

Contract No. 04-XX-30-W0430

STORAGE AND INTERSTATE RELEASE AGREEMENT

among

The United States of America, acting through the Secretary of the Interior; The Metropolitan Water District of Southern California; the Southern Nevada Water Authority; and the Colorado River Commission of Nevada (collectively referred to herein as the "Parties" or individually as "Party").

Recitals

- A. The Secretary of the Interior (Secretary) is authorized by the Boulder Canyon Project Act (43 U.S.C. § 617d) to contract for the storage and delivery of Colorado River water. The Secretary's authority over the storage and delivery of Colorado River water to the Lower Division States is further articulated in the Decree issued by the United States Supreme Court in *Arizona v. California*, 376 U.S. 340 (1964) (Decree).
- B. In accordance with the authority granted in 5 U.S.C. § 553, 43 U.S.C. §§ 391, 485, and 617, the Supreme Court's opinion in *Arizona v. California*, 373 U.S. 546 (1963), and Article II (B) (6) of the Decree, the Secretary adopted regulations providing for offstream storage of Colorado River water and development and release of Intentionally Created Unused Apportionment in the Lower Division States. (43 CFR Part 414). These regulations authorize the United States Bureau of Reclamation (Reclamation), Lower Colorado Region, acting through the Regional Director, to execute and administer this Storage and Interstate Release Agreement (Agreement) on behalf of the United States. (43 CFR § 414.3(c)) References to the Secretary in this Agreement include the United States Bureau of Reclamation, Lower Colorado Region.
- C. The Metropolitan Water District of Southern California (MWD) was incorporated on December 6, 1928 pursuant to the Metropolitan Water District Act of the State of California. In accordance with the provisions of that act, MWD is expressly authorized to exercise such powers as are necessary and proper to carry out the objects and purposes of the district, including the acquisition of water rights within and without the state, and the storage and transport of water. (West's California Water Code Appendix §§ 109-120 and 109-130) California law authorizes MWD to contract with any public or private corporation for the purpose of carrying out any of its powers. (California Public Contract Code § 21562)
- D. In accordance with the authority granted by California law, MWD can enter into Storage and Interstate Release Agreements and develop Intentionally Created

- 1 Unused Apportionment (ICUA) pursuant to the federal regulations. MWD has a
2 contract with the Secretary issued under Section 5 of the Boulder Canyon Project
3 Act for the storage and delivery of Colorado River water.
- 4 E. By virtue of the authorities specified in Recitals C and D, MWD is an "Authorized
5 Entity" within the meaning of 43 CFR § 414.2(1).
- 6 F. The Southern Nevada Water Authority (SNWA) is a Nevada joint powers agency
7 and political subdivision of the State of Nevada, created by agreement dated
8 July 25, 1991, as amended November 17, 1994, and January 1, 1996, pursuant
9 to N.R.S. §§ 277.074 and 277.120. SNWA is authorized by N.R.S. § 538.186 to
10 enter into this Agreement and, pursuant to its contract issued under Section 5 of
11 the Boulder Canyon Project Act, SNWA has the right to divert ICUA released by
12 the Secretary for use within the State of Nevada pursuant to Article II(B)(6) of the
13 Decree.
- 14 G. By virtue of the authorities specified in Recital F, SNWA is an "Authorized Entity"
15 within the meaning of 43 CFR § 414.2(2).
- 16 H. The Colorado River Commission of the State of Nevada (CRCN) is an agency of
17 the State of Nevada, authorized generally by N.R.S. §§ 538.041 through
18 538.251. CRCN is authorized by N.R.S. § 538.186 to enter into this Agreement.
19 CRCN, in furtherance of the State of Nevada's responsibility to promote the
20 health and welfare of its people in Colorado River matters, enters into this
21 Agreement to facilitate the storage of Colorado River water, establishment and
22 maintenance of a SNWA Interstate Account for SNWA, and development and
23 release of ICUA for SNWA.
- 24 I. This Agreement is entered into to establish an enduring cooperative relationship
25 between MWD and SNWA under the Secretary's Offstream Storage Regulations
26 that will benefit both MWD and SNWA in the management of their respective
27 water supplies and in the management of the Colorado River apportionments of
28 their respective states during an era of limited water supplies. To this end, this
29 Agreement provides a specific program for the storage by MWD of unused
30 Nevada apportionment of Colorado River water in California and the subsequent
31 recovery of such water by MWD and the development of ICUA for SNWA. This
32 Agreement also provides a structure whereby such cooperation and storage
33 program might continue beyond 2010.
- 34 J. Concurrently with execution of this Agreement, CRCN, SNWA and MWD have
35 entered into a separate agreement (Operational Agreement), consistent with this
36 Agreement, governing operational and financial matters as between MWD,
37 SNWA, and CRCN relating to the storage of Colorado River water and the
38 development of ICUA.
- 39 NOW THEREFORE, in consideration of the mutual covenants herein contained,
40 the United States, MWD, SNWA, and CRCN hereby agree as follows:

1 **Article 1**
2 **Definitions and Term**

3 1.1 **Definitions.** The following terms shall have the meaning defined here.
4 All defined terms shall be identified by initial letter capitalization.

5 1.1.1 "ICUA" means Intentionally Created Unused Apportionment as that
6 term is defined in 43 CFR Part 414.

7 1.1.2 "SNWA Interstate Account" means the storage account established
8 by MWD under the terms of this Agreement.

9 1.1.3 "Year" means calendar year.

10 1.2 **Term of the Agreement.** This Agreement shall be effective as of
11 October 27, 2004, upon its execution by all Parties, and shall continue in effect
12 until terminated by 90 days' written notice from either SNWA or MWD given after
13 Colorado River water has been stored for SNWA and credited to the SNWA Interstate
14 Account and thereafter the SNWA Interstate Account balance has been reduced to
15 zero.

16 **Article 2**
17 **Water Available for Storage; Facilities**

18 2.1 Water stored pursuant to this Agreement shall be from within the State of
19 Nevada's unused basic or surplus apportionment under Articles II(B)(1) or II(B)(2) of the
20 Decree and may be made available from Nevada by the Secretary to California only in
21 accordance with Article II(B)(6) of the Decree. If the Secretary determines unused
22 apportionment from Nevada is available, the Secretary will make unused Nevada
23 apportionment available to MWD to be stored under the Agreement in accordance with
24 the terms of this Agreement and will not make that water available to other entitlement
25 holders. Water stored pursuant to this Agreement shall not include the State of
26 California's unused basic or surplus apportionment.

27 2.2 The facilities which may be utilized by MWD to store water pursuant to this
28 Agreement are those facilities described in MWD's Integrated Resources Plan,
29 2003 Update, dated May 2004, and located within the State of California. With respect
30 to water stored pursuant to this Agreement, all facilities to be used to divert, convey to
31 storage, store, withdraw from storage, and subsequently convey and distribute such
32 water, are facilities that have been constructed and financed by MWD or facilities to
33 which the title has been transferred to MWD by the United States.

34 2.3 The quantity of Colorado River water to be stored pursuant to this
35 Agreement shall be as agreed by MWD and SNWA, subject to the limitations specified
36 in Article 7.

Article 3
Storage

3.1 As early as practicable in each Year in which there will be unused Nevada basic or surplus apportionment available for storage pursuant to this Agreement, SNWA shall notify the Secretary and MWD of the total quantity of such water and the quantity within each of Nevada's basic apportionment and Nevada's surplus apportionment.

3.2 Within 60 days of receipt of SNWA's notice under Section 3.1, MWD shall notify the Secretary and SNWA of (i) the total quantity of unused Nevada apportionment, which MWD can store, and (ii) confirm that MWD will store such water.

3.3 As soon as practicable after receipt of MWD's notice under Section 3.2, the Secretary will confirm the existence of such unused Nevada apportionment, decide whether such unused Nevada apportionment shall be released for consumptive use in California under Article II(B)(6) of the Decree, and release the specified quantity of Colorado River water to MWD pursuant to Article II(B)(6) of the Decree in accordance with the Secretary's decision. MWD shall divert and store the released water.

Article 4
Development of Intentionally Created Unused Apportionment

4.1 ICUA shall be developed under this Agreement only after 2006.

4.2 MWD shall develop ICUA for the benefit of SNWA in accordance with the provisions of this Agreement and the Operational Agreement and consistent with the laws of the State of California and the United States and MWD's Colorado River water storage and delivery contract with the Secretary. MWD shall develop ICUA by withdrawing water that has been previously stored for SNWA and delivering such water for consumptive use within California in lieu of Colorado River water that MWD otherwise would divert. Any other potential means of developing ICUA must first be approved by the Secretary. MWD will withdraw stored water from the facilities identified in Section 2.2 above which are under MWD's control such that the development of ICUA is enforceable by MWD. Because MWD will recover stored water from facilities under the control of MWD, notice will not be given to other entitlement holders of Colorado River water to participate in development of this ICUA. In the event MWD elects, subject to the approval of the Secretary, to use a means other than the recovery and use of stored water, MWD shall give such notice to other entitlement holders to participate in development of the ICUA as the Secretary deems appropriate in light of the means.

4.3 The amount of ICUA to be developed and released to SNWA in any Year shall not exceed the lesser of (i) 30,000 acre-feet, unless MWD agrees to a larger amount in such Year, or (ii) the previous end-of-Year balance in the SNWA Interstate Account.

4.4 For any Year in which ICUA is to be developed for SNWA by MWD and released by the Secretary, SNWA shall, by June 1 of the previous Year, make a written

1 request to MWD for the development of ICUA in accordance with the terms of this
2 Agreement, specifying the quantity of ICUA to be developed.

3 4.5 By December 1 of each Year in which SNWA has made a request for
4 development of ICUA in the following Year, MWD shall prepare and deliver to the
5 Secretary an ICUA Certification. The ICUA Certification shall:

6 4.5.1 certify: (i) whether the SNWA Interstate Account balance is
7 sufficient to support the development of the requested ICUA; (ii) that ICUA will be
8 developed in the upcoming Year in an amount equal to the amount requested by
9 SNWA; and (iii) that such ICUA otherwise would not exist.

10 4.5.2 request that the Secretary release the ICUA in the requested
11 amount for use in Nevada pursuant to Article II (B) (6) of the Decree and this
12 Agreement.

13 4.5.3 set forth the means by which MWD intends to develop ICUA
14 utilizing stored water in the SNWA Interstate Account and the quantity of ICUA which
15 MWD intends to develop.

16 4.6 In each Year as to which MWD has certified under Section 4.5 that it will
17 develop ICUA, MWD shall take all actions necessary to ensure that ICUA is developed
18 in accordance with such certification. If MWD does not develop ICUA as required under
19 this Article, MWD shall develop ICUA in another Year to repay to Lake Mead storage
20 the amount of ICUA consumptively used by SNWA but not developed by MWD. The
21 Secretary, in addition to any other remedy available, may seek a court order requiring
22 MWD to do so. The Year of repayment shall be at the discretion of the Secretary, but
23 shall not be more than three years after the year in which the shortfall occurred.

24 Article 5

25 Release of Intentionally Created Unused Apportionment

26 5.1 For any Year as to which SNWA has made a request under Section 4.4
27 for the development of ICUA, SNWA shall also make a written request of the Secretary
28 for the release of ICUA for consumptive use in the State of Nevada. Such request shall
29 be made by September 15 of the previous Year, or such earlier date as reasonably
30 required in writing by the Secretary, for a release of ICUA in the following Year, and
31 shall be consistent with SNWA's request for the development of ICUA. The request
32 shall specify the quantity of ICUA to be released by the Secretary and shall certify that
33 SNWA has mailed, first class postage paid, a copy of the request to the States of
34 Nevada, Arizona, and California by providing copies to CRCN, the Arizona Department
35 of Water Resources and the Colorado River Board of California and MWD.

36 5.2 The request for the development of ICUA by SNWA shall be incorporated
37 into the Secretary's Annual Operating Plan for the Colorado River System Reservoirs.
38 The Annual Operating Plan shall state that, upon proper certification, the Secretary
39 intends to release that quantity of ICUA to SNWA under Article II (B) (6) of the Decree in
40 accordance with the terms of this Agreement.

1 5.3 Release of ICUA under this Agreement for diversion by SNWA shall
2 operate under 43 CFR § 414.3(f), Anticipatory Release of ICUA, as provided in this
3 article.

4 5.4 By December 20 of each Year in which the Secretary has received a
5 proper and timely request for release of ICUA, the Secretary shall determine whether
6 there is water stored under this Agreement in quantities sufficient to support the
7 development of the requested ICUA, whether MWD's certification under Section 4.5
8 meets the requirements of 43 CFR Part 414, and whether all necessary actions required
9 by 43 CFR Part 414 have been taken. Such request may be modified with the consent
10 of SNWA, MWD, and the Secretary. For purposes of this Agreement, all necessary
11 actions are those actions expressly enumerated in 43 CFR Part 414, as amplified by
12 this Agreement.

13 5.5 The Secretary shall, as he or she deems appropriate, review books and
14 records in accordance with Section 6.3 and take such other measures as appropriate to
15 verify the quantity of water stored and the quantity of ICUA developed under this
16 Agreement. In the event of a discrepancy in which there is a shortfall of ICUA
17 developed, the Secretary shall require MWD to repay to Lake Mead storage as set forth
18 in Section 4.6.

19 5.6 Pursuant to the provisions of 43 CFR §413.3(f) and only after determining
20 that MWD's certification under section 4 meets the requirements of 43 CFR Part 414,
21 the Secretary shall release ICUA to SNWA in the Year as to which, and to the extent
22 that, MWD has certified, pursuant to Section 4.5 of this Agreement, that ICUA will be
23 developed.

24 5.7 Once the Secretary has determined that ICUA will be released to SNWA,
25 such ICUA shall not be available for release to any entitlement holder in the States of
26 Arizona or California or any other entitlement holder in Nevada in that Year.

27 5.8 In any Year in which the Secretary has released ICUA to SNWA, MWD
28 shall debit the SNWA Interstate Account beginning-of-Year balance in an amount equal
29 to the amount of ICUA released by the Secretary to SNWA under this Agreement.

30 5.9 The amount of ICUA released for consumptive use in Nevada effective
31 January 1 of any Year shall not be subject to reduction unless:

32 5.9.1 SNWA requests that MWD cease development of ICUA, and

33 5.9.2 MWD certifies to the Secretary that a specific quantity of ICUA will
34 not be developed pursuant to the SNWA request.

35 5.10 The Secretary shall release ICUA in accordance with the request of
36 SNWA, the terms of this Agreement, in particular the determination of the Secretary, the
37 Boulder Canyon Project Act, Article II (B) (6) of the Decree and all other applicable
38 Federal laws and executive orders.

1 5.11 With respect to ICUA released for diversion by SNWA pursuant to this
2 Agreement, the only facilities that will be used to divert, store, convey, or distribute such
3 water that were constructed by the United States are certain facilities of the Southern
4 Nevada Water System that were constructed and financed by the United States, the
5 ownership of which was subsequently transferred to SNWA.

6 **Article 6**
7 **Accounting**

8 6.1 MWD shall establish and maintain a storage account entitled the "SNWA
9 Interstate Account" for accounting purposes, which account shall accurately reflect the
10 quantities of all water stored and all water debited from the account for purposes of
11 developing ICUA pursuant to this Agreement.

12 6.2 MWD shall report on the SNWA Interstate Account as follows:

13 6.2.1 MWD shall provide its final annual accounting to the Secretary by
14 March 1 of the Year following the Year in which MWD stored water or developed ICUA
15 for SNWA.

16 6.2.2 MWD shall prepare and submit to the Secretary and the States of
17 Arizona, California, and Nevada by March 1 of each Year a final verified accounting for
18 the prior Year of: (i) the beginning balance of the SNWA Interstate Account; (ii) the
19 amount of Colorado River water diverted and stored for the benefit of SNWA in that
20 Year; (iii) any debits from the SNWA Interstate Account during that Year on account of
21 water withdrawn for purposes of developing ICUA; (iv) the net balance in the SNWA
22 Interstate Account at the end of the Year; and (v) the cumulative amount properly
23 credited to the SNWA Interstate Account.

24 6.3 All records of MWD concerning this Agreement, including all records used
25 by MWD to prepare the final verified accounting, shall be available for inspection by the
26 Secretary and SNWA, such inspection to be during normal business hours and on
27 reasonable advance notice.

28 **Article 7**
29 **Environmental Compliance Limitation**

30 7.1 SNWA agrees with, and for the benefit of, the United States only that
31 SNWA will not request the storage of Colorado River water or the development of ICUA
32 in any Year in excess of the limitations specified in Sections 7.1.1 and 7.1.2 unless the
33 Secretary has first taken such actions as may be necessary to comply with the
34 requirements of the National Environmental Policy Act, the Endangered Species Act,
35 and any other applicable environmental law with respect to such excess storage or
36 development of excess ICUA.

37 7.1.1 With respect to storage of Colorado River water, SNWA will request
38 storage under this Agreement only to the extent that Colorado River water stored by the
39 Arizona Water Banking Authority for SNWA under the Agreement for Interstate Water

1 Banking among the Arizona Water Banking Authority, SNWA, and CRCN during such
2 Year is less than 200,000 acre-feet.

3 7.1.2 With respect to the development of ICUA, SNWA will not request
4 that more than an aggregate of 100,000 acre-feet of ICUA be developed pursuant to
5 this Agreement and the Storage and Interstate Release Agreement among the
6 United States, the Arizona Water Banking Authority, SNWA, and CRCN dated
7 December 18, 2002.

8 **Article 8**
9 **General Provisions**

10 8.1 Upon execution of this Agreement and annually thereafter, SNWA shall
11 pay an annual administration fee of two thousand dollars (\$2,000.00) to cover the
12 United States' costs to perform the routine tasks necessary to administer this
13 Agreement. The initial annual administration fee shall be pro-rated on the basis of one
14 hundred sixty six dollars and sixty-seven cents (\$166.67) per month for the first Year,
15 payable upon execution of this Agreement. Thereafter, the fee for each subsequent
16 year shall be due on January 1.

17 8.2 The Secretary reserves the right at intervals of five (5) years, beginning
18 five (5) years after the date of execution of this Agreement, to reexamine the annual
19 administration fee and to revise the fee after three (3) months' advance written notice
20 and after consultation with SNWA if the Secretary determines that a different charge is
21 necessary to cover the United States' costs to perform the tasks described in this
22 Agreement. Upon SNWA's written request, the Secretary shall provide SNWA with a
23 detailed cost analysis supporting the adjustment to the annual administration fee.

24 8.3 No agreement to which the Secretary is not a Party shall be construed as
25 altering the rights and obligations as between the Secretary and the other Parties to this
26 Agreement.

27 8.4 The records of any Party to this Agreement that relate to the SNWA
28 Interstate Account, including the development and verification of the account balance,
29 and the development, release and use of ICUA shall be open to inspection by any other
30 Party.

31 8.5 The provisions of this section shall govern enforcement of this Agreement.

32 8.5.1 Time is of the essence in the performance of this Agreement.

33 8.5.2 The Parties recognize and acknowledge that the availability of
34 ICUA as provided in this Agreement is a critical alternative municipal water supply for
35 SNWA while other longer-term sources of supply are being developed; that in planning
36 to meet the needs of the area it serves, SNWA will rely on ICUA being available to it as
37 provided in this Agreement; that accordingly the release of ICUA as provided in Section
38 5.6 is critical to the economy, health and safety of the area served by SNWA; that the
39 release of ICUA as provided in this Agreement presents a unique opportunity for SNWA

1 to obtain additional Colorado River water under the Decree; and that, for these reasons,
2 among others, the water resources to be released as ICUA for use in Nevada are
3 unique and not susceptible of replacement by SNWA.

4 8.6 The Parties to this Agreement shall indemnify the United States, its
5 employees, agents, subcontractors, successors, or assignees from loss or claims for
6 damages and from liability to persons or property, direct or indirect, and loss or claim of
7 any nature whatsoever arising by reason of actions taken by non-Federal Parties to this
8 Agreement.

9 8.7 The Parties to this Agreement recognize and acknowledge that this
10 Agreement is a contract executed pursuant to Federal Reclamation law, including the
11 provisions of 43 U.S.C. § 390uu.

12 8.8 This Agreement shall not constitute approval by the Secretary of any other
13 agreement or water delivery program.

14 8.9 Nothing in this Agreement is intended or shall be construed to affect the
15 rights of any other Colorado River entitlement holder.

16 8.10 No Party to this Agreement shall be considered to be in default in the
17 performance of any obligations under this Agreement when a failure of performance
18 shall be due to uncontrollable forces. The term "uncontrollable force" shall mean any
19 cause beyond the control of the Party unable to perform such obligation, including but
20 not limited to failure or threat of failure of facilities, flood, earthquake, storm, fire,
21 lightning, and other natural catastrophes, epidemic, war, civil disturbance or
22 disobedience, strike, labor dispute, labor or material shortage, sabotage, restraint by
23 order of a court or regulatory agency of competent jurisdiction, and action or non-action
24 by, or failure to obtain the necessary authorizations or approvals from, a Federal
25 governmental agency or authority, which by exercise of due diligence and foresight
26 such Party could not reasonably have been expected to overcome. Nothing contained
27 herein shall be construed to require any Party to settle any strike or labor dispute in
28 which it is involved.

29 8.11 Non-Federal Parties to this Agreement may assign their interest in this
30 Agreement, in whole or in part, to other authorized entities, as defined in 43 CFR
31 Part 414, subject to the approval of all other Parties to this Agreement.

32 8.12 The Secretary does not warrant the quality of water released or delivered
33 under this Agreement. The United States is not liable for damages of any kind resulting
34 from water quality problems and the United States has no obligation to construct or
35 furnish water treatment facilities to maintain or improve water quality except as may
36 otherwise be provided in relevant Federal law.

37 8.13 The expenditure or advance of any money or the performance of any
38 obligation of the United States under this Agreement shall be contingent on
39 appropriation or allotment of funds. No liability shall accrue to the United States in case

1 funds are not appropriated or allotted. Absence of appropriation or allotment of funds
2 shall not relieve MWD, SNWA, or CRCN from any obligation under this Agreement

3 8.14 No member of or Delegate to Congress, Resident Commissioner, or
4 official of MWD, SNWA, or CRCN shall benefit from this Agreement other than as a
5 water user or landowner in the same manner as other water users or landowners.

6 **Article 9**
7 **Notices**

8 9.1 Notices and Requests.

9 9.1.1 All notices, requests, and other communications required or
10 provided by this Agreement shall be in writing and addressed to the affected Party, with
11 a copy sent to all other Parties to this Agreement and, unless sent by facsimile pursuant
12 to Section 9.2, shall be mailed first class postage paid addressed as follows:

13 MWD:

14 The Metropolitan Water District of Southern California
15 P.O. Box 54153
16 Los Angeles, California 90054-0153
17 Attn: Chief Executive Officer

18 SNWA:

19 Southern Nevada Water Authority
20 1001 S. Valley View Boulevard
21 Las Vegas, Nevada 89153
22 Attn: General Manager

23 CRCN:

24 Colorado River Commission of Nevada
25 555 E. Washington Avenue, Suite 3100
26 Las Vegas, Nevada 89101
27 Attn: Director

28 Secretary:

29 U.S. Department of the Interior
30 Bureau of Reclamation
31 Lower Colorado Regional Office
32 P.O. Box 61470
33 Boulder City, Nevada 89006
34 Attn: Regional Director

35 The State of Arizona:

36 Arizona Department of Water Resources
37 500 North 3rd Street
38 Phoenix, Arizona 85004
39 Attn: Director

The State of California:

Colorado River Board of California
770 Fairmont Avenue, Suite 100
Glendale, California 91203-1035
Attn: Executive Director

The State of Nevada:

Colorado River Commission of Nevada
555 E. Washington Avenue, Suite 3100
Las Vegas, Nevada 89101
Attn: Director

9.1.2 Any Party may, at any time, change its mailing address by notice to the other Parties.

9.2 Notices and Requests by Facsimile.

9.2.1 Notices and requests may be given by facsimile among MWD, SNWA, CRCN and the Secretary in lieu of first class mail as provided in sub-article 9.1. Such facsimiles shall be deemed complete upon a receipt from sender's facsimile machine indicating that the transmission was satisfactorily completed and after phone communication with administrative offices of the recipient notifying the recipient that a facsimile has been sent.

MWD Facsimile Number 213-217-5704

SNWA Facsimile Number 702-258-3951


CRCN Facsimile Number 702-486-2695


Secretary Facsimile Number 702-293-8042

9.2.2 Any Party may, at any time, change its facsimile number by notice to the other Parties.

In Witness of this Agreement, the Parties affix their official signatures below, acknowledging execution of this document on the 27 day of October, 2004.

Legal Review and Approval: **THE UNITED STATES OF AMERICA**

By: 
Field Solicitor
Phoenix, Arizona

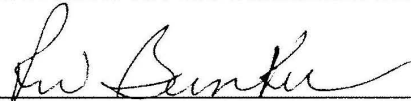
By: 
Assistant Secretary
for Water and Science
Department of the Interior

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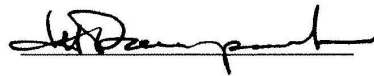
**STATE OF NEVADA, acting through its
COLORADO RIVER COMMISSION**

Attest:

By: 
Executive Director

By: 
Chair

Approved as to form:

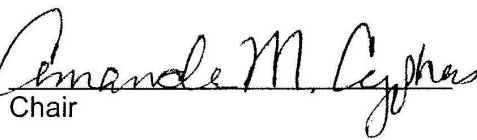
By: 

Title: 

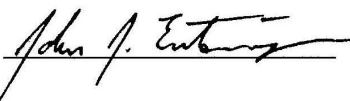
SOUTHERN NEVADA WATER AUTHORITY

Attest:

By: 
General Manager

By: 
Chair

Approved as to form:

By: 

Title: Deputy Counsel

**THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA**

Attest:

By: 
Executive Secretary

By: 
Chief Executive Officer

Approved as to form:

By: 

Title: GENERAL COUNSEL

Bureau of Reclamation, Interior**Pt. 414**

States settlement lands shall be subject to assessment by a district on the same basis as other lands of like character within the operation of the district.

(c) Settlement lands, which the United States is not under contract to sell or exchange at the time a district makes its levy may be assessed by a district to the extent of the construction charge obligation installment required to be levied for the following year on such lands on account of the district's construction cost obligation to the United States. No other levies shall be made by a district against settlement lands in this status.

(d) While settlement lands which the United States has leased for use as irrigated lands and which the United States has not contracted to sell or exchange may not be assessed by a district except as provided in paragraph (c) of this section, lessees shall pay the district the same amounts annually that would be required to be paid for water service if the lands were subject to assessment therefor, in addition to any assessment levied under paragraph (c) of this section.

(e) Assessments made by a district against settlement lands while the United States is under contract to sell or exchange such lands shall be subject to all interest and penalties for delinquency as provided by the laws of Washington, but interest and penalties shall cease to accumulate on the date such contract is terminated or the purchaser's interest therein reacquired by the United States.

(f) No action shall be taken by or for a district to enforce any lien created as permitted under the regulations in this part by assessment foreclosure or other means that would purport to transfer any right in or title to any land or interests therein while title thereto is vested in the United States. Although the United States does not assume any obligation for the payment of such liens, it will in any conveyance of settlement lands covered thereby convey subject to those liens.

§ 413.4 Assessment of other project act lands and rights of way.

(a) A district shall, as to other project act lands and rights of way the

title to which passes to the United States on or after January 1 of any year and before the district has levied its assessments for that year, immediately remove the lands from its assessment rolls and shall not thereafter take any proceedings to complete or enforce the assessments. Any such removal from the rolls shall be effective as of January 1 of the year in which title passes to the United States Action so to remove shall be taken promptly after the giving of written notice by the Project Manager to the district as to the lands involved, and the district shall provide the United States with a certificate stating that the lands have not been and will not be assessed so long as title thereto remains in the United States.

(b) There is no authority in law for the assessment of rights of way owned by the United States. Accordingly, a district shall make no assessment thereof while title thereto remains in the United States.

(c) Other project act lands while title thereto remains in the United States shall not be assessed for any district charge so long as they are in the "other project act lands" category.

§ 413.5 Reports on status of settlement lands.

The Project Manager will furnish each district prior to its annual levy every year a list of all the settlement lands owned by the United States for which water is available and which are not under contract of sale or exchange and therefore are not to be assessed by the district, except for construction charge obligation installments under § 413.3(c) when such charges are required to be levied.

PART 414—OFFSTREAM STORAGE OF COLORADO RIVER WATER AND DEVELOPMENT AND RELEASE OF INTENTIONALLY CREATED UNUSED APPORTIONMENT IN THE LOWER DIVISION STATES

Subpart A—Purposes and Definitions

Sec.

414.1 Purpose.

414.2 Definitions of terms used in this part.

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**SUBPART B—STORAGE AND INTERSTATE
RELEASE AGREEMENTS**

414.3 Storage and Interstate Release Agreements.

414.4 Reporting Requirements and accounting under storage and interstate release agreements.

**Subpart C—Water Quality and
Environmental compliance**

414.5 Water Quality.

414.6 Environmental Compliance and funding of Federal costs.

AUTHORITY: 5 U.S.C. 553; 43 U.S.C. 391, 485 and 617; 373 U.S. 546; 376 U.S. 340.

SOURCE: 64 FR 59006, Nov. 1, 1999, unless otherwise noted.

**Subpart A—Purposes and
Definitions**

§ 414.1 Purpose.

(a) *What this part does.* This part establishes a procedural framework for the Secretary of the Interior (Secretary) to follow in considering, participating in, and administering Storage and Interstate Release Agreements in the Lower Division States (Arizona, California, and Nevada) that would:

(1) Permit State-authorized entities to store Colorado River water offstream;

(2) Permit State-authorized entities to develop intentionally created unused apportionment (ICUA);

(3) Permit State-authorized entities to make ICUA available to the Secretary for release for use in another Lower Division State. This release may only take place in accordance with the Secretary's obligations under Federal law and may occur in either the year of storage or in years subsequent to storage; and

(4) Allow only voluntary interstate water transactions. These water transactions can help to satisfy regional water demands by increasing the efficiency, flexibility, and certainty in Colorado River management in accordance with the Secretary's authority under Article II (B) (6) of the Decree entered March 9, 1964 (376 U.S. 340) in the case of *Arizona v. California*, (373 U.S. 546) (1963), as supplemented and amended.

(b) *What this part does not do.* This part does not:

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(1) Affect any Colorado River water entitlement holder's right to use its full water entitlement;

(2) Address or preclude independent actions by the Secretary regarding Tribal storage and water transfer activities;

(3) Change or expand existing authorities under the body of law known as the "Law of the River";

(4) Change the apportionments made for use within individual States;

(5) Address intrastate storage or intrastate distribution of water;

(6) Preclude a Storing State from storing some of its unused apportionment in another Lower Division State if consistent with applicable State law; or

(7) Authorize any specific activities; the rule provides a framework only.

§ 414.2 Definitions of terms used in this part.

Authorized entity means:

(1) An entity in a Storing State which is expressly authorized pursuant to the laws of that State to enter into Storage and Interstate Release Agreements and develop ICUA ("storing entity"); or

(2) An entity in a Consuming State which has authority under the laws of that State to enter into Storage and Interstate Release Agreements and acquire the right to use ICUA ("consuming entity").

Basic apportionment means the Colorado River water apportioned for use within each Lower Division State when sufficient water is available for release, as determined by the Secretary of the Interior, to satisfy 7.5 million acre-feet (maf) of annual consumptive use in the Lower Division States. The United States Supreme Court, in *Arizona v. California*, confirmed that the annual basic apportionment for the Lower Division States is 2.8 maf of consumptive use in the State of Arizona, 4.4 maf of consumptive use in the State of California, and 0.3 maf of consumptive use in the State of Nevada.

BCPA means the Boulder Canyon Project Act, authorized by the Act of Congress of December 21, 1928 (45 Stat. 1057).

Colorado River Basin means all of the drainage area of the Colorado River

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System and all other territory within the United States to which the waters of the Colorado River System shall be beneficially applied.

Colorado River System means that portion of the Colorado River and its tributaries within the United States.

Colorado River water means water in or withdrawn from the mainstream.

Consuming entity means an authorized entity in a Consuming State.

Consuming State means a Lower Division State where ICUA will be used.

Consumptive use means diversions from the Colorado River less any return flow to the river that is available for consumptive use in the United States or in satisfaction of the Mexican treaty obligation.

(1) Consumptive use from the mainstream within the Lower Division States includes water drawn from the mainstream by underground pumping.

(2) The Mexican treaty obligation is set forth in the February 3, 1944, Water Treaty between Mexico and the United States, including supplements and associated Minutes of the International Boundary and Water Commission.

Decree means the decree entered March 9, 1964, by the Supreme Court in *Arizona v. California*, 373 U.S. 546 (1963), as supplemented or amended.

Entitlement means an authorization to beneficially use Colorado River water pursuant to:

- (1) The Decree;
- (2) A water delivery contract with the United States through the Secretary; or
- (3) A reservation of water from the Secretary.

Intentionally created unused apportionment or ICUA means unused apportionment that is developed:

- (1) Consistent with the laws of the Storing State;
- (2) Solely as a result of, and would not exist except for, implementing a Storage and Interstate Release Agreement.

Lower Division States means the States of Arizona, California, and Nevada.

Mainstream means the main channel of the Colorado River downstream from Lee Ferry within the United States, including the reservoirs behind dams on

the main channel, and Senator Wash Reservoir off the main channel.

Offstream storage means storage in a surface reservoir off of the mainstream or in a ground water aquifer. Offstream storage includes indirect recharge when Colorado River water is exchanged for ground water that otherwise would have been pumped and consumed.

Secretary means the Secretary of the Interior or an authorized representative.

Storage and Interstate Release Agreement means an agreement, consistent with this part, between the Secretary and authorized entities in two or more Lower Division States that addresses the details of:

- (1) Offstream storage of Colorado River water by a storing entity for future use within the Storing State;
- (2) Subsequent development of ICUA by the storing entity, consistent with the laws of the Storing State;
- (3) A request by the storing entity to the Secretary to release ICUA to the consuming entity;
- (4) Release of ICUA by the Secretary to the consuming entity; and
- (5) The inclusion of other entities that are determined by the Secretary and the storing entity and the consuming entity to be appropriate to the performance and enforcement of the agreement.

Storing entity means an authorized entity in a Storing State.

Storing State means a Lower Division State in which water is stored off the mainstream in accordance with a Storage and Interstate Release Agreement for future use in that State.

Surplus apportionment means the Colorado River water apportioned for use within each Lower Division State when sufficient water is available for release, as determined by the Secretary, to satisfy in excess of 7.5 maf of annual consumptive use in the Lower Division States.

Unused apportionment means Colorado River water within a Lower Division State's basic or surplus apportionment, or both, which is not otherwise put to beneficial consumptive use during that year within that State.

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Upper Division States means the States of Colorado, New Mexico, Utah, and Wyoming.

Water delivery contract means a contract between the Secretary and an entity for the delivery of Colorado River water in accordance with section 5 of the BCPA.

Subpart B—Storage and Interstate Release Agreements

§ 414.3 Storage and Interstate Release Agreements.

(a) *Basic requirements for Storage and Interstate Release Agreements.* Two or more authorized entities may enter into Storage and Interstate Release Agreements with the Secretary in accordance with paragraph (c) of this section. Each agreement must meet all of the requirements of this section.

(1) The agreement must specify the quantity of Colorado River water to be stored, the Lower Division State in which it is to be stored, the entity(ies) that will store the water, and the facility(ies) in which it will be stored.

(2) The agreement must specify whether the water to be stored will be within the unused basic apportionment or unused surplus apportionment of the Storing State. For water from the Storing State's apportionment to qualify as unused apportionment available for storage under this part, the water must first be offered to all entitlement holders within the Storing State for purposes other than interstate transactions under proposed Storage and Interstate Release Agreements.

(3) The agreement must specify whether the water to be stored will be within the unused basic apportionment or unused surplus apportionment of the Consuming State. If the water to be stored will be unused apportionment of the Consuming State, the agreement must acknowledge that any unused apportionment of the Consuming State may be made available from the Consuming State by the Secretary to the Storing State only in accordance with Article II(B)(6) of the Decree. If unused apportionment from the Consuming State is to be stored under a Storage and Interstate Release Agreement, the Secretary will make the unused apportionment of the Consuming State

available to the storing entity in accordance with the terms of a Storage and Interstate Release Agreement and will not make that water available to other entitlement holders.

(4) The agreement must specify the maximum quantity of ICUA that will be developed and made available for release to the consuming entity.

(5) The agreement must specify that ICUA may not be requested by the consuming entity in a quantity that exceeds the quantity of water that had been stored under a Storage and Interstate Release Agreement in the Storing State.

(6) The agreement must specify a procedure to verify and account for the quantity of water stored in the Storing State under a Storage and Interstate Release Agreement.

(7) The agreement must specify that, by a date certain, the consuming entity will:

(i) Notify the storing entity to develop a specific quantity of ICUA in the following calendar year;

(ii) Ask the Secretary to release that ICUA; and

(iii) Provide a copy of the notice or request to each Lower Division State.

(8) The agreement must specify that when the storing entity receives a request to develop a specific quantity of ICUA:

(i) It will ensure that the Storing State's consumptive use of Colorado River water will be decreased by a quantity sufficient to develop the requested quantity of ICUA; and

(ii) Any actions that the storing entity takes will be consistent with its State's laws.

(9) The agreement must include a description of:

(i) The actions the authorized entity will take to develop ICUA;

(ii) Potential actions to decrease the authorized entity's consumptive use of Colorado River water;

(iii) The means by which the development of the ICUA will be enforceable by the storing entity; and

(iv) The notice given to entitlement holders, including Indian tribes, of opportunities to participate in development of this ICUA.

(10) The agreement must specify that the storing entity will certify to the

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Secretary that ICUA has been or will be developed that otherwise would not have existed. The certification must:

(i) Identify the quantity, the means, and the entity by which ICUA has been or will be developed; and

(ii) Ask the Secretary to make the ICUA available to the consuming entity under Article II(B)(6) of the Decree and the Storage and Interstate Release Agreement.

(11) The agreement must specify a procedure for verifying development of the ICUA appropriate to the manner in which it is developed.

(12) The agreement must specify that the Secretary will release ICUA developed by the storing entity:

(i) In accordance with a request of the consuming entity;

(ii) In accordance with the terms of the Storage and Interstate Release Agreement;

(iii) Only for use by the consuming entity and not for use by other entitlement holders; and

(iv) In accordance with the terms of the Storage and Interstate Release Agreement, the BCPA, Article II(B)(6) of the Decree and all other applicable laws and executive orders.

(13) The agreement must specify that ICUA shall be released to the consuming entity only in the year and to the extent that ICUA is developed by the storing entity by reducing Colorado River water use within the Storing State.

(14) The agreement must specify that the Secretary will release ICUA only after the Secretary has determined that all necessary actions have been taken under this part.

(15) The agreement must specify that before releasing ICUA the Secretary must first determine that the storing entity:

(i) Stored water in accordance with the Storage and Interstate Release Agreement in quantities sufficient to support the development of the ICUA requested by the consuming entity; and

(ii) Certified to the satisfaction of the Secretary that the quantity of ICUA requested by the consuming entity has been developed in that year or will be developed in that year under § 414.3(f).

(16) The agreement must specify that the non-Federal parties to the Storage and Interstate Release Agreement will indemnify the United States, its employees, agents, subcontractors, successors, or assigns from loss or claim for damages and from liability to persons or property, direct or indirect, and loss or claim of any nature whatsoever arising by reason of the actions taken by the non-federal parties to the Storage and Interstate Release Agreement under this part.

(17) The agreement must specify the extent to which facilities constructed or financed by the United States will be used to store, convey, or distribute water associated with a Storage and Interstate Release Agreement.

(18) The agreement must include any other provisions that the parties deem appropriate.

(b) *How to address financial considerations.* The Secretary will not execute an agreement that has adverse impacts on the financial interests of the United States. Financial details between and among the non-Federal parties need not be included in the Storage and Interstate Release Agreement but instead can be the subject of separate agreements. The Secretary need not be a party to the separate agreements.

(c) *How the Secretary will execute storage and interstate release agreements.* The Regional Director for the Bureau of Reclamation's Lower Colorado Region (Regional Director) may execute and administer a Storage and Interstate Release Agreement on behalf of the Secretary. The Secretary will notify the public of his/her intent to participate in negotiations to develop a Storage and Interstate Release Agreement and provide a means for public input. In considering whether to execute a Storage and Interstate Release Agreement, the Secretary may request, and the non-Federal parties must provide, any additional supporting data necessary to clearly set forth both the details of the proposed transaction and the eligibility of the parties to participate as State-authorized entities in the proposed transaction. The Secretary will also consider: applicable law and executive orders; applicable contracts; potential effects on trust resources; potential effects on entitlement holders,

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including Indian tribes; potential impacts on the Upper Division States; potential effects on third parties; potential environmental impacts and potential effects on threatened and endangered species; comments from interested parties, particularly parties who may be affected by the proposed action; comments from the State agencies responsible for consulting with the Secretary on matters related to the Colorado River; and other relevant factors, including the direct or indirect consequences of the proposed Storage and Interstate Release Agreement on the financial interests of the United States. Based on the consideration of the factors in this section, the Secretary may execute or decide not to execute a Storage and Interstate Release Agreement.

(d) *Assigning interests to an authorized entity.* Non-Federal parties to a Storage and Interstate Release Agreement may assign their interests in the Agreement to authorized entities. The assignment can be in whole or in part. The assignment can only be made if all parties to the agreement approve.

(e) *Requirement for contracts under the Boulder Canyon Project Act.* Release or diversion of Colorado River water for storage under this part must be supported by a water delivery contract with the Secretary in accordance with Section 5 of the BCPA. The only exception to this requirement is storage of Article II(D) (of the Decree) water by Federal or tribal entitlement holders. The release or diversion of Colorado River water that has been developed or will be developed as ICUA under this part also must be supported by a Section 5 water delivery contract.

(1) An authorized entity may satisfy the requirement of this section through a direct contract with the Secretary. An authorized entity also may satisfy the Section 5 requirement of the BCPA, for purposes of this part, through a valid subcontract with an entitlement holder that is authorized by the Secretary to subcontract for the delivery of all or a portion of its entitlement.

(2) For storing entities that do not otherwise hold a contract or valid subcontract for the delivery of the water to be stored, the Storage and Inter-

state Release Agreement will serve as the vehicle for satisfying the Section 5 requirement for the release or diversion of that water.

(3) For consuming entities that do not otherwise hold a contract or valid subcontract for the delivery of the water to be released by the Secretary as ICUA, the Storage and Interstate Release Agreement will serve as the vehicle for satisfying the Section 5 requirement for the release or diversion of that water.

(f) *Anticipatory release of ICUA.* The Secretary may release ICUA to a consuming entity before the actual development of ICUA by the storing entity if the storing entity certifies to the Secretary that ICUA will be developed during that same year that otherwise would not have existed.

(1) These anticipatory releases will only be made in the same year that the ICUA is developed.

(2) Before an anticipatory release, the Secretary must be satisfied that the storing entity will develop the necessary ICUA in the same year that the ICUA is to be released.

(g) *Treaty obligations.* Prior to executing any specific Storage and Interstate Release Agreements, the United States will consult with Mexico through the International Boundary and Water Commission under the boundary water treaties and other applicable international agreements in force between the two countries.

§414.4 Reporting requirements and accounting under Storage and Interstate Release Agreements.

(a) *Annual report to the Secretary.* Each storing entity will submit an annual report to the Secretary containing the material required by this section. The report will be due on a date to be agreed upon by the parties to the Storage and Interstate Release Agreement. The report must include:

(1) The quantity of water diverted and stored during the prior year under all Storage and Interstate Release Agreements; and

(2) The total quantity of stored water available to support the development of ICUA under each Storage and Interstate Release Agreement to which the

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storing entity is a party as of December 31 of the prior calendar year.

(b) *How the Secretary accounts for diverted and stored water.* The Secretary will account for water diverted and stored under Storage and Interstate Release Agreements in the records maintained under Article V of the Decree.

(1) The Secretary will account for the water that is diverted and stored by a storing entity as a consumptive use in the Storing State for the year in which it is stored.

(2) The Secretary will account for the diversion and consumptive use of ICUA by a consuming entity as a consumptive use in the Consuming State of unused apportionment under Article II(B)(6) of the Decree in the year the water is released in the same manner as any other unused apportionment taken by that State.

(3) The Secretary will maintain individual balances of the quantities of water stored under a Storage and Interstate Release Agreement and available to support the development of ICUA. The appropriate balances will be reduced when ICUA is developed by the storing entity and released by the Secretary for use by a consuming entity.

Subpart C—Water Quality and Environmental Compliance

§ 414.5 Water quality.

(a) *Water Quality is not guaranteed.* The Secretary does not warrant the quality of water released or delivered under Storage and Interstate Release Agreements, and the United States will not be liable for damages of any kind resulting from water quality problems. The United States is not under any obligation to construct or furnish water treatment facilities to maintain or improve water quality except as may otherwise be provided in relevant Federal law.

(b) *Required water quality standards.* All entities, in diverting, using, and returning Colorado River water, must:

(1) Comply with all applicable water pollution laws and regulations of the United States, the Storing State, and the Consuming State; and

(2) Obtain all applicable permits or licenses from the appropriate Federal, State, or local authorities regarding water quality and water pollution matters.

§ 414.6 Environmental compliance and funding of Federal costs.

(a) *Ensuring environmental compliance.* The Secretary will complete environmental compliance documentation, compliance with the National Environmental Policy Act of 1969, as amended, and the Endangered Species Act of 1973, as amended; and will integrate the requirements of other statutes, laws, and executive orders as required for Federal actions to be taken under this part.

(b) *Responsibility for environmental compliance work.* Authorized entities seeking to enter into a Storage and Interstate Release Agreement under this part may prepare the appropriate documentation and compliance document for a proposed Federal action, such as execution of a proposed Storage and Interstate Release Agreement. The compliance documents must meet the standards set forth in Reclamation's national environmental policy guidance before they can be adopted.

(c) *Responsibility for funding of Federal costs.* All costs incurred by the United States in evaluating, processing, and/or executing a Storage and Interstate Release Agreement under this part must be funded in advance by the authorized entities that are party to that agreement.

PART 417—PROCEDURAL METHODS FOR IMPLEMENTING COLORADO RIVER WATER CONSERVATION MEASURES WITH LOWER BASIN CONTRACTORS AND OTHERS

Sec.

417.1 Scope of part.

417.2 Consultation with contractors.

417.3 Notice of recommendations and determinations.

417.4 Changed conditions, emergency, or hardship modifications.

417.5 Duties of the Commissioner of Indian Affairs with respect to Indian reservations.

417.6 General regulations.

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storing entity is a party as of December 31 of the prior calendar year.

(b) *How the Secretary accounts for diverted and stored water.* The Secretary will account for water diverted and stored under Storage and Interstate Release Agreements in the records maintained under Article V of the Decree.

(1) The Secretary will account for the water that is diverted and stored by a storing entity as a consumptive use in the Storing State for the year in which it is stored.

(2) The Secretary will account for the diversion and consumptive use of ICUA by a consuming entity as a consumptive use in the Consuming State of unused apportionment under Article II(B)(6) of the Decree in the year the water is released in the same manner as any other unused apportionment taken by that State.

(3) The Secretary will maintain individual balances of the quantities of water stored under a Storage and Interstate Release Agreement and available to support the development of ICUA. The appropriate balances will be reduced when ICUA is developed by the storing entity and released by the Secretary for use by a consuming entity.

Subpart C—Water Quality and Environmental Compliance

§414.5 Water quality.

(a) *Water Quality is not guaranteed.* The Secretary does not warrant the quality of water released or delivered under Storage and Interstate Release Agreements, and the United States will not be liable for damages of any kind resulting from water quality problems. The United States is not under any obligation to construct or furnish water treatment facilities to maintain or improve water quality except as may otherwise be provided in relevant Federal law.

(b) *Required water quality standards.* All entities, in diverting, using, and returning Colorado River water, must:

(1) Comply with all applicable water pollution laws and regulations of the United States, the Storing State, and the Consuming State; and

(2) Obtain all applicable permits or licenses from the appropriate Federal, State, or local authorities regarding water quality and water pollution matters.

§414.6 Environmental compliance and funding of Federal costs.

(a) *Ensuring environmental compliance.* The Secretary will complete environmental compliance documentation, compliance with the National Environmental Policy Act of 1969, as amended, and the Endangered Species Act of 1973, as amended; and will integrate the requirements of other statutes, laws, and executive orders as required for Federal actions to be taken under this part.

(b) *Responsibility for environmental compliance work.* Authorized entities seeking to enter into a Storage and Interstate Release Agreement under this part may prepare the appropriate documentation and compliance document for a proposed Federal action, such as execution of a proposed Storage and Interstate Release Agreement. The compliance documents must meet the standards set forth in Reclamation's national environmental policy guidance before they can be adopted.

(c) *Responsibility for funding of Federal costs.* All costs incurred by the United States in evaluating, processing, and/or executing a Storage and Interstate Release Agreement under this part must be funded in advance by the authorized entities that are party to that agreement.

PART 417—PROCEDURAL METHODS FOR IMPLEMENTING COLORADO RIVER WATER CONSERVATION MEASURES WITH LOWER BASIN CONTRACTORS AND OTHERS

Sec.

417.1 Scope of part.

417.2 Consultation with contractors.

417.3 Notice of recommendations and determinations.

417.4 Changed conditions, emergency, or hardship modifications.

417.5 Duties of the Commissioner of Indian Affairs with respect to Indian reservations.

417.6 General regulations.

§ 417.1

AUTHORITY: 45 Stat. 1057, 1060; 43 U.S.C. 617; and Supreme Court Decree in "Arizona v. California," 376 U.S. 340.

SOURCE: 37 FR 18076, Sept. 7, 1972, unless otherwise noted.

§ 417.1 Scope of part.

The procedures established in this part shall apply to every public or private organization (herein termed "Contractor") in Arizona, California, or Nevada which, pursuant to the Boulder Canyon Project Act or to provisions of other Reclamation Laws, has a valid contract for the delivery of Colorado River water, and to Federal establishments other than Indian Reservations enumerated in Article II(D) of the March 9, 1964, Decree of the Supreme Court of the United States in the case of "Arizona v. California et al.", 376 U.S. 340 (for purposes of this part each such Federal establishment is considered as a "Contractor"), except that (a) neither this part nor the term "Contractor" as used herein shall apply to any person or entity which has a contract for the delivery or use of Colorado River water made pursuant to the Warren Act of February 21, 1911 (36 Stat. 925) or the Miscellaneous Purposes Act of February 25, 1920 (41 Stat. 451), (b) Contractors and permittees for small quantities of water, as determined by the Regional Director, Bureau of Reclamation, Boulder City, Nev. (herein termed "Regional Director"), and Contractors for municipal and industrial water may be excluded from the application of these procedures at the discretion of the Regional Director, and (c) procedural methods for implementing Colorado River water conservation measures on Indian Reservations will be in accordance with § 417.5 of this part.

§ 417.2 Consultation with contractors.

The Regional Director or his representative will, prior to the beginning of each calendar year, arrange for and conduct such consultations with each Contractor as the Regional Director may deem appropriate as to the making by the Regional Director of annual recommendations relating to water conservation measures and operating practices in the diversion, delivery, distribution and use of Colorado River

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water, and to the making by the Regional Director of annual determinations of each Contractor's estimated water requirements for the ensuing calendar year to the end that deliveries of Colorado River water to each Contractor will not exceed those reasonably required for beneficial use under the respective Boulder Canyon Project Act contract or other authorization for use of Colorado River water.

§ 417.3 Notice of recommendations and determinations.

Following consultation with each Contractor and after consideration of all relevant comments and suggestions advanced by the Contractors in such consultations, the Regional Director will formulate his recommendations and determinations relating to the matters specified in § 417.2. The recommendations and determinations shall, with respect to each Contractor, be based upon but not necessarily limited to such factors as the area to be irrigated, climatic conditions, location, land classifications, the kinds of crops raised, cropping practices, the type of irrigation system in use, the condition of water carriage and distribution facilities, record of water orders, and rejections of ordered water, general operating practices, the operating efficiencies and methods of irrigation of the water users, amount and rate of return flows to the river, municipal water requirements and the pertinent provisions of the Contractor's Boulder Canyon Project Act water delivery contract. The Regional Director shall give each Contractor written notice by registered or certified mail, return receipt requested, of his recommendations and determinations. If the recommendations and determinations include a reduction in the amount of water to be delivered, as compared to the calendar year immediately preceding, the notice shall be delivered to the Contractor or timely sent by registered or certified mail, return receipt requested, so that it may reasonably be delivered at least 30 days prior to the first date water delivery would be affected thereby, and shall specify the basis for such reduction including any pertinent factual determinations. The recommendations

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and determinations of the Regional Director shall be final and conclusive unless, within 30 days of the date of receipt of the notice, the Contractor submits his written comments and objections to the Regional Director and requests further consultation. If, after such further consultation, timely taken, the Regional Director does not modify his recommendations and determinations and so advises the Contractor in writing, or if modifications are made but the Contractor still feels aggrieved thereby after notification in writing of such modified recommendations and determinations, the Contractor may, before 30 days after receipt of said notice, appeal to the Secretary of the Interior. During the pendency of such appeal, and until disposition thereof by the Secretary, the recommendations and determinations formulated by the Regional Director shall be of no force or effect. In the event delivery of water is scheduled prior to the new recommendations and determinations becoming final, said delivery shall be made according to the Contractor's currently proposed schedule or to the schedules approved for the previous calendar year, whichever is less.

§417.4 Changed conditions, emergency, or hardship modifications.

A Contractor may at any time apply in writing to the Regional Director for modification of recommendations or determinations deemed necessary because of changed conditions, emergency, or hardship. Upon receipt of such written application identifying the reason for such requested modification, the Regional Director shall arrange for consultation with the Contractor with the objective of making such modifications as he may deem appropriate under the then existing conditions. The Regional Director may initiate efforts for further consultation with any Contractor on his own motion with the objective of modifying previous recommendations and determinations, but in the event such modifications are made, the Contractor shall have the same opportunity to object and appeal as provided in §417.3 of this part for the initial recommendations and determinations. The Regional Di-

rector shall afford the fullest practicable opportunity for consultation with a Contractor when acting under this section. Each modification under this section shall be transmitted to the Contractor by letter.

§417.5 Duties of the Commissioner of Indian Affairs with respect to Indian reservations.

(a) The Commissioner of Indian Affairs (herein termed "Commissioner") will engage in consultations with various tribes and other water users on the Indian Reservations listed in Article II (D) of said Supreme Court Decree, similar to those engaged in by the Regional Director with regard to Contractors as provided in §417.2 of this part. After consideration of all comments and suggestions advanced by said tribes and other water users on said Indian Reservations concerning water conservation measures and operating practices in the diversion, delivery, distribution and use of Colorado River water, the Commissioner shall, within the limits prescribed in said decree, make a determination as to the estimated amount of water to be diverted for use on each Indian Reservation covered by the above decree. Said determination shall be made prior to the beginning of each calendar year. That determination shall be based upon, but not necessarily limited to, such factors as: The area to be irrigated, climatic conditions, location, land classifications, the kinds of crops raised, cropping practices, the type of irrigation system in use, the condition of water carriage and distribution facilities, record of water orders, and rejections of ordered water, general operating practices, the operating efficiencies and methods of irrigation of the tribes and water users on each reservation, the amount and rate of return flows to the river, municipal water requirements, and other uses on the reservation. The Commissioner of Indian Affairs shall deliver to the Regional Director written notice of the amount of water to be diverted for use upon each Indian Reservation for each year 60 days prior to the beginning of each calendar year and the basis for said determination. The determination of the Commissioner shall be final and

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conclusive unless within 30 days of the date of receipt of such notice the Regional Director submits his written comments and objections to the Commissioner of Indian Affairs and requests further consultation. If after such further consultation, timely taken, the Commissioner does not modify his determination and so advises the Regional Director in writing or if modifications are made by the Commissioner but the Regional Director still does not agree therewith, the Regional Director may, within 30 days after receipt of the Commissioner's response, appeal to the Secretary of the Interior for a decision on the matter. During the pendency of such appeal and until disposition thereof by the Secretary, water deliveries will be made to the extent legally and physically available according to the Commissioner's determination or according to the Commissioner's determination for the preceding calendar year, whichever is less.

(b) Modifications of said determinations due to changed conditions, emergency or hardship may be made by the Commissioner, subject, however, to the right of the Regional Director to appeal to the Secretary, as provided in the case of an initial determination by the Commissioner. During the pendency of such an appeal, water deliveries will be made on the basis of the initial determination.

§ 417.6 General regulations.

In addition to the recommendations and determinations formulated according to the procedures set out above, the right is reserved to issue regulations of general applicability to the topics dealt with herein.

**PART 418—OPERATING CRITERIA
AND PROCEDURES FOR THE
NEWLANDS RECLAMATION
PROJECT, NEVADA**

GENERAL PROVISIONS

Sec.

- 418.1 Definitions.
- 418.2 How Project water may be used.
- 418.3 Effect of these regulations on water rights.
- 418.4 Prohibited deliveries.
- 418.5 Responsibility for violations.

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418.6 Fallon Paiute-Shoshone Indian Reservation.

CONDITIONS OF WATER DELIVERY

- 418.7 Who may receive irrigation deliveries.
- 418.8 Types of eligible land.
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APPENDIX A TO PART 418—CALCULATION OF EFFICIENCY EQUATION

AUTHORITY: 43 U.S.C. 391, et seq.; 43 U.S.C. 373; 43 U.S.C. 614, et seq.; 104 Stat. 3289, Pub. L. 101-618.

THE FOLLOWING TEXT OF THE 2003 IOPP IS AN EXCERPT FROM THE OCTOBER 10, 2003, *RECORD OF DECISION, COLORADO RIVER WATER DELIVERY AGREEMENT, IMPLEMENTATION AGREEMENT, INADVERTENT OVERRUN AND PAYBACK POLICY, AND RELATED FEDERAL ACTIONS, FINAL ENVIRONMENTAL IMPACT STATEMENT*. THE COMPLETE RECORD OF DECISION APPEARS AMONG THE SUPPLEMENTAL DOCUMENTS ON THE DVD INCLUDED WITH THIS VOLUME.

A. INADVERTENT OVERRUN AND PAYBACK POLICY

Reclamation is adopting a policy that will identify inadvertent overruns, will establish procedures that account for inadvertent overruns and will define subsequent payback requirements for users of Colorado River mainstream water in the Lower Division States. The Inadvertent Overrun and Payback Policy is effective beginning on January 1, 2004. The language of the policy has been modified from the language published in Appendix I of the Final IA EIS. The comments from Southern Nevada Water Authority and Colorado River Commission of Nevada were accommodated. Edits were made for grammar and consistency, and to eliminate duplication. None of the changes would result in environmental impacts different from those described in the Final IA EIS. The policy as finalized follows.

1. Background

In its June 3, 1963 opinion in the case of *Arizona v. California* (373 U.S. 546), the Supreme Court of the United States held that Congress has directed the Secretary of the Interior (Secretary) to administer a network of useful projects constructed by the Federal Government on the lower Colorado River, and has entrusted the Secretary with sufficient power to direct, manage, and coordinate their operation. The Court held that this power must be construed to permit the Secretary to allocate and distribute the waters of the mainstream of the Colorado River within the boundaries set down by the Boulder Canyon Project Act (45 Stat. 1057, 43 U.S.C. 617) (BCPA). The Secretary has entered into contracts for the delivery of Colorado River water with entities in Arizona, California, and Nevada in accordance with section 5 of the BCPA. The Secretary has the responsibility of operating Federal facilities on the Colorado River and delivering mainstream Colorado River water to users in Arizona, California, and Nevada that hold entitlements, including present perfected rights, to such water.

Article V of the Decree of the Supreme Court of the United States in *Arizona v. California* dated March 9, 1964 (376 U.S. 340) requires the Secretary to compile and maintain records of diversions of water from the mainstream, of return flow of such water to the mainstream as is available for consumptive use in the United States or in satisfaction of the Mexican Treaty obligation, and of consumptive use of such water. Reclamation reports this data each year in the Decree Accounting Record.¹⁵

Pursuant to the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs developed as a result of the Colorado River Basin Project Act of September 30, 1968, the Secretary annually consults with representatives of the governors of the Colorado River Basin States, general public and others and issues an Annual Operating Plan (AOP) for the coordinated operation of the Colorado River reservoirs. Reclamation also requires each Colorado River water user in the Lower

¹⁵ These records are published as: *Compilation of Records in Accordance with Article V of the Decree of the Supreme Court of the United States in Arizona v. California, et. al.*, dated March 9, 1964.

Basin to schedule water deliveries in advance for the following calendar year (calendar year is the annual basis for decree accounting of consumptive use in the lower Colorado basin) and to later report its actual water diversions and returns to the mainstream.

Pursuant to 43 CFR part 417, prior to the beginning of each calendar year, Reclamation consults with entities holding BCPA section 5 contracts (Contractor) for the delivery of water. Under these consultations, Reclamation makes recommendations relating to water conservation measures and operating practices in the diversion, delivery, distribution, and use of Colorado River water. Reclamation also makes a determination of the Contractor's estimated water requirements for the ensuing calendar year to ensure that deliveries of Colorado River water to each Contractor will not exceed those reasonably required for beneficial use under the respective BCPA contract or other authorization for use of Colorado River water. Reclamation sends a letter approving the Contractor's water order for the ensuing year in the amount determined to be appropriate by Reclamation. Reclamation then monitors the actual water orders, receives reports of measured diversions and return flows from major Contractors and Federal establishments, estimates unmeasured diversions and return flows, calculates consumptive use from preliminary diversions and measured and unmeasured return flows, and reports these records on an individual and aggregate monthly basis. Later, when final records are available, Reclamation prepares and publishes the final Decree Accounting Record on a calendar year basis.

For various reasons, a user may inadvertently consumptively use Colorado River water in an amount that exceeds the amount available under its entitlements as provided in annual approved water orders (inadvertent overrun). Further, the final Decree Accounting Record may show that an entitlement holder inadvertently diverted water in excess of the quantity of the entitlement that may not have been evident from the preliminary records. Reclamation is therefore adopting an administrative policy that defines inadvertent overruns, establishes procedures that account for the inadvertent overruns and defines the subsequent requirements for payback to the Colorado River mainstream.

2. Inadvertent Overruns

Effective January 1, 2004, Reclamation adopts the following Inadvertent Overrun and Payback Policy for the Lower Colorado River Basin:

1. Inadvertent overruns are those which the Secretary deems to be beyond the control of the entitlement holder; for example, overruns due to the discrepancy between preliminary and final stream flow and diversion records.
2. An inadvertent overrun is Colorado River water diverted, pumped or received by an entitlement holder of the Lower Division States that is in excess of the water user's entitlement for that year. This IOP policy provides a structure to payback the amount of water diverted, pumped or received in excess of entitlement for that year. This IOP policy does not create any right or entitlement to this water, nor does it expand the underlying entitlement in any way. An entitlement holder has no right to order, divert, pump or receive an inadvertent overrun. If, however, water is diverted, pumped or received inadvertently in excess of annual approved orders, and sources of unused Colorado River water are not available to accommodate adjustment of water orders by Reclamation, the inadvertent overrun policy will govern the payback. This IOP Policy will not be applied in any manner to the deliveries made under the United States Mexico Water Treaty of 1944.
3. Payback will be required to commence in the calendar year that immediately follows the release date of a final Decree Accounting Record that reports uses that are in excess of an individual's

entitlement.

4. Payback must be made only from measures that are above and beyond the normal reasonable and beneficial consumptive use of water (extraordinary conservation measures). Extraordinary conservation measures mean actions taken to conserve water that otherwise would not return to the mainstream of the Colorado River and be available for beneficial consumptive use in the United States or to satisfy the Mexican treaty obligation. Any entitlement holder with a payback obligation must submit to Reclamation, along with its water order, a plan which will show how it will intentionally forbear use of Colorado River water by extraordinary conservation measures, including fallowing, sufficient to meet its payback obligation and which demonstrates that the measures being proposed are in addition to those being implemented to meet any existing transfer or conservation agreement, and are in addition to the measures found in its Reclamation approved conservation plan. Plans for payback could also include supplementing Colorado River system water supplies with non-system water supplies through exchange or forbearance or other acceptable arrangements, provided that non-system water is not physically introduced into the system without appropriate environmental review and approval by Reclamation. Water banked off-stream or groundwater from areas not hydrologically connected to the Colorado River or its tributaries are examples of such supplemental supplies. Water ordered but subsequently not diverted is not included in this policy in any manner.
5. Maximum cumulative inadvertent overrun accounts will be specified for individual entitlement holders as 10 percent of an entitlement holder's normal year consumptive use entitlement. (Normal year means a year for which the Secretary has determined that sufficient mainstream Colorado River water is available for release to satisfy 7.5 maf of annual consumptive use in the States of California, Arizona and Nevada.)
6. The number of years within which an overrun, calculated from consumptive uses reported in final Decree Accounting Records, must be paid back, and the minimum payback required for each year shall be as follows:
 - a. In a year in which the Secretary makes a flood control release or a space building release pursuant to the applicable Water Control Manual for Hoover Dam, Lake Mead, any accumulated amount in the overrun account will be forgiven.
 - b. If the Secretary has declared a 70R surplus in an AOP applicable to the calendar year of payback, any payback obligation for that calendar year will be deferred at the entitlement holder's option.
 - c. In a year when Lake Mead elevation is between the elevation for a 70R surplus determination and elevation 1,125 feet above mean sea level on January 1, the payback obligation incurred in that year must be paid back in full within 3 years of the reporting of the obligation, with a minimum payback each year being the greater of 20 percent of the individual entitlement holder's maximum allowable cumulative overrun account amount or 33.3 percent of the total account balance.
 - d. In a year when Lake Mead elevation is at or below elevation 1,125 feet above mean sea level on January 1, the total account balance must be paid back in full in that calendar year.
 - e. For any year in which the Secretary declares a shortage under the Decree, the total

account must be paid back in full that calendar year, and further accumulation of inadvertent overruns will be suspended as long as shortage conditions prevail.

7. A separate inadvertent overrun account may be established in those limited cases in which a lower priority user is contractually responsible for payback of other senior entitlement holders. The separate inadvertent overrun account will be limited to a maximum cumulative amount of 10 percent of the senior entitlement holder's average consumptive use. Such inadvertent overrun accounts will be the assigned responsibility of the lower priority user in addition to its own entitlement-based inadvertent overrun account. If, however, senior entitlement holder's approved aggregate calendar year water orders are in excess of the specified amount for which the lower priority user will be responsible, such excess will not be deemed inadvertent and the lower priority user's water order for that year will be reduced accordingly by Reclamation.
8. Each month, Reclamation will monitor the actual water orders, receive reports of measured diversions and return flows from Contractors and Federal establishments, estimate unmeasured diversions and return flows, and project individual and aggregate consumptive uses for the year. Should preliminary determinations indicate that monthly consumptive uses by individual users, or aggregate uses, when added to the approved schedule of uses for the remainder of that year, exceed entitlements pursuant to annual approved water orders but are not exceeding the maximum inadvertent overrun account amount, Reclamation will notify in writing the appropriate entities that the preliminary determinations are forecasting annual uses in excess of their entitlements.
9. During years in which an entitlement holder is forbearing use to meet its payback obligation, Reclamation will monitor the implementation of the extraordinary conservation measures, and require that the entitlement holder's consumptive use be at or below its approved water order for that year. Should the entitlement holder's actual monthly deliveries for the first 5 months of the year exceed their forecasted orders, and projections indicate the entitlement holder's end of year use is likely to be 5 percent or more above their adjusted entitlement, Reclamation will notify the entitlement holder in writing. At the end of 7 months, if it continues to appear that the entitlement holder is likely to be above its adjusted entitlement Reclamation will notify the entitlement holder that they are at risk of exceeding their adjusted entitlement, and having their next year's orders placed under enforcement proceedings. Reclamation will monitor the implementation of the extraordinary conservation measures and monitor the forbearance of consumptive use of Colorado River water. Should preliminary determinations of the implementation of extraordinary conservation or of monthly Colorado River consumptive uses indicate that sufficient extraordinary conservation or sufficient forbearance of Colorado River consumptive use is not projected to occur, Reclamation will notify the appropriate entitlement holders in writing that the preliminary determinations are forecasting that their annual payback obligations are not on target or being met. If this condition occurs for two consecutive years, in the second year Reclamation will begin enforcement proceedings, and will so advise the entitlement holder in writing by July 31 of the second year. Reclamation will consult with the entitlement holder on a modified release schedule and will limit releases to the entitlement holder for the remainder of the year such that by the end of the year the individual entitlement holder has met its payback obligation.
10. Procedures will be established for accounting for inadvertent overruns on an annual basis and for supplementing the final Decree Accounting Record. The procedures and measures for administering the IOP will be reviewed every 5 years. Final determinations under this IOP policy shall be made by Reclamation's Lower Colorado Regional Director.

Subject: **Policy Establishing a Demonstration Program for System Conservation of Colorado River Water**

Purpose: Reclamation plans to implement a Demonstration Program for System Conservation (Demonstration System Conservation Program). A Demonstration System Conservation Program will allow Reclamation to determine whether voluntary System Conservation through the use of land fallowing could be used as an interim and supplemental measure to reduce the water supply impacts that otherwise would occur on Colorado River reservoir system storage (System Storage).

Authority: Boulder Canyon Project Act of 1928, Colorado River Basin Project Act of 1968, and Colorado River Basin Salinity Control Act of 1974, as amended

I. General.

A. Background.

1. Under current river operations, Wellton-Mohawk Irrigation and Drainage District (Wellton-Mohawk) drainage water is not returned to the Colorado River so the United States can meet the salinity requirements of the Mexican Water Treaty. This drainage water is bypassed to the Cienega de Santa Clara (Cienega) and an equivalent amount of water is released from System Storage. The Wellton-Mohawk drainage water bypassed to the Cienega is called "Bypass Water." When the Yuma Desalting Plant (YDP) is operating, it is expected that YDP Reject Stream will also be routed to the Cienega.
2. The Colorado River Basin Salinity Control Act (Salinity Control Act) recognizes that replacement of Bypass Water and YDP Reject Stream is a national obligation, as provided in section 202 of the Colorado River Basin Project Act. The Salinity Control Act further provides that measures to replace Bypass Water and YDP Reject Stream may be undertaken independently of that national obligation.
3. At the present time, approximately 110,000 acre-feet of drainage water from Wellton-Mohawk is bypassed each year to the Cienega to meet the requirements of the Mexican Water Treaty and an equivalent amount of water is released from System Storage. The release of water from System Storage to replace Bypass Water or YDP Reject Stream depletes System Storage and increases the risk of shortage. The Demonstration System Conservation Program can mitigate the impacts caused by the increased depletions of water from System Storage. In light of the recent

drought in the Colorado River watershed, it is important that Bypass Water be replaced as soon as possible and steps be taken to avoid depletions that would result from routing YDP Reject Stream to the Cienega.

B. Purpose.

1. Reclamation proposes to enter into agreements with eligible Entitlement Holders under which the Entitlement Holders will agree to conserve the use of a portion of their approved annual consumptive use of Colorado River water. Participation in this Demonstration System Conservation Program is voluntary and a participating Entitlement Holder will be paid for verified reductions in its consumptive use, up to the amount of pledged System Conservation. This voluntary System Conservation could provide an interim and supplemental source of water to offset the impacts of replacing Bypass Water or YDP Reject Stream with water from System Storage. The purpose of this Policy is to establish Reclamation's criteria for administering a Demonstration System Conservation Program.
2. Implementing a means to replace Bypass Water or YDP Reject Stream other than through the release of water from System Storage is in the common interest of all Colorado River Basin States (Basin States). The Lower Colorado Region will initiate consultations with the Basin States on a basin-wide approach to address this issue. In the interim, the Lower Colorado Region is implementing this Policy that will apply only in Arizona, California, and Nevada (the Lower Division States). This Policy would be limited to extraordinary conservation activities through land fallowing in the Lower Division States.
3. Reclamation is systematically working on implementing a dual path approach, whereby Reclamation is addressing the design deficiencies of the YDP while concurrently implementing a Demonstration System Conservation Program. The Demonstration System Conservation Program is expected to produce data that can be analyzed to determine the feasibility of using such a program as an interim conservation method, not to exceed the amount of Bypass Water or YDP Reject Stream.

C. Applicability. The Demonstration System Conservation Program would be limited to Entitlement Holders in the Lower Division States. This Policy replaces and supersedes the policy adopted on May 18, 2004.

D. Definitions. For the purposes of this Policy:

1. Consumptive use means diversions from the Colorado River less any return flow to the river that is available for consumptive use in the United States or in satisfaction of the Mexican Treaty Obligation.
 - a. Consumptive use from the Colorado River within the Lower Division States includes water drawn from the Colorado River by underground pumping.
 - b. The Mexican Treaty Obligation is set forth in the February 3, 1944, Water Treaty between Mexico and the United States, including supplements and associated Minutes of the International Boundary and Water Commission.
2. Decree means the consolidated decree entered March 27, 2006 (547 U.S. ____ (2006), by the United States Supreme Court in *Arizona v. California, et al.*, or as it may be further modified.
3. Entitlement Holder means a person or entity within the Lower Division States that has an existing authorization to divert Colorado River water as reasonably required for beneficial uses pursuant to (i) a decreed right, (ii) a Boulder Canyon Project Act Section 5 contract with the United States through the Secretary of the Interior, or (iii) a Federal reservation of water.
4. System Conservation for the purposes of this Policy means a voluntary reduction of consumptive use of Colorado River water use by an Entitlement Holder through land fallowing under a System Conservation Agreement. System Conservation does not include measures: (i) required by Reclamation under its existing contract(s) for delivery of water with an Entitlement Holder, (ii) required by Reclamation to avoid non-beneficial or unreasonable use determinations, (iii) implemented by the Entitlement Holder to meet consumptive use reduction obligations under any transfer or conservation agreement with another party, (iv) implemented for money payment or other valuable consideration from another party, or (v) voluntarily undertaken by an Entitlement Holder for purposes other than System Conservation.
5. System Conservation Agreement means an agreement, entered into between Reclamation and an Entitlement Holder pursuant to this Policy, to reduce consumptive use of Colorado River water through extraordinary conservation by land fallowing.

6. 43 CFR Part 417 means the procedures established in Title 43, Subtitle B, Ch. 1, Part 417 of the *Code of Federal Regulations* relating to the Department of the Interior's annual review of Entitlement Holders' water conservation measures and operating practices in the diversion, delivery, distribution, and use of Colorado River water.
7. Inadvertent Overrun and Payback Policy means the Lower Colorado Region's policy, approved by the Secretary of the Interior on October 10, 2003, and effective January 1, 2004, that identifies and defines inadvertent overruns of approved consumptive use of Colorado River water by an Entitlement Holder, establishes procedures that account for inadvertent overruns, and defines subsequent Entitlement Holder payback requirements to System Storage (69 Fed. Reg. 12208-09, March 15, 2004).
8. Secretary means the Secretary of the Interior or a duly authorized representative.

II. Demonstration System Conservation Program.

- A. **Program Requirements.** Reclamation proposes to initiate a Demonstration System Conservation Program to determine whether voluntary system conservation, not to exceed the amount of Bypass Water or YDP Reject Stream, would be feasible to mitigate the impacts caused by releasing water from System Storage to replace Bypass Water or YDP Reject Stream that is routed to the Cienega. The Demonstration System Conservation Program may be initiated in calendar year 2006 and will continue through December 31, 2008.
 1. **Submittal of System Conservation Proposals:** Pursuant to 43 CFR Part 417, Reclamation will determine each Entitlement Holder's estimated consumptive use water requirements for the following calendar year and inform the Entitlement Holder in writing of that determination. Reclamation may request eligible interested Entitlement Holders to submit Demonstration System Conservation Program proposals under this Policy each year this Policy is in effect. Entitlement Holders may submit such proposals at any time during the period this Policy is in effect or Reclamation may enter into negotiations with an Entitlement Holder or Entitlement Holders to implement System Conservation under this Policy.
 - a. An Entitlement Holder may submit its proposal to implement System Conservation in calendar year 2006 any time after the effective date of this Policy but prior to November 15.

- b. An Entitlement Holder must submit its proposal to implement System Conservation in calendar years 2007 and 2008 by September 15 of the previous year.
- c. Reclamation may also enter into negotiations with an individual Entitlement Holder(s) to implement System Conservation.
 - (1) Reclamation may establish an amount that Reclamation is willing to pay to implement System Conservation and seek offers to conserve water at that cost.
 - (2) Reclamation will then negotiate and execute the necessary System Conservation Agreement(s) with the individual Entitlement Holder(s).

2. **Eligibility to Participate in a System Conservation Program.**

Reclamation will entertain definitive System Conservation proposals only from existing Entitlement Holders with a recent history of beneficial consumptive use. Proposals from individuals that use Colorado River water delivered within the service area of an Entitlement Holder, but are not themselves existing Entitlement Holders, will not be considered. Because of the costs associated with administration of System Conservation proposals for small quantities of water conservation, the minimum quantity of water conservation that will be considered for a System Conservation proposal is a reduction of 1,000 acre-feet of consumptive use per year.

