Balance at June 30, 2008	Additions	Disposals	Balance at June 30, 2009
Land	24,159	-	-	24,159
Building	79,827	-	-	79,827
Improvements	2,207	-	-	2,207
Furniture & Equipment	70,450	2,957	-	73,407
Totals at historical costs	176,643	2,957	-	179,600
Less accumulated depreciation				
Building	63,123	326	-	63,449
Improvements	2,207	-	-	2,207
Furniture & Equipment	53,452	3,937	-	57,389
Total accumulated depreciation	118,782	4,263	-	123,045
Capital assets, net	$ 57,861	(1,306)	-	56,555

NOTE 4 OTHER NOTES

Employee Retirement Plan

The Commission's employee pension plan is a 401(K) defined contribution plan which covers all of the present employees. The Commission contributes 7% of the employees' gross salaries. In addition, the Commission will match contributions made by employees up to a maximum of 3%. Accordingly, the maximum allowable contribution by the Commission is 10%. The employees are allowed to contribute up to the maximum allowed by law. The employer's share of the pension plan contribution for the year ended June 30, 2009 was $22,396, which includes $500 of administrative costs.

Risk Management

The commission is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; and natural disasters for which the government carries commercial insurance.

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Suplemental Schedules

UPPER COLORADO RIVER COMMISSION

Supplemental Schedule of Cash Receipts and Disbursements

Year ended June 30, 2009

Cash at June 30, 2008		$ 409,389
Cash Receipts:		
Assessments	329,000	
Interest	10,260	
Refunds	38	
Waternews Subscriptions	938	
		340,236
Cash Disbursements:		
Personal Services	271,105	
Travel	21,669	
Current Operating	30,837	
Capital Outlay	3,538	
Contingency	0	
		327,149
Cash at June 30, 2009		$ 422,476

UPPER COLORADO RIVER COMMISSION

Detail of Personal Services and Current Operating Expenditures - Budget to Actual (Accrual Basis)

Year ended June 30, 2009

	Budget	Actual	Favorable (Unfavorable) Variance
Summary of Personal Services with Budget Comparisons			
Executive director	$ 101,842	101,842	-
Administrative secretary	32,349	32,349	-
General counsel	83,270	83,270	-
Consulting services	38,800	1,112	37,688
Social security	16,636	16,025	611
Pension fund contributions	22,196	22,396	(200)
Employee medical insurance	18,354	18,255	99
Janitorial	1,100	780	320
	$ 314,547	276,029	38,518
Summary of Current Operating Expenditures with Budget Total Comparison			
Audit and accounting	3,000	2,819	181
Building repair & maintenance	2,800	2,669	131
Insurance	3,300	2,115	1,185
Library	5,800	6,150	(350)
Meetings, including reporter	2,000	462	1,538
Memberships and registrations	2,400	2,553	(153)
Office supplies and postage	3,300	3,712	(412)
Printing	2,800	2,940	(140)
Telephone	4,000	4,198	(198)
Utilities	5,500	3,927	1,573
	$ 34,900	31,545	3,355

Current operating expenses are budgeted in total, thus only total compared

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Upper Colorado River Commission

APPENDIX B

BUDGET

Fiscal Year Ending June 30, 2010

APPROVED FY 2010 Budget
UPPER COLORADO RIVER COMMISSION
7/1/09 TO 6/30/10

	As Approved 6/112009
Personnel Costs	317,792
Travel	27,000
Current Expense	36,700
Janitor	1,100
Income (Newsletter)	- 1,000
Capital Expense	4,400
Contingency	5,000
Total	390,992

2010 State Assessments	State %	FY 10
Colorado	51.75%	173,663
New Mexico	11.25%	37,752
Utah	23.00%	77,183
Wyoming	4.00%	46,981
Total		$335,579

Upper Colorado
River Commission

APPENDIX C

RESOLUTIONS

RESOLUTION
of the
UPPER COLORADO RIVER COMMISSION
Honoring Tanya M. Trujillo

WHEREAS, Tanya M. Trujillo has worked as the General Counsel for the New Mexico Interstate Stream Commission since 2004; and