3. **Submittal of System Conservation Proposals:** System Conservation proposals must be submitted in writing to Reclamation at the following address:

Bureau of Reclamation
Lower Colorado Regional Office
PO Box 61470
Boulder City, Nevada 89006-1470
Attn: Area Manager, Boulder Canyon Operations Office

4. **Elements of a System Conservation Proposal.** Under the Demonstration System Conservation Program, Reclamation will consider only agricultural land following System Conservation proposals. Generally, each Entitlement Holder's System Conservation of reasonable beneficial consumptive use is based on

fallowing of irrigated agricultural lands and will be limited to no more than 33 percent of that Entitlement Holder's service area irrigated acreage, including fallowing that occurs under other programs undertaken by the Entitlement Holder to meet consumptive use reduction obligations under any transfer or conservation agreement with another party. This percentage is subject to modification pending implementation of this Demonstration System Conservation Program and further consultation with the Lower Division States. A waiver of this maximum participation level will be considered for an Entitlement Holder that owns all of the irrigated acreage within its service area boundaries. Any System Conservation proposal must specify the following: (1) how much consumptive use the Entitlement Holder proposes to conserve; (2) the amount of financial compensation the Entitlement Holder would expect per acre-foot of water conserved and forborne; (3) how the proposed land fallowing measures would result in a verified reduction in diversions and consumptive use; (4) required approvals, if any, under State law; and (5) other information that would assist in Reclamation's evaluation of the proposal.

5. **Overrun Payback Obligations.** An Entitlement Holder that is paying back an overrun under the Inadvertent Overrun and Payback Policy, or Exhibit C to the Colorado River Water Delivery Agreement approved by the Secretary on October 10, 2003, may concurrently participate in the Demonstration System Conservation Program. An Entitlement Holder will first be obligated to meet its annual overrun payback obligation (as reflected in Reclamation's determination of the Entitlement Holder's estimated reasonable beneficial consumptive use water requirements) before forbearing any additional water available for System Conservation under this Policy.
6. **Changes in Water Orders.** An Entitlement Holder entering into a System Conservation Agreement will be permitted to increase its water order if it determines it can divert and put to beneficial use (on lands having a recent history of irrigation) a quantity of water different than that previously specified in an annual water order or amended water order and Reclamation approves. The maximum allowable increase in a conserving Entitlement Holder's water order will be limited to its maximum entitlement, if the entitlement is quantified, less consumptive use reduction obligations under any transfer or conservation agreement with another party and its agreed to reduction in consumptive use during that year under a System Conservation Agreement. An Entitlement Holder cannot increase the amount of System Conservation it had previously scheduled for implementation during the calendar year.

7. **Cost and Compensation.** If Reclamation is evaluating several System Conservation proposals, Reclamation will prioritize eligible System Conservation offers on the basis of offered cost per acre-foot reduction in consumptive use. Reclamation will commit its limited funding to implement System Conservation on the basis of offered cost, with the lowest cost per acre-foot receiving the first priority consideration. Offers will be considered until Reclamation has used up the appropriated funds available in that year for this program. Compensation will be limited to the reduction in reasonable beneficial consumptive use that is actually verified. Reclamation will pay 50 percent of the compensation for the reduction in consumptive use upon the execution of a System Conservation Agreement. Reclamation will pay the remaining 50 percent of the compensation after verifying that the reduction in consumptive use occurred consistent with the terms of the System Conservation Agreement. An Entitlement Holder pledging System Conservation will not be compensated for water within its estimated water requirements as determined by Reclamation that remains unused after the pledged System Conservation and consumptive use reduction obligations under any transfer or conservation agreement with another party are deducted from the Entitlement Holder's estimated consumptive use water requirements as determined by Reclamation. Such water could be available for use by Entitlement Holders within the Lower Division State subject to the terms of existing contracts, the water use priority system for that State, and approval by Reclamation.

8. **Protecting Rights of Junior Entitlement Holders.** Reclamation will not compete with a Lower Division State's existing junior Entitlement Holders for the use of Colorado River water that would be forborne by System Conservation actions in that Lower Division State.
 - a. Accordingly, an amount of water equal to the amount of water to be conserved pursuant to a System Conservation Agreement in a Lower Division State first will be made available for acquisition and beneficial use by junior Entitlement Holders within that State up to an amount necessary to satisfy the Entitlement Holder's calendar year consumptive use water requirements, pursuant to the order of priority in accordance with the priority system applicable to Entitlement Holders within that State. Reclamation will inform all junior Entitlement Holders, in writing, of the quantity of water to be forborne that is offered to Reclamation by Entitlement Holders that submit System

Conservation proposals along with the proposed financial or other terms associated with the proposed System Conservation. Any junior Entitlement Holder within the relevant Lower Division State who is interested in acquiring an amount of water less than or equal to the amount of water to be forborne will be required to submit to Reclamation a binding commitment, by a date specified by Reclamation, to acquire a specific quantity of water and to pay a proportionate share or all of the costs of the System Conservation proposal, depending upon whether the junior Entitlement Holder is interested in acquiring an amount of water less than or equal to the amount of water to be forborne.

- b. If there are no interested junior Entitlement Holders in the State where the proposed System Conservation is to occur, the water forborne under the System Conservation proposal will not be delivered in that year as unused entitlement to other users within the State or as unused apportionment to another Lower Division State but will remain in System Storage.

- 9. **Protecting the Rights of All States.** No more than one-half of the total conservation will be implemented by Arizona or California over the period of the Demonstration System Conservation Program unless a State agrees to have more than one-half the total conservation implemented in that State. Reclamation, in its Colorado River accounting and water use report prepared under Article V of the Decree for calendar year 2006 and afterwards, shall include a supplemental accounting section for the Demonstration System Conservation Program. For the year covered by the report, this supplemental accounting section will report the amount of any Bypass Water, the amount of any water made available from operation of the YDP, the amount of any YDP Reject Stream, the amount of water forborne due to System Conservation, and the amount of water made available to replace the Bypass Water or Reject Stream by any other measures.

B. Program Implementation.

1. Environmental Compliance.

- a. Reclamation has reviewed the adoption of this Demonstration System Conservation Program for compliance with Federal environmental laws, including the National Environmental Policy Act, and determined that the

program meets the criteria for a Categorical Exclusion as described within 516 DM 6, Appendix 9, Categorical Exclusion 12, as follows: "Conduct of programs of demonstration, educational, and technical assistance to water user organizations for improvement of project and on-farm irrigation water use and management." A Categorical Exclusion Checklist has been prepared for this Policy. No System Conservation program was initiated under the May 18, 2004, Policy and therefore there has been no data to evaluate to date.

- b. The approval of a System Conservation agreement by Reclamation will constitute a Federal action subject to applicable Federal environmental law. Appropriate environmental compliance documentation will be completed prior to Reclamation's execution of a System Conservation agreement.

2. **System Conservation Agreements.** Reclamation will enter into specific commitments pursuant to this Policy to implement System Conservation on an annual basis for a period not longer than one year during the term of the Demonstration System Conservation Program. System Conservation Agreements will not in any way affect the long-term entitlement to Colorado River water of any Entitlement Holder or the apportionment of any Lower Division State. Critical to Reclamation's evaluation of any System Conservation proposal is a determination that there has been no artificial inflation of the System Conservation Entitlement Holder's estimated reasonable beneficial consumptive use water requirements. In evaluating any System Conservation proposal, Reclamation shall consider, among other items, the cost to the United States and the recent water history of consumptive use by the Entitlement Holder.
3. **Verification of Conserved Water.** The reduction in consumptive use of Colorado River water associated with any System Conservation proposal shall be the measure of the amount of water conserved. Reclamation will require any proposed reduction in Colorado River water consumptive use from a System Conservation proposal to be reflected in verifiable reductions in consumptive use. If an Entitlement Holder with an approved System Conservation proposal does not reduce its actual water use by the agreed-upon amount for which payment has been received, Reclamation shall treat any overuse as an inadvertent overrun that is subject to the Inadvertent Overrun and Payback Policy. Reclamation will consult with Entitlement Holders, representatives

of the Lower Division States, and other interested parties before, during, and after the System Conservation action has taken place, and based on those consultations shall verify that land is fallowed to make water available that otherwise would have been consumptively used.

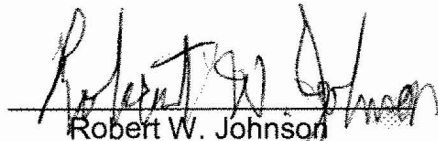
4. **Reclamation's Purpose in Conserving System Water.** Any water conserved through this Demonstration System Conservation Program will remain in System Storage to offset the impacts caused by depletions from System Storage attributed to Bypass Water. Reclamation will pay Entitlement Holders to conserve water under this Policy only up to the amount of the anticipated Bypass Water or YDP Reject Stream for the calendar year. By helping conserve the amount of Colorado River water in storage, the Demonstration System Conservation Program will decrease the probability and severity of potential shortage determinations and enhance the potential for future surplus determinations.
5. **Evaluation of Demonstration System Conservation Program.** Reclamation will evaluate the results of the Demonstration System Conservation Program after its conclusion and consult with Entitlement Holders, representatives of the Lower Division States, and other interested parties to determine whether a long-term System Conservation program is feasible. If Reclamation determines a long-term System Conservation program is feasible and desirable, Reclamation will develop proposed policies and procedures for a long-term System Conservation program in consultation with representatives of the Lower Division States.

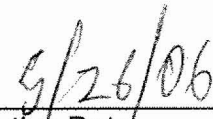
- III. **Other Alternatives.** This Demonstration System Conservation Program is being implemented as one element of a variety of programs that could be used to replace the Bypass Water or YDP Reject Stream. The YDP/Cienega Workgroup presented a report, dated April 22, 2005, describing various programs that could be pursued. Reclamation has an ongoing public process to examine these programs and others to gather data on one or more approaches to replace the Bypass Water or YDP Reject Stream.

In line with the dual track approach earlier described in this Policy, Reclamation continues to work on the design deficiencies for the YDP. In addition, Reclamation is conducting a demonstration with the YDP to operate the plant at one-eighth capacity for a 90-day period in the winter of 2006 to assist in evaluating the design deficiencies and the cost of operating YDP at larger capacities.

- IV. **Authority of the Secretary Not Affected:** Nothing in this Policy diminishes or abrogates the authority of the Secretary of the Interior under applicable Federal law, regulation, or Supreme Court Decree.

Adopted as a Policy of the Lower Colorado Region, Bureau of Reclamation:


Robert W. Johnson
Regional Director


Effective Date



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

In Reply Refer To:
LWP 430/511.

25 JUN 1980

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Mr. Paul L. Billhymer
Executive Director
Upper Colorado River Commission
355 South Fourth East Street
Salt Lake City, UT 84111

Dear Mr. Billhymer:

This supplements my letter of April 28, 1980, about the termination of the Lake Powell filling criteria.

The "General Governing and Operating Criteria During Lake Powell Filling Period" were published in the Federal Register on July 12, 1962, and stated that the filling criteria would be applicable until the date Lake Powell storage first attains elevation 3,700 feet and Lake Mead storage is simultaneously at or above elevation 1,146 feet. On Sunday evening, June 22, 1980, Lake Powell exceeded elevation 3,700 feet for the first time, and on that date Lake Mead was at about elevation 1,201 feet, thus terminating the Lake Powell filling criteria.

Sincerely,

(Sgd) Cecil D. Andrus

SECRETARY

dc:
Secretary's Surname
Secretary's Reading Files—LWP (2)
Asst Secy - LW (2)
ES, OPA, PBA, WRC
S-Jankel
FSA-Denver
✓ Regional Director, (LC), UC
E&R Center, D-400, D-700
W.O. Code 700

LWP:H Willms:ah:6-23-80:x5471

SEE ATTACHED PAGE FOR IDENTICALS.

A-335

Appendix 31: Termination of Lake Powell Filling Criteria (1980)

Honorable Scott M. Matheson
Governor of Utah
Salt Lake City, UT 84114

cc:
Mr. Daniel F. Lawrence
Director and Interstate Streams Commissioner
Division of Water Resources
Department of Natural Resources
Salt Lake City, UT 84114

Honorable Bruce King
Governor of New Mexico
Santa Fe, NM 87501

cc:
Mr. Steven E. Reynolds
State Engineer
Bataan Memorial Building
Santa Fe, NM 87501

Honorable Ed Herschler
Governor of Wyoming
Cheyenne, WY 82001

cc:
Mr. George Christopoulos
State Engineer
State Office Building East
Cheyenne, WY 82002

Honorable Bruce Babbitt
Governor of Arizona
Phoenix, AZ 85007

cc:
Mr. Wesley E. Steiner
Executive Director
State Water Engineer
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Phoenix, AZ 85004

Honorable Edmund G. Brown, Jr.
Governor of California
Sacramento, CA 95814

cc:
Mr. Myron B. Holburt
Chief Engineer
Colorado River Board of California
107 South Broadway, Room 8103
Los Angeles, CA 90012

Honorable Robert List
Governor of Nevada
Carson City, NV 89701

cc:
Mr. Duane Sudweeks
Acting Administrator
Division of Colorado River Resources
P.O. Box 1748
Las Vegas, NV 89101

Honorable Richard Lamm
Governor of Colorado
Denver, CO 80203

cc:
Mr. J. William McDonald
Director, Colorado Water Conservation Board
1313 Sherman Street
Denver, CO 80203



THE SECRETARY OF THE INTERIOR
WASHINGTON

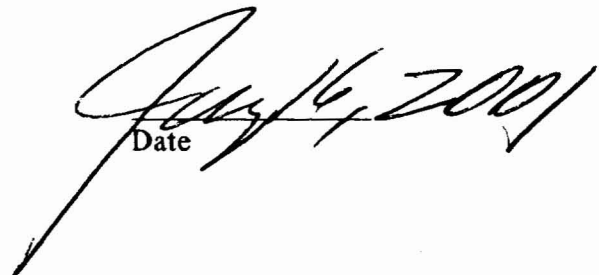
RECORD OF DECISION

**COLORADO RIVER INTERIM SURPLUS GUIDELINES
FINAL ENVIRONMENTAL IMPACT STATEMENT**

JANUARY 2001

Approved


Secretary of the Department of the Interior


Date

RECORD OF DECISION
COLORADO RIVER INTERIM SURPLUS GUIDELINES
FINAL ENVIRONMENTAL IMPACT STATEMENT

I. Introduction

This document constitutes the Record of Decision (ROD) of the Department of the Interior, regarding the preferred alternative for Colorado River Interim Surplus Guidelines (Guidelines). The Secretary of the Interior (Secretary) is vested with the responsibility of managing the mainstream waters of the lower Colorado River pursuant to federal law. This responsibility is carried out consistent with applicable federal law. Reclamation, as the agency that is designated to act on the Secretary's behalf with respect to these matters, is the lead Federal agency for the purposes of National Environmental Policy Act (NEPA) compliance for the development and implementation of the proposed interim surplus guidelines. The FEIS was prepared pursuant to the National Environmental Policy Act of 1969 (NEPA), as amended, the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500 through 1508), Department of Interior Policies, and Reclamation's NEPA Handbook. Colorado River Interim Surplus Criteria is the subject of the Final Environmental Impact Statement (FEIS), filed with the Environmental Protection Agency (FES-00-52) on December 8, 2000 and noticed by the Environmental Protection Agency and Reclamation in the Federal Register on December 15, 2000.

The FEIS was prepared by Reclamation to address the formulation and evaluation of specific interim surplus guidelines and to identify the potential environmental effects of implementing such guidelines. The FEIS addresses the environmental issues associated with, and analyzes the environmental consequences of various alternatives for specific interim surplus guidelines. The alternatives addressed in the FEIS are those Reclamation determined would meet the purpose of and need for the federal action and represented a broad range of the most reasonable alternatives.

The National Park Service (NPS) and the International Boundary and Water Commission United States and Mexico (IBWC) are cooperating agencies for purposes of assisting with the environmental analysis in the FEIS. The NPS administers three areas of national significance within the area potentially affected by the proposed action: Glen Canyon National Recreation Area (GCNRA), Grand Canyon National Park and Lake Mead National Recreation Area (LMNRA). The NPS administers recreation, cultural and natural resources in these areas and also grants and administers recreation concessions for the operation of marinas and related facilities at Lake Powell and Lake Mead, while the elevation of each of these reservoirs is controlled by and subject to Reclamation operations. The IBWC is a bi-national organization responsible for administration of the provisions of the U.S.-Mexico Water Treaty of 1944 (Treaty), including the Colorado River waters allocated to Mexico, protection of lands along the Colorado River from

floods by levee and floodway projects, resolution of international boundary water sanitation and other water quality problems, and preservation of the river as the international boundary. The IBWC consists of the United States Section and the Mexico Section which have their headquarters in the adjoining cities of El Paso, Texas and Ciudad Juarez, Chihuahua, respectively. These and other federal, state and local agencies are expected to use the FEIS and ROD in their planning and decision-making processes.

II. Recommended Decision

The recommendation is the approval of the following Federal action: the adoption of specific interim surplus guidelines identified in the Preferred Alternative (Basin States Alternative) as analyzed in the FEIS. These specific interim surplus guidelines would be used annually to determine the conditions under which the Secretary would declare the availability of surplus water for use within the states of Arizona, California and Nevada. These guidelines would be consistent with both the Decree entered by the United States Supreme Court in 1964 in the case of *Arizona v. California* (Decree) and Article III(3)(b) of the *Criteria for Coordinated Long-Range Operation of the Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of September 30, 1968* (LROC). The guidelines would remain in effect for determinations made through calendar year 2015 regarding the availability of surplus water through calendar year 2016, may be subject to five-year reviews conducted concurrently with LROC reviews, and would be applied each year as part of the Annual Operation Plan (AOP) process.

III. Background

The Secretary of the Interior manages the lower Colorado River system in accordance with federal law, including the 1964 Decree of the U.S. Supreme Court in *Arizona v. California* (Decree), the Colorado River Basin Project Act of 1968 (CRBPA), and the *Criteria for Coordinated Long-Range Operation of the Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of September 30, 1968* (LROC). Within this legal framework, the Secretary makes annual determinations regarding the availability of surplus water from Lake Mead by considering various factors, including the amount of water in system storage and predictions for natural runoff. The 1964 Decree provides that if there exists sufficient water available in a single year for release (primarily from Lake Mead) to satisfy annual consumptive use in the states of Arizona, California, and Nevada in excess of 7.5 million acre-feet (maf), such excess consumptive use in Arizona, California and Nevada is “surplus.” The Secretary is authorized to determine the conditions upon which such water may be made available. The CRBPA directed the Secretary to adopt criteria for coordinated long-range operation of reservoirs on the Colorado River in order to comply with and carry out the provisions of the Colorado River Compact of 1922 (Compact), the Colorado River Storage Project Act of 1956 (CRSPA), the Boulder Canyon Project Act of 1928 (BCPA) and the United States-Mexico Water Treaty of 1944 (Treaty). The Secretary sponsors a formal review of the LROC every five years.

The LROC provide that the Secretary will determine the extent to which the reasonable consumptive use requirements of mainstream users in Arizona, California and Nevada (the Lower Division states) can be met. The LROC define a normal year as a year in which annual pumping and release from Lake Mead will be sufficient to satisfy 7.5 maf of consumptive use in accordance with the Decree. A surplus year is defined as a year in which water in quantities greater than normal (i.e., greater than 7.5 maf) is available for pumping or release from Lake Mead pursuant to Article II(B)(2) of the Decree after consideration of relevant factors, including the factors listed in the LROC. Surplus water is available to agencies which have contracted with the Secretary for delivery of surplus water, for use when their water demand exceeds their basic entitlement, and when the excess demand cannot be met within the basic apportionment of their state. Water apportioned to, but unused by one or more Lower Division states can be used to satisfy beneficial consumptive use requests of mainstream users in other Lower Division states as provided in Article II(B)(6) of the Decree.

Pursuant to the CRBPA, the LROC are utilized by the Secretary, on an annual basis, to make determinations with respect to the projected plan of operations of the storage reservoirs in the Colorado River Basin. The AOP is prepared by Reclamation, acting on behalf of the Secretary, in consultation with representatives of the Colorado River Basin states (Basin States) and other parties, as required by federal law. The interim surplus guidelines would serve to implement the provisions of Article III(3)(b) of the LROC on an annual basis in the determinations made by the Secretary as part of the AOP process for a period of fifteen years.

To date, the Secretary has applied factors, including but not limited to those found in Article III(3)(b)(i-iv) of the LROC, in annual determinations of the availability of surplus quantities of water for pumping or release from Lake Mead. As a result of actual operating experience and through preparation of AOPs, particularly during recent years when there has been increasing demand for surplus water, the Secretary has determined that there is a need for more specific surplus guidelines, consistent with the Decree and applicable federal law, to assist in the Secretary's annual decision making during an interim period.

For many years, California has been diverting more than its normal 4.4 maf apportionment. Prior to 1996, California utilized unused apportionments of other Lower Division states that were made available by the Secretary. Since 1996, California has also utilized surplus water made available by Secretarial determination. California is in the process of developing the means to reduce its annual use of Colorado River water to 4.4 maf. Both Arizona and Nevada are approaching full use of their Colorado River apportionments.

Additionally, through adoption of specific interim surplus guidelines, the Secretary will be able to afford mainstream users of Colorado River water, particularly those in California who currently utilize surplus flows, a greater degree of predictability with respect to the likely existence, or lack thereof, of surplus conditions on the river in a given year. Adoption of the interim surplus guidelines is intended to recognize California's plan to reduce reliance on surplus deliveries, to assist California in moving toward its allocated share of Colorado River water, and to avoid

hindering such efforts. Implementation of interim surplus guidelines would take into account progress, or lack thereof, in California's efforts to achieve these objectives. The surplus guidelines would be used to identify the specific amount of surplus water which may be made available in a given year, based upon factors such as the elevation of Lake Mead, during a period within which demand for surplus Colorado River water will be reduced. The increased level of predictability with respect to the prospective existence and quantity of surplus water would assist in planning and operations by all entities that receive surplus Colorado River water pursuant to contracts with the Secretary.

IV. Alternatives Considered

The FEIS analyzed five action alternatives for interim surplus guidelines as well as a No Action Alternative/Baseline Condition that was developed for comparison of potential effects of the action alternatives. A common element of all alternatives is that in years in which the *Field Working Agreement between the Bureau of Reclamation and the Army Corps of Engineers for Flood Control Operation of Hoover Dam and Lake Mead* (Field Working Agreement) requires releases greater than the downstream beneficial consumptive use demands, the Secretary shall determine that a "flood control surplus" will be declared in that year. In such years, releases will be made to satisfy all beneficial uses within the United States and up to an additional 200,000 acre feet (af) will be made available to Mexico under the Treaty. The No Action Alternative/Baseline Condition and the five action alternatives are described below.

1. No Action Alternative/Baseline Condition: Under the No Action Alternative, determinations of surplus would continue to be made on an annual basis, in the AOP process, pursuant to the LROC and the Decree. The No Action Alternative represents the future AOP process without specific interim surplus guidelines. Surplus determinations consider such factors as end-of-year system storage, potential runoff conditions, projected water demands of the Basin States and the Secretary's discretion in addressing year-to-year issues. The No Action Alternative is identified as the "environmentally preferable alternative" as it affords the Secretary the greatest degree of annual flexibility in managing the mainstream waters and resources of the lower Colorado River pursuant to applicable federal law. However, the year-to-year variation in the conditions considered by the Secretary in making surplus water determinations makes projections of surplus water availability highly uncertain, and may hinder efforts by California to reduce its over-reliance on Colorado River water supplies.

The approach used in the FEIS for analyzing the hydrologic aspects of the interim surplus guidelines alternatives was to use a computer model that simulates specific operating parameters and constraints. In order to follow CEQ guidelines calling for a No Action alternative for use as a "baseline" against which to compare project alternatives, Reclamation selected a specific operating strategy for use as a baseline condition, which could be described mathematically in the model.

The baseline is based on a 70R spill avoidance strategy (70R strategy). The 70R baseline strategy involves assuming a 70-percentile inflow into the system subtracting out the consumptive uses and system losses and checking the results to see if all of the water could be stored or if flood control releases from Lake Mead would be required. If flood control releases from Lake Mead would be required, additional water is made available to the Lower Basin states beyond 7.5 maf. The notation 70R refers to the specific inflow where 70 percent of the historical natural runoff is less than this value (17.4 maf) for the Colorado River basin at Lee Ferry. In practice, the 70R surplus determination trigger elevation would be made during the fall of the preceding year using projected available system space. The 70R strategy trigger line gradually rises from approximately 1199 feet above mean sea level (msl) in 2002 to 1205 feet msl in 2050 as a result of increasing water use in the Upper Basin. Under baseline conditions, when a surplus condition is determined to occur, surplus water would be made available to fill all water orders by holders of surplus water contracts in the Lower Division states.

Reclamation has utilized a 70R strategy for both planning purposes and studies of surplus determinations in past years. When Reclamation reviewed previous surplus determinations as part of the Draft Environmental Impact Statement (DEIS) effort, the data indicated that the 1997 surplus determination did not precisely fit the 70R strategy. As a result, Reclamation selected the 75R strategy as representative of recent operational decisions for use as the baseline condition in the DEIS. However, based on further review and analysis, public comment, and discussion with representatives of the Basin States during the DEIS review period, Reclamation selected the 70R strategy for the baseline condition in the FEIS. While the 70R strategy is used to represent baseline conditions, it does not represent a decision by Reclamation to utilize the 70R strategy for determination of future surplus conditions in the absence of interim surplus guidelines. It should be noted that the 70R strategy and 75R strategy produced very similar modeling results for the purpose of determining impacts associated with the action alternatives analyzed in this FEIS. The primary effect of simulating operation with the 70R strategy would be that surplus conditions would only be determined when Lake Mead is nearly full.

2. Basin States Alternative (Preferred Alternative): The Basin States Alternatives is similar to, and based upon, information submitted to the Secretary by representatives of the Governors of the states of Colorado, Wyoming, Utah, New Mexico, Arizona, Nevada and California. After receipt of this information (during the public comment period), Reclamation shared the submission with the public (through the *Federal Register* and Reclamation's surplus guidelines web sites) for consideration and comment. Reclamation then analyzed the states' submission and crafted this additional alternative for inclusion in the FEIS. Some of the information submitted for the Department's review was outside of the scope of the proposed action for adoption of interim surplus guidelines and was therefore not included as part of the Basin States Alternative (e.g., adoption of shortage criteria and adoption of surplus criteria beyond the 15-year period) as presented in the FEIS.

The Basin States Alternative specifies ranges of Lake Mead water surface elevations to be used through 2015 for determining the availability of surplus water through 2016. The elevation

ranges are coupled with specific uses of surplus water in such a way that, if Lake Mead's surface elevation were to decline, the amount of surplus water would be reduced. The surplus determination elevations under the preferred alternative consist of three tiered Lake Mead water surface elevations, each of which is associated with certain designations on the purposes for which surplus water could be used. When a flood control surplus is determined, surplus water would be made available for all established uses by contractors for surplus water in the Lower Division States. When Lake Mead water levels are below the lowest surplus trigger elevation, surplus water would not be made available.

3. Flood Control Alternative: Under the Flood Control Alternative, a surplus condition is determined to exist when flood control releases from Lake Mead are occurring or projected to occur in the subsequent year. The method of determining need for flood control releases is based on flood control regulations published by the Los Angeles District of the Corps of Engineers (Corps) and the Field Working Agreement between the Corps and Reclamation. Under the flood control strategy, a surplus is determined when the Corps flood control regulations require releases from Lake Mead in excess of downstream demand. If flood control releases or space building releases are required, surplus conditions are determined to be in effect. The average Lake Mead water surface elevation that would trigger flood control releases is approximately 1211 feet msl. In practice, flood control releases are not based on the average trigger elevation, but would be determined each month by following the Corps regulations. When a flood control surplus is determined, surplus water would be made available for all established uses by contractors for surplus water in the Lower Division States.

4. Six States Alternative: The Six States Alternative specifies ranges of Lake Mead water surface elevations to be used through 2015 for determining the availability of surplus water through 2016. The elevation ranges are coupled with specific uses of surplus water in such a way that, if Lake Mead's surface elevation were to decline, the amount of surplus water would be reduced. The surplus determination elevations under the Six States Alternative consist of three tiered Lake Mead water surface elevations, each of which is associated with certain designations on the purposes for which surplus water could be used. When flood control releases are made, any and all beneficial uses would be met, including unlimited off-stream storage. When Lake Mead water levels are below the lowest surplus trigger elevation, surplus water would not be made available.

5. California Alternative: The California Alternative specifies Lake Mead water surface elevations to be used for the interim period through 2015 for determining the availability of surplus water through 2016. The elevation ranges are coupled with specific uses of surplus water in such a way that, if Lake Mead's surface elevation declines, the amount of surplus water would be reduced. The Lake Mead elevations at which surplus conditions would be determined under the California Alternative are expressed as three tiered, upward sloping trigger lines that rise gradually year by year to 2016, in recognition of the gradually increasing water demand of the Upper Division states from the present to 2016. Each tier would be coupled with limitations on the amount of surplus water available at that tier. Each tier under the California Alternative

would be subject to adjustment during the interim period based on changes in Upper Basin demand projections. When flood control releases are made, any and all beneficial uses would be met, including unlimited off-stream storage. When Lake Mead water levels are below the lowest surplus trigger elevation, surplus water would not be made available

6. Shortage Protection Alternative: The Shortage Protection Alternative is based on maintaining an amount of water in Lake Mead necessary to provide a normal annual supply of 7.5 maf for the Lower Division, 1.5 maf for Mexico and storage necessary to provide an 80 percent probability of avoiding future shortages. The surplus triggers under this alternative range from an approximate Lake Mead initial elevation of 1126 feet msl to an elevation of 1155 feet msl at the end of the interim period. At Lake Mead elevations above the surplus trigger, surplus conditions would be determined to be in effect and surplus water would be available for use in the Lower Division states. Below the surplus trigger elevation, surplus water would not be made available.

V. Basis For Decision

Reclamation selected the Basin States Alternative as its preferred alternative based on Reclamation's determination that it best meets all aspects of the purpose and need for the action, including the need: to remain in place for the entire period of the interim guidelines; to garner support among the Basin States that will enhance the Secretary's ability to manage the Colorado River reservoirs in a manner that balances all existing needs for these precious water supplies; and, to assist in the Secretary's efforts to insure that California water users reduce their over reliance on surplus Colorado River water. Reclamation notes the important role of the Basin States in the statutory framework for administration of Colorado River Basin entitlements and the significance that a seven-state consensus represents on this issue. With respect to the information within the scope of the proposed action, Reclamation found the Basin States Alternative to be a reasonable alternative and fully analyzed the environmental effects of this alternative in the FEIS. The identified environmental effects of the Basin States Alternative are well within the range of anticipated effects of the alternatives presented in the DEIS and do not affect the environment in a manner not already considered in the DEIS. Thus, based on all available information, this alternative is the most reasonable and feasible alternative.

VI. Public Response To Final Environmental Statement

Following the Federal Register Notice of Availability for the FEIS on December 15, 2000, and as of Friday at 7:00 PM (EST), on January 12, 2001, Reclamation had received one letter supporting the preferred alternative in the FEIS, one letter from the Ten Tribes Partnership, one letter from a Non-governmental Organization and four letters and approximately 7,517 email comments entitled "Stop Damage to the Colorado River Delta" commenting on the FEIS. The email form letter appears to be based upon information made available by Environmental Defense as posted

on its Environmental Defense Action Network Internet web site. The live action alert allows citizens to automatically email a form/sample letter to a designated addressee (in this case the Bureau of Reclamation's project leader). Of the total of approximately 7,517 email form letters, approximately 400 have been edited in some manner from the template letter provided and the remainder (approx. 7,100) are identical to the form letter. Of the edited email form letters none make substantive comments on the FEIS beyond that contained in the email form letter template.

With respect to the comments received on the FEIS, and pursuant to Reclamations's NEPA guidance, "Only in special circumstances should any specific comments be responded to in the ROD. If the comments raise significant issues that have not been addressed, the need to supplement the FEIS should be determined." Reclamation does not believe that the comments received on the FEIS raise any significant issues that would require supplementing the FEIS. Reclamation provides the following additional information.

A summary of issues raised by the comment letters are as follows:

Comment/Issue 1: Objection to the preferred alternative in the FEIS because these criteria will deprive the Colorado River delta of life-sustaining water, destroy important native riparian habitats, and push numerous endangered species perilously close to extinction.

Response: The rationale for identification of the preferred alternative is addressed in Chapter 2.3.2 and analyzed in the Chapter 3, Affected Environment and Environmental Consequences. Transboundary Impacts are addressed in Chapter 3.16 of the FEIS. In addition, the status of consultation on special status species for the preferred alternative in the FEIS is addressed in Section VIII of the ROD.

Comment/Issue 2. Urges Reclamation to insure that impacts to the Colorado River delta are mitigated by dedicating sufficient water to meet the needs of its riparian ecosystems, specifically the needs of cottonwoods and willows throughout their lifecycle.

Response: Dedicating Colorado River Water for the Colorado River delta is addressed in Chapter 1.1.4 and Chapter 2.2.3 of the FEIS. Transboundary Impacts are addressed in Chapter 3.16 of the FEIS. See also Section X. Part 7, Transboundary Impacts, and Section VIII of the ROD that discusses the status of consultation on special status species for the preferred alternative.

Comment/Issue 3: Urges Reclamation to issue a supplemental EIS including the Pacific Institute proposal as a reasonable alternative and its analysis.

Response: Consideration of the Pacific Institute's proposal in the FEIS is addressed in Chapter 2.2.3 and further responded to in Volume III, Comment and Responses, Part B, page B-22, Response 11-2 and page B-24, Response 11-6, page B-38, comment 12-6 and 12-7. These responses address the reasons that the Pacific Institute proposal was not analyzed as an independent alternative in the FEIS. Accordingly, Reclamation has

determined that is not necessary to supplement the FEIS.

Comment/Issue 4: Disagreement on the acceptance of the Basin States proposal as an alternative and its identification as the preferred alternative.

Response: The Basin States Alternative and its identification as the preferred alternative is addressed in Chapter 2.3.2 of the FEIS. The working draft of the Basin States Proposal was published in the Federal Register during the DEIS public comment process. The Federal Register notice on the draft Basin States Proposal is included in the FEIS in Chapter 5.9.

Comment/Issue 5: The Ten Tribes Partnership, by letter dated January 8, 2001, expressed concerns regarding the impact of the Interim Surplus Guidelines on the Tribes' reserved water rights. The Tribes noted their disagreement with Reclamation's analysis and the position taken by the Department of the Interior with regard to its trust responsibility on Tribal water rights in the FEIS. Additionally, the Ten Tribes Partnership requested Reclamation to assist them in on-reservation development of their water resources.

Response: As an initial matter, Reclamation fully identified and analyzed Tribal water rights in the FEIS in Chapter 3.14, their Depletion Schedule in Attachment Q, and fully responded to Tribal comments on the DEIS in Volume III, pages B-164 through 219 of the FEIS.

Additionally, as part of its analysis of the proposed federal action in the EIS, Reclamation identified a significant quantity of confirmed but unused water rights belonging to several Indian tribes in the Colorado River basin. These undeveloped rights are a factor in the available water supply which is being managed as surplus.

The Department, as trustee, believes that these surplus guidelines will benefit the tribes by helping to ensure that California does not develop a permanent reliance on unused water rights. By the same token, the Department believes it important for the tribes to develop and utilize their water rights. Accordingly, the Department directs the Bureau of Reclamation to provide appropriate assistance (including technical and financial assistance) to each of the relevant tribes to establish a water use plan for on-reservation development.

VII. Alteration of Project Plan In Response To Public Comment

Public comments on the FEIS did not result in changes to the proposed action nor selection of the Preferred Alternative.

VIII. Status Of Consultation On Special Status Species Under Section 7(a)(2) Of The Endangered Species Act

On January 11, 2001, Reclamation received a memorandum from the U.S. Fish and Wildlife Service (Service) pursuant to the Endangered Species Act (Act) of 1973, as amended, responding to Reclamation's November 29, 2000 memorandum regarding the adoption of proposed Interim Surplus Criteria for the lower Colorado River and its possible effects to endangered species and their critical habitat in the river corridor below Glen Canyon Dam to Separation Rapid from Glen Canyon Dam operations. Reclamation's November 29, 2000 memorandum concluded that the proposed project may affect, but is not likely to adversely affect, listed species in the Colorado River corridor or their critical habitat from Glen Canyon Dam to the headwaters of Lake Mead. The species of consideration include the endangered humpback chub (*Gila cypha*) with critical habitat, endangered razorback sucker (*Xyrachen texanus*) with critical habitat, endangered southwestern willow flycatcher (*Empidonax extimus trailli*) without critical habitat, and threatened (proposed delisted) bald eagle (*Haliaeetus leucocephalus*) without critical habitat. The Service concurred with Reclamation's determination that a 2 percent change in the frequency of occurrence of experimental flows as a result of Interim Surplus Criteria "may affect, but is not likely to adversely affect the above mentioned listed species or their critical habitat." The Service also concurred with Reclamation's determination that a change in the frequency of Beach Habitat Building Flows (BHBF) through the Grand Canyon from 1 in 5 years, to the current estimate of 1 in every 6 years with the adoption of Interim Surplus Criteria "may affect, but is not likely to adversely affect listed species or adversely modify their critical habitat" given that BHBF's are not required to remove jeopardy to native fish, nor required to minimize incidental take, and have not proven critical to the survival or recovery of native fishes. No further section 7 consultation is required for the adoption of Interim Surplus Criteria in the Grand Canyon at this time.

On January 12, 2001 Reclamation received a Biological Opinion (BO) from the Service for Interim Surplus Criteria, Secretarial Implementation Agreements, and Conservation Measures on the Lower Colorado River, Lake Mead to the Southerly International Boundary, Arizona, California, and Nevada. This BO is based on information provided in the August 31, 2000 biological assessment, the DEIS for Interim Surplus Criteria, and final conservation measures provided by Reclamation on January 9, 2001. The species under consideration include the razorback sucker, bonytail chub (*Gila elegans*), desert pupfish (*Cyprinodon macularius*), Yuma clapper rail (*Rallus longirostris yumanensis*), brown pelican (*Pelecanus occidentalis*), southwestern willow flycatcher, the threatened desert tortoise (*Gopherus agassizii*) and bald eagle; and designated critical habitat for the razorback sucker and bonytail chub. The service previously concurred with Reclamation's determination of "is not likely to adversely affect" for the bald eagle. Reclamation has also made findings of "no effect" for the desert pupfish, brown pelican, and desert tortoise and critical habitat for the bonytail chub. After reviewing the current status of the bonytail chub, razorback sucker, Yuma clapper rail and southwestern willow flycatcher, the environmental baseline for the action area, the effects of Interim Surplus Criteria, including conservation measures, and cumulative effects, it is the Service's biological opinion that the proposed action of Interim Surplus Criteria is not likely to jeopardize the continued existence

of the bonytail chub, razorback sucker, Yuma clapper rail, and southwestern willow flycatcher or result in the destruction or adverse modification of critical habitat for the razorback sucker in the Lower Colorado River. Reclamation has provided conservation measures that would be part of the proposed action once selected. These measures are designed to reduce the significance of the effects of the action on listed species and critical habitat. These conservation measures are identified in this ROD in Section X.- Environmental Impacts and Implementation of Environmental Commitments, Part 4 - Special Status Species.

Reclamation consulted with the Service and the National Marine Fisheries Service (NMFS) through a supplemental biological assessment (SBA) on Transboundary effects in Mexico from the proposed action for Interim Surplus Criteria by memoranda dated January 9, 2001. These consultations do not reflect any conclusion on Reclamation's part that consultation is required, as a matter of law or regulation, on any possible impact the adoption of interim surplus criteria may have on U.S. listed species in Mexico. Rather, consultation on these effects have proceeded with the expressed understanding that it may exceed what is required under applicable Federal law and regulations and does not establish a legal or policy precedent.

The Service responded to Reclamation's memorandum on Transboundary effects on January 11, 2001. The Service noted that Reclamation requested Service concurrence with a finding of "may affect, not likely to adversely affect" for the endangered southwestern willow flycatcher and totoaba (*Totoaba macdonaldi*). Reclamation also made findings of "no effect" to the endangered desert pupfish, Yuma clapper rail, and the vaquita (*Phocaena sinus*). The Service stated that it does not have jurisdiction in section 7 consultations for marine species such as the vaquita and totoaba, therefore they are not discussed in their memorandum. The Yuma clapper rail is not listed under the Endangered Species of 1973 (as amended) outside of the United States. Therefore, Yuma clapper rails in Mexico are not protected or considered in the section 7 consultation and are not discussed further in their memorandum. The Service concurred with Reclamation's finding of "no effect" for the desert pupfish. The Service finds that the effects of the Interim Surplus Criteria as described in the SBA are insignificant and concurs with Reclamation's finding of "may affect, not likely to adversely affect" for the southwestern willow flycatcher.

The NMFS responded to Reclamations's memorandum on Transboundary effects on January 12, 2001. Reclamation concluded that the proposed action for the Interim Surplus Criteria will "not affect" the Yuma clapper rail, desert pupfish, and the vaquita. Reclamation also concluded that the proposed interim surplus criteria "may affect, but is not likely to adversely affect" the southwestern willow flycatcher and totoaba and requested concurrence with this finding for the endangered totoaba. In their response the NMFS concurred with Reclamation's determination that the implementation of the preferred alternative will not likely adversely affect the totoaba. This finding concludes informal consultation pursuant to section 7 of the Endangered Species Act and its implementing regulations.

IX Status of Consultation On Cultural Resources Under Section 106 Of The National Historic Preservation Act

Reclamation is the agency designated to act on behalf of the Secretary with respect to the adoption of specific interim surplus guidelines identified in the Preferred Alternative (Basin States Alternative) analyzed in the FEIS. Reclamation is the lead Federal agency for the purposes of compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. Reclamation determined in the FEIS, that while development and implementation of Interim Surplus Guidelines should be considered an undertaking for the purposes of Section 106, it is not of a type that was likely to affect historic properties. Following publication and distribution of the DEIS, Reclamation received a memorandum from the Nevada State Historic Preservation Officer (NSHPO) through the public review and comment process. The memorandum stated that the NSHPO disagreed with Reclamation's finding that development and implementation of Interim Surplus Guidelines constituted an undertaking with no potential to effect historic properties, and requested the matter be forwarded to the Advisory Council on Historic Preservation (Council) for review. In accordance with the NSHPO's request, and pursuant to 36 CFR 800.5(c)3, Reclamation has prepared a memorandum on this matter and has forwarded it to the Council for review. Reclamation is proposing that further consultation occur within the framework provided by Section 110 of the NHPA. Reclamation believes questions and concerns regarding what sorts of impacts might be occurring to, or may occur at some future date to historic properties as a result of on-going operation of the Colorado River system, are better viewed as long term management issues, which should be addressed through consultation under Section 110 or the NHPA, rather than through Section 106 compliance for a specific activity that represents only a small part of a much larger, on-going program.

X. Environmental Impacts and Implementation of Environmental Commitments

Potential Impacts are associated with changes in the difference between probabilities of occurrence for specific resource issues under study when comparing the No Action Alternative/Baseline Condition to that of the Preferred Alternative. Potential impacts on 13 resource issues from the Preferred Alternative were analyzed by Reclamation in the FEIS. These included; Water Supply, Water Quality, River Flow Issues, Aquatic Resources, Special Status Species, Recreation, Energy Resources, Air Quality, Visual Resources, Cultural Resources, Indian Trust Assets, Environmental Justice, and Transboundary Impacts. Reclamation determined these resource issues will not be adversely affected by the adoption of the Preferred Alternative and thus will not require specific mitigation measures to reduce or eliminate non-significant effects because the small changes in the probabilities of occurrence of flows which would effect these resource issues are within Reclamation's current operational regime and authorities under applicable federal law. In recognition of potential effects that could occur with implementation of the Preferred Alternative, Reclamation has developed a number of environmental commitments that will be undertaken. Some environmental commitments are the result of compliance with specific consultation requirements.

Environmental commitments that will be implemented by Reclamation are identified below.

1. Water Quality

Reclamation will continue to monitor salinity and Total Dissolved Solids (TDS) in the Colorado River as part of the ongoing Colorado River Basin Salinity Control Program to ensure compliance with the numeric criteria on the river as set forth in the Forum's 1999 Annual Review.

Reclamation will continue to participate in the Lake Mead Water Quality Forum and the Las Vegas Wash Coordination Committee as a principal and funding partner in studies of water quality in the Las Vegas Wash and Lake Mead. Reclamation is an active partner in the restoration of the Las Vegas Wash wetlands.

Reclamation is and will continue to acquire riparian and wetland habitat around Lake Mead and on the Lower Colorado River related to ongoing and projected routine operations.

Reclamation will continue to participate with the Nevada Division of Environmental Protection and Kerr-McGee Chemical Company in the perchlorate remediation program of groundwater discharge points along Las Vegas Wash which will reduce the amount of this contaminant entering the Colorado River.

Reclamation will continue to monitor river operations, reservoir levels and water supply and make this information available to the Colorado River Management Work Group (CRMWG), agencies and the public. This information is also available on Reclamation's website (<http://www.lc.usbr.gov> and <http://www.uc.usbr.gov>).

2. Riverflow Issues

Reclamation and the other stakeholders in the Glen Canyon Dam Adaptive Management Program (AMP) are currently developing for recommendation to the Secretary an experimental flow program for the operations of Glen Canyon Dam which includes Beach/Habitat-Building-Flows (BHBFs). BHBFs are implemented over the long-term by hydrologic triggering criteria approved by the Secretary, and are one measure implemented subject to and consistent with existing law designed to protect and mitigate adverse impacts to and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established. This experimental flow program will consider both the potential for reduced frequency of BHBFs resulting from the Interim Surplus Guidelines and for experimental flows to be conducted independent of the hydrologic triggering criteria. The design of the experimental flow program will include the number of flows, the duration and the magnitude of experimental flows. The AMP shall forward their recommendation on this matter for the Secretary's consideration.

3. Aquatic Resources

Reclamation will initiate a temperature monitoring program below Hoover Dam with state and other Federal agencies to document temperature changes related to baseline conditions and implementation of interim surplus guidelines and assess their potential effects on listed species and the sport fishery. The existing hydrolab below Hoover Dam will be modified as necessary to provide this temperature data.

4. Special Status Species

Reclamation will implement the following conservation measures for Razorback sucker in Lake Mead and native fish in Lake Mohave:

1. Reclamation will continue to provide funding and support for the ongoing Lake Mead Razorback Sucker study. The focus will be on locating populations of razorbacks in Lake Mead from the lower Grand Canyon (Separation Canyon) area downstream to Hoover Dam, documenting use and availability of spawning areas at various water elevations, clarifying substrate requirements, monitoring potential nursery areas, continuing ageing studies and confirming recruitment events that may be tied to physical conditions in the lake. The expanded program will be developed within 9 months of signing the BO and implemented by January 2002. Initial studies will extend for 5 years, followed by a review and determination of the scope of studies for the remaining 10 years of the Interim Surplus Guidelines (ISG). Reclamation will use the bathymetric surveys, to be conducted in fiscal year 2001, to gather data in the areas of the identified spawning habitat, if not already available;
2. Reclamation will to the maximum extent practicable provide rising spring (February through April) water surface elevations of 5-10 feet on Lake Mead, to the extent hydrologic conditions allow. Hydrologic studies indicate that such conditions could occur once in 6 years, although no guarantee of frequency can be made. This operation plan will be pursued through BHBFs and/or equalization and achieved through the Adaptive Management Program and Annual Operating Plan processes, as needed for spawning razorback suckers;
3. Reclamation will continue existing operations in Lake Mohave that benefit native fish during the 15-year effective period of these Guidelines and will explore additional ways to provide benefits to native fish; and,
4. Reclamation will monitor water levels of Lake Mead from February through April of each year during the 15 years these Guidelines are in place. Should water levels reach 1160 feet because of the implementation of these Guidelines, Reclamation will implement a program to collect and rear larval razorbacks in Lake Mead the

spawning season following this determination. If larvae cannot be captured from Lake Mead, wild larvae will be collected from Lake Mohave.

The implementation of these Guidelines is not likely to produce a condition resulting in a minimum February through April Lake Mead elevation at or below 1130 feet for more than 2 consecutive years during which surplus is being declared. Therefore, this condition has not been evaluated as an effect of the proposed action.

5. Recreation

Reclamation is initiating a bathymetric survey of Lake Mead in fiscal year 2001 and will coordinate with the Lake Mead National Recreation Area to identify critical recreation facility elevations and navigational hazards that would be present under various reservoir surface elevations.

Reclamation will continue to monitor river operations, reservoir levels and water supply and make this information available to the CRMWG, agencies and the public. This operational information will provide the Lake Mead National Recreation Area and the Glen Canyon National Recreation Area with probabilities for future reservoir elevations to aid in management of navigational aids, recreation facilities, other resources and fiscal planning.

Reclamation will continue its consultation and coordination with the Glen Canyon National Recreation Area and the Navajo Nation on the development of Antelope Point as a resort destination.

6. Cultural Resources

Reclamation shall continue to consult and coordinate with the State Historic Preservation Officer, the Advisory Council on Historic Preservation (Council), Glen Canyon National Recreation Area, Lake Mead National Recreation Area, Tribes and interested parties with regard to the potential effects of implementation of the Preferred Alternative as required by Sections 106 and 110 of the National Historic Preservation Act following the Council's recommended approach for consultation for the Protection of Historic Properties found at 36 CFR 800.

7. Transboundary Impacts

A November 14, 2000, meeting of the International Boundary and Water Commission and Technical Advisors from the U.S. Bureau of Reclamation and Mexico's National Water Commission was held. At this meeting, Mexico expressed concern that a reduction of historic flows arriving in Mexico could impact Mexico's use of those waters for recharge

of ground waters; Mexico's use of those waters for leaching of soils to combat salinity; Mexico's use of those waters to dilute saline flows in the land boundary delivery point; endangered species that depend on use of those waters in Mexico; riparian habitat that depends on those waters in Mexico; and, fisheries in the upper Gulf of California. Though it is the position of the United States through the United States International Boundary and Water Commission that the United States does not mitigate for impacts in a foreign country, the United States is committed to participate with Mexico through the IBWC Technical Work Groups to develop cooperative projects beneficial to both countries concerning the issues expressed by Mexico. Significantly, IBWC Minute No. 306 (which was adopted by the IBWC's United States and Mexico sections on December 12, 2000), outlines a process that may lead to specific delta restoration measures.

XI. Implementing The Decision

1. Allocation of Colorado River Water - Basic Apportionment

Article II(B)(6) of the Decree authorizes the Secretary to release a lower division state's apportioned but unused water for consumptive use in another lower division state, but provides that no rights to the recurrent use of such apportioned water shall accrue to any state by reason of its previous use. The Decree leaves it to the Secretary to determine how any such unused apportionment shall be allocated, and to make such determinations either annually, or for a more extended period, though in neither situation can the Secretary's policy create a right in any state to the future use of such unused apportionment. In the course of establishing Interim Surplus Guidelines for the lower division states, the Secretary has determined that in order to make an accurate assessment of the amount of water available and reasonably needed to meet annual consumptive use in the lower division states, it is desirable to know in advance to which users, and for which uses, any unused apportionment will be made available. The Secretary is therefore including within the Interim Surplus Guidelines a statement of his intended method of distributing unused apportionment that may be available during the Interim period.

2. Forbearance and Reparation Arrangements

It is expected that Lower Division States and individual contractors for Colorado River water will adopt arrangements that will affect utilization of Colorado River water during the effective period of these guidelines. It is expected that water orders from Colorado River contractors will be submitted to reflect these forbearance and reparation arrangements by Lower Division states and individual contractors. The forbearance arrangements are expected to address California's Colorado River water demands while the anticipated reductions in California's Colorado River water use are implemented. The reparation arrangements are expected to address the circumstance where California contractors would limit their use of Colorado River water to mitigate the impacts of any declared shortage conditions on other Lower Division states. The reparation arrangements are also expected to address the circumstance where the anticipated reductions do not in fact occur and would require California contractors to limit their use of Colorado River water in order to repay the Colorado River system for previously stored water.

It is anticipated that MWD will enter into forbearance and reparation agreements with the State of Arizona and with the Southern Nevada Water Authority, which are necessary to provide for forbearance of water under Article II(B)(6) of the Decree. The Secretary may also, as appropriate, be a party to those portions of the agreements concerning the allocation of forbearance of water under Article II(B)(6) of the Decree. It is anticipated that these agreements will be completed no later than December 31, 2001. In the event that the forbearance and reparation agreements are not completed by December 31, 2002, apportionment for use of surplus water shall be made according to the percentages provided in Article II(B)(2) of the Decree (without prejudice to the Secretary's authority under Article II(B)(6) of the Decree) until such time as the agreements are completed, or until December 31, 2015, whichever is earlier.

The Secretary will deliver Colorado River water to contractors in a manner consistent with these arrangements, provided, however, that any such arrangements are consistent with the BCPA, the Decree and do not infringe on the rights of third parties. Surplus water will only be delivered to entities with contracts for surplus water.

3. Definitions

For purposes of these guidelines, the following definitions apply:

- a. "Domestic" use shall have the meaning defined in the Compact.
- b. "Off-stream Banking" shall mean the diversion of Colorado River water to underground storage facilities for use in subsequent years from the facility used by a contractor diverting such water.
- c. "Direct Delivery Domestic Use" shall mean direct delivery of water to domestic end users or other municipal and industrial water providers within the contractor's area of normal service, including incidental regulation of Colorado River water supplies within the year of operation but not including Off-stream Banking.
- d. "Direct Delivery Domestic Use" for The Metropolitan Water District of Southern California (MWD) shall include delivery of water to end users within its area of normal service, incidental regulation of Colorado River water supplies within the year of operation, and Off-stream Banking only with water delivered through the Colorado River Aqueduct.

4. Relationship with Existing Law

These Guidelines are not intended to, and do not:

- a. Guarantee or assure any water user a firm supply for any specified period.
- b. Change or expand existing authorities under applicable federal law, except as specifically provided herein with respect to determinations of surplus conditions under the Long Range Operating Criteria and administration of surplus water supplies during the effective period of these Guidelines.
- c. Address intrastate storage or intrastate distribution of water, except as may be specifically provided by Lower Division States and individual contractors for Colorado River water who may adopt arrangements that will affect utilization of Colorado River water during the effective period of these Guidelines.
- d. Change the apportionments made for use within individual States, or in any way impair

or impede the right of the Upper Basin to consumptively use water available to that Basin under the Colorado River Compact.

e. Affect any obligation of any Upper Division State under the Colorado River Compact.

f. Affect any right of any State or of the United States under Sec. 14 of the Colorado River Storage Project Act of 1956 (70 Stat. 105); Sec. 601(c) of the Colorado River Basin Project Act of 1968 (82 Stat. 885); the California Limitation Act (Act of March 4, 1929; Ch. 16, 48th Sess.); or any other provision of applicable federal law.

g. Affect the rights of any holder of present perfected rights or reserved rights, which rights shall be satisfied within the apportionment of the State within which the use is made in accordance with the Decree.

5. Interim Surplus Guidelines

These Guidelines, which shall implement and be used for determinations made pursuant to Article III(3)(b) of the *Criteria for Coordinated Long-Range Operation of the Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of September 30, 1968* (LROC) during the period identified in Section 4(A) are hereby adopted:

Section 1. Allocation of Unused Basic Apportionment Water under Article II(B)(6)

A. Introduction

Article II(B)(6) of the Decree allows the Secretary to allocate water that is apportioned to one Lower Division State, but is for any reason unused in that State, to another Lower Division State. This determination is made for one year only and no rights to recurrent use of the water accrue to the state that receives the allocated water. Historically, this provision of the Decree has been used to allocate Arizona's and Nevada's apportioned but unused water to California.

Water use projections made for the analysis of these interim Guidelines indicate that neither California nor Nevada is likely to have significant volumes of apportioned but unused water during the effective period of these Guidelines. Depending upon the requirements of the Arizona Water Banking Authority (AWBA) for intrastate and interstate Off-Stream Banking, Arizona may have significant amounts of apportioned but unused water.

B. Application to Unused Basic Apportionment

Before making a determination of a surplus condition under these Guidelines, the Secretary will determine the quantity of apportioned but unused water from the basic apportionments under Article II(B)(6), and will allocate such water in the following order of priority:

1. Meet the Direct Delivery Domestic Use requirements of MWD and Southern Nevada Water Authority (SNWA), allocated as agreed by said agencies;
2. Meet the needs for Off-stream Banking activities in California by MWD and in Nevada by SNWA, allocated as agreed by said agencies; and
3. Meet the other needs for water in California in accordance with the California Seven-Party Agreement as supplemented by the Quantification Settlement Agreement.

Section 2. Determination of Lake Mead Operation during the Interim Period

A. Normal and Shortage Conditions

1. Lake Mead at or below elevation 1125 ft.

In years when available Lake Mead storage is projected to be at or below elevation 1125 ft. on January 1, the Secretary shall determine a Normal or Shortage year.

B. Surplus Conditions

1. Partial Domestic Surplus (Lake Mead between elevation 1125 ft. and 1145 ft.)

In years when Lake Mead storage is projected to be between elevation 1125 ft. and elevation 1145 ft. on January 1, the Secretary shall determine a Partial Domestic Surplus. The amount of such Surplus shall equal:

- a. For Direct Delivery Domestic Use by MWD, 1.212 maf reduced by: 1.) the amount of basic apportionment available to MWD and 2.) the amount of its domestic demand which MWD offsets in such year by offstream groundwater withdrawals or other options. The amount offset under 2.) shall not be less than 400,000 af in 2002 and will be reduced by 20,000 af/yr over the Interim Period so as to equal 100,000 af in 2016.
- b. For use by SNWA, one half of the Direct Delivery Domestic Use within the SNWA service area in excess of the State of Nevada's basic apportionment.
- c. For Arizona, one half of the Direct Delivery Domestic Use in excess of the State of Arizona's basic apportionment.

2. Full Domestic Surplus (Lake Mead above Elevation 1145 ft. and below 70R Strategy)

In years when Lake Mead content is projected to be above elevation 1145 ft., but less than the amount which would initiate a Surplus under B.3. 70R Strategy or B.4. Flood Control Surplus hereof on January 1, the Secretary shall determine a Full Domestic Surplus. The amount of such Surplus shall equal:

- a. For Direct Delivery Domestic Use by MWD, 1.250 maf reduced by the amount of basic apportionment available to MWD.
 - b. For use by SNWA, the Direct Delivery Domestic Use within the SNWA service area in excess of the State of Nevada's basic apportionment.
 - c. For use in Arizona, the Direct Delivery Domestic Use in excess of Arizona's basic apportionment.
3. Quantified Surplus
(70R Strategy)

In years when the Secretary determines that water should be released for beneficial consumptive use to reduce the risk of potential reservoir spills based on the 70R Strategy the Secretary shall determine and allocate a Quantified Surplus sequentially as follows:

- a. Establish the volume of the Quantified Surplus.
- b. Allocate and distribute the Quantified Surplus 50% to California, 46% to Arizona and 4% to Nevada, subject to c. through e. that follow.
- c. Distribute California's share first to meet basic apportionment demands and MWD's Direct Delivery Domestic Use and Off-stream Banking demands, and then to California Priorities 6 and 7 and other surplus contracts. Distribute Nevada's share first to meet basic apportionment demands and then to the remaining Direct Delivery Domestic Use and Off-stream Banking demands. Distribute Arizona's share to surplus demands in Arizona including Off-stream Banking and interstate banking demands. Arizona, California and Nevada agree that Nevada would get first priority for interstate banking in Arizona.
- d. Distribute any unused share of the Quantified Surplus in accordance with Section 1, *Allocation of Unused Basic Apportionment Water Under Article II(B)(6)*.
- e. Determine whether MWD, SNWA and Arizona have received the amount of water they would have received under Section 2.B.2., *Full Domestic Surplus* if a Quantified Surplus had not been declared. If they have not, then determine and meet all demands provided for in Section 2.B.2. *Full Domestic Surplus* (a), (b) and (c).

4. Flood Control Surplus

In years in which the Secretary makes space-building or flood control releases pursuant to the Field Working Agreement, the Secretary shall determine a Flood Control Surplus for the remainder of that year or the subsequent year as specified in Section 7. In such years, releases will be made to satisfy all beneficial uses within the United States, including unlimited off-stream banking. Under current practice, surplus declarations under the Treaty for Mexico are declared when flood control releases are made. Modeling assumptions used in the FEIS are based on this practice. The proposed action is not intended to identify, or change in any manner, conditions when Mexico may schedule up to an additional 0.2 maf. Any issues relating to the implementation of the Treaty, including any potential changes in approach relating to surplus declarations under the Treaty, must be addressed in a bilateral fashion with the Republic of Mexico.

C. Allocation of Colorado River Water and forbearance and reparation arrangements

Colorado River water will continue to be allocated for use among the Lower Division States in a manner consistent with the provisions of the Decree. It is expected that Lower Division States and individual contractors for Colorado River water will adopt arrangements that will affect utilization of Colorado River water during the effective period of these guidelines. It is expected that water orders from Colorado River contractors will be submitted to reflect forbearance and reparation arrangements by Lower Division states and individual contractors. The Secretary will deliver Colorado River water to contractors in a manner consistent with these arrangements, provided that any such arrangements are consistent with the BCPA, the Decree and do not infringe on the rights of third parties. Surplus water will only be delivered to entities with contracts for surplus water.

D. Shortage

Two different shortage assumptions, including shortage guidelines submitted in the information presented by the Basin States, were modeled and compared in the FEIS. The Department and Reclamation intend to develop shortage guidelines, through the 5-year review of the LROC, when appropriate. These Guidelines are not intended to, and do not, change in any manner from current conditions the assumptions for conditions that may create a determination of shortage or the magnitude of shortage that could be imposed on Lower Basin diversions.

Section 3. Implementation of Guidelines

During the effective period of these Guidelines the Secretary shall utilize the currently established process for development of the Annual Operating Plan for the Colorado River System Reservoirs (AOP) and use these Guidelines to make determinations regarding Normal and Surplus conditions for the operation of Lake Mead and to allocate apportioned but unused water.

The operation of the other Colorado River System reservoirs and determinations associated with development of the AOP shall be in accordance with the Colorado River Basin Project Act of 1968, the Guidelines, and other applicable federal law.

In order to allow for better overall water management during the Interim Period, the Secretary shall undertake a “mid-year review” pursuant to Section I(2) of the LROC, allowing for the revision of the current AOP, as appropriate, based on actual runoff conditions which are greater than projected, or demands which are lower than projected. The Secretary shall revise the determination for the current year only to allow for additional deliveries. Any revision in the AOP may occur only after a re-initiation of the AOP consultation process as required by law.

As part of the AOP process during the effective period of these Guidelines, California shall report to the Secretary on its progress in implementing its California Colorado River Water Use Plan.

These Guidelines implement Article III(3) of the LROC and may be reviewed concurrently with the LROC 5-year review. The Secretary will base annual determinations of surplus conditions on these Guidelines, unless extraordinary circumstances arise. Such circumstances could include operations necessary for safety of dams or other emergency situations, or other unanticipated or unforeseen activities arising from actual operating experience.

Section 4. Effective Period & Termination

A. Effective Period

These guidelines will be in effect 30 days from the publication of the Secretary's Record of Decision (ROD) in the Federal Register. These Guidelines will, unless subsequently modified, remain in effect through December 31, 2015 (through preparation of the 2016 AOP).

B. Termination of Guidelines

These Guidelines shall terminate on December 31, 2015 (through preparation of the 2016 AOP). At the conclusion of the effective period of these Guidelines, the modeled operating criteria are assumed to revert to the operating criteria used to model baseline conditions (i.e., modeling assumptions used in the EIS are based upon a 70R strategy for the period commencing January 1, 2016 (for preparation of the 2017 AOP)).

At the conclusion of the effective period of these Guidelines, California shall have implemented sufficient measures to be able to limit total uses of Colorado River water within California to 4.4 maf, unless a surplus is determined under the 70R strategy.

Section 5. California's Colorado River Water Use Plan Implementation Progress

A. Introduction

The purpose of the California Colorado River Water Use Plan is to ensure that California limits its use of Colorado River water to no more than 4.4 maf in normal years at the end of the fifteen year period for these Guidelines, unless a surplus is determined under the 70R strategy. The Secretary will annually review the status of implementation of the California Colorado River Water Use Plan during the development of the AOP.

B. California's Quantification Settlement Agreement

It is expected that the California Colorado River contractors will execute the Quantification Settlement Agreement (and its related documents) among the Imperial Irrigation District (IID), Coachella Valley Water District (CVWD), MWD, and the San Diego County Water Authority by December 31, 2001. In the event that the California contractors and the Secretary have not executed such agreements by December 31, 2002, the interim surplus determinations under Sections 2(B)(1) and 2(B)(2) of these Guidelines will be suspended and will instead be based upon the 70R Strategy, for either the remainder of the period identified in Section 4(A) or until such time as California completes all required actions and complies with reductions in water use reflected in Section 5(C) of these Guidelines, whichever occurs first.

C. California's Colorado River Water Use Reductions

California will need to reduce its need for surplus Colorado River water through the period identified in Section 4(A). The California Agricultural (Palo Verde Irrigation District (PVID), Yuma Project Reservation Division (YPRD), IID, and CVWD) usage plus 14,500 af of Present Perfected Right (PPR) use would need to be at or below the following amounts at the end of the calendar year indicated in years of quantified surplus (for Decree accounting purposes all reductions must be within 25,000 af of the amounts stated):

<u>Benchmark Date (Calendar Year)</u>	<u>Benchmark Quantity (California Agricultural usage & 14,500 AF of PPR Use <i>in maf</i>)</u>
2003	3.74
2006	3.64
2009	3.53
2012	3.47

In the event that California has not reduced its use in amounts equal to the above Benchmark Quantities, the interim surplus determinations under Sections 2(B)(1) and 2(B)(2) of these Guidelines will be suspended and will instead be based upon the 70R Strategy, for up to the remainder of the period identified in Section 4(A). If however, California meets the missed Benchmark Quantity before the next Benchmark Date, the interim surplus determinations under Sections 2(B)(1) and 2(B)(2) shall be reinstated as the basis for the surplus determinations under the AOP for the next following year(s). Upon such reinstatement, California's reductions shall return to the schedule identified above.

Section 6. Authority

These Guidelines are issued pursuant to the authority vested in the Secretary by federal law, including the Boulder Canyon Project Act of 1928 (28 Stat. 1057) (the “BCPA”), and the Decree issued by the U.S. Supreme Court in *Arizona v. California*, 376 U. S. 340 (1964) (the “Decree”) and shall be used to implement Article III of the Criteria for the Coordinated Long-Range Operation of Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of September 30, 1968 (Pub. L. No. 90-537) (the “LROC”).

Section 7. Modeling and Data

The August 24-Month Study projections for the January 1 system storage and reservoir water surface elevations, for the following year, will be used to determine the applicability of these Guidelines.

In preparation of the AOP, Reclamation will utilize the 24-Month Study and/or other modeling methodologies appropriate for the determinations and findings necessary in the AOP. Reclamation will utilize the best available data and information, including the National Weather Service forecasting to make these determinations.

F. Tampering or attempting to tamper with property or real property, or moving, manipulating, or setting in motion any of the parts thereof.

Violation of the prohibition listed in 43 CFR part 423 is punishable by fine or imprisonment for not more than 6 months, or both.

Dated: March 2, 2005.

Michael J. Ryan,

Area Manager, Northern California Area Office, Mid-Pacific Region.

[FR Doc. 05-6112 Filed 3-28-05; 8:45 am]

BILLING CODE 4310-MN-P

DEPARTMENT OF THE INTERIOR

Bureau of Reclamation

Review of Existing Coordinated Long-Range Operating Criteria for Colorado River Reservoirs (Operating Criteria)

AGENCY: Bureau of Reclamation (Reclamation), Interior.

ACTION: Notice of final decision regarding the operating criteria.

SUMMARY: The purpose of this action is to provide public notice that the Secretary of the Interior (Secretary) has made a number of limited modifications to the text of the Operating Criteria developed pursuant to section 602 of the Colorado River Basin Project Act of 1968. The bases for the changes are: (1) Specific change in Federal law applicable to the Operating Criteria, (2) language in the current text of the Operating Criteria that is outdated, and (3) specific modifications to Article IV(b) of the Operating Criteria that reflect actual operating experience. The review of the Operating Criteria has been conducted through a public review process, including consultation with the seven Colorado River Basin States, tribal representatives, and interested parties and stakeholders.

DATES: *Effective Date:* March 21, 2005.

FOR FURTHER INFORMATION CONTACT: Jayne Harkins, Bureau of Reclamation, Lower Colorado Region, P.O. Box 61470, Boulder City, Nevada 89006-1470; telephone (702) 293-8411; faxogram (702) 293-8614; e-mail: jharkins@lc.usbr.gov; or Tom Ryan, Bureau of Reclamation, Upper Colorado Region, 125 South State Street, Room 6107, Salt Lake City, Utah 84138-1147; telephone (801) 524-3732; faxogram (801) 524-5499; e-mail: tryan@uc.usbr.gov.

SUPPLEMENTARY INFORMATION: The public review process began with a **Federal Register** notice published on January 15, 2002, announcing the sixth

review of the Operating Criteria and inviting comments regarding whether the Operating Criteria should be modified, and if so, how they should be modified (67 FR 1986). The January 15, 2002, notice provided for a comment period that ended on March 18, 2002. On March 6, 2002, a second notice was published in the **Federal Register** extending the comment period to March 29, 2002, and inviting public feedback on whether or not Reclamation should conduct a public meeting to solicit comments as part of the sixth review of the Operating Criteria (67 FR 10225). A letter was then sent to all interested parties, tribes, and stakeholders on March 7, 2002, that included copies of both **Federal Register** notices and the Operating Criteria.

On June 27, 2002, a Fact Sheet providing information on the Operating Criteria, scope of the review process, public participation, timeline for the review process, and contact information was sent to all interested parties and stakeholders. In addition to the Fact Sheet, Reclamation set up a Web site (<http://www.usbr.gov/lc/region/g4000/lroc>) for the sixth review of the Operating Criteria that contained further information on the review, copies of all comment letters received, and links to technical documents Reclamation felt would be useful during the review process.

Detailed written comments were received from 16 interested parties providing Reclamation with numerous issues, comments, and concerns regarding possible changes to the Operating Criteria. The names of the parties that provided comments, as well as the corresponding number assigned by Reclamation to the comment letter, are as follows:

1. Western Area Power Administration, Phoenix, Arizona.
2. Quechan Indian Tribe.
3. Metropolitan Water District of Southern California.
4. National Park Service.
5. Arizona Department of Water Resources.
6. Sierra Club, Southwest Rivers, Defenders of Wildlife, Land and Water Fund of the Rockies, Environmental Defense, Pacific Institute, Friends of Arizona Rivers, Living Rivers, and American Rivers.
7. Interested Party (this entity requested that their name be withheld from public disclosure).
8. Colorado River Board of California.
9. Western Area Power Administration, Salt Lake City, Utah.
10. Upper Colorado River Commission.

11. Irrigation & Electrical Districts Association of Arizona.

12. Colorado Water Conservation Board, State of Colorado.

13. New Mexico Interstate Stream Commission.

14. Office of the Attorney General, Water & Natural Resources Division, State of Wyoming.

15. International Boundary and Water Commission, United States and Mexico.

16. State of Utah, Department of Natural Resources, Division of Water Resources.

The comment letters were reviewed for identification of and analysis of the issues. Responses to the comment letters, as well as the corresponding number of the party that made the comment, are provided under the *Synopsis of Comments and Responses* section of this notice.

As required by Federal law, formal consultation with the seven Basin States, interested parties and stakeholders, as well as government-to-government consultation with tribal representatives, was conducted during this review of the Operating Criteria. The January 15, 2002, **Federal Register** notice stated that open public meetings would be conducted as part of this review, and in the March 6, 2002, **Federal Register** notice, Reclamation asked for comments on whether or not a public meeting should be held. At the end of the comment period (March 29, 2002), several of those who provided comments stated that a public meeting to solicit comments on the need to revise the Operating Criteria was not needed. Accordingly, Reclamation did not conduct a public meeting at that point in the review process.

On November 3, 2004, a Notice of Proposed Decision Regarding the Operating Criteria and Announcement of Public Consultation Meeting was published in the **Federal Register** (69 FR 64096). The Notice identified the proposed changes to the Operating Criteria as Reclamation's response to comments received and invited public input on those changes. The notice announced that a public consultation meeting would be held in Henderson, Nevada, on November 19, 2004, and provided for a comment period that ended on December 6, 2004. On November 4, 2004, a letter was sent to all interested parties, tribes, and stakeholders containing a copy of the November 3, 2004, **Federal Register** notice.

On November 19, 2004, a public consultation meeting was conducted to (1) Discuss the proposed changes to the Operating Criteria as Reclamation's response to comments received, (2)

identify any new issues, (3) answer questions from interested parties, and (4) update the public on the remainder of the review process. This meeting was considered a formal consultation with the seven Basin States, interested parties and stakeholders, as well as government-to-government consultation with tribal representatives as described in the November 3, 2004, **Federal Register** notice.

During the comment period ending December 6, 2004, written comments were received from 11 interested parties. The names of the parties that provided comments, as well as the corresponding number assigned by Reclamation to the comment letter, are as follows:

17. Sierra Club, High Country Citizens' Alliance.
18. Upper Colorado River Commission.
19. Friends of Lake Powell.
20. Brynn C. Johns.
21. State of Utah, Department of Natural Resources, Division of Water Resources.
22. Page Electric Utility.
23. Colorado Water Conservation Board, State of Colorado.
24. City of Page, Arizona.
25. Grand Canyon Trust.
26. Metropolitan Water District of Southern California.
27. Colorado River Board of California.

The additional comment letters were reviewed for identification of and analysis of the issues. Responses to all of the comments received, as well as the corresponding number of the party that made the comment, are provided under the *Synopsis of Comments and Responses* section of this notice.

Following analysis of all comments received as a result of this review, the National Environmental Policy Act was applied to the Secretary's proposed final decision. It was determined that the proposed modifications to the text of the Operating Criteria were administrative in nature and did not constitute a major federal action significantly affecting the quality of the human environment. Therefore, a Categorical Exclusion was prepared by Reclamation.

Background: The Operating Criteria, promulgated pursuant to section 602 of the 1968 Colorado River Basin Project Act (Pub. L. 90-537), were published in the **Federal Register** on June 10, 1970 (35 FR 8951). In order to comply with and carry out the provisions of the Colorado River Compact, the Upper Colorado River Basin Compact, and the Mexican Water Treaty, the Operating Criteria provide for the coordinated long-range operation of the reservoirs

constructed and operated under the authority of the Colorado River Storage Project Act, the Boulder Canyon Project Act, and the Boulder Canyon Project Adjustment Act. The Operating Criteria state that the Secretary will sponsor a formal review of the Operating Criteria at least every five years with participation by Colorado River Basin State representatives as each Governor may designate and other parties and agencies as the Secretary may deem appropriate. As required by Public Law 102-575 (the Grand Canyon Protection Act of 1992), the Secretary also consults in this review process with the general public including representatives of academic and scientific communities, environmental organizations, the recreation industry, and contractors for the purchase of federal power produced at Glen Canyon Dam.

Previous reviews of the Operating Criteria were conducted in 1975, 1980, 1985, 1990, and 1995. These reviews did not propose any changes to the Operating Criteria. Prior to 1990, reviews were conducted primarily through meetings with and correspondence among representatives of the seven Basin States and Reclamation. Because the long-range operation of Colorado River reservoirs is important to many agencies and individuals, in 1990, through an active public involvement process, Reclamation expanded the review of the Operating Criteria to include all interested stakeholders. A team consisting of Reclamation staff from Salt Lake City, Utah, and Boulder City, Nevada, was organized to conduct the 1995 review. For the current review, Reclamation staff from Boulder City and Salt Lake City followed a similar public process.

The scope of the review has been consistent with the statutory purposes of the Operating Criteria which are "to comply with and carry out the provisions of the Colorado River Compact, Upper Colorado River Basin Compact, and Mexican Water Treaty" 43 U.S.C. 1552(a). Long-range operations generally refer to the planning of reservoir operations over several decades, as opposed to the Annual Operating Plan which details specific reservoir operations for the next operating year, as required by 43 U.S.C. 1552(b).

Modifications to the Operating Criteria: As a result of this review, the following modifications will be made to the Operating Criteria (additions are shown bolded inside of less than or greater than signs < > and deletions are shown bolded inside of brackets []):

Long-Range Operating Criteria

Amended March 21, 2005

Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of September 30, 1968 (Pub. L. 90-537)

These Operating Criteria are promulgated in compliance with section 602 of Public Law 90-537. They are to control the coordinated long-range operation of the storage reservoirs in the Colorado River Basin constructed under the authority of the Colorado River Storage Act (hereinafter "Upper Basin Storage Reservoirs") and the Boulder Canyon Project Act (Lake Mead). The Operating Criteria will be administered consistent with applicable Federal laws, the Mexican Water Treaty, interstate compacts, and decrees relating to the use of the waters of the Colorado River.

The Secretary of the Interior (hereinafter the "Secretary") may modify the Operating Criteria from time to time in accordance with section 602(b) of Pub. L. 90-537. The Secretary will sponsor a formal <public> review of the Operating Criteria at least every 5 years, with participation by State representatives as each Governor may designate and such other parties and agencies as the Secretary may deem appropriate.

I. Annual Report

(1) On [January 1, 1972, and on] January 1 of each year [thereafter], the Secretary shall transmit to the Congress and to the Governors of the Colorado River Basin States a report describing the actual operation under the adopted criteria for the preceding compact water year and the projected plan of operation for the current year.

(2) The plan of operation shall include such detailed rules and quantities as may be necessary and consistent with the criteria contained herein, and shall reflect appropriate consideration of the uses of the reservoirs for all purposes, including flood control, river regulation, beneficial consumptive uses, power production, water quality control, recreation, enhancement of fish and wildlife, and other environmental factors. The projected plan of operation may be revised to reflect the current hydrologic conditions, and the Congress and the Governors of the Colorado River Basin States be advised of any changes by June of each year.

II. Operation of Upper Basin Reservoirs

(1) The annual plan of operation shall include a determination by the Secretary of the quantity of water

considered necessary as of September 30 of each year to be in storage as required by section 602(a) of Pub. L. 90-537 (hereinafter "602(a) Storage"). The quantity of 602(a) Storage shall be determined by the Secretary after consideration of all applicable laws and relevant factors, including, but not limited to, the following:

- (a) Historic streamflows;
- (b) The most critical period of record;
- (c) Probabilities of water supply;
- (d) Estimated future depletions of the upper basin, including the effects of recurrence of critical periods of water supply;

(e) The "Report of the Committee on Probabilities and Test Studies to the Task Force on Operating Criteria for the Colorado River," dated October 30, 1969, and such additional studies as the Secretary deems necessary;

(f) The necessity to assure that upper basin consumptive uses not be impaired because of failure to store sufficient water to assure deliveries under section 602(a)(1) and (2) of Pub. L. 90-537.

(2) If in the plan of operation, either:

(a) the Upper Basin Storage Reservoirs active storage forecast for September 30 of the current year is less than the quantity of 602(a) Storage determined by the Secretary under Article II(1) hereof, for that date; or

(b) the Lake Powell active storage forecast for that date is less than the Lake Mead active storage forecast for that date; the objective shall be to maintain a minimum release of water from Lake Powell of 8.23 million acre-feet for that year. **[However, for the years ending September 30, 1971 and 1972, the release may be greater than 8.23 million acre-feet if necessary to deliver 75,000,000 acre-feet at Lee Ferry for the 10-year period ending September 30, 1972.]**

(3) If, in the plan of operation, the Upper Basin Storage Reservoirs active storage forecast for September 30 of the current water year is greater than the quantity of 602(a) Storage determination for that date, water shall be released annually from Lake Powell at a rate greater than 8.23 million acre-feet per year to the extent necessary to accomplish any or all of the following objectives:

(a) to the extent it can be reasonably applied in the States of the Lower Division to the uses specified in Article III(e) of the Colorado River Compact, but no such releases shall be made when the active storage in Lake Powell is less than the active storage in Lake Mead,

(b) to maintain, as nearly as practicable, active storage in Lake Mead

equal to the active storage in Lake Powell, and

(c) to avoid anticipated spills from Lake Powell.

(4) In the application of Article II(3)(b) herein, the annual release will be made to the extent that it can be passed through Glen Canyon Powerplant when operated at the available capability of the powerplant. Any water thus retained in Lake Powell to avoid bypass of water at the Glen Canyon Powerplant will be released through the Glen Canyon Powerplant as soon as practicable to equalize the active storage in Lake Powell and Lake Mead.

(5) Releases from Lake Powell pursuant to these criteria shall not prejudice the position of either the upper or lower basin interests with respect to required deliveries at Lee Ferry pursuant to the Colorado River Compact.

III. Operation of Lake Mead

(1) Water released from Lake Powell, plus the tributary inflows between Lake Powell and Lake Mead, shall be regulated in Lake Mead and either pumped from Lake Mead or released to the Colorado River to meet requirements as follows:

- (a) Mexican Treaty obligations;
- (b) Reasonable consumptive use requirements of mainstream users in the Lower Basin;
- (c) Net river losses;
- (d) Net reservoir losses;
- (e) Regulatory wastes.

(2) [Until such time as mainstream water is delivered by means of the Central Arizona Project, the consumptive use requirements of Article III(1)(b) of these Operating Criteria will be met.] <(Adopted: June 10, 1970, Deleted: March 21, 2005)>

(3) After commencement of delivery of mainstream water by means of the Central Arizona Project, the consumptive use requirements of Article III(1)(b) of these Operating Criteria will be met to the following extent:

(a) Normal: The annual pumping and release from Lake Mead will be sufficient to satisfy 7,500,000 acre-feet of annual consumptive use in accordance with the decree in *Arizona v. California*, 376 U.S. 340 (1964).

(b) Surplus: The Secretary shall determine from time to time when water in quantities greater than "Normal" is available for either pumping or release from Lake Mead pursuant to Article II(b)(2) of the decree in *Arizona v. California* after consideration of all relevant factors, including, but not limited to, the following:

(i) the requirements stated in Article III(1) of these Operating Criteria;

(ii) requests for water by holders of water delivery contracts with the United States, and of other rights recognized in the decree in *Arizona v. California*;

(iii) actual and forecast quantities of active storage in Lake Mead and the Upper Basin Storage Reservoirs; and

(iv) estimated net inflow to Lake Mead.

(c) Shortage: The Secretary shall determine from time to time when insufficient mainstream water is available to satisfy annual consumptive use requirements of 7,500,000 acre-feet after consideration of all relevant factors, including, but not limited to, the following:

(i) the requirements stated in Article III(1) of these Operating Criteria;

(ii) actual and forecast quantities of active storage in Lake Mead;

(iii) estimate of net inflow to Lake Mead for the current year;

(iv) historic streamflows, including the most critical period of record;

(v) priorities set forth in Article II(A) of the decree in *Arizona v. California*; and

(vi) the purposes stated in Article I(2) of these Operating Criteria.

The shortage provisions of Article II(B)(3) of the decree in *Arizona v. California* shall thereupon become effective and consumptive uses from the mainstream shall be restricted to the extent determined by the Secretary to be required by section 301(b) of Public Law 90-537.

IV. Definitions

(1) In addition to the definitions in section 606 of Public Law 90-537, the following shall also apply:

(a) "Spills," as used in Article II(3)(c) herein, means water released from Lake Powell which cannot be utilized for project purposes, including, but not limited to, the generation of power and energy.

(b) "Surplus," as used in Article III(3)(b) herein, is water which can be used to meet consumptive use **[demands]** in the three Lower Division States in excess of 7,500,000 acre-feet annually. The term "surplus" as used in these Operating Criteria is not to be construed as applied to, being interpretive of, or in any manner having reference to the term "surplus" in **<either>** the Colorado River Compact **<or the 1944 Mexican Treaty>**.

(c) "Net inflow to Lake Mead," as used in Article III(3)(b)(iv) and (c)(iii) herein, represents the annual inflow to Lake Mead in excess of losses from Lake Mead.

(d) "Available capability," used in Article II(4) herein, means that portion

of the total capacity of the powerplant that is physically available for generation.

Synopsis of Comments and Responses: Cited below is a synopsis of the comments received during the sixth review of the Operating Criteria and responses to those comments. The number(s) in parentheses following each comment refer(s) to the party that made the comment (please see the **SUPPLEMENTARY INFORMATION** section of this notice for a numbered list of the commenting parties).

Comment No. 1—(Letter No. 2): Reclamation must draft and implement the Operating Criteria in accordance with Federal law, which includes * * * treaties establishing Indian reservations and their reserved water rights. * * * Accordingly, the Quechan Tribe is extremely concerned that the Operating Criteria and its implementation not interfere with the tribe's senior perfected federal reserved water rights. * * * The tribe requests that Reclamation review its Operating Criteria in that light, and make any necessary modifications.

Response: The Operating Criteria do not affect the Quechan Tribe's senior water rights to use all of its Present Perfected Rights, including any additional rights granted in a supplemental decree. The Operating Criteria specifically state that they will be administered consistent with applicable federal laws. Some issues regarding the water rights of the Quechan Tribe are pending in active litigation before the United States Supreme Court in *Arizona v. California*. The Operating Criteria will be administered in a manner consistent with any further decisions from the Court in this regard. The Department of the Interior notes that the Court has established a priority date of January 9, 1884, for the federal reserved rights awarded to the tribe to date.

Comment No. 2—(Letter No. 2): The Quechan Tribe is also concerned that the Operating Criteria and its implementation not inappropriately facilitate, validate, or permanently secure use by others of Colorado River water that the tribe is not beneficially using. * * * Reclamation should therefore not designate water as "surplus" to the extent that such designation makes the water available for others.

Response: On an annual basis, determinations of availability of "surplus" water are made as part of the Annual Operating Plan process, and are based upon the Interim Surplus Guidelines adopted by the Secretary of the Interior (66 FR 7772–82).

Determinations of "surplus" conditions are consistent with the provisions of Article II(B)(2) of the Decree entered by the United States Supreme Court in *Arizona v. California*, 376 U.S. 340, 342 (1964). The Department does not believe that the Operating Criteria or the Interim Surplus Guidelines inappropriately facilitate, validate, or permanently secure use by others of Colorado River water that the tribe is not using at this time. Nor does the Department believe that the Operating Criteria would preclude the tribe or any entitlement holder from using their Colorado River entitlement in the future. In short, the Operating Criteria do not alter the quantity or priority of tribal entitlements.

Comment No. 3—(Letter No. 2): The Quechan Tribe asks that Reclamation consider whether the present and future plans for tribal water marketing and banking mandate modification to the Operating Criteria, particularly in light of Reclamation's trust responsibilities to Indian tribes and their members.

Response: The Department does not believe that a change to the Operating Criteria is warranted due to any plans that the tribe may have with respect to future marketing and banking of tribal water. The Operating Criteria do not define nor will they alter the quantity or priority of tribal entitlements. The Operating Criteria provide for the coordinated long-range operation of the reservoirs constructed and operated under the authority of the Colorado River Storage Project Act and the Boulder Canyon Project Act for the purposes of complying with and carrying out the provisions of the Colorado River Compact, Upper Colorado River Basin Compact, and Mexican Water Treaty.

Comment No. 4—(Letter No. 2): The Quechan Tribe asks that Reclamation consider whether Arizona's and Nevada's full use of their allotments mandates modification to the Operating Criteria, particularly in light of Reclamation's trust responsibilities to Indian tribes and their members.

Response: The Department does not believe that a change to the Operating Criteria is warranted due to Arizona's and Nevada's current estimated use of Colorado River water. The Operating Criteria do not define nor will they alter state apportionments or the rights of individual entities to Colorado River water.

Comment No. 5—(Letter No. 2): The Quechan Tribe asks that Reclamation consider whether the overall allocation of the Colorado River mandates modification to the Operating Criteria, particularly in light of Reclamation's

trust responsibilities to Indian tribes and their members. Please note that the tribe has proposed a Tribal Accounting Pool in Lake Mead to allow undeveloped tribal waters to be tracked by an in-reservoir accounting system.

Response: The Department does not believe that a change to the Operating Criteria is warranted due to allocations of the Colorado River. The Operating Criteria implement and carry out the provisions of the Colorado River Compact, Upper Colorado River Basin Compact, and Mexican Water Treaty, as well as federal statutory law. These sources of the basin and state allocations to Colorado River water control Reclamation actions pursuant to the Operating Criteria. While annual yield calculations made early in the 20th century have been revised pursuant to additional data, the Operating Criteria do not define or alter any rights of individual entities to Colorado River water.

The Department acknowledges that the Ten Tribes Partnership (in comments to Reclamation on the Draft Interim Surplus Criteria Environmental Impact Statement) proposed the Tribal Accounting Pool (TAP) in Lake Mead. The TAP was a proposed methodology to track the amounts of undeveloped tribal water and determine the portion of surplus, normal, and shortage water delivered to other non-partnership Lower Basin users as a result of undeveloped Ten Tribes' water in the Lower Basin. The Department of the Interior did not include the TAP methodology as part of the Interim Surplus Guidelines and does not believe that revision of the Operating Criteria to include the TAP methodology is appropriate. See *e.g.*, U.S. Department of the Interior, Response to Ten Tribes Partnership, Interim Surplus Guidelines, Final Environmental Impact Statement, Volume III at page B–208 (Comment 13).

Comment No. 6—(Letter No. 2): The Quechan Tribe asks Reclamation to consider whether Reclamation should adopt the Operating Criteria as a rule, pursuant to the Administrative Procedure Act.

Response: The Administrative Procedure Act (APA) was originally enacted in 1946, was significantly amended in 1966, and has been subsequently modified by Congress. Primary purposes of the APA are (1) to require agencies to keep the public informed on organization, procedures, and rules; (2) to provide for public participation in the rulemaking process; (3) to prescribe uniform standards of conduct for rulemaking and adjudicatory proceedings; and (4) to

address judicial review of agency decisionmaking.

The APA addresses rulemaking. A “rule” is defined as: “the whole or part of an agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy or describing the organization, procedure, or practice requirements of an agency * * *” 5 U.S.C. 551(4). Rulemaking is usually referred to as either formal or informal. While developed pursuant to specific provisions of the Colorado River Basin Project Act, the review of the Operating Criteria should be categorized as informal rulemaking.

Consistent with the APA, Reclamation has provided for public participation and review of the Operating Criteria. Reclamation has developed a thorough administrative record. Notices regarding five-year reviews are also publicly noticed through the **Federal Register**. All comment letters received and notes from public meetings, as well as any analysis performed by Reclamation, are part of the public record. The public has been kept informed of the intent of the review and encouraged to participate. The Department believes that it is meeting the requirements of the APA and all actions are in accordance with applicable federal law.

Comment No. 7—(Letter No. 2): The Quechan Tribe is also concerned about the Operating Criteria’s cumulative effects on the Colorado River and on its senior rights in the river when considered with the many other federal activities that affect the flow of the Colorado River.

Response: See response to Comments No. 1 and 2.

Comment No. 8—(Letter No. 2): The Quechan Tribe requests that Reclamation comply with the National Environmental Policy Act if it (1) modifies the Operating Criteria or (2) determines that application of the Operating Criteria has or will have significant adverse effects (short- or long-term) on the environment, the tribe’s water rights, or the Fort Yuma Reservation.

Response: Reclamation complies with the National Environmental Policy Act (NEPA) with respect to its activities. In the past, Reclamation elected to utilize its NEPA process to evaluate the five-year review process and any proposed changes.

The Department is making a number of changes to the Operating Criteria through this notice that are editorial in nature. These changes fall into several categories: a minor textural addition, textural clarification of facts, and deletions of text referring to operational

requirements and/or other events completed in the past. All of these editorial changes are administrative in nature and their implementation would not individually or cumulatively have a significant effect on the quality of the human environment or tribal resources. Reclamation has completed a Categorical Exclusion checklist supporting a Departmental Categorical Exclusion for this action.

Comment No. 9—(Letter No. 3): If there is no Quantification Settlement Agreement, Reclamation should review the Operating Criteria to better achieve the purposes of the 1922 Colorado River Compact.

Response: The Department of the Interior and the California entities completed the Quantification Settlement Agreement on October 10, 2003.

Comment No. 10—(Letter No. 4): National Park protection should be one of the factors considered in development of the annual plan of operation (Article I(2)), including provisions for any experimental flows necessary to meet the purposes of the Grand Canyon Protection Act.

Response: Article I of the Operating Criteria concerns the Annual Report. In Article I(2) it states: “The plan of operation shall include such detailed rules and quantities as may be necessary and consistent with the criteria contained herein, and shall reflect appropriate consideration of the uses of the reservoirs for all purposes, including flood control, river regulation, beneficial consumptive uses, power production, water quality control, recreation, enhancement of fish and wildlife, and other environmental factors.” Because the Operating Criteria are “administered consistent with applicable Federal laws” (which include the Grand Canyon Protection Act), National Park protection is already currently considered in the annual plan of operation under the existing Operating Criteria. See introductory paragraph of Operating Criteria. Moreover, Reclamation has promulgated Glen Canyon Operating Criteria (and operating plans) pursuant to the requirements of section 1804(b) and (c) of the Grand Canyon Protection Act that specifically address the applicable requirements of that Act. As provided in the Grand Canyon Protection Act, these Glen Canyon Operating Criteria (and operating plans) are “separate from and in addition to those specified in section 602(b) of the Colorado River Basin Project Act of 1968.” See Grand Canyon Protection Act at section 1804(c)(1)(A). The reference to section 602(b) is the statutory provision which requires

preparation of the Colorado River Annual Plan of Operation referenced in Article I(2) of the Operating Criteria. Accordingly, the Department does not believe that it is necessary for the Operating Criteria to be specifically modified to reflect that fact.

Comment No. 11—(Letters No. 4 and 17): The Grand Canyon Protection Act should be specifically mentioned as one of the relevant factors to be considered in the operation of Upper Basin reservoirs (Article II(3)).

Response: The existing Operating Criteria contain language stating that the Operating Criteria are administered consistent with applicable federal laws, which by definition, includes the Grand Canyon Protection Act. The Grand Canyon Protection Act is not mentioned explicitly in Article II(3), but is considered in the context that it is an applicable federal law. In addition, see response to Comment No. 10.

Comment No. 12—(Letters No. 4 and 17): With provisions now in place for Beach/Habitat-Building Flows from Glen Canyon Dam, Article II(4) is no longer completely accurate as written. We propose the following rewording: “Annual releases will be made through the powerplant to the extent practicable except when above powerplant capacity releases are determined by the Secretary, after giving consideration to other applicable factors, to be necessary to meet the provisions of the Grand Canyon Protection Act.”

Response: The scheduling of Beach/Habitat-Building Flows (BHBFs) from Glen Canyon Dam has been controversial since the mid-1990s. The preferred alternative in the Final Environmental Impact Statement for the Operation of Glen Canyon Dam called for BHBFs to take place when Lake Powell storage was low. The Colorado River Basin States expressed significant reservations with that approach. Subsequently, in the 1996 Record of Decision, the Secretary of the Interior adopted a strategy for scheduling BHBFs that was anticipated to apply during high-reservoir storage conditions and that was based to a greater extent on spill avoidance and dam safety considerations. Through the Glen Canyon Dam Adaptive Management Program (AMP), BHBF triggering criteria have been further defined based upon spill avoidance and dam safety. These BHBF triggering criteria are workable and consistent with the Operating Criteria.

In 2002, a sequence of experimental flows was recommended by the AMP. This AMP recommendation was forwarded to the Secretary for her consideration and was adopted in

November 2002. In this experimental flow sequence, one or more BHBFs may be made outside of the established BHBf triggering criteria. These experimental flows are considered test releases and will be made to advance the scientific knowledge of physical and biological process in the Grand Canyon ecosystem. The long-term implementation of BHBFs will continue to be carried out consistent with the Colorado River Storage Project Act, Colorado River Basin Project Act, and BHBf triggering criteria.

In November 2004, the first of these experimental flows that utilized releases greater than powerplant capacity was conducted. In this high-flow test, 41,000 cubic feet per second was released from Glen Canyon Dam for a period of 60 hours. The objective of the test was to evaluate the conservation of fine sediments that form beaches, riparian plant substrate, and endangered fish habitats. It will take approximately 18 months to fully evaluate the test.

Comment No. 13—(Letter No. 4): Under the Operation of Lake Mead, the National Park Service thinks that the Interim Surplus Criteria should replace the language in Article III(3)(b) defining “Surplus.” At least for the next 15 years, the Interim Surplus Criteria Record of Decision defines the relevant factors that the Secretary must consider in determining whether water quantities greater than “normal” are available for pumping or release from Lake Mead.

Response: The Department does not agree that Article III(3)(b) language should be updated to reflect adoption of the Interim Surplus Guidelines Record of Decision by the Secretary. The Department of the Interior specifically considered, and sought public input on, the concept of modifying Article III(3)(b) of the Operating Criteria during the process that led to adoption of the Interim Surplus Guidelines. See 64 FR 27010 (May 18, 1999). After reviewing the public comments received, the Department announced its intention to adopt “interim implementing criteria pursuant to Article III(3) of the Long-Range Operating Criteria” rather than modifying the actual text of the Operating Criteria. See 64 FR 68373 (December 7, 1999). This approach was carried through and set forth in the Record of Decision adopted by the Secretary. See 66 FR 7772, 7780 at section XI(5) (“These Guidelines, which shall implement and be used for determinations made pursuant to Article III(3)(b) of the [Operating Criteria] * * * are hereby adopted * * *”).

Comment No. 14—(Letters No. 4 and 6): The Department should begin a process for shortage determination.

Response: In the past year Reclamation has provided data and information regarding drought analysis and reservoir operations to representatives of the seven Colorado River Basin States, the Western Area Power Administration, and non-governmental organizations that have expressed an interest. Reclamation continues to monitor reservoir storage and basin hydrologic conditions and anticipates beginning a process in spring 2005 to evaluate alternatives regarding the development of shortage guidelines for the delivery of water to the three Lower Division States (Arizona, California, and Nevada).

Comment No. 15—(Letter No. 6): As noted in the January 15, 2002, **Federal Register** notice (67 FR 1986), the Secretary’s consultation responsibilities have been specifically extended to encompass the general public. We recommend that this responsibility be reflected in the Operating Criteria by adding the phrase “and the public” to the end of the second introductory paragraph.

Response: The Department agrees that section 1804 of the Grand Canyon Protection Act specifically modifies Federal law applicable to the Operating Criteria, and by that Act, Congress extended the consultation process to encompass the general public. The Department has included a modification to reflect this responsibility.

Comment No. 16—(Letters No. 6 and 17): The Grand Canyon Protection Act (Pub. L. 102–575) charged the Secretary with operating Glen Canyon Dam “in such a manner as to protect, mitigate impacts to, and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established.” We recommend that the protection and enhancement of these values be inserted as reservoir uses that are considered in developing the annual operating plan under Article I(2) of the Operating Criteria by adding the phrase “protection of cultural resources” after “water quality control” and before “recreation” and by adding the phrase “protection and enhancement of fish and wildlife” before “and other environmental factors.”

Response: See response to Comment No. 10.

Comment No. 17—(Letter No. 6): Although the phrase “recurrence of critical periods of water supply” that is included in Article II(1)(d) may have been universally understood when the Operating Criteria were originally

established, its meaning is unclear to us. We recommend that either a definition of this phrase be included in the definitions section or that the entire clause beginning with the word “including” be deleted.

Response: The term “critical period” is used twice in the Operating Criteria. A “critical period” is a general concept used in water supply planning representing a sequence of drier than average years with below normal runoff. Water supply management must account for these periods of below normal runoff and their “recurrence” to assure a consistent supply of water. As used in the context of Colorado River management, the phrase “recurrence of critical periods” means: the frequency at which critical periods (sequences of years with below normal runoff) have occurred in the past and are likely to recur in the future. The Department believes that the current language in the Operating Criteria is relevant and should remain in the Operating Criteria. The Department does not agree that this term requires a specific definition.

Comment No. 18—(Letter No. 6): We question whether the “Report of the Committee on Probabilities and Test Studies to the Task Force on Operating Criteria for the Colorado River,” dated October 30, 1969, which is referenced in Article II(1)(e) of the Operating Criteria, still has relevance in determining 602(a) Storage. We request either that Reclamation provide us with a copy of that report or a summary of it, or that Article II(1)(e) be deleted from the Operating Criteria.

Response: As requested, a copy of the “Report of the Committee on Probabilities and Test Studies to the Task Force on Operating Criteria for the Colorado River” has been made available on our Web site at <http://www.usbr.gov/lc/region/g4000/lroc>.

Comment No. 19—(Letters No. 6 and 17): The Secretary and her agencies are engaged in modification of river operations in various parts of the basin in order to meet their responsibilities under the Endangered Species Act. In order to reflect these changes, we recommend that a new subsection be added to Article II(1) that reads: “Streamflow requirements of fish and wildlife, and other environmental values.”

Response: The Department notes that Article II(1) of the Operating Criteria is applicable to, and lists relevant factors for, determination of 602(a) Storage. The Operating Criteria are “administered consistent with applicable Federal laws” (which include the Endangered Species Act). See introductory paragraph of Operating Criteria. As with

other aspects of applicable federal law, the Endangered Species Act applies to proposed discretionary actions undertaken by federal agencies and its consideration is implicit in the existing Operating Criteria. Accordingly, the Department does not believe that it is necessary for the Operating Criteria to be modified.

Comment No. 20—(Letter No. 6): The last sentence in Article II(2) of the Operating Criteria refers to operations in 1971 and 1972, and is no longer relevant. We recommend that this sentence be deleted.

Response: The Department concurs with the recommendation. The references to operations in 1971 and 1972 are no longer relevant and the Department has deleted those sentences from the Operating Criteria.

Comment No. 21—(Letters No. 6 and 17): In recognition of the Secretary's responsibilities under the Grand Canyon Protection Act and the Endangered Species Act, we recommend that a new subsection (d) be added to Article II(3) that reads: "to meet the requirements of the Grand Canyon Protection Act and the Endangered Species Act."

Response: See response to Comments No. 11 and 19.

Comment No. 22—(Letter No. 6): Given that the Colorado River Storage Project Act lists generation of hydroelectric power as an incidental purpose for Glen Canyon Dam, and that the Record of Decision on the operation of Glen Canyon Dam interprets the mandates of the Grand Canyon Protection Act to allow bypass of water at the Glen Canyon Powerplant under limited conditions and for specified purposes, we suggest that the language in Article II(4) is not appropriate. We recommend that this section be deleted.

Response: Article II(4) specifies the method that water will be released from Lake Powell when such releases are needed in the application of Article II(3)(b) to maintain, as nearly as practicable, active storage in Lake Mead equal to the active storage in Lake Powell. The Glen Canyon Dam Record of Decision does not address spilling water released for storage equalization purposes. Article II(4), as written, is necessary in specifying how storage equalization releases from Lake Powell should be made.

Comment No. 23—(Letters No. 6 and 17): In recognition of the Secretary's responsibilities under the National Environmental Policy Act, the Endangered Species Act, as well as the Law of the River, we recommend inserting the following phrase at the beginning of Section III(1): "Consistent with applicable federal laws, including

but not limited to the National Environmental Policy Act and the Endangered Species Act."

Response: The existing Operating Criteria contain language stating that the Operating Criteria are administered consistent with applicable federal laws, which by definition, includes the National Environmental Policy Act and the Endangered Species Act. In addition, see response to Comments No. 11 and 19.

Comment No. 24—(Letter No. 6): Article III(2) is no longer pertinent and we recommend that it be deleted.

Response: The Department agrees that Article III(2) is no longer pertinent since the Central Arizona Project began delivering water in 1985. The Department has deleted the language in Article III(2).

Comment No. 25—(Letter No. 6): To reflect the mandates of the Grand Canyon Protection Act within the universe of project purposes at Glen Canyon Dam, we recommend adding the phrase "and the protection and enhancement of national park values in Grand Canyon National Park and/or Glen Canyon National Recreation Area" at the end of Article IV(1)(a).

Response: The Department believes that Article IV(1)(a), as written, adequately defines spills. The language, as written, enables appropriate flexibility in the operation of Glen Canyon Dam to accomplish project purposes.

Comment No. 26—(Letter No. 6): Delete the word "demands" in Article IV(1)(b) of the Operating Criteria.

Response: To maintain consistency with Article III of the Operating Criteria and the 1964 Decree in *Arizona v. California*, the Department agrees that the word "demands" should be deleted in Article IV(1)(b). The Department has deleted the word "demands" from Article IV(1)(b).

Comment No. 27—(Letter No. 6): Since Article IV(1)(d) defines a term used solely in Section II(4), we recommend that it be deleted along with Article II(4).

Response: As Article II(4) remains relevant in the Operating Criteria (see response to Comment No. 22), Article IV(1)(d) needs to remain in the Operating Criteria. The term "available capability," as defined in Article IV(1)(d), is used in Article II(4).

Comment No. 28—(Letter No. 6): The Interim Surplus Guidelines are having a negative effect on the Colorado delta.

Response: The Record of Decision for the Colorado River Interim Surplus Guidelines Final Environmental Impact Statement states that five-year reviews of the Interim Surplus Guidelines may

be conducted, and if so, such reviews would be coordinated with the Operating Criteria review. The Interim Surplus Guidelines became effective in February 2001 and were first applied in the 2002 Annual Operating Plan. At this time, there is no need for a review of the Interim Surplus Guidelines. In the future, however, actual operating conditions may warrant a review of the Interim Surplus Guidelines.

Comment No. 29—(Letters No. 6 and 17): Conduct an environmental review of the Operating Criteria under the National Environmental Policy Act.

Response: See response to Comment No. 8.

Comment No. 30—(Letter No. 6): A Categorical Exclusion is arbitrary and capricious because the actual promulgation of the Operating Criteria has not been evaluated in a National Environmental Policy Act process.

Response: See response to Comment No. 8.

Comment No. 31—(Letter No. 16): The development and implementation process for the Interim Surplus Guidelines more than fulfilled the requirements for a five-year review. The Colorado River Basin States and the Secretary of the Interior have already agreed on how to operate the Colorado River for the next 15 years. The state of Utah does not see the need to spend time and resources on a review of the Operating Criteria.

Response: The Operating Criteria explicitly call for their own formal review at least every five years. The Department intends to follow the requirements of the Operating Criteria. The last review was completed with a **Federal Register** notice published on February 24, 1998 (63 FR 9256). The Interim Surplus Guidelines serve to implement Article III(3)(b) of the Operating Criteria. The Interim Surplus Guidelines may be reviewed concurrently with the five-year review of the Operating Criteria pursuant to Section 3 of the Interim Surplus Guidelines.

Comment No. 32—(Letters No. 1, 3, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 23, and 27): No changes to the Operating Criteria are warranted at this time.

Response: The Secretary of the Interior has made a number of limited modifications to the Operating Criteria in this **Federal Register** notice. However, in making those modifications, the Secretary found that in all other respects the Operating Criteria continue to meet the purpose and goals for which they were developed and the requirements of section 602 of the 1968 Colorado River Basin Project Act. The Secretary

believes that neither the structure, format, nor content of the Operating Criteria require significant revisions as a result of actual operating experience. By this **Federal Register** notice, based on information submitted for review by the Department of the Interior, the Secretary has made a number of limited modifications to the text of the Operating Criteria. The bases for the changes are: (1) Specific change in Federal law applicable to the Operating Criteria, (2) language in the current text of the Operating Criteria that is outdated, and (3) specific modifications to Article IV(b) of the Operating Criteria that reflect actual operating experience.

Comment No. 33—(Letter No. 18): We do not object to the changes proposed in the **Federal Register** notice.

Response: Comment noted.

Comment No. 34—(Letter No. 18): The Upper Colorado River Commission does not endorse the assumption and objective in the Operating Criteria of a minimum release of water from Lake Powell of 8.23 million acre-feet every year. If such a number is used in the Operating Criteria, it must be understood that this is a planning objective which may be modified in the Annual Operating Plan (AOP) to reflect current conditions and in accordance with Colorado River Compact requirements. We remain concerned about the drought and depletion of storage at Lake Powell. It is imperative that the Operating Criteria be interpreted to have sufficient flexibility to allow for modifications in the AOP as needed to reflect critical conditions and Colorado River Compact requirements.

Response: Article III of the Colorado River Compact contains several provisions relating to the release of water from the Upper Basin to the Lower Basin. The specification of a minimum annual release objective from Glen Canyon Dam is found only in Article II(2) of the Operating Criteria which states that “* * * the objective shall be to maintain a minimum release of water from Lake Powell of 8.23 million acre-feet * * *.”

Because the minimum annual release objective is higher than inflow during periods of drought, storage in Lake Powell is drawn down during a drought. The more severe the drought, the more significant the drawdown is at Lake Powell. Storage in Lake Powell recovers during normal or wet years. Lake Mead storage decreases during drought as well, but does so at a slower rate because of the presence of the minimum annual release objective from Lake Powell.

Representatives of the seven Colorado River Basin States, Reclamation, and the

Western Area Power Administration are investigating impacts of prolonged drought where reducing the release from Lake Powell below the 8.23 million acre-foot per year objective would protect the minimum power pool at Lake Powell and the water supply for the Upper Division States of Colorado, New Mexico, Utah, and Wyoming. The 2005 Colorado River Annual Operating Plan (AOP) calls for an April 2005 mid-year review of the 2005 annual release amount from Lake Powell to determine if the runoff forecast warrants an adjustment to the annual release for water year 2005.

Determinations of Upper Basin annual deliveries (annual releases from Lake Powell) are made in the AOP. The AOP is prepared each year by the Department of the Interior through the Bureau of Reclamation in consultation with the seven Basin States Governors’ representatives; the Upper Colorado River Commission; Native American tribes; appropriate federal agencies; representatives of the academic and scientific communities, environmental organizations, and the recreation industry; water delivery contractors; contractors for the purchase of federal power; others interested in Colorado River operations; and the general public through the Colorado River Management Work Group. The Department, through Reclamation, will continue to address issues related to low reservoir storage caused by drought in the AOP consultation process.

Comment No. 35—(Letter No. 18): Decisions regarding the timing for the next review should be left open.

Response: The Department has made no decision regarding the timing of the next review of the Operating Criteria.

Comment No. 36—(Letter No. 19): It is critical for the Operating Criteria for reservoir operations to uphold the intent of the 1922 Colorado River Compact. The Operating Criteria should be flexible and responsive to variations in hydrologic conditions, and should not jeopardize the interests of the Upper Basin.

Response: See response to Comment No. 34.

Comment No. 37—(Letter No. 19): The 1922 Colorado River Compact anticipating fluctuating hydrologic conditions specified Upper Basin water deliveries as a 10-year progressive series. We note that the existing Operating Criteria dictate the minimal annual release of 8.23 million acre-feet which is counter to Article III(d) of the 1922 Colorado River Compact.

Response: See response to Comment No. 34.

Comment No. 38—(Letter No. 19): We are also concerned that the Operating Criteria contain a requirement to equalize Lake Mead with Lake Powell during times of Upper Basin water surpluses, but that there are no provisions to equalize the level of Lake Powell with Lake Mead during times of Upper Basin drought for so long as the Upper Basin is conditionally satisfying its 10-year water delivery obligations.

Response: Article II(3) of the Operating Criteria contains a requirement that releases greater than 8.23 million acre-feet be made only when reservoir storage in the Upper Basin is greater than 602(a) Storage. Article II(1) of the Operating Criteria describes 602(a) Storage.

There is no provision in the Operating Criteria to equalize the level of Lake Powell with Lake Mead during times of drought when reservoir storage in Lake Powell is lower than Lake Mead. However, river simulation modeling of the Colorado River system shows that in the future there will be times when Lake Powell storage will be greater than Lake Mead. This will occur because of the application of 602(a) Storage provisions. See Colorado River Basin Project Act at section 602(a). Following a drought, the 602(a) Storage provision in the Operating Criteria allows Lake Powell to refill to a level sufficient to protect the Upper Basin from future droughts. Releases greater than the objective minimum are not made from Lake Powell until this level of storage is achieved. It is likely that when the current drought comes to an end, during a year (or series of years) with above average inflow to Lake Powell, reservoir storage in Lake Powell will exceed that of Lake Mead.

In 2004, an Interim 602(a) Storage Guideline was adopted that set 14.85 million acre-feet of storage (elevation 3,630 feet) at Lake Powell as the minimum level for 602(a) Storage through the year 2016. See 69 FR 28945 (May 19, 2004). Under this interim guideline, releases greater than the minimum objective release will not be made when Lake Powell is projected to be below elevation 3,630 feet. Thus, while Lake Powell storage decreases faster than Lake Mead during periods of drought, the 602(a) Storage provision allows Lake Powell storage to rebound quicker than Lake Mead when there is a return to average or wetter than average hydrology. In addition, see response to Comment No. 34.

Comment No. 39—(Letter No. 19): Presently, there exists a large imbalance between the water volumes in Lake Mead and Lake Powell (14.3 million acre-feet to 8.8 million acre-feet), which

has jeopardized the interests of the Upper Basin and put at risk the future generation of hydroelectric power at Glen Canyon Dam.

Response: The severity of the drought over the past five years in combination with the objective to maintain a minimum release of 8.23 million acre-feet has caused a significant drawdown of Lake Powell. The minimum release objective contained in the Operating Criteria results in Lake Powell storage decreasing during periods of drought. From 1988 through 1992, there was a five-year drought in the Colorado River Basin and the water surface elevation of Lake Powell decreased by 89 feet. The drought of the past five years (2000–2004) is more severe than the drought that occurred from 1988 to 1992. Records show the current drought to be the most severe five-year drought in the Colorado River Basin in over 100 years of recordkeeping. Because of this, Lake Powell has experienced a significant reduction in storage.

Elevation 3,490 feet at Lake Powell has been identified as the minimum level at which hydropower can be generated at Lake Powell. The river bypass tubes at Glen Canyon Dam can release water as low as elevation 3,370 feet, but no hydropower can be generated by the release of water through the river bypass tubes. Elevation 3,370 feet is the lowest elevation at which water can be released from Lake Powell. Between elevations 3,490 feet and 3,370 feet, there is four million acre-feet of storage. The Operating Criteria do not reference these elevations at Lake Powell. Previous river simulation modeling of the Colorado River system performed by Reclamation showed no occurrences of Lake Powell reaching 3,490 feet in the next 50 years when subject to the most severe droughts of the 20th century. However, since the current five-year drought is worse than any of the 20th century droughts, there is now some risk that Lake Powell could reach minimum power pool (elevation 3,490 feet) under a scenario of continued drought in combination with the continuation of the minimum release objective from Lake Powell. The Department will continue to address the issue of low reservoir storage at Lake Powell in the Annual Operating Plan consultation process. In addition, see response to Comments No. 34 and 38.

Comment No. 40—(Letter No. 19): Over the past 10 years, the Upper Basin has delivered more than 100 million acre-feet of water to the Lower Basin, which now in combination with drought conditions has prejudiced the interests of the Upper Basin.

Response: During the past 10-year period (water years 1995–2004), over 100 million acre-feet has flowed past Lee Ferry. The majority of this flow occurred during the five-year period of 1995 through 1999 which was a period with above average flow on the Colorado River. In July 1999, Lake Powell storage was 97 percent of capacity. During the five-year period of 1995 to 1999, 59.5 million acre-feet flowed past Lee Ferry, with reservoirs throughout the Upper Colorado River Basin, including Lake Powell, releasing excess water because they were full. Release of this water from Lake Powell was necessary because of the physical storage limitation of Lake Powell and dam safety considerations. During the past five years, the objective in the operation of Lake Powell has been to release 8.23 million acre-feet per year, consistent with the Operating Criteria. It should also be noted that during the late 1990s, flood control releases were taking place from Lake Mead in the Lower Basin resulting in a significant volume of water, approximately 5 million acre-feet, being released from Lake Mead in excess of Lower Basin demands. In addition, see response to Comment No. 34.

Comment No. 41—(Letter No. 19): The existing Operating Criteria need clarification that the minimal objective release of 8.23 million acre-feet stated in the Operating Criteria is an “operating target” which is subject to revision in the Annual Operating Plan process.

Response: See response to Comment No. 34.

Comment No. 42—(Letter No. 19): The Friends of Lake Powell strongly endorse the Annual Operating Plan process. Furthermore, we believe that operation of the Colorado River reservoirs can be optimized with each Basin sharing more equitably in the burden of drought. This would be best accomplished by maintaining, as equally as practicable, the active water stored in Lake Powell and Lake Mead (for so long as Upper Basin 10-year water delivery obligations are satisfied).

Response: Under the Operating Criteria, Lake Powell storage drops below Lake Mead storage during periods of drought. When there is a return to average or above average inflow, Lake Powell storage recovers faster than storage recovers in Lake Mead. The 602(a) Storage requirement allows water storage in Lake Powell to be greater than water storage in Lake Mead in the period following a drought. Maintaining storage equal in Lake Powell and Lake Mead as an operating strategy would be counter to the 602(a) Storage requirement and could put the Upper

Basin at risk of not having enough water in storage for future droughts. The Department will continue to address low reservoir storage caused by drought in the Annual Operating Plan consultation process. In addition, see response to Comments No. 34 and 38.

Comment No. 43—(Letter No. 20): The Operating Criteria of Glen Canyon Dam need to be revisited. When all needs are considered, it would be better to treat Lakes Mead and Powell more similarly, or better yet, to apply your normal system Operating Criteria to the operation of Glen Canyon Dam.

Response: See response to Comments No. 34, 38, and 42.

Comment No. 44—(Letter No. 21): The technical changes proposed in the current Operating Criteria review seem to make sense in order to keep the document current with regards to updated legislation and rules.

Response: Comment noted.

Comment No. 45—(Letter No. 21): With the current drought and the ongoing discussions by the seven Colorado River Basin States as to how to cope with low storage levels in the system, it would be appropriate for this review of the Operating Criteria to serve as the current review for at least the next five years. During this time, the seven Basin States will be working together to provide additional guidelines dealing with shortages. Similar to the Interim Surplus Guidelines process, if and when shortage guidelines are agreed to and given time to develop operational experience, it would be appropriate to again review the Operating Criteria.

Response: See response to Comment No. 35.

Comment No. 46—(Letter No. 22): Page Electric Utility strongly believes that the water level of Lake Powell should be maintained at or above elevation 3,490 feet to maintain the minimum power pool.

Response: See response to Comments No. 34 and 39.

Comment No. 47—(Letter No. 23): We have no objections to the proposed removal of obsolete provisions in the Operating Criteria.

Response: Comment noted.

Comment No. 48—(Letter No. 23): An amount less than the minimum release objective may be released from Lake Powell, if the states of the Upper Division are in compliance with Article III(d) of the Colorado River Compact, in order to avoid impairment or potential impairment of the beneficial consumptive use of water in any Upper Division State.

Response: See response to Comment No. 34.

Comment No. 49—(Letter No. 23): The Operating Criteria have been flexible enough to allow for adjustments following the floods of the 1980s, they have been flexible enough to allow for the development of the interim operating criteria to aid California in reducing its use of Colorado River water to 4.4 million acre-feet per year, and they have been flexible enough to allow for experimental flow tests from Glen Canyon Dam in 1996 and again in 2004. All these were accomplished within the limitations provided by the Colorado River Compact, the Upper Colorado River Basin Compact, and the Mexican Water Treaty. The Operating Criteria cannot be used to modify these basic documents, as some would suggest.

Response: The Department concurs. The Operating Criteria cannot be used to modify the Colorado River Compact, the Upper Colorado River Basin Compact, or the Mexican Water Treaty.

Comment No. 50—(Letter No. 24): The Operating Criteria should meet the intent of the 1922 Colorado River Compact, yet be flexible enough to take into consideration variations in hydrologic conditions and drought.

Response: The Operating Criteria were developed to provide sufficient flexibility in the operation of Colorado River reservoirs while meeting the requirements of interstate compacts, federal laws, treaties, decrees, and regulations germane to the Colorado River. Over the past 34 years, the Operating Criteria have provided the flexibility to properly manage the Colorado River through periods of average, above average, and below average inflow.

Comment No. 51—(Letter No. 24): The 1922 Colorado River Compact intended for a flexible water delivery schedule based on 10-year averages. The existing Operating Criteria appear to dictate a minimal release that does not consider drought conditions.

Response: See response to Comment No. 34.

Comment No. 52—(Letter No. 24): A new minimal annual release given current conditions should be considered in the 6.5 to 7 million acre-foot range for the stabilization of both reservoirs.

Response: See response to Comments No. 34 and 38.

Comment No. 53—(Letter No. 24): The cost effective generation of hydroelectric power should not be jeopardized at Glen Canyon Dam; therefore, a minimum lake elevation should be established at Lake Powell.

Response: See response to Comments No. 34, 38, and 39.

Comment No. 54—(Letter No. 25): The following changes should be made to

the Operating Criteria: In Article I(2), after the word, "recreation," add the phrase, "protection of Grand Canyon National Park and Glen Canyon National Recreation Area."

Add the following paragraph as Article II(6): "In the application of Article II, Glen Canyon Dam will be operated and releases from Lake Powell made in accordance with the Grand Canyon Protection Act in order to protect, mitigate adverse impacts to, and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established. Annual releases will be made through the powerplant to the extent practicable except when above-powerplant releases are determined by the Secretary to be necessary to meet the provisions of the Grand Canyon Protection Act. Water releases pursuant to this paragraph will not affect allocations of water secured to the Colorado River Basin States by any compact, law, or decree."

In Section IV(1)(a), after the phrase, "power and energy," add the phrase, "and protection of natural and cultural resources in Grand Canyon National Park and Glen Canyon Recreation Area."

Response: See response to Comments No. 10, 11, and 12.

Comment No. 55—(Letter No. 26): The Metropolitan Water District of Southern California (Metropolitan) urges Reclamation not to commit to a five-year hiatus in beginning the next review of the Operating Criteria. A five-year hiatus prior to beginning the next review would amount to an eight-year period between reviews, while the Operating Criteria commit to a review at least every five years. Metropolitan believes that Reclamation should leave open the date that the next review will commence, basing that date instead upon actual operating experience or unforeseen circumstances.

Response: See response to Comment No. 35.

Comment No. 56—(Letter No. 27): The Colorado River Board of California (Board), in its March 2002 letter, indicated that there was a need to provide additional specificity to provide guidance as the Annual Operating Plan (AOP) is developed. This specificity is needed to address reservoir operations over the full range of expected operations and include releases during high water events and conditions, as well as, during low water conditions and shortages. Although there was an identified need to provide sufficient detail and substance to guide development of the AOP, there is a greater need to bring this five-year

review to a conclusion within this five-year review period. Accordingly, the Board finds that Reclamation's proposed modifications to the Operating Criteria are acceptable. It is the Board's position that consideration of any substantive modifications to the Operating Criteria should be delayed until the next review is undertaken.

Response: Comment noted.

Comment No. 57—(Letter No. 27): It is unclear from the **Federal Register** notice whether Reclamation plans in some way to note for the reader that certain text has been inserted or deleted through this review. As such, it is recommended that additions and deletions to the text of the Operating Criteria be noted in footnotes to the Operating Criteria.

Response: The Department will denote additions and deletions to the text of the Operating Criteria using a combination of text strikeout, bolding, less than or greater than signs, and/or brackets.

Comment No. 58—(Letter No. 27): At the public meeting held in Henderson, Nevada, on November 19, 2004, Reclamation staff indicated an intent that the next review not begin until five years after the current review is concluded. Such a schedule would depart from the review process required by the Colorado River Basin Project Act of 1968. No such intent should be specified in a final decision regarding the current review. A decision regarding the timing of the beginning of the next review should be left open as it may be necessary to begin the next review prior to the time suggested at the public hearing.

Response: See response to Comment No. 35.

Public Consultation Meeting— November 19, 2004

Reclamation conducted a public consultation meeting in Henderson, Nevada, on November 19, 2004. Two attendees provided oral comments at the meeting. A summary of the comments made and responses to those comments is as follows:

Kara Gillon—Defenders of Wildlife: Why were no changes proposed to the Operating Criteria to reflect the Grand Canyon Protection Act? Will Reclamation conduct National Environmental Policy Act compliance to the proposed changes?

Response: See response to Comments No. 8, 10, 11, 12, and 15.

Jerry Zimmerman—Colorado River Board of California: The Colorado River Board of California (Board) previously sent in a letter that stated that there is no need to change the Operating Criteria. The Operating Criteria need to

provide specificity on operations over a full range of water conditions. Specificity on shortage and surplus and on deliveries to the United States and Mexico is needed in the Operating Criteria. This specificity would help in the development of the Annual Operating Plan each year. The Board finds the proposed changes acceptable and that the current review needs to be completed soon. Substantive changes should be included in the next review. The Board will also be providing written comments.

Response: See response to Comments No. 56 and 58.

Final Decision: After a careful review of all comments received, and after formal consultation with the Governor's representatives of the seven Basin States, tribal representatives, and interested parties and stakeholders, the Secretary of the Interior has made a number of limited modifications to the text of the Operating Criteria. However, in making those modifications, the Secretary found that in all other respects the Operating Criteria continue to meet the purpose and goals for which they were developed and the requirements of Section 602 of the 1968 Colorado River Basin Project Act. The Secretary believes that neither the structure, format, nor content of the Operating Criteria require significant revisions as a result of actual operating experience. The bases for the changes are: (1) Specific change in Federal law applicable to the Operating Criteria, (2) language in the current text of the Operating Criteria that is outdated, and (3) specific modifications to Article IV(b) of the Operating Criteria that reflect actual operating experience.

Dated: March 21, 2005.

Gale A. Norton,

Secretary, Department of the Interior.

[FR Doc. 05-6160 Filed 3-28-05; 8:45 am]

BILLING CODE 4310-MN-P

INTERNATIONAL TRADE COMMISSION

[Inv. No. 337-TA-534]

In the Matter of Certain Color Television Receivers and Color Display Monitors, and Components Thereof; Notice of Investigation

AGENCY: U.S. International Trade Commission.

ACTION: Institution of investigation pursuant to 19 U.S.C. 1337.

SUMMARY: Notice is hereby given that a complaint was filed with the U.S. International Trade Commission on

February 24, 2005, under section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, on behalf of Thomson Licensing S.A. of Boulogne, France, and Thomson Licensing Inc. of Princeton, New Jersey. A letter supplementing the complaint was filed on March 18, 2005. The complaint, as supplemented, alleges violations of section 337 in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain color television receivers and color display monitors, and components thereof, by reason of infringement of claims 1 and 3 of U.S. Patent No. 4,836,651, claim 1 of U.S. Patent No. 5,041,888, claims 1, 5, and 7 of U.S. Patent No. 5,153,754, claims 1, 3, 5, and 6 of U.S. Patent No. 5,389,893, and claims 1 and 2 of U.S. Patent No. 5,452,195. The complaint further alleges that an industry in the United States exists as required by subsection (a)(2) of section 337.

The complainants request that the Commission institute an investigation and, after the investigation, issue a permanent exclusion order and permanent cease and desist orders.

ADDRESSES: The complaint and supplement, except for any confidential information contained therein, are available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, SW., Room 112, Washington, D.C. 20436, telephone 202-205-2000. Hearing impaired individuals are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on 202-205-1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000. General information concerning the Commission may be obtained by accessing its Internet server (<http://www.usitc.gov>). The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <http://edis.usitc.gov>.

FOR FURTHER INFORMATION CONTACT:

Steven R. Pedersen, Esq., Office of Unfair Import Investigations, U.S. International Trade Commission, telephone 202-205-2781.

Authority: The authority for institution of this investigation is contained in section 337 of the Tariff Act of 1930, as amended, and in section 210.10 of the Commission's Rules of Practice and Procedure, 19 CFR 210.10 (2004).

Scope of Investigation: Having considered the complaint, the U.S.

International Trade Commission, on March 18, 2005, *ordered that*—

(1) Pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, an investigation be instituted to determine whether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain color television receivers or color display monitors, or components thereof, by reason of infringement of claim 1 or 3 of U.S. Patent No. 4,836,651, claim 1 of U.S. Patent No. 5,041,888, claim 1, 5, or 7 of U.S. Patent No. 5,153,754, claim 1, 3, 5, or 6 of U.S. Patent No. 5,389,893, or claim 1 or 2 of U.S. Patent No. 5,452,195, and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

(2) For the purpose of the investigation so instituted, the following are hereby named as parties upon which this notice of investigation shall be served:

(a) The complainants are—

Thomson Licensing S.A., 46 quai
Alphonse Le Gallo, 92648 Boulogne,
France.

Thomson Licensing Inc., 2
Independence Way, Princeton, NJ
08540.

(b) The respondents are the following companies alleged to be in violation of section 337, and are the parties upon which the complaint is to be served:

BenQ Corp., 157 Shan-Ying Rd.,
Gueishan, Taoyuan 333, Taiwan.
BenQ Optonics (Suzhou) Co., Ltd., 169
Zhujiang Rd., New District, Suzhou,
Jiangsu, China 215011.
BenQ America Corp., 53 Discovery,
Irvine, California 92618.
AU Optonics Corp., No. 1, Li-Hsin
Road 2, Science-Based Industrial
Park, Hsinchu 300, Taiwan.

(c) Steven R. Pedersen, Esq., Office of Unfair Import Investigations, U.S. International Trade Commission, 500 E Street, SW., Suite 401, Washington, DC 20436, who shall be the Commission investigative attorney, party to this investigation; and

(3) For the investigation so instituted, the Honorable Robert L. Barton, Jr. is designated as the presiding administrative law judge.

Responses to the complaint and the notice of investigation must be submitted by the named respondents in accordance with section 210.13 of the Commission's Rules of Practice and Procedure, 19 CFR 210.13. Pursuant to 19 CFR 201.16(d) and 210.13(a), such responses will be considered by the Commission if received no later than 20



THE SECRETARY OF THE INTERIOR
WASHINGTON

MAY 02 2005

Honorable Jon Huntsman, Jr.
Governor of Utah
Salt Lake City, Utah 84114

Dear Governor Huntsman:

In accordance with the 2005 Annual Operating Plan for Colorado River Reservoirs (2005 AOP), transmitted to you by my letter of November 19, 2004, the Department has conducted a mid-year review to determine if the runoff forecast warrants an adjustment to the release amount from Lake Powell for the remainder of water year 2005. The Department has conducted public meetings and sought recommendations from the seven Colorado River Basin States on this issue.

The Department has reviewed all of the information presented during this review, and we have concluded that an adjustment to the release amount from Lake Powell during the next five months is not warranted. In particular, we note that the current runoff forecast into Lake Powell during the spring snowmelt season from April - July, 2005 is projected to be 106% of average, and that overall Colorado River system storage is approximately 10% better at this time than had been projected last fall when the Department committed to undertake this mid-year review. Moreover, if runoff in the Colorado River Basin remains at average levels, the contents of Lake Mead and Lake Powell are projected to be approximately equal by September 2006. This transmittal supplements the 2005 AOP and incorporates by reference the applicable provisions of the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs (Operating Criteria), and the 2005 AOP, including but not limited to, Article II(5) of the Operating Criteria and the section entitled "Disclaimer" at page 27 of the 2005 AOP.

In previous multi-year droughts in the Colorado River Basin we have seen individual years of average or above-average flow. Therefore, it is premature to conclude from this one year of average flow in the Upper Basin and above average flow in the Lower Basin that the drought in the Colorado River Basin has ended. With reduced system storage at this time, we remain very concerned about the impacts of drought throughout the Basin. Accordingly, in upcoming consultations on development of the 2006 AOP, scheduled to begin in June of this year, the Department will propose to include a provision that requires a mid-year review next April if the March 15, 2006 runoff forecast projects decreased storage in the Colorado River system. The purpose of the review will be to determine if an adjustment to the release amount from Lake Powell for water year 2006 is warranted.

Honorable Jon Huntsman, Jr.

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When developing annual operating plans for the Colorado River, including this and future mid-year reviews, the Department retains authority pursuant to applicable law and the Operating Criteria to adjust releases from Glen Canyon Dam to amounts less than 8.23 million acre-feet per year. This authority was recognized at the time the Department established the Operating Criteria in 1970. Specifically, the Department transmitted the following statement to the Governors of each of the Colorado River Basin States on June 9, 1970: "...[T]he Operating Criteria imposes no firm or fixed obligation that 8.23 million acre-feet be released each year from Lake Powell. That quantity is stated as an "objective" of the Operating Criteria." At the time the Department made this statement it had been considering a formal request by the Upper Basin states to reduce the referenced Art. II release volume of 8.23 million acre-feet. The unambiguous statement that the "Operating Criteria imposes no firm or fixed obligation that 8.23 million acre-feet be released each year from Lake Powell" reflects the contemporaneous position of the Secretary of the Interior at the time of the adoption of the Operating Criteria. Like this statement of Departmental position, the relevant provisions of Art. II of the Operating Criteria remain unchanged since 1970.

Recent progress in the administration of the Colorado River has been achieved, in large part, due to the close and productive working relationships among the Colorado River Basin states. While we regret that the Basin states were unable to reach a consensus recommendation on operations for the remaining five months of this water year, we appreciate the extensive and productive efforts of the Governor's representatives to review and consider actions to address reduced supplies in the Basin. We believe that these discussions have produced a deeper understanding of the management challenges facing the Colorado River Basin and will facilitate our development of additional tools to improve coordinated management of the reservoirs in the Colorado River system.

The Department recognizes that it is preferable to develop strategies to address drought and other water management challenges in processes other than annual operating plan consultation meetings. In order to determine the most appropriate way to address these challenges, I am directing Reclamation to convene a meeting of the Colorado River Management Work Group by May 31, 2005. The purpose of the meeting will be to consult with the Colorado River Basin States and the public on the most appropriate processes and mechanisms to address these management challenges.

We do not underestimate the challenges we face in this effort. It has been well understood for decades that there are areas of substantial disagreement between the Upper and Lower Colorado River Basin states on a number of fundamental issues regarding interpretation of the Colorado River Compact of 1922. For example, the opinions of the Upper and Lower Basins differ as to the requirements under the Compact for contribution of water to meet the U.S.-Mexico Treaty of 1944. The Department intends to develop operational tools that can continue to assure productive use of the Colorado River into the future, while avoiding unnecessary, protracted or destabilizing litigation.

Honorable Jon Huntsman, Jr.

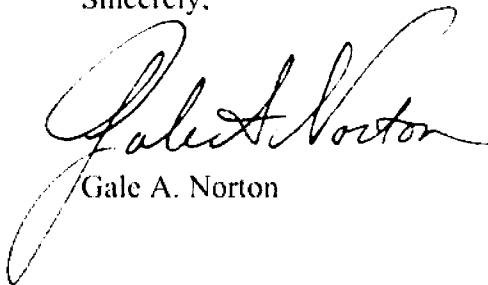
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After this consultation, the Department intends to issue a notice through the Federal Register on or before June 15, 2005 to begin work on these matters. At a minimum, we will address the following matters in our upcoming Federal Register notice: 1) Development of Lower Basin Shortage Guidelines, and, 2) Development of Conjunctive Management Guidelines for Lake Powell and Lake Mead. It is my expectation that, regardless of the particular process utilized, the Department will complete these processes by December 2007.

In the past five years we have seen many achievements on the Colorado River. However, recent years of drought, decreasing system storage and increasing demands for Colorado River water supplies require that all users of Colorado River water adhere to the limitations established in conformance with the "Law of the River." The importance of the Colorado River to the Southwestern United States for water supply, hydropower production, recreation, fish and wildlife habitat, and other benefits dictates that all parties must work together to find creative solutions that will conserve reservoir storage and help to minimize the adverse effects of drought in the Colorado River Basin.

I remain committed to working with all stakeholders to find solutions within the framework of the Law of the River to ensure that the Department's management of the Colorado River continues to respect and implement the applicable provisions of the Colorado River Compact, the Mexican Water Treaty and other applicable law.

Sincerely,

A handwritten signature in black ink, appearing to read "Gale A. Norton". The signature is fluid and cursive, with a large initial "G" and "N".

Gale A. Norton

cc: Mr. D. Larry Anderson
Director
Utah Division of Water Resources
1636 West North Temple, Room 310
Salt Lake City, Utah 84116

Honorable Jon Huntsman, Jr.

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Identical letters sent to:

Honorable Dave Freudenthal
Governor of Wyoming
Cheyenne, Wyoming 82002

Honorable Bill Owens
Governor of Colorado
Denver, Colorado 80203

cc: Mr. Patrick T. Tyrrell
State Engineer
State of Wyoming
Herschler Building, 4th Floor East
Cheyenne, Wyoming 82002-0370

cc: Mr. Rod Kuharich
Director
Colorado Water Conservation Board
1313 Sherman Street, Suite 721
Denver, Colorado 80123

Honorable Kenny Guinn
Governor of Nevada
Carson City, Nevada 89701

Honorable Bill Richardson
Governor of New Mexico
Santa Fe, New Mexico 87501

cc: Mr. George Caan
Director
Colorado River Commission of Nevada
555 East Washington Avenue, Ste. 3100
Las Vegas, Nevada 89101-1048

cc: Mr. John D'Antonio
State Engineer
P.O. Box 25102
Santa Fe, New Mexico 87504-5102

Honorable Janet Napolitano
Governor of Arizona
Phoenix, Arizona 85007

Honorable Arnold Schwarzenegger
Governor of California
Sacramento, California 95814

cc: Mr. Herb Guenther
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Arizona Department of Water Resources
500 N. Third Street
Phoenix, Arizona 85004

cc: Mr. Gerald R. Zimmerman
Executive Director
Colorado River Board of California
770 Fairmont Avenue, Suite 10
Glendale, California 91203-1035

Honorable Jon Huntsman, Jr.

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cc: Honorable Stephen L. Johnson
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Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460

Mr. Arturo Duran
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El Paso, Texas 79902-1441

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Members of the Colorado River
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Colonel Richard G. Thompson
District Engineer
Corps of Engineers
Los Angeles District
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Los Angeles, California 90017



THE SECRETARY OF THE INTERIOR
WASHINGTON

Record of Decision

Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead

December 2007

Recommending Official:

Robert Johnson December 13, 2007
ROBERT JOHNSON Date
Commissioner, Bureau of Reclamation

Approved:

Dirk Kempthorne December 13, 2007
DIRK KEMPTHORNE Date
Secretary of the Department of the Interior

Record of Decision
Colorado River Interim Guidelines for Lower Basin Shortages
and the Coordinated Operations for Lake Powell and Lake Mead
Final Environmental Impact Statement
(November 2007)

I. Introduction

The Colorado River Basin (Basin) is in the eighth year of drought – the worst eight year period in over a century of continuous recordkeeping. Reservoir elevations have declined over this period and the duration of this ongoing, historic drought is unknown. This is the first long-term drought in the modern history of the Colorado River, although climate experts and scientists suggest droughts of this severity have occurred in the past and are likely to occur in the future. The Colorado River provides water to two nations, and to users within seven western states. With over 27 million people relying on the Colorado River for drinking water in the United States, and over 3.5 million acres of farmland in production in the Basin, the Colorado River is the single most important natural resource in the Southwest.

The Secretary of the Interior (Secretary) has a unique role on the Colorado River – charged with management of a vast system of dams and reservoirs that have provided water for the development of the Southwest.

Under these conditions, conflict over water is unsurprising and anticipated. Declining reservoir levels in the Basin led to interstate and inter-basin tensions. As the agency charged with management of the Colorado River, the Department of the Interior (Department) had not yet developed operational rules for the full range of operations at Lake Powell and Lake Mead because these types of low-reservoir conditions had simply not yet occurred.

Against this background, at the direction of the Secretary, the Department initiated a public process in May of 2005 to develop additional operational guidelines and tools to meet the challenges of the drought in the Basin. While water storage in the massive reservoirs afforded great protection against the drought, the Department set a goal to have detailed, objective operational tools in place by the end of 2007 in order to be ready to make informed operational decisions if the reservoirs continued to decline.

During the public process, a unique and remarkable consensus emerged in the basin among stakeholders including the Governor's representatives of the seven Colorado River Basin States (Basin States). This consensus had a number of common themes: encourage conservation, plan for shortages, implement closer coordination of operations of Lake Powell and Lake Mead, preserve flexibility to deal with further challenges such

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as climate change and deepening drought, implement operational rules for a long – *but not permanent* – period in order to gain valuable operating experience, and continue to have the federal government facilitate – *but not dictate* – informed decision-making in the Basin.

Today, this Record of Decision (ROD) constitutes the Department’s final decision after facilitating, analyzing, and considering public input over the past two and one-half years, during which the ongoing drought continued to focus nationwide attention on the Basin. A broad range of considerations have been analyzed, involving water supply, environmental protection, hydropower production, and recreation – all benefits that flow from the management of the Colorado River.

This document is the ROD of the Department of the Interior, regarding the Preferred Alternative for Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations of Lake Powell and Lake Mead (Guidelines). The Secretary is vested with the responsibility of managing the mainstream waters of the lower Colorado River pursuant to federal law. This responsibility is carried out consistent with applicable federal law.

The Bureau of Reclamation (Reclamation), the agency that is designated to act on the Secretary’s behalf with respect to these matters, is the lead federal agency for the purposes of the National Environmental Policy Act. The Final Environmental Impact Statement – *Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead*, dated October 2007, (FES-07-37) (Final EIS) was prepared pursuant to the National Environmental Policy Act of 1969 (NEPA), as amended, the Council on Environmental Quality’s (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500 through 1508), Department of the Interior Policies, and Reclamation’s NEPA Handbook. The Final EIS was filed with the Environmental Protection Agency (EPA) on October 26, 2007 and noticed by EPA (72 Fed. Reg. 62229) and Reclamation (72 Fed. Reg. 62272) in the *Federal Register* on November 2, 2007.

The Final EIS was prepared by Reclamation to address the formulation and evaluation of specific interim guidelines for shortage determinations and coordinated reservoir operations, and to identify the potential environmental effects of implementing such guidelines. The Final EIS addresses the environmental issues associated with, and analyzes the environmental consequences of various alternatives for specific interim guidelines. The alternatives addressed in the Final EIS are those Reclamation determined would meet the purpose of and need for the federal action and represented a broad range of the most reasonable alternatives.

The Bureau of Indian Affairs (BIA), Fish and Wildlife Service (FWS), National Park Service (NPS), Western Area Power Administration (Western) and the United States Section of the International Boundary and Water Commission (USIBWC) are

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cooperating agencies for purposes of assisting with the environmental analysis in the Final EIS.

The BIA has responsibility for the administration and management of lands held in trust by the United States for American Indians (Indian) and Indian tribes located within the Basin. Developing forestlands, leasing assets on these lands, directing agricultural programs, protecting water and land rights, developing and maintaining infrastructure, and economic development are all part of the BIA's responsibility.

FWS manages four national wildlife refuges along the Colorado River. Among its many other key functions, the FWS administers and implements federal wildlife laws, protects endangered species, manages migratory birds, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, and assists foreign governments with international conservation efforts.

The NPS administers areas of national significance along the Colorado River, including Glen Canyon National Recreation Area, Grand Canyon National Park, and Lake Mead National Recreation Area. The NPS conserves natural and cultural resources and administers visitor use, and also grants and administers concessions for the operation of marinas and other recreation facilities at Lake Powell and Lake Mead, as well as concessions' operations along the Colorado River between Glen Canyon Dam and Lake Mead.

Western markets and transmits power generated from the various hydropower plants located within the Basin operated by Reclamation. Western customers include municipalities, cooperatives, public utility and irrigation districts, federal and state agencies, investor-owned utilities, and Indian tribes located throughout the Basin.

The USIBWC is the United States component of a bi-national organization responsible for administration of the provisions of the February 3, 1944 Treaty between the United States and Mexico Relating to the Utilization of the Waters of the Colorado and Tijuana Rivers and of the Rio Grande (1944 Treaty), which includes the Colorado River waters allotted to Mexico, protection of lands along the Colorado River from floods by levee and floodway construction projects, resolution of international boundary water sanitation and other water quality problems, and preservation of the Colorado River as the international boundary. The International Boundary and Water Commission (IBWC) consists of the United States Section and the Mexican Section, which have their headquarters in the adjoining cities of El Paso, Texas and Ciudad Juarez, Chihuahua, respectively.

II. Decision

The recommendation is the approval of the following federal action: the adoption of specific interim guidelines for Lower Basin shortages and coordinated operations of Lake Powell and Lake Mead, as provided below in Section XI. These interim

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Guidelines are based upon the Preferred Alternative analyzed in the Final EIS, and include several operational refinements as a result of public input, described below in Section VII. The interim Guidelines would be used each year by the Department in implementing the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of September 30, 1968 (Long-Range Operating Criteria or Operating Criteria or LROC), through issuance of the Annual Operating Plan for Colorado River Reservoirs (AOP). The Guidelines would remain in effect for determinations to be made through 2025 regarding water supply and reservoir operating decisions through 2026, as provided below in Section 8 of the Guidelines.

The Preferred Alternative proposes:

- ◆ discrete levels of shortage volumes associated with Lake Mead elevations to conserve reservoir storage and provide water users and managers in the Lower Basin with greater certainty to know when, and by how much, water deliveries will be reduced in drought and other low reservoir conditions;
- ◆ a coordinated operation of Lake Powell and Lake Mead determined by specified reservoir conditions that would minimize shortages in the Lower Basin and avoid the risk of curtailments in the Upper Basin;
- ◆ a mechanism to encourage and account for augmentation and conservation of water supplies, referred to as Intentionally Created Surplus (ICS), that would minimize the likelihood and severity of potential future shortages; and
- ◆ the modification and extension of the Interim Surplus Guidelines (66 Fed. Reg. 7772, Jan 25, 2001) (ISG) through 2026.

III. Background

The Secretary, acting through Reclamation, is responsible for water management throughout the western United States. Reclamation's authority is limited throughout the west by the limiting provisions of Reclamation law, beginning with the Reclamation Act of 1902.

The Secretary also has a broader and unique legal role as he manages the lower Colorado River system in accordance with federal law, including the Boulder Canyon Project Act of 1928, the 1963 Decision of the U.S. Supreme Court in *Arizona v. California*, the 2006 Consolidated Decree of the U.S. Supreme Court in *Arizona v. California* (Consolidated Decree), the Colorado River Basin Project Act of 1968 (CRBPA), the LROC, and the Grand Canyon Protection Act of 1992, and other applicable provisions of federal law. Within this legal framework, the Secretary makes annual determinations regarding the availability of water from Lake Mead by considering various factors, including the amount of water in system storage and

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predictions for natural runoff. The CRBPA directed the Secretary to propose and adopt criteria: “In order to comply with and carry out the provisions of the Colorado River Compact, the Upper Colorado River Basin Compact, and the Mexican Water Treaty, ... for the coordinated long-range operation of the reservoir constructed and operated under the authority of the Colorado River Storage Project Act, the Boulder Canyon Project Act, and the Boulder Canyon Project Adjustment Act.”

Pursuant to the CRBPA, the narrative provisions of LROC are utilized by the Secretary, on an annual basis, to make determinations with respect to the projected plan of operations of the storage reservoirs in the Basin. The AOP is prepared by Reclamation, acting on behalf of the Secretary, in consultation with representatives of the Basin States and other parties, as required by federal law. In the AOP, with respect to operations of Hoover Dam, the Secretary is required to determine when Normal, Surplus, or Shortage conditions occur in the lower Colorado River, based on various factors including storage and hydrologic conditions in the Basin.

As described in the Final EIS:

- ◆ A “Normal Condition” exists when the Secretary determines that sufficient mainstream water is available to satisfy 7.5 million acre-feet (maf) of annual consumptive use in the Lower Division states (Arizona, California, and Nevada). If a state will not use all of its apportioned water for the year, the Secretary may allow other states of the Lower Division to use the unused apportionment, provided that the use is authorized by a water delivery contract with the Secretary.
- ◆ A “Surplus Condition” exists when the Secretary determines that sufficient mainstream water is available for release to satisfy consumptive use in the Lower Division states in excess of 7.5 maf annually. The water available for excess consumptive use is surplus and is distributed for use in Arizona, California, and Nevada pursuant to the terms and conditions provided in the ISG. The current provisions of the ISG are scheduled to terminate in 2016. In general terms, the ISG link the availability of surplus water to the elevation of Lake Mead. When Lake Mead is full and Reclamation is making flood control releases, surplus supplies are unlimited. As Lake Mead’s elevation drops, surplus water amounts are reduced, and ultimately eliminated. The ISG also link surplus availability to continued progress by California in reducing its agricultural use of water to benchmarks established in the ISG. If a state does not use all of its apportioned water for the year, the Secretary may allow other Lower Division states to use the unused apportionment, provided that the use is authorized by a water delivery contract with the Secretary.
- ◆ A “Shortage Condition” exists when the Secretary determines that insufficient mainstream water is available to satisfy 7.5 maf of annual consumptive use in the Lower Division states. To date, the Secretary has never made such a

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determination, as flow in the Colorado River has been sufficient to meet Normal or Surplus delivery amounts. When making a shortage determination, the Secretary must consult with various parties as set forth in the Consolidated Decree and consider all relevant factors as specified in the LROC, including 1944 Treaty obligations, the priorities set forth in the Consolidated Decree, and the reasonable consumptive use requirements of mainstream water users in the Lower Division states. If a state does not use all of its apportioned water for the year, the Secretary may allow other Lower Division states to use the unused apportionment, provided that the use is authorized by a water delivery contract with the Secretary.

As discussed above, during the period from 2000 to 2007, the Colorado River has experienced the worst drought conditions in approximately one hundred years of recorded history. This drought in the Basin has reduced Colorado River system storage, while demands for Colorado River water supplies have continued to increase. From October 1, 1999 through September 30, 2007, storage in Colorado River reservoirs fell from 55.8 maf (approximately 94 percent of capacity) to 32.1 maf (approximately 54 percent of capacity), and was as low as 29.7 maf (approximately 52 percent of capacity) in 2004. This drought was the first sustained drought experienced in the Basin at a time when all major storage facilities were in place, and when use by the Lower Division states met or exceeded the annual “normal” apportionment of 7.5 maf pursuant to Article II(B)(1) of the Consolidated Decree.

Currently, the Department does not have specific operational guidelines in place to address the operations of Lake Powell and Lake Mead during drought and low reservoir conditions. To date, storage of water and flows in the Colorado River have been sufficient so that it has not been necessary to reduce Lake Mead annual releases below 7.5 maf; that is, the Secretary has never reduced deliveries by declaring a “shortage” on the lower Colorado River. Without operational guidelines in place, however, water users in the Lower Division states who rely on Colorado River water are not currently able to identify particular reservoir conditions under which the Secretary would reduce the annual amount of water available for consumptive use from Lake Mead to the Lower Division states below 7.5 maf. Nor are these water users able to identify the frequency or magnitude of any potential future annual reductions in their water deliveries.

Accordingly, the Secretary, acting through Reclamation, proposes adoption of specific Colorado River Lower Basin shortage guidelines and coordinated reservoir management strategies to address operations of Lake Powell and Lake Mead, particularly under drought and low reservoir conditions. These Guidelines are found at Section XI of this ROD. This action is proposed in order to provide a greater degree of certainty to United States Colorado River water users and managers of the Basin by providing detailed, and objective guidelines for the operations of Lake Powell and Lake Mead, thereby allowing water users in the Lower Basin to know when, and by how much, water deliveries will be reduced in drought and other low reservoir conditions.

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The Secretary has also determined the desirability of developing additional operational guidelines that will provide for releases greater than or less than 8.23 maf from Lake Powell. To further enhance this coordinated reservoir approach, the Secretary has determined a need for guidelines that provide water users in the Lower Division states the opportunity to conserve and take delivery of water in and from Lake Mead for the purposes of enhancing existing water supplies, particularly under low reservoir conditions. In addition, the Secretary has determined the need to modify and extend the ISG to coincide with the duration of the proposed new Guidelines. This will provide an integrated approach for reservoir management and more predictability for future Lower Division water supplies.

IV. Alternatives Considered

The purpose of the proposed federal action is to:

- ◆ improve Reclamation's management of the Colorado River by considering trade-offs between the frequency and magnitude of reductions of water deliveries, and considering the effects on water storage in Lake Powell and Lake Mead, and on water supply, power production, recreation, and other environmental resources;
- ◆ provide mainstream United States users of Colorado River water, particularly those in the Lower Division states, a greater degree of predictability with respect to the amount of annual water deliveries in future years, particularly under drought and low reservoir conditions; and
- ◆ provide additional mechanisms for the storage and delivery of water supplies in Lake Mead to increase the flexibility of meeting water use needs from Lake Mead, particularly under drought and low reservoir conditions.

This proposed federal action considers four operational elements that collectively are designed to address the purpose and need for the proposed federal action. The interim Guidelines would be used by the Secretary to:

- ◆ determine those circumstances under which the Secretary would reduce the annual amount of water available for consumptive use from Lake Mead to the Colorado River Lower Division states below 7.5 maf (a "Shortage") pursuant to Article II(B)(3) of the Consolidated Decree;
- ◆ define the coordinated operation of Lake Powell and Lake Mead to provide improved operation of these two reservoirs, particularly under low reservoir conditions;
- ◆ allow for the storage and delivery, pursuant to applicable federal law, of conserved Colorado River system and non-system water in Lake Mead to

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increase the flexibility of meeting water use needs from Lake Mead, particularly under drought and low reservoir conditions; and

- ◆ determine those conditions under which the Secretary may declare the availability of surplus water for use within the Lower Division states. The proposed federal action would modify the substance of the existing ISG and the term of the ISG from 2016 through 2026.

Six alternatives are considered and analyzed in the Final EIS. The alternatives consist of a No Action Alternative and five action alternatives. The five action alternatives are: Basin States Alternative, Conservation Before Shortage Alternative, Water Supply Alternative, Reservoir Storage Alternative, and the Preferred Alternative. The action alternatives reflect input from Reclamation staff, the cooperating agencies, stakeholders, and other interested parties.