WHEREAS, Tanya M. Trujillo has advised New Mexico's Commissioner on the Upper Colorado River Commission and has served as a member of the Commission's Legal Committee; and

WHEREAS, Tanya M. Trujillo has worked tirelessly to preserve New Mexico's rights to beneficially use the waters of the Colorado River system and is regarded by all as a competent and knowledgeable professional whose judgment can and should be trusted; and

WHEREAS, Tanya M. Trujillo, during her relatively short tenure with the State of New Mexico, made significant contributions on a number of Colorado River issues, of particular note, the Navajo Nation Water Rights Settlement in the San Juan Basin in New Mexico and its authorizing legislation; and

WHEREAS, Tanya M. Trujillo is leaving her employment with the State of New Mexico in June of 2009 to work for the United States Senate Energy and Natural Resources Committee; and

WHEREAS, Tanya M. Trujillo has honorably represented the State of New Mexico in all matters coming before the Commission and its Legal Committee, and this representation has generated the utmost respect of the Commission, its advisers and staff.

NOW, THEREFORE, BE IT RESOLVED that the Upper Colorado River Commission, at its Meeting held in Santa Fe, New Mexico on June 11, 2009 does hereby express the gratitude and appreciation of the Commission and its staff for the untiring service and wise counsel rendered by Tanya M. Trujillo in addressing the many legal and political water resource problems that have confronted the Commission during her tenure as a member of the Upper Colorado River Commission's Legal Committee; and

BE IT FURTHER RESOLVED that the Upper Colorado River Commissioner, its advisers and staff sincerely wish Tanya M. Trujillo the best of health, happiness and prosperity in all her future endeavors; and

BE IT FURTHER RESOLVED that the Executive Director of the Upper Colorado River Commission is directed to send a copy of this Resolution to Tanya M. Trujillo and to the Attorney General of the State of New Mexico.