Reclamation received two written proposals for alternatives that met the purpose and need of the proposed federal action, one from the Basin States and another from a consortium of environmental non-governmental organizations (NGO). These proposals were used by Reclamation to formulate two of the alternatives considered and analyzed in the Final EIS (Basin States Alternative and Conservation Before Shortage Alternative). A third alternative (Water Supply Alternative) was developed by Reclamation, and a fourth alternative (Reservoir Storage Alternative) was developed by Reclamation in coordination with the NPS and Western. The No Action Alternative and the action alternatives analyzed in the Draft EIS were posted on Reclamation's project website (<http://www.usbr.gov/lc/region/programs/strategies.html>) on June 30, 2006.

A fifth alternative, the Preferred Alternative, was developed (and included in the Final EIS) after consideration of the comments received on the Draft EIS and further analysis. The Preferred Alternative was posted on Reclamation's project website on June 15, 2007 and is composed of operational elements from the action alternatives identified and analyzed in the Draft EIS.

The Preferred Alternative is the most reasonable and feasible alternative; all environmental effects of this alternative, as well as the No Action Alternative and the remaining four action alternatives have been fully analyzed in the Final EIS. The identified environmental effects of the Preferred Alternative are well within the range of anticipated effects of the alternatives presented in the Draft EIS and do not affect the environment in a manner not already considered in the Draft EIS.

Reclamation identified the Preferred Alternative and the Conservation Before Shortage Alternative as the environmentally preferred alternatives, as provided in 50 CFR 1505.2. The combination of the ICS mechanism and the coordinated operations between Lake Powell and Lake Mead maintains and enhances water supply and environmental benefits at both reservoirs. In addition, these alternatives strike an

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appropriate balance between the storage of water for future deliveries and the lack of disruption of near-term water deliveries.

Reclamation selected from among the four key operational elements disclosed in the Draft EIS to formulate the Preferred Alternative. Reclamation has determined that the four operational elements selected under this alternative best meet all aspects of the purpose and need of the proposed federal action.

A. No Action Alternative

The No Action Alternative represents a projection of future conditions that could occur during the life of the proposed federal action without an action alternative being implemented. It provides a baseline for comparison of each of the action alternatives.

Pursuant to LROC, the Secretary makes a number of determinations at the beginning of each operating year through the development and execution of the AOP, including the water supply available to users in the Lower Basin and the annual release from Lake Powell. However, the LROC currently does not include specific guidelines for such determinations. Furthermore, there is no actual operating experience under low reservoir conditions, i.e., there has never been a shortage determination in the Lower Basin. Therefore, in the absence of specific guidelines, the outcome of the annual determination in any particular year in the future cannot be precisely known. However, a reasonable representation of future conditions under the No Action Alternative is needed for comparison to each action alternative. The modeling assumptions used for this representation are consistent with the assumptions used in previous environmental compliance documents for the ISG, the Colorado River Water Delivery Agreement, and the Lower Colorado River Multi-Species Conservation Program (LCR MSCP). However, the assumptions used in the No Action Alternative are not intended to limit or predetermine these decisions in any future AOP determination.

B. Basin States Alternative

The Basin States Alternative was developed by the Basin States and proposes a coordinated operation of Lake Powell and Lake Mead that would minimize shortages in the Lower Basin and avoid risk of curtailments of Colorado River water use in the Upper Basin. This alternative includes shortages to conserve reservoir storage; coordinated operations of Lake Powell and Lake Mead determined by specified reservoir conditions; a mechanism for the creation, accounting, and delivery of conserved system and non-system water (ICS); and a modification and extension of the ISG through 2026.

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C. Conservation Before Shortage Alternative

The Conservation Before Shortage Alternative was developed by a consortium of environmental NGOs, and includes voluntary, compensated reductions (shortages) in water use to minimize involuntary shortages in the Lower Basin and to avoid risk of curtailments of Colorado River water use in the Upper Basin. This alternative includes voluntary shortages prior to involuntary shortages; coordinated operations of Lake Powell and Lake Mead determined by specified reservoir conditions; an expanded ICS mechanism for the creation, accounting, and delivery of conserved system and non-system water, including water for environmental uses; and modification and extension of the ISG through 2026. There are two aspects of the Conservation Before Shortage proposal that are unique to the Conservation Before Shortage Alternative: a funding mechanism for the voluntary conservation program, and a recommendation that a portion of the conserved water be used to benefit the environment. However, as noted in the Final EIS, the viability of the Conservation Before Shortage program funding proposal is not known at this time. The Department currently does not have the authority to implement all facets of this proposal and additional legislation would be necessary to gain such authority.

D. Water Supply Alternative

The Water Supply Alternative maximizes water deliveries at the expense of retaining water in storage in the reservoirs for future use. This alternative would reduce water deliveries only when insufficient water to meet entitlements is available in Lake Mead. When reservoir elevations are relatively low, Lake Powell and Lake Mead would share water (“balance contents”). This alternative does not include a mechanism for the creation, accounting, and delivery of conserved system and non-system water in Lake Mead. The existing ISG would be extended through 2026.

E. Reservoir Storage Alternative

The Reservoir Storage Alternative was developed in coordination with the cooperating agencies and other stakeholders, primarily Western and the NPS. This alternative would keep more water in storage in Lake Powell and Lake Mead by reducing water deliveries and by increasing shortages to retain more water in storage and thereby, benefit power and recreational interests. This alternative includes larger, more frequent shortages that serve to conserve reservoir storage; coordinated operations of Lake Powell and Lake Mead determined by specified reservoir conditions (more water would be held in Lake Powell than under the Basin States Alternative); and an expanded mechanism for the creation, accounting, and delivery of conserved system and non-system water in Lake Mead. The existing ISG would be terminated after 2007.

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F. Preferred Alternative

The Preferred Alternative incorporates operational elements identified in the Basin States and Conservation Before Shortage alternatives. This alternative includes shortages to conserve reservoir storage and a coordinated operation of Lake Powell and Lake Mead determined by specified reservoir conditions that would minimize shortages in the Lower Basin and avoid risk of curtailments of use in the Upper Basin; and also adopts the ICS mechanism for promoting water conservation in the Lower Basin. It is anticipated that the maximum cumulative amount of ICS would be 2.1 maf pursuant to Section XI.D. of this ROD; however, the potential effects of a maximum cumulative amount of ICS of up to 4.2 maf have been analyzed in the Final EIS. This alternative also includes modification and extension of the ISG through 2026.¹

V. Basis for Decision

In 2005, tensions among the Basin States brought the basin closer to multi-state and inter-basin litigation than perhaps any time since the adoption of the Compact. On May 2, 2005, in a decision of the Secretary, the Department outlined a number of fundamental considerations that would guide the NEPA process that concludes with the adoption of this ROD. These considerations include:

- ◆ concern regarding the impacts of drought throughout the Colorado River Basin;
- ◆ a recognition of the recent history of close and productive working relationships among the Basin States;
- ◆ a belief that discussions among the states could facilitate the development of additional tools to improve coordinated operation of Colorado River reservoirs;

¹ It is anticipated that elements of the decision adopted by this ROD will be implemented through a number of agreements. The following agreements are anticipated to be executed at or about the time of issuance of this ROD:

- Delivery Agreement between the United States and Imperial Irrigation District (IID)
- Delivery Agreement between the United States and The Metropolitan Water District of Southern California (MWD)
- Delivery Agreement between the United States, Southern Nevada Water Authority (SNWA) and the Colorado River Commission of Nevada (CRCN)
- Funding and Construction of the Lower Colorado River Drop 2 Storage Reservoir Project Agreement among the United States, SNWA, and CRCN
- Lower Colorado River Basin Intentionally Created Surplus Forbearance Agreement among the Arizona Department of Water Resources, the Southern Nevada Water Authority, CRCN, the Palo Verde Irrigation District (PVID), IID, Coachella Valley Water District (CVWD), MWD, and the City of Needles
- California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus among the PVID, IID, CVWD, MWD and the City of Needles

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- ◆ a preference that operational strategies not be developed in the AOP setting, which is used by the Department to annually implement operational strategies that are developed through separate, public processes;
- ◆ an intention to develop operational tools that would avoid unnecessary, protracted or destabilizing litigation; and
- ◆ a commitment to continue to consult with and work with all stakeholders in the Basin.

In light of the severity of the drought, the Department announced its intention to complete the development of drought and low-reservoir operational tools by December 2007, and to do so through an open, public process. In closing, the Secretary expressed the opinion that “all parties must work together to find creative solutions that will conserve reservoir storage and help to minimize the adverse effects of drought in the Colorado River Basin.”

The fundamental basis for this decision is that each of the above foundational considerations have been honored and achieved through the development of a consensus seven-state recommendation that has been incorporated, as appropriate, into the Preferred Alternative adopted herein today.

The Department selected the Preferred Alternative based on the Department’s determination that it best meets all aspects of the purpose and need for the federal action, including: the need to remain in place for the extended period of the interim Guidelines; the desirability of the alternative based on the facilitated consensus recommendation from the Basin States; the likely durability of the mechanisms adopted in the Preferred Alternative in light of the extraordinary efforts that the Basin States and water users have undertaken to develop implementing agreements that will facilitate the water management tools (shortage sharing, forbearance, and conservation efforts) identified in the Preferred Alternative; and the range of elements in the alternative that will enhance the Secretary’s ability to manage the Colorado River reservoirs in a manner that recognizes the inherent tradeoffs between water delivery and water storage.

Importantly for the long-term stable management of the Colorado River, adoption of this decision activates a legal agreement among the Basin States that contains a critically important provision: the Basin States have agreed to mandatory consultation provisions to address future controversies on the Colorado River through consultation and negotiation, as a requirement, before resorting to litigation. With respect to the various interests, positions and views of each of the seven Basin States, this provision adds an important new element to the modern evolution of the legal framework for the prudent management of the Colorado River.

In recent years, in a number of settings, and facing a broad range of water management challenges, the Department has highlighted the important role of the Basin States in the

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statutory framework for administration of Basin entitlements and the significance that a seven-state consensus represents. Multi-state consensus is a rare and unique achievement that should continue to be recognized and facilitated.

With respect to the information within the scope of the proposed action, Reclamation concluded that the Preferred Alternative is a reasonable alternative and fully analyzed the environmental effects of this alternative in the Final EIS. The identified environmental effects of the Preferred Alternative are well within the range of anticipated effects of the alternatives presented in the Draft EIS and do not affect the environment in a manner not already considered in the Draft EIS. Thus, based on all available information, this alternative is the most reasonable, feasible, implementable, and durable alternative.

Drought is not limited to the Southwest, nor are interstate tensions over water management. As a final basis for this decision, the Department believes that a model for interstate cooperation can be found in the elements of the Preferred Alternative adopted today.

VI. Public Response to the Final Environmental Impact Statement

Following the *Federal Register* Notice of Availability of the Final EIS on November 2, 2007, and as of 8:00 PM (EST), Tuesday, December 11, 2007, Reclamation received six comment letters on the Final EIS and the updated draft Interim Operational Guidelines for Lake Powell and Lake Mead posted November 16, 2007 on Reclamation's project website. After appropriate consideration, the Department concludes that the comments received do not identify or raise any significant issues that would require supplementing the Final EIS. The major issues noted in the comment letters are summarized below:

The Basin States submitted a letter expressing their appreciation to Reclamation and Department staff for their diligence in working with the Basin States and others in developing the draft Guidelines for Lake Powell and Lake Mead; and they further stated that the adoption of the Guidelines "represent a significant and historic milestone, reflecting the continuation of the consultative approach to river management between the federal government and affected states on the Colorado River."

The San Diego County Water Authority submitted a comment letter fully supporting the statements in the Basin States' letter to the Secretary on the Final EIS. The Authority also noted their concern that the proposed implementation of Guidelines, specifically ICS, should not inadvertently conflict with the implementation of certain terms of October 10, 2003 Allocation Agreement. The Department agrees that the creation, release, or delivery of ICS or the declaration of an ICS Surplus Condition in a calendar year shall not constitute a determination by the Secretary of the existence of surplus Colorado River water in that calendar year for the purposes of Section 9.2.2 of the Allocation Agreement Among the United States of America, The Metropolitan Water

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District of Southern California, Coachella Valley Water District, Imperial Irrigation District, San Diego County Water Authority, the La Jolla, Pala, Pauma, Rincon and San Pasqual Bands of Mission Indians, the San Luis Rey River Indian Water Authority, the City of Escondido and Vista Irrigation District, dated October 10, 2003. This understanding has also been expressly stated in the proposed Delivery Agreements for IID and MWD (Section V of this ROD).

The EPA submitted a comment letter noting it had no objections to the proposed project and some of the details of the Final EIS pertinent to their views. Further, EPA encouraged Reclamation to “play an active role in facilitating comprehensive water management among all water sectors in the Basin.” Reclamation intends to continue to pursue its mission in the 17 western states, and in particular on the Colorado River, to assist in meeting the increasing water demands of the West while protecting the environment and the public's investment in these structures. Reclamation places great emphasis on fulfilling its water delivery obligations, water conservation, water recycling and reuse, and developing partnerships with our customers, states, and Native American Tribes, and in finding ways to bring together the variety of interests to address the competing needs for our limited water resources.

The Colorado River Board of California submitted comments on behalf of its member agencies on the updated draft Guidelines. The majority of the comments were editorial and to the extent the individual comments improved the clarity of the Guidelines they were incorporated into the Guidelines found in Section XI of this ROD.

A comment letter dated November 12, 2007, was received from a single member of the public and noted his concern that the terms of the Biological Opinion (BO) should be met and that impacts due to climate change on “listed fish and birds” are addressed. FWS issued the BO on the Preferred Alternative described in this ROD on December 12, 2007. Reclamation has agreed to implement Conservation measures to benefit the listed species addressed in the BO and comply with the terms and conditions of the incidental take statement in the BO. Acknowledging the potential for impacts due to climate change and increased hydrologic variability, the Secretary proposes that the Guidelines be interim in duration and extend through 2026, providing the opportunity to gain valuable operating experience for the management of Lake Powell and Lake Mead, particularly for low reservoir conditions, and improve the basis for making additional future operational decisions, whether during the Interim Period (Section 8 of the Guidelines) or thereafter. In addition, the Preferred Alternative has been crafted to include operational elements that would respond if potential impacts of climate change and increased hydrologic variability are realized. In particular, the Preferred Alternative includes a coordinated operation element that allows for the adjustment of Lake Powell's release to respond to low reservoir storage conditions in Lake Powell or Lake Mead as described in Section 2.7 and Section 2.3 in the Final EIS. In addition, the Preferred Alternative will enhance conservation opportunities in the Lower Basin and the retention of water in Lake Mead through adoption of the ICS mechanism. Finally, the Preferred Alternative includes a shortage strategy at Lake Mead that would result in

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additional shortages being considered, after appropriate consultation, if Lake Mead elevations drop below 1,025 feet mean sea level (msl).

The Defenders of Wildlife submitted a comment letter dated December 11, 2007, on behalf of their organization, the National Wildlife Federation, the Pacific Institute, and the Sierra Club regarding the updated draft Guidelines. The comments are limited to information that was published in Appendix S of the Final EIS dated November 2, 2007. The letter offers a number of clarifying comments, raises concerns regarding the appropriate mechanisms for consultation between federal and non-federal parties, and raises detailed comments regarding the implementation of the ICS and Developed Shortage Supply (DSS) components of the Guidelines. Reclamation thoroughly reviewed the comments submitted and concluded that no changes to the Guidelines were necessary. With respect to the issues regarding consultation, Reclamation will continue to meet all legal obligations for appropriate consultation with non-federal parties and believes that the commitments for continued consultation with the Basin States can be implemented in a manner consistent with the provisions of applicable federal law. Moreover, Reclamation believes that some of the concerns identified in this comment letter have been addressed by Section 7.D of the updated draft Guidelines posted on December 10, 2007, which provides that the Lower Colorado Regional Director will establish procedures for the implementation of ICS and DSS after issuance of this ROD. Reclamation will continue to work closely with all stakeholders in the development of ICS and DSS procedures and in the implementation and administration of the Guidelines.

VII. Refinement of Operational Guidelines for the Preferred Alternative in Response to Public Comments

Hydrologic modeling of the Colorado River system was used to determine the potential hydrologic effects of each of the alternatives and also provided the basis for analyzing the potential effects on other environmental resources (such as recreation, biology, and energy, etc.). Nearly all modeling assumptions were common to each alternative; only the assumptions specific to each alternative were different. This approach allowed a relative comparison of the potential effects of each alternative compared to the No Action Alternative and lead to the identification of the Preferred Alternative.

Historically, the determination of the annual release volume for Lake Powell could change on a monthly basis throughout the water year. This approach afforded great flexibility to respond to changing monthly runoff forecasts yet was practical to implement since there were effectively only two operational tiers (a minimum objective release of 8.23 maf per year or releases greater due to equalization or spill avoidance). The annual release volume for Lake Mead, however, was essentially determined on an annual basis primarily to provide a greater degree of certainty to water users with respect to the water supply in the Lower Basin. The modeled operation of Lake Powell and Lake Mead for all alternatives in the Final EIS was consistent with this past operational experience and provided a valid basis for comparison.

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However, given the more complicated proposed operation for Lake Powell under all of the action alternatives, Reclamation conducted additional investigations and subsequently refined the operational guidelines to include a combined monthly/annual methodology to determine the annual release volume for Lake Powell. This methodology consists of a January 1 determination of the release volume with appropriate April adjustments to those volumes, and providing the necessary flexibility to respond to changing inflow forecasts while ensuring that the operation does not result in excessive changes in monthly releases from Lake Powell.

In addition, comments were also received in both written and oral form from representatives of the Basin States with respect to the modeling assumptions used for the Basin States Alternative and the Preferred Alternative, reflected in Appendix S of the Final EIS. Specifically, the comments were in regard to the coordinated operation of Lake Powell and Lake Mead when Lake Powell is relatively high and operating near or in the equalization tier. A concern was identified where the proposed operation might not respond effectively when Lake Powell is relatively high, Lake Mead is relatively low, and a reasonably high inflow forecast occurs. Reclamation conducted additional investigations to identify approaches to ensure some additional water is released from Lake Powell when this situation arises.

Reclamation refined the proposed operational guidelines to incorporate these changes (contained in Section 6, 7, and 8 of the Guidelines) and published those refinements on the project website on November 16, 2007. An evaluation concluded that these refinements to the proposed Guidelines would not result in substantial changes with regard to the environmental effects and fall within the impacts already analyzed in the Final EIS.

VIII. Environmental Impacts and Implementation of Environmental Commitments

Hydrologic modeling of the Colorado River system was conducted to determine the potential hydrologic effects of the alternatives. Modeling provided projections of potential future Colorado River system conditions (i.e., reservoir elevations, reservoir releases, river flows) for comparison of those conditions under the No Action Alternative to conditions under each action alternative. Due to the uncertainty with regard to future inflows into the system, multiple simulations were performed in order to quantify the uncertainties of future conditions and as such, the modeling results are typically expressed in probabilistic terms.

Hydrologic modeling also provided the basis for the analysis of the potential effects of each alternative on other environmental resources. The Final EIS evaluated 14 resource areas: hydrologic resources (including reservoir storage and releases, groundwater, and water deliveries), water quality, air quality, visual resources, biological resources (including vegetation and wildlife and special status species), cultural resources, Indian trust assets, electrical power resources, recreation (including shoreline facilities, boating

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and navigation, and sport fish populations), transportation, socioeconomics (including employment, income and tax revenue, municipal and industrial water users, and recreation economics), environmental justice, indirect effects of the ICS mechanism, and climate change considerations. The potential effects to specific resources were identified and analyzed for each action alternative and compared to the potential effects to that resource under the No Action Alternative. These comparisons are typically expressed in terms of the relative differences in probabilities between the No Action Alternative and the action alternatives.

Based on the analyses in the EIS, Reclamation determined that specific measures to avoid or mitigate environmental harm were not required, with the exception of conservation measures for listed species as noted below. For other resource areas, the impacts of the Preferred Alternative were well within the range of the alternatives considered, and generally improved conditions compared to the No Action Alternative. For a few resource areas, the Preferred Alternative resulted in minor negative impacts compared to the No Action Alternative, and measures to avoid such impacts were determined to be unnecessary or not feasible.

A. Lower Colorado River Multi-Species Conservation Plan

It is important to note that Reclamation is already undertaking significant environmental mitigation measures on the Colorado River, including the LCR MSCP from Lake Mead to the Southerly International Boundary (SIB) with Mexico, and implementation of activities pursuant to the 1996 Glen Canyon Dam ROD for the reach of the Colorado River from Glen Canyon Dam to Lake Mead.

The LCR MSCP is a 50-year cooperative effort between federal and non-federal entities, approved by the Secretary in April 2005. This program was developed to address potential effects to listed and other selected special status species (covered species) from identified ongoing and future anticipated federal discretionary actions and non-federal activities on the lower Colorado River (covered actions). The development and implementation of shortage criteria on the lower Colorado River was one of the federal covered actions (MSCP Biological Assessment Section 2.2.2.1) included in the LCR MSCP and covered under the LCR MSCP BO (FWS 2005). The LCR MSCP BO provides Endangered Species Act (ESA) compliance for the effects of covered actions for a reduction of Lake Mead reservoir elevations to 950 feet msl and flow reductions of up to 0.845 maf from Hoover Dam to Davis Dam, 0.860 maf from Davis Dam to Parker Dam, and 1.574 maf from Parker Dam to Imperial Dam. The LCR MSCP identified, and it is mitigating for, impacts to the covered species and their habitats from the flow reduction conditions described above. These impacts included the potential loss of up to:

- ◆ 2,008 acres of cottonwood-willow habitats;
- ◆ 133 acres of marsh habitat; and

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- ◆ 399 acres of backwater habitat.

To address these impacts, the LCR MSCP will:

- ◆ restore 5,940 acres of cottonwood-willow habitat;
- ◆ restore 512 acres of marsh habitat;
- ◆ restore 360 acres of backwater habitat;
- ◆ stock 660,000 razorback sucker over the term of the LCR MSCP; and
- ◆ stock 620,000 bonytail over the term of the LCR MSCP.

In addition, these habitats will be actively managed to provide habitat values greater than those of the impacted habitats. While the LCR MSCP is geared toward special status species, it is important to understand that all species that use the habitats impacted by the LCR MSCP covered activities benefit by the conservation actions currently being carried out under the LCR MSCP.

Reclamation has reviewed the effects of the Preferred Alternative in this Final EIS and has determined that all potential effects to listed species and their habitats along the Colorado River from the full pool elevation of Lake Mead to the SIB are covered by the LCR MSCP. FWS has concurred with Reclamation's determination in a letter dated November 28, 2007.

B. Glen Canyon Dam Adaptive Management Program

The 1996 Glen Canyon Dam ROD describes detailed criteria and operating plans for Glen Canyon Dam operations and includes other management actions to accomplish this objective; among these are the Glen Canyon Dam Adaptive Management Program (AMP). The AMP provides a process for assessing the effects of Glen Canyon Dam operations on downstream resources and project benefits. The results of that assessment are used to develop recommendations for modifying Glen Canyon Dam operations and other resource management actions. This is accomplished through the Adaptive Management Work Group (AMWG), a federal advisory committee. The AMWG consists of stakeholders that include federal and state agencies, representatives of the Basin States, Indian tribes, hydroelectric power customers, environmental and conservation organizations, and recreational and other interest groups.

C. Endangered Species Act Compliance

In compliance with the ESA, Reclamation submitted a Biological Assessment (BA) to FWS on September 10, 2007 and requested formal consultation on the Preferred

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Alternative. Reclamation divided the analysis of potential effects on listed species into three geographic areas: Lake Powell to the upper end of Lake Mead, Lake Mead to the SIB with Mexico, and potential interdependent/interrelated effects on the Virgin and Muddy Rivers in southern Nevada. Reclamation determined the effects of the Preferred Alternative within the geographic area of the MSCP (Lake Mead to SIB with Mexico) were covered by the earlier consultation on LCR MSCP, and requested FWS' concurrence on this determination by memo dated October 26, 2007. FWS concurred with this determination by memo dated November 28, 2007. For the remainder of the action area, Reclamation determined the Preferred Alternative may affect, and is likely to adversely affect the southwestern willow flycatcher, humpback chub, and Kanab ambersnail, and that the Preferred Alternative may affect, but would not be likely to adversely affect seven other species.

FWS issued its BO for the Preferred Alternative by memo dated December 12, 2007. The BO concurred with Reclamation's "not likely to adversely affect" findings for the seven species addressed in the BA, and found that the adverse effects to southwestern willow flycatcher, humpback chub, and Kanab ambersnail would not jeopardize the continued existence of those species. Reclamation has included the following conservation measures for listed species in the action area as part of its proposed action:

- ◆ Nonnative Fish Control – In coordination with other Department of the Interior AMP participants and through the AMP, Reclamation will continue efforts to control both cold- and warm-water nonnative fish species in the mainstem of Marble and Grand canyons, including determining and implementing levels of nonnative fish control as necessary. Control of these species using mechanical removal and other methods will help to reduce this threat.
- ◆ Humpback Chub Refuge – Reclamation will assist FWS in development and funding of a broodstock management plan and creation and maintenance of a humpback chub refuge population at a federal hatchery or other appropriate facility by providing expedited advancement of \$200,000 in funding to the FWS during calendar year 2008; this amount shall be funded from, and within, the amount identified in the 2005 LCR MSCP BO. Creation of a humpback chub refuge will reduce or eliminate the potential for a catastrophic loss of the Grand Canyon population of humpback chub by providing a permanent source of genetically representative stock for repatriating the species
- ◆ Genetic Biocontrol Symposium – Reclamation will transfer up to \$20,000 in fiscal year 2008 to FWS to help fund an international symposium on the use and development of genetic biocontrol of nonnative invasive aquatic species which is tentatively scheduled for January 2009. Although only in its

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infancy, genetic biocontrol of nonnative species is attracting worldwide attention as a potential method of controlling aquatic invasive species. Helping fund an effort to bring researchers together will further awareness of this potential method of control and help mobilize efforts for its research and development.

- ◆ Sediment Research – In coordination with other Department of the Interior AMP participants and through the AMP, Reclamation will monitor the effect of sediment transport on humpback chub habitat and will work with the Grand Canyon Monitoring and Research Center to develop and implement a scientific monitoring plan acceptable to FWS. Although the effects of dam operation-related changes in sediment transport on humpback chub habitat are not well understood, humpback chub are known to utilize backwaters and other habitat features that require fine sediment for their formation and maintenance. Additional research will help clarify this relationship
- ◆ Parasite Monitoring – In coordination with other Department of the Interior AMP participants and through the AMP, Reclamation will continue to support research on the effects of Asian tapeworm on humpback chub and potential methods to control this parasite. Continuing research will help better understand the degree of this threat and the potential for management actions to minimize it.
- ◆ Monitoring and Research – Through the AMP, Reclamation will continue to monitor Kanab ambersnail and its habitat in Grand Canyon and the effect of dam releases on the species, and Reclamation will also continue to assist FWS in funding morphometric and genetic research to better determine the taxonomic status of the subspecies.
- ◆ Kanab Ambersnail Monitoring and Research –Through the AMP, Reclamation will continue to monitor Kanab ambersnail and its habitat in Grand Canyon and the effect of dam releases on the species, and Reclamation will also continue to assist FWS in funding morphometric and genetic research to better determine the taxonomic status of the subspecies.
- ◆ Southwestern Willow Flycatcher Monitoring and Research – Through the AMP, Reclamation will continue to monitor southwestern willow flycatcher and its habitat and the effect of dam releases on the species throughout Grand Canyon and report findings to FWS, and will work with NPS and other AMP participants to identify actions to conserve the flycatcher.

IX. Implementing the Decision

A. Setting

Against the backdrop of prolonged drought, in 2005, with reservoir elevations dropping rapidly, the Department was faced with the challenge of making operational decisions regarding modified operations of Glen Canyon Dam and Hoover Dam. One of the challenges that the Department faced was that there were not detailed, objective guidelines to determine how the operation of the two reservoirs would be modified in drought and other low-reservoir conditions.

After receiving conflicting recommendations from representatives of the four Upper Division and the three Lower Division states, the Secretary issued a decision on May 2, 2005, charging Reclamation with the development of operational tools that can continue to assure productive use of the Colorado River into the future, while avoiding unnecessary, protracted or destabilizing litigation.

More than two years later, the drought conditions have continued and the need for detailed operational guidelines is even more necessary today as compared with mid-2005. Reclamation has conducted an extensive public process, seeking input from state, tribal and local governments, along with input from members of environmental organizations and members of the general public. These Guidelines represent the Department's determination as to the most appropriate set of guidelines to adopt at this stage of the ongoing drought.

B. Scope of Guidelines

These Guidelines are intended to be applied each year during the Interim Period with respect to the operation and management of the waters of the Colorado River stored in Lake Powell and Lake Mead. The relevant sections of these Guidelines address the following:

- ◆ determine those circumstances under which the Secretary would reduce the annual amount of water available for consumptive use from Lake Mead to the Colorado River Lower Division states below 7.5 maf (a "Shortage") pursuant to Article II(B)(3) of the Consolidated Decree;
- ◆ define the coordinated operation of Lake Powell and Lake Mead to provide improved operation of these two reservoirs, particularly under low reservoir conditions;
- ◆ allow for the storage and delivery, pursuant to applicable federal law, of conserved Colorado River system and non-system water in Lake Mead to increase the flexibility of meeting water use needs from Lake Mead, particularly under drought and low reservoir conditions; and,

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- ◆ determine those conditions under which the Secretary may declare the availability of surplus water for use within the Lower Division states. The proposed federal action would modify the substance of the existing ISG and would change the term of the ISG from 2016 through 2026.

X. Operational Setting

A. Criteria for the Coordinated Long-Range Operation of Colorado River Reservoirs

Section 602 of the CRBPA required the Secretary to propose and adopt criteria for the coordinated long-range operation of the reservoirs constructed and operated under the authority of the Colorado River Storage Project Act of 1956, the Boulder Canyon Project Act of 1928 (BCPA), and the Boulder Canyon Project Adjustment Act. The Secretary adopted such “Long-Range Operating Criteria” (LROC) in 1970 and has been operating the Colorado River consistent with the LROC since 1970. In 2005, the Secretary approved minor changes to the text of the LROC. (70 Fed. Reg. 15873, Mar. 29, 2005). The Secretary identified the bases for the limited changes as: (1) specific change in federal law applicable to the Operating Criteria, (2) language in the current text of the Operating Criteria that was outdated, and (3) specific modifications to Article IV(b) of the Operating Criteria that reflect actual operating experience.

It is the Department’s decision that these Guidelines implement the LROC on an annual basis through the Interim Period and that the operation of the relevant Colorado River reservoirs be documented in each year’s AOP (Subsection C, below). See also Section 7 of the Guidelines for further description of the relationship between the LROC and these Guidelines.

B. Interim Surplus Guidelines

Beginning in 1999, the Secretary determined that there was a need for detailed, objective guidelines to assist in the determination of availability of water in excess of 7.5 maf per year to water users in the three Lower Division states of Arizona, California, and Nevada. One of the important issues facing the Department at that time was the question of whether to modify the LROC to address determination of a Surplus Condition or whether to adopt guidelines that would implement the LROC with detailed provisions.

At the time, the Department sought public input on the concept of modifying Article III(3)(b) of the LROC during the process that led to adoption of the ISG. See 64 Fed. Reg. 27010 (May 18, 1999). After reviewing the public comments received, the Department announced its intention to adopt “interim implementing criteria pursuant to Article III(3) of the Long-Range Operating Criteria” rather than modifying the actual text of the LROC. See 64 Fed. Reg. 68373 (December 7,

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1999). This approach was carried through and set forth in the ROD for the ISG adopted by the Secretary. See 66 Fed. Reg. 7772, 7780 at Section XI(5) (“These Guidelines, which shall implement and be used for determinations made pursuant to Article III(3)(b) of the [Operating Criteria] ... are hereby adopted ...”). See also discussion at 70 Fed. Reg. 15878 (March 29, 2005) (review of LROC).

It is the Department’s decision in adopting these Guidelines to continue the approach initially adopted in the ISG, and accordingly is not modifying the LROC at this time. Instead, the determinations made under these interim Guidelines will implement the relevant provisions of Article II (Lake Powell) and Article III (Lake Mead) during the Interim Period, as defined in Section 7, herein.

C. Annual Operating Plan for Colorado River Reservoirs

Section 602(b) of the CRBPA of 1968 requires that the Secretary transmit to the Congress and to the Governors of the Basin States, by January 1st of each year, a report describing the actual operation under the LROC for the preceding compact water year and the projected operation for the current year. This report is commonly referred to as the “Annual Operating Plan” or the “AOP.”

In 1992, in the Grand Canyon Protection Act, Congress required that, in preparing the 602(b) AOP, the Secretary shall consult with the Governors of the Basin States and with the general public, including representatives of academic and scientific communities, environmental organizations, the recreation industry; and contractors for the purpose of federal power produced at Glen Canyon Dam.

Each year the Secretary implements the provisions of the 1968 and 1992 statutes regarding the projected operation of Colorado River reservoirs and stakeholder consultation through the Colorado River Management Work Group. This process involves appropriate consultation prior to finalization of the proposed AOP. The AOP is used to memorialize operational decisions that are made pursuant to individual federal actions (e.g., ISG, 1996 Glen Canyon Dam ROD, this ROD). Thus, the AOP serves as a single, integrated reference document required by section 602(b) of the CRBPA of 1968 regarding past and anticipated operations.

It is the Department’s decision that these Guidelines be implemented on an annual basis through the Interim Period and documented in each year’s AOP. This ROD addresses annual volumes of releases from Glen Canyon Dam and Hoover Dam. Accordingly, this ROD does not modify the authority of the Secretary to determine monthly, daily, hourly, or instantaneous releases from Glen Canyon Dam and Hoover Dam. See Section 7 of the Guidelines for further description of the relationship between the AOP and these Guidelines.

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XI. Conditions of Implementation

A. Forbearance

1. Role of Forbearance Agreements within the Context of the Law of the River and Relationship to Intentionally Created Surplus (ICS)

For the purposes of these Guidelines, the term “forbearance agreements” refers to agreements that a party who has a right to surplus Colorado River water could enter into that would provide that party’s agreement to forgo (or not exercise) its right to surplus Colorado River water. In any such agreements, the party agrees to “forbear” or refrain from exercising its right to surplus Colorado River water under the specified terms and conditions of the applicable agreement. Through such agreements, increased flexibility of Colorado River water management can be achieved – resulting in greater conservation of water than would otherwise be accomplished.

In Years in which the Secretary determines that sufficient Mainstream water is available for delivery to satisfy annual consumptive use in the Lower Division states in excess of 7.5 maf, Article II(B)(2) of the Consolidated Decree directs the Secretary to apportion such surplus Mainstream water 50% for use in California, 46% for use in Arizona, and 4% for use in Nevada. The Boulder Canyon Project Act and Articles II(B)(2) and II(B)(6) of the Consolidated Decree, taken together, authorize the Secretary to apportion surplus water and to deliver one Lower Division state’s unused apportionment for use in another Lower Division state. Pursuant to such authority and for the purpose of increasing the efficiency, flexibility, and certainty of Colorado River management and thereby helping satisfy the current and projected regional water demands, the Secretary determined that it is prudent and desirable to promulgate guidelines to establish a procedural framework for facilitating the creation and delivery of ICS within the Lower Basin.

In the absence of forbearance, surplus water is apportioned for use in the Lower Division states according to the specific percentages provided in Article II(B)(2) of the Consolidated Decree discussed above. In order to allow for management flexibility, the seven Colorado River Basin States have recommended an operational program for the creation and delivery of ICS. In furtherance of this recommendation, numerous major water users within the Lower Basin have identified their willingness, under specified circumstances, to participate in such an operational program. These parties have submitted a draft “Forbearance Agreement,” as preliminarily approved by the parties, as part of a package of documents (Appendix J) submitted for consideration by the Secretary as a necessary element to enable implementation of the operations contemplated by the Basin States Alternative. The Secretary has developed a Preferred

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Alternative based on this information, as well as other information submitted during the NEPA process.

The parties to the Forbearance Agreement have indicated that they intend that the Agreement provide the appropriate legal mechanism to achieve successful implementation of this element of the Preferred Alternative. The parties have indicated that among the conditions on their forbearance, they will forbear only with respect to a specified ICS volume and only to ICS created by projects described in exhibits attached to the Forbearance Agreement or added thereto by written consent of all parties. Given the voluntary nature of the forbearance concept, it is appropriate for the parties to clearly identify the limited conditions upon which their forbearance is granted.

Through adoption and implementation of these Guidelines, the Secretary will only approve the creation, delivery and use of ICS in a manner that is fully consistent with the provisions of the Consolidated Decree, including Articles II(B)(2) and II(B)(6) therein. The Secretary will require forbearance by the State of Arizona, the Palo Verde Irrigation District, the Imperial Irrigation District, the Coachella Valley Water District, The Metropolitan Water District of Southern California, the City of Needles, and other California entities as appropriate, the Southern Nevada Water Authority, and the Colorado River Commission of Nevada for implementation of this element of these Guidelines (regarding ICS). If, in the opinion of the Secretary, the State of Arizona or the Palo Verde Irrigation District, the Imperial Irrigation District, the Coachella Valley Water District, The Metropolitan Water District of Southern California, the City of Needles, or other California entities as appropriate, the Southern Nevada Water Authority, or the Colorado River Commission of Nevada, unreasonably withhold forbearance, the Secretary may, after consultation with the Basin States, modify these Guidelines. Moreover, the Secretary will ensure that implementation of the ICS mechanism does not infringe on the rights of any third party who is a Contractor and who is not a party to the Forbearance Agreement.

2. Monitoring Implementation

Under these Guidelines, Colorado River water will continue to be allocated for use among the Lower Division states in a manner consistent with the provisions of the Consolidated Decree. It is expected that Lower Division states and individual Contractors for Colorado River water have or will adopt arrangements that will affect utilization of Colorado River water during the Interim Period. It is expected that water orders from Colorado River Contractors will be submitted to reflect forbearance arrangements by Lower Division states and individual Contractors. The Secretary will deliver Colorado River water to Contractors in a manner consistent with these arrangements, provided that any such arrangements are consistent with the BCPA, the

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Consolidated Decree and do not infringe on the rights of third parties. Surplus water will only be delivered to entities with contracts for surplus water. ICS will be delivered pursuant to Section 3.C. of these Guidelines and a Delivery Agreement.

B. Delivery Agreement

Article II(B)(5) of the Consolidated Decree in *Arizona v. California* states that mainstream Colorado River water shall be released or delivered to water users in Arizona, California, and Nevada “only pursuant to valid contracts therefore made with such users by the Secretary of the Interior, pursuant to Section 5 of the Boulder Canyon Project Act or any other applicable federal statute.” Section 5 of the Boulder Canyon Project Act authorizes the Secretary to enter into such contracts.

Numerous Contractors in Arizona, California, and Nevada now hold contracts which entitle them to the delivery of Colorado River water under the circumstances and in the priorities specified in the individual contracts. Contracts entered into prior to the adoption of these Guidelines do not, however, expressly address circumstances in which ICS or DSS might be created or delivered.

To ensure the requirements of Section 5 of the Boulder Canyon Project Act and Article II(B)(5) of the Consolidated Decree are complied with, and to reduce the possibility of ambiguity, the Secretary anticipates entering into delivery contracts with any person or persons intending to create ICS or DSS. Such contracts are expected to address the requirements set forth in the Guidelines for the approval of ICS or DSS plans, the certification and verification of the ICS or DSS created under the plans, the ordering and delivery of ICS or DSS, the accounting for ICS or DSS in the annual report filed with the U.S. Supreme Court in accordance with Article V of the Consolidated Decree, and such other matters as may bear on the delivery of the ICS or DSS, as for example the point of delivery and place of use, if not already provided for under existing contracts.

C. Mexico

The United States delivers an annual allotment of Colorado River water to Mexico pursuant to the treaty between the United States of America and Mexico relating to the utilization of waters of the Colorado and Tijuana Rivers and of the Rio Grande, signed February 3, 1944, and its supplementary protocol signed November 14, 1944. In adopting these Guidelines the Department of the Interior is making a final agency action regarding the operation of Lake Powell and Lake Mead, and the delivery of water to water users in the United States, in response to the worst drought in the Basin in over a century of recordkeeping.

Prior to adopting these Guidelines, the Department provided information on the proposed action to the USIBWC, and met with representatives of the Mexican Section of the IBWC and the Mexican Government. The Department has

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considered the information provided by the USIBWC prior to adopting these Guidelines, including information representing the views of the Government of Mexico. The USIBWC has advised that the Department may proceed with planning and implementation activities for these Guidelines with the understanding that these Guidelines are not intended to constitute an interpretation or application of the 1944 Treaty or to represent current United States policy or a determination of future United States policy regarding deliveries to Mexico.

The Department notes the intention of the Governments of the United States and Mexico, memorialized in a Joint Statement issued August 13, 2007, to cooperate and collaborate regarding issues related to the lower portion of the Colorado River under the auspices of the IBWC.

D. Intentionally Created Surplus

1. Findings

ICS may be created through projects that create water system efficiency or extraordinary conservation or tributary conservation or the importation of non-Colorado River System water into the Mainstream. ICS is consistent with the concept that entities may take actions to augment storage of water in the lower Colorado River Basin. The ICS shall be delivered to the Contractor that created it pursuant to both Articles II(B)(2) and II(B)(6) of the Consolidated Decree and Forbearance Agreements. Implementation of these Guidelines for ICS is conditioned upon execution of Forbearance Agreements and Delivery Agreements as further provided for in these Guidelines.

2. Purposes

The primary purposes of ICS are to: (a) encourage the efficient use and management of Colorado River water; and to increase the water supply in Colorado River System reservoirs, through the creation, delivery and use of ICS; (b) help minimize or avoid shortages to water users in the Lower Basin; (c) benefit storage of water in both Lake Powell and Lake Mead; (d) increase the surface elevations of both Lake Powell and Lake Mead to higher levels than would have otherwise occurred; and (f) assure any Contractor that invests in conservation or augmentation to create ICS that no other Contractor will claim the ICS created by the Contractor pursuant to an approved plan by the Secretary.

3. Quantities

The maximum quantities of Extraordinary Conservation ICS that may be accumulated in all ICS Accounts, at any time, upon the effective date of these Guidelines is limited to the amounts provided in Section 3.B.5. of these Guidelines. The maximum quantities of Extraordinary Conservation ICS that

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may be created and/or delivered in any given Year are also limited to the amounts provided in Sections 3.B.4. and 3.C.4., respectively. As described in the Final EIS, Reclamation has analyzed ICS amounts in excess of the amounts approved by this Record of Decision and provided in these Guidelines. Any decision by the Secretary to increase the amounts in excess of the amounts provided in these Guidelines would be based on actual operating experience and would require modification of these Guidelines after consultation with the Basin States.

E. Relationship with Existing Law

These Guidelines are not intended to, and do not:

1. guarantee or assure any water user a firm supply for any specified period;
2. change or expand existing authorities under applicable federal law, except as specifically provided herein with respect to determinations under the Long-Range Operating Criteria and administration of water supplies during the effective period of these Guidelines;
3. address intrastate storage or intrastate distribution of water, except as may be specifically provided by Lower Division states and individual Contractors for Colorado River water who may adopt arrangements that will affect utilization of Colorado River water during the effective period of these Guidelines;
4. change the apportionments made for use within individual States, or in any way impair or impede the right of the Upper Basin to consumptively use water available to that Basin under the Colorado River Compact;
5. affect any obligation of any Upper Division state under the Colorado River Compact;
6. affect any right of any State or of the United States under Sec. 14 of the Colorado River Storage Project Act of 1956 (70 Stat. 105); Sec. 601(c) of the Colorado River Basin Project Act of 1968 (82 Stat. 885); the California Limitation Act (Act of March 4, 1929; Ch. 16, 48th Sess.); or any other provision of applicable federal law;
7. affect the rights of any holder of present perfected rights or reserved rights, which rights shall be satisfied within the apportionment of the State within which the use is made, and in the Lower Basin, in accordance with the Consolidated Decree; or
8. constitute an interpretation or application of the 1944 Treaty between the United States and Mexico Relating to the Utilization of the Waters of the

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Colorado and Tijuana Rivers and of the Rio Grande (1944 Treaty) or to represent current United States policy or a determination of future United States policy regarding deliveries to Mexico. The United States will conduct all necessary and appropriate discussions regarding the proposed federal action and implementation of the 1944 Treaty with Mexico through the International Boundary and Water Commission (IBWC) in consultation with the Department of State.

F. Definitions

For purposes of these Guidelines, the following definitions apply:

1. “24-Month Study” refers to the operational study that reflects the current Annual Operating Plan that is updated each month by Reclamation to project future reservoir contents and releases. The projections are updated each month using the previous month’s reservoir contents and the latest inflow and water use forecasts. In these Guidelines, the term “projected on January 1” shall mean the projection of the January 1 reservoir contents provided by the 24-Month Study that is conducted in August of the previous Year.
2. “AOP” shall mean the Annual Operating Plan for the Colorado River System Reservoirs.
3. “Active Storage” shall mean the amount of water in reservoir storage, exclusive of bank storage, which can be released through the existing reservoir outlet works, consistent with the Colorado River Basin Project Act of 1968 (82 Stat. 885).
4. “BCPA” shall mean the Boulder Canyon Project Act of 1928 (28 Stat. 1057).
5. “Basin States” shall mean the seven Colorado River Basin States of Arizona, California, Colorado, New Mexico, Nevada, Utah, and Wyoming.
6. “Certification Report” shall mean the written documentation provided by a Contractor that provides the Secretary with sufficient information to allow the Secretary to determine whether the quantity of ICS or DSS approved by the Secretary in an approved plan has been created and whether the creation was consistent with the approved plan.
7. “Colorado River System” shall have the same meaning as defined in the 1922 Colorado River Compact.
8. “Consolidated Decree” shall mean the Consolidated Decree entered by the United States Supreme Court in *Arizona v. California*, 547 U.S. 150 (2006).

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9. “Contractor” shall mean an entity holding an entitlement to Mainstream water under (a) the Consolidated Decree, (b) a water delivery contract with the United States through the Secretary, or (c) a reservation of water by the Secretary, whether the entitlement is obtained under (a), (b) or (c) before or after the adoption of these Guidelines.
10. “DSS Account” shall mean records established by the Secretary regarding DSS.
11. “Delivery Agreement” shall mean an agreement consistent with these Guidelines entered into between the Secretary of the Interior and one or more Contractors creating ICS.
12. “Developed Shortage Supply (“DSS”)” shall mean water available for use by a Contractor under the terms and conditions of a Delivery Agreement and Section 4 of these Guidelines in a Shortage Condition, under Article III(B)(3) of the Consolidated Decree.
13. “Direct Delivery Domestic Use” shall mean direct delivery of water to domestic end users or other municipal and industrial water providers within the Contractor’s area of normal service, including incidental regulation of Colorado River water supplies within the Year of operation but not including Off-stream Banking. For the Metropolitan Water District of Southern California (MWD), Direct Delivery Domestic Use shall include delivery of water to end users within its area of normal service, incidental regulation of Colorado River water supplies within the Year of operation, and Off-stream Banking only with water delivered through the Colorado River Aqueduct.
14. “Domestic Use” shall have the same meaning as defined in the 1922 Colorado River Compact.
15. “Forbearance Agreement” shall mean an agreement under which one or more Contractors agree to forbear a right to ICS, under a water delivery contract or the Consolidated Decree.
16. “ICS Account” shall mean records established by the Secretary regarding ICS.
17. “ICS Determination” shall mean a determination by the Secretary that ICS is available for delivery.
18. “Intentionally Created Surplus (“ICS”)” shall mean surplus Colorado River System water available for use under the terms and conditions of a Delivery Agreement, a Forbearance Agreement, and these Guidelines.

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- a. ICS created through extraordinary conservation, as provided for in Section 3.A.1., shall be referred to as “Extraordinary Conservation ICS.”
 - b. ICS created through tributary conservation, as provided for in Section 3.A.2., shall be referred to as “Tributary Conservation ICS.”
 - c. ICS created through system efficiency projects, as provided for in Section 3.A.3., shall be referred to as “System Efficiency ICS.”
 - d. ICS created through the importation of non-Colorado River System Water, as provided for in Section 3.A.4., shall be referred to as “Imported ICS.”
- 19. “Interim Period” shall mean the effective period as described in Section 8.
 - 20. “Long-Range Operating Criteria (“LROC”)” shall mean the Criteria for the Coordinated Long-Range Operation of Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of September 30, 1968 (Pub. L. No. 90-537), published at 35 Fed. Reg. 8951 (June 10, 1970), as amended March 21, 2005.
 - 21. “Lower Division states” shall mean the Colorado River Basin States of Arizona, California, and Nevada.
 - 22. “Mainstream” shall have the same meaning as defined in the Consolidated Decree.
 - 23. “Off-stream Banking” shall mean the diversion of Colorado River water to underground storage facilities for use in subsequent Years from the facility used by a Contractor diverting such water.
 - 24. “ROD” shall mean the Record of Decision issued by the Secretary for the Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead.
 - 25. “Upper Division states” shall mean the Colorado River Basin States of Colorado, New Mexico, Utah, and Wyoming.
 - 26. “Water Accounting Report” shall mean the annual *Colorado River Accounting and Water Use Report – Arizona, California, and Nevada* that includes, but is not limited to, the compilation of records in accordance with Article V of the Consolidated Decree.
 - 27. “Water Year” shall mean October 1 through September 30.

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28. “Year” shall mean calendar year.

G. Interim Guidelines for the Operation of Lake Powell and Lake Mead

These Guidelines shall include Sections XI.A., B., E., and F. above and this Section XI.G. These Guidelines which shall implement and be used for determinations made pursuant to the Long-Range Operating Criteria during the effective period identified in Section 8, are hereby adopted:

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Section 1. Allocation of Unused Basic Apportionment Water Under Article II(B)(6)

A. Introduction

Article II(B)(6) of the Consolidated Decree allows the Secretary to allocate water that is apportioned to one Lower Division state, but is for any reason unused in that State, to another Lower Division state. This determination is made for one Year only and no rights to recurrent use of the water accrue to the state that receives the allocated water.

B. Application to Unused Basic Apportionment

Before making a determination of a Surplus Condition under these Guidelines, the Secretary will determine the quantity of apportioned but unused water excluding ICS created in that Year from the basic apportionments under Article II(B)(6), and will allocate such water in the following order of priority:

1. Meet the Direct Delivery Domestic Use requirements of MWD and Southern Nevada Water Authority (SNWA), allocated as agreed by said agencies;
2. Meet the needs for Off-stream Banking activities for use in California by MWD and for use in Nevada by SNWA, allocated as agreed by said agencies; and
3. Meet the other needs for water in California in accordance with the California Seven-Party Agreement as supplemented by the Quantification Settlement Agreement.

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Section 2. Determination of Lake Mead Operation During the Interim Period

In the development of the AOP, the Secretary shall use the August 24-Month Study projections for the following January 1 system storage and reservoir water surface elevations to determine the Lake Mead operation for the following Calendar Year as described in this Section 2.

A. Normal Conditions

1. Lake Mead above elevation 1,075 feet and below elevation 1,145 feet

In Years when Lake Mead elevation is projected to be above 1,075 feet and below elevation 1,145 feet on January 1, the Secretary shall determine either a Normal Condition, or, under Section 2.B.5., an ICS Surplus Condition.

B. Surplus Conditions

1. Partial Domestic Surplus

[Adopted January 16, 2001; Deleted December 13, 2007]

2. Domestic Surplus

(Lake Mead at or above elevation 1,145 feet and below the elevation that triggers a Quantified Surplus (70R Strategy))

In years when Lake Mead content is projected to be at or above elevation 1,145 feet, but less than the amount which would initiate a Surplus under Section 2.B.3., Quantified Surplus, or Section 2.B.4., Flood Control Surplus, on January 1, the Secretary shall determine a Domestic Surplus Condition. The amount of such Surplus shall equal –

- a. From the effective date of these Guidelines through December 31, 2015 (through preparation of the 2016 AOP):
 - 1) For Direct Delivery Domestic Use by MWD, 1.250 maf reduced by the amount of basic apportionment available to MWD.
 - 2) For use by SNWA, the Direct Delivery Domestic Use within the SNWA service area in excess of the State of Nevada's basic apportionment.
 - 3) For use in Arizona, the Direct Delivery Domestic Use in excess of Arizona's basic apportionment.

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- b. From January 1, 2016 (for preparation of the 2017 AOP) through December 31, 2025 (through preparation of the 2026 AOP):
 - 1) For use by MWD, 250,000 af per Year in addition to the amount of California's basic apportionment available to MWD.
 - 2) For use by SNWA, 100,000 af per Year in addition to the amount of Nevada's basic apportionment available to SNWA.
 - 3) For use in Arizona, 100,000 af per Year in addition to the amount of Arizona's basic apportionment available to Arizona Contractors.

3. Quantified Surplus (70R Strategy)²

In years when the Secretary determines that water should be delivered for beneficial consumptive use to reduce the risk of potential reservoir spills based on the 70R Strategy the Secretary shall determine a Quantified Surplus Condition and allocate a Quantified Surplus sequentially as follows:

- a. Establish the volume of the Quantified Surplus. For the purpose of determining the existence, and establishing the volume, of Quantified Surplus, the Secretary shall not consider any volume of ICS as defined in these Guidelines.
- b. Allocate and distribute the Quantified Surplus 50 percent to California, 46 percent to Arizona, and 4 percent to Nevada, subject to c. through e. that follow.
- c. Distribute California's share first to meet basic apportionment demands and MWD's demands, and then to California Priorities 6 and 7 and other surplus contracts. Distribute Nevada's share first to meet basic apportionment demands and then to the remaining demands. Distribute Arizona's share to surplus demands in Arizona including Off-stream Banking and interstate banking demands. Nevada shall receive first priority for interstate banking in Arizona.
- d. Distribute any unused share of the Quantified Surplus in accordance with Section 1.
- e. Determine whether MWD, SNWA and Arizona have received the amount of water they would have received under Section 2.B.2., if a Quantified Surplus

²70R is a spill avoidance strategy that determines a surplus if the January 1 projected system storage space is less than the space required by the flood control criteria, assuming a natural inflow of 17.4 maf (the 70th percentile non-exceedence flow). See ISG Final EIS at Section 2.3.1.2.

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Condition had not been determined. If they have not, then determine and meet all demands provided for in Section 2.B.2.

4. Flood Control Surplus

In years in which the Secretary makes space-building or flood control releases³ pursuant to the 1984 Field Working Agreement between Reclamation and the Army Corps of Engineers (as may be amended), the Secretary shall determine a Flood Control Surplus for the remainder of that Year or the subsequent Year. In such years, releases will be made to satisfy all beneficial uses within the United States, including unlimited Off-stream Banking.

5. ICS Surplus

- a. In years in which Lake Mead's elevation is projected to be above elevation 1,075 feet on January 1, a Flood Control Surplus has not been determined, and delivery of ICS has been requested, the Secretary may determine an ICS Surplus Condition in lieu of a Normal Condition or in addition to other operating conditions that are based solely on the elevation of Lake Mead.
- b. In years in which a Quantified Surplus or a Domestic Surplus is available to a Contractor, the Secretary shall first deliver the Quantified Surplus or Domestic Surplus before delivering any requested ICS to that Contractor. If available Quantified Surplus or Domestic Surplus is insufficient to meet a Contractor's demands, the Secretary shall deliver ICS available in that Contractor's ICS Account at the request of the Contractor, subject to the provisions of Section 3.C.

C. Allocation of Colorado River Water and Forbearance and Reparation Arrangements

[Content of 2001 ISG Section 2.C., Allocation of Colorado River Water and Forbearance and Reparation Arrangements, is now found at III.A., as modified]

D. Shortage Conditions

1. Deliveries to the Lower Division States during Shortage Condition Years shall be implemented in the following manner:

³ Under current practice, surplus waters are made available to Mexico pursuant to the 1944 Treaty (when Mexico may schedule up to an additional 0.2 maf) when flood control releases are made. These Guidelines are not intended to affect that practice. Any issues relating to the implementation of the 1944 Treaty, including any potential changes in approach relating to surplus declarations under the 1944 Treaty, would be addressed with Mexico as appropriate through the USIBWC.

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- a. In years when Lake Mead content is projected to be at or below elevation 1,075 feet and at or above 1,050 feet on January 1, a quantity of 7.167 maf shall be apportioned for consumptive use in the Lower Division States of which 2.48 maf shall be apportioned for use in Arizona and 287,000 af shall be apportioned for use in Nevada in accordance with the Arizona-Nevada Shortage Sharing Agreement dated February 9, 2007, and 4.4 maf shall be apportioned for use in California.
 - b. In years when Lake Mead content is projected to be below elevation 1,050 feet and at or above 1,025 feet on January 1, a quantity of 7.083 maf shall be apportioned for consumptive use in the Lower Division States of which 2.4 maf shall be apportioned for use in Arizona and 283,000 af shall be apportioned for use in Nevada in accordance with the Arizona-Nevada Shortage Sharing Agreement dated February 9, 2007, and 4.4 maf shall be apportioned for use in California.
 - c. In years when Lake Mead content is projected to be below elevation 1,025 feet on January 1, a quantity of 7.0 maf shall be apportioned for consumptive use in the Lower Division States of which 2.32 maf shall be apportioned for use in Arizona and 280,000 af shall be apportioned for use in Nevada in accordance with the Arizona-Nevada Shortage Sharing Agreement dated February 9, 2007, and 4.4 maf shall be apportioned for use in California.
2. During a Year when the Secretary has determined a Shortage Condition, the Secretary shall deliver Developed Shortage Supply available in a Contractor's DSS Account at the request of the Contractor, subject to the provisions of Section 4.C.

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Section 3. Implementation of Intentionally Created Surplus

[Content of 2001 ISG Section 3., Implementation of Guidelines, is now found at Section 7., as modified herein.]

A. Categories of ICS

1. Extraordinary Conservation ICS

A Contractor may create Extraordinary Conservation ICS through the following activities:

- a. Fallowing of land that currently is, historically was, and otherwise would have been irrigated in the next Year.
- b. Canal lining programs.
- c. Desalination programs in which the desalinated water is used in lieu of Mainstream water.
- d. Extraordinary conservation programs that existed on January 1, 2006.
- e. Extraordinary Conservation ICS demonstration programs pursuant to a letter agreement entered into between Reclamation and the Contractor prior to the effective date of these Guidelines.
- f. Tributary Conservation ICS created under Section 3.A.2. and not delivered in the Year created.
- g. Imported ICS created under Section 3.A.4. and not delivered in the Year created.
- h. Other extraordinary conservation measures, including but not limited to, development and acquisition of a non-Colorado River System water supply used in lieu of Mainstream water within the same state, in consultation with the Basin States.

2. Tributary Conservation ICS

A Contractor may create Tributary Conservation ICS by purchasing documented water rights on Colorado River System tributaries within the Contractor's state if there is documentation that the water rights have been used for a significant period of Years and that the water rights were perfected prior to June 25, 1929 (the effective date of the Boulder Canyon Project Act). The actual amount of any Tributary Conservation ICS introduced to the Mainstream shall be subject to verification by the Secretary as provided in Section 3.D. Any Tributary

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Conservation ICS not delivered pursuant to Section 3.C. or deducted pursuant to Section 3.B.2. in the Year it was created will, at the beginning of the following Year, be converted to Extraordinary Conservation ICS and will thereafter be subject to all provisions applicable to Extraordinary Conservation ICS. Tributary Conservation ICS may be delivered for Domestic Use only.

3. System Efficiency ICS

A Contractor may make contributions of capital⁴ to the Secretary for use in projects designed to realize system efficiencies that save water that would otherwise be lost from the Mainstream in the United States. An amount of water equal to a portion of the water conserved would be made available to contributing Contractor(s) by the Secretary as System Efficiency ICS.⁵ System efficiency projects are intended only to provide temporary water supplies. System Efficiency ICS will be delivered to the contributing Contractor(s) on a schedule of annual deliveries as provided in an exhibit to a Forbearance Agreement and Delivery Agreement. The Secretary may identify potential system efficiency projects, terms for capital participation in such projects, and types and amounts of benefits the Secretary could provide in consideration of non-federal capital contributions to system efficiency projects, including identification of a portion of the water saved by such projects.

4. Imported ICS

A Contractor may create Imported ICS by introducing non-Colorado River System water in that Contractor's state into the Mainstream. Contractors proposing to create Imported ICS shall make arrangements with the Secretary, contractual or otherwise, to ensure no interference with the Secretary's management of Colorado River System reservoirs and regulatory structures. Any arrangement shall provide that the Contractor must obtain appropriate permits or other authorizations required by state and federal law. The actual amount of any Imported ICS introduced to the Mainstream shall be subject to verification by the Secretary as provided in Section 3.D. Any Imported ICS not delivered pursuant to Section 3.C. or deducted pursuant to Section 3.B.2. in the Year it was created will be converted, at the beginning of the following Year, to Extraordinary Conservation ICS and thereafter will be subject to all provisions applicable to Extraordinary Conservation ICS.

⁴ To the extent permitted by federal law, monies to pay construction, operation, maintenance, repair, and/or replacement costs.

⁵ Should other Contractor(s) elect to participate in a system efficiency project following the Secretary making an amount of water available to the contributing Contractor(s), the Secretary shall reduce the amount of water in the contributing Contractor(s)' ICS Account(s) and credit the electing Contractor(s)' ICS Account(s) in an equal amount in accordance with the terms of the Secretary's agreement for the funding of the system efficiency project.

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B. Creation of ICS

A Contractor may only create ICS in accordance with the following conditions:

1. A Contractor shall submit a plan for the creation of ICS to the Secretary demonstrating how all requirements of these Guidelines will be met in the Contractor's creation of ICS. Until such plan is reviewed and approved by the Secretary, subject to such environmental compliance as may be required, such plan or any ICS purportedly created through it shall not be a basis for creation of ICS. An ICS plan will consist of at a minimum the following information:
 - a. Project description, including what extraordinary measures will be taken to conserve or import water;
 - b. Term of the activity;
 - c. Estimate of the amount of water that will be conserved or imported;
 - d. Proposed methodology for verification of the amount of water conserved or imported; and
 - e. Documentation regarding any state or federal permits or other regulatory approvals that have already been obtained by the Contractor or that need to be obtained prior to creation of ICS.

A Contractor may modify its approved plan for creation of ICS during any Year, subject to approval by the Secretary. A Contractor with an approved multi-Year plan for System Efficiency ICS is not required to seek further approval by the Secretary in subsequent Years unless the Contractor seeks to modify the plan.

2. There shall be a one-time deduction of five percent (5%) from the amount of ICS in the Year of its creation. This system assessment shall result in additional system water in storage in Lake Mead. This one-time system assessment shall not apply to:
 - a. System Efficiency ICS created pursuant to Section 3.B. because a large portion of the water conserved by this type of project will increase the quantity of system water in storage over time.
 - b. Extraordinary Conservation ICS created by conversion of Tributary Conservation ICS that was not delivered in the Year created, pursuant to this Section 3.B. because 5% of the ICS is deducted at the time the Tributary Conservation ICS is created.

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- c. Extraordinary Conservation ICS created by conversion of Imported ICS that was not delivered in the Year created, pursuant to this Section 3.B. because 5% of the ICS is deducted at the time the Imported ICS is created.
 - d. ICS created under demonstration programs in 2006 and 2007 which has already been assessed the 5% system assessment.
- 3. Except as provided in Sections 3.A.2. and 3.A.4., Extraordinary Conservation ICS can only be created if such water would have otherwise been beneficially used.
 - 4. The maximum total amount of Extraordinary Conservation ICS that can be created during any Year is limited to the following:
 - a. 400,000 af for California Contractors;
 - b. 125,000 af for Nevada Contractors; and
 - c. 100,000 af for Arizona Contractors.
 - 5. The maximum quantity of Extraordinary Conservation ICS that may be accumulated in all ICS Accounts, at any time, is limited to the following:
 - a. 1.5 maf for California Contractors;
 - b. 300,000 af for Nevada Contractors; and
 - c. 300,000 af for Arizona Contractors.
 - 6. Except as provided in Sections 3.A.2. and 3.A.4., no category of surplus water can be used to create Extraordinary Conservation ICS.
 - 7. The quantity of Extraordinary Conservation ICS remaining in an ICS Account at the end of each Year shall be diminished by annual evaporation losses of 3%. Losses shall be applied annually to the end-of-the-Year balance of Extraordinary Conservation ICS beginning in the Year after the ICS is created and continuing until no Extraordinary Conservation ICS remains in Lake Mead. No evaporation losses shall be assessed during a Year in which the Secretary has determined a Shortage Condition.
 - 8. Extraordinary Conservation ICS from a project within a state may only be credited to the ICS Account of a Contractor within that state that has funded or implemented the project creating ICS, or to the ICS Account of a Contractor within the same state as the funding entity and project and with written agreement of the funding entity.

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9. A Contractor must notify Reclamation of the amount of ICS it wishes to create for the subsequent Year pursuant to an existing, approved plan. A Contractor may request mid-Year modification(s) to reduce the amount of ICS created during that Year, subject to the requirements of this Section 3.B. A Contractor cannot increase the amount of ICS it had previously scheduled to create during the Year.

C. Delivery of ICS

The Secretary shall deliver ICS in accordance with the following conditions:

1. The delivery shall be consistent with the terms of a Delivery Agreement with a Contractor regarding ICS.
2. The Secretary has determined an ICS Surplus Condition.
3. The existence of Forbearance Agreements necessary to bring the delivery of the ICS into compliance with Articles II(B)(2) and II(B)(6) of the Consolidated Decree.
4. A limitation on the total amount of Extraordinary Conservation ICS that may be delivered in any Year is as follows:
 - a. 400,000 af for California Contractors;
 - b. 300,000 af for Nevada Contractors; and
 - c. 300,000 af for Arizona Contractors.
5. If the May 24-Month Study for that Year indicates that a Shortage Condition would be determined in the succeeding Year if the requested amounts for the current Year under Section 3.C. were delivered, the Secretary may deliver less than the amounts of ICS requested to be delivered.
6. If the Secretary releases Flood Control Surplus water, Extraordinary Conservation ICS accumulated in ICS Accounts shall be reduced by the amount of the Flood Control Surplus on an acre-foot for acre-foot basis until no Extraordinary Conservation ICS remains. The reductions to the ICS Accounts shall be shared on a pro-rata basis among all Contractors that have accumulated Extraordinary Conservation ICS.
7. If a Contractor has an overrun payback obligation, as described in the October 10, 2003 Inadvertent Overrun and Payback Policy or Exhibit C to the October 10, 2003 Colorado River Water Delivery Agreement, the Contractor must pay the overrun payback obligation in full before requesting or receiving delivery of

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ICS. The Contractor's ICS Account shall be reduced by the amount of the overrun payback obligation in order to pay the overrun payback obligation.

8. If more ICS is delivered to a Contractor than is actually available for delivery to the Contractor in that Year, then the excess ICS delivered shall be treated as an inadvertent overrun until it is fully repaid.
9. A Contractor may request mid-Year modification(s) to increase or reduce the amount of ICS to be delivered during that Year because of changed conditions, emergency, or hardship, subject to the requirements of this Section 3.C.
10. The Contractor shall agree in the Delivery Agreement that the records of the Contractor relating to the creation of ICS shall be open to inspection by the Secretary and by any Contractor or Basin State.

D. Accounting for ICS

The Secretary shall develop procedures to account for and verify, on an annual basis, ICS creation and delivery. At a minimum such procedures shall include the following:

1. A Contractor shall submit for the Secretary's review and verification, appropriate information, as determined by the Secretary, contained in a Certification Report, to demonstrate the amount of ICS created and that the method of creation was consistent with the Contractor's approved ICS plan, a Forbearance Agreement, and a Delivery Agreement. Such information shall be submitted in the Year following the creation of the ICS.
2. The Secretary, acting through the Lower Colorado Regional Director, shall verify the information submitted pursuant to this section, and provide a final written decision to the Contractor regarding the amount of ICS created. The results of such final written decisions shall be made available to the public through publication pursuant to Section 3.D.3. and other appropriate means. A Contractor and any party to an applicable Forbearance Agreement may appeal the Regional Director's verification decision first to the Regional Director and then to the Secretary; and through judicial processes.
3. Each Year the Water Accounting Report will be supplemented to include ICS Account balance information for each Contractor and shall address ICS creation, deliveries, amounts no longer available for delivery due to releases for flood control purposes, deductions pursuant to Section 3.B.2., deductions due to annual evaporation losses pursuant to Section 3.B.7., any amounts of ICS converted to Extraordinary Conservation ICS, and ICS remaining available for delivery.

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Section 4. Implementation of Developed Shortage Supply

[Content of 2001 ISG Section 4., Effective Period & Termination, is now found at Section 8., as modified herein.]

A. Categories of DSS

1. Tributary Conservation DSS

A Contractor may create Tributary Conservation DSS by purchasing documented water rights on Colorado River System tributaries within the Contractor's state if there is documentation that the water rights have been used for a significant period of Years and that the water rights were perfected prior to June 25, 1929 (the effective date of the Boulder Canyon Project Act). The actual amount of any Tributary Conservation DSS introduced to the Mainstream shall be subject to verification by the Secretary as provided in Section 4.D. Tributary Conservation DSS may be delivered for Domestic Use only.

2. Imported DSS

A Contractor may create Imported DSS by introducing non-Colorado River System water in that Contractor's state into the Mainstream, making sufficient arrangements with the Secretary, contractual or otherwise, to ensure no interference with the Secretary's management of Colorado River System reservoirs and regulatory structures. Any arrangement shall provide that the Contractor must obtain appropriate permits or other authorizations required by state and federal law. The actual amount of any Imported DSS introduced to the Mainstream shall be subject to verification by the Secretary as provided in Section 4.D.

B. Creation of DSS

A Contractor may only create DSS in accordance with the following conditions:

1. A Contractor shall submit a plan for the creation of DSS to the Secretary demonstrating how all requirements of these Guidelines will be met in the Contractor's creation of DSS. Until such plan is reviewed and approved by the Secretary, subject to such environmental compliance as may be required, such plan, or any DSS purportedly created through it, shall not be a basis for creation of DSS. A DSS plan will consist of at a minimum the following information:
 - a. Project description, including what extraordinary measures will be taken to conserve or import water;
 - b. Term of the activity;

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- c. Estimate of the amount of water that will be conserved or imported;
- d. Proposed methodology for verification of the amount of water conserved or imported; and
- e. Documentation regarding any state or federal permits or other regulatory approvals that have already been obtained by the Contractor or that need to be obtained prior to creation of DSS.

A Contractor may modify its approved plan for creation of DSS during any Year, subject to approval by the Secretary.

- 2. There shall be a one-time deduction of five percent (5%) from the amount of DSS in the Year of its creation. This system assessment shall result in additional system water in storage in Lake Mead.
- 3. DSS may only be created during a Year when the Secretary has determined a Shortage Condition.
- 4. DSS may only be created by a project that is approved by the Secretary for creation prior to the Secretary determining a Shortage Condition.
- 5. A Contractor must notify Reclamation of the amount of DSS it wishes to create for the subsequent Year pursuant to an existing, approved plan. A Contractor may request mid-Year modification(s) to reduce the amount of DSS created during that Year, subject to the requirements of this Section 4.B. A Contractor cannot increase the amount of DSS it had previously scheduled to create during the Year.

C. Delivery of DSS

The Secretary shall deliver DSS in accordance with the following conditions:

- 1. The delivery shall be consistent with the terms of a Delivery Agreement with a Contractor regarding DSS.
- 2. The Secretary has determined a Shortage Condition.
- 3. Delivery of DSS shall not cause the total deliveries within the Lower Division states to reach or exceed 7.5 maf in any Year.
- 4. Delivery of DSS shall be in accordance with Article II(B)(3) of the Consolidated Decree.
- 5. If a Contractor has an overrun payback obligation, as described in the October 10, 2003 Inadvertent Overrun and Payback Policy or Exhibit C to the October

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10, 2003 Colorado River Water Delivery Agreement, the Contractor must pay the overrun payback obligation in full before requesting or receiving delivery of DSS. The Contractor's DSS Account shall be reduced by the amount of the overrun payback obligation in order to pay the overrun payback obligation.

6. If more DSS is delivered to a Contractor than is actually available for delivery to the Contractor in that Year, then the excess DSS delivered shall be treated as an inadvertent overrun until it is fully repaid.
7. A Contractor may request mid-Year modification(s) to increase or reduce the amount of DSS to be delivered during that Year because of changed conditions, emergency, or hardship, subject to the requirements of this Section 4.C.
8. The Contractor shall agree in the Delivery Agreement that the records of the Contractor relating to the creation of DSS shall be open to inspection by the Secretary or by any Contractor or Basin State.
9. DSS may only be delivered in the Year of its creation. Any DSS not delivered pursuant to this Section 4.C. in the Year it is created may not be converted to Extraordinary Conservation ICS.

D. Accounting for DSS

The Secretary shall develop procedures to account for and verify, on an annual basis, DSS creation and delivery. At a minimum such procedures shall include the following:

1. A Contractor shall submit for the Secretary's review and verification appropriate information, as determined by the Secretary, contained in a Certification Report, to demonstrate the amount of DSS created and that the method of creation was consistent with the Contractor's approved DSS plan and a Delivery Agreement. Such information shall be submitted in the Year following the creation of the DSS.
2. The Secretary, acting through the Lower Colorado Regional Director, shall verify the information submitted pursuant to this section, and provide a final written decision to the Contractor regarding the amount of DSS created. The results of such final written decisions shall be made available to the public through publication pursuant to Section 4.D.3. and other appropriate means. The Contractor may appeal the Regional Director's verification decision first to the Regional Director and then to the Secretary; and through judicial processes.
3. Each Year the Water Accounting Report will be supplemented to include DSS information for each Contractor and shall address DSS creation, deliveries, and deductions pursuant to Section 4.B.2.

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Section 5. California's Colorado River Water Use Plan Implementation Progress

A. Introduction

[Adopted January 16, 2001; Deleted December 13, 2007]

B. California's Quantification Settlement Agreement

[Adopted January 16, 2001; Deleted December 13, 2007]

C. California's Colorado River Water Use Reductions

The California Agricultural (Palo Verde Irrigation District, Yuma Project Reservation Division, Imperial Irrigation District, and Coachella Valley Water District) usage plus 14,500 af of Present Perfected Right (PPR) use would need to be at or below the following amounts at the end of the Year indicated in Years other than Quantified or Flood Control Surplus (for Decree accounting purposes all reductions must be within 25,000 af of the amounts stated):

Benchmark Date (Calendar Year)	Benchmark Quantity (California Agricultural usage & 14,500 AF of PPR Use in MAF)
2003	3.75 ⁶
2006	3.64 ⁶
2009	3.60 ⁷
2012	3.47

In the event that California has not reduced its use in accordance with the limits set forth above in any Year in which the Benchmark Quantity applies, the surplus determination under Section 2.B.2. of these Guidelines will be suspended and will instead be based upon the 70R Strategy, for up to the remainder of the term of these Guidelines. If however, California meets the missed Benchmark Quantity before the next Benchmark Date or the 2012 Benchmark Quantity after 2012, the surplus determination under Section 2.B.2. shall be reinstated as the basis for the surplus determination under the AOP for the next following Year(s).

⁶ The Benchmark Quantities in 2003 and 2006 were met.

⁷ The 2009 Benchmark Quantity is modified from 3.53 maf due to construction delays that have been experienced for the All-American Canal Lining Project.

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As part of the AOP process during the Interim Period of these Guidelines, California shall report to the Secretary on its progress in implementing its California Colorado River Water Use Plan.

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Section 6. Coordinated Operation of Lake Powell and Lake Mead During the Interim Period

[Content of 2001 ISG Section 6., Authority, is now found at Section 9., as modified herein.]

During the Interim Period, the Secretary shall coordinate the operations of Lake Powell and Lake Mead according to the strategy set forth in this Section 6.

The objective of the operation of Lake Powell and Lake Mead as described herein is to avoid curtailment of uses in the Upper Basin, minimize shortages in the Lower Basin and not adversely affect the yield for development available in the Upper Basin.

The August 24-Month Study projections of the January 1 system storage and reservoir water surface elevations, for the following Water Year, shall be used to determine the applicable operational tier for the coordinated operation of Lake Powell and Lake Mead as specified in the table below.

Consistent with the provisions of this Section 6, equalization or balancing of storage in Lake Powell and Lake Mead shall be achieved as nearly as is practicable by the end of each Water Year. When equalizing or balancing the contents of the reservoirs, scheduled Water Year releases from Lake Powell will be adjusted each month based on forecasted inflow, and projected September 30 Active Storage at Lake Powell and Lake Mead. In this Section 6, the term “storage” shall mean Active Storage.

When determining lake elevations and contents under this Section 6, no adjustment shall be made for ICS.

Coordinated operation of Lake Powell and Lake Mead as described herein will be presumed to be consistent with the Section 602(a) storage requirement contained in the Colorado River Basin Project Act.

Releases from Lake Powell for coordinated operations will be consistent with the parameters of the Record of Decision for the Glen Canyon Dam Final Environmental Impact Statement and the Glen Canyon Dam Operating Criteria (62 Fed. Reg. 9447, March 3, 1997).

Notwithstanding the quantities set forth in this Section 6, the Secretary shall evaluate and take additional necessary actions, as appropriate, at critical elevations in order to avoid Lower Basin shortage determinations as reservoir conditions approach critical thresholds. Any actions shall also be consistent with avoidance of curtailment of consumptive uses in the Upper Basin.

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

April adjustments to Lake Powell operations in the Upper Elevation Balancing Tier (as specified in Sections 6.B.3. and 6.B.4.) shall be based on the April 24-Month Study projections of the September 30 system storage and reservoir water surface elevations for the current Water Year. Any such adjustments shall not require re-initiation of the AOP consultation process. In making these projections, the Secretary shall utilize the April 1 final forecast of the April through July runoff, currently provided by the National Weather Service's Colorado Basin River Forecast Center.

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A. Equalization Tier

In each Water Year, the Lake Powell equalization elevation will be as follows:

Lake Powell Equalization Elevation Table	
Water Year	Elevation (feet)
2008	3,636
2009	3,639
2010	3,642
2011	3,643
2012	3,645
2013	3,646
2014	3,648
2015	3,649
2016	3,651
2017	3,652
2018	3,654
2019	3,655
2020	3,657
2021	3,659
2022	3,660
2023	3,662
2024	3,663
2025	3,664
2026	3,666

1. In Water Years when Lake Powell elevation is projected on January 1 to be at or above the elevation stated in the Lake Powell Equalization Elevation Table, an amount of water will be released from Lake Powell to Lake Mead at a rate greater than 8.23 maf per Water Year to the extent necessary to avoid spills, or equalize storage in the two reservoirs, or otherwise to release 8.23 maf from Lake Powell. The Secretary shall release at least 8.23 maf per Water Year and shall release additional water to the extent that the additional releases will not cause Lake Powell content to be below the elevation stated in the Lake Powell Equalization Elevation Table or cause Lake Mead content to exceed that of Lake Powell; provided, however, if Lake Powell reaches the elevation stated in the Lake Powell Equalization Elevation Table for that Water Year and the September 30 projected Lake Mead elevation is below elevation 1,105 feet, the Secretary shall release additional water from Lake Powell to Lake Mead until the first of the following conditions is projected to occur on September 30: (i) the reservoirs fully equalize; (ii) Lake Mead reaches elevation 1,105 feet; or (iii) Lake Powell reaches 20 feet below the elevation in the Lake Powell Equalization Elevation Table for that year.

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B. Upper Elevation Balancing Tier

1. In Water Years when the projected January 1 Lake Powell elevation is below the elevation stated in the Lake Powell Equalization Elevation Table and at or above 3,575 feet, the Secretary shall release 8.23 maf from Lake Powell if the projected January 1 Lake Mead elevation is at or above 1,075 feet.
2. If the projected January 1 Lake Powell elevation is below the elevation stated in the Lake Powell Equalization Elevation Table and at or above 3,575 feet and the projected January 1 Lake Mead elevation is below 1,075 feet, the Secretary shall balance the contents of Lake Mead and Lake Powell, but shall release not more than 9.0 maf and not less than 7.0 maf from Lake Powell in the Water Year.
3. When operating in the Upper Elevation Balancing Tier, if the April 24-Month Study projects the September 30 Lake Powell elevation to be greater than the elevation in the Lake Powell Equalization Elevation Table, the Equalization Tier will govern the operation of Lake Powell for the remainder of the Water Year (through September).
4. When operating under Section 6.B.1, if the April 24-Month Study projects the September 30 Lake Mead elevation to be below 1,075 feet and the September 30 Lake Powell elevation to be at or above 3,575 feet, the Secretary shall balance the contents of Lake Mead and Lake Powell, but shall release not more than 9.0 maf and not less than 8.23 maf from Lake Powell in the Water Year.
5. When Lake Powell is projected to be operating under Section 6.B.2. and more than 8.23 maf is projected to be released from Lake Powell during the upcoming Water Year, the Secretary shall recalculate the August 24-Month Study projection of the January 1 Lake Mead elevation to include releases above 8.23 maf that are scheduled to be released from Lake Powell during the months of October, November, and December of the upcoming Water Year, for the purposes of determining Normal or Shortage conditions pursuant to Sections 2.A. or 2.D. of these Guidelines.

C. Mid-Elevation Release Tier

1. In Water Years when the projected January 1 Lake Powell elevation is below 3,575 feet and at or above 3,525 feet, the Secretary shall release 7.48 maf from Lake Powell in the Water Year if the projected January 1 elevation of Lake Mead is at or above 1,025 feet. If the projected January 1 Lake Mead elevation is below 1,025 feet, the Secretary shall release 8.23 maf from Lake Powell in the Water Year.

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D. Lower Elevation Balancing Tier

1. In Water Years when the projected January 1 Lake Powell elevation is below 3,525 feet, the Secretary shall balance the contents of Lake Mead and Lake Powell, but shall release not more than 9.5 maf and not less than 7.0 maf from Lake Powell in the Water Year.

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Section 7. Implementation of Guidelines

[Content of 2001 ISG Section 7, Modeling and Data Authority, is now found at Section 7.A., as modified herein.]

A. AOP Process

During the Interim Period, the Secretary shall utilize the AOP process to determine operations under these Guidelines concerning the coordinated operations of Lake Powell and Lake Mead pursuant to Section 6 of these Guidelines, and the allocation of apportioned but unused water from Lake Mead and the determinations concerning whether Normal, Surplus or Shortage conditions shall apply for the delivery of water from Lake Mead, pursuant to Section 1 and Section 2 of these Guidelines.

B. Consultation

The Secretary shall consult on the implementation of these Guidelines in circumstances including but not limited to the following:

1. The Secretary shall first consult with all the Basin States before making any substantive modification to these Guidelines.
2. Upon a request for modification of these Guidelines, or upon a request to resolve any claim or controversy arising under these Guidelines or under the operations of Lake Powell and Lake Mead pursuant to these Guidelines or any other applicable provision of federal law, regulation, criteria, policy, rule, or guideline, or regarding application of the 1944 Treaty that has the potential to affect domestic management of Colorado River water, the Secretary shall invite the Governors of all the Basin States, or their designated representatives, and the Department of State and USIBWC as appropriate, to consult with the Secretary in an attempt to resolve such claim or controversy by mutual agreement.
3. In the event projections included in any monthly 24-Month Study indicate Lake Mead elevations may approach an elevation that would trigger shortages in deliveries of water from Lake Mead in the United States, the Secretary shall consult with the Department of State, the USIBWC and the Basin States on whether and how the United States may reduce the quantity of water allotted to Mexico consistent with the 1944 Treaty.⁸

⁸ These Guidelines are not intended to constitute an interpretation or application of the 1944 Treaty or to represent current United States policy or a determination of future United States policy regarding deliveries to Mexico. The United States will conduct all necessary and appropriate discussions regarding the proposed federal action and implementation of the 1944 Treaty with Mexico through the IBWC in consultation with the Department of State.

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4. Whenever Lake Mead is below elevation 1,025 feet, the Secretary shall consult with the Basin States annually to consider whether Colorado River hydrologic conditions, together with the anticipated delivery of water to the Lower Division states and Mexico, is likely to cause the elevation of Lake Mead to fall below 1,000 feet. Upon such a consideration, the Secretary shall consult with the Basin States to discuss further measures that may be undertaken. The Secretary shall implement any additional measures consistent with applicable federal law.
5. During the Interim Period the Secretary shall consult with the Basin States regarding the administration of ICS.
6. During the Interim Period the Secretary shall consult with the Basin States regarding the creation of ICS through other extraordinary conservation measures pursuant to Section 3.A.1.h.
7. During the Interim Period the Secretary shall consult with the Basin States regarding the creation of System Efficiency ICS pursuant to Section 3.A.3.
8. The Secretary shall consult with the Basin States to evaluate actions at critical elevations that may avoid shortage determinations as reservoir elevations approach critical thresholds.

C. Mid-Year Review

In order to allow for better overall water management during the Interim Period, the Secretary may undertake a mid-year review to consider revisions to the AOP. The Secretary shall initiate a mid-year review if requested by any Basin State or by the Upper Colorado River Commission. In the mid-year review, the Secretary may modify the AOP to make a determination that a different operational tier (Section 2.A., B., or D., or Section 6.A., B., C., or D.) than that determined in the AOP will apply for the remainder of the Year or Water Year as appropriate, or that an amount of water other than that specified in the applicable operational tier will be released for the remainder of the Year or Water Year as appropriate. The determination of modification of the AOP shall be based upon an evaluation of the objectives to avoid curtailment of uses in the Upper Basin, minimize shortages in the Lower Basin and not adversely affect the yield for development available in the Upper Basin. In undertaking such a mid-year review, the Secretary shall utilize the April 1 final forecast of the April through July runoff, currently provided by the National Weather Service's Colorado Basin River Forecast Center, and other relevant factors such as actual runoff conditions, actual water use, and water use projections. For Lake Mead, the Secretary shall revise the determination in any mid-year review for the current Year only to allow for additional deliveries from Lake Mead pursuant to Section 2 of these Guidelines.

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D. Operations During Interim Period

These Guidelines implement the LROC and may be reviewed concurrently with the LROC five-year review. The Secretary will base annual determinations regarding the operations of Lake Powell and Lake Mead on these Guidelines unless extraordinary circumstances arise. Such circumstances could include operations that are prudent or necessary for safety of dams, public health and safety, other emergency situations, or other unanticipated or unforeseen activities arising from actual operating experience.

Beginning no later than December 31, 2020, the Secretary shall initiate a formal review for purposes of evaluating the effectiveness of these Guidelines. The Secretary shall consult with the Basin States in initiating this review.

Procedures will be established for implementation of ICS and DSS by Reclamation's Lower Colorado Regional Director.

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Section 8. Interim Period and Termination

[Adopted January 16, 2001; Deleted and Modified December 13, 2007]

A. Interim Period

These Guidelines will be effective upon the date of execution of the ROD for Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations of Lake Powell and Lake Mead and will, unless subsequently modified, remain in effect through December 31, 2025 (through preparation of the 2026 AOP).

The Department promulgated these Guidelines based on consideration of multiple sources of information, including existing applicable guidelines, information submitted by the general public, an Agreement and recommendation submitted by the representatives of the Governors of the seven Colorado Basin States, modeling, and other information contained in environmental compliance documentation. The Secretary recognizes that the Basin States' recommendation was developed with the intent to be consistent with existing law, as addressed by Section 9 of the April 23, 2007, Agreement among the Basin States.

The Secretary recognizes that differences exist with respect to interpretations of certain provisions contained in the Law of the River and the proper application of those provisions, including, for example, Section 602(a) of the Colorado River Basin Project Act of 1968. In lieu of a formal determination regarding such disputes, the Secretary will apply the operational criteria in these Guidelines. By way of further example, positions and rights concerning the calculation of the quantity of Section 602(a) storage and releases of water from Lake Powell are reserved. The Secretary, through the adoption of these Guidelines, makes no determination with respect to the correctness of any interpretation of Section 602(a) storage and release requirements or other positions of the individual Colorado River Basin states.

Actual operations under these Guidelines shall not represent interpretations of existing law by the Secretary, nor predetermine in any manner the means of operation that the Secretary may adopt following the Interim Period. Releases from Lake Powell or Lake Mead pursuant to these Guidelines shall not prejudice the position or interests of either the Upper or Lower Division states, or any Colorado River Basin state, with respect to required storage or deliveries of water pursuant to applicable federal law, either during or after the Interim Period.

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B. Effective Period - Special Provisions

1. The provisions for the delivery and accounting of ICS in Section 3 shall remain in effect through December 31, 2036, unless subsequently modified, for any ICS remaining in an ICS Account on December 31, 2026.
2. The provisions for the creation and delivery of Tributary Conservation ICS and Imported ICS in Section 3 shall continue in full force and effect until fifty years from the date of the execution of the ROD.
3. The provisions for the creation and delivery of DSS in Section 4 shall continue in full force and effect until fifty years from the date of the execution of the ROD.

C. Termination of Guidelines

Except as provided in Section 8.B., these Guidelines shall terminate on December 31, 2025 (through preparation of the 2026 AOP). At the conclusion of the effective period of these Guidelines, the operating criteria for Lake Powell and Lake Mead are assumed to revert to the operating criteria used to model baseline conditions in the Final Environmental Impact Statement for the Interim Surplus Guidelines dated December 2000 (i.e., modeling assumptions are based upon a 70R Strategy for the period commencing January 1, 2026 (for preparation of the 2027 AOP)).

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Section 9. Authority

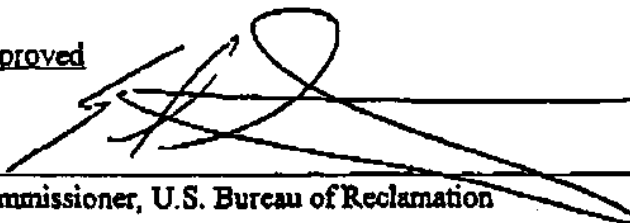
These Guidelines are issued pursuant to the authority vested in the Secretary by federal law, including the Boulder Canyon Project Act of 1928 (28 Stat. 1057), the Colorado River Storage Project Act (70 Stat. 105), and the Consolidated Decree issued by the U.S. Supreme Court in *Arizona v. California*, 547 U.S. 150 (2006) and shall be used to implement Articles II and III of the Criteria for the Coordinated Long-Range Operation of Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of September 30, 1968 (Pub. L. No. 90-537), as amended.

RECORD OF DECISION


OPERATION OF GLEN CANYON DAM

Final Environmental Impact Statement

October 1996

Approved 

Date **OCT 08 1996**
Commissioner, U.S. Bureau of Reclamation



Date **OCT 09 1996**
Secretary of the Interior

RECORD OF DECISION

OPERATION OF GLEN CANYON DAM FINAL ENVIRONMENTAL IMPACT STATEMENT

I. INTRODUCTION

This record of decision (ROD) of the Department of the Interior, Bureau of Reclamation (Reclamation), documents the selection of operating criteria for Glen Canyon Dam, as analyzed in the final Environmental Impact Statement (EIS), dated March 21, 1995 (FES 95-8). The EIS on the operation of Glen Canyon Dam was prepared with an unprecedented amount of scientific research, public involvement, and stakeholder cooperation.

Scientific evidence gathered during Phase I of the Glen Canyon Environmental Studies (GCES) indicated that significant impacts on downstream resources were occurring due to the operation of Glen Canyon Dam. These findings led to a July 1989 decision by the Secretary of the Interior for Reclamation to prepare an EIS to reevaluate dam operations. The purpose of the reevaluation was to determine specific options that could be implemented to minimize, consistent with law, adverse impacts on the downstream environment and cultural resources, as well as Native American interests in Glen and Grand Canyons. Analysis of an array of reasonable alternatives was needed to allow the Secretary to balance competing interests and to meet statutory responsibilities for protecting downstream resources and producing hydropower, and to protect affected Native American interests.

In addition, the Grand Canyon Protection Act of 1992 was enacted on October 30, 1992. Section 1802 (a) of the Act requires the Secretary to operate Glen Canyon Dam:

"...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."

Alternatives considered include the No Action Alternative as well as eight operational alternatives that provide various degrees of protection for downstream resources and hydropower production.

II. DECISION

The Secretary's decision is to implement the Modified Low Fluctuating Flow Alternative (the preferred alternative) as described in the final EIS on the Operation of Glen Canyon Dam with a minor change in the timing of beach/habitat building flows (described below). This alternative was selected because it will reduce daily flow fluctuations well below the no action levels (historic pattern of releases) and will provide high steady releases of short duration which will protect or enhance downstream resources while allowing limited flexibility for power operations.

The Modified Low Fluctuating Flow Alternative incorporates beach/habitat-building flows which are scheduled high releases of short duration designed to rebuild high elevation sandbars, deposit nutrients, restore backwater channels, and provide some of the dynamics of a natural system. In the final EIS, it was assumed that these flows would occur in the spring when the reservoir is low, with a frequency of 1 in 5 years.

The Basin States expressed concern over the beach/habitat-building flows described in the final EIS because of the timing of power plant by-passes. We have accommodated their concerns, while maintaining the objectives of the beach/habitat-building flows. Instead of conducting these flows in years in which Lake Powell storage is low on January 1, they will be accomplished by utilizing reservoir releases in excess of power plant capacity required for dam safety purposes. Such releases are consistent with the 1956 Colorado River Storage Project Act, the 1968 Colorado River Basin Project Act, and the 1992 Grand Canyon Protection Act.

Both the Colorado River Management Work Group and the Transition Work Group, which participated in the development of the Annual Operating Plan and the EIS, respectively, support this change as it conforms unambiguously with each member's understanding of the Law of the River. These groups include representatives of virtually all stakeholders in this process.

The upramp rate and maximum flow criteria were also modified between the draft and final EIS. The upramp rate was increased from 2,500 cubic feet per second per hour to 4,000 cubic feet per second per hour, and the maximum allowable release was increased from 20,000 to 25,000 cubic feet per second. We made these modifications to enhance power production flexibility, as suggested by comments received. These modifications were controversial among certain interest groups because of concerns regarding potential impacts on resources in the Colorado River and the Grand Canyon. However, our analysis indicates that there would be no significant differences in impacts associated with these changes ("Assessment of Changes to the Glen Canyon Dam EIS Preferred Alternative from Draft to Final EIS", October 1995).

The 4,000 cubic feet per second per hour upramp rate limit will be implemented with the understanding that results from the monitoring program will be carefully considered. If impacts differing from those described in the final EIS are identified, a new ramp rate criterion will be considered by the Adaptive Management Work Group and a recommendation for action forwarded to the Secretary.

The maximum flow criterion of 25,000 cubic feet per second will be implemented with the understanding that actual maximum daily releases would only occasionally exceed 20,000 cubic feet per second during a minimum release year of 8.23 million acre-feet. This is because the maximum allowable daily change constraint overrides the maximum allowable release and because monthly release volumes are lower during minimum release years. If impacts differing from those described in the final EIS are identified through the Adaptive Management Program, the maximum flow restriction will be reviewed by the Adaptive Management Work Group and a recommendation for action will be forwarded to the Secretary.

III. DESCRIPTION OF ALTERNATIVES

Nine alternative methods of operating Glen Canyon Dam (including the No Action Alternative) were presented in the final EIS. The eight action alternatives were designed to provide a reasonable range of alternatives with respect to operation of the dam. One alternative would allow unrestricted fluctuations in flow (within the physical constraints of the power plant) to maximize power production, four would impose varying restrictions on fluctuations, and three others would provide steady flows on a monthly, seasonal, or annual basis. The names of the alternatives reflect the various operational regimes. In addition, the restricted fluctuating flow and steady flow alternatives each include seven elements which are common to all of them. These common elements are: 1) Adaptive Management, 2) Monitoring and Protecting Cultural Resources, 3) Flood Frequency Reduction Measures, 4) Beach/Habitat-Building Flows, 5) New Population of Humpback Chub, 6) Further Study of Selective Withdrawal, and 7) Emergency Exception Criteria. A detailed description of the alternatives and common elements can be found in Chapter 2 of the final EIS. A brief description of the alternatives is given below.

UNRESTRICTED FLUCTUATING FLOWS

No Action: Maintain the historic pattern of fluctuating releases up to 31,500 cubic feet per second and provide a baseline for impact comparison.

Maximum Power plant Capacity: Permit use of full power plant capacity up to 33,200 cubic feet per second.

RESTRICTED FLUCTUATING FLOWS

High: Slightly reduce daily fluctuations from historic levels.

Moderate: Moderately reduce day fluctuations from historic levels; includes habitat maintenance flows.

Modified Low (Preferred Alternative): Substantially reduce daily fluctuations from historic levels; includes habitat maintenance flows.

Interim Low: Substantially reduce daily fluctuations from historic levels; same as interim operations except for addition of common elements.

STEADY FLOWS

Existing Monthly Volume: Provide steady flows that use historic monthly release strategies.

Seasonally Adjusted: Provide steady flows on a seasonal or monthly basis; includes habitat maintenance flows.

Year-Round: Provide steady flows throughout the year.

Table I shows the, specific operational criteria for each of the alternatives.

IV. SIGNIFICANT ISSUES AND ALTERNATIVES

The Glen Canyon Dam EIS scoping process was initiated in early 1990 and the public was invited to comment on the appropriate scope of the EIS. More than 17,000 comments were received during the scoping period, reflecting the national attention and intense interest in the EIS.

As a result of the analysis of the oral and written scoping comments, the following were determined to be resources or issues of public concern: beaches, endangered species, ecosystem integrity, fish, power costs, power production, sediment, water conservation, rafting/boating, air quality, the Grand Canyon wilderness, and a category designated as "other" for remaining concerns. Comments regarding interests and values were categorized as: expressions about the Grand Canyon, economics, nonquantifiable values, nature versus human use, and the complexity of Glen Canyon Dam issues.

The EIS team consolidated and refined the public issues of concern, identifying the significant resources and associated issues to be analyzed in detail. These resources include: water, sediment, fish, vegetation, wildlife and habitat, endangered and other special status species, cultural resources, air quality, recreation, hydropower, and non-use value.

Further meetings were held with representatives from the cooperating agencies and public interest groups who provided comments on the criteria for development of reasonable alternatives for the EIS. The public also had an opportunity to comment on the preliminary selection of alternatives at public meetings and through mailings. The final selection of alternatives took into consideration the public's views.

V. COMMENTS RECEIVED ON THE FINAL EIS

Many comments and recommendations on the final EIS were received in the form of pre-printed postcards and letters that addressed essentially the same issues. The comments are summarized below along with Reclamation's responses.

COMMENT: Maintain Draft EIS flows. Modifying the upramp, rate and maximum flows

Table 1.—Operating limits of alternatives identified for detailed analysis

	Unrestricted Fluctuating Flows		Restricted Fluctuating Flows					Steady Flows	
	No Action	Maximum Powerplant Capacity	High	Moderate	Modified Low	Interim Low	Existing Monthly Volume	Seasonally Adjusted	Year-Round
Minimum releases (cfs) ¹	1,000 Labor Day-Easter ² 3,000 Easter-Labor Day	1,000 Labor Day-Easter ² 3,000 Easter-Labor Day	3,000 5,000 8,000 depending on monthly volume, firm load, and market conditions	5,000	8,000 between 7 a.m. and 7 p.m. 5,000 at night	8,000 between 7 a.m. and 7 p.m. 5,000 at night	8,000	³ 8,000 Oct-Nov 8,500 Dec 11,000 Jan-Mar 12,500 Apr 18,000 May-Jun 12,500 Jul 9,000 Aug-Sep	Yearly volume prorated ⁴
Maximum releases (cfs) ⁵	31,500	33,200	31,500	31,500 (may be exceeded during habitat maintenance flows)	25,000 (exceeded during habitat maintenance flows)	20,000	Monthly volumes prorated	18,000 (exceeded during habitat maintenance flows)	Yearly volume prorated ⁴
Allowable daily flow fluctuations (cfs/24 hours)	30,500 Labor Day-Easter 28,500 Easter-Labor Day	32,200 Labor Day-Easter 30,200 Easter-Labor Day	15,000 to 22,000	±45% of mean flow for the month not to exceed ±6,000	⁶ 5,000 6,000 or 8,000	⁶ 5,000 6,000 or 8,000	⁷ ±1,000	⁷ ±1,000	⁷ ±1,000
Ramp rates (cfs/hour)	Unrestricted	Unrestricted	Unrestricted up, 5,000 or 4,000 down	4,000 up 2,500 down	4,000 up 1,500 down	2,500 up 1,500 down	2,000 cfs/day between months	2,000 cfs/day between months	2,000 cfs/day between months
Common elements	None	None	Adaptive management (including long-term monitoring and research) Monitoring and protecting cultural resources Flood frequency reduction measures Beach/habitat-building flows New population of humpback chub Further study of selective withdrawal Emergency exception criteria						

1 In high volume release months, the allowable daily change would require higher minimum flows (cfs).

2 Releases each weekday during recreation season (Easter to Labor Day) would average not less than 8,000 cfs for the period from 8 a.m. to midnight.

3 Based on an 8.23-million-acre-foot (maf) year; in higher release years, additional water would be added equally to each month, subject to an 18,000-cfs maximum.

4 for an 8.23-maf year, steady flow would be about 11,400 cfs.

5 Maximums represent normal or routine limits and may necessarily be exceeded during high water years.

6 Daily fluctuation limit of 5,000 cfs for monthly release volumes less than 600,000 acre-feet; 6,000 cfs for monthly release volumes of 600,000 to 800,000 acre-feet; and 8,000 cfs for monthly volumes over 800,000 acre-feet.

7 Adjustments would allow for small power system load changes.

between the draft and final EIS has neither been open for public review nor subjected to serious scientific scrutiny. These changes should have been addressed in the draft EIS and made available for public comment at that time. Credible proof, based on the testing of a specific scientific hypothesis, that alterations in operating procedures at Glen Canyon Dam follow the spirit and intent of the Grand Canyon Protection Act needs to be provided. The burden of proof that there will be no impact on downstream resources rests with those proposing changes.

RESPONSE: The modification of the preferred alternative, which incorporated changes in the upramp rate and maximum flows, was made after extensive public discussion. The new preferred alternative was discussed as an agenda item during the May, June, August, and November 1994 public meetings of the Cooperating Agencies who assisted in the development of the EIS. A wide range of public interest groups received advance mailings and agendas and were represented at the public meetings. The environmental groups attending these meetings included: America Outdoors, American Rivers, Desert Flycasters, Environmental Defense Fund, Friends of the River, Grand Canyon River Guides, Grand Canyon Trust, Sierra Club, and Trout Unlimited. Meeting logs indicate that representatives from at least some of these groups attended all but the May meeting. In addition, approximately 16,000 citizens received periodic newsletters throughout the EIS process. This included a newsletter outlining the proposed changes issued several months prior to the final EIS. The environmental groups mentioned above were included on the newsletter mailing list.

Reclamation's research and analysis has been thorough with regards to changes in flows and ramping rates and potential impacts upon downstream resources. A complete range of research flows was conducted from June 1990 to July 1991. These included high and low fluctuating flows with fast and slow up and down ramp rates. Glen Canyon Environmental Studies Phase II identified cause and effect relationships between downramp rates and adverse impacts to canyon resources. However, no cause and effect relationships between upramp rates and adverse impacts to canyon resources were identified. The draft EIS, (a public document peer reviewed by GCES and the EIS Cooperating Agencies) states that upramp rates have not been linked to sandbar erosion (page 95) and that "Rapid increases in river stage would have little or no effect on sandbars." (page 190).

With respect to potential impacts occurring with the change in flows, it should be noted that sand in the Grand Canyon is transported almost exclusively by river flows. The amount of sand transported increases exponentially with increases in river flow. Maintaining sandbars over the long term depends on the amount of sand supplied by tributaries, monthly release volumes, range of flow fluctuations, and the frequency and distribution of flood flows. Conversely, occasional flows between 20,000 and 25,000 cubic feet per second may cause minor beach building, and may provide water to riparian vegetation.

As part of the EIS, the effects of each alternative on long-term sand storage in Marble Canyon (river miles 0 to 61) were analyzed. The Marble Canyon reach was chosen for analysis because it is more sensitive to impacts from dam operations than downstream reaches. For each fluctuating flow alternative, the analysis used 20 years of hourly flow modeled by Spreck Rosekrans of the Environmental Defense Fund and 85 different hydrologic scenarios (each representing 50 years of

monthly flow data). This analysis was documented in the draft EIS on page 182, and Appendix D, pages 4-5. The analyses relating to the probability of net gain in riverbed sand for each alternative is documented in the draft EIS on pages 54-55, 184, 187, and 194.

Specific peer reviewed studies relating to the above analyses are listed in Attachment 1.

COMMENT: Do not change the upramp rate and maximum flow criteria at the same time. While acknowledging Reclamation's good efforts to identify and establish optimum operating criteria for all users of Glen Canyon Dam, changing two flow criteria (upramp rate and maximum flow criterion of preferred alternative) does not make prudent scientific sense. It will not result in reliable data. Not enough information is at hand to predict the outcome of these proposals.

RESPONSE: Viewed from the purely scientific viewpoint, it would be preferable to change variables one at a time in a controlled experiment. However, many uncontrolled variables already exist, and from a resource management standpoint the interest lies in measuring the possible resource impact, if any, which might result from jointly changing both criteria. The best available information suggests that the long-term impact of changing both criteria at once will be difficult, if not impossible to detect.

Even though both parameters would change, for 8 months of an 8.23 million acre foot year (minimum release year), only the upramp rate will be used. The ability to operationally exceed 20,000 cubic feet per second only exists in months in which releases are in excess of 900,000 acre feet. In a minimum release year, flows above 20,000 cubic feet per second will most likely occur in December, January, July, and August. Evaluation of the upramp rates can be initiated immediately with the evaluation of the increase in maximum flow relegated to the months with the highest volumes. New upramp and maximum flow criteria would be recommended through the Adaptive Management Program should monitoring results indicate that either of these criteria are resulting in adverse impacts to the natural, cultural, or recreational (human safety) resources of the Grand Canyon differing from those shown in the final EIS.

COMMENT: "Habitat/Beach Building Floods" designed to redeposit sediment and reshape the river's topography much like the Canyon's historic floods should be conducted.

An experimental release based on this premise is critical to restore some of the river's historic dynamics; without it, any flow regime will result in continued loss of beach and backwater habitat. This "spike" should be assessed and implemented for the spring of 1996, subject to a critical evaluation of its flow size, timing, impact on fisheries, and completion of a comprehensive monitoring plan. Recent side-canyon floods underscore the need for restoring natural processes.

RESPONSE: Reclamation and the Cooperating Agencies continue to support this concept. The preferred alternative supports such a flow regime. A test flow was conducted this spring. The results of this flow are currently being analyzed. We expect to conduct more of these flows in the future.

COMMENT: Endorse the Fish & Wildlife Service's Biological Opinion and implement

experimental steady flows to benefit native fishes, subject to the results of a risk/benefit analysis now in progress.

RESPONSE: The preferred alternative provides for experimental steady flows through the Adaptive Management Program for the reasons put forth in the Biological Opinion.

COMMENT: Fund and implement immediately an Adaptive Management Program. This is the appropriate forum to address important issues. It is imperative that resource management rely on good science to monitor, and respond to possible adverse effects resulting from changes in dam operations.

RESPONSE: The preferred alternative provides for implementation of an Adaptive Management Program.

COMMENT: Interior Secretary Babbitt should issue a Record of Decision by December 31, 1995, and conduct an efficient and timely audit by the General Accounting Office as mandated by the Grand Canyon Protection Act.

RESPONSE: In compliance with the Grand Canyon Protection Act, Interior Secretary Babbitt could not issue the Record of Decision until considering the findings of the General Accounting Office. Those findings were issued on October 2, 1996.

OTHER COMMENTS: Another set of comments were received from municipalities and other power user groups. These letters made up about 3 percent of the total received and were essentially identical in content. Although the authors were not totally in agreement with the preferred alternative because of the reduction in peaking power, they believe it is a workable compromise. These letters characterized the final EIS as ". . . a model for resolving complex environmental issues among divergent interests." They also urged the government to protect the integrity of the process, resist efforts to overturn the FEIS, and allow the scientists' assessment to stand, in as much as the Adaptive Management Process will give Reclamation an opportunity to evaluate the effects of operational changes over time and make modifications according to scientific findings.

RESPONSE: While the preferred alternative may not satisfy all interests, Reclamation believes it is a workable compromise and meets the two criteria set out in the EIS for the reoperation of the dam, namely restoring downstream resources and maintaining hydropower capability and flexibility.

A letter of comment from the Environmental Protection Agency (EPA) indicates that EPA's comments on the draft EIS were adequately addressed in the final EIS. It also expresses their support for the preferred alternative.

Samples of the comment letters and cards, and a copy of EPA's comment letter are included as Attachment 2.

VI. ENVIRONMENTAL COMMITMENTS AND MONITORING

The following environmental and monitoring commitments will be carried out under the preferred alternative or any of the other restricted fluctuating or steady flow alternatives described in the final EIS. A detailed description of these commitments can be found on pages 33 - 43 of that document. All practicable means to avoid or minimize environmental harm from the preferred alternative have been adopted.

1. Adaptive Management: This commitment includes the establishment of an Adaptive Management Workgroup, chartered in accordance with the Federal Advisory Committee Act; and development of a long-term monitoring, research, and experimental program which could result in some additional operational changes. However, any operational changes will be carried out in compliance with NEPA.

2. Monitoring and Protection of Cultural Resources: Cultural sites in Glen and Grand Canyons include prehistoric and historic sites and Native American traditional use and sacred sites. Some of these sites may erode in the future under any EIS alternative, including the no action alternative. Reclamation and the National Park Service, in consultation with Native American Tribes, will develop and implement a long-term monitoring program for these sites. Any necessary mitigation will be carried out according to a programmatic agreement written in compliance with the National Historic Preservation Act. This agreement is included as Attachment 5 in the final EIS.

3. Flood Frequency Reduction Measures: Under this commitment, the frequency of unanticipated floods in excess of 45,000 cubic feet per second will be reduced to an average of once in 100 years. This will be accomplished initially through the Annual Operating Plan process and eventually by raising the height of the spillway gates at Glen Canyon Dam 4.5 feet.

4. Beach/Habitat-Building Flows: Under certain conditions, steady flows in excess of a given alternative's maximum will be scheduled in the spring for periods ranging from 1 to 2 weeks. Scheduling, duration, and flow magnitude will be recommended by the Adaptive Management Work Group and scheduled through the Annual Operating Plan process. The objectives of these flows are to deposit sediment at high elevations, re-form backwater channels, deposit nutrients, restore some of the natural system dynamics along the river corridor, and help the National Park Service manage riparian habitats.

5. New Population of Humpback Chub: In consultation with the U.S. Fish and Wildlife Service (FWS), National Park Service, and Arizona Game and Fish Department (AGFD), Reclamation will make every effort (through funding, facilitating, and technical support) to ensure that a new population of humpback chub is established in the mainstem or one or more of the tributaries within Grand Canyon.

6. Further Study of Selective Withdrawal: Reclamation will aggressively pursue and support research on the effects of multilevel intake structures at Glen Canyon Dam and use the results of this research to decide whether or not to pursue construction. FWS, in consultation with AGFD,

will be responsible for recommending to Reclamation whether or not selective withdrawal should be implemented at Glen Canyon Dam. Reclamation will be responsible for design, NEPA compliance, permits, construction, operation, and maintenance.

7. Emergency Exception Criteria: Operating criteria have been established to allow the Western Area Power Administration to respond to various emergency situations in accordance with their obligations to the North American Electric Reliability Council. This commitment also provides for exceptions to a given alternative's operating criteria during search and rescue situations, special studies and monitoring, dam and power plant maintenance, and spinning reserves.

VII. BASIS FOR DECISION

The goal of selecting a preferred alternative was not to maximize benefits for the most resources, but rather to find an alternative dam operating plan that would permit recovery and long-term sustainability of downstream resources while limiting hydropower capability and flexibility only to the extent necessary to achieve recovery and long-term sustainability.

Based on the impact analysis described in the final EIS, three of the alternatives are considered to be environmentally preferable. They are: the Moderate Fluctuating Flow Alternative, the Modified Low Fluctuating Flow Alternative, and the Seasonally Adjusted Steady Flow Alternative. Modified Low Fluctuating Flow is selected for implementation because it satisfies the critical needs for sediment resources and some of the habitat needs of native fish, benefits the remaining resources, and allows for future hydropower flexibility, although there would be moderate to potentially major adverse impacts on power operations and possible decreases in long-term firm power marketing. Nearly all downstream resources are dependent to some extent on the sediment resource. This alternative meets the critical requirements of the sediment resource by restoring some of the pre-dam variability through floods and by providing a long-term balance between the supply of sand from Grand Canyon tributaries and the sand-transport capacity of the river. This, in turn, benefits the maintenance of habitat. The critical requirements for native fish are met by pursuing a strategy of warming releases from Glen Canyon Dam, enhancing the sediment resource, and substantially limiting the daily flow fluctuations.

The decision process for selecting the preferred alternative for the EIS followed a repetitive sequence of comparisons of effects on downstream resources resulting from each alternative. Alternatives resulting in unacceptable adverse effects on resources (such as long-term loss of sandbars leading to the destruction of cultural resource sites and wildlife habitat) were eliminated from further comparisons. Comparisons continued until existing data were no longer available to support assumed benefits.

All resources were evaluated in terms of both positive and adverse effects from proposed alternatives. Once it was determined that all alternatives would deliver at least 8.23 million acre feet of water annually, water supply played a minor role in subsequent resource evaluations. (One of the objectives of the "Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs" is a minimum annual release of 8.23 million acre feet of water from Glen Canyon

Dam.) The alternatives covered a range of possible dam operations from maximum utilization of peaking power capabilities with large daily changes in downstream river levels (Maximum Powerplant Capacity Alternative) to the Year-Round Steady Flow Alternative that would have eliminated all river fluctuations and peaking power capabilities. Within this range, the Maximum Powerplant Capacity, No Action, and High Fluctuating Flow alternatives were eliminated from consideration as the preferred alternative because they would not meet the first criterion of resource recovery and long-term sustainability. Data indicated that while beneficial to hydropower production, these alternatives would either increase or maintain conditions that resulted in adverse impacts to downstream resources under no action. For example, under these alternatives, the sediment resource would not likely be maintained over the long-term.

At the other end of the range, the Year-Round Steady Flow Alternative was also eliminated from consideration as the preferred alternative. This alternative would result in the greatest storage of sand within the river channel, the lowest elevation sandbars, the largest potential expansion of riparian vegetation, and the highest white-water boating safety benefits. However, it would not provide the variability on which the natural processes of the Grand Canyon are dependent (e.g. beach building, unvegetated sandbars, and backwater habitats). A completely stable flow regime would encourage the growth of vegetation thereby reducing bare-sand openings and patches of emergent marsh vegetation. This would limit beach camping and reduce the habitat value of these sites. With respect to other resources, this alternative did not provide any benefits beyond those already provided by other alternatives. Steady flows could also increase the interactions between native and non-native fish by intensifying competition and predation by non-natives on native fish. Such interactions would reach a level of concern under steady flows. Finally, this alternative would have major adverse impacts on hydropower (power operations and marketing).

The Existing Monthly Volume Steady Flow Alternative was eliminated from selection as the preferred alternative for reasons similar to those discussed above for the Year-Round Steady Flow Alternative.

Although the Interim Low Fluctuating Flow Alternative performed well over the interim period (August 1991 to the present), long-term implementation of this alternative would not restore some of the pre-dam variability in the natural system. The selected Modified Low Fluctuating Flow Alternative is an improved version of the Interim Low Fluctuating Flow Alternative because it would provide for some pre-dam variability through habitat maintenance flows.

The three remaining alternatives--the Moderate Fluctuating, Modified Low Fluctuating, and Seasonally Adjusted Steady Flow Alternatives-- provide similar benefits to most downstream resources (e.g., vegetation, terrestrial wildlife, and cultural resources) with respect to increased protection or improvement of those resources (see Table 11-7 in the EIS). The Moderate Fluctuating Flow Alternative provided only minor benefits to native fish over no action conditions because of the relative similarity in flow fluctuations; and the benefits from the Seasonally Adjusted Steady Flow Alternative were uncertain given the improvement in habitat conditions for non-native fish this alternative would provide. Seasonally adjusted steady flows also would create conditions significantly different from those under which the current aquatic ecosystem has developed in the last 30 years and would adversely affect hydropower to a greater extent than the

other two alternatives. The Modified Low Fluctuating Flow could substantially improve the aquatic food base and benefit native and non-native fish. The potential exists for a minor increase in the native fish population.

Although the Moderate Fluctuating, Modified Low Fluctuating, and Seasonally Adjusted Steady Flow Alternatives provide similar benefits to most downstream resources, the Modified Low Fluctuating Flow Alternative was selected as the preferred alternative because it would provide the most benefits with respect to the original selection criteria, given existing information. This alternative would create conditions that promote the protection and improvement of downstream resources while maintaining some flexibility in hydropower production. Although there would be a significant loss of hydropower benefits due to the selection of the preferred alternative (between V 5. 1 and \$44.2 million annually) a recently completed non-use value study conducted under the Glen Canyon Environmental Studies indicates that the American people are willing to pay much more than this loss to maintain a healthy ecosystem in the Grand Canyon. The results of this nonuse value study are summarized in Attachment 3 of the ROD.

The results of a General Accounting Office (GAO) audit mandated by the Grand Canyon Protection Act are in Attachment 4 of the ROD. This audit generally concludes that Reclamation used appropriate methodologies and the best available information in determining the potential impact of various dam flow alternatives on important resources. However, GAO identified some shortcomings in the application of certain methodologies and data, particularly with respect to the hydropower analysis. Reclamation's assumptions do not explicitly include the mitigating effect of higher electricity prices on electricity demand (price elasticity). GAO also determined that Reclamation's assumptions about natural gas prices were relatively high and that two computational errors were made during the third phase of the power analysis. According to GAO, these limitations suggest that the estimated economic impacts for power are subject to uncertainty. GAO also found limitations with some of the data used for impact analysis. Certain data was incomplete or outdated, particularly data used in assessing the economic impact of alternative flows on recreational activities. Nevertheless, the National Research Council peer reviewed both the Glen Canyon Environmental Studies and the EIS, and generally found the analysis to be adequate. The GAO audit concluded that these shortcomings and limitations are not significant and would not likely alter the findings with respect to the preferred alternative and usefulness of the document in the decision-making process. The audit also determined that most of the key parties (83 percent of respondents) support Reclamation's preferred alternative for dam operations, although some concerns remain.

Appendix 36: Record of Decision - Operation of Glen Canyon Dam (w/o attachments) (1996)

The full text of this Record of Decision, together with Attachments 1-4, appears among the supplemental documents on the DVD included with this volume.

Commission Act that a meeting of the Jimmy Carter National Historic Site Advisory Commission will be held at 8:30 a.m. to 4:00 p.m. at the following location and date.

DATES: March 20–21, 1997.

LOCATION: The Carter Presidential Library, One Coppenhill, Atlanta, Georgia 30303.

FOR FURTHER INFORMATION CONTACT:

Mr. Fred Boyles, Superintendent, Jimmy Carter National Historic Site, Route 1 Box 800, Andersonville, Georgia 31711, (912) 924-0343.

SUPPLEMENTARY INFORMATION: The purpose of the Jimmy Carter National Historic Site Advisory Commission is to advise the Secretary of the Interior or his designee on achieving balanced and accurate interpretation of the Jimmy Carter National Historic Site.

The members of the Advisory Commission are as follows:

Dr. Steven Hochman

Dr. James Sterling Young

Dr. Donald B. Schewe

Dr. Henry King Stanford

Dr. Barbara Fields, Director, National Park Service, Ex-Officio member

The matters to be discussed at this meeting include the status of park development and planning activities. This meeting will be open to the public. However, facilities and space for accommodating members of the public are limited. Any member of the public may file with the commission a written statement concerning the matters to be discussed. Written statements may also be submitted to the Superintendent at the address above. Minutes of the meeting will be available at Park Headquarters for public inspection approximately 4 weeks after the meeting.

Dated: February 24, 1997.

Daniel W. Brown,

Acting Regional Director, Southeast Region.

[FR Doc. 97-5133 Filed 2-28-97; 8:45 am]

BILLING CODE 4310-70-M

Agenda for the February 12, 1997 Public Meeting for the Advisory Commission for the San Francisco Maritime National Historical Park; Public Meeting, Fort Mason Center, Building F, 10:00 AM–12:30 PM

10:00 AM Welcome—Neil Chaitin, Chairman

Opening Remarks—Neil Chaitin, Chairman, William G. Thomas, Superintendent

Approval of Minutes—October 17, 1996 meeting

10:15 AM Update—General Management Plan, William G. Thomas, Superintendent

10:35 AM Review—Programmatic Agreement between the Park, the State Historic Preservation Officer, and the Advisory Council on Historic Preservation, regarding historical compliance issues within the Draft General Management Plan of 1996. Stephen Canright, Curator of History and/or Frank Willis, Denver Service Center.

11:05 AM Update—Haslett Warehouse Building Plan, William G. Thomas, Superintendent

11:20 AM Status—Condition of Ships/Inspection Procedures, Wayne Boykin, Ships Manager

WAPAMA—Condition Status, Wayne Boykin, Ships Manager
—Army Corps of Engineers, Bay Model Visitor Center, Status of Docking Agreement, William G. Thomas, Superintendent, Representative, Army Corps of Engineers

12:00 PM Public comments and questions

12:15 PM Election of Officers

12:30 PM Agenda items/Date for next meeting

12:45 PM Adjournment

William G. Thomas,

Superintendent.

[FR Doc. 97-5134 Filed 2-28-97; 8:45 am]

BILLING CODE 4310-70-P

Bureau of Reclamation

Operating Criteria and 1997 Annual Plan of Operations for Glen Canyon Dam

AGENCY: Bureau of Reclamation, Interior.

ACTION: Adoption of operating criteria and 1997 annual plan of operations.

SUMMARY: Pursuant to the Grand Canyon Protection Act of 1992, the Bureau of Reclamation (Reclamation) is required to prepare formal Operating Criteria and an Annual Plan of Operations following completion of an audit by the General Accounting Office (GAO) and the Record of Decision (ROD) on the Operation of Glen Canyon Dam. The GAO audit was completed on October 2, 1996, and the Glen Canyon Dam Operation ROD was signed on October 9, 1996. Draft copies of the proposed Operating Criteria and the 1997 Annual Plan of Operations were distributed to Governors of the Colorado River Basin States, the Upper Colorado River Commission, appropriate Federal agencies, Indian Tribes, representatives

of academic and scientific communities, environmental organizations, the recreation industry, contractors for the purchase of federal power produced at Glen Canyon Dam, and others interested in Colorado River operations.

FOR FURTHER INFORMATION CONTACT: Mr. Bruce Moore, Bureau of Reclamation, 125 South State Street, Room 6107, Salt Lake City, Utah 84138-1102; telephone: 801-524-3702.

SUPPLEMENTARY INFORMATION: The Operating Criteria specify the requirements for an annual report of operations under the Grand Canyon Protection Act, a periodic review of Operating Criteria, and details regarding operational constraints. These constraints include maximum, minimum, and daily fluctuation flow rates, maximum ramp rates, emergency exception criteria, flood frequency reduction measures, habit maintenance flows, and beach/habitat building flows.

The 1997 Annual Plan of Operations reflects the operation of Glen Canyon Dam consistent with the Operating Criteria. Monthly releases are expected to vary between 600,000 acre-feet and 1,500,000 acre-feet and daily fluctuations will likely vary between 6,000 cfs/day and 8,000 cfs/day depending on monthly release volumes. The revised maximum daily flow rate of 25,000 cfs and the maximum upramp rate of 4,000 cfs/hr. will be placed into effect following signing of these documents by the Secretary of the Interior. The following paragraphs contain the final text of the Operating Criteria and the 1997 Plan of Operations for Glen Canyon Dam.

Operating Criteria: These Operating Criteria are promulgated according to section 1804 of Public Law 102-575, the Grand Canyon Protection Act of 1992. They are to control the operation of Glen Canyon Dam, constructed under the authority of the Colorado River Storage Project Act. These Operating Criteria are separate and apart from the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs prepared according to the Colorado River Basin Project Act of 1968.

1. Annual Report: As required in the Grand Canyon Protection Act, a report shall be prepared and submitted to Congress annually. This report will describe the operation of Glen Canyon Dam for the preceding water year and the expected operation for the upcoming water year. The annual plan of operations shall include such detailed rules and quantities as are required by the Operating Criteria contained herein. It shall provide a detailed explanation of the expected hydrologic conditions for

the Colorado River immediately below Glen Canyon Dam.

2. Review of Criteria: The Secretary of the Interior shall review these Operating Criteria as the result of actual operating experiences to determine if the Operating Criteria should be modified to better accomplish the purposes of the Grand Canyon Protection Act. Such a review shall be made at least every 5 years in consultation with the appropriate Federal agencies, Governors of the Colorado River Basin States, Indian Tribes, representatives of academic and scientific communities, environmental organizations, the recreation industry and contractors for the purchase of Federal power produced at Glen Canyon Dam.

3. Specific Operational Constraints: The plan of operations will follow the description of the preferred alternative (Modified Low Fluctuating Flow) in the Operation of Glen Canyon Dam Final Environmental Impact Statement and its Record of Decision. The specific criteria are as follows:

Minimum Releases—8,000 cfs between 7 a.m. and 7 p.m. and 5,000 cfs at night.

Maximum Releases—25,000 cfs. Several circumstances warrant exception to this restriction. These are the Beach/Habitat Building Flows and the Habitat Maintenance Flows (both described below) and the release of large volumes of water to avoid spills or floodflow releases from Glen Canyon Dam. These latter releases would most likely result from high snowmelt runoff into Lake Powell; if such high releases above 25,000 cfs are required, they shall be made at constant daily flow rates.

Allowable Daily Flow Fluctuations—5,000 cfs/24 hours for monthly release volumes less than 600,000 acre feet; 6,000 cfs/24 hours for monthly release volumes of 600,000 to 800,000 acre feet; and 8,000 cfs/24 hours for monthly release volumes over 800,000 acre feet.

Maximum Ramp Rates—4,000 cfs/hour when increasing, and 1,500 cfs/hour when decreasing.

Emergency Exception Criteria—Normal powerplant operations will be altered temporarily to respond to emergencies. These changes in operations typically would be of short duration (usually less than 4 hours) and would be the result of emergencies at the dam or within the interconnected electrical system. Examples of system emergencies include:

- Insufficient generating capacity.
- Transmission system; overload, voltage control, and frequency.

- System restoration.
- Humanitarian situations (Search and rescue).

Flood Frequency Reduction Measures—The frequency of unanticipated flood flows in excess of 45,000 cfs will be reduced to no more than 1 year in 100 years as a long-term average. This will be accomplished initially through the Annual Operating Plan process and eventually by raising the height of the spillway gates at Glen Canyon Dam 4.5 feet.

Habitat Maintenance Flows—Habitat maintenance flows are high, steady releases within powerplant capacity (33,200 cfs) not to exceed 14 days in March, although other months will be considered under the Adaptive Management Program. Actual powerplant release capacity may be less 33,200 cfs under low reservoir conditions. These flows will not be scheduled when projected storage in Lake Powell on January 1 is greater than 19,000,000 acre feet, and typically would occur when annual releases are at or near the minimum objective release of 8,230,000 acre-feet. Habitat maintenance flows differ from beach/habitat-building flows because they will be within powerplant capacity, and will occur nearly every year when the reservoir is low.

Beach/Habitat-Building Flows—These controlled floods will occur as described in the EIS (steady flow not to exceed 45,000 cfs, duration not to exceed 14 days, up-ramp rates not to exceed 4,000 cfs/hours, and down-ramp rates not to exceed 1,500 cfs/hour) except instead of conducting them in years in which Lake Powell storage is low on January 1, they will be accomplished by utilizing reservoir releases in excess of powerplant capacity required for dam safety purposes. Such releases are consistent with the 1956 Colorado River Storage Project Act, the 1968 Colorado River Basin Project Act, and the 1992 Grand Canyon Protection Act.

1997 Annual Plan of Operations: Under the most probable inflow conditions in water year 1997, Glen Canyon Dam is expected to release about 14.1 million acre-feet through the Grand Canyon to Lake Mead. This is about 5.9 million acre-feet greater than the minimum objective release and is the result of high snowpack conditions throughout the Colorado River basin. Lake Powell is expected to fill in July.

Monthly release volumes from Glen Canyon Dam during 1997 are expected

to range from 600,000 acre-feet to 1,500,000 acre-feet. Projected daily allowable fluctuations therefore will be 6,000 cfs or 8,000 cfs (see criteria). With the projected monthly release volumes, it is likely that peak daily releases will exceed 20,000 cfs during the months of February through July, when monthly release volumes are at their highest for the year. Minimum releases of 5,000 cfs at night and 8,000 cfs during the day and ramping rates of 4,000 cfs/hr increasing and 1,500 cfs/hr decreasing will be followed. All of the above is outlined in the Record of Decision implementing the preferred alternative of the Glen Canyon Dam Environmental Impact Statement.

With current projected monthly release volumes, daily releases will exceed 20,000 cfs during the months of February through July, when monthly release volumes are at their highest for the year. Releases above 25,000 cfs will be made as steady flows. Since there are concerns for possible modifications of the environmental restoration in the Grand Canyon accomplished last year with the beach/habitat building flow, monitoring of the impacts of this spring's releases will be an important objective of the Grand Canyon Monitoring and Research Center and may result in fluctuating flows to aid in this effort.

Every measure will be taken to prevent a powerplant bypass this spring in order to preserve the environmental enhancement accomplished by the beach/habitat building flow test in April 1996. Water year 1997 had a January 1, 1997, Lake Powell storage content greater than 19 million acre-feet; therefore a beach/habitat maintenance flow of powerplant capacity is not planned.

This plan is prepared in conformance with Section 1804(c)(1)(A) of the GCPA. Any changes to the plan would require reconsultation in accordance with this Act.

The draft Operating Criteria and the 1997 Annual Plan of Operations were discussed at a consultation meeting held on November 21, 1996, with the Transition Work Group, which includes many of the same people who received draft copies.

Dated: February 14, 1997.

Eluid L. Martinez,

Commissioner, Bureau of Reclamation.

[FR Doc. 97-5144 Filed 2-28-97; 8:45 am]

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RECLAMATION

Managing Water in the West

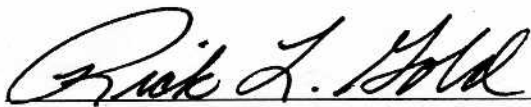
Record of Decision

Operation of Flaming Gorge Dam

Final Environmental Impact Statement

February, 2006

Approved



Director, Upper Colorado Region

2-16-06

Date

**Record of Decision
Operation of Flaming Gorge Dam
Final Environmental Impact Statement**

I. Summary of Action and Background

The Bureau of Reclamation (Reclamation) has completed a final environmental impact statement (EIS) on the operation of Flaming Gorge Dam. The EIS describes the potential effects of modifying the operation of Flaming Gorge Dam to assist in the recovery of four endangered fish, and their critical habitat, downstream from the dam. The four endangered fish species are Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), razorback sucker (*Xyrauchen texanus*), and bonytail (*Gila elegans*). Reclamation would implement the proposed action by modifying the operations of Flaming Gorge Dam, to the extent possible, to achieve the flows and temperatures recommended by participants of the Upper Colorado River Endangered Fish Recovery Program (Recovery Program). Reclamation's goal is to implement the proposed action and, at the same time, maintain and continue all authorized purposes of the Colorado River Storage Project.

The purpose of the proposed action is to operate Flaming Gorge Dam to protect and assist in recovery of the populations and designated critical habitat of the four endangered fishes, while maintaining all authorized purposes of the Flaming Gorge Unit of the Colorado River Storage Project (CRSP), including those related to the development of water resources in accordance with the Colorado River Compact.

As the Federal agency responsible for the operation of Flaming Gorge Dam, Reclamation was the lead agency in preparing the EIS. Eight cooperating agencies also participated in preparing this EIS: the Bureau of Indian Affairs (BIA), Bureau of Land Management, National Park Service, State of Utah Department of Natural Resources, U.S. Fish and Wildlife Service, United States Department of Agriculture Forest Service, Utah Associated Municipal Power Systems, and Western Area Power Administration (Western).

The EIS was prepared pursuant to the National Environmental Policy Act of 1969 (NEPA), as amended; the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508); the Department of the Interior's NEPA Implementing Procedures (516 DM 1-15); and Reclamation's NEPA Handbook.

Flaming Gorge Dam, located on the Green River in northeastern Utah about 200 miles east of Salt Lake City, is an authorized storage unit of the CRSP. Flaming Gorge Dam was completed in 1962 and full operation of the dam and reservoir began in 1967. The powerplant, located at the base of the dam, began commercial operation in 1963 and was

completed in 1964. Reclamation operates the dam and powerplant and Western markets the power.

The EIS describes and analyzes the potential effects of two alternatives. Under the No Action Alternative, operations under the conditions imposed by the 1992 Biological Opinion would continue. Under the Action Alternative, operations would be in accordance with the flow and temperature regimes described in the *Flow and Temperature Recommendations for Endangered Fish in the Green River Downstream of Flaming Gorge Dam* (2000 Flow and Temperature Recommendations) which were designed, developed, and published by the Upper Colorado River Endangered Fish Recovery Program (Recovery Program).

II. Reclamation's Decision

It is the decision of the Bureau of Reclamation (Reclamation) to select the Action Alternative as presented in the Operation of Flaming Gorge Dam Final Environmental Impact Statement (EIS) issued on November 15, 2005. In making this decision, Reclamation has reviewed the alternatives and their predicted environmental, economic, and social impacts, and considered the comments submitted by the interested public. This decision includes the potential for refinement of the flow and temperature recommendations if relevant new information gained through adaptive management supports that possibility.

III. Alternatives Considered in the Final EIS

No Action Alternative – Under the No Action Alternative, Flaming Gorge Dam would be operated to achieve the flow and temperature regimes recommended in the 1992 Biological Opinion. These flows were intended to mimic a more natural hydrograph than occurred under previous dam operations and to protect nursery habitats of endangered fishes downstream from the Green and Yampa River confluence.

Under normal operations, reservoir releases through Flaming Gorge Powerplant range from 800 to 4,600 cfs. These flows adhere to the interim operating criteria for Flaming Gorge Dam established by Reclamation in September 1974. Under these criteria, Reclamation agreed to provide (1) a minimum flow of 400 cfs at all times, (2) flows of 800 cfs under normal conditions and for the foreseeable future, and (3) flows exceeding 800 cfs when compatible with multipurpose operations of all CRSP reservoirs.

Temperature requirements under the No Action Alternative, specified in the Reasonable and Prudent Alternative of the 1992 Biological Opinion (page 30), include the following:

Releases from Flaming Gorge beginning July 1 and continuing until November 1 should be of the warmest water available, approaching 59 degrees F (15 degrees C) (highest lake levels). By releasing the warmest water available during this period, water temperatures in the upper Green River should not differ more than 9 degrees F (5 degrees C) in the Yampa River at Echo Park and should average

near 72-77 degrees F (22-25 degrees C) in Gray Canyon from July 1 to August 15.

Action Alternative – Under the Action Alternative, releases from Flaming Gorge Dam would be patterned so that the peak flows, durations, and base flows and temperatures, described in the 2000 Flow and Temperature Recommendations for Reaches 1, 2, and 3 of the Green River, would be achieved to the extent possible.

- Reach 1 begins at Flaming Gorge Dam and extends 65 river miles to the confluence of the Green and Yampa Rivers. In this reach, the Green River extends 25 miles to the Colorado border and meanders about 10 river miles into northwestern Colorado and then flows southward for about 30 river miles. This reach is almost entirely regulated by releases from Flaming Gorge Dam.
- Reach 2 begins at the confluence of the Green and Yampa Rivers in Colorado and extends 99 river miles southwest to the White River confluence near Ouray, Uintah County, Utah. In this reach, tributary flows from the Yampa River combine with releases from Flaming Gorge Dam to provide a less regulated flow regime than in Reach 1.
- Reach 3 begins at the confluence of the Green and White Rivers and extends 246 river miles south to the confluence of the Green and Colorado Rivers in Canyonlands National Park at the boundary of Wayne and San Juan Counties in southeastern Utah. In this reach, the Green River is further influenced by tributary flows from the White, Duchesne, Price, and San Rafael Rivers.

Table 2 on page 25 of the EIS shows a summary of the recommended spring peak and summer-to-winter base flows from the 2000 Flow and Temperature Recommendations report for all three reaches of the Green River. Under the Action Alternative, Flaming Gorge Dam would be operated with the goal of achieving the 2000 Flow and Temperature Recommendations, while maintaining and continuing all authorized purposes of Flaming Gorge Dam and Reservoir.

The 2000 Flow and Temperature Recommendations for each reach are not integrated in such a way that a particular release from Flaming Gorge Dam could equally achieve the recommendations for all reaches simultaneously. The intent of the Action Alternative is first to meet the 2000 Flow and Temperature Recommendations for Reach 2 by timing releases to supplement the larger Yampa River spring peak flows and then, if necessary, make adjustments to releases so that the 2000 Flow and Temperature Recommendations for Reach 1 could also be met. The Flaming Gorge Model assumes that the 2000 Flow and Temperature objectives in Reach 3 are met whenever the flow objectives are met in Reach 2.

The 2000 Flow and Temperature Recommendations focus primarily on the flow regimes in Reaches 2 and 3, which include flows from the Yampa River. However, since these river flow criteria are based solely on upper Green River hydrology, the 2000 Flow and Temperature Recommendations in Reaches 1 and 2 would most likely be achieved to varying degrees. For example, in years when the upper Green River Basin is wetter than the Yampa River Basin, meeting the 2000 Flow and Temperature Recommendations in

Reaches 2 and 3 would most likely exceed the minimum target for the peak flow recommendations for Reach 1.

Conversely, if the Yampa River Basin is wetter than the upper Green River Basin, meeting the 2000 Flow and Temperature Recommendations for Reaches 2 and 3 could result in falling short of the peak flow target for Reach 1. Under this scenario, the Action Alternative might require Flaming Gorge Dam releases to be increased so that the 2000 Flow and Temperature Recommendations in Reach 1 could also be met. Flows in Reaches 2 and 3 would then exceed their respective minimum 2000 Flow and Temperature Recommendations. Since only one release pattern can be selected each year, depending upon how water is distributed between the upper Green River and Yampa River Basins, each reach would achieve or exceed its respective minimum 2000 Flow and Temperature Recommendations to varying degrees.

Each year, Reclamation would work closely with the U.S. Fish and Wildlife Service and Western in developing a flow regime consistent with the 2000 Flow and Temperature Recommendations and CRSP purposes and would also consider input from the Flaming Gorge Working Group meetings. The overall effectiveness of implementing the Action Alternative would be measured by the long-term frequency of achieving flow thresholds described in the 2000 Flow and Temperature Recommendations. Consideration would be given to hydrologic conditions, operational limitations, past operational conditions, and the overall health of the endangered fish downstream from the dam. An administrative record of the operational decisionmaking would be maintained and available to the public. This record would include analysis of previous operations and the effectiveness of achieving desired targets on a year-by-year basis.

Water release temperatures at the dam would be regulated with the objective of achieving target temperatures for upper Lodore Canyon and the confluence of the Yampa and Green Rivers during the first 2 to 5 weeks of the base flow period and/or when Colorado pikeminnow larvae are present at this confluence.

Normal powerplant operations would continue to be adjusted on a daily basis to meet power system needs. Normal dam and powerplant operations would be altered temporarily to respond to emergencies. These emergencies may be associated with dam safety, power system conditions, or personal safety of individuals or groups associated with recreation or other activities on the river.

IV. Environmentally Preferable Alternative

The analyses in the EIS show the Action Alternative to be the environmentally preferable alternative. In comparison to the No Action Alternative, the Action Alternative is predicted to have a greater benefit for the four endangered fish species as well as the riverine community and riparian corridor which have declined in overall health and condition since the construction of Flaming Gorge Dam. In addition, fish communities in Flaming Gorge Reservoir, particularly kokanee salmon, are predicted to benefit from a decrease in reservoir fluctuations.

V. Basis For Decision

The Action Alternative is selected for implementation because it best meets purpose and need, is the environmentally preferable alternative, and when compared to the No Action Alternative, does not result in unacceptable adverse impacts.

The following paragraphs describe the Department of the Interior's basis and authority for this decision and clarify language in the final EIS, particularly Section 1.4.1.1. The authority to implement an operations regime that is consistent with the 2000 Flow and Temperature Recommendations is found in section 1 of CRSPA. This section states:

In order to initiate the comprehensive development of the water resources of the Upper Colorado River Basin, for the purposes, among others, of regulating the flow of the Colorado River, storing water for beneficial consumptive use, making it possible for states of the Upper Basin to utilize, consistently with the provisions of the Colorado River Compact, the apportionments made to and among them in the Colorado River Compact and the Upper Colorado River Basin Compact, respectively, providing for the Reclamation of arid and semi-arid land, for the control of floods and for the generation of hydroelectric power, as an incident to the foregoing purposes, the Secretary of the Interior is hereby authorized (1) to construct, operate, and maintain the following initial units of the Colorado River storage project, consisting of dams, reservoirs, powerplants, transmission facilities and appurtenant works [including] Flaming Gorge. . .

The Colorado River Compact of 1922 established an upper basin and a lower basin within the Colorado River system and apportioned the exclusive beneficial consumptive use of Colorado River water in perpetuity to the Upper and Lower Basins. The Upper Colorado River Basin Compact of 1948 apportioned the Upper Basin's share of the Colorado River system among the states of Colorado, Utah, Arizona, Wyoming and New Mexico. CRSPA was enacted in 1956 to facilitate the development of the water and power resources of the Upper Basin consistent with the Compacts.

The Upper Colorado River Endangered Fish Recovery Program (Recovery Program) was developed in response to the request of Colorado, Wyoming, and Utah to facilitate the continued development of their Compact apportionments in light of Endangered Species Act concerns. The goal of the Recovery Program, therefore, is to recover the listed species of the Upper Colorado River to the point of de-listing, while allowing for the continued operation and development of the water resources of the Upper Colorado River Basin. All Recovery Program participants have signaled their agreement with the principles and goals of the Recovery Program through their participation and support in Recovery Program activities.¹ In addition to its recovery objectives, the Recovery program also includes an ESA Section 7 agreement, wherein program actions and

¹ Final Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin, U.S. Fish and Wildlife Service, Sept. 29, 1989, pp. 1-1 and January 1988 Cooperative Agreement for the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin, including 2001 extension through Sept. 30, 2013.

sufficient progress toward recovery constitute a Reasonable and Prudent Alternative for those existing and future water depletion activities that may jeopardize the continued existence of endangered species or cause the destruction or adverse modification of critical habitat of those species.

Implementation of the Recovery Program's 2000 Flow and Temperature Recommendations, in concert with other Recovery Program actions, is intended to avoid jeopardy and assist in recovery. By implementing the 2000 Flow and Temperature Recommendations, Reclamation is taking the steps necessary to avoid jeopardizing the continued existence of the endangered species from the operation of Flaming Gorge Dam and to voluntarily and cooperatively take steps to facilitate recovery of the fish, which, in turn, will support the continued and further utilization of the Federal facilities to aid in the development of the states' Compact apportionments. Thus, consistent with the authorized purposes of CRSPA, implementation of the 2000 Flow and Temperature Recommendations supports the States of the Upper Basin in the utilization of their Compact apportionment while assisting in the recovery of endangered species. Moreover, that specific authorized purposes of the Unit may not be fully maximized for limited durations in certain year types does not invalidate the actions of the Secretary, as long as the overall purposes of CRSPA are met. And we expect in this instance, these purposes will be met.

This action is limited to the proposition that avoiding jeopardy and making progress toward recovery of listed fish facilitate the ability of the Upper Basin states to continue utilizing and further develop their Colorado River apportionments. It is not a decision that reads CRSPA as generally authorizing the release of water for fish and wildlife purposes. In these particular and unique circumstances, therefore, we conclude the implementation of an operations regime that is consistent with the 2000 Flow and Temperature Recommendations is deemed to be within the authorization contained in section 1 of CRSPA. Reference to the 1968 Colorado River Basin Project Act language in Section 1.4.1.1 of the final EIS neither claims nor provides authority in implementing the proposed action, but is included to inform the public that consideration of fish and wildlife purposes is required under the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs.

The EIS shows that the negative effects of the Action Alternative are minimal and insignificant and that there is considerable potential to further reduce undesirable effects through adaptive management. In particular, the hydrology analysis shows that the greatest potential for negative effects to several resources, including land use, recreation, mosquito control, and power generation are associated with one particular flow recommendation, specifically a spring peak release of at least 18,600 cubic feet per second (cfs) in Reach 2 for two weeks or more in at least one of four average hydrological years. Reclamation recognizes that the 2000 Flow and Temperature Recommendations represent the best available science and affirms its intent to meet those recommendations to the extent possible. At the same time, because of the potential economic effects of powerplant bypasses, Reclamation intends to work through the Upper Colorado Endangered Fish Recovery Program, along with the cooperating

agencies on the EIS and the interested public, to assess the possibility of improving connectivity of floodplain habitats, identifying ways to improve entrainment of larval razorback suckers into floodplain habitats, maintain the river channel, restore natural variability of the river system, and meet other goals of the Flow and Temperature Recommendations at lower peak flow levels where feasible. Such additional knowledge gained through the adaptive management process may result in future refinement of the 2000 Flow and Temperature Recommendations that would maintain or improve conditions for the four endangered fish species while minimizing negative effects to the authorized purposes of Flaming Gorge Dam.

VI. Summary of Comments Received on the Final EIS

Reclamation has received 17 comment letters since the final EIS was published. Several of these letters were received after the 30-day waiting period ended on December 27, 2005, but were nevertheless reviewed prior to finalizing the Record of Decision. No new issues were raised that would require further analysis in the EIS.

This Record of Decision has been edited for clarity in response to comments received on the final EIS. Conflicting opinions were expressed on the authority to implement the proposed action, as well as on the purpose of the technical working group.

Concern was expressed that a technical working group, as recommended by the 2000 Flow and Temperature Recommendations, might be duplicative of the efforts of the already established Flaming Gorge Working Group and Recovery Program. The purpose of a technical working group would be limited to proposing specific flow and temperature targets for each year's operations. This is the informal process that has historically occurred to propose dam operations each year during spring peak and base flow seasons. Reclamation, Western, and the U.S. Fish and Wildlife Service are specified as participants in this group because they are the three agencies involved in compliance with the Endangered Species Act. The Flaming Gorge Working Group remains the appropriate forum for addressing public input, other resource concerns or research flows. The Recovery Program remains the appropriate forum for discussion of endangered fish response to Flaming Gorge Dam operations and for identification of endangered fish research needs. The environmental commitments listed below clarify Reclamation's intentions in establishing this process.

VII. Environmental Commitments

- (1) The Flaming Gorge Working Group, which meets two times per year, will continue to function as a means of providing information to and gathering input from stakeholders and interested parties on dam operations.
- (2) The adaptive management process will rely on ongoing or added Recovery Program activities for monitoring and studies to test the outcomes of modifying the flows and release temperatures from Flaming Gorge Dam. It will rely on the Flaming Gorge Working Group meetings for exchange of information with the public.

(3) Reclamation will develop a process for operating the selective withdrawal structure consistent with the objective of improving temperature conditions for the endangered native fish. This process will include identification of lines of communication for planning and making changes to selective withdrawal release levels, coordination with other agencies, recognition of equipment limitations that may affect the ability to release warmer water, and the costs and equipment impacts associated with operating at higher temperatures.

(4) Reclamation will continue to annually coordinate the peak flow releases from Flaming Gorge Dam with the appropriate Federal, State, and county officials. This will include continued communication with county officials to assist in their mosquito control activities.

(5) As recommended by the Wyoming State Historic Preservation Office, Reclamation will periodically inspect eligible historic properties around Flaming Gorge Reservoir to determine whether there are any effects from the Action Alternative.

(6) Reclamation will consult with Federal, State, and local officials and the interested public to determine whether additional signage or other means of public notification of higher spring river flows are needed.

(7) A Ute ladies'-tresses recovery team geomorphology working group, consisting of the National Park Service, Reclamation, and several independent researchers, is currently in place. As part of Reclamation's efforts to monitor and understand the effects of the proposed action on Ute ladies'-tresses this group will be expanded to include interested Federal and State agency geomorphologists, riparian ecologists, and botanists who choose to participate on a voluntary basis. This group could assist in designing and implementing a monitoring program to gain additional knowledge about Ute ladies'-tresses. Reclamation will oversee the Ute ladies'-tresses working group and insure that the working group meets regularly to discuss and prioritize monitoring, assist with data interpretation, and prioritize any needed research. When appropriate, this working group will also provide recommendations to the technical working group discussed in item 10 below.

(8) Reclamation will continue to participate in the Recovery Program efforts.

(9) Reclamation will support the Recovery Program, in coordination with the U.S. Fish and Wildlife Service and Western, in developing and conducting Recovery Program studies associated with flood plain inundation. Such studies would include improving connectivity of floodplain habitats, identifying ways to improve entrainment of larval razorback suckers into floodplain habitats, maintain the river channel, restore natural variability of the river system, and analyze possibilities for meeting the goals of the Flow and Temperature Recommendations at lower peak flow levels where feasible.

(10) In coordination with the Recovery Program, a technical working group, consisting of biologists and hydrologists from Reclamation, Western and FWS, will annually propose an initial flow regime to the existing Flaming Gorge Working Group. This process will concurrently fulfill informal consultation and coordination requirements of ESA for the action agencies. The Flaming Gorge Working Group will then provide comments and input on the proposed flows relative to all resource concerns. Reclamation will then make a determination on how to incorporate the additional information into the annual operational plan.

(11) As agreed during consultation in 2004, Reclamation will notify the Ute Indian Tribe of the Uintah and Ouray Reservation and BIA annually of the onset of high spring flows.

VIII. Implementation

Implementation of the Action Alternative will begin with the spring 2006 runoff season. The process for implementation of the Action Alternative is described in Section 2.5.3 of the EIS (page 31) and Section 4.20 of the EIS (page 251). The administrative record referenced in Section 2.5.3 of the EIS and on page 4 above will include an annual report to document the technical working group's recommendations and discussions, Reclamation's target flow regimes on a season by season basis, analysis of previous operations as related to recommendations and targets, as well as a long term analysis of the frequency of achieving the flow thresholds described in the 2000 Flow and Temperature Recommendations.

In order to provide for proper implementation, the technical working group should meet not later than 30 days after signature of this Record of Decision in order to develop the recommended spring peak and base flow and temperature targets. To facilitate proper consultation and coordination within the context of the adaptive management process, preliminary recommendations should be shared with the Flaming Gorge Working Group at least one month prior to its next scheduled meeting on April 13, 2006. It must be recognized that due to the uncertain nature of forecasting, a preliminary recommendation may be subject to drastic revision based upon forecast changes. To prepare for such suggested changes, the technical working group should give consideration to providing for more than one target recommendation, with each recommendation linked to a possible or predicted hydrology scenario.

RECLAMATION

Managing Water in the West

Record of Decision for the Navajo Reservoir Operations, Navajo Unit - San Juan River New Mexico, Colorado, Utah Final Environmental Impact Statement



**U.S. Department of the Interior
Bureau of Reclamation**

July 2006

Summary of Action

The Bureau of Reclamation (Reclamation) has completed a final environmental impact statement (EIS) on the operation of Navajo Reservoir, Colorado River Storage Project, San Juan River, New Mexico, Colorado, and Utah. The proposed action is to operate Navajo Dam and Reservoir to meet Endangered Species Act (ESA) related Flow Recommendations for the San Juan River¹ or a reasonable alternative to those recommendations, in a manner which enables both current and future water depletions to proceed in compliance with the ESA. The EIS was prepared by Reclamation to provide sufficient releases of water at times, quantities, and durations believed to be necessary to conserve two endangered fish species, the Colorado pikeminnow (*Ptychocheilus lucius*) and the razorback sucker (*Xyrauchen texanus*) and their critical habitat, as recommended by the San Juan River Basin Recovery Implementation Program's (SJRBRIP)² Flow Recommendations, while protecting authorized purposes of the Navajo Unit. Reclamation's goal is to implement the proposed action and, at the same time, continue to protect all authorized purposes of the Colorado River Storage Project, including the Navajo Unit, and to protect Indian trust assets.

The Notice of Intent to prepare the EIS was published in the *Federal Register* on October 1, 1999, and described the purpose of the proposed action as “. . . to mimic the natural hydrograph of the [San Juan] river to create and maintain habitat and to maintain a healthy biological community in order to conserve populations of two endangered fishes, while maintaining the other authorized purposes of the Unit.” The EIS on Navajo Reservoir Operations was filed with the Environmental Protection Agency on April 20, 2006 (FES 06-06).

The EIS and this Record of Decision were prepared pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended; the Council on Environmental Quality's regulations for implementing NEPA (40 CFR 1500-1508); the Department of the Interior's NEPA Implementing Procedures (516 DM 1-15); and Reclamation's NEPA Handbook. As the primary Federal agency responsible for the operation of Navajo Reservoir, Reclamation was the lead agency in preparing the EIS. Nineteen cooperating agencies, including Indian Tribes, Federal and state agencies, and water user organizations, participated in preparing the EIS.

¹ Holden, Paul B., comp., *Flow Recommendations for the San Juan River*. San Juan River Basin Recovery Implementation Program, Biology Committee. Albuquerque, NM: U.S. Fish and Wildlife Service, 1999.

² The SJRBRIP is a major cooperative effort among entities interested in the goals of recovery of endangered fish and provision for water use and development in the San Juan River Basin. In addition to Reclamation, participants include the U.S. Fish and Wildlife Service, Bureau of Indian Affairs, Bureau of Land Management, Southern Ute Indian Tribe, Ute Mountain Ute Tribe, Navajo Nation, Jicarilla Apache Nation, water development interests, and the states of Colorado and New Mexico.