L. RICHARD BRATTON, Chairman
United States of America

JENNIFER L. GIMBEL
State of Colorado

JOHN R. D'ANTONIO JR.
State of New Mexico

DENNIS J. STRONG
State of Utah

PATRICK T. TYRRELL
State of Wyoming

Upper Colorado
River Commission

APPENDIX D

TRANSMOUNTAIN DIVERSIONS

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN IN COLORADO 1991-2009

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	10YEAR AVERAGE
TO PLATTE RIVER BASIN																				
Grand River Ditch	18,410	21,360	24,770	17,870	19,808	23,260	17,948	21,140	19,440	9,363	8,326	9,390	2,541	7,376	21,217	19,542	20,432	22,098	19,385	13,967
Eureka Ditch	60	212	95	0	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alva B. Adams Tunnel	199,200	198,300	206,400	233,200	238,500	207,300	229,000	203,800	165,840	118,960	131,931	268,000	88,571	122,770	162,911	273,118	233,858	287,330	243,307	193,076
Berthoud Pass Ditch	624	1,010	1,260	874	815	1,530	2,610	1,570	0	0	268	244	298	202	801	839	720	702	727	480
Moffat Water Tunnel	64,900	49,890	34,470	43,310	24,220	51,050	50,860	35,620	38,530	27,454	34,353	35,070	36,510	30,862	56,274	85,031	43,341	76,912	44,455	47,026
Boreas Pass Ditch	82	175	334	83	0	209	282	178	249	62	95	29	86	21	133	177	187	171	209	117
Vidler Tunnel	1,240	1,150	1,150	465	760	268	420	425	580	167	186	320	220	194	518	641	714	1,059	1,285	530
Harold D. Roberts Tunnel	65,850	85,530	124,100	73,890	52,176	36,920	53,480	30,550	40,380	47,377	53,263	130,500	36,027	45,699	59,233	111,409	41,392	76,912	57,286	65,910
Straight Creek Tunnel	269	363	408	330	320	399	393	295	386	190	163	225	183	164	361	347	226	286	267	241
TO ARKANSAS RIVER BASIN																				
Hoosier Pass Tunnel	12,400	11,570	11,186	9,188	4,532	12,306	8,312	10,400	10,115	5,226	5,294	3,400	3,671	3,266	10,034	12,276	6,121	10,965	10,230	7,048
Columbine Ditch	1,602	1,610	2,478	1,470	2,390	2,500	1,730	1,669	933	1,740	1,790	780	1,940	1,210	1,530	1,940	1,830	87	78	1,293
Ewing Ditch	869	934	1,622	796	1,410	1,440	1,350	759	618	1,020	936	192	1,030	499	784	963	1,040	1,440	1,200	910
Wurtz Ditch	2,260	2,173	4,031	2,073	4,241	4,210	4,180	2,183	1,230	2,600	2,230	647	2,400	1,550	2,300	2,920	2,360	1,280	2,920	2,121
Homestake Tunnel	638	26,910	28,110	24,230	23,505	38,690	37,130	23,316	31,420	24,140	35,770	26,510	9,930	23,150	23,920	32,490	20,880	26,820	50,510	27,412
Twin Lakes Tunnel	42,980	41,970	62,664	42,850	33,120	34,850	34,190	47,441	16,580	42,060	45,650	20,570	45,240	35,550	50,160	54,677	54,470	64,540	58,740	47,166
Charles H. Boustead Tunnel	61,130	57,060	88,740	55,040	91,300	38,540	79,380	53,986	43,140	50,690	50,530	15,780	57,999	28,590	55,810	62,340	55,220	90,790	83,840	55,159
Busk-Ivanhoe Tunnel	5,660	5,210	4,980	4,100	5,817	2,450	4,640	4,174	5,070	5,240	5,330	2,680	5,090	5,270	5,170	4,830	4,310	4,880	3,320	4,612
Larkspur Ditch	95	205	334	146	116	60	185	67	6	7	63	0	0	76	171	221	397	461	375	177
TO RIO GRANDE BASIN																				
Tarbell Ditch	0	344	109	207	68	368	753	830	1,700	750	532	0	330	693	1,120	231	993	902	511	606
Tabor Ditch	997	684	1,060	639	1,240	375	1,340	1,010	1,430	495	254	87	323	250	1,050	801	1,270	1,050	827	641
Treasure Pass Ditch	9	63	113	94	0	15	245	223	367	70	29	0	185	150	337	71	200	121	262	143
Don La Font Ditches No. 1 & 2	473	480	0	364	50	112	64	0	0	10	0	0	0	0	54	0	269	218	154	71
Williams Creek-Squaw Pass Ditch	235	475	441	279	374	124	421	289	746	230	199	91	226	200	632	358	466	328	257	299
Pine River-Weminuche Pass Ditch	257	520	246	172	672	42	1,050	396	1,100	203	212	0	103	100	2,710	390	577	350	352	500
Weminuche Pass Ditch	685	2,630	0	0	0	0	1,090	459	3,400	0	0	0	64	50	508	241	1,050	743	847	350
TOTAL	480,925	510,828	599,101	511,670	505,614	457,018	531,053	440,780	383,260	338,054	377,404	514,515	292,967	307,892	457,738	665,853	492,323	670,445	581,344	469,853

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN IN COLORADO TO RIO GRANDE BASIN IN NEW MEXICO 1991-2009

San Juan-Chama Diversions	119,440	87,090	98,800	82,300	85,100	57,239	141,174	96,701	118,901	42,741	110,582	6,310	62,707	84,884	152,624	71,722	118,860	145,946	106,382	90,276