Reclamation's Decision

Reclamation's decision is to implement the Preferred Alternative, the 250/5000 Alternative, as described in the EIS. The preferred alternative, to the extent possible,³ implements criteria needed to assist in meeting the Flow Recommendations for the San Juan River and to assist both current and future water development in the San Juan River Basin to proceed in compliance with Federal and state laws, interstate compacts, and the ESA. The preferred alternative best protects Indian trust assets by facilitating present and future tribal water development. Navajo Reservoir will be operated so that releases range from 250 cubic feet per second (cfs) to 5,000 cfs. Flexibility will be retained to adjust release rates within this range to respond to new information, including any revision to the Flow Recommendations, as it becomes available. In making this decision, Reclamation has carefully reviewed the alternatives and their predicted environmental, economic, technical, and social impacts, and has considered the comments and concerns of agencies, tribes, organizations, and the public. This decision includes the potential for refinement of the Flow Recommendations based on relevant new information as may be gained through adaptive management.

Operating major water resources projects, like the Navajo Unit, is contingent on a number of factors, in addition to regulatory and statutory constraints, that are outside the control of Reclamation. Factors including hydrologic conditions, reservoir storage, runoff timing, forecasting inaccuracies, and gage errors all affect Reclamation's ability to meet the Flow Recommendations. Thus, built into this decision is the acknowledgement that Reclamation may not be able to precisely meet the Flow Recommendations 100 percent of the time, but the intent will be to operate in a manner that is consistent with the goals of the SJRBRIP.

Background and Associated Issues

Navajo Unit

Navajo Dam was completed in 1963 under the authority of the Colorado River Storage Project Act (CRSPA) to meet multiple water resource purposes. The dam is located on the San Juan River approximately 38 miles upstream from Farmington, New Mexico, and about 55 miles southeast of Durango, Colorado. The reservoir extends into both Colorado and New Mexico and has a maximum content of 1,701,300 acre feet (af), including an inactive pool of 625,675 af. During the irrigation season, the minimum operating level for the Navajo Indian Irrigation Project (NIIP) diversion intake is at elevation 5,990 feet, or about 662,000 af of storage; but the reservoir can be drawn down during the winter to elevation 5,985 feet, or about 626,000 af of storage, so long as storage recovers sufficiently prior to the NIIP irrigation season. Through a Federal Energy Regulatory Commission issued license and an agreement with Reclamation, the City of Farmington owns and operates a hydroelectric plant at Navajo Dam.

³ As described in the Biological Opinion and EIS.

Water development in New Mexico and Colorado supported by the Navajo Unit includes, but is not limited to, the San Juan-Chama Project; the NIIP; the Jicarilla Apache Nation Water Rights Settlement Act; and, as part of the Southern Ute and Ute Mountain Ute Indian Water Rights Settlement, development of the Animas-La Plata Project (ALP). Also included are numerous smaller water uses and the proposed Navajo-Gallup Water Supply Project. Navajo Reservoir also provides benefits of river regulation, water supply, flood control, recreation, fish and wildlife uses, and generation of hydroelectric power.

The United States has a trust responsibility to protect and maintain rights reserved by or granted to Indian Tribes by treaties, statutes, and executive orders. This trust responsibility requires that Federal agencies take actions reasonably necessary to protect Indian trust assets. The operation of Navajo Reservoir has the potential to affect Indian trust assets in the form of water rights. Indian trust assets exist for four federally recognized tribes within the San Juan River Basin: the Navajo Nation, the Jicarilla Apache Nation, the Southern Ute Indian Tribe, and the Ute Mountain Ute Tribe. Several existing and proposed Indian water projects, including ALP and NIIP, depend on reoperation of Navajo Reservoir for ESA compliance; and if reoperation is not implemented, future Indian water development in the Basin might not proceed as planned and several existing projects could be affected as well. In addition to the NIIP, the proposed Navajo-Gallup Water Supply Project is a component of a water rights settlement proposed by the State of New Mexico and the Navajo Nation.

After initial filling of Navajo Reservoir, water management focused primarily on meeting NIIP irrigation needs, providing flood control, and maintaining relatively stable river flows. Spring peak flows in the San Juan River were substantially decreased (post-reservoir peaks averaged 54 percent of pre-reservoir peaks) and flows for the remainder of the year increased (August-February flows averaged 18 percent higher).

Endangered Species Issues

The catalyst for changing Navajo Reservoir operations was consultation with the U.S. Fish and Wildlife Service (Service) on the proposed construction of ALP, located in Colorado within the San Juan River Basin. The Service issued a draft Biological Opinion in 1990 concluding ALP would jeopardize the continued existence of the Colorado pikeminnow in the San Juan River and no reasonable and prudent alternative to avoid jeopardy was identified at that time. Subsequent hydrologic investigations suggested that flexibility in the operation of Navajo Dam could help offset the negative impacts of operating ALP.

Reclamation requested initiation of ESA consultation on the operation of Navajo Reservoir in 1991, and the Service concurred with a later request from Reclamation that consultation be extended while research was conducted on flow needs of the endangered fish. During the 1991-1998 research period, Reclamation operated Navajo Reservoir to provide test flows to mimic a natural hydrograph. The SJRBRIP directed research efforts. The SJRBRIP was established in 1992 to conserve San Juan River populations of Colorado pikeminnow and razorback sucker consistent with recovery goals for the species established by the Service, while providing measures for compliance with the ESA for water development and management activities in the San Juan River Basin conducted consistent with Federal and

state laws, including interstate compacts. The SJRBRIP includes elements to protect the genetic integrity of the endangered fish, to augment populations by stocking, to protect and restore habitat, to protect water quality, to address non-native fish competition, and to monitor endangered fish status and trends.

Following the research period, the SJRBRIP published the Flow Recommendations which generally call for a spring peak flow and certain base flows the remainder of the year. The recommendations suggest hydrology-based Navajo Reservoir operating criteria that provide for the flow variability to create and maintain habitat for the endangered fish. The recommendations integrate hydrology, geomorphology, habitat, and biology to define flow magnitude, duration, and frequency for the spring runoff and target base flows for the remainder of the year.

In 1994, critical habitat was designated for the Colorado pikeminnow on the San Juan River from Farmington to Lake Powell and for the razorback sucker from the Hogback Diversion, near Shiprock, to Lake Powell.

In June 2000, the Service prepared a new Biological Opinion that allowed the ALP Project to proceed, dependent on the following conservation measure: the operation of Navajo Reservoir to mimic the natural hydrograph of the San Juan River to benefit endangered fish species and their critical habitat. Mimicry of the natural hydrograph would be achieved by operating Navajo to follow the Flow Recommendations. Such reoperations would be subject to completion of the Navajo Reservoir Operations EIS and Record of Decision.

A Biological Assessment for Navajo operations was prepared by Reclamation under Section 7(c)(1) of the ESA and was provided to the Service in July 2003. The Service submitted their final Biological Opinion on the project to Reclamation on January 5, 2006.

Biological Opinions for other water projects in the San Juan Basin depend on the SJRBRIP, including the ability to operate Navajo Reservoir in a manner that helps to meet the Flow Recommendations. For example, completion of NIIP, the Public Service Company of New Mexico water contract with the Jicarilla Apache Nation, the Jicarilla Navajo River Project, Florida and Mancos Project water contracts, and unspecified minor depletions all depend on the SJRBRIP.

Flow Recommendations

The recommendations are for river flows downstream from the confluence of the Animas-San Juan Rivers at Farmington. A summary of flow recommendation criteria follows. The duration and frequency statistics for categories A-D are determined by modeling of projected basin depletions for the 1929-1993 period of hydrology.

- | | |
|--------------|--|
| A. Category: | Flows greater than 10,000 cfs during spring runoff |
| Duration: | A minimum of 5 days between March 1 and July 31 |
| Frequency: | 20% of years, with maximum interval of 11 years |

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- B. Category: Flows greater than 8,000 cfs during runoff
Duration: A minimum of 10 days between March 1 and July 31
Frequency: 33% of years, with maximum interval of 7 years
- C. Category: Flows greater than 5,000 cfs during spring runoff
Duration: A minimum of 21 days between March 1 and July 31
Frequency: 50% of years, with maximum interval of 5 years
- D. Category: Flows greater than 2,500 cfs during spring runoff
Duration: A minimum of 10 days between March 1 and July 31
Frequency: 80% of years, with maximum interval of 3 years
- E. Category: Timing of peak flows
Timing: Within 5 days of historical mean peak date of May 31 (on average, based on modeling for the period 1929-1993).
- F. Category: Target base flows (mean weekly)
Level: 500 cfs target; range 500-1,000 cfs (actual target base flows measured as the average of the weekly base flows at three of four streamflow gaging stations on the San Juan River in accordance with the Biological Opinion.
- G. Category: Flood control releases
Control: Handle as a high magnitude, short duration spike and release when flood control rules require, except that the release shall not occur earlier than September 1 unless necessary for protection of life and property.

The SJRBRIP is in the process of reevaluating the Flow Recommendations based on extension of the hydrologic record through at least 2000 and on new habitat and biological response data collected and analyzed after 1998. Any revisions to the Flow Recommendations, in combination with anticipated development of interstate compact allocations, will likely require the flexibility to adjust Navajo Dam releases between a minimum of 250 cfs and a maximum of 5,000 cfs consistent with the preferred alternative of the EIS. If revisions to the Flow Recommendations were outside the scope of the EIS, further evaluation under NEPA would be necessary.

Alternatives Considered in the EIS

The purpose of modifying the operations of Navajo Reservoir is to provide sufficient releases of water at times, quantities, and durations believed to be needed to conserve the two endangered fish species and their designated critical habitat, in concert with other recovery actions. The need for a plan to modify operations has resulted from previous ESA consultations on San Juan River Basin projects and the requirement for Reclamation to comply with the ESA for and through discretionary actions that affect endangered species.

Three alternatives were fully considered in the EIS: no action, 250/5000 alternative, and the 500/5000 alternative.

No Action Alternative

Under this alternative, Navajo Reservoir would be operated as it was prior to the 1990's research flows. Operations to mimic a natural hydrograph or to provide spring peaks would not be implemented. Minimum releases would be 500 cfs and planned spring releases of 5,000 cfs would not occur. This alternative would not meet the Flow Recommendations. It would continue to benefit the tailwater trout fishery, operation of irrigation diversions, recreation, and hydropower.

The No Action Alternative would adversely affect Indian trust assets. It would likely jeopardize the continued existence of endangered fish and could also require reconsultation with the Service for the ALP and other projects. Consequently, that portion of the Ute Mountain Ute and Southern Ute Indian Tribes' water right settlement provided under ALP might not be met as planned and the settlement might be compromised. This could adversely affect non-Indian water users as well. The No Action Alternative would put the operation and completion of NIIP at risk and could require reconsultation under the ESA. Future Navajo Nation water development could also be adversely affected. Similarly, the Jicarilla Apache Nation's Navajo River Project and their third-party contract with New Mexico Public Service for the San Juan Generating Station and other Navajo Reservoir supply contracts serviced by the Jicarilla Nation could also be compromised. Further, the proposed Navajo-Gallup Water Supply Project might not be able to proceed as planned, thus compromising the proposed Navajo Nation Water Rights Settlement with the State of New Mexico in the San Juan River Basin. Other projects that rely on Navajo Reservoir operations for ESA compliance might also require reconsultation.

250/5000 Alternative (Preferred)

This alternative would have a range of releases between 250 and 5,000 cfs and would meet the Flow Recommendations within the constraints of CRSPA purposes and hydrologic conditions. This alternative also provides operational flexibility to reduce environmental impacts as well as to address extreme hydrologic conditions. The Flow Recommendations would be followed to provide recommended spring peak frequencies, quantities, and durations, and also target base flows. CRSPA authorized purposes would also be maintained and Indian trust assets protected. The alternative would support water projects with ESA consultation dependent on Navajo Reservoir operations. The 250/5000 Alternative would have significant impacts on certain resources such as the downstream trout fishery, recreation, and hydropower. This alternative was designated the preferred alternative in the EIS.

500/5000 Alternative

This alternative would have a range of releases between 500 and 5,000 cfs. It was developed because of the strong public interest in maintaining a minimum release of 500 cfs to continue

to benefit resources such as recreation, the downstream trout fishery, hydropower, and water quality. This alternative would not fully meet the Flow Recommendations because sufficient water supplies would not be stored to provide recommended spring peaks. In addition, less of the states' interstate compact allocations might be considered to be available for development. The 500/5000 Alternative would likely jeopardize the continued existence of the endangered fish and thus could also require reconsultation with the Service for the ALP Project and other projects that rely on the SJRBRIP and the associated Navajo Reservoir operations for ESA compliance.

Environmentally Preferred Alternative

Based on the analysis in the EIS, the 250/5000 Alternative is the Environmentally Preferred Alternative. The decision is to implement the 250/5000 Alternative. The 250/5000 Alternative helps mimic a natural hydrograph for the San Juan River and because of this is considered the Environmentally Preferred Alternative. The natural hydrograph is projected to benefit river habitat, native riparian areas and associated vegetation and wildlife, and native fish.

Basis of Decision and Issues Evaluated

Key elements in evaluating alternatives were the degree to which alternatives met Flow Recommendations, maintained CRSPA purposes, and protected Indian trust assets. The 250/5000 Alternative has been selected as the Preferred Alternative and the Environmentally Preferred Alternative because it is the only alternative that meets Flow Recommendations while maintaining an adequate water supply to continue providing CRSPA authorized purposes. This alternative best meets the purpose and need and best protects Indian trust assets. Positive impacts would occur for Indian water projects and settlements because the 250/5000 Alternative supports ESA compliance for existing and future water uses and the SJRBRIP. The 250/5000 Alternative provides the best potential for future water development and maintains ESA compliance for water projects in the San Juan River Basin such as NIIP, ALP, and existing and future Navajo Nation and Jicarilla Apache Nation water uses.

It is recognized in the EIS that the 250/5000 Alternative has significant adverse effects on the trout fishery downstream from Navajo Dam and also adversely affects river recreation (trout fishing and rafting), hydropower production, irrigators' ability to divert water, and water quality. While there are negative economic effects associated with adverse effects on these resources, the 250/5000 Alternative protects existing and planned water uses in the San Juan River Basin which have significant economic benefits.

As discussed in the EIS and Biological Opinion, the 250/5000 Alternative would provide flexibility at certain times for limited durations to increase minimum releases during the irrigation season to reduce impacts to downstream resources and water uses. This flexibility derives from water committed for future development but not currently used and from other operational and/or hydrological factors and will be available in many, but not all years. When possible, the release of this water will be incorporated into operations to augment the

250 cfs minimum release during the irrigation season. The availability and use of flexibility will be addressed at the Navajo Reservoir operation meetings and reviewed throughout the year using modeling and forecasting tools. Using this approach, and notwithstanding factors that are beyond Reclamation's control, Reclamation would operate the reservoir consistent with the goals of the SJRBRIP and would exercise flexibility in such a way as to avoid impacts to the magnitude and duration of spring peak releases planned for in the Flow Recommendations. This flexibility will be reduced as the use of approved but not fully developed projects increases. Flexibility will not create a risk of shortages of Navajo Reservoir supplies and will not be considered a release of storage water to downstream senior water rights.

The Service's final Biological Opinion on the preferred alternative concluded this action would not jeopardize the continued existence of threatened and endangered species nor adversely modify critical habitat. The bald eagle and southwestern willow flycatcher may be affected, but not likely adversely affected. Concerning the Colorado pikeminnow and razorback sucker, the Service concluded that these fish may be affected and are likely to be adversely affected. These determinations were based on the adverse effects of reservoir operations continued into the future and not on the implementation of the Flow Recommendations. The Service concluded that meeting the Flow Recommendations should prove beneficial for the endangered fish.

In its opinion, the Service determined that the level of anticipated take is not likely to result in jeopardy to the razorback sucker and Colorado pikeminnow nor would the Preferred Alternative cause destruction or adverse modification of their critical habitat. Two Reasonable and Prudent Measures and two Terms and Conditions were included in the opinion and are adopted as environmental commitments.

The following paragraphs describe the Department of the Interior's basis and authority for this decision. The authority to implement the preferred alternative is found in Section 1 of CRSPA. This section states:

In order to initiate the comprehensive development of the water resources of the Upper Colorado River Basin, for the purposes, among others, of regulating the flow of the Colorado River, storing water for beneficial consumptive use, making it possible for the States of the Upper Basin to utilize, consistently with the provisions of the Colorado River Compact, the apportionments made to and among them in the Colorado River Compact and the Upper Colorado River Basin Compact, respectively, providing for the reclamation of arid and semi-arid land, for the control of floods, and for the generation of hydroelectric power, as an incident of the foregoing purposes, the Secretary of the Interior is authorized (1) to construct, operate, and maintain the following initial units of the Colorado River storage project, consisting of dams, reservoirs, powerplants, transmission facilities and appurtenant works: Wayne N. Aspinall, Flaming Gorge, Navajo (dam and reservoir only), and Glen Canyon . . . [43 U.S.C. § 620].

The Colorado River Compact of 1922 established an Upper Basin and a Lower Basin within the Colorado River system and apportioned the exclusive beneficial consumptive use of Colorado River water in perpetuity to the Upper and Lower Basins. The Upper Colorado River Basin Compact of 1948 apportioned the Upper Basin's share of the Colorado River system among the states of Colorado, Utah, Arizona, Wyoming, and New Mexico. The CRSPA was enacted in 1956 to facilitate the development of the water and power resources of the Upper Basin consistent with the Compacts.

The SJRBRIP was developed to facilitate the continued development of states' Compact apportionments in light of ESA concerns. The goal of the SJRBRIP, therefore, is to conserve the San Juan River populations of endangered fish species consistent with the recovery goals of the species published by the Service, while proceeding with the continued operation and development of both Indian and non-Indian water resources of the San Juan River Basin. All SJRBRIP participants, agreeing that recovery to the point of de-listing will both facilitate and ensure the continued development of water resources, have agreed with the principles and goals of the SJRBRIP through their participation in and support of program activities. In addition to its recovery objectives, the SJRBRIP includes an agreement on principles for conducting ESA Section 7 consultations, wherein program actions and sufficient progress toward recovery constitute a Reasonable and Prudent Alternative for existing and future water resource management and development activities that are likely to jeopardize the continued existence of endangered fish species or cause the destruction of or adverse modification of critical habitat of those species.

The SJRBRIP's Flow Recommendations, in concert with other program actions, are intended to avoid jeopardy and assist in recovery. By implementing actions that assist in meeting the Flow Recommendations, Reclamation is taking the steps necessary to avoid jeopardizing the continued existence of the endangered fish from the operation of Navajo Dam and to voluntarily and cooperatively take steps to facilitate recovery of the fish, which, in turn, will support the continued and further utilization of the Federal facilities to aid in the development of the states' Compact apportionments. Thus, consistent with the authorized purposes of CRSPA, implementation of the Flow Recommendations supports the states in the utilization of their Compact apportionment while assisting in the recovery of endangered species. Moreover, that specific authorized purposes of the Navajo Unit may not be fully maximized for limited durations in certain year types does not invalidate the actions of the Secretary of the Interior, as long as the overall purposes of CRSPA are met. And we expect in this instance, these purposes will be met.

This action is limited to the proposition that both avoiding jeopardy and making progress toward recovery of listed fish facilitate the ability of the San Juan Basin states to continue utilizing and further developing their Colorado River apportionments. It is not a decision that reads CRSPA as generally authorizing the release of water for fish and wildlife purposes. In these particular and unique circumstances, therefore, we conclude the implementation of an operations regime that is consistent with the Preferred Alternative is deemed to be within the authorization contained in Section 1 of CRSPA.

Environmental Commitments

All practicable means to avoid or minimize environmental harm have been included in the Preferred Alternative and are summarized below:

1. Reclamation will follow the Reasonable and Prudent Measures as well as the Terms and Conditions in the Biological Opinion on the project.
2. Navajo Reservoir will be operated to assist in meeting spring peak and annual base flows as described in the Biological Opinion which may be amended from time to time through the SJRBRIP adaptive management process. Release changes will be limited to increments of 200 cfs or 10 percent of flow, whichever is higher, every 2 hours. Base flows and spring peaks will be monitored with U.S. Geological Service gages as described in the EIS and Biological Opinion.
3. Public operation meetings for Navajo Reservoir will continue to be held 3 times per year to provide information to and receive input from stakeholders and the public on operations and other water-related activities.
4. Currently, some flexibility in reservoir releases exists because water committed under present water rights and/or future development is not fully used. This may be a significant amount of water in some, but not all, years. The release of this water will be incorporated into operations to augment the minimum 250 cfs release during the irrigation season with a goal of minimum releases of 350 cfs. The release of this additional water will help alleviate adverse effects on the trout fishery, river recreation, hydropower, irrigators' ability to divert, and water quality. The use of this additional water will be discussed at Navajo Reservoir operation meetings. As noted previously, the flexibility to augment minimum releases will diminish as committed water that is unused becomes developed. The impacts of the release of this additional water will be carefully monitored, particularly as depletions increase in the future.
5. Severe droughts, with anticipated shortages to Navajo Reservoir water users, will be addressed according to the shortage sharing provisions of Section 11 of Public Law 87-483, or through cooperative water sharing agreements, provided such agreements do not violate Section 11. Operational changes in severe droughts could include temporary modifications to normal operations of the reservoir and potential short-term modifications in spring peak release criteria or the target base flows in the Flow Recommendations. In periods of extreme, multi-year droughts, releases from Navajo Reservoir may have to be reduced below 250 cfs to match the inflow to the reservoir. This would not occur until after Reclamation has completed additional environmental review and coordination with the Indian Tribes and Nations, the Service, the State of New Mexico, and the public.
6. Reclamation will retain the ability to modify planned releases in order to complete extraordinary maintenance, address emergency situations, and complete safety of dam activities that may be required in the future.

7. Reclamation will coordinate with the Corps of Engineers and the National Weather Service as well as with local agencies to assist in reducing potential flooding problems that could result from combinations of spring peak releases and downstream flash floods.

8. Reclamation will carry on its activities in a manner which protects Indian trust assets and avoids adverse impacts to Indian trust assets when possible. Positive effects to Indian trust assets are anticipated from the Preferred Alternative which supports water projects that have received environmental clearance and potentially for others currently undergoing environmental review.

9. Reclamation will continue to participate in and support the SJRBRIP. Monitoring endangered fish populations and habitat responses to the new operations will be conducted by the SJRBRIP. Recovery goals for the two endangered fish species and criteria for measuring positive population responses of the species are addressed in the Navajo Operations Biological Opinion. If, based on SJRBRIP monitoring results, there are not positive population responses in the time frames outlined in the recovery goals and in the positive population response criteria, reinitiation of ESA consultation may be required by the Service.

10. Reclamation will participate with the New Mexico Game and Fish Department and other agencies in planning and implementing instream measures to reduce adverse impacts to the trout fishery resulting from lower minimum flows. Specifically, Reclamation can provide technical assistance and use of Reclamation lands for habitat improvement projects.

11. Lands associated with the Navajo Unit have potential for long-term habitat for the southwestern willow flycatcher. The lands downstream from Navajo Dam are of particular interest because the habitat has strong potential for long-term stability and management. Potential habitat in inflow areas is subject to seasonal reservoir level fluctuations. Reclamation will develop and implement a flycatcher management plan on Unit lands to protect and improve flycatcher habitat.

12. While the Preferred Alternative results in slightly lower impacts (in comparison to other alternatives) to cultural resources on the reservoir shoreline, fluctuations of Navajo Reservoir continue to result in adverse impacts. Reclamation is committed to implementing a cultural resources program to address the impacts of reservoir fluctuation. An initial goal will be to prepare and implement a Cultural Resource Management Plan in consultation with the State Historic Preservation Officers of Colorado and New Mexico and other consulting parties such as Indian Tribes.

Implementation

Reclamation will implement the operating criteria contained in the Preferred Alternative beginning 30 days after issuance of this Record of Decision.

Approved:



Regional Director
Bureau of Reclamation, Upper Colorado Region
Salt Lake City, Utah

7-31-06

Date

FIELD WORKING AGREEMENT
BETWEEN
DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION
AND
DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS
FOR
FLOOD CONTROL OPERATION
OF
HOOVER DAM AND LAKE MEAD, COLORADO RIVER, NEVADA - ARIZONA

This field working agreement, made and entered into this 8th day
of February 1984, between the Lower Colorado Region,
Bureau of Reclamation and the South Pacific Division, Corps of Engineers,

WITNESSETH THAT:

WHEREAS, Hoover Dam and Lake Mead, Colorado River, Clark County,
Nevada and Mohave County, Arizona, was authorized as part of the Boulder
Canyon Project Act (Public Law 70-642). The Boulder Canyon Project Act
states that Boulder Dam (Public Law 43 changed the name of the structure
from Boulder Dam to Hoover Dam) and the reservoir that it creates shall be
used: first, for river regulation, improvement of navigation, and flood
control; second, for irrigation and domestic uses; and third, for power.

WHEREAS, the Department of the Interior, acting through the Bureau of
Reclamation, represented by the appropriate Regional Director, hereinafter
referred to as the Regional Director, has constructed Hoover Dam and

Reservoir, and is responsible for the safety of the structure and for normal operations of the Lower Colorado River, of which said dam and reservoir are a part.

WHEREAS, the Department of the Army, acting through the Corps of Engineers, represented by its appropriate District and Division Engineers, is responsible for the flood control operation of Hoover Dam and Lake Mead in accordance with Section 7 of the 1944 Flood Control Act (Section 7, Public Law 78-534, 58 Stat. 890, 33 U.S.C. 709), which directs the Army to prescribe regulations for the use of storage allocated for flood control or navigation at all reservoirs constructed wholly or in part with Federal funds, and as promulgated in the Code of Federal Regulations, Title 33, Part 208.11, 13 October 1978.

WHEREAS, there is a need for a working agreement to insure a clear understanding of flood control regulations and information exchange required for the operation of Hoover Dam and Lake Mead.

NOW, THEREFORE, it is mutually understood and agreed by and between the parties hereto that this field working agreement shall consummate the provisions of the 1944 Flood Control Act for Hoover Dam and Lake Mead. In addition to the responsibilities of the project owner and the Corps of Engineers spelled out in paragraph 208.11, 33 CFR, it is agreed that Hoover Dam and Lake Mead will be operated in the interest of flood control in accordance with the following water control plan.

(a) In order to provide storage space for control of floods, releases from Lake Mead shall be scheduled so that available storage space for flood control will not be less than that indicated in the following table for the dates shown. Flood control storage space shall be the available storage space below elevation 1,229 feet.

<u>Date</u>	<u>Available flood control storage space (acre-feet)</u>
1 August.....	1,500,000
1 September.....	2,270,000
1 October.....	3,040,000
1 November.....	3,810,000
1 December.....	4,580,000
1 January.....	5,350,000

Pertinent information on permissible changes in available flood control storage space in Lake Mead is given in subparagraphs (1), (2), and (3) of this paragraph.

(1) The available flood control storage space in Lake Mead during the period 1 August to 1 January may be reduced to a minimum of 1,500,000 acre-feet, provided the additional space prescribed under paragraph (a) above is available in active storage space in upstream reservoirs. The maximum storage space in upstream reservoirs that can be credited to the 1 September, 1 October, 1 November, 1 December, or 1 January storage space requirement in Lake Mead is given in the following table:

<u>Reservoir</u>	<u>Creditable storage space</u> (Acre-feet)
Lake Powell.....	3,850,000
Nava jo.....	1,035,900
Blue Mesa.....	748,500
Flaming Gorge plus Fontenelle.....	1,507,200

(2) Space building releases from Lake Mead during the period 1 August to 1 January shall not exceed 28,000 cubic feet per second. Space building releases are herein defined as releases for the purpose of attaining the available flood control storage space given in paragraph (a) above.

(3) If, however, available flood control storage space diminishes at any time to less than 1,500,000 acre-feet then the minimum flood control releases are described in paragraph (b) below.

(b) At any time during the year, if available storage space in Lake Mead should become less than 1,500,000 acre-feet, then minimum releases from Lake Mead for flood control shall be determined daily from table 1 (Minimum Flood Control releases from Hoover Dam throughout the year) using available flood control storage space in Lake Mead. Pertinent information on permissible changes in the releases as indicated in table 1 is given in subparagraphs (1), (2), and (3) of this paragraph.

(1) During 1 August to 1 January minimum releases from Lake Mead as given in table 1, if 40,000 cubic feet per second or less, shall not be reduced when once initiated until the storage space prescribed in paragraph (a) above becomes available. During the remainder of the year, releases as given in table 1 if 40,000 cubic feet per second or less are maintained until 1,500,000 acre-feet of storage is available at Lake Mead.

(2) Minimum releases from Lake Mead as given in table 1, if greater than 40,000 cubic feet per second, shall not be reduced, when once initiated, until Lake Mead water surface has receded to elevation 1,221.4 (top of spillway gates raised position). During 1 August to 1 January, releases may then be gradually reduced to 40,000 cubic feet per second and shall be maintained at not less than that rate until the storage space prescribed in paragraph (a) above becomes available. During the remainder of the year releases may also be reduced to 40,000 cubic feet per second upon reaching elevation 1,221.4 in Lake Mead, and shall be maintained at not less than that rate until 1,500,000 acre-feet of storage space is available at Lake Mead.

(3) The releases required in table 1 are minimum releases. Based on forecasted inflow, releases when the Lake Mead water surface elevation is between 1219.61 feet and 1229.00 may be higher during the early stages of a flood so as to achieve a greater reduction in ultimate peak outflow.

(c) Releases from Lake Mead shall be restricted to quantities that will not cause a flow in excess of 40,000 cubic feet per second at the gaging station, Colorado River below Davis Dam, insofar as possible.

However, with the reservoir water surface at the top of the flood control pool, a discharge of about 65,000 cubic feet per second will be passing over the Hoover Dam spillways with the gates in the raised position.

(d) For the period 1 January through 31 July, minimum releases from Lake Mead to attain the 1 August flood control space prescribed in paragraph (a) above shall be determined by use of the Flood Control Algorithm described in Exhibit 1 and Water Loss Equations for Lakes Mead and Powell described in Exhibit 2. Pertinent information on inflow forecasts and on permissible changes in the prescribed releases is given in subparagraphs (1), (2), (3), (4), (5), and (6) of this paragraph.

(1) All inflow forecasts used in carrying out the provisions of these regulations shall be prepared by the Colorado River Forecasting Service located in the National Weather Service River Forecast Center in Salt Lake City, Utah and shall be for the flow of the Colorado River into Lake Mead including the runoff contribution from the tributary drainage area between Lake Powell and Lake Mead.

(2) Lake Mead inflow forecasts as provided by the Colorado River Forecast Service shall be determined from depleted flow. Depletion of natural (virgin) flow shall include transbasin diversions, net water use (diversion minus return flow), and evaporation from reservoirs upstream of Lake Powell. Adjustments to the forecast provided by the Colorado River Forecast Service shall be made for effective storage space in upstream reservoirs as specified in subparagraph (3) of this paragraph. The

maximum forecast for any specified runoff period is defined as the estimated inflow volume (acre-feet) that, on the average, will not be exceeded 19 times out of 20.

(3) Effective storage space in Navajo, Blue Mesa, and Flaming Gorge plus Fontenelle reservoirs is the lesser of the actual space available, or the usable space available. The usable space is the difference between the mean forecasted inflow volume (acre-feet) for any specified runoff period and projected mean reservoir releases. In computing effective storage space for Flaming Gorge plus Fontenelle, the actual space is the sum of the actual available space in both reservoirs; while mean forecasted inflow volume and projected mean reservoir release will be the values at Flaming Gorge reservoir. Effective storage space in a reservoir(s) may be a negative value if projected mean reservoir releases exceed the mean forecasted inflow volume.

(4) When minimum releases for the months of January through July as determined by the Flood Control Algorithm are less than 28,000 cubic feet per second, it will be permissible to release less than the indicated amounts for a part of a month, provided the average releases for the entire month will equal the release given by the Algorithm, without flows exceeding 28,000 cubic feet per second at the gaging station, Colorado River below Davis Dam.

(5) The Flood Control Algorithm described in Exhibit 1 accounts for storage space in Lakes Powell and Mead. Whenever sufficient runoff occurs, Lake Powell is expected to fill to capacity (water surface

elevation 3700.0 feet) and Lake Mead is expected to fill to capacity (water surface elevation 1219.61), and remain full until 1 August so as to preclude any increase in the flood control releases specified by the Flood Control Algorithm above 28,000 cubic feet per second at the gaging station, Colorado River below Davis Dam.

(6) The objective of the Flood Control Algorithm is to specify releases such that Lake Mead will be no higher than water surface elevation 1219.61 feet (1,500,000 acre-feet of available storage space below elevation 1229.0 feet) on 1 August. Subsequent revisions to the minimum releases specified by the Flood Control Algorithm may be made during July if justified by a forecast of the remaining runoff and comparison with empty reservoir space available.

(e) During the period 1 January through 31 July the larger release specified by the Flood Control Algorithm versus table 1 shall be the required minimum release.

(f) At anytime of the year, Hoover Dam releases shall not result in a flow rate greater than 28,000 cubic feet per second at the gaging station, Colorado River below Davis Dam unless required or authorized by these regulations.

(g) Nothing in this agreement shall be construed to require dangerously rapid changes in magnitudes of releases. Releases will be made in a manner consistent with requirements for protecting the dam, reservoir and appurtenances from major damages.

(h) Hoover Dam is but one of three major flood control reservoirs in the Lower Colorado River Basin. The Corps of Engineers operates Alamo Dam on the Bill Williams River and Painted Rock Dam on the Gila River. In that flows on these tributary streams contribute to the mainstem Colorado River, coordinated operation of all three reservoirs is essential to achieving flood control objectives. Hence temporary deviations from the Hoover Dam releases prescribed in this regulation may be necessary after consideration of the available storage, projected inflows, and required releases from these tributary reservoirs.

(i) The Bureau of Reclamation shall procure such current basic hydrologic data, and make such current calculations of permissible releases from Lake Mead as are required to accomplish the flood control objectives prescribed above.

(j) The Bureau of Reclamation shall keep the Los Angeles District Engineer, Corps of Engineers, Department of the Army, in charge of the locality, currently advised of reservoir releases, reservoir storage, and such other operating data as the District Engineer may request, and also of those basic operating criteria that effect the schedule of operation.

(k) The flood control regulations are subject to temporary modification by the Los Angeles District Engineer, Corps of Engineers, if found necessary in time of emergency. Requests for and action on such modifications may be made by the fastest means of communications available. The action taken shall be confirmed in writing the same day to the office of the Regional Director and shall include justification for the action.

(l) The Regional Director may temporarily deviate from the flood control regulations in the event an immediate short-term departure is deemed necessary for emergency reasons to protect the safety of Hoover Dam and Lake Mead, or downstream dams, or the levee systems along the lower Colorado River. Such actions will be immediately reported by the fastest means of communication available. Actions shall be confirmed in writing the same day to the Los Angeles District Engineer, Corps of Engineers, and shall include justification for the action.

(m) The Bureau of Reclamation shall be responsible for providing adequate warnings to downstream interests when changes in release of stored floodwaters are made.

(n) Revisions to the flood control operation for Hoover Dam and Lake Mead may be developed as necessary by the parties of this agreement. Each such revision shall be effective on the date specified.

IN WITNESS WHEREOF, the parties hereto have caused this memorandum of agreement to be executed as of the day and date first above written.

Corps of Engineers

BY: 

Brigadier General, USA
Division Engineer
South Pacific Division

Bureau of Reclamation

BY: 

Regional Director
Lower Colorado Region

Table 1. Minimum flood control releases from Hoover Dam throughout the year.

<u>CRITERIA</u>	<u>RELEASES</u>
Water surface elevation between 1219.61 and 1221.40 feet (available storage between 1,500,000 and 1,218,000 acre-feet)	Make releases equal to inflow up to 28,000 cubic feet per second
Water surface elevation between 1221.40 and 1226.90 feet (available storage between 1,218,000 and 340,000 acre-feet)	Make outflow equal to inflow up to 40,000 cubic feet per second
Water surface elevation between 1226.90 feet to 1229.00 (available storage between 340,000 and 0 acre-feet)	Make outflow equal to inflow up to 65,000 cubic feet per second
At water surface elevation 1229.00 (top of the flood control pool)	Maintain outflow equal to inflow

NOTE:

<u>Water surface elevation (feet)</u>	<u>Water in storage (millions of acre-feet)</u>	<u>Available storage (millions of acre-feet)</u>	<u>Level</u>
1205.40	23.708	3.669	Permanent spillway crest
1219.61	25.877	1.500	Minimum required flood control pool
1221.40	26.159	1.218	Top of spillway gates in raised position
1226.9	27.037	0.340	Spillway discharge equals 40,000 cubic feet per second with spillway gates in raised position
1229.00	27.377	0	Top of flood control pool
1232.00	—	0	Top of dam

EXHIBIT 1

FLOOD CONTROL ALGORITHM

The flood control algorithm is applicable during the period of 1 January through 31 July.

Definitions.

FI = the forecasted depleted inflow volume (in million acre-feet) to Lake Mead during the current month through 31 July, which will not be exceeded 19 times out of 20, and has been adjusted for effective storage space in selected upstream reservoirs excluding Lake Powell. FI is referred to as the maximum forecast.

SSM = current storage space (in million acre-feet) in Lake Mead below elevation 1229.0 feet.

SSP = current storage space (in million acre-feet) in Lake Powell below elevation 3700.0 feet.

RRM_N = the Hoover Dam hypothetical average release rate (in cubic feet per second at a specific step rate corresponding to the subscript N) through 31 July excluding the current month. Step values are as follows:

<u>Release Step</u>	<u>Release Rate</u> (cubic feet per second)
RRM ₁	0
RRM ₂	19,000
RRM ₃	28,000
RRM ₄	35,000
RRM ₅	40,000
RRM ₆	73,000

RCM = the Hoover Dam average release rate (in cubic feet per second) during the current month determined from solution of the volumetric equation given below.

FCR = the Hoover Dam average release rate (in cubic feet per second) required for flood control during the current month.

NCM = the number of days in the current month.

NRM = the number of remaining days from the present through 31 July excluding the current month.

BSM = the Lake Mead water loss (in million acre-feet) to bank storage during the current month through 31 July.

EVM = the Lake Mead water loss (in million acre-feet) due to evaporation at the lake surface during the current month through 31 July.

BSP = the Lake Powell net water loss (in million acre-feet) due bank storage during the current month through 31 July.

EVP = the Lake Powell net water loss (in million acre-feet) due to evaporation and precipitation during the current month through 31 July.

SNC = The Lake Mead net water withdrawal (in million acre-feet) due to consumptive use by the Southern Nevada Water Project during the current month through 31 July.

Detailed procedure and equations used to define the terms BSM, EVM, BSP and EVP are presented in Exhibit 2.

The volumetric equation applied to determine RCM is as follows:

$$FI = SSM + SSP - 1.5 + 1.9835 \times 10^{-6} ((RCM \times NCM) + (RRM_N \times NRM)) + BSM + EVM + BSP + EVP + SNC$$

Solution of equality of the volumetric equation is iterative using progressively increasing step values of RRM_1 through RRM_6 . RRM_N must be the smallest step value satisfying the requirement that RCM must be equal to or less than RRM_N .

The required Hoover Dam flood control release FCR during the current month is determined according to either condition a or b as follows:

(a) if RCM is greater than or equal to RRM_{N-1} then, $FCR = RCM$

or

(b) if RCM is less than RRM_{N-1} then, $FCR = RRM_{N-1}$

EXHIBIT 2

WATER LOSS EQUATIONS FOR
LAKES MEAD AND POWELL
July 1982

LAKE MEAD

$$BSM = 0.065 (SSM - 1.5)$$

$$EVM = (NEM) (AAM \times 10^{-6})$$

where:

BSM = the Lake Mead water loss (in million acre-feet) to bank storage during the current month through 31 July.

SSM = current storage space (in million acre-feet) in Lake Mead below elevation 1229.0 feet.

EVM = the Lake Mead water loss (in million acre-feet) due to evaporation at the lake surface during the current month through 31 July.

AAM = the average reservoir surface area (in acres) on Lake Mead from the current month through 31 July.

\overline{NEM} = the average evaporation depth (in feet) for Lake Mead from the current month through 31 July as follows:

<u>Month</u>	<u>Evaporation Rate (feet)</u>
January	0.36
February	0.33
March	0.37
April	0.46
May	0.53
June	0.64
July	0.80

LAKE POWELL

$BSP = 0.15 (SSP)$

BSP = the Lake Powell water loss (in million acre-feet) to bank storage during the current month through 31 July.

SSP = current storage space (in million acre-feet) in Lake Powell below elevation 3700.0 feet.

$EVP = (C_1 E^4 + C_2 E^3 + C_3 E^2 + C_4 E + C_5) (SM)$

where:

EVP = the Lake Powell net water loss (in million acre-feet) due to evaporation and precipitation during the current month through 31 July.

E = the average water surface elevation of Lake Powell (in feet above mean sea level) from the current month through 31 July.

SM = a coefficient for the current month through 31 July as follows:

<u>Period</u>	<u>Coefficient</u>
January - July	0.536
February - July	0.486
March - July	0.439
April - July	0.380
May - July	0.313
June - July	0.222
July	0.118

Constants are as follows:

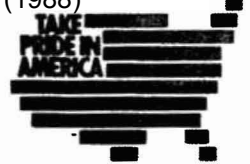
$$\begin{aligned}
 C_1 &= -1.06524 \times 10^{-12} \\
 C_2 &= 1.68872 \times 10^{-8} \\
 C_3 &= -9.51439 \times 10^{-5} \\
 C_4 &= 0.229605 \\
 C_5 &= -2.0211176 \times 10^2
 \end{aligned}$$

The equations in Exhibit 2 may be revised based on prudent engineering analysis without requiring formal revision of the total field working agreement. Revision would be effective following written agreement between the Regional Director and the Division Engineer. All revised versions of Exhibit 2 shall be labeled indicating the date of revision before being effective.



United States Department of the Interior

BUREAU OF RECLAMATION
LOWER COLORADO REGIONAL OFFICE
P.O. BOX 427
BOULDER CITY, NEVADA 89005



IN REPLY
REFER TO:

LC-230

SEP 19 1988

DECISION

Mr. Ronald R. Madson, Esquire
Attorney for Complainant Laughlin
River Tours, Inc., and John T. Talley
530 South Fourth Street
Las Vegas, Nevada 89101

Re: Administrative Decision of the Regional Director, Lower Colorado Region, Bureau of Reclamation, United States Department of the Interior, Regarding Application for Administrative Relief of Laughlin River Tours, Inc., and John T. Talley, President of Laughlin River Tours, Inc., dated November 23, 1987

Dear Mr. Madson:

On November 6, 1987, your client Mr. John T. Talley, President of Laughlin River Tours, Inc., filed a complaint in the United States District Court, District of Nevada against the Bureau of Reclamation, (Reclamation) United States Department of the Interior, the United States of America and Doe Government Agencies I-V. The complaint sought a "mandatory injunction ordering defendants to release sufficient waters, if available, from the dams along the Colorado River so as to make the said river navigable." In addition, you prayed for general and special damages to be determined at the time of trial and for such other relief as the court may deem necessary in the premises.

(Complaint p. 5, paragraph 1-3). On the same date you filed a motion for a temporary restraining order and a motion for a preliminary injunction. Specifically both motions requested injunctive relief in the form of an order requiring the Bureau of Reclamation to release a minimum of 10,000 cubic feet per second (cfs) "so that said waters can be navigable in fact." (See p. 1, paragraph 1 of both motions.)

On November 6, 1987, the Honorable Philip M. Pro held a hearing on the motion for a temporary restraining order. After the hearing, Judge Pro granted the oral motion of the Colorado River Commission, State of Nevada, to intervene on the side of defendants, and denied the motion for a temporary restraining order. Judge Pro also set the hearing for the motion for a preliminary injunction for November 18, 1987. At that hearing the

Honorable Howard G. McKibben granted motions to intervene on the side of defendants by the Department of Water and Power of the City of Los Angeles, the State of Arizona and its Arizona Power Authority and its Department of Water Resources, the Central Arizona Water Conservation District, and the State of California. Judge McKibben also granted the motion to intervene on the side of defendants made by the Metropolitan Water District of Southern California. In addition, after the hearing, Judge McKibben denied plaintiffs' motion for a preliminary injunction, and upon motion of defendant United States, ordered plaintiffs to exhaust administrative remedies by applying to the Regional Director, Lower Colorado Region, Bureau of Reclamation, for an administrative determination regarding the requested relief. Specifically, Judge McKibben requested Reclamation to take a "hard look" at the meaning of the phrase "improvement of navigation" in the Boulder Canyon Project Act and its relation to the other purposes of the Boulder Canyon Project Act and the needs of boaters on the river.

In furtherance of the court's request you submitted a letter requesting relief to the Regional Director dated November 23, 1987. Your letter, and an attached letter to the Regional Director dated October 24, 1987, from Mr. John T. Talley, set forth the following factual allegations which are summarized as follows. Your client operates a commercial river tour enterprise consisting of "The Little Belle," an 87 ton vessel, the "Colorado River King," a 39 ton vessel, and the "Nauti-Gal," a 10 ton vessel on the Colorado River. The "Nauti Gal" and "The Little Belle" operate in the vicinity of Laughlin, while the Colorado River King operates between Laughlin, Nevada and Lake Havasu City, Arizona.

Your client's stated cubic feet per second need for water is quoted as follows:

Sun. thru Fri. - 5:00 a.m. to 10 p.m. We need 10,000 cfs release. This 5:00 a.m. release allows the river to rise from 5,000 cfs at night to 10,000 cfs approximately 8 miles from Davis Dam, giving vessels 10,000 cfs for navigation until they pickup deeper water caused by Lake Havasu backup.

Sat. - 5:00 a.m. to 12 Midnight. Our cfs requirement of at least 10,000 release at all times. We feel the mandate given by Congress at the time approval was given to build Boulder Dam (to improve navigation), presently being violated completely by other requirements of the Seven (7) States, Navigation [sic] being the oldest commerce, Grandfathered, should not be stopped as is now

being done. It is our hope that these needs be met immediately for safety as well as commercial purposes.

Your client also expresses the general view that the area has changed in its requirements for constant water flow and that the need is increasing at a fast pace. Your client cites recreation, fish and game, casinos, etc., as examples.

Attached to your client's letter is a supporting letter dated November 17, 1987, from Mr. Olivia Brusso, Executive Director, Bullhead Area Chamber of Commerce expressing concern about the then low water flow and its adverse effect on local merchants, travelers, tourists, and employees attempting to cross the river to Laughlin, Nevada. In addition, the letter expresses concern that "river bank erosion as well as pest abatement has been affected," as well as an adverse affect on river front residential landowners. Also included is a letter to Judge McKibben dated November 17, 1987, from Dan Tucksen, Executive Director, Laughlin Chamber of Commerce alleging that low water flows have caused traffic hazards due to a shut down of ferry boats "leaving at least 8,000 people per day with no other way to get to Laughlin except to drive across the bridge or [go] around Davis Dam." The letter also complains of the erosion of river banks.

The administrative record also contains a letter to Senator Chic Hecht, United States Senate, from John Clark, Republic Candidate, Assembly District 72, Clark County, Nevada, dated November 10, 1987. The letter sets forth a similar complaint and requests information regarding when water discharges will be increased or whether the Army Corps of Engineers can dredge to alleviate sand which has built up due to the 1983 floods.

Your letter of November 23, 1987 refines your client's complaint somewhat by specifically identifying low water releases between 2,500 and 5,000 cfs during a period several hours each night. You also specifically complain of gyration of release between 2,500 cfs and 20,000 cfs during a 24-hour period. You allege that these gyrations cause erosion, massive silting, and unspecified environmental problems. You further allege this will jeopardize flood control and river regulation in the future. You request that the Bureau of Reclamation conduct a thorough objective study as to whether this situation will make the Colorado River permanently non-navigable for a typical user of the Colorado River as well as its effects on bank erosion, silt accumulation and filling of channels. You further reiterate your demand that at least 10,000 cfs be released "at all times so as to make the Colorado River navigable for the average user"

In addition this office has reviewed approximately 26 letters and form affidavits submitted by you from boaters on the Colorado River alleging difficulty in navigating the river in boats having

drafts of as little as 5 inches to as deep as 40 inches, though the affidavits do not generally discuss the location, time or precise navigational difficulty encountered. We have also received several unsolicited letters from members of the public complaining of the menace to navigation caused by the operation of your client's boats. For example, a letter from Mr. William T. Warburton states in part: "The boat he [Talley] operates is too big for this river and is a menace to boaters, floaters, swimmers and fisherman alike!" Another letter dated November 18, 1987, to the Superintendent, Davis Dam, from Mr. Harold Von Beck, charges that the operation of your client's boats has caused serious erosion of the river banks. He complains that your client's boats run at full throttle which "results in a strong undertow which takes silt with it. It is followed by a series of heavy and rapid waves which loosen up the next layer of soil. Both raise havoc with boats and docks. The described action is much worse than from any other craft on the river Concluding I would state that a boat with a displacement hull of the size as the Blue River Safari has and with the speed it is capable of should not operate on the lower Colorado. Transporting a few people between Laughlin and Lake Havasu City on the water is not worth the resulting damage to the environment. Other types of boats could be used too." Mr. Von Beck attached photos purporting to document the adverse effects. [See Exhibit A, "Correspondence File, Laughlin River Tours, Inc. application."]*

I

ISSUE PRESENTED

The central issue presented by your initial application for administrative relief is whether the Bureau of Reclamation is required by federal law, specifically the Boulder Canyon Project Act of 1928, 43 U.S.C. 617 et seq., to release "at all times," or at least during the operational hours of your tour boat service, sufficient water in the amount of 10,000 cfs to meet the navigational needs of your boats. Our proposed decision issued on June 27, 1988, concluded that federal law placed no such duty or obligation on the Bureau of Reclamation. We further concluded that, even assuming that legal authority existed which vested this office with discretionary authority to make such releases, I declined, as a matter of sound discretion and policy, to order such releases. Since issuing my Proposed Decision you have modified your initial request reducing your demand to a minimum 7,000 cfs even flow around the clock. For the reasons set forth below I hereby decline your application for either a uniform release of 10,000 cfs per day or a uniform release of 7,000 cfs per day.

 * All exhibits cited may be inspected and viewed in Room 200 C, Bureau of Reclamation, Park Street between Boulder Highway and Utah Street, Boulder City, Nevada 89005.

II BACKGROUND

Any analysis regarding the relationship between water releases and the Secretary of Interior's statutory obligation to improve navigation requires a brief review of the history of the Colorado River and navigation thereon, the circumstances giving rise to Reclamation projects on the river, and the intended and actual effects these projects have had on the navigability of the lower Colorado River.

Morphology and History of the Lower Colorado River Prior to the Construction of Hoover and Davis Dams.

The Colorado River rises in the mountains of Colorado and Wyoming and flows generally in a southwesterly direction for about 1,400 miles through Colorado, Utah, and Arizona and along the Arizona-Nevada and Arizona-California borders. Thereafter it passes into Mexico and empties into the Mexican waters of the Sea of Cortez. Prior to the construction of Hoover Dam, which was completed in 1935, the flows of the Colorado River were erratic and were characterized by low flows during fall and winter, and flood flows during spring runoff. In addition seasonal storms would generate unpredictable localized flooding. Flows in fact varied from highs greater than 200,000 cfs during spring runoff to low flows of 500 cfs in winter. Occasionally flows were so low that the river disappeared underground in certain sections of the river.

The course of the river was in a constant state of fluctuation due to heavy silting and the wildly varying rates of flow throughout the year. For example, in the Mohave Valley, as flooding subsided in the late summer and early fall, the river would recede and often cut for itself new and narrower channels in the valley floor nearly always different from the previous channel or channels. In addition to the annual periods or seasons of flooding, subsidence, and sustained periods of low flow, the evidence demonstrates that there were high flow years and low flow years that further contributed to the erratic and turbulent behavior of the river. The river carried a heavy sediment load estimated at 140,000 acre-feet of silt per year, which alternately deposited and eroded throughout the course of the river. Aerial photography reveals historical meanders of the last 150 years and clearly documents the varying courses the river has taken.

Obviously from the facts set forth above, it is apparent that the Colorado River historically was a muddy river. With the closure of Hoover Dam in 1935, Lake Mead was formed and the silt that the river had in suspension when it was in its natural muddy state settled out and the water in Lake Mead behind Hoover Dam became clear. Silt settles to the bottom of bodies of water as the velocity of the water slows. This accounts for the clearing of

the waters of Lake Mead. The process of silt settling to the bottom and raising the height of the lake or river bed is called aggradation. Conversely, when water began to be released from Hoover Dam it had great capacity to take into suspension approximately the same quantities of silt that it had carried formerly given the same velocity. Thus the clear water released from Hoover picked up sediment and took into suspension substantial quantities of sediment from the river bed, thus lowering the elevation of the river bed, or degrading the same. This process is called degradation.

Parker Dam was closed in 1938 forming Lake Havasu. As the velocity of the water flowing into Lake Havasu lessened, the silt being carried settled out in the headwaters of and in Lake Havasu itself. Similarly, before Davis Dam was closed in 1950, the river transported much of the silt it picked up below Hoover Dam into the Mohave Valley. After closure of Davis Dam, and the creation of Lake Mohave behind it, clear water released from the dam quickly degraded the river bed, and the sediment that it picked up and took into suspension was carried from below Davis Dam into the Mohave Valley.

Sources: (Hundley, "Dividing the Waters" pp. 12-14).
 (Watkins, "The Grand Colorado" pp. 165-166).
See also Peterson v. Morton, 465 F. Supp. 986 (D. Nevada 1979), affirmed 666 F.2d 361 (9th Cir. 1982)

History of Navigation on the Lower Colorado River Prior to Construction of Hoover and Davis Dams.

The Colorado River was navigated in the sixteenth century by several Spanish parties of exploration. The delta was later navigated and mapped by British and American explorers during the first half of the nineteenth century. Early commercial attempts at navigation were steamships which began navigating the Colorado River in 1852. The steamships transported goods from the ocean port at Puerto Isabel in Mexico to Yuma. A government agent, J. Ross Browne, wrote after visiting Yuma in 1864: "As a navigable stream it possesses some advantages during the dry season: boats can seldom sink in it; and for the matter of channels it has an unusual variety. The main channel shifts so often that the most skillful pilot always knows where it is not to be found by pursuing the course of his last trip." In time, steamship operators learned to adapt to the varying river conditions and were fairly effective. However, from written accounts it appears that navigation at best was a difficult process on the river. Often steamers were stuck on sand bars for several days waiting for the river to rise. The coming of the railroad to Yuma in 1877 eliminated the need for the river traffic from the ocean, but steamships continued on the river from Yuma

northward. Similarly, when the railroad reached northward to Needles, California, in 1883, further need for river traffic decreased.

The delta portion of the river dried up as the result of irrigation diversions at intervals after 1901. Navigation from Yuma south was interrupted by the shift of the river's outlet to Volcano Lake in 1909. Steamship traffic from Yuma ceased entirely in 1909 with the construction of Laguna Dam, but continued to operate up and down from Needles until 1918. Steamships were able to navigate for only about six months per year beginning in June and ending in late fall. The unpredictable flows and shifting channels made navigation difficult. Navigation, however, was not often characterized as hazardous since the river was wide and generally described as too shallow for a boat to sink. Because of the shifting channels there were virtually no maps or charts of the river. After the commercial traffic finally waned with the ever increasing efficiency of ground transportation, there was very little evidence of boating activity on the river for many years other than an occasional reference to surveyor's boats and engineering investigations. However, before commercial navigation disappeared, the navigability of the river to a point near Fort Callville, above the future site of Hoover Dam, had been established, and the river had been an artery of trade and commerce for an important, if brief, period.

This history was to become significant when the constitutional bases for the Boulder Canyon Project Act were subsequently attacked. See Arizona v. California, 283 U.S. 423 (1931). It is also interesting to note in passing that Article IV of the Colorado River Compact, signed November 24, 1922, also reflected the sad state of navigation during this period. Article IV states in pertinent part:

(a) Inasmuch as the Colorado River has ceased to be navigable for commerce and the reservation of its waters for navigation would seriously limit the development of its Basin, the use of its water for purposes of navigation shall be subservient to the use of such water for domestic, agricultural, and power purposes. If the Congress shall not consent to this paragraph, the other provisions of the compact shall nevertheless remain binding. . . .^{1/}

^{1/} Congress of course rejected the statement of non-navigability in enacting the Boulder Canyon Project Act. However, there is in fact some evidence to suggest that the phrase "improvement of navigation" was placed in Sections 1 and 6 of the Boulder Canyon
(footnote continued)

At any rate, it was not until 1946, following the depression and the end of World War II that recreational boating began in any significant amount. Lake Mead took approximately six years to fill, and the resulting reservoir, navigable throughout, had a surface area of approximately 234 sq. miles, 115 river miles long. Similarly, Davis Dam was completed or closed in 1950, and created Lake Mohave, navigable throughout, with a reservoir surface area of approximately 44 sq. miles, 67 river miles long. Also, Parker Dam, completed in 1938 created Lake Havasu, with a surface area, navigable throughout, of 32 sq. miles, 35 river miles long. Navigation on all of these lakes is open to virtually any kind of boat for any lawful purpose at any time of the year. Navigation by recreational boaters exists throughout the year and is not dependent on seasonal flows or varying channels as existed prior to these structures. It is interesting to note that none of the authorizing statutes included authorization for locks in order eliminate the obvious limitations which the dams would place on the limited upriver navigation.

Sources: (Paher, "Colorado River Ghost Towns" pp. 44-45)
(Watkins, "The Grand Colorado" p. 69)

(Wilbur, Ray Lyman and Northcutt Ely, "The Hoover Dam Documents" pp. 2-3.)

(Nathanson, Milton N., "Updating the Hoover Dam Documents")

(Fradkin, Philip L. "A River No More: The Colorado River and the West" pp. 328-330.)

(footnote continued from previous page)

Project Act, at least in part, in order to establish Congress' constitutional power to enact the legislation. The Fall-Davis Report (authorized by the Kinkaid Act of May 18, 1920, 41 Stat. 600) was submitted to Congress in 1922. The report gave rise to the Congressionally recognized need for the Boulder Canyon Project Act, did not reflect improvement on navigation as a recommended purpose of the proposed dam. Paragraph 6 of the report's recommendations stated:

It is recommended that every development hereafter authorized to be undertaken on the Colorado River by Federal Government or otherwise be required in both construction and operation to give priority of right and use: First. To river regulation and flood control. Second. To use of storage water for irrigation. Third. To development of power.

Current State of Navigation on the Lower Colorado River.

The success of Reclamation's efforts to improve navigation on the Lower Colorado River is well established by the usage the river receives during the time of year when the weather is pleasant and there is a desire for recreational boating. This can be shown by several measurement parameters. The number of commercial establishments supporting boating along the river is informative. There are 12 boat supply and equipment outlets listed in the commercial telephone directory in the Lake Havasu area, 8 in the Blythe area, and 12 in the Yuma area. In addition, from an inspection of the 1986 aerial photographs for the river system, several marinas were identified; 5 near Bullhead City, 4 near Needles, 6 on Lake Havasu, and 7 in the Blythe area. An estimate of the boat-use days on the Lower Colorado, extrapolated from recreational use studies by the Bureau of Land Management and the National Park Service, shows that the yearly annual boat use is projected to be over 80,000 days in 1988. For comparison the number has grown from an estimated 15,000 boat-use days in 1964.

I also ordered that an on site study be done regarding the navigability of that portion of the Colorado River below Davis Dam traversed by your boat. The evaluation was conducted during December, 1987 and January, 1988. The river was held at low flows during the evaluation in order to simulate typical December and January flows. The evaluation was conducted from a 14-foot boat with a 25 HP motor and four passengers. The flows from Davis dam were at 3,000 cfs during the inspection of the river from Davis Dam to Lake Havasu. The boat and crew traversed the river without incident and without hanging up on sandbars or obstructions. The river below Parker Dam to Yuma was also navigated during flows of 5,000 cfs from Parker Dam. A larger boat, a 16 foot hydrologic survey boat with a 120 HP motor, also made the trip below Parker Dam. Again, the river was navigated without serious incident. The larger boat did encounter an occasional sand bar but was able to be freed easily. It was noted that the temperatures were cold, though not unseasonably so. No other boats were on the river from Davis Dam to Lake Havasu. A few boating fishermen were encountered in the lower reaches of the river below Parker Dam, but no other recreational boats were seen.

Bureau of Reclamation Activities Which Improve Navigation on the River.

Reclamation has improved navigation throughout the lower Colorado River in four primary ways. First, Reclamation has constructed, maintains, and operates the above mentioned dams. The dams prevent millions of tons of silt annually from clogging the river channel. This improves navigation. Second, Reclamation operates the dams at near full levels when at all possible. As described above, this expands the total surface area of water available for

recreational and commercial boaters wishing to navigate on the river. Indeed, the reservoirs created by the dams are perhaps the primary reason for the heavy increase in the recreational industry along the Colorado River. Third, in order to balance and meet the multifold purposes of the Boulder Canyon Project Act, Reclamation releases water from storage in a regulated manner. This evens out seasonal flows, and prevents the wide swings in water flow which were a major impediment to year round navigation throughout the length of the river prior to construction of the dams. Fourth, Reclamation has constructed the Colorado River Front Work and Levee System. A brief description and history of this system and how it improves navigation on the Colorado River is set forth below.

The Colorado River Front Work and Levee System (System)

The Colorado River Front Work and Levee System was authorized by the Acts of March 3, 1925 (43 Stat. 1186, 1198), January 21, 1927 (44 Stat. 1010, 1021), July 1, 1940 (54 Stat. 708), and the Act of June 28, 1946 (60 Stat. 338), Public Law 79-469, as amended by the Act of May 1, 1958 (72 Stat. 101). The 1946 amendment amended the 1940 Act to read as follows:

That for the purpose of controlling the floods, improving navigation, and regulating the flow of the Colorado River, there is hereby authorized to be appropriated out of any moneys in the Treasury of the United States not otherwise appropriated, for the fiscal year ending June 30, 1928, and annually thereafter, such sums as may be necessary, to be spent by the Bureau of Reclamation under the direction of the Secretary of the Interior, to defray the cost of (a) operating and maintaining the Colorado River Front Work and Levee System in Arizona, Nevada, and California; (b) constructing, improving, extending, operating, and maintaining protection and drainage works and systems along the Colorado River; (c) controlling said river, and improving, modifying, straightening, and rectifying the channel thereof; and (d) conducting investigations and studies in connection therewith: * * * [Emphasis added]

A more complete history and description of the System is set forth in Exhibits B and C. However, a brief description of the activities of the System and how those activities improve navigation will be useful. The System is a comprehensive system of dikes, levees, drainage channels, desilting basins and other

structures constructed by Reclamation throughout the length of the lower Colorado River. In the above Exhibits documenting the system frequent mention is made of the following activities conducted by Reclamation pursuant to the above Congressional statutes authorizing the system: dredging, bank stabilization, snag removal, levee and dike construction, creation of diversion and sediment pools, and construction of earth fill training structures, channel reconstruction, and phreatophyte control and removal. These activities improve navigation in the following ways:

1. Dredging--Dredging improves navigation by deepening the river channel, removal of sediment which could cause future blockage of navigable reaches of the River and Lakes.
2. Bank stabilization--Primarily this entails using rock riprap on soft or otherwise unstable river banks to restrict lateral migration by the river. This assists in establishing a well defined, and thus deeper, river channel.
3. Snag removal--This activity was centered exclusively on Lake Havasu after frequent reports of boating accidents on the lake caused by hidden snags below the water line. The program has been very successful and such accidents have been markedly reduced. However, this is not to say that hazards, such as snags, shallow areas etc., still do not create a boating hazard to the unwary.
4. Levee construction--Levees are structures back from the channel of the river to protect against flood waters which have broken loose from its confined channel. The levees assist in improving navigation by returning such waters to the channel, and keeping the river channel from migrating during floods and degrading the preexisting navigable channel.
5. Construction of dikes and training structures--These narrow the channel, and increase the stability of the channel by improving the water depth, thereby improving navigation.
6. Channel reconstruction--This entails completely recreating a new channel to replace the natural channel. A good example is the reach of the river in the lower Cibola valley

which contains a reconstructed channel approximately 15 miles in length which provides a stable, deep, easily navigable reach of the river year round.

7. Phreatophyte removal--This entails removal of plants (typically salt cedars) along the banks of the river which consume large quantities of river waters. Also, plants with a low wildlife value are replaced with plants more conducive to favorable wildlife habitat. The water so conserved improves navigation on the river.

All of the above activities improve navigation without requiring the release of stored waters in excess of the consumptive needs. The System demonstrates how the multifold purposes of the Boulder Canyon Project Act can be implemented without wasting water to meet any single purpose.

Criteria Governing Water Releases from the Colorado River System

A detailed description of the geographic, economic, and legal factors governing the Secretary of Interior's regulation of the Colorado River is set forth in Exhibit D. Water releases are governed almost exclusively by what is known as the "Operating Criteria" (Exhibit E.), developed pursuant to Section 602(a) of the Colorado River Basin Project Act of September 30, 1968, 82 Stat. 885, (43 U.S.C. Section 1552). That Act directed the Secretary of the Interior to "propose criteria for the coordinated long-range operation of the reservoirs constructed and operated under the authority of the Colorado River Storage Project Act [43 U.S.C. Section 620 et seq.], the Boulder Canyon Project Act 43 U.S.C. Section 617 et seq.], and the Boulder Canyon Project Adjustment Act [43 U.S.C. Section 618 et seq.]. The Colorado River Basin Project Act required the criteria to make provision for the storage of water in storage units of the Colorado River Storage Project and releases of water from Lake Powell in accordance with certain stated priorities. First, releases are to be made under certain circumstances, to supply one-half the deficiency described in Article III(c) of the Colorado River Compact. Article III(c) of the Compact sets forth the shared burdens of the upper and lower division states to satisfy the treaty demands of Mexico for Colorado river water. Second, certain releases must be made to satisfy Article III(d) of the Compact. Article III(d) represents a prohibition on the upper states not to deplete the flow of a river by a stated amount. The purpose of this was to share flood waters with the lower basin states. Finally, and most significantly, priority three provided:

(3) storage of water not required for the releases specified in clauses (1) and (2) of this subsection to the extent that the Secretary, after consultation with the Upper Colorado River Commission and representatives of the three Lower Division States and taking into consideration all relevant factors (including, but not limited to, historic streamflows, the most critical period of record, and probabilities of water supply), shall find this to be reasonably necessary to assure deliveries under clauses (1) and (2) without impairment of annual consumptive uses in the upper basin pursuant to the Colorado River Compact: Provided, That water not so required to be stored shall be released from Lake Powell: (i) to the extent it can be reasonable applied in the States of the Lower Division to the uses specified in article III(e) of the Colorado River Compact, but no such release shall be made when the active storage in Lake Powell is less than the active storage in Lake Mead, (ii) to maintain, as nearly as practicable, active storage in Lake Mead equal to the active storage in Lake Powell, and (iii) to avoid anticipated spills from Lake Powell. [Emphasis added]

The underscored section above is significant because Article III (e) of the Compact states that the States of the upper division shall not withhold water, and the States of the lower division shall not require the delivery of water, which cannot be reasonably applied to domestic and agricultural uses. Thus it appears that the priorities set forth in Section 1552 of the Colorado River Basin Project Act represents a clear and later expression by Congress governing the use of water downstream from Lake Powell. This obviously includes water stored downstream at Lake Mead and Lake Mohave. Thus, releasing water to improve navigation in excess of downstream consumptive uses may well be violative of the priorities reflected in Section 1552. By statute the proposed criteria were required to be submitted to the Governors of the seven basin states and after receiving public comment the criteria were published in the Federal Register. The criteria were adopted in 1970 and have gone substantially unchanged since. The statute also required the Secretary of Interior to report to Congress, and the seven Colorado River Basin States, "describing the actual operation under the adopted criteria for the preceding compact water year and the projected operation for the current year." See Exhibit F. It is instructive to note that the criteria do not reflect releases of water in order to improve navigation. This is neither an

oversight nor a failure to recognize improvement of navigation as a first priority. It is merely reflective of the fact that the criteria are designed to govern releases of water for consumptive needs. Also, it is instructive to note that the Secretary could not change the long range criteria to reflect the release of waters requested by the applicant without fulfilling another statutory obligation. Section 1551 (b) states in pertinent part:

As a result of actual operating experiences or unforeseen circumstances, the Secretary may thereafter modify the criteria to better achieve the purpose specified in subsection (a) of this section, but only after correspondence with the Governors of the seven Colorado River Basin States and appropriate consultation with such State representatives as each Governor may designate.

The Secretary of the Interior, consistent with the need to conserve water in the arid west for consumptive use needs, has never chosen to improve navigation by releasing water when releasing would cause waste of water. Rather, as described more fully above, he has chosen to improve navigation in other ways less wasteful of this precious natural resource.

Summary of Water Release Schedule During Period Giving Rise To This Controversy

The Colorado River runoff is virtually entirely controlled. Consequently, water to meet navigation, river regulation, irrigation, municipal, and power production is supplied from upstream storage reservoirs. In the Lower Colorado River Basin, releases from Hoover, Davis, and Parker Dams are scheduled each week on a daily basis and adjusted daily as necessary, to meet downstream requirements for irrigation and municipal supply. This water is released through the powerplants at the dams. Here the power requirements influence the release pattern but not the quantity. Hourly releases are varied to meet an efficient power generating schedule but the total quantity released is limited to that needed to meet downstream orders and transit losses. Consequently, the highest flows occur during the summer when irrigation and other use is highest; the lower flows occur during the winter when demand is lowest. This pattern can clearly be seen from the hydrography set forth in Exhibits G and H.

This water release regimen is reflected in the monthly increases of water released during the period this controversy has been pending before this office. A brief history of those releases is set forth below for illustrative purposes.

Davis Dam contains 5 hydroelectric generators each referred to as a unit. Each unit is capable of releasing up to approximately 5,000 cfs. Generally during the first half of November 1987 Davis Dam hourly releases were at a minimum of a one unit of flow (approximately 5,000 cfs) and a maximum of a 2 units of flow or about 10,000 cfs. During the last half of November and first half of December releases ranged from a 1/2 unit flow of about 2,000 cfs generally from 10 p.m. to 8 a.m. up to a high of 3 or 4 units, 15,000 to 20,000 cfs during the day. During the last half of December releases ranged from 1/2 to 5 units, a maximum of 25,000 cfs. Small amounts of excess water were released over downstream demands during November and December in anticipation of flood control release requirements in January and February 1988.

During the first nine days of January 1988 hourly releases ranged from a minimum of 1 unit flow from Davis Dam to a full 5 units to satisfy minimum flood control release requirements. On the 9th of January flood control release requirements declined, allowing for a 1/2 unit flow during off-peak periods. From March 31 to date, releases for downstream demands have required hourly flows ranging from 1 unit to 5 units.

Water Loss Implications of Maintaining Either A 10,000 CFS Release, or 7,000 CFS Release From Davis Dam

The potential water loss from maintaining a mean daily release of 10,000 cfs from Davis Dam will vary according to the future hydrologic conditions and water demand patterns. The exact water loss is difficult to predict, especially over a long period of time. To illustrate the potential losses, the projected 1989 water year releases are used. Increased releases need not be wasted to Mexico if some entity is able to use the extra releases.

There are five major water user groups on the Lower Colorado River: (1) Arizona irrigation, (2) Arizona M&I, (3) California irrigation, (4) California M&I, and (5) Nevada M&I. Arizona cannot physically pump any more water through their system in water year 1989 than is currently scheduled. Most of the water used in California for M&I purposes is used by the Metropolitan Water District and is transported through the Colorado River Aqueduct. The Colorado River Aqueduct is at capacity in water year 1989. The California and Arizona irrigators are the last users on the river system. The additional flows to maintain this minimum release would occur in the fall and winter months (October through February) when little irrigation water is required. That leaves the water created by the excess releases to go to Mexico and become lost to the system from U.S. users. The following table establishes the projected 1989 water year releases for all months that would fall short of a proposed 10,000 cfs minimum flow from Davis Dam and the associated water losses to the United States System in that year.

Projected Mean Daily Releases at Davis Dam
Associated Water Losses with Proposed Minimum Release
Water Year 1989

<u>Month</u>	<u>Average Daily Flow (cfs)</u>	<u>Proposed Daily Flow (cfs)</u>	<u>Difference (cfs)</u>	<u>Volume of Water Lost (AF)</u>
October 88	8,500	10,000	1,500	92,000
November 88	7,700	10,000	2,300	136,000
December 88	8,200	10,000	1,800	110,000
January 89	7,000	10,000	3,000	184,000
February 89	9,200	10,000	800	<u>44,000</u>
Total				566,000

The value of an acre-foot (AF) of water depends on the use of the water. Irrigation water generally is valued less than municipal and industrial (M&I) water. From an agricultural standpoint, water is valued at its contribution in the production process. To derive the value of water for irrigation, farm budgets are prepared which account for all costs (i.e., return to all factors of production) except water. The difference between the anticipated revenues and the estimated costs of production represents the residual or returns to water. In Arizona, the irrigation value of water is estimated to be about \$80 an acre-foot, whereas in California the value is estimated to be about \$30 per acre-foot. The difference is primarily due to the crop mix. California's irrigation value is based on crops produced in the Imperial Valley. If Coachella was included in the analysis, the value of water would likely be increased due to a greater percentage of high value crops produced in the Coachella Valley. All values reflect a January 1988 price level.

Traditionally, M&I water is valued according to the next least cost alternative of obtaining the prescribed amount of water. The estimated value of M&I water in Arizona ranges from \$210 to over \$500 per acre-foot depending upon the size of the water project. The estimated value of M&I water in California varies from \$180 to \$220 per acre-foot. Again, these values reflect a January 1988 price level.

Depending upon who is shorted on water deliveries, the value of a water shortage could change dramatically. Arizona does not currently have the capacity to take its full Colorado River apportionment. Therefore, in the short and intermediate time frame, Arizona is not used to value potential water losses. Since, Arizona will not bear the near term losses, California remains the party impacted by the loss of water. Existing law

gives California irrigators a higher priority use than M&I, therefore it seems reasonable to assume that the losses will be born by the M&I users and the water should be valued accordingly.

The resultant value of water losses based on the previous discussion could be more than \$100 million ($\$200/\text{AF} \times 566,000 \text{ AF}$) for water year 1989.

Subsequent to issuance of our Proposed Decision, you submitted, during the public comment period, a modification of your application for relief in the form of a legal brief commenting on the Proposed Decision. Specifically, you modified your request as follows at p. 19 of your brief:

The projected daily releases that Davis Dam contain [sic] on page 29 of the Decision shows that an average daily flow currently scheduled for the months of October, November, December of 1988 and January and February of 1989 are adequate daily flows which would result in navigable water throughout the Colorado River. For example, the projected average daily flow in October of 1988 is 8,500 cfs. If said waters were released uniformly over a 24 hour period during October, 1988, the navigability of the river would be resolved, thereby, not wasting a drop of water beyond their projections. This principle is also true as to the months of November and December of 1988 and January and February of 1989.

What the applicant is objecting to is the extreme fluctuation of the average daily flow, not the total amount of flow.

We read the above paragraphs as expressing the position that your client's navigational needs can be satisfied within the projected average daily releases set forth in the above table labelled "Projected Mean Daily Releases at Davis Dam" cited above at p. 29 of the proposed decision, but included at p. 16 herein. The projected mean daily release set forth in the above table for January, 1989 is 7,000 cfs. We assume that if a minimum uniform twenty four hour flow of 7,000 cfs can meet your client's needs during January, then the same minimum flow will satisfy your client's needs during the other months set forth in the above table. We also assume that your request does not seek waters in excess of the projected mean daily releases, thus "not wasting a drop of water beyond their [Reclamation's] projections." [p. 19]. We base this assumption on your expressed satisfaction with living within the releases set forth in the table and by the last sentence set forth in the above quotation from your brief.

Your modified request has required this office to reanalyze the above conclusions regarding the impact of the requested relief on water and power resources. First, we find it necessary, for the purposes of clarification, to make some preliminary comments regarding your modified request. The above table referencing projected mean daily releases at Davis Dam was set forth in our discussion for the purpose of analyzing the economic losses regarding water attendant to meeting your initial request for administrative relief. The table was not presented, and should not be used, as a projected plan regarding actual daily operations governing water releases from Davis Dam. Such use of the table would be wholly inappropriate and lead to an erroneous understanding regarding operation of the system. This is apparent for several reasons.

First, as expressed in the title to the table, the listed releases are projections of future average release requirements, useful for analysis, but not useful in making water release decisions at the time such decisions are required. For example, during the water year of 1989 water release decisions on any given day will be determined by water orders placed by downstream users on a weekly basis, and refined by Reclamation and water users on a daily basis. Secondly, the releases set forth in the subject table are monthly averages of the mean daily projections. Actual releases may vary widely on a day to day and week to week basis depending upon downstream water orders. Water orders are in turn affected by cropping patterns and regional and local weather conditions. As set forth above, such projections and averages are useful in computing and predicting the economic impacts of a projected course of action. They are not, however, useful for determining operating procedure.

Nevertheless, we are constrained to take you at your word. That is to say that you are now requesting a minimum around the clock even flow of 7,000 cfs. It is your position that this will meet the navigational needs of your client. As before, we have analyzed your modified request. For the reasons set forth below it is the conclusion of this office that federal law places no duty or obligation to meet your client's request. Further, even assuming that legal authority exists which vests this office with discretionary authority to make such releases, I decline as a matter of sound discretion and policy to order such releases.

First, your request, if granted, would essentially turn our projected daily mean release table into a mandatory operating schedule. This would have severe negative impacts on water and power operations. First, as suggested above, the 7,000 cfs figure is merely reflective of a projected average. Use of this average figure may meet your client's needs but may well not provide sufficient water on a daily or weekly basis to satisfy downstream orders. Similarly, 7,000 cfs may, during some days or weeks,

provide water in excess of downstream needs. Water released from Davis Dam in excess of downstream needs is wasted due to the lack of downstream storage. Loss of water (depending on the variables governing water orders) might result in a loss from 0 to as much as several hundred thousand acre-feet. In extraordinary circumstances the water loss might even be greater. For example, as recently as January 1979 the average daily release was 2,897 cfs. Exhibit I. Had Reclamation been required to release 7,000 cfs in order to meet your client's needs during this month, a loss of approximately 200,000 acre-feet of water for that month alone would have been wasted. By comparison the State of Nevada's total annual apportionment under the decree in Arizona v. California, supra, is only 300,000 acre-feet.

The Hydroelectric Implications of a Uniform 10,000 CFS (or Alternative 7,000 CFS) Release Pattern From Davis Dam to Improve Navigation.

It is clear from prior description that variations in flow which arise during a twenty-four hour a day cycle are necessitated by the peaking of releases so as to generate maximum electricity when the need for electricity is the greatest i.e. during daylight hours. The need for this practice results from the fact that there is no way to effectively store for future delivery the large amounts of hydroelectric power generated by the generator's along the Colorado River. Therefore, hydroelectric power must be generated when it is needed.

The government of the United States, acting through the Bureau of Reclamation and the Western Area Power Administration, (Western) generates and markets power to serve the public interest in such a manner as to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles. The most efficient use of the hydro-system for power operations is: (1) to displace higher priced peaking units, (2) to shape thermal off-peak generation, (3) to provide load regulation and (4) to provide for power system reserves. A requirement to release a uniform 10,000 cfs from the Davis Dam and powerplant would essentially eliminate all of the uses and benefits listed above. Under a uniform 7,000 cfs regimen the impacts would be only slightly lessened.

In a typical week of operation, a uniform 10,000 cfs release would mean that 4,080 megawatt hours of peaking energy would have to be replaced by other base loaded or peaking generation. If a 7,000 cfs were uniformly released, 3,260 megawatt hours of peaking energy would have to be replaced. Currently, the difference between the Parker-Davis energy rate of 4.8 mills per kilowatt hour and Western's average fuel replacement on-peak rate of 18 mills per kilowatt hour would have to be expended by our customers, at a minimum, to replace this peaking energy. This

calculates out to two to three million dollars of increased annual costs which would ultimately be passed on to the power consumer.

Further, the ability to shape off-peak thermal generation with the Davis powerplant would be lost completely. The Parker-Davis electric service contracts would have to be modified to require Western's customers to schedule more off-peak hydrogeneration. To accommodate this, some thermal units would have to shut down or operate below their point of most efficient operation to match generation to load.

Because of the relative efficiency of a hydro unit over a wide load range and its rapid response time, the hydro-system is the most efficient method of matching generation to load on a minute to minute basis. At either a 10,000 cfs or 7,000 cfs regimen our ability to regulate load with the Davis powerplant would be extremely limited during the summer season and possibly eliminated completely during the winter season of a typical water year, depending on predominant weather and cropping patterns.

Even when the hydro generating capacity is not being used to its maximum capability, the hydro-system is providing an important service to the interconnected power system of the southwest; that of supplying reserves for power systems emergencies. The proposed operation would virtually make useless 165 megawatts of installed generating capacity at the Davis powerplant under a 10,000 cfs regimen, and make similarly useless 205 megawatts under a 7,000 cfs regimen. This lost capacity would have to be replaced by our customers with peaking combustion turbines or base loaded thermal units or some combination of both to optimally match the available generation to load and to provide for power system reserves. The installed costs for combustion turbines and base load coal units is currently estimated to be \$300 and \$1,700 per kilowatt, respectively. We estimate a dollar investment for installed capacity to adjust to a 10,000 cfs regimen to be in a range from \$50 million to \$280 million. At a 7,000 cfs regimen this increases to a range from \$60 million to \$350 million. These increased cost would more than likely be passed on to the consumer. In addition, the revenue of \$1.87 per kilowatt month currently being charged for Parker-Davis capacity would not be available for project operation and repayment. This 3.7 million (\$4.6 million under a 7,000 cfs regimen) dollars of annual lost revenue would have to be made up by an offsetting increase in the rate currently being charged for project energy and capacity.

The most significant immediate impact of a uniform release of 7,000 cfs is to work a permanent shut down of approximately $3\frac{1}{2}$ units of generation capacity at Davis Dam during the winter months. We could, of course, release more than 7,000 cfs in order to increase hydroelectric output but this would waste water since

such releases would generally exceed consumptive needs downstream. Secondly, of course, an even flow vitiates the above advantages which peaking brings to the system. Further, releasing any amount below your 7,000 cfs minimum need during evening hours in an attempt to reduce water losses has the inevitable effect of creating a trough in the flow of the river below Davis Dam. This trough begins the moment the flow is reduced and ends when the flow is increased to your 7,000 cfs minimum. The trough of course is not stationary but migrates down the river at a rate approximately equal to the velocity of the river, which is approximately an average of four miles per hour. Your route of navigation between Laughlin, Nevada and the permanently deeper headwaters of Lake Havasu is approximately sixty miles in length. Assuming your boat travels at a rate of 15-20 miles per hour, simple arithmetic reveals that your boat inevitably must cross the trough at least once during its daily tour. Since the bottom of the trough is below your 7,000 cfs minimum, it apparently will interfere with your navigation.

As demonstrated above, your requests either require this office to waste water, waste substantial hydroelectric resources, or both.

III LEGAL ANALYSIS

With the above background in mind your application requires this office to reassess our legal responsibility, if any, to release substantial amounts of water from Hoover and Davis dams to meet your specific navigational needs. The touchstone of this inquiry is Section 6 of the Boulder Canyon Project Act of 1928, 43 U.S.C. §§617 et seq. Section 6 reads in pertinent part:

That the dam and reservoir provided for by section 1 hereof shall be used: First, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses and satisfaction of present perfected rights in pursuance of Article VIII of said Colorado River compact; and third, for power.

It is less than clear from a reading of the above statute whether Congress intended, by listing the groups of purposes in numerical sequence, to set a strict priority among the three groups of purposes. We assume for the purposes of this decision that the statute does indeed set such a priority. However, this opinion should not be read to concede that the statute sets forth a priority scheme as a matter of law. We only decide that, assuming such a priority, the agency has met its burden. However, we construe the first listed purpose, that of river regulation, to represent a broad grant of authority to the Secretary of the

Interior to make the reasonable trade-offs and compromises necessary to meet all of the purposes of the Act to the greatest possible extent. In other words, we do not read the above priorities as requiring the Secretary to maximize the first set of purposes before embarking on operations to meet the second and third priorities. Such an interpretation would virtually vitiate the Secretary's ability to meet many of the Act's purposes, even those purposes listed as the first priorities, i.e. river regulation, flood control, and improvement of navigation, and in addition would disregard the valuable property rights of downstream water right holders.

For example, if the Secretary were to operate Hoover Dam to maximize its ability to control flood water because flood control is a first priority, he would, of necessity, keep Hoover's reservoir empty or near empty. At the very least he would be required, by such an interpretation of the statute, to keep storage space available to handle any remotely foreseeable flood situation. This would not only substantially reduce his ability to operate the dam to store water for domestic and irrigation needs but would also substantially reduce his ability to generate low cost hydroelectric power. Most significantly, reducing the amount of stored water would inhibit the ability to meet other first priority purposes such as river regulation and improvement of navigation. This is apparent because less stored water means less water available to regulate the river during times of scarcity and plenty. Less stored water also means less water to maintain a stable river for navigation on the reservoirs and on the miles and miles of river channel below the dams. As demonstrated above, maintenance of the reservoirs at near full levels has led to a demonstrable increase and improvement of navigation throughout the length of the lower Colorado River. The recitation regarding the state of the Colorado River during wet and dry years and seasons prior to construction of Hoover Dam demonstrates this point in a particularly graphic way.

Assuming that the statute does set forth a prioritized scheme, what does such a priority mean? We believe it requires the Secretary, within his discretion, to first construct, operate, and maintain Hoover Dam in such a manner as to address in a meaningful fashion first priority purposes before meeting second and third priorities. For example, if the Secretary were to operate the dam at fullest levels at all times so as to completely vitiate the dam's inherent capacity to handle even minimum flood flows in order to provide maximal power generation, or meet domestic or irrigation water needs, such a practice might well be violative of the statute's priority scheme. That is not the case at hand. As discussed fully above, the past and current practices of Reclamation meet the needs of second and third priorities while meeting the burden of improving navigation.

With respect to the first priority of river regulation and improvement of navigation, several additional comments are in order. First, the statute is utterly silent with respect to how Hoover Dam should be used to improve navigation on the river. In light of the manifold purposes of this complex statute we are convinced that Congress intended decisions regarding how, when, and where navigation should be improved to be left to the sound discretion of the Secretary. We are convinced that the statute clearly places at least a minimal burden on the Secretary to use the dam to improve navigation. We are similarly convinced by the facts set forth in detail above that this burden has been well met by the operational practices of the Secretary. This conclusion is further reinforced when one realizes that the duty placed on the Secretary of the Interior in 1928 was one to improve navigation on the Colorado River from its natural untamed state. This is not to say that Reclamation has been totally successful at making the river navigable at all times, at all locations, for everyone's needs. Further, we disagree with your contention that the river has been made non-navigable by Reclamation's practices. It is well settled that in order to be deemed navigable, the whole of a stream need not be navigable and need not be navigable at all times. A river remains navigable even though there are occasional obstructions and interruptions such as sandbars. It is not necessary for navigability that use be continuous. See e.g. United States v. Appalachian Power Company, 311 U.S. 377 (1940); Arizona v. California, 283 U.S. 423 (1931); and United States v. Utah, 283 U.S. 64 (1930).

The wisdom of Congress in leaving these matters to Secretarial discretion becomes evident when one understands that while the vast network of dams, canals, levees, dikes, and reservoirs which constitute the total system is a marvel to behold, it nevertheless has its limitations. These limitations make it impossible to meet everyone's particular needs without hurting someone else. For example, releases of vast amounts of water to meet your needs, would hinder the navigational needs of others on Lake Mead since the total navigable surface area of that reservoir would be reduced. The precise degree of such reduction of course depends on many variables, not the least of which is the amount of unpredictable yearly runoff into the reservoir. Indeed, in times of severe shortage, this agency's ability to meet even your average operational needs, needs which we currently meet, might well be placed in jeopardy.

While we assert that the Boulder Canyon Project Act vests wide discretion in the Secretary of Interior in meeting the Act's purposes, we are not unmindful that the touchstone of our responsibility is to ascertain and implement Congressional intent. A review of the facts and sources cited above reveals that since passage of the Boulder Canyon Project Act in 1928 the operations of this agency have been under close and continual scrutiny by

Congress. This scrutiny has been manifested by subsequent legislation such as the acts authorizing the Colorado River Front Work and Levee System; the Colorado River Storage Project Act of 1956, 43 U.S.C. Sections 620 et seq.; the Colorado River Basin Project Act of 1968, 43 U.S.C. Sections 1501 et seq.; and the Colorado River Basin Salinity Control Act of 1974, 43 U.S.C. Sections 1571 et seq. Further, as required by the Colorado River Basin Project Act, annual reports on the preceding compact water year and the projected operation for the current water years have been annually submitted to Congress. In short, Congress has been well informed of our water release practices. In no subsequent legislation has Congress expressed any dissatisfaction with our construction of the statute or its implementation, or acted to modify the agency's water release practices as those practices relate to navigation. In particular, we view the continued funding of the Front Work and Levee System by Congress, through annual appropriations, as evidence of Congressional policy that any continued duty to improve navigation be accomplished by the expenditure of appropriated funds for channel maintenance, levees, etc., rather than the non-consumptive release of waters which are the life blood of the arid Southwest.

Finally, as set forth more fully above, we believe that the statutory water release priorities set forth in the Section 1552 of the Colorado River Basin Project Act of 1968, governing the Secretary's Operating Criteria, express a clear Congressional directive that water releases should be linked to treaty needs or consumptive irrigation and domestic uses. Indeed, releasing water in derogation of that directive might well constitute a violation of that statute.

In summary, we believe that Reclamation is, and has been, in full compliance with Section 6 of the Boulder Canyon Project Act. The Act grants broad discretion to the Secretary to perform the balancing of interests and factors necessary to meet the multifold purposes of the Act. The Act does not require the Secretary to maximize first priority needs prior to embarking on second or third priorities. Finally, we feel the continual scrutiny of Congress, and subsequently enacted legislation, confirm our position that water should not be released to improve navigation beyond consumptive use needs.

IV

EXAMINATION OF ALTERNATIVES

In hopes of accommodating your client's needs without releasing water, I have asked the River Development Branch to conduct a preliminary study on the costs and public benefits of dredging, and/or pursuing other activities, which might alleviate your particular navigational problems. That study reveals that it would be possible to clear a channel sufficient for your boat to

make unobstructed passage during the few evening hours of low water release which present a problem during the winter months of otherwise low recreational use. Unless you or others are willing to undertake the accomplishment of such a project, or provide the funding, I do not believe that the benefits to the public outweigh the cost. In addition the project would have to solve important environmental and other problems. We suggest that you explore using a smaller boat, or at least one with a more modest draft. Such boats are in successful commercial tour use along the Yuma reaches of the river.

It should be noted at this point that we believe that your problems are largely self inflicted. Your boats have been able to navigate without hindrance for several years following the record high-water events of 1983 and 1984. Releases for flood control allowed a full 24-hour navigation for your boats all year long. We have now, however, returned to our traditional regimen. Information regarding this regimen was fully documented and was available to you at our offices prior to your embarking on your enterprise. The return to our prior water release practice was a well known fact which could have been easily ascertained by a visit to our offices. This office feels that any expectation that we would not return to these releases would have been wholly unfounded. [See Exhibits G and H.] See also comment letter and attachments, dated July 25, 1988 from Colorado River Commission, Appendix A.

V

EROSION COMPLAINT

Finally, your application specifically complains that our water release practices create permanent degradation of the river channel upon which your boats operate. I have taken note of your expressed concern in this regard. The River Development Branch has reviewed this matter. The Branch reports as follows. The causes of riverbank erosion involve both the river regime and riverbank properties. The causes of riverbank erosion frequently differ at various locations along the river. In many instances, erosion at a site is the result of several causes. Erosion may be the result of flood flows, toe scour, bed degradation, overbank flow, wave action, propeller wash, normal streamflow, man made structures, eddy action, rainfall erosion and bankline seepage, or a combination of these.

If a river undergoes an increase in river stage under the influence of an arriving flood wave, flow may be induced into the riverbanks. As the stage declines, the flow is reversed. The amount of bank storage induced by flood flow is dependent on the length of the flood, the time of the drop of the flood flows and the characteristics of the riverbank material.

If the riverbank consists of large noncohesive material (gravel, cobbles or coarse sand) the ground water surface elevation in the bank will drop at the same rate as the river stage. If the river bank consists of cohesive material (clays) they will have low permeability and drain slowly. These clay banks will become unstable under rapidly falling river stages as the water drains into the river. If the river bank consists of small noncohesive material (sands) or is a stratified mixture of sand, clays and gravels, the permeability and drainage of the bank will be somewhere between the above extremes.

The banks of the lower Colorado River consist of alluvial materials, mostly sand with layers of gravels and clays. The amount of bank storage and the permeability is variable along the river depending on the specific site location, characteristics of the bank and flow properties at the location.

The fluctuations of the river flows on the Colorado have not been identified as a cause of instability in the riverbanks. The permeability of the alluvial materials is high enough to allow drainage of the bank storage, allowing the ground water elevations to closely follow the river stage. The most dominant process causing erosion along the banks of the lower Colorado River is the erosive action of the riverflows themselves and wave action caused by boats. In short, we do not feel that the facts bear out your assertions that fluctuations in the quantity of water released during a twenty-four hour period are causing erosion or making the channel permanently non-navigable.

Your application also complains that daily fluctuations in the river flows increases the sediment from the river bottom itself, and deposits this material in areas of the river which contribute to navigational problems. The facts are to the contrary. The river bottom in the reach from Davis Dam to Needles is "armored", that is, it has a coating of coarse pebbles and gravels. This coating has a shingling effect which practically eliminates the degradation of the river bed for the flow regime up to about 30,000 cfs. This fact has been affirmed by the sediment transport sampling and river surveys in this reach of the river which have been conducted since the closure of Davis Dam and which chronicle the armoring process. When Davis Dam began damming the river and trapping the upstream sediments, the clean water discharged below the dam "plucked" the fine sands and silts from the river bottom, leaving the coarser pebbles and rocks. This process continued and gradually progressed downstream until at this point in time the river is fairly well armored as far downstream as Needles.

Below Needles the water continues to be very clean and clear at all flows up to about 28,000 cfs. While not armored to the degree or manner that the river is upstream, the bottom does consist of coarse sand which moves very little in the normal flow release

pattern. Recent sediment analyses of the flows at Topock, about 12 miles south of Needles, show sediment concentrations less than 10 parts per million, which are contrasted to the river's sediment carrying capacity, shown in earlier samples, of concentrations of 300 parts per million in this section of the river.

Sources: (Freeze, R. Allan and Cherry, John A, 1979, "Groundwater" Prentice-Hall, pp. 211-226, 470-472.)

(Peterson, Margaret S., 1986, River Engineering, Prentice-Hall, pp. 53-59.)

(U.S. Army, Corps of Engineers, Huntsville Division, Streambank Protection Manual, 1987.)

("Report on River Control Work and Investigation" December 1976, Bureau of Reclamation)

(Continually compiled survey data on file at the River Development Branch, Lower Colorado Regional Office, Bureau of Reclamation)

VI CONCLUSION

In this decision we have examined the history of navigation before and after enactment of the Boulder Canyon Project Act of 1928. Our purpose in doing so was to establish a perspective in reviewing our statutory duty to improve navigation on the lower Colorado River. It appears that navigation reached its low point when improved ground transportation virtually eliminated commercial navigation on the river. The construction of Hoover, Davis and Parker dams have been the central most important ingredient leading to improved navigation throughout the course of the lower Colorado River. As documented above, the river channel has generally been stabilized and massive silting substantially reduced. Hundreds of square miles of reservoir surface area has been created and is navigable year around. Wide swings in seasonal flows on the river have been evened out so that more of the channel is navigable over more miles and for a longer period of time than before these dams were constructed. We continue to meet our responsibilities to improve navigation by maintaining reservoirs at the fullest levels possible in accordance with the long range operating criteria pursuant to the Colorado River Basin Project Act as mandated by Congress. In short, we do not feel that we are required to make the requested water releases in order to bring past practices into compliance with federal law.

Finally, I have severe doubts whether I have legal authority to make such releases, on the facts before me, without violating the Colorado River Basin Project Act. It appears that such releases

would violate the statutory priorities set forth therein. However, even assuming that I have legal authority, I decline to do so. While releasing water in the massive amounts requested would marginally improve the number of hours during a few winter months for your three boats, the waste of water and hydroelectric benefits would be enormous. Water releases in excess of consumptive needs will invariably be wasted because of the limited storage space available in Lake Havasu impounded by Parker Dam downstream. Releasing water to raise the depth of the river as a method of improving navigation at one specific point on the river is not required by the Boulder Canyon Project Act and makes no sense in the arid West where water is probably the most precious of natural resources. Your application is therefore denied.

You may appeal this decision to the Commissioner, Bureau of Reclamation, United States Department of Interior, "C" Street, between 18th and 19th Streets, N.W., Washington, D.C. 20240. You should perfect your appeal by filing a notice of appeal in this office no later than thirty days from date of receipt of this decision. An appeal brief must be filed in the Commissioner's Office no later than 30 days from the date of filing of the notice of appeal.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ed M. Hallenbeck", with a stylized flourish at the end.

Edward M. Hallenbeck
Regional Director



IN REPLY
REFER TO:

United States Department of the Interior

BUREAU OF RECLAMATION
WASHINGTON, D.C. 20240

JAN 9 1989

DECISION

Ronald R. Madson, Esquire
Attorney for Complainant Laughlin
River Tours, Inc.; and John T. Talley
530 South Fourth Street
Las Vegas, Nevada 89101

Re: Administrative Decision of the Commissioner, Bureau of Reclamation, United States Department of the Interior, Regarding Appeal Brief of Administrative Decision of September 19, 1988, made by the Regional Director, Lower Colorado Region, Bureau of Reclamation, U.S. Department of the Interior, regarding application for administrative relief of Laughlin River Tours, Inc., and John T. Talley, individually, dated November 23, 1988.

Dear Mr. Madson:

I have reviewed your appeal brief and the Administrative Record. From this review I have concluded that the decision rendered by Regional Director Edward M. Hallenbach on September 19, 1988, is the correct decision and it is hereby affirmed.

In 1902, when Theodore Roosevelt created the Reclamation Service, now the Bureau of Reclamation, he used the words "... to do the greatest good for the greatest number" to guide the actions of this agency in conducting conservation activities in the West. Since that time, Congress has sought to embody the spirit of Roosevelt's words in legislation enacted which affect the natural resources of the West. Nowhere is this more apparent than in the operation of the Colorado River system.

Congress has entrusted the Secretary of the Interior with powers to direct, manage, and coordinate the operation of the Colorado River reservoir system pursuant to the Boulder Canyon Project Act and the other statutes, court decisions, decrees, treaties, and contracts which constitute the "Law of the River". This body of law guides the Secretary in the exercise of discretion and judgement in managing Colorado River operations, in balancing the competing interests on the Colorado River, and requires consultation with the seven basin States in forecasting and in the formulation of operation plans. That is to say, the Secretary is not at liberty to comply with individual or collective requests unless such requests are consistent with the "Law of the River."

The central issues presented by your initial application for administrative relief are whether the Bureau of Reclamation, through its operations, has rendered the Colorado River non-navigable and whether we are required by federal law, specifically the Boulder Canyon Project Act of 1928, 43 U.S.C. 617 et seq., to release "at all times," or at least during the operational hours of your clients's tour boat service, sufficient water to meet the navigational needs of his boats. Your initial request was for 10,000 cfs but has since been modified to 7000 cfs even flow around the clock.

Your request for administrative relief relies heavily on an interpretation of the Boulder Canyon Project Act that asserts a Congressional intent to impose a rigid priority system to the uses that should be made of the River. The Regional Director's Decision (Decision) dated September 19, 1988, fails to find such clarity in a reading of the statute and neither do I. But moreover, the Boulder Canyon Project Act is but one of the many parts of the "Law of the River". Because of their interrelationships, I believe they must be viewed in the aggregate, and in so doing I find that the purposes for which the River is operated cannot be considered mutually exclusive due to the inherent conflicts between the purposes. For these reasons and those stated on pages 21-24 of the Decision, I concur with the conclusion that the Bureau of Reclamation is not obligated to meet your request.

You also assert that the Colorado River has been made nonnavigable by the operations of the Bureau of Reclamation. On page 17 of your opposition to the June 27, 1988 Proposed Administrative Decision of the Regional Director, you conclude:

The test of whether is (sic) river is navigable is whether the river is one of "general and common usefulness for the purpose of trade and commerce." JOHN TALLEY re-emphasizes that the present river regulation (gyrating release patterns) by the BUREAU renders the river usable for trade or commerce with respect to his operation.


Therefore, not only has the Bureau's current Operating Criteria not improved navigation, but the Bureau's actions has created conditions which render the river non-navigable...

I believe it is well settled that in order to be deemed navigable, the whole of a stream need not be navigable and it need not be navigable at all times. United States v. Appalachian Power Co., (1940) 311 U.S. 377, 409; Arizona v. California, (1931) 283 U.S. 423, 453, 455; United States v. Utah (1930) 283 U.S. 64, 86) And further, Article IV of the Colorado River Compact recognized that the river had ceased to be navigable for commercial purposes. We are also mindful of Congress' intent as stated in hearings prior to the passage of the Boulder Canyon Project Act that the flow of the river be intended for use by power boats and other small craft.

I believe the record shows that the Bureau is meeting its responsibilities in administering the River. Your appeal is therefore denied.

This decision is final for the Department of the Interior.

Sincerely,

A handwritten signature in cursive script, reading "C. Dale Duvall". The signature is written in dark ink and is positioned above the printed name and title.

C. Dale Duvall
Commissioner

cc: Clerk of the Court
U.S. District Court
P.O. Box 11130
Reno, Nevada 89520

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(c) The report shall be submitted to the Committees on Appropriations and Interior and Insular Affairs of the House of Representatives and the Committees on Appropriations and Energy and Natural Resources of the Senate within three years of the appropriation of funds authorized by section 1617.

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SEC. 1617. AUTHORIZATION OF APPROPRIATIONS.

43 USC 390h-15.

There is authorized to be appropriated for fiscal years beginning after September 30, 1992, \$4,000,000 to carry out the study authorized by section 1616.

TITLE XVII—IRRIGATION ON STANDING ROCK INDIAN RESERVATION, NORTH DAKOTA

SEC. 1701. IRRIGATION ON STANDING ROCK INDIAN RESERVATION.

(a) Section 5(e) of Public Law 89-108, as amended by section 3 of the Garrison Diversion Unit Reformulation Act of 1986 (Public Law 99-294), is amended by striking "Fort Yates" and inserting "one or more locations within the Standing Rock Indian Reservation".

100 Stat. 419.

(b) Section 10 of Public Law 89-108, as amended by section 8 of Public Law 99-294, is further amended by adding subsection (e) as follows:

100 Stat. 424.

"(e) The portion of the \$61,000,000 authorized for Indian municipal, rural, and industrial water features shall be indexed as necessary to allow for ordinary fluctuations of construction costs incurred after October 1, 1986, as indicated by engineering costs indices applicable for the type of construction involved. All other authorized cost ceilings shall remain unchanged."

TITLE XVIII—GRAND CANYON PROTECTION

Grand Canyon Protection Act of 1992.

SEC. 1801. SHORT TITLE.

This Act may be cited as the "Grand Canyon Protection Act of 1992".

SEC. 1802. PROTECTION OF GRAND CANYON NATIONAL PARK.

(a) **IN GENERAL.**—The Secretary shall 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 project, 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.

(b) **COMPLIANCE WITH EXISTING LAW.**—The Secretary shall implement this section in a manner fully consistent with and subject to the Colorado River Compact, the Upper Colorado River Basin Compact, the Water Treaty of 1944 with Mexico, the decree of the Supreme Court in *Arizona v. California*, and the provisions of the Colorado River Storage Project Act of 1956 and the Colorado River Basin Project Act of 1968 that govern allocation, appropriation, development, and exportation of the waters of the Colorado River Basin.

(c) **RULE OF CONSTRUCTION.**—Nothing in this title alters the purposes for which the Grand Canyon National Park or the Glen Canyon National Recreation Area were established or affects the

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authority and responsibility of the Secretary with respect to the management and administration of the Grand Canyon National Park and Glen Canyon National Recreation Area, including natural and cultural resources and visitor use, under laws applicable to those areas, including, but not limited to, the Act of August 25, 1916 (39 Stat. 535) as amended and supplemented.

SEC. 1803. INTERIM PROTECTION OF GRAND CANYON NATIONAL PARK.

(a) **INTERIM OPERATIONS.**—Pending compliance by the Secretary with section 1804, the Secretary shall, on an interim basis, continue to operate Glen Canyon Dam under the Secretary's announced interim operating criteria and the Interagency Agreement between the Bureau of Reclamation and the Western Area Power Administration executed October 2, 1991 and exercise other authorities under existing law, in accordance with the standards set forth in section 1802, utilizing the best and most recent scientific data available.

(b) **CONSULTATION.**—The Secretary shall continue to implement Interim Operations in consultation with—

(1) Appropriate agencies of the Department of the Interior, including the Bureau of Reclamation, United States Fish and Wildlife Service, and the National Park Service;

(2) The Secretary of Energy;

(3) The Governors of the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming;

(4) Indian Tribes; and

(5) The general public, including representatives of the academic and scientific communities, environmental organizations, the recreation industry, and contractors for the purchase of Federal power produced at Glen Canyon Dam.

(c) **DEVIATION FROM INTERIM OPERATIONS.**—The Secretary may deviate from Interim Operations upon a finding that deviation is necessary and in the public interest to—

(1) comply with the requirements of Section 1804(a);

(2) respond to hydrologic extremes or power system operation emergencies;

(3) comply with the standards set forth in Section 1802;

(4) respond to advances in scientific data; or

(5) comply with the terms of the Interagency Agreement.

(d) **TERMINATION OF INTERIM OPERATIONS.**—Interim operations described in this section shall terminate upon compliance by the Secretary with section 1804.

SEC. 1804. GLEN CANYON DAM ENVIRONMENTAL IMPACT STATEMENT; LONG-TERM OPERATION OF GLEN CANYON DAM.

(a) **FINAL ENVIRONMENTAL IMPACT STATEMENT.**—Not later than 2 years after the date of enactment of this Act, the Secretary shall complete a final Glen Canyon Dam environmental impact statement, in accordance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

(b) **AUDIT.**—The Comptroller General shall—

(1) audit the costs and benefits to water and power users and to natural, recreational, and cultural resources resulting from management policies and dam operations identified pursuant to the environmental impact statement described in subsection (a); and

(2) report the results of the audit to the Secretary and the Congress.

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(c) **ADOPTION OF CRITERIA AND PLANS.**—(1) Based on the findings, conclusions, and recommendations made in the environmental impact statement prepared pursuant to subsection (a) and the audit performed pursuant to subsection (b), the Secretary shall—

(A) adopt criteria and operating plans separate from and in addition to those specified in section 602(b) of the Colorado River Basin Project Act of 1968; and

(B) exercise other authorities under existing law, so as to ensure that Glen Canyon Dam is operated in a manner consistent with section 1802.

(2) Each year after the date of the adoption of criteria and operating plans pursuant to paragraph (1), the Secretary shall transmit to the Congress and to the Governors of the Colorado River Basin States a report, separate from and in addition to the report specified in section 602(b) of the Colorado River Basin Project Act of 1968 on the preceding year and the projected year operations undertaken pursuant to this Act.

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(3) In preparing the criteria and operating plans described in section 602(b) of the Colorado River Basin Project Act of 1968 and in this subsection, the Secretary shall consult with the Governors of the Colorado River Basin States and with the general public, including—

(A) representatives of academic and scientific communities;

(B) environmental organizations;

(C) the recreation industry; and

(D) contractors for the purchase of Federal power produced at Glen Canyon Dam.

(d) **REPORT TO CONGRESS.**—Upon implementation of long-term operations under subsection (c), the Secretary shall submit to the Congress the environmental impact statement described in subsection (a) and a report describing the long-term operations and other reasonable mitigation measures taken to protect, mitigate adverse impacts to, and improve the condition of the natural, recreational, and cultural resources of the Colorado River downstream of Glen Canyon Dam.

(e) **ALLOCATION OF COSTS.**—The Secretary of the Interior, in consultation with the Secretary of Energy, is directed to reallocate the costs of construction, operation, maintenance, replacement and emergency expenditures for Glen Canyon Dam among the purposes directed in section 1802 of this Act and the purposes established in the Colorado River Storage Project Act of April 11, 1956 (70 Stat. 170). Costs allocated to section 1802 purposes shall be nonreimbursable. Except that in fiscal year 1993 through 1997 such costs shall be nonreimbursable only to the extent to which the Secretary finds the effect of all provisions of this Act is to increase net offsetting receipts; *Provided*, That if the Secretary finds in any such year that the enactment of this Act does cause a reduction in net offsetting receipts generated by all provisions of this Act, the costs allocated to section 1802 purposes shall remain reimbursable. The Secretary shall determine the effect of all the provisions of this Act and submit a report to the appropriate House and Senate committees by January 31 of each fiscal year, and such report shall contain for that fiscal year a detailed accounting of expenditures incurred pursuant to this Act, offsetting receipts generated by this Act, and any increase or reduction in net offsetting receipts generated by this Act.

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SEC. 1805. LONG-TERM MONITORING.

(a) **IN GENERAL.**—The Secretary shall establish and implement long-term monitoring programs and activities that will ensure that Glen Canyon Dam is operated in a manner consistent with that of section 1802.

(b) **RESEARCH.**—Long-term monitoring of Glen Canyon Dam shall include any necessary research and studies to determine the effect of the Secretary's actions under section 1804(c) on the natural, recreational, and cultural resources of Grand Canyon National Park and Glen Canyon National Recreation Area.

(c) **CONSULTATION.**—The monitoring programs and activities conducted under subsection (a) shall be established and implemented in consultation with—

- (1) the Secretary of Energy;
- (2) the Governors of the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming;
- (3) Indian tribes; and
- (4) the general public, including representatives of academic and scientific communities, environmental organizations, the recreation industry, and contractors for the purchase of Federal power produced at Glen Canyon Dam.

SEC. 1806. RULES OF CONSTRUCTION.

Nothing in this title is intended to affect in any way—

- (1) the allocations of water secured to the Colorado Basin States by any compact, law, or decree; or
- (2) any Federal environmental law, including the Endangered Species Act (16 U.S.C. 1531 et seq.).

SEC. 1807. STUDIES NONREIMBURSABLE.

All costs of preparing the environmental impact statement described in section 1804, including supporting studies, and the long-term monitoring programs and activities described in section 1805 shall be nonreimbursable. The Secretary is authorized to use funds received from the sale of electric power and energy from the Colorado River Storage Project to prepare the environmental impact statement described in section 1804, including supporting studies, and the long-term monitoring programs and activities described in section 1805, except that such funds will be treated as having been repaid and returned to the general fund of the Treasury as costs assigned to power for repayment under section 5 of the Act of April 11, 1956 (70 Stat. 170). Except that in fiscal year 1993 through 1997 such provisions shall take effect only to the extent to which the Secretary finds the effect of all the provisions of this Act is to increase net offsetting receipts; *Provided*, That if the Secretary finds in any such year that the enactment of this Act does cause a reduction in net offsetting receipts generated by all provisions of this Act, all costs described in this section shall remain reimbursable. The Secretary shall determine the effect of all the provisions of this Act and submit a report to the appropriate House and Senate committees by January 31 of each fiscal year, and such report shall contain for that fiscal year a detailed accounting of expenditures incurred pursuant to this Act, offsetting receipts generated by this Act, and any increase or reduction in net offsetting receipts generated by this Act.

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SEC. 1808. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated such sums as are necessary to carry out this title.

SEC. 1809. REPLACEMENT POWER.

The Secretary of Energy in consultation with the Secretary of the Interior and with representatives of the Colorado River Storage Project power customers, environmental organizations and the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming shall identify economically and technically feasible methods of replacing any power generation that is lost through adoption of long-term operational criteria for Glen Canyon Dam as required by section 1804 of this title. The Secretary shall present a report of the findings, and implementing draft legislation, if necessary, not later than two years after adoption of long-term operating criteria. The Secretary shall include an investigation of the feasibility of adjusting operations at Hoover Dam to replace all or part of such lost generation. The Secretary shall include an investigation of the modifications or additions to the transmission system that may be required to acquire and deliver replacement power.

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TITLE XIX—MID-DAKOTA RURAL WATER SYSTEM**SEC. 1901. SHORT TITLE.**

This title may be cited as the “Mid-Dakota Rural Water System Act of 1992”.

Mid-Dakota
Rural Water
System Act
of 1992.
South Dakota.

SEC. 1902. DEFINITIONS.

For purposes of this title—

(1) the term “feasibility study” means the study entitled “Mid-Dakota Rural Water System Feasibility Study and Report” dated November 1988 and revised January 1989 and March 1989, as supplemented by the “Supplemental Report for Mid-Dakota Rural Water System” dated March 1990 (which supplemental report shall control in the case of any inconsistency between it and the study and report), as modified to reflect consideration of the benefits of the water conservation programs developed and implemented under section 1905 of this title;

(2) the term “pumping and incidental operational requirements” means all power requirements incident to the operation of intake facilities, pumping stations, water treatment facilities, reservoirs, and pipelines up to the point of delivery of water by the Mid-Dakota Rural Water System to—

(A) each entity that distributes water at retail to individual users; or

(B) each rural use location;

(3) the term “rural use location” includes a water use location—

(A) that is located in or in the vicinity of a municipality identified in appendix A of the feasibility report, for which municipality and vicinity there was on December 31, 1988, no entity engaged in the business of distributing water at retail to users in that municipality or vicinity; and

(B) that is one of no more than 40 water use locations in that municipality and vicinity;

**Glen Canyon Dam Adaptive Management Work Group
Federal Advisory Committee
Bureau of Reclamation**

CHARTER

1. Official Designation: Glen Canyon Dam Adaptive Management Work Group
2. Scope and Objectives: The Committee will provide advice and recommendations to the Secretary of the Interior (Secretary) relative to the operation of Glen Canyon Dam in accordance with the additional criteria and operating plans specified in Section 1804 of the Grand Canyon Protection Act (Act) of October 30, 1992, embodied in Public Law 102-575, and to the exercise of other authorities under existing laws 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, as provided in section 1802 of the Act

The Glen Canyon Dam Adaptive Management Program (AMP) provides for monitoring the results of the operating criteria and plans adopted by the Secretary and research and experimentation to suggest appropriate changes to those operating criteria and plans.

The AMP includes an Adaptive Management Work Group (AMWG). The Secretary's Designee will chair the AMWG. The AMWG will recommend suitable monitoring and research programs and make recommendations to the Secretary. The AMWG may recommend research and monitoring proposals outside the Act, which complement the AMP process, but such proposals will be funded separately, and do not deter from the focus on the Act.

3. Description of Duties: The duties or roles and functions of the AMWG are in an advisory capacity only. They are to:

- a. Establish AMWG operating procedures.
- b. Advise the Secretary in meeting environmental and cultural commitments including those contained in the Glen Canyon Dam Environmental Impact Statement Record of Decision (GCDEIS ROD) and subsequent related decisions.
- c. Recommend the framework for the AMP policy, goals, and direction.
- d. Recommend resource management objectives for development and implementation of a long-term monitoring plan, and any necessary research and studies required to determine the effect of the operation of Glen Canyon Dam on 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.
- e. Review and provide input on the report identified in Section 1804 (c)(2) of the Act to the Secretary, the Congress, and the Governors of the Colorado River Basin States. The report

will include discussion of dam operations, the operation of the AMP, status of resources, and measures taken to protect, mitigate, and improve the resources defined in the Act.

f. Annually review long-term monitoring data to provide advice on the status of resources and whether the AMP Strategic Plan goals and objectives are being met. If necessary, develop recommendations for modifying the GCDEIS ROD, associated operating criteria, and other resource management actions pursuant to the Act.

g. Facilitate input and coordination of information from stakeholders to the Secretary to assist in meeting consultation requirements under Section 1804 (c) of the Act.

h. Monitor and report on all program activities undertaken to comply with applicable laws, including permitting requirements.

4. Duration: It is the intent that the AMWG will continue indefinitely, unless terminated by the Secretary, or the operation of the Federal Advisory Committee Act (FACA), 5 U.S.C. Appendix 2.

5. Agency or Official to Whom the Committee Reports: The AMWG reports to the Secretary through the Secretary's Designee who will serve as the chairperson and Designated Federal Officer of the AMWG. In the absence of the Chairperson or the designated alternate, another designated senior level Department of the Interior representative will act as Chairperson for the AMWG.

6. Bureau Responsible for Providing Necessary Support: The logistical and support services for the meetings of the AMWG will be provided by the Bureau of Reclamation (Reclamation).

7. Estimated Annual Operating Costs: The estimated annual operating costs associated with supporting the Committee's functions are \$500,000, including all direct and indirect expenses. It is estimated that five FTE's will be required to support the Committee.

8. Allowances for Committee Members (compensation, travel, per diem, etc.): Members of the Committee serve without compensation. However, while away from their homes or regular places of business, members engaged in Committee business (including regular, Technical, and ad hoc meetings) approved by the Designated Federal Officer may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in Government service under section 5703 of title 5 of the United States Code.

9. Estimated Number and Frequency of Meetings: The AMWG is expected to meet biannually. The Secretary's Designee, who will serve as the Designated Federal Officer, may call additional meetings as deemed appropriate. Fifteen members must be present at any meeting of the AMWG to constitute a quorum.

10. Termination Date: The AMWG is subject to the provisions of FACA and will take no action unless the charter filing requirements of Section 9 of FACA have been complied with. The Committee is subject to biennial review and will terminate 2 years from the date the charter is

filed, unless, prior to that time, the charter is renewed in accordance with Section 14 of the FACA.

11. Membership: Members and alternate members of the AMWG to be appointed by the Secretary will be comprised of but not limited to:

- a. Secretary's Designee, who will serve as Chairperson for the AMWG.
- b. One representative each from the following entities:
 - (1) Bureau of Reclamation
 - (2) Bureau of Indian Affairs
 - (3) U.S. Fish and Wildlife Service
 - (4) National Park Service
 - (5) Western Area Power Administration
 - (6) Arizona Game and Fish Department
 - (7) Hopi Tribe
 - (8) Hualapai Tribe
 - (9) Navajo Nation
 - (10) San Juan Southern Paiute Tribe
 - (11) Southern Paiute Consortium
 - (12) Pueblo of Zuni
- c. One representative each from the seven basin States:
 - (1) Arizona
 - (2) California
 - (3) Colorado
 - (4) Nevada
 - (5) New Mexico
 - (6) Wyoming
 - (7) Utah
- d. Two representatives each from:
 - (1) Environmental groups
 - (2) Recreation groups
 - (3) Contractors who purchase Federal power from Glen Canyon Powerplant

Members will be appointed to the AMWG by the Secretary, with input and recommendations from the above-referenced agencies, States, tribes, contractors for Federal power from Glen Canyon Dam, environmental representatives, and other stakeholders. These stakeholders may also recommend an alternate member for appointment by the Secretary. When the regular appointed member is not present, alternates will have authority to participate in AMWG business, including quorum and voting privileges. Members and alternates of the AMWG will be appointed for a 4-year term.

12. Ethics Responsibility: No AMWG member or alternate will participate in any specific party matter including a lease, license, permit, contract, claim, agreement, or related litigation with the Department in which the member has a direct financial interest.

13. Designated Federal Officer: Secretary's Designee, Glen Canyon Dam Adaptive Management Work Group, Department of the Interior, 1849 C Street, NW, Washington, DC 20240.

14. Subgroups: The AMWG may have workgroups or subgroups that the Committee and the Secretary's Designee deems necessary for the purpose of compiling information or conducting research. However, such workgroups may not conduct business without the direction of the Committee and must report in full to the Committee.

15. Authority: The Grand Canyon Protection Act (Act) of October 30, 1992, Public Law 102-575, Sections 1802, 1804, and 1805, Federal Advisor Committee Act, 5 U.S.C. Appendix 2.



Secretary of the Interior

JUL 23 2008

Date Signed

JUL 23 2008

Date Filed



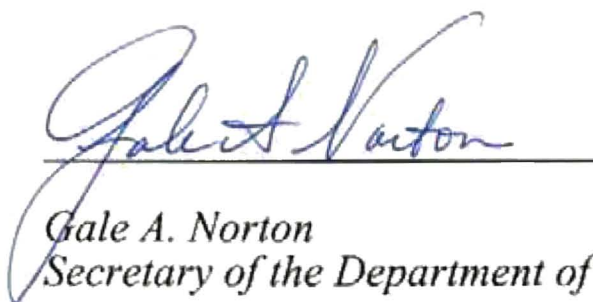
THE SECRETARY OF THE INTERIOR
WASHINGTON

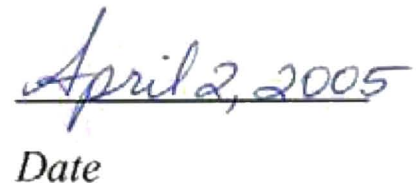
Record of Decision

Lower Colorado River Multi-Species Conservation Plan

April 2005

Approved


Gale A. Norton
Secretary of the Department of the Interior


Date

**RECORD OF DECISION
LOWER COLORADO RIVER
MULTI-SPECIES CONSERVATION PROGRAM**

**FINAL ENVIRONMENTAL IMPACT STATEMENT
(DECEMBER 2004)**

I. Introduction

This document constitutes the Record of Decision (ROD) of the Department of the Interior regarding the Lower Colorado River Multi-Species Conservation Program (LCR MSCP).

The importance of the Colorado River to the southwestern portion of the United States cannot be overstated: the Colorado is the lifeblood of the southwest. The Colorado River provides water and power to over 20 million people (in cities such as Los Angeles, San Diego, Las Vegas, Phoenix and Tucson), irrigates over 2 million acres, and generates up to 10 billion kilowatt-hours of electricity annually.

The Secretary of the Interior has statutory responsibility for the operation of Hoover Dam, Davis Dam and other facilities on the lower Colorado River which constitute a “vast, interlocking machinery--a dozen major works delivering water according to congressionally fixed priorities for home, agricultural, and industrial uses to people spread over thousands of square miles.” *Arizona v. California*, 373 U.S. 546, 589 (1963). In exercising this authority Congress “entrusted [the Secretary] with sufficient power ... to direct, manage, and coordinate their operation.” *Id.* at 590. In this capacity, the Secretary serves a “water master” function on the lower Colorado River (LCR) and is required to operate the LCR pursuant to a body of law commonly referred to as the “Law of the River.”¹

Congress has also delegated statutory responsibility to the Secretary for administration of the Endangered Species Act of 1973 (ESA), for the purpose of conserving species and the ecosystems upon which they depend. The Supreme Court has stated that “[a]s it was finally passed, the Endangered Species Act of 1973 represented the most comprehensive legislation for the preservation of endangered species ever enacted by any nation. Its stated purposes were “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved,” and “to provide a program for the conservation of such ... species” *TVA v. Hill*, 437 U.S. 153, 180 (1978) (citations omitted).

The LCR MSCP has been designed to implement and harmonize these statutory responsibilities.²

¹ The “Law of the River” includes interstate compacts, an international treaty, a Supreme Court decree and injunction, applicable federal statutes, regulations and contracts, and other documents and agreements that control the management and distribution of the Colorado River. *See e.g., Defenders of Wildlife v. Norton*, 257 F. Supp. 2d 53 (D.D.C. 2003). *See § II, infra*, for a detailed discussion of this topic.

² In addition to the operation of major facilities on the lower Colorado River, the LCR MSCP addresses federal actions by the Bureau of Indian Affairs, the Bureau of Land Management, the National Park Service and the U.S. Fish & Wildlife Service and the Western Area Power Administration (U.S. Department of Energy). The LCR MSCP also addresses actions by over forty non-federal entities from the States of Arizona, California and Nevada. These non-federal entities rely on the Colorado River for water and power supplies and also manage resource programs on the lower Colorado River. *See generally*, Final LCR MSCP Biological Assessment and Final Habitat Conservation

The Bureau of Reclamation (Reclamation) and the Fish and Wildlife Service (Service), as the agencies that are designated to act on the Secretary's behalf with respect to these matters, are the joint co-leads for the purposes of compliance with the National Environmental Policy Act of 1969 (NEPA) for the development and implementation of the LCR MSCP. The two lead agencies for NEPA and The Metropolitan Water District of Southern California (Metropolitan) as the lead agency for the California Environmental Quality Act (CEQA), prepared an Environmental Impact Statement/Environmental Impact Report (EIS/EIR) that analyzes the effects of the proposed action on the human environment.

For the Service, the EIS evaluates the effects of issuing a section 10(a)(1)(B) permit to the non-federal participants of the LCR MSCP. For Reclamation, the EIS evaluates the effects of implementing the conservation measures in the LCR MSCP Habitat Conservation Plan (HCP), and for Metropolitan, the EIR evaluates the effects of implementing the conservation measures in the LCR MSCP HCP.³

The Final Environmental Impact Statement (FEIS) was prepared pursuant to NEPA, as amended, the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500 through 1508), Department of the Interior Policies, and Reclamation and the Service NEPA Handbooks. The LCR MSCP is the subject of the FEIS filed with the Environmental Protection Agency (EPA) (FES-04-47) and noticed by the EPA, Reclamation and the Service in the Federal Register on December 17, 2004 (69 Fed. Reg. 75556). Alternatives have been fully described in detail and evaluated in the FEIS.

The LCR MSCP is a cooperative effort between Federal and non-federal entities for the purpose of:

- conserving habitat and working toward the recovery of threatened and endangered species, as well as reducing the likelihood of additional species being listed;
- accommodating present water diversions and power production and optimizing opportunities for future water and power development, to the extent consistent with the law; and
- providing the basis for incidental take authorizations.

The LCR MSCP permit applicants have applied to the Service for an incidental take permit, pursuant to section 10(a)(1)(B) of the Endangered Species Act (Act). The permit application is for six listed species, two candidate species, and 19 unlisted species that may become listed under the Act in the future.

The proposed activities to be covered by the permit are the present and future activities of non-Federal entities within the States of Arizona, California, and Nevada, including primarily those that involve the consumption of water and power resources of the lower Colorado River (LCR).

In addition to the covered activities of the non-Federal LCR MSCP permit applicants, specific present and potential future actions of six Federal agencies on the LCR are also included in the

Plan for the LCR MSCP.

³ Compliance with CEQA, including any actions taken by California parties under the LCR MSCP, is the exclusive responsibility of the relevant California parties.

LCR MSCP.⁴ Those Federal agencies are Reclamation, Bureau of Indian Affairs (BIA), National Park Service (NPS), Bureau of Land Management (BLM), Western Area Power Administration (Western) and the Service. The Federal agencies and permit applicants are collectively referred to as the LCR MSCP participants. The covered actions and activities for the LCR MSCP participants occur along the LCR in La Paz, Mohave, and Yuma counties, Arizona; Imperial, Riverside, and San Bernardino counties, California; and Clark County, Nevada. The requested duration of the permit and the associated formal section 7 consultation for the Federal agencies is 50 years (2005-2055).

The LCR MSCP participants developed the LCR MSCP Habitat Conservation Plan, (LCR MSCP HCP) and the LCR MSCP Biological Assessment (LCR MSCP BA). These documents describe the covered activities, the effects of those activities that may result in incidental take, and the conservation measures that they propose to minimize and mitigate impacts from any incidental take of the covered species.⁵

II. Decision

The purpose of this ROD is to: (1) state our decision, present the rationale for its selection, and portray its implementation; (2) identify the alternatives considered in reaching the decision; and (3) state whether all means to avoid or minimize environmental harm from implementation of the selected alternative have been adopted in accordance with 40 C.F.R. § 1502.2.

This ROD effects the approval of the following Federal actions:

- A. Issuance of an ESA Section 10(a)(1)(B) incidental take permit for the LCR MSCP HCP;
- B. Execution of an Implementation Agreement (IA) for the LCR MSCP;
- C. Execution of a Funding and Management Agreement (FMA) for the LCR MSCP;
- D. Implementation of the LCR MSCP by Reclamation.

The LCR MSCP represents a comprehensive species conservation approach to both federal actions and non-federal activities on the lower Colorado River. This unique conservation partnership includes federal, state and tribal participants. In addition, this program represents a unique partnership among a number of agencies within the U.S. Department of the Interior.

In approving the foregoing identified actions, I also direct all participating agencies within the Department of the Interior to utilize their authorities in furtherance of this conservation program to the fullest extent allowed by law. Rather than undertaking piecemeal, action-by-action ESA compliance activities, the LCR MSCP is designed as a *comprehensive approach* to species conservation; such an approach can work only if the various federal authorities are *themselves*

⁴ As provided in the ESA's implementing regulations, Section 7 and the requirements for ESA consultations apply only to discretionary federal actions. See 50 C.F.R. § 402.03.

⁵ Approval of the LCR MSCP provides ESA compliance for the impacts of certain future covered actions and activities within the Planning Area, but it does not provide approval for the identified future covered actions and activities. Any decisions regarding approval of covered activities, and possible additional environmental review, will be made when a specific covered action or activity is actually proposed in the future. Implementation of the conservation actions contained in the LCR MSCP is not dependent upon approval of any of the identified future potential covered actions and activities.

working together in a coordinated and complementary fashion. Working together, through the implementing structure identified in this Record of Decision (ROD) and the Agreements identified above, it is the direction of the Department that the LCR MSCP is administered through a seamless integration of Departmental authorities and programs during the anticipated 50-year term of LCR MSCP implementation by Reclamation. Throughout the anticipated 50-year term of the LCR MSCP, the Departmental agencies may identify the need for additional intra-Departmental agreements to facilitate implementation of the conservation program. I direct that all participating Departmental officials work together and put in place such agreements to achieve the important species conservation actions identified in this program.

III. Background

A. Law of the River⁶

The Secretary of the Interior is vested with the responsibility to manage the mainstream waters of the LCR pursuant to a body of law commonly referred to as the “Law of the River.” The Law of the River includes, but is not limited to, Federal and state laws, interstate compacts, an international treaty, court decisions, Federal contracts, Federal and state regulations, and multi-party agreements.

The Colorado River Compact of 1922 allocated 7.5 million acre-feet annually to the “upper basin” states (Colorado, Wyoming, Utah, and New Mexico) and 7.5 million acre-feet annually to the “lower basin” states (California, Arizona, and Nevada).⁷ In 1928, Congress passed the Boulder Canyon Project Act, approving the Colorado River Compact and authorizing construction of the Hoover Dam. Hoover Dam was completed in 1935. Over the following fifteen years, two more major dams, four major irrigation canals, and several smaller facilities were constructed.

In 1944, the federal government signed a treaty with Mexico allotting that country 1.5 million acre-feet of water per year from the Colorado River (absent a Treaty-based surplus of up to 1.7 million acre-feet or a Treaty-based reduction due to extraordinary drought or serious accident) and allocating to Mexico any other waters arriving at Mexican points of diversion or at the Southerly International Boundary (SIB) between the two countries.⁸ Mexico then built and completed in 1950 the Morelos Diversion Dam near the intersecting boundaries of Arizona, California, and Baja California to divert its water for use in the Mexicali and San Luis Valleys.

In order to resolve continuing disputes over the apportionment of water among the lower basin states, Arizona filed suit in 1952. After a decade of litigation, the Supreme Court upheld the validity of contracts entered into by the Secretary of the Interior pursuant to the Boulder Canyon

⁶ This discussion regarding the “Law of the River” is included to provide a background understanding and context for the management of the Colorado River and to describe actions taken by the Secretary of the Interior, certain of which are covered actions as part of the LCR MSCP. Relevant provisions of the “Law of the River” affect the rights of the United States, the Republic of Mexico, the seven Colorado River Basin States and various entities within each of the Basin States; accordingly it would be inappropriate for this ROD to provide a formal legal interpretation of any of these provisions of law. Therefore, nothing in the ROD is intended to interpret the provisions of the Colorado River Compact, the Boulder Canyon Project Act of 1928, the U.S.-Mexico Treaty of 1944, the decision of the Supreme Court in *Arizona v. California*, or other provisions of the Law of the River cited herein.

⁷ Colorado River Compact of 1922, Art. III(a).

⁸ Treaty Between the United States of America & Mexico, Art. 10(b), 15(e).

Project Act,⁹ affirmed that the Secretary is, by statute, bound by the Colorado River Compact, and enjoined the federal government from releasing water (other than that needed to satisfy the Mexican Treaty) except in accordance with the order of priority established by Congress: (1) river regulation, improvement of navigation, and flood control; (2) irrigation and domestic uses; and (3) power.¹⁰ The injunction also affirmed Congress' statutory apportionment of mainstream waters among the three lower basin states.

Reclamation, which built and/or operates all of the American dams in the lower basin and conducts river operations for the Secretary, is responsible for delivering water to the lower basin states and to Mexico in accordance with the Compact, the Treaty, the Supreme Court injunction, and contracts with recipients.

ESA Listings and Consultations on the Lower Colorado River: 1967-2005

In 1967, the Yuma clapper rail, an endemic bird of the LCR, was listed as endangered under the precursor law to the ESA. In 1980, the bonytail, a native fish of the LCR, was listed as endangered under the ESA. In 1991, the razorback sucker, another native fish of the LCR, was listed as endangered. In 1994, areas of the LCR were designated as critical habitat for these two endangered fish species. In 1995, the southwestern willow flycatcher, a native bird of the LCR region, was also listed as endangered.

Reclamation began consulting with the Service on new projects in the early 1980s. Until 1995, however, it had not evaluated the impacts of its routine, ongoing operations on listed species and critical habitats along the LCR. In that year, Reclamation began an evaluation of its ongoing operations and actively engaged in negotiations with the three lower basin states and other interested parties regarding development of a comprehensive, long-term LCR MSCP. Representatives of the States of Arizona, California and Nevada (and entities which rely on the Colorado River for water and power) sought to participate in a program through which federal and non-federal participants could develop a comprehensive species conservation strategy to address current and future operations which could be effectively implemented in the lower Colorado River region.

Reclamation entered into formal consultation with the Service in 1996 on discretionary operations and maintenance activities on the LCR. The Service issued a Biological Opinion (BO) in 1997 that covered Reclamation activities for a five-year period. The BO found that the Reclamation actions were likely to jeopardize the continued existence of the southwestern willow flycatcher, bonytail, and razorback sucker, and would destroy or adversely modify designated critical habitat for the bonytail and razorback sucker. The BO contained several Reasonable and Prudent Alternatives (RPAs) designed to provide a multi-phased approach to address the adverse effects.

In 1997, representatives of the Department of the Interior and the States of Arizona, California and Nevada entered formal agreements for development and cost-sharing of the LCR MSCP (see discussion below). Included in the RPAs contained in the 1997 BO issued by the Service was a requirement for the continued development of the long-term LCR MSCP.

Environmental groups filed suit in 1997 alleging that the multi-phased RPA violated the ESA.

⁹ *Arizona v. California*, 373 U.S. 546, 83 S.Ct. 1468, 10 L.Ed.2d 542 (1963).

¹⁰ *Arizona v. California*, 376 U.S. 340, 341-42, 84 S.Ct. 755, 11 L.Ed.2d 757 (1964).

The U.S. District court upheld the Service's decision to require the development of a long-term LCR MSCP as part of the RPA, finding it a reasonable approach to the complex ESA issues along the LCR. The court stated that the RPA "contemplates the initiation of long-term planning to protect the Flycatcher and other endangered species and their habitat along the LCR."¹¹ The court further noted that the "RPA addresses many of the threats facing the Flycatcher over the entire course of the LCR and its range in the short-term... until long-term solutions can be put in place."¹² On appeal, the Ninth Circuit affirmed the district court's holding, noting that there was a rational connection between the facts found in the BO and the choice made to adopt the multi-phased RPA.¹³ As discussed more fully below, the federal and non-federal participants have worked continuously since 1997 to develop the LCR MSCP.

In 2000, environmental groups filed suit to challenge the decision in the section 7 consultation not to address the effects to species in Mexico resulting from river operations. The district court for the District of Columbia held that Reclamation does not have a duty to consult on effects to extra-territorial species in Mexico that are downstream from river flows over which Reclamation has no discretionary control. The court stated "[t]he formulas established by the Law of the River strictly limit Reclamation's authority to release additional waters to Mexico, and Section 7(a)(2) of the ESA does not loosen those limitations or expand Reclamation's authority."¹⁴ The court further noted that "it seems unlikely that any case will present facts that more clearly make any agency's actions non-discretionary than this one: a Supreme Court injunction, an international treaty, federal statutes, and contracts between the government and water users that account for every acre foot of lower Colorado River water."¹⁵

In 2002, Reclamation requested a 3-year extension (to April 30, 2005) of the 1997 consultation, due to the fact that the LCR MSCP was not yet completed. The Service issued a BO based on the 1997 BO for Reclamation's discretionary operations and maintenance activities that would provide section 7 compliance for Reclamation through April 30, 2005 and allow additional time for completion of the LCR MSCP. Based on updated wildlife studies and on some of the positive effects of Reclamation's ongoing conservation efforts, the Service's April 2005 BO concluded that Reclamation's operations would not be likely to jeopardize the continued existence of listed species or adversely modify designated critical habitat.

During the 1997 - 2005 period, Reclamation funded and undertook activities pursuant to its ESA consultations on the lower Colorado River. A summary of some of the key activities undertaken during this period include the following:

- Reclamation conducted restoration activities including identifying restoration concepts opportunities along the LCR, and conducting numerous *in situ* studies using various planting methods for large scale restoration. These studies included all aspects of restoration such as monitoring water application and use, survival and growth success, plant genetics, and other pertinent items. Several restoration demonstration areas have

¹¹ *Southwest Center for Biological Diversity v. Reclamation*, 6 F. Supp.2d 1119 (D.Ariz. 1997).

¹² *Id.* at 1132.

¹³ *Southwest Center for Biological Diversity v. Reclamation*, 143 F.3d 515, 523 (9th Cir. 1998).

¹⁴ *Defenders of Wildlife v. Norton*, 257 F. Supp.2d 53, 67-68 (D.D.C. 2003).

¹⁵ *Id.* at 69.

been initiated, and are being monitored for vegetation success and bird and mammal use.

- A total of 1400 acres of Southwestern Willow Flycatcher habitat was acquired or protected in the Southwest. Protective management actions for the existing Southwestern Willow Flycatcher habitat along the LCR including fire management, Brown-Headed Cowbird trapping efforts, documenting threats to nesting habitat and other protective management actions were taken (and are continuing).
- Numerous studies and surveys were conducted and are continuing to determine various aspects of the status and ecology of the Southwestern Willow Flycatcher occurring along the LCR. These studies and surveys included documenting distribution, nesting locations, nesting habitat characteristics, food habits, as well as interactions with Brown-Headed Cowbirds and predation.
- Reclamation participated in various monitoring activities for avian species such as maintaining MAPS stations (Monitoring Avian Productivity and Survival), conducting winter bird counts, and participating in other avian related surveys.
- Other species specific monitoring conducted since 1997 include mammal surveys for bats, Yuma Cotton Rat, and small mammal use of restoration sites.
- Reclamation upgraded fish rearing facilities at FWS and Arizona hatcheries for production of razorback sucker and bonytail. Fifty thousand sub-adult razorback suckers were stocked below Parker Dam during this period. Studies on movements of razorback sucker, bonytail and flannelmouth sucker were also conducted during this period. Research was initiated (and continues) on the razorback sucker population in Lake Mead to determine why limited recruitment occurs in that population.
- Slightly over 300 acres of impoundments for protected habitats for native fish were identified. Work is continuing to reclaim those impoundments and place native fish in them. The Reclamation actions included determining best methods for excluding non-native fish, actions such as replacing water in large isolated backwaters with higher quality groundwater, determining the sizes of fish eggs and larvae to determine screen sizes, and developing proper methodology for removing all non-native fish prior to stocking with native fish.
- Reclamation continued to serve as the lead agency in the Lake Mohave Native Fishes Program, which has the goal of replacing the existing population of aging razorback suckers with 50,000 spawning adult razorback suckers. The program has stocked over 80,000 juvenile and sub-adult razorback suckers.
- Research was conducted on various aspects of the life history of native LCR fishes. These included distribution and habitat use of non-native fish such as flathead catfish; initiating studies on an isolated habitat on Cibola Refuge that has a self-sustaining population of razorback sucker and bonytail; a literature review, summary and assessment of relative roles of biotic and abiotic factors for management of native fishes in the LCR; as well as cooperating in other native fish activities with other agencies on the LCR.
- Reclamation has also continued to maintain updated vegetation and backwater maps of the LCR and is currently updating the backwater rating system for the LCR.

Development of the LCR MSCP by Representatives of the Federal Government working with Arizona, California and Nevada entities

On August 2, 1995, the United States, through the U.S. Department of the Interior; the Arizona Department of Water Resources and the Arizona Game and Fish Commission; the Colorado River Board of California and the California Department of Fish and Game; and the Colorado River Commission of Nevada, and the Division of Wildlife of the Nevada State Department of Conservation and Natural Resources entered into a Memorandum of Agreement for Development of a Lower Colorado River Multi-Species Conservation Program, which was clarified in a Memorandum of Clarification, signed in June 1996, to acknowledge Federal actions within the 100-year floodplain of the LCR which are subject to section 7 consultation under ESA.

On June 26, 1996, the U.S. Department of the Interior and representatives of the three lower Colorado River basin states of Arizona, California, and Nevada entered into the “Lower Colorado River Multi-Species Conservation Program Agreement” by which they agreed, subject to appropriation, to a sharing between Federal and State parties of the costs of developing the LCR MSCP and implementing certain interim conservation measures during fiscal years 1996 through 1999.

In May of 1997, representatives of the U.S. Department of the Interior (on behalf of the BLM, Reclamation, the Service, BIA, and the NPS) and the three lower Colorado River basin states of Arizona, California, and Nevada entered into the “Lower Colorado River Multi-Species Conservation Program Joint Participation Agreement” to jointly develop a Lower Colorado River Multi-Species Conservation Program and to formally establish the Steering Committee and other organizational structures necessary for the development of the LCR MSCP. At the same time, representatives of the three states also entered into the “Lower Colorado River Multi-Species Conservation Program Inter-State Cost-Sharing Agreement” to provide funding commitments and arrangements with respect to the non-federal portion of the costs of the Program.

To facilitate the development of an ecosystem-based habitat conservation plan (HCP) and coordination with the various LCR MSCP Federal partners, the Director of the Service designated the LCR MSCP Steering Committee as the Ecosystem Conservation, Recovery, and Implementation Team (ECRIT) for the LCR. The potentially affected parties and other interested parties established a public process for developing the required documents and plans. Various public agencies and other nongovernmental groups participated, at their discretion and at various times, in developing the various components of the LCR MSCP.

The LCR MSCP participants determined that the unique factual circumstances on the LCR required that ESA compliance be approached through a combination of both section 7 of the ESA (applicable to federal actions and entities) and section 10 of the ESA (applicable to non-federal activities and entities). The coordinated management of the LCR results from a combination of Federal and non-Federal discretionary and non-discretionary activities, which prevents a separate analysis of the Federal and non-Federal components. Given the combination of Federal actions, both discretionary and non-discretionary, and non-Federal actions carried out in the LCR, absent a comprehensive approach such as that utilized in the development of the LCR MSCP, it is not clear which parties could have specific responsibility under section 9 of the ESA for any potential take of ESA-listed species. To eliminate any uncertainty regarding which method of take authorization, section 7 or section 10, is more appropriate in this situation, the LCR MSCP participants requested that the Service authorize take under both sections 7 and 10

and the Service adopted this approach.

Scientific Peer Review Utilized in Development of LCR MSCP

The LCR MSCP Steering Committee commissioned two separate scientific reviews of interim conservation strategy documents during program development in 1999 and 2002.

The first scientific review was conducted by the American Institute of Biological Sciences (AIBS) from June through October 1999. The key recommendations of the six member panel included:

- change the approach utilized in the LCR MSCP from a species based approach to a habitat approach. This approach would entail creation of integrated habitat mosaics in areas along the river ranging from aquatic to mesquite communities;
- Focus on restoration and management of an integrated mosaic of habitat types, including open water, backwater, marsh, riparian, and mesquite habitats;
- Prioritize development and implementation of the conservation plan based on the following general cornerstone strategies-
- Restore or rehabilitate natural ecological processes and conditions;
- Protect, enhance, restore habitat and protect large blocks of habitat;
- Directly manipulate biotic populations and restore natural biotic communities; and
- Implement research, monitoring, and adaptive management.

The second scientific peer review was conducted on the draft Conservation Plan between November 5, 2002 and January 21, 2003. The Science Review Team consisted of 6 members selected from a list of 18 active interdisciplinary scientists with a working knowledge of Southwest ecosystems. The Science Review Team's conclusions included:

- The LCR MSCP technical consultant's approach was correct in preparing the Conservation Plan;
- Mitigation offered is reasonable and commendable;
- Data are lacking for nearly all species- therefore there is significant weakness in the supporting science base;
- Adaptive ecosystem management is the best approach to determining solutions;
- Front-loading the implementation phase with research and monitoring is needed to gain better insight on species needs and to test habitat restoration concepts before committing to large-scale actions.

The LCR MSCP Steering Committee instructed the technical consultants to incorporate the recommendations of the peer review into the MSCP Conservation Plan, as appropriate.

Completion of LCR MSCP Development: 2004

On April 16, 2004, the Service received the section 10 permit application package from the non-Federal parties. On June 9, 2004, the Service's Arizona Ecological Services Office certified the application package as complete. The public review period for the draft LCR MSCP documents began on June 18, 2004. A 60-day public comment period was provided, and three public hearings were scheduled for July 20, 21, and 22, 2004. Comments received during the public review period were addressed and incorporated as appropriate into the final LCR MSCP documents. The final LCR MSCP HCP, BA, Appendices, and Responses to Comments

documents were issued on the same date as companion documents to the FEIS.¹⁶

Reclamation requested formal section 7 consultation on its identified covered actions on the LCR, implementation of the MSCP Conservation Plan, and the specified actions of the five other Federal agencies on November 26, 2004.

IV. Alternatives Considered

The FEIS was prepared by Reclamation and the Service to address the formulation and evaluation of specific multi-species conservation approaches and to identify the potential environmental effects of implementing such conservation approaches. The alternatives addressed in the FEIS are those Reclamation and the Service determined would meet the purpose of and need for the Federal actions and represented a broad range of the most reasonable alternatives.

The FEIS analyzed three action alternatives as well as a No Action alternative that was developed for comparison of potential effects of the action alternatives. The three action alternatives and the No Action alternative are described below.

1. Proposed Conservation Plan Alternative

The proposed action alternative includes two primary components: 1) implementation of a regional Conservation Plan by Federal and non-Federal participants that would meet the LCR MSCP goals and objectives; 2) issuance of an ESA section 10(a)(1)(B) permit by the Service based on the proposed Conservation Plan for non-Federal covered activities.

The Conservation Plan includes a full range of conservation measures for all covered species. Based on application of the selection criteria, 27 species were proposed as “covered species” under the section 10(a)(1)(B) permit. The LCR MSCP also includes four “evaluation species.” Evaluation species are species that could become listed during the term of the LCR MSCP but for which sufficient information is not currently available to determine their status in the planning area, the potential affects of covered activities, or to develop specific conservation measures for the species. The Conservation Plan includes research studies and pilot management studies for the evaluation species to determine their status in the planning area and to determine appropriate conservation measures.

The Conservation Plan includes the following types of conservation measures that, in combination, would achieve program objectives for regulatory compliance and contribute towards species’ recovery:

- Maintenance of an important portion of existing habitat for covered species in the planning area;
- Creation and maintenance of new habitat, including long-term management of created habitat to maintain and preserve ecological functions;
- Avoidance and minimization of impacts on covered species and their habitat resulting from covered activities and Conservation Plan implementation;
- Population enhancement measures that directly or indirectly increase abundance of covered species; and
- Monitoring and research necessary to assess and improve conservation measure

¹⁶ Since 1997, the LCR MSCP participants spent seven years and \$ 8.3 million on MSCP development.

effectiveness and adaptively manage implementation of the Conservation Plan over time.

The Conservation Plan is designed to fully mitigate adverse effects on all covered species resulting from covered actions and activities and to meet the ESA section 10 standard to minimize and mitigate the impacts of the covered activities on covered species to the maximum extent practicable.

This alternative would be implemented in the planning area, which is the historic floodplain of the LCR, from Lake Meade to the SIB between the United States and Mexico and areas with elevations up to and including the full pool elevations of Lake Mead, Lake Mohave, and Lake Havasu.

2. No Action Alternative

The No Action Alternative describes a reasonable assumption of the expected future situation that would result if the Conservation Plan were not implemented as proposed and the section 10(a)(1)(B) permit were not issued. This alternative is based on a number of assumptions regarding the actions that would be taken in the absence of the LCR MSCP. These assumptions include: 1) a comprehensive, multi-species conservation plan would not be implemented by the non-Federal and Federal entities; 2) the Service would not issue a comprehensive section 10(a)(1)(B) permit to the states of Arizona, California, and Nevada for incidental take resulting from the covered activities; 3) the covered activities described in the BA and HCP would likely be implemented, but regulatory compliance would be required and applied on a case-by-case basis as each activity is considered and approved; 4) individual project mitigation programs likely would not provide the regional wildfire suppression and law enforcement funding proposed in the conservation Plan; and 5) coordinated monitoring and adaptive management programs would not be implemented.

3. ESA-Listed Species Only Conservation Plan Alternative

This alternative would provide coverage only for those species listed under the ESA, and it would result in the issuance of a section 10(a)(1)(B) permit by the Service. Covered species would be the Yuma clapper rail, southwestern willow flycatcher, desert tortoise, bonytail, humpback chub, and razorback sucker. This alternative would differ from the proposed action primarily in that no honey mesquite and less cottonwood-willow and marsh land cover would need to be established. Additionally, no take permit would be issued for unlisted species, and specific benefits for those species would not occur. Under this alternative, the Conservation Plan would be implemented in the same geographic area as the proposed action and would include:

- Establishment of a \$ 25 million fund to support projects that maintain existing habitat for listed species that would be covered by the Conservation Plan under this alternative;
- Creation of native land cover types in the planning area (4,050 acres of cottonwood-willow, 382 acres of marsh, and 360 acres of backwaters) to provide covered species habitats;
- Long-term management of established habitat to maintain and preserve ecological functions;¹⁷

¹⁷ Nothing in this Record of Decision or the agreement approved by this Record of Decision, modifies, in any manner, any applicable obligation to seek the approval of the appropriate Federal land manager prior to taking any action associated with implementation of the Conservation Plan on Federal lands.

- Avoidance and minimization of impacts resulting from covered activities and Conservation Plan implementation on listed species and their habitat;
- Population enhancement measures intended to directly or indirectly increase abundance of listed species;
- Adaptive management measures, including monitoring and research necessary to assess and improve conservation measure effectiveness; and
- Other conservation measures relating to the listed species and the strategies for implementing them.

4. Off-Site Conservation Plan Alternative

The off-site conservation plan alternative would involve the application for and issuance of a section 10(a)(1)(B) permit for the same covered activities and covered species as the proposed action. The level of impacts to covered species, including the amount of take authorization that is requested, is the same for this alternative as for the proposed action, and therefore, the same level of conservation measures would be established to mitigate the impacts, including:

- Establishment of a \$ 25 million fund to support projects that maintain existing habitat for listed species that would be covered by the Conservation Plan under this alternative;
- Long-term management of established habitat to maintain and preserve ecological functions;
- Avoidance and minimization of impacts resulting from covered activities and Conservation Plan implementation on listed species and their habitat;
- Population enhancement measures intended to directly or indirectly increase abundance of listed species;
- Adaptive management measures, including monitoring and research necessary to assess and improve conservation measure effectiveness; and
- Other conservation measures relating to the listed species and the strategies for implementing them.

The primary difference between this alternative and the proposed action is that conservation areas generally would be created along tributaries to the LCR. Fish conservation, including the creation of 360 acres of backwaters and fish augmentation strategies, would continue to take place in the mainstem, reservoirs, and backwaters of the LCR. For purposes of analysis, it is assumed that created land cover types would be distributed equally between the three off-site conservation areas.

Potential off-site locations for implementing the Conservation Plan elements are: (1) the lower reaches of the Muddy River/Moapa Valley and Virgin River, proceeding upstream from the confluences with Lake Meade and overlapping the Nevada Department of Wildlife's Overton Wildlife Management Area; (2) the lower reach of the Bill Williams River, proceeding upstream from the confluence with the LCR and overlapping the Bill Williams River National Wildlife Refuge, to Alamo Dam; and 3) lower Gila River Valley, proceeding upstream from the LCR planning area and extending approximately ten miles east of Mohawk Valley.

V. Basis for Decision

Reclamation and the Service selected the Proposed Conservation Plan Alternative combined with the off-site mitigation option in Alternative 4 as the preferred alternative based on the determination that it best meets all aspects of the purpose and need for the action. The selected

alternative is the environmentally preferable alternative because it surpasses other alternatives in realizing the full range of environmental goals, including contributions to the recovery of species covered by the LCR MSCP. This alternative will effectively conserve species while allowing the use of water under existing entitlements. Based on all available information, the preferred alternative provides the greatest benefit for the covered species, and has been designated as the most reasonable and feasible alternative. The No Action Alternative was not selected because it would not provide the level of conservation to the covered species on the LCR, as there would not be a coordinated conservation plan put into place. The ESA Listed Species Only Alternative was not selected because it did not adequately provide future certainty for the covered actions and activities regarding conservation needs for species not currently listed under the ESA.

Measures to avoid, minimize, and mitigate to the greatest practicable extent the environmental effects that could result from the implementation of the selected alternative have been incorporated into the decision.

In order for the Service to issue a section 10(a)(1)(B) permit, the LCR MSCP HCP must meet the criteria set forth in 16 U.S.C. § 1539(a)(2)(A) and (B). Criteria for this statutory provision and how the LCR MSCP HCP satisfies these criteria are summarized below.

A. The taking of the affected species will be incidental to otherwise lawful activities.

Any take of the affected species will be incidental to the otherwise lawful implementation of the covered activities and the conservation measures, as specified in detail in the LCR MSCP HCP and in the biological and conference opinion. Any incidental taking of listed species for research or other conservation purposes will be covered under separate section 10(a)(1)(A) permits.

B. The applicants will, to the maximum extent practicable, avoid, minimize, and mitigate the impacts of taking the affected species.

The LCR MSCP HCP contains measures, as summarized in this ROD, to minimize and mitigate, to the maximum extent practicable, the impacts of take of the covered species under the permit and the incidental take statement of the biological and conference opinion for the Federal actions.¹⁸ The Service interprets the “maximum extent practicable” standard to require that the level of mitigation must be rationally related to the level of take identified under the plan. The mitigation also must be reasonably capable of being accomplished.¹⁹ The level of mitigation provided by the LCR MSCP more than compensates for the impacts of the take that is authorized under the MSCP. The LCR MSCP provides a comprehensive conservation program that will expend \$ 626 million (in 2003 dollars, indexed annually as provided in the Funding and Management Agreement)²⁰ over the 50 year term of the Program on the conservation of covered

¹⁸ Due to the difficulty in teasing apart the Section 7 and Section 10 components of the LCR MSCP, the Service elected to evaluate the entire program using the section 10 standards, which are perceived to have a more rigorous standard regarding measures to offset incidental take. Thus, the MSCP as a whole, including both federal and non-federal components, has been found by the Service to meet the standards of section 10, including the requirement that minimization and mitigation be to the maximum extent practicable.

¹⁹ See *National Wildlife Federation v. Norton*, 306 F. Supp.2d 920, 928, n. 12 (E.D. Cal. 2004).

²⁰ No reference or description to the Program Documents contained in this Record of Decision modifies in any manner the provisions contained in the Funding and Management Agreement, the Implementation Agreement or any of the other Program Documents.

species along the LCR and conserve approximately 8,132 acres of habitat for covered species.

In addition to the avoidance, minimization, and mitigation components of the HCP that support a determination that the HCP does mitigate to the maximum extent practicable, the HCP includes additional conservation measures that contribute to the recovery or stabilization of most of the covered species. These measures include:

1. conservation of more acres of habitat than required for full mitigation of habitat lost²¹;
2. species-specific research on other threats that identifies actions that will be taken if those threats are significant. An example is MRM 3 for research on the effects of nest site competition with starlings for the cavity nesting covered bird species;
3. contributions to ongoing conservation programs that enhance the ability of such programs to evaluate or implement other conservation opportunities; and
4. coordination with present and future recovery efforts for listed species through evaluation of conservation actions (such as habitat creation technologies, monitoring of stocked fish survival and habitat use, and evaluation of selenium transit through river management activities).

C. The applicants will ensure that adequate funding for the plan will be provided.

The IA and FMA for the LCR MSCP describe the full level of funding to implement all facets of the LCR MSCP HCP. The total cost of the Program is estimated at \$626,180,000 over the 50 year term of the Program (in 2003 dollars, subject to yearly adjustments for inflation), with 50 percent of the costs borne by the permit applicants and 50 percent borne by the U.S. government, pursuant to annual appropriations, as represented by Reclamation. Information used to estimate the total cost of implementing the LCR MSCP HCP is found in Appendix N in Volume IV of the final LCR MSCP documents and in Chapter 7 of the final LCR MSCP HCP. The final IA and FMA document the agreed-upon cost share. These documents are herein incorporated by reference. Further evidence that causes the FWS to believe that the permit applicants will ensure adequate funding for the LCR MSCP includes:

1. letters dated August 17, 2004 from the states of Arizona, California, and Nevada to the Secretary of the Interior agreeing to fund the LCR MSCP for its full 50-year term;
2. the fact that the permit applicants who have agreed to fund the LCR MSCP have a consistent fiscal track record. Non-Federal parties have participated in the LCR MSCP for 10 years at an approximate cost of 4 million dollars;
3. the IA and FMA provide written funding assurances by the non-Federal parties²²;
4. the LCR MSCP is jointly funded by multiple contributors from the three states, rather than by a single contributor; and
5. the states are currently finalizing intra-state funding arrangements, which will provide each contributor with specific responsibilities for an amount of their contribution. These agreements will be ratified by the boards or other relevant authorities prior to the permit being issued.

²¹ In addition, all of the conservation measures identified in the MSCP will be implemented even if some of the covered activities are not proposed or implemented during the 50-year term of the MSCP.

²² The applicants' compliance with the Funding and Management Agreement will ensure that adequate funding for the HCP will be provided.

The Service's No Surprises assurances are discussed in the section 10(a)(1)(B) permit for the LCR MSCP, and measures to address changed and unforeseen circumstances have also been identified in the LCR MSCP HCP.

D. The taking will not appreciably reduce the likelihood that the species will survive and recover in the wild.

The ESA's legislative history establishes the intent of Congress that issuance criteria be based on a finding of "not likely to jeopardize" a species' continued existence and "not likely to destroy or adversely modify" designated critical habitat under section 7(a)(2) [see 50 CFR 402.02]. In addition, because proposed critical habitat for the southwestern willow flycatcher is present in the LCR MSCP action area, and 21 unlisted species that were proposed for inclusion as covered species for which incidental take authority will be permitted upon listing, we must also consider the requirements of formal conference to make determinations on likelihood of jeopardy for these unlisted species as if they were proposed to be listed as threatened or endangered, or adverse modification of proposed critical habitat. In the biological and conference opinion, we concluded that the issuance of the incidental take permit to the Applicants and the actions of Federal agencies described in the LCR MSCP BA will not likely jeopardize the continued existence of the listed species and 20 of the unlisted species.

Designated and proposed critical habitat will not likely be destroyed or adversely modified.

E. Other measures, as required by the Director of the Service, have been met.

The LCR MSCP HCP and proposed permit terms and conditions incorporate all elements that we have determined to be necessary for approval of the LCR MSCP HCP and issuance of the permit.

The Service also reviewed the general permit criteria and conditions set forth in 50 C.F.R. § 13.21(b)-(c) and determined that the applicants have met the criteria for the issuance of the permit and do not have any disqualifying factors that would prevent the permit from being issued.

VI. Public Response to Final Environmental Impact Statement

Two comment letters were received on the FEIS subsequent to publication of the FEIS on December 17, 2004. These comment letters did not contain any new issues that had not been previously analyzed in the Program documents, including the FEIS, and its accompanying documentation.²³

VII. Alteration of Project Plan in Response to Public Comment

Public comments on the FEIS did not result in changes to the proposed action nor selection of the Preferred Alternative.

²³ Letters were received from the U.S. Environmental Protection Agency (Region IX), dated January 19, 2005 ("EPA is pleased that the issues identified in our review of the DEIS have been addressed in the FEIS"), and from Mr. Jurg Heuberger of the the Planning/Building Department of Imperial County, dated January 24, 2005 (commenting on the content of the responses to comments found in Volume V of the FEIS, and stating that that "the County forward [sic] to participating in the development and the implementation activities of the LCR MSCP with the Bureau and all the other participating agencies.").

VIII. Environmental Impacts and Environmental Commitments

Potential impacts to 19 resources from implementation of the Preferred Alternative were analyzed in the FEIS. Of the 19 resources evaluated, it was determined for 14 of these resources that the proposed action would have less than significant impacts. For these 14 resource areas, mitigation measures were determined not to be necessary and none are proposed. These 14 resources included: Aesthetics; Energy and Depletable Resources; Hazards and Hazardous Materials; Hydrology and Water Quality; Indian Trust Assets; Land Use; Noise; Population and Housing; Public Utilities and Services; Recreation; Socioeconomics; Topography, Geology, Soils, and Mineral Resources; Transboundary Impacts; and Transportation.

For three resources, Agricultural Resources, Biological Resources, and Cultural Resources, it was determined that the proposed action would have potentially significant effects on the resources, but that these effects could be mitigated to less than significant through the implementation of mitigation measures. The mitigation measures adopted for these three resources to reduce the effects to less than significant are set forth in Section 3 of the FEIS.

For Air Quality and Environmental Justice, it was determined that the proposed action could have potentially significant effects and that these effects might remain potentially significant despite the mitigation measures adopted. However, the effects are being minimized and mitigated to the maximum extent practicable. The mitigation measures are set forth in Section 3 of the FEIS.

IX. Implementing the Decision

LCR MSCP Participants

Permittees covered by the section 10(a)(1)(B) permit include:

Arizona: The Arizona Department of Water Resources; Arizona Electric Power Cooperative Inc.; Arizona Game and Fish Commission; Arizona Power Authority; Central Arizona Water Conservation District; Cibola Valley Irrigation and Drainage District; City of Bullhead City; City of Lake Havasu City; City of Mesa; City of Somerton; City of Yuma; Electrical District No. 3, Pinal County, Arizona; Golden Shores Water Conservation District; Mohave County Water Authority; Mohave Valley Irrigation and Drainage District; Salt River Project Agricultural Improvement and Power District; Town of Fredonia; Town of Thatcher; Town of Wickenburg; Unit "B" Irrigation and Drainage District; Wellton-Mohawk Irrigation and Drainage District; Yuma County Water Users' Association; Yuma Irrigation District; Yuma Mesa Irrigation and Drainage District.

California: The City of Needles, the Coachella Valley Water District, the Colorado River Board of California, the Imperial Irrigation District, the Los Angeles Department of Water and Power, the Palo Verde Irrigation District, the San Diego County Water Authority, the Southern California Edison Company, the Southern California Public Power Authority, Bard Water District, and The Metropolitan Water District of Southern California.

Nevada: The Colorado River Commission of Nevada, the Nevada Department of Wildlife, Basic Water Company, and the Southern Nevada Water Authority.

Federal agencies participating in the LCR MSCP, and receiving ESA compliance through

section 7 consultation instead of section 10 are:

Reclamation, the Service, NPS, BIA, BLM, and Western.

Covered Actions and Activities

The covered activities of the six Federal agencies are set forth in Chapter 2 of the LCR MSCP BA and are summarized as follows:

Reclamation's ongoing and future actions include water operations, hydropower production, channel maintenance, flood control, and implementation of the LCR MSCP. Western's covered actions include its role in hydropower generation. The NPS's covered actions include riparian habitat restoration, fishery management, and boating access. The BIA's covered actions include irrigation system operation and maintenance, water conservation practices, riparian habitat restoration, wildland fire management, recreation facilities development, and farmland development. The Service and BLM's covered actions are their diversion and return flows of their LCR water allocations.

The covered activities of the non-federal parties are set forth in Chapter 2 of the LCR MSCP HCP and include, principally, diverting water and contracting for hydropower.

Covered Species

The covered actions and covered activities addressed in the LCR MSCP may affect the following federally listed, candidate, and nonlisted species, and these species constitute Covered Species under the LCR MSCP²⁴:

Yuma clapper rail (*Rallus longirostris yumanensis*)
Southwestern willow flycatcher (*Empidonax traillii extimus*)
Desert tortoise (*Gopherus agassizii*)
Bonytail (*Gila elegans*)
Humpback chub (*Gila cypha*)
Razorback sucker (*Xyrauchen texanus*)
Yellow-billed cuckoo (*Coccyzus americanus occidentalis*)
Relict leopard frog (*Rana onca*)
Western red bat (*Lasiurus blossevillei*)
Western yellow bat (*Lasiurus xanthinus*)
Colorado River cotton rat (*Sigmodon arizonae plenus*)
Yuma hispid cotton rat (*Sigmodon hispidus eremicus*)
Western least bittern (*Ixobrychus exilis hesperis*)
California black rail (*Laterallus jamaicensis corturniculus*)
Elf owl (*Micrathene whitneyi*)
Gilded flicker (*Colaptes chrysoides*)
Gila woodpecker (*Melanerpes uropygialis*)
Vermilion flycatcher (*Pyrocephalus rubinus*)

²⁴ The list of covered species does not contain the desert pocket mouse, which was included in the LCR MSCP HCP and permit application. The Service determined there was insufficient information on this species to support including it in the section 10(a)(1)(B) permit, and recommended to the LCR MSCP participants that it be considered an evaluation species.

Arizona Bell's vireo (*Vireo bellii arizonae*)
Sonoran yellow warbler (*Dendroica petechia sonorana*)
Summer tanager (*Piranga rubra*)
Flat-tailed horned lizard (*Phrynosoma mcalli*)
Flannelmouth sucker (*Catostomus latipinnis*)
MacNeill's sootywing skipper (*Pholisora graciellae*)
Sticky buckwheat (*Eriogonum viscidulum*)
Threecorner milkvetch (*Astragalus geyeri* var *triquetrus*)

The full implementation of the LCR MSCP HCP is a condition of the incidental take permit. Chapter 5 of the LCR MSCP HCP, and Chapter 3 of the EIS/EIR describe the conservation measures and results of their implementation in detail; pertinent information is summarized below.

Mitigation

The LCR MSCP HCP describes the measures to minimize and mitigate adverse effects of any expected incidental take. The LCR MSCP permittees and Reclamation are committed to implementing the LCR MSCP HCP, including all conservation measures. All conservation measures are terms and conditions of the incidental take permit and incidental take statement contained in the biological and conference opinion for the LCR MSCP.

The conservation measures in the LCR MSCP HCP are briefly summarized below.

- Establishment of 5,940 acres of cottonwood-willow habitat suitable for the covered species that use this habitat type in amounts described in Table 2-55 of the BA and Table 5-5 of the HCP.
- Establishment of 1,320 acres of honey mesquite type III habitat (defined in section 3.3.1 of the HCP) suitable for the covered species that use this habitat type in amounts described in Table 2-55 of the BA and Table 5-5 of the HCP.
- Establishment of 512 acres of cattail (*Typha domingensis*)/bulrush (*Scirpus* spp.) marsh habitat for the covered species that use this habitat type in amounts described in Table 2-55 of the BA and Table 5-5 of the HCP.
- Establishment of 360 acres of backwaters for the covered species that use this habitat type in amounts described in Table 2-55 of the BA and Table 5-5 of the HCP.
- Perpetual maintenance of habitat created to replace that lost to "footprint" (non-flow related) impacts. The remaining habitat acreage will be maintained for at least the 50-year period covered by the permit and consultation. Created habitat lost to fire, drought, or flood will be restored to suitable condition or replaced elsewhere to ensure the total acreage of habitat is provided for the term of the LCR MSCP.
- Contributions to river-wide fire protection efforts by other Federal and state agencies.
- Planning process to select suitable sites for habitat restoration described.
- Augmentation of existing populations of razorback sucker in the LCR MSCP planning area to enhance these populations and provide for subsequent research and management programs.
- Augmentation of existing populations of bonytail and expansion of occupied area in the LCR MSCP planning areas to enhance existing populations and establish a new population and provide for subsequent research and management programs.
- Provision of \$500,000 to the Glen Canyon Dam Adaptive Management Work

- Group to support unfunded conservation needs of the humpback chub.
 - Provision of \$400,000 for conservation measures in support of the flannelmouth sucker in the LCR.
 - Provision of \$10,000 per year for 10 years to support planned, but unfunded, conservation actions to contribute to the recovery of the relict leopard frog.
 - Provision of \$10,000 per year until 2030 (25 years of funding) to the Clark County Multi-Species Habitat Conservation Plan Rare Plant Workgroup to support unfunded conservation measures in support of the sticky buckwheat and threecorner milkvetch.
 - Directed research into covered and evaluation species and their habitats, management actions and restoration technology for habitat restoration, and monitoring of species and their habitats.
 - Establishment of a \$25 million dollar fund to support maintenance actions for existing covered species habitats on the LCR.
 - Provision for specific avoidance and minimization measures to reduce the potential for take of covered species, and specific mitigation measures to offset take that has occurred. There are both general and species-specific measures included. In addition, there are monitoring and research measures that provide information on the species, their distribution, and habitat use to provide focus for the development of habitats. The general measures are listed below and are detailed in Chapter 5 of the HCP:
1. Avoidance and Minimization Measure (AMM) 1: To the extent practicable, avoid and minimize impacts of implementing the LCR MSCP (Conservation Plan) on existing covered species habitats.
 2. AMM 2: Avoid impacts of flow-related covered activities on covered species habitats at Topock Marsh.
 3. AMM 3: To the extent practicable, avoid and minimize disturbance of covered bird species during the breeding season.
 4. AMM 4: Minimize contaminant loads in runoff and return irrigation flows from LCR MSCP-created habitats to the LCR.
 5. AMM 5: Avoid impacts of operation, maintenance, and replacement of hydroelectric generation and transmission facilities on covered species in the LCR MSCP planning area.
 6. AMM 6: Avoid or minimize impacts on covered species habitats during dredging, bank stabilization activities, and other river-management actions.
 7. Monitoring and Research Measure (MRM) 1: Conduct surveys and research to better identify covered and evaluation species' habitat requirements.
 8. MRM 2: Monitor and adaptively manage created covered species and evaluation species habitats.
 9. MRM 3: Conduct research to determine and address the effects of nest-site competition with European starlings on reproduction of covered species.
 10. MRM 4: Conduct research to determine and address the effects of brown-headed cowbird nest parasitism on reproduction of covered species.
 11. MRM 5: Evaluate selenium in created backwaters and marshes and evaluate effects of releasing selenium through dredging activities.
 12. Conservation Area Management Measure (CMM) 1: Reduce risk of loss of created habitat to wildfire.
 13. CMM 2: Replace created habitat affected by wildfire.

Monitoring

The Service will monitor compliance with the terms and conditions of the permit and the incidental take statement. The LCR MSCP HCP contains a comprehensive monitoring program that will assess the effectiveness of minimization and mitigation measures throughout the 50-year term of the permit and section 7 consultation with the Federal agencies. The goal of the monitoring program is to provide information and data necessary to assess compliance, to verify progress toward achievement of the biological goals for the species, and adapt management in accordance with monitoring results. Specific phases of the monitoring program are:

1. System monitoring: collect data on existing populations of covered species and their habitats to identify data gaps and research questions that relate to the successful implementation of the conservation plan.
2. Species research: based on the results of system monitoring, targeted species research will be identified and implemented to ensure the success of the habitat-creation components of the conservation plan.
3. Restoration research: identify effective technologies and practices to create the habitats for the covered species.
4. Post-development monitoring: once habitats are created, evaluate the progress toward suitable habitat for the covered species, and document the use of the created habitats by covered species, to define success of the conservation plan.

Section 5.11 of the LCR MSCP HCP describes the monitoring program and section 5.12 describes how the results from the monitoring program will be incorporated into adaptive management strategies to provide for effective implementation of the conservation plan.

Implementation

Management of the LCR MSCP and implementation of the Conservation Plan identified in the Permit and the Biological Opinion shall be the responsibility of Reclamation, which, in consultation with the Steering Committee, will employ a person who shall be designated the Program Manager of the LCR MSCP. Reclamation will cooperate with and coordinate its management and implementation activities for the LCR MSCP with the Service and the other Members of the Steering Committee.

The Regional Director of the Lower Colorado Region of Reclamation (Regional Director), in consultation with the Steering Committee, will appoint a Program Manager, who shall be responsible for operation, management, and implementation of the provisions, terms, and conditions of the Conservation Measures. The Program Manager shall be under the supervision of the Regional Director for Reclamation's Lower Colorado Region and will have an office located within Arizona, California, or Nevada.

The Program Manager will take appropriate action to implement the Conservation Plan and Conservation Measures and obligations set forth in this Agreement, consistent with the provisions of the Program Documents, including but not limited to the following:

- Administer and implement the LCR MSCP in a manner that complies with the requirements of the ESA, other applicable Federal and state laws, and the Program Documents.
- Direct the preparation of Program implementation schedules and cost estimates, an annual Program Implementation Work Plan and Budget and periodic Contribution payment schedules, and, as necessary, direct the preparation of any changes to these documents.
- Establish one or more Program Accounts, as deemed necessary and appropriate,

- for the administration of funds from any Contributor or other participant in the LCR MSCP.
- Review and discuss with, and attempt to seek a consensus among, Members of the Steering Committee and its subcommittees and work groups and attempt to resolve any Dispute in accordance with the FMA.

The Steering Committee formed for MSCP development will be replaced by a new Lower Colorado River Multi-Species Conservation Program Steering Committee whose initial Members have been divided into seven Participant Groups and are identified as follows:

1. The Federal Participant Group:
 - Bureau of Reclamation
 - Fish and Wildlife Service
 - National Park Service
 - Bureau of Land Management
 - Bureau of Indian Affairs
 - Western Area Power Administration
2. The Arizona Participant Group:
 - All Arizona LCR MSCP section 10(a)(1)(B) permit holders.
3. The California Participant Group:
 - All California LCR MSCP section 10(a)(1)(B) permit holders.
4. The Nevada Participant Group:
 - All Nevada LCR MSCP section 10(a)(1)(B) permit holders.
5. The Native American Participant Group:
 - (Note: Participant Group will be contacted to determine interest in being a member.)
6. The Conservation Participant Group:
 - (Note: Participant Group will be contacted to determine interest in being a member.)
7. The Other Interested Parties Participant Group:
 - (Note: Participant Group will be contacted to determine interest in being a member.)

The Steering Committee shall continue to be designated by the Director of the Service as the ECRIT for the LCR.

The Steering Committee will meet at least once in each calendar year and at such other times as called by the Chair or the Program Manager or as otherwise provided in the by-laws. The Steering Committee will work with the Program Manager to coordinate implementation of the LCR MSCP.

The Steering Committee may create standing or ad hoc subcommittees or work groups as it deems necessary to carry out its responsibilities under the Program Documents. Except with respect to designating subcommittees and work groups, and except as otherwise provided in this Agreement, the Steering Committee will have no decision-making authority with respect to the management and administration of the LCR MSCP.

Each meeting of the Steering Committee must be open to the public, and any person attending a Steering Committee meeting may file a written statement, or provide reasonable and timely oral input regarding topics on the meeting agenda. The Steering Committee will develop appropriate procedures to provide public notice of Steering Committee or subcommittee meetings.

The Steering Committee will review certain matters presented by the Program Manager. Prior to taking any action with respect to the following types of matters, the Program Manager shall first present the proposed action to the Steering Committee for its consideration:

- Annual Implementation Report, Work Plan, and Budget and Contribution payment schedules related to the Program.
- Additional or modified Conservation Measures proposed pursuant to the Adaptive Management Program.
- Land and water acquisitions.
- Reports and responses to Congress and Federal and state regulatory agencies concerning the Program, where practicable.

Annually, during the term of this Agreement, the Program Manager shall develop and present to the Steering Committee a Program Implementation Report, Work Plan, and Budget consistent with the Program Documents. The Implementation Report, Work Plan, and Budget shall include:

- A current financial report.
- A description of all Conservation Measures initiated, continued, or completed during the previous year.
- A description of all Conservation Measures intended to be initiated or continued during the next three-year period.
- The purpose for, and the cost estimate of, all Conservation Measures intended to be initiated or continued during the next three year period.
- A running tabulation and description of all Conservation Measures which have been completed from the commencement of the LCR MSCP to the date of the report.
- Descriptions of any take known to have occurred during the previous budget period.
- A running tabulation of habitat created or restored by the Plan.
- A description of all findings, conclusions, and results of monitoring, research, or Conservation Measures previously undertaken.
- Any recommendation made by the Service or any state wildlife agency regarding the LCR MSCP.
- Approval or rejection of any minor modification to the MSCP.

After presentation to the Steering Committee the Program Manager shall submit the Implementation Report, Work Plan, and Budget to the Service for its review and determination regarding the consistency of the past, current, and future implementation plans with the terms of the Conservation Plan and Permit. The submittal will note any matters in "Dispute," as that term is defined in the Funding and Management Agreement.

Within sixty (60) days after receipt of the Implementation Report, Work Plan, and Budget, the Service will submit its written evaluation to the Program Manager. The evaluation shall include the opinion of the Service regarding the consistency of the Implementation Report, Work Plan, and Budget with the requirements of the Conservation Plan and Permit. In the event the opinion of the Service is that the Implementation Report, Work Plan, and Budget demonstrates that Conservation Measures undertaken or proposed do not comply with the LCR MSCP and its Permit, it shall specify, in detail, in what regard the Implementation Report, Work Plan, and Budget is deficient and shall suggest what alternative measures might be undertaken.

The ultimate decision-making authority for actions taken by agencies with the Department of the Interior, including those matters which may be in "Dispute" pursuant to the Funding and Management Agreement, rests with the Secretary of the Interior.

Cost Share

The Program Cost of the LCR MSCP over its 50-year term is Six Hundred Twenty-Six Million One Hundred Eighty Thousand Dollars (\$626,180,000) in 2003 dollars, which will be adjusted annually for inflation over the 50 year term of the Program.

The Federal Parties shall bear fifty percent (50%) of the Program Cost, plus one hundred percent (100 %) of any costs of the LCR MSCP in excess of the Program Cost, with the exception of costs associated with an amendment of the LCR MSCP.

The State Permittees shall bear fifty percent (50%) of the Program Cost (Non-federal Cost Share). The California Permittees shall bear fifty percent (50%) of the Non-federal Cost Share. The Nevada Permittees shall bear twenty-five percent (25%) of the Non-federal Cost Share, and the Arizona Permittees shall bear twenty-five percent (25%) of the Non-federal Cost Share. Reclamation, with support of funding from California agencies, will implement the conservation and mitigation measures identified in the 2001 Biological Opinion for implementing 400,000 acre-feet annually in changes of point of diversion for California's Colorado River Water Use Plan. The LCR MSCP includes the potential extension of the Interim Surplus Guidelines beyond 2016 and the 400,000 acre-feet change in point of diversion as Covered Actions. The implementation of the 2001 Biological Opinion conservation and mitigation measures shall be credited against the requirements of the LCR MSCP in accordance with the HCP, and the budgeted cost of those measures shall be credited to the California Permittees in the amount that each has paid for the cost of implementing these conservation and mitigation measures.

PUBLIC LAW 98-381—AUG. 17, 1984

98 STAT. 1333

Public Law 98-381
98th Congress

An Act

To authorize the Secretary of the Interior to construct, operate, and maintain certain facilities at Hoover Dam, and for other purposes.

Aug. 17, 1984

[S. 268]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. This Act may be cited as the "Hoover Power Plant Act of 1984".

Hoover Power
Plant Act of
1984.

Energy.
43 USC 619 note.

TITLE I

SEC. 101. (a) The Secretary of the Interior is authorized to increase the capacity of existing generating equipment and appurtenances at Hoover Powerplant (hereinafter in this Act referred to as "uprating program"); and to improve parking, visitor facilities, and roadways and to provide additional elevators, and other facilities that will contribute to the safety and sufficiency of visitor access to Hoover Dam and Powerplant (hereinafter in this Act referred to as "visitor facilities program").

43 USC 619.

(b) The Secretary of the Interior is authorized to construct a Colorado River bridge crossing, including suitable approach spans, immediately downstream from Hoover Dam for the purpose of alleviating traffic congestion and reducing safety hazards. This bridge shall not be a part of the Boulder Canyon project and shall neither be funded nor repaid from the Colorado River Dam Fund or the Lower Colorado River Basin Development Fund.

SEC. 102. (a) Section 403(b) of the Colorado River Basin Project Act of 1968 (82 Stat. 894, as amended, 43 U.S.C. 1543) is amended by inserting "(1)" after "(b)" and adding the following new paragraph at the end thereof:

"(2) Except as provided in subsection 309(b), as amended, sums advanced by non-Federal entities for the purpose of carrying out the provisions of title III of this Act shall be credited to the development fund and shall be available without further appropriation for such purpose."

43 USC 1528.

43 USC 1521.

(b) Paragraph (1) of section 403(c) of the Colorado River Basin Project Act of 1968 (82 Stat. 894, as amended, 43 U.S.C. 1543(c)) is revised to read as follows:

"(1) all revenues collected in connection with the operation of facilities authorized in title III in furtherance of the purposes of this Act (except entrance, admission, and other recreation fees or charges and proceeds received from recreation concessionaires), until completion of repayment requirements of the Central Arizona project;"

(c) Paragraph (2) of section 403(c) is revised by inserting immediately preceding the existing proviso: "Provided, however, That for the Boulder Canyon project commencing June 1, 1987, and for the Parker-Davis project commencing June 1, 2005, and until the end of the repayment period for the Central Arizona project described in section 301(a) of this Act, the Secretary of Energy shall provide for

43 USC 1543.

43 USC 1521.

surplus revenues by including the equivalent of 4½ mills per kilowatthour in the rates charged to purchasers in Arizona for application to the purposes specified in subsection (f) of this section and by including the equivalent 2½ mills per kilowatthour in the rates charged to purchasers in California and Nevada for application to the purposes of subsection (g) of this section as amended and supplemented: *Provided further*, That after the repayment period for said Central Arizona project, the equivalent of 2½ mills per kilowatthour shall be included by the Secretary of Energy in the rates charged to purchasers in Arizona, California, and Nevada to provide revenues for application to the purposes of said subsection (g) of this section.”

SEC. 103. (a) The Boulder Canyon Project Act of 1928 (45 Stat. 1057, as amended, 43 U.S.C. 617 et seq.), as amended and supplemented, is further amended:

43 USC 617a. (1) In the first sentence of section 2(b), by striking out “except that the aggregate amount of such advances shall not exceed the sum of \$165,000,000”, and by replacing the comma after the word “Act” with a period.

43 USC 617b. (2) In section 3, by deleting “\$165,000,000.” and inserting in lieu thereof “\$242,000,000, of which \$77,000,000 (October 1983 price levels) shall be adjusted plus or minus such amounts as may be justified by reason of ordinary fluctuations of construction costs as indicated by engineering cost indices applicable to the type of construction involved herein. Said \$77,000,000 represents the additional amount required for the uprating program and the visitor facilities program.”

43 USC 617 note. (b) Except as amended by this Act, the Boulder Canyon Project Act of 1928 (45 Stat. 1057, as amended, 43 U.S.C. 617 et seq.), as amended and supplemented, shall remain in full force and effect.

SEC. 104. (a) The Boulder Canyon Project Adjustment Act of 1940 (54 Stat. 774, as amended, 43 U.S.C. 618), as amended and supplemented, is further amended:

43 USC 618. (1) In section 1 by deleting the phrase “during the period beginning June 1, 1937, and ending May 31, 1987” appearing in the introductory paragraph of section 1 and in section 1(a) and inserting in lieu thereof “beginning June 1, 1937”.

(2) In section 1(b) by deleting the phrase “and such portion of such advances made on and after June 1, 1937, as (on the basis of repayment thereof within such fifty-year period or periods as the Secretary may determine) will be repayable prior to June 1, 1987” and inserting in lieu thereof “and such advances made on and after June 1, 1937, over fifty-year periods”.

(3) In section 1 by deleting the word “and” at the end of subsection (c); deleting the period at the end of subsection (d) and inserting in lieu thereof “; and”, and by adding after subsection (d) the following new subsection (e):

43 USC 1543. “(e) To provide, by application of the increments to rates specified in section 403(c)(2) of the Colorado River Basin Project Act of 1968, as amended and supplemented, revenues, from and after June 1, 1987, for application to the purposes there specified.”

43 USC 618a. (4) In section 2:

(i) by deleting the first sentence and subsection (a) and inserting in lieu thereof: “All receipts from the project shall be paid into the Colorado River Dam Fund and shall be available, without further appropriation, for:

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“(a) Defraying the costs of operation (including purchase of supplemental energy to meet temporary deficiencies in firm energy which the Secretary of Energy is obligated by contract to supply), maintenance and replacements of, and emergency expenditures for, all facilities of the project, within such separate limitations as may be included in annual appropriations Acts;” and

(ii) by amending subsection (e) to read as follows:

“(e) Transfer to the Lower Colorado River Basin Development Fund established by title IV of the Colorado River Basin Project Act of 1968, as amended and supplemented, of the revenues referred to in section 1(e) of this Act.”

43 USC 1541.

43 USC 618.

43 USC 618e.

(5) By deleting the final period at the end of section 6 and inserting in lieu thereof the following: “: *Provided*, That the respective rates of interest on appropriated funds advanced for the visitor facilities program, as described in section 101(a) of the Hoover Power Plant Act of 1984, shall be determined by the Secretary of the Treasury, taking into consideration average market yields on outstanding marketable obligations of the United States with remaining periods to maturity comparable to the reimbursement period of the program during the month preceding the fiscal year in which the costs of the program are incurred. To the extent that more than one interest rate is determined pursuant to the preceding sentence, the Secretary of the Treasury shall establish for repayment purposes an interest rate at a weighted average of the rates so determined.”

Ante, p. 1333.

(6) In section 12, in the paragraph beginning with “Replacements”, by deleting “during the period from June 1, 1937, to May 31, 1987, inclusive” and inserting in lieu thereof “beginning June 1, 1937”.

43 USC 618k.

(b) Except as amended by this Act, the Boulder Canyon Project Adjustment Act of 1940 (54 Stat. 774, as amended, 43 U.S.C. 618), as amended and supplemented, shall remain in full force and effect.

43 USC 618 note.

43 USC 618o.

SEC. 105. (a)(1) The Secretary of Energy shall offer:

Contracts with U.S.

43 USC 619a.

(A) To each contractor for power generated at Hoover Dam a renewal contract for delivery commencing June 1, 1987, of the amount of capacity and firm energy specified for that contractor in the following table:

SCHEDULE A

LONG TERM CONTINGENT CAPACITY AND ASSOCIATED FIRM ENERGY RESERVED FOR RENEWAL CONTRACT OFFERS TO CURRENT BOULDER CANYON PROJECT CONTRACTORS

Contractor	Contingent capacity (kW)	Firm energy (thousands of kWh)		Total
		Summer	Winter	
Metropolitan Water District of Southern California.....	247,500	904,382	387,592	1,291,974
City of Los Angeles.....	490,875	488,535	209,658	698,193
Southern California Edison Company..	277,500	175,486	75,208	250,694
City of Glendale.....	18,000	47,398	20,313	67,711
City of Pasadena.....	11,000	40,655	17,424	58,079
City of Burbank.....	5,125	14,811	6,347	21,158
Arizona Power Authority.....	189,000	452,192	193,797	645,989
Colorado River Commission of Nevada.....	189,000	452,192	193,797	645,989
United States, for Boulder City.....	20,000	56,000	24,000	80,000
Totals.....	1,448,000	2,631,651	1,128,136	3,759,787

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43 USC 617d.

(B) To purchasers in the States of Arizona, Nevada and California eligible to enter into such contracts under section 5 of the Boulder Canyon Project Act, contracts for delivery commencing June 1, 1987, or as it thereafter becomes available, of capacity resulting from the uprating program and for delivery commencing June 1, 1987, of associated firm energy as specified in the following table:

SCHEDULE B

CONTINGENT CAPACITY RESULTING FROM THE UPRATING PROGRAM AND ASSOCIATED FIRM ENERGY

State	Contingent capacity (kW)	Firm energy (thousands of kWh)		
		Summer	Winter	Total
Arizona.....	188,000	148,000	64,000	212,000
California.....	127,000	99,850	43,364	143,214
Nevada.....	188,000	288,000	124,000	412,000
Totals.....	503,000	535,850	231,364	767,214

Provided, however, That in the case of Arizona and Nevada, such contracts shall be offered to the Arizona Power Authority and the Colorado River Commission of Nevada, respectively, as the agency specified by State law as the agent of such State for purchasing power from the Boulder Canyon project: *Provided further,* That in the case of California, no such contract under this subparagraph (B) shall be offered to any purchaser who is offered a contract for capacity exceeding 20,000 kilowatts under subparagraph (A) of this paragraph.

(C) To the Arizona Power Authority and the Colorado River Commission of Nevada and to purchasers in the State of California eligible to enter into such contracts under section 5 of the Boulder Canyon Project Act, contracts for delivery commencing June 1, 1987, of such energy generated at Hoover Dam as is available respectively to the States of Arizona, Nevada, and California in excess of 4,501.001 million kilowatthours in any year of operation (hereinafter called excess energy) in accordance with the following table:

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SCHEDULE C

EXCESS ENERGY

Priority of entitlement to excess energy	State
First: Meeting Arizona's first priority right to delivery of excess energy which is equal in each year of operation to 200 million kilowatthours: <i>Provided, however,</i> That in the event excess energy in the amount of 200 million kilowatthours is not generated during any year of operation, Arizona shall accumulate a first right to delivery of excess energy subsequently generated in an amount not to exceed 600 million kilowatthours, inclusive of the current year's 200 million kilowatthours. Said first right of delivery shall accrue at a rate of 200 million kilowatthours per year for each year excess energy in the amount of 200 million kilowatthours is not generated, less amounts of excess energy delivered.	Arizona
Second: Meeting Hoover Dam contractual obligations under schedule A of section 105(a)(1)(A) and under schedule B of section 105(a)(1)(B) not exceeding 26 million kilowatthours in each year of operation.
Third: Meeting the energy requirements of the three States, such available excess energy to be divided equally among the States.	Arizona, Nevada, California

(2) The total obligation of the Secretary of Energy to deliver firm energy pursuant to schedule A of section 105(a)(1)(A) and schedule B of section 105(a)(1)(B) is 4,527.001 million kilowatthours in each year of operation. To the extent that the actual generation at Hoover Powerplant in any year of operation (less deliveries thereof to Arizona required by its first priority under schedule C of section 105(a)(1)(C) whenever actual generation in any year of operation is in excess of 4,501.001 million kilowatthours) is less than 4,527.001 million kilowatthours, such deficiency shall be borne by the holders of contracts under said schedules A and B in the ratio that the sum of the quantities of firm energy to which each contractor is entitled pursuant to said schedules bears to 4,527.001 million kilowatthours. At the request of any such contractor, the Secretary of Energy will purchase energy to meet that contractor's deficiency at such contractor's expense.

(3) Subdivision E of the "General Consolidated Power Marketing Criteria or Regulations for Boulder City Area Projects" published in the Federal Register May 9, 1983 (48 Federal Register commencing at 20881), hereinafter referred to as the "Criteria" or as the "Regulations" shall be deemed to have been modified to conform to this section. The Secretary of Energy shall cause to be included in the Federal Register a notice conforming the text of said Regulations to such modifications.

Federal
Register,
publication.

(4) Each contract offered under subsection (a)(1) of this section shall:

(A) expire September 30, 2017;

(B) not restrict use to which the capacity and energy contracted for by the Metropolitan Water District of Southern California may be placed within the State of California: *Provided,* That to the extent practicable and consistent with sound water management and conservation practice, the Metropolitan Water District of Southern California shall use such capacity and energy to pump available Colorado River water prior to

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using such capacity and energy to pump California State water project water; and

(C) conform to the applicable provisions of subdivision E of the Criteria, commencing at 48 Federal Register 20881, modified as provided in this section. To the extent that said provisions of the Criteria, as so modified, are applicable to contracts entered into under this section, those provisions are hereby ratified.

48 USC 617t.

(b) Nothing in the Criteria shall be construed to prejudice any rights conferred by the Boulder Canyon Project Act, as amended and supplemented, on the holder of a contract described in subsection (a) of this section not in default thereunder on September 30, 2017.

(c)(1) The Secretary of Energy shall not execute a contract described in subsection (a)(1)(A) of this section with any entity which is a party to the action entitled the "State of Nevada, et al. against the United States of America, et al." in the United States District Court for the District of Nevada, case numbered CV LV '82 441 RDF, unless that entity agrees to file in that action a stipulation for voluntary dismissal with prejudice of its claims, or counterclaims, or crossclaims, as the case may be, and also agrees to file with the Secretary a document releasing the United States, its officers and agents, and all other parties to that action who join in that stipulation from any claims arising out of the disposition under this section of capacity and energy from the Boulder Canyon project. The Attorney General shall join on behalf of the United States, its officers and agents, in any such voluntary dismissal and shall have the authority to approve on behalf of the United States the form of each release.

48 USC 617d.

(2) If after a reasonable period of time as determined by the Secretary, the Secretary is precluded from executing a contract with an entity by reason of paragraph (1) of this subsection, the Secretary shall offer the capacity and energy thus available to other entities in the same State eligible to enter into such contracts under section 5 of the Boulder Canyon Project Act.

(d) The uprating program authorized under section 101(a) of this Act shall be undertaken with funds advanced under contracts made with the Secretary of the Interior by non-Federal purchasers described in subsection (a)(1)(B) of this section. Funding provided by non-Federal purchasers shall be advanced to the Secretary of the Interior pursuant to the terms and conditions of such contracts.

(e) Notwithstanding any other provisions of the law, funds advanced by non-Federal purchasers for use in the uprating program shall be deposited in the Colorado River Dam Fund and shall be available for the uprating program.

(f) Those amounts advanced by non-Federal purchasers shall be financially integrated as capital costs with other project costs for rate-setting purposes, and shall be returned to those purchasers advancing funds throughout the contract period through credits which include interest costs incurred by such purchasers for funds contributed to the Secretary of the Interior for the uprating program.

(g) The provisions of this section constitute an exercise by the Congress of the right reserved by it in section 5(b) of the Boulder Canyon Project Act, as amended and supplemented, to prescribe terms and conditions for the renewal of contracts for electrical energy generated at Hoover Dam. This section constitutes the exclusive method for disposing of capacity and energy from Hoover Dam for the period beginning June 1, 1987, and ending September 30, 2017.

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(h)(1) Notwithstanding any other provision of law, any claim that the provisions of subsection (a) of this section violates any rights to capacity or energy from the Boulder Canyon project is barred unless the complaint is filed within one year after the date of enactment of this Act in the United States Claims Court which shall have exclusive jurisdiction over this action. Any claim that actions taken by any administrative agency of the United States violates any right under this title or the Boulder Canyon Project Act or the Boulder Canyon Project Adjustment Act is barred unless suit asserting such claim is filed in a Federal court of competent jurisdiction within one year after final refusal of such agency to correct the action complained of.

43 USC 617t.

43 USC 618o.

(2) Any contract entered into pursuant to section 105 or section 107 of this Act shall contain provisions by which any dispute or disagreement as to interpretation or performance of the provisions of this title or of applicable regulations or of the contract may be determined by arbitration or court proceedings. The Secretary of Energy or the Secretary of the Interior, as the case may be, if authorized to act for the United States in such arbitration or court proceedings and, except as provided in paragraph (1) of this subsection, jurisdiction is conferred upon any district court of the United States of proper venue to determine the dispute.

(i) It is the purpose of subsections (c), (g), and (h) of this section to ensure that the rights of contractors for capacity and energy from the Boulder Canyon project for the period beginning June 1, 1987, and ending September 30, 2017, will vest with certainty and finality.

SEC. 106. Reimbursement of funds advanced by non-Federal purchasers for the uprating program shall be a repayment requirement of the Boulder Canyon project beginning with the first day of the month following completion of each segment thereof. The cost of the visitor facilities program as defined in section 101(a) of this Act shall become a repayment requirement beginning June 1, 1987, or when substantially completed, as determined by the Secretary of the Interior, if later.

43 USC 619b.

SEC. 107. (a) Subject to the provisions of any existing layoff contracts, electrical capacity and energy associated with the United States' interest in the Navajo generating station which is in excess of the pumping requirements of the Central Arizona project and any such needs for desalting and protective pumping facilities as may be required under section 101(b)(2)(B) of the Colorado River Basin Salinity Control Act of 1974, as amended (hereinafter in this Act referred to as "Navajo surplus") shall be marketed and exchanged by the Secretary of Energy pursuant to this section.

42 USC 7133
note.

(b) Navajo surplus shall be marketed by the Secretary of Energy pursuant to the plan adopted under subsection (c) of this section, directly to, with or through the Arizona Power Authority and/or other entities having the status of preference entities under the reclamation law in accordance with the preference provisions of section 9(c) of the Reclamation Project Act of 1939 and as provided in part IV, section A of the Criteria.

43 USC 1571.

43 USC 485h.

(c) In the marketing and exchanging of Navajo surplus, the Secretary of the Interior shall adopt the plan deemed most acceptable, after consultation with the Secretary of Energy, the Governor of Arizona, and the Central Arizona Water Conservation District (or its successor in interest to the repayment obligation for the Central Arizona project), for the purposes of optimizing the availability of Navajo surplus and providing financial assistance in the timely

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43 USC 389.

construction and repayment of construction costs of authorized features of the Central Arizona project. The Secretary of the Interior, in concert with the Secretary of Energy, in accordance with section 14 of the Reclamation Project Act of 1939, shall grant electrical power and energy exchange rights with Arizona entities as necessary to implement the adopted plan: *Provided, however,* That if exchange rights with Arizona entities are not required to implement the adopted plan, exchange rights may be offered to other entities.

(d) For the purposes provided in subsection (c) of this section, the Secretary of Energy, or the marketing entity or entities under the adopted plan, are authorized to establish and collect or cause to be established and collected, rate components, in addition to those currently authorized, and to deposit the revenues received in the Lower Colorado River Basin Development Fund to be available for such purposes and if required under the adopted plan, to credit, utilize, pay over directly or assign revenues from such additional rate components to make repayment and establish reserves for repayment of funds, including interest incurred, to entities which have advanced funds for the purposes of subsection (c) of this section: *Provided, however,* That rates shall not exceed levels that allow for an appropriate saving for the contractor.

(e) To the extent that this section may be in conflict with any other provision of law relating to the marketing and exchange of Navajo surplus, or to the disposition of any revenues therefrom, this section shall control.

Report.

SEC. 108. Recognizing the expiration of Colorado River storage project (CRSP) contracts in 1989, prior to final reallocation of CRSP power pursuant to existing law, and within one year after enactment of this Act, the Secretary of Energy, acting through the Western Area Power Administration, shall report, to the Committee on Interior and Insular Affairs of the House of Representatives and the Committee on Energy and Natural Resources of the United States Senate, on all Colorado River storage project (CRSP) power resources, including those presently allocated to the Lower Division States, which may be used to financially support the development of authorized projects in the States of the Upper Division (as that term is used in article II of the Colorado River Compact) of the Colorado River Basin.

Fish and fishing.
16 USC 839b
note.

43 USC 371 note.

16 USC 839 note.

SEC. 109. The Secretary of the Interior, acting pursuant to Federal reclamation law (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof and supplementary thereto) and in accordance with the Pacific Northwest Electric Power Planning and Conservation Act (94 Stat. 2697) is authorized to design, construct, operate, and maintain fish passage facilities within the Yakima River Basin, and to accept funds from any entity, public or private, to design, construct, operate, and maintain such facilities.

TITLE II

Contracts
with U.S.
Conservation.
42 USC 7275.

SEC. 201. (a) Each long-term firm power service contract entered into or amended subsequent to one year from the date of enactment of this Act by the Secretary of Energy acting by and through the Western Area Power Administration (hereinafter "Western"), shall contain an article requiring the development and implementation by the purchaser thereunder of an energy conservation program. A long-term firm power service contract is any contract for the sale by Western of firm capacity, with or without energy, which is to be

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delivered over a period of more than one year. The term "purchaser" includes parent-type entities and their distribution or user members. If more than one such contract exists with a purchaser, only one program will be required for that purchaser. Each such contract article shall—

(1) contain time schedules for meeting program goals and delineate actions to be taken in the event such schedules are not met, which may include a reduction of the allocation of capacity or energy to such purchaser as would otherwise be provided under such contract; and

(2) provide for review and modification of the energy conservation program at not to exceed five year intervals.

(b) For purposes of this title, an energy conservation program shall—

(1) apply to all uses of energy and capacity which are provided from any Federal project;

(2) contain definite goals;

(3) encourage customer consumption efficiency improvements and demand management practices which ensure that the available supply of hydroelectric power is used in an economically efficient and environmentally sound manner.

SEC. 202. (a) Within one year after the date of enactment of this Act, Western shall amend its existing regulations (46 Fed. Reg. 56140) to reflect—

(1) the elements to be considered in the energy conservation programs required by this title, and

(2) Western's criteria for evaluating and approving such programs.

Such amended regulations shall be promulgated only after public notice and opportunity to comment in accordance with the Administrative Procedure Act (5 U.S.C. 551-706).

(b) The following elements shall be considered by Western in evaluating energy conservation programs:

(1) energy consumption efficiency improvements;

(2) use of renewable energy resources in addition to hydroelectric power;

(3) load management techniques;

(4) cogeneration;

(5) rate design improvements, including—

(i) cost of service pricing;

(ii) elimination of declining block rates;

(iii) time of day rates;

(iv) seasonal rates; and

(v) interruptible rates; and

(6) production efficiency improvements.

(c) Where a purchaser is implementing one or more of the foregoing elements under a program responding to Federal, State, or other

Regulations.
42 USC 7276.

Public
information.
5 USC note prec.
551.

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initiatives that apply to conservation and renewable energy development, in evaluating that purchaser's energy conservation program submitted pursuant to this title, Western shall make due allowance for the incorporation of such elements within the energy conservation program required by this title.

Approved August 17, 1984.

LEGISLATIVE HISTORY—S. 268 (H.R. 4275):

HOUSE REPORT No. 98-648 accompanying H.R. 4275 (Comm. on Interior and Insular Affairs).

SENATE REPORT No. 98-137 (Comm. on Energy and Natural Resources).

CONGRESSIONAL RECORD:

Vol. 129 (1983): Aug. 4, considered and passed Senate.

Vol. 130 (1984): May 3, H.R. 4275 considered and passed House; S. 268, amended, passed in lieu.

July 26, 27, 30, 31, Senate considered and concurred in House amendments.

[Title II was later amended by the Energy Policy Act of 1992, Pub. L. No. 98-381, 106 Stat. 2776 (1992)]

Bureau of Reclamation, Interior**§ 431.1****§ 429.11 [Reserved]****§ 429.12 Applicability.**

(a) This part 429 applies to any possession or occupancy of Reclamation facilities, lands, or waterbodies.

(b) This part 429 does not apply to the use of Reclamation lands for transitory activities such as hiking, camping, sightseeing, picnicking, hunting, swimming, boating, fishing, and other personal recreational pursuits. These activities are governed by 43 CFR part 423, Public Conduct on Bureau of Reclamation Facilities, Lands, and Waterbodies.

(c) This part does not apply to leasing Reclamation lands for grazing, agriculture, or any other purposes where a greater return will be realized by the United States through a competitive bidding process.

(d) This part does not apply to interests issued or granted for the replacement or relocation of facilities belonging to others under section 14 of the Reclamation Project Act of August 4, 1939, 43 U.S.C. 389.

(e) This part does not apply to archaeological resources or archaeological resources management activities that are governed by the Archaeological Resources Protection Act (Pub. L. 96-95), 43 CFR part 7, and 43 CFR part 423.

[71 FR 19802, Apr. 17, 2006]

§ 429.13 General restrictions.

You must not possess or occupy, or extract or remove natural resources from Reclamation facilities, lands, or waterbodies unless you obtain a right-of-use in accordance with this part 429 or under other written agreement with Reclamation.

[71 FR 19802, Apr. 17, 2006]

PART 430—RULES FOR MANAGEMENT OF LAKE BERRYESSA

AUTHORITY: Title VII, Pub. L. 93-493, 88 Stat. 1494.

§ 430.1 Concessioners' appeal procedures.

The procedures detailed in title 43 CFR part 4, subpart G, are made appli-

cable to the concessioners at Lake Berryessa, Napa County, California, as the procedure to follow in appealing decisions of the contracting officer of the Bureau of Reclamation, Department of the Interior, or his authorized representatives on disputed questions concerning termination for default or unsatisfactory performance under the concession contracts.

[40 FR 27658, July 1, 1975]

PART 431—GENERAL REGULATIONS FOR POWER GENERATION, OPERATION, MAINTENANCE, AND REPLACEMENT AT THE BOULDER CANYON PROJECT, ARIZONA/NEVADA

Sec.

431.1 Purpose.

431.2 Scope.

431.3 Definitions.

431.4 Power generation responsibilities.

431.5 Cost data and fund requirements.

431.6 Power generation estimates.

431.7 Administration and management of the Colorado River Dam Fund.

431.8 Disputes.

431.9 Future regulations.

AUTHORITY: Reclamation Act of 1902 (32 Stat. 388), Boulder Canyon Project Act of 1928 (43 U.S.C. 617 *et seq.*), Boulder Canyon Project Adjustment Act of 1940 (43 U.S.C. 618 *et seq.*), Colorado River Storage Project Act of 1956 (43 U.S.C. 620 *et seq.*), Colorado River Basin Project Act of 1968 (43 U.S.C. 1501 *et seq.*), and Hoover Power Plant Act of 1984 (98 Stat. 1333).

SOURCE: 51 FR 23962, July 1, 1986, unless otherwise noted.

§ 431.1 Purpose.

(a) The Secretary of the Interior (Secretary), acting through the Commissioner of Reclamation (Commissioner), is authorized and directed to operate, maintain, and replace the facilities at the Hoover Powerplant, and also to promulgate regulations as the Secretary finds necessary and appropriate in accordance with the authorities in the Reclamation Act of 1902, and all acts amendatory thereof and supplementary thereto.

(b) In accordance with the Boulder Canyon Project Act of 1928, as amended and supplemented (Project Act), the Boulder Canyon Project Adjustment

§ 431.2

Act of 1940, as amended and supplemented (Adjustment Act), and the Hoover Power Plant Act of 1984 (Hoover Power Plant Act), the Bureau of Reclamation (Reclamation) promulgates these "General Regulations for Power Generation, Operation, Maintenance, and Replacement at the Boulder Canyon Project, Arizona/Nevada" (General Regulations) which include procedures to be used in providing Contractors and the Western Area Power Administration (Western) with cost data and power generation estimates, a statement of the requirements for administration and management of the Colorado River Dam Fund (Fund), and methods for resolving disputes.

§ 431.2 Scope.

These General Regulations shall be effective on June 1, 1987, and shall apply to power generation, operation, maintenance, and replacement activities at the Boulder Canyon Project after May 31, 1987. "General Regulations for the Charges for the Sale of Power from the Boulder Canyon Project" are the subject of a separate rule, under 10 CFR part 904, by the Secretary of Energy, acting by and through the Administrator of Western. The "General Regulations for Generation and Sale of Power in Accordance with the Boulder Canyon Project Adjustment Act," dated May 20, 1941, and the "General Regulations for Lease of Power," dated April 25, 1930, terminate May 31, 1987.

§ 431.3 Definitions.

As used in this part:

Additions and betterments shall mean such work, materials, equipment, or facilities which enhance or improve the Project and do more than restore the Project to a former good operating condition.

Colorado River Dam Fund or Fund shall mean that special fund established by section 2 of the Project Act and which is to be used only for the purposes specified in the Project Act, the Adjustment Act, the Colorado River Basin Project Act, and the Hoover Power Plant Act.

Contractor shall mean any entity which has a fully executed contract

with Western for electric service pursuant to the Hoover Power Plant Act.

Project or Boulder Canyon Project shall mean all works authorized by the Project Act, the Hoover Power Plant Act, and any future additions authorized by Congress, to be constructed and owned by the United States, but exclusive of the main canal and appurtenances authorized by the Project Act, now known as the All-American Canal.

Replacements shall mean such work, materials, equipment, or facilities as determined by the United States to be necessary to keep the Project in good operating condition, but shall not include (except where used in conjunction with the word "emergency" or the phrase "however necessitated") work, materials, equipment, or facilities made necessary by any act of God, or of the public enemy, or by any major catastrophe.

Upgrading Program shall mean the program authorized by section 101(a) of the Hoover Power Plant Act for increasing the capacity of existing generating equipment and appurtenances at Hoover Powerplant, as generally described in the report of Reclamation, entitled "Hoover Powerplant Upgrading, Special Report," issued in May 1980, supplemented in January 1985, and further supplemented in September 1985.

§ 431.4 Power generation responsibilities.

(a) Power generation, and the associated operation, maintenance, and making of replacements, however necessitated, of facilities and equipment at the Hoover Powerplant, are the responsibilities of Reclamation.

(b) Subject to the statutory requirement that Hoover Dam and Lake Mead shall be used: First, for river regulation, improvement of navigation and flood control; second, for irrigation and domestic uses and satisfaction of present perfected rights mentioned in section 6 of the Project Act; and third, for power, Reclamation shall release water, make available generating capacity, and generate energy, in such quantities, and at such times, as are necessary for the delivery of the capacity and energy to which Contractors are entitled.

Bureau of Reclamation, Interior**§431.7**

(c) Reclamation reserves the right to reschedule, temporarily discontinue, reduce, or increase the delivery of water for the generation of electrical energy at any time for the purpose of maintenance, repairs, and/or replacements, and for investigations and inspections necessary thereto, or to allow for changing reservoir and river conditions, or for changes in kilowatthours generation per acre-foot, or by reason of compliance with the statutory requirement as referred to in paragraph (b) of this section; *Provided, however,* That Reclamation shall, except in case of emergency, give Western reasonable notice in advance of any change in delivery of water, and that Reclamation shall make such inspections and perform such maintenance and repair work at such times and in such manner as to cause the least inconvenience possible to Contractors and that Reclamation shall prosecute such work with diligence and, without unnecessary delay, resume delivery of water as scheduled.

(d) Should a Contractor have concerns regarding power generation and related matters and request a meeting in writing, including a description of areas of concern, Reclamation shall convene such meeting within 10 days of receipt of such request and shall notify all Contractors and Western of the date and location of the meeting, and the areas of concern to be discussed.

[51 FR 23962, July 1, 1986; 51 FR 24531, July 7, 1986]

§431.5 Cost data and fund requirements.

Reclamation shall submit annually on or before April 15 to Western and Contractors, cost data, including one year of actual costs for the last completed fiscal year and estimated costs for the next 5 fiscal years, for operation, maintenance, replacements, additions and betterments, non-Federal funds advanced for the uprating program by non-Federal purchasers, and interest on and amortization of the Federal investment. Such cost data shall identify major items. Upon 5 days prior written notice to Reclamation, any Contractor shall have the right, subject to applicable Federal laws and regulations, to review records used to

prepare such cost data at Reclamation offices during regular business hours. Contractors shall have an opportunity to present written views within 30 days of the transmittal of the cost data. Reclamation responses to written views shall be provided within 60 days of transmittal of the cost data or 30 days after a meeting with Contractors convened pursuant to §431.4(d), whichever is later.

§431.6 Power generation estimates.

Reclamation shall submit annually on or before April 15 to Western and Contractors, an estimated annual operation schedule for the Hoover Powerplant showing estimated power generation and estimated maintenance outages for review, and shall provide an opportunity to present written views within 30 days of the transmittal of the schedule. Reclamation responses to written views shall be provided within 60 days of the transmittal of the schedule or 30 days after a meeting with Contractors convened pursuant to §431.4(d), whichever is later. The estimated annual operation schedule of Hoover Powerplant shall be subject to necessary modifications, in accordance with §431.4(c). Upon 5 days prior written notice to Reclamation, any Contractor shall have the right, subject to applicable Federal laws and regulations, to review records used to prepare such power generation estimates at Reclamation offices during regular business hours.

§431.7 Administration and management of the Colorado River Dam Fund.

Reclamation is responsible for the repayment of the Project and the administration of the Colorado River Dam Fund and the Lower Colorado River Basin Development Fund.

(a) All receipts to the Project shall be deposited in the Fund along with electric service revenues deposited by Western and shall be available without further appropriation for:

(1) Defraying the costs of operation (including purchase of supplemental energy to meet temporary deficiencies in firm energy which the Secretary of Energy is obligated by contract to supply), maintenance, and replacements of

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all Project facilities, including emergency replacements necessary to insure continuous operations;

(2) Payment of annual interest on the unpaid investments in accordance with appropriate statutory authorities;

(3) Repayment of capital investments including amounts readvanced from the Treasury;

(4) Payments to the States of Arizona and Nevada as provided in section 2(c) of the Adjustment Act and section 403(c)(2) of the Colorado River Basin Project Act;

(5) Transfers to the Lower Colorado River Basin Development Fund and subsequent transfers to the Upper Colorado River Basin Fund, as provided in section 403(c)(2) of the Colorado River Basin Project Act and section 102(c) of the Hoover Power Plant Act, as reimbursement for the monies expended heretofore from the Upper Colorado River Basin Fund to meet deficiencies in generation at Hoover Dam during the filling period of storage units of the Colorado River Storage Project in accordance with the provisions of sections 403(g) and 502 of the Colorado River Basin Project Act, such transfers, totalling \$27,591,621.25, to be effected by 17 annual payments of \$1,532,868.00 beginning in 1988 and a final payment of \$1,532,865.25 in 2005; and

(6) Any other purposes authorized by existing and future Federal law.

(b) Appropriations for the visitor facilities program and any other purposes authorized by existing and future Federal law advanced or readvanced to the Fund shall be disbursed from the Fund for those purposes.

(c) All funds advanced by non-Federal Contractors for the Uprating Program shall be deposited in the Fund, shall be available without further appropriation, and shall be disbursed from the Fund to accomplish the Uprating Program.

(d) The Fund shall be administered and managed in accordance with applicable Federal laws and regulations, by the Secretary acting through the Commissioner.

[51 FR 23962, July 1, 1986; 51 FR 24531, July 7, 1986]

§ 431.8 Disputes.

(a) All actions by Reclamation or the Secretary shall be binding unless and until reversed or modified in accordance with the provisions herein.

(b) Any disputes or disagreements as to interpretation or performance of the provisions of these General Regulations under the responsibility of the Secretary shall first be presented to and decided by the Commissioner. The Commissioner shall be deemed to have denied the Contractor's contention or claim if it is not acted upon within 60 days of its having been presented. The decision of the Commissioner shall be subject to appeal to the Secretary by a notice of appeal accompanied by a statement of reasons filed with the Secretary within 30 days after such decision. The Secretary shall be deemed to have denied the appeal if it is not acted upon within 60 days of its having been presented.

(c) The decision of the Secretary shall be final unless, within 30 days from the date of such decision, a written request for arbitration is received by the Secretary. The Secretary shall have 90 days from the date of receipt of a request for arbitration either to concur in or deny in writing the request for such arbitration. Failure by the Secretary to take any action within the 90 day period shall be deemed a denial of the request for arbitration. In the event of a denial of a request for arbitration, the decision of the Secretary shall become final. Upon a decision becoming final, the disputing Contractor's remedy lies with the appropriate Federal court. Any claim that a final decision of the Secretary violates any right accorded the Contractor under the Project Act, the Adjustment Act, or title I of the Hoover Power Plant Act is barred unless suit asserting such claim is filed in a Federal court of competent jurisdiction within one year after final refusal by the Secretary to correct the action complained of, in accordance with section 105(h) of the Hoover Power Plant Act.

(d) When a timely request for arbitration is received by the Secretary and the Secretary concurs in the request, the disputing Contractor and the Secretary shall, within 30 days of receipt of such notice of concurrence, each

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name one arbitrator to the panel of arbitrators which will decide the dispute. All arbitrators shall be skilled and experienced in the field pertaining to the dispute. In the event there is more than one disputing Contractor in addition to the Secretary, the disputing Contractors shall collectively name one arbitrator to the panel of arbitrators. In the event of their failure collectively to name such arbitrator within 15 days after their first meeting, that arbitrator shall be named as provided in the Commercial Arbitration Rules of the American Arbitration Association. The two arbitrators thus selected shall name a third arbitrator within 30 days of their first meeting. In the event of their failure to so name such third arbitrator, that arbitrator shall be named as provided in the Commercial Arbitration Rules of the American Arbitration Association. The third arbitrator shall act as chairperson of the panel. The arbitration shall be governed by the Commercial Arbitration Rules of the American Arbitration Association. The arbitration shall be lim-

ited to the issue submitted. The panel of arbitrators shall render a final decision in this dispute within 60 days after the date of the naming of the third arbitrator. A decision of any two of the three arbitrators named to the panel shall be final and binding on all parties involved in the dispute.

§ 431.9 Future regulations.

(a) Reclamation may from time to time promulgate additional or amendatory regulations deemed necessary for the administration of the Project, in accordance with applicable law; *Provided*, That no right under any contract made under the Hoover Power Plant Act shall be impaired or obligation thereunder be extended thereby.

(b) Any modification, extension, or waiver of any provision of these General Regulations granted for the benefit of any one or more Contractors shall not be denied to any other Contractor.

PARTS 432–999 [RESERVED]

RECLAMATION

Managing Water in the West

Amended

NAVAJO

POWER MARKETING PLAN



U.S. Department of the Interior
Bureau of Reclamation

AMENDED NAVAJO POWER MARKETING PLAN

I. PURPOSE AND SCOPE

Section 107 of the Hoover Power Plant Act of 1984, Pub. L. 98-381, requires that a power marketing plan be developed to provide for marketing and Exchanging of Navajo Surplus for the purposes of optimizing the availability of Navajo Surplus and providing financial assistance in the timely construction and repayment of construction costs of authorized features of the Central Arizona Project. The Secretary of the Department of the Interior adopted the original Navajo Power Marketing Plan on December 1, 1987 (Original Plan). The Revised Stipulation entered in the Central Arizona Project repayment litigation, *Central Arizona Water Conservation District v. United States, et al.*, No. CIV 95-625-TUC-WDB (EHC), No. CIV 95-1720-PHX-EHC (Consolidated Action) requires, as a condition to the effectiveness of the Revised Stipulation, that the Original Plan be amended. The Revised Stipulation requires the amended Navajo Power Marketing Plan provide for the establishment and collection of rates for the sale or Exchange of Navajo Surplus that optimize the availability and use of revenues for the Lower Colorado River Basin Development Fund while allowing for an appropriate saving for the contractor. Satisfying the requirements of the Revised Stipulation is one of the elements necessary for final judgment to be entered in the above-referenced litigation. The entry of final judgment in that litigation permits the Secretary of the Department of the Interior to make a required finding under the terms of the Arizona Water Settlements Act of 2004, Pub. L. 108-451.

- A. This Amended Navajo Power Marketing Plan hereinafter called "Plan" shall be applicable to all new or amended contracts for Navajo Surplus entered into after this Plan is adopted. The Original Plan shall remain in effect for all Navajo Surplus contracts entered into before the adoption of this Plan and shall continue until such contracts terminate or are amended in accordance with this Plan.
- B. This Plan recognizes the obligation of the United States to use its entitlement to electrical capacity and energy from Navajo to provide necessary power for the pumping requirements of the Central Arizona Project and any such needs for desalting and protective pumping facilities as may be required under section 101(b)(2)(B) of the Colorado River Basin Salinity Control Act of 1974, Pub. L. 93-320, as amended.
- C. This Plan provides that Western, working closely with Reclamation and CAWCD, will be the marketing entity responsible for the sale and Exchange of Navajo Surplus in accordance with applicable Federal law, regulations and the Revised Stipulation. Western shall market Navajo Surplus directly to, with or through the Arizona Power Authority and/or other entities having the status of preference entities under the Reclamation Project Act of 1939. Western may utilize Exchange, banking, purchase or sales agreements, or integration with other resources to fulfill any purpose of this Plan.

- D. This Plan sets parameters for the establishment of Rates, not to exceed levels that allow for an appropriate saving for the contractor, that will optimize the availability and use of revenues from the sale and Exchange of Navajo Surplus to provide financial assistance for payment of the operation and maintenance expenses associated with Navajo Surplus and for the purposes set forth in 43 U.S.C. 1543(f), as amended by the Arizona Water Settlements Act of 2004, Pub. L. 108-451.
- E. This Plan satisfies the obligation of the United States in accordance with the Revised Stipulation, to amend the Original Plan “to provide for the establishment and collection of rates for the sale or exchange of Navajo Surplus Power after September 30, 2011.”
- F. This Plan specifies that for so long as Navajo operates and there is Navajo Surplus, Western shall continue to market Navajo Surplus under this Plan with such amendments or revisions as may be adopted by the Secretary of the Department of the Interior, after consultation with the Secretary of Energy, CAWCD, and the Governor of Arizona and as provided by law, including the authorities set forth in section II.

II. AUTHORITIES

The authorities under which this Plan is developed are:

- A. Federal Reclamation laws (43 U.S.C. 372 et seq., and all Acts amendatory thereof or supplementary thereto); in particular, the Colorado River Basin Project Act of 1968, Pub. L. 90-537, as amended, the Colorado River Basin Salinity Control Act of 1974, Pub. L. 93-320, as amended, the Hoover Power Plant Act of 1984, Pub. L. 98-381, and the Arizona Water Settlements Act of 2004, Pub. L. 108-451.
- B. Rules, regulations, and agency agreements of Western and Reclamation issued or made pursuant to applicable law.

III. DEFINITIONS

The following terms wherever used herein shall have the following meanings:

- A. “Boulder City Marketing Area” shall mean the marketing area defined in the 1984 Conformed Criteria published in the Federal Register (49 FR 50585) on December 28, 1984.
- B. “Central Arizona Project” or “CAP” shall mean the Reclamation multipurpose water resource development and management project in Arizona authorized by the Colorado River Basin Project Act of 1968, Pub. L. 90-537, as amended (43 U.S.C. 1501 et seq.).
- C. “CAWCD” shall mean the Central Arizona Water Conservation District.

- D. “Conformed Criteria” shall mean the Conformed General Consolidated Power Marketing Criteria or Regulations for Boulder City Area Projects published in the Federal Register (49 FR 50582) on December 28, 1984.
- E. “Development Fund” shall mean the Lower Colorado River Basin Development Fund established under section 403 of the Colorado River Basin Project Act of 1968, Pub. L. 90-537, as amended.
- F. “Exchange” shall mean any arrangements providing for delivery of capacity and energy to Western and return of capacity and energy by Western from Navajo within a one year period.
- G. “Navajo” shall mean the Navajo Generating Station, the thermal generating power plant located near Page, Arizona, and associated transmission facilities.
- H. “Navajo Entitlement” shall mean the United States entitlement of 24.3 percent of the generation from Navajo.
- I. “Navajo Surplus” shall mean capacity and energy associated with the Navajo Entitlement which is in excess of the pumping requirements of the Central Arizona Project and any such needs for desalting and protective pumping facilities as may be required under section 101(b)(2)(B) of the Colorado River Basin Salinity Control Act of 1974, Pub. L. 93-320, as amended.
- J. “New Waddell Dam” or “New Waddell Reservoir” shall mean the regulatory storage facilities constructed on the Agua Fria River as a feature of the CAP.
- K. “Original Plan” shall mean the original Navajo Power Marketing Plan adopted on December 1, 1987.
- L. “Plan” shall mean this Amended Navajo Power Marketing Plan.
- M. “Rate(s)” shall mean the price(s) established by a marketing process for various Navajo Surplus capacity or energy products marketed under this Plan to optimize the availability and use of revenues for the Development Fund.
- N. “Reclamation” shall mean the Bureau of Reclamation, United States Department of the Interior.
- O. “Revised Stipulation” shall mean the Revised Stipulation Regarding a Stay of Litigation, Resolution of Issues During the Stay and for Ultimate Judgment Upon the Satisfaction of Conditions, filed with the United States District Court for the District of Arizona in *Central Arizona Water Conservation District v. United States, et al.*, No. CIV 95-625-TUC-WDB (EHC), No. CIV 95-1720-PHX-EHC (Consolidated Action), and that court’s order dated April 28, 2003, and any amendments or revisions thereto.

- P. “Western” shall mean the Western Area Power Administration, United States Department of Energy.

IV. POWER TO BE MARKETED

- A. Reclamation, in consultation with CAWCD, shall annually or more frequently, as appropriate, determine the Navajo Surplus available for sale and Exchange by Western, and the period for which it will be available for sale and Exchange, taking into consideration among other factors, the following:
1. Existing contractual commitments to deliver Navajo Surplus, including new contracts entered into under the first opportunity provisions of section IV.G. of the Original Plan.
 2. CAP estimated pumping energy requirements in excess of capacity and energy supplied to CAWCD from Hoover Dam or New Waddell Dam, based on projected CAP water deliveries for that year and successive years.
 3. Estimated capacity and energy needs of the United States for desalting and protective pumping facilities, as may be required under section 101(b)(2)(B) of the Colorado River Basin Salinity Control Act of 1974, Pub. L. 93-320, as amended.
 4. Projected Navajo generation.
- B. Any Navajo Surplus not sold or Exchanged in accordance with paragraph A of this section may, as determined by Western, in cooperation with CAWCD and Reclamation, be sold under appropriate long-term or short-term arrangements.

V. OPTIMIZATION

- A. To optimize the availability of Navajo Surplus, CAWCD shall utilize, for CAP pumping requirements, Hoover capacity and energy scheduled from Hoover Dam in accordance with the terms and conditions of CAWCD’s contract with the Arizona Power Authority to permit additional Navajo capacity and energy to be sold or Exchanged by Western as Navajo Surplus.
- B. To optimize the availability and use of revenues from the sale and Exchange of Navajo Surplus:
1. CAWCD will use seasonal and daily power management. Specifically, CAWCD will divert maximum amounts of water from the Colorado River in the winter season for storage in the New Waddell Reservoir, and then serve CAP water demands in the summer season from water previously placed in storage. On a daily basis, CAWCD to the extent possible will pump off-peak to optimize the on-peak availability of Navajo Surplus.

2. Western, in consultation with Reclamation and CAWCD, shall develop capacity and energy products from the Navajo Surplus determined to be available under section IV.A for sale or Exchange, taking into account market prices for standard capacity and energy products.

VI. ELIGIBILITY

- A. Western shall offer Navajo Surplus for sale in the following order of priority, in accordance with part IV, section A of the Conformed Criteria:
 1. Preference entities within Arizona.
 2. Preference entities within the Boulder City Marketing Area.
 3. Preference entities in adjacent Federal marketing areas.
 4. Non-preference entities in the Boulder City Marketing Area.
- B. In the event a bidding or request for proposal process is utilized, after the bids or proposals are received the bidding entities will be given first opportunity, in order of priority, to purchase at a price which is based on the highest offer.
- C. In the event that a potential contractor fails to place Navajo Surplus capacity and energy under contract within a reasonable period, as specified by Western and in accordance with the terms and conditions offered by Western, the amounts of capacity and energy not placed under contract will be reoffered in accordance with the order of priority specified in paragraph A of this section.
- D. Arizona entities, regardless of preference status, shall have first opportunity for electrical capacity and energy Exchange rights as necessary to implement this Plan. Western, in consultation with CAWCD and Reclamation, may determine that any capacity and energy not subscribed to by Arizona entities for Exchange may be offered for sale in the order of priority stated in paragraph A of this section or may be offered to non-Arizona entities for Exchange.

VII. CONTRACT PROVISIONS

- A. Western, after consultation with Reclamation and CAWCD, shall enter into all power sales and Exchange contracts necessary to carry out the provisions of this Plan in selling and exchanging Navajo Surplus. Navajo Surplus shall be marketed, and Exchange rights granted, by Western on behalf of the Secretary of the Department of the Interior, under contracts consistent with this Plan and the Conformed Criteria.
- B. Contracts for the sale or Exchange of Navajo Surplus shall specify a delivery point on the Navajo or CAP transmission systems as may be available. If the contractor cannot take delivery of Navajo Surplus into its own system at these delivery points, transmission service arrangements to other delivery points will be the obligation of the contractor.

- C. CAWCD may be a party to contracts for the sale or Exchange of Navajo Surplus for the limited purposes of (i) concurring that the contracts optimize the financial assistance available for the purposes set forth in 43 U.S.C. 1543(f), as amended by the Arizona Water Settlements Act of 2004, Pub. L. 108-451, and (ii) affirming any rights and obligations of CAWCD under the contracts.
- D. Western and the contractor shall agree upon written metering and scheduling instructions prior to any deliveries under this Plan. The metering and scheduling instructions shall provide the operating and accounting procedures for such deliveries. Metering and scheduling instructions are intended to implement terms of the contract, not to modify or amend it, and therefore are subordinate to the contract. Western and the contractor may modify these instructions, as necessary, to reflect changing power system conditions. In the event the contractor fails or refuses to execute the initial metering and scheduling instructions or any revised instructions Western determines to be necessary, Western shall develop and implement temporary instructions until acceptable instructions have been developed and executed by Western and the contractor.

VIII. RATE-SETTING

- A. Rates for Navajo Surplus developed pursuant to section IV.A shall be established annually by Reclamation and Western, in consultation with CAWCD, through a competitive process that optimizes the availability and use of revenues for the Development Fund with priority to entities in accordance with section VI.A. and that allows for an appropriate saving for the contractor, taking into consideration, among other factors, prices for comparable capacity and energy products.
- B. Rates for Navajo Surplus developed under section IV.B or marketed under the first opportunity provision of the Original Plan shall be established in the contracts for sale of such Navajo Surplus, taking into consideration, among other factors, prices for comparable capacity and energy products, and allowing for an appropriate saving for the contractor.
- C. Rates developed annually pursuant to this Plan shall not be applicable to pre-existing contracts unless provided for in such contracts.
- D. Because of the Hoover Power Plant Act of 1984's, Pub. L. 98-381, requirements for noncost-based rates, the Rates established pursuant to this Plan are not suitable to the required review of Western's rates by the Federal Energy Regulatory Commission. All Rates promulgated by the Administrator