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN IN UTAH 1991-2009

TO GREAT BASIN	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	10 YEAR AVERAGE
Broadbent Supply Ditch (Woming)												2,892	1,101	912	1,101	1,217	1,551	2,044	1,455	1,534
Fairview Tunnel	3,460	1,525	4,474	2,049	2,445	2,830	2,009	1,985	1,617	1,844	1,959	1,182	2,459	1,571	2,345	2,563	1,515	2,630	1,429	1,950
Ephraim Tunnel	2,751	1,808	4,007	1,004	2,629	2,132	3,399	2,395	2,444	1,648	3,049	2,804	2,862	3,691	4,874	4,532	3,000	3,000	4,221	3,368
Spring City Tunnel	2,149	1,632	3,391	1,334	2,670	2,824	2,571	1,519	798	1,066	1,819	1,487	3,013	1,737	3,321	3,004	2,755	2,755	2,800	2,376
Central Utah Project, Bonneville Unit*	30,590	63,975	49,243	18,587	11,933	11,891	12,385	5,006	16,863	3,707	3,954	46,889	42,715	33,861	75,670	33,617	33,606	38,834	37,229	35,008
Hobble Creek Ditch	552	369	1,051	694	825	590	972	800	740	0	194	0	0	0	0	0	0	0	0	19
Strawberry-Willow Creek Ditch	1,342	2,041	2,171	962	953	1,379	1,706	1,554	667	1,239	0	0	0	0	0	0	0	0	0	124
Strawberry Water Users Association*	58,329	72,872	51,484	74,190	36,768	51,934	41,576	52,821	61,297	76,636	80,873	69,419	58,570	62,962	49,824	47,791	68,906	86,297	45,971	64,725
Duchesne Tunnel	21,062	15,678	35,648	22,817	39,859	31,895	39,446	30,746	33,429	28,452	28,739	20,767	28,857	27,278	29,008	21,454	29,496	26,607	29,492	27,015
TOTAL	120,235	159,900	151,469	121,637	98,082	105,475	104,064	96,826	117,855	114,592	120,587	145,440	139,577	132,012	166,143	114,178	140,829	162,167	122,597	136,119

TRANSMOUNTAIN DIVERSIONS FROM GREAT BASIN IN UTAH TO COLORADO RIVER BASIN IN 1991-2009

Tropic and East Fork Canal	3,612	5,325	6,509	4,801	7,022	4,542	5,442	6,922	6,699	3,413	6,153	2,333	2,712	2,431	4,500	4,884	4,469	5,319	4,258	4,047

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN TO NORTH PLATTE BASIN IN 1991-2009

City of Cheyenne	16,462	12,450	23,422	14,405	12,144	17,014	14,119	14,870	13,252	15,327	12,563	6,668	16,745	13,502	17,454	16,880	12,061	18,519	10,063	13,978

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN 1991-2009

TOTAL	736,550	768,043	869,383	728,312	697,018	635,304	788,068	645,355	629,669	510,401	618,083	673,700	512,384	538,959	792,559	866,849	762,704	994,857	819,228	709,279

Based on preliminary streamflow records obtained from U. S. Bureau of Reclamation, U. S. Geological Survey, Central Utah Water Conservancy District, Colorado Division of Water Resources, New Mexico Interstate Stream Commission, and Wyoming State Engineer's Office - subject to revision.

Streamgaging of the following small transmountain div in 1959. Flows are estimated a and adde to total on line 93: Candland Ditch - 200 acre-feet, Horseshoe Tunnel - 600 acre-feet, Larsen Tunnel - 690 acre-feet, Coal Fork Ditch - 260 acre-feet, Twin Creek Tunnel - 220 acre-feet, Cedar Creek Tunnel - 340 acre-feet, Black Canyon Ditch -290 acre-feet, Reeder Ditch - 250 acre-feet, Madsen Ditch - 40 acre-feet, and John August Ditch - 200 acre-feet. These diversions are from the San Rafael River in the Colorado River Basin to the Great **Basin in Utah and total about 3,100 acre-feet annually.**

Does not include diversions for enlargement Continental Divide Ditch which services 437 acres or Ranger Ditch which services 391 acres. Neither ditch is gaged, and suitable estimates of diversion amounts are currently unavailable.

The total diversion is the sum of all diversions except Tropic and East Fork Canal which imports water to the Colorado River Basin. This import is subtracted from the sum of exports.

* Part of the Strawberry Reservoir to Bonneville Basin trans-mountain diversions

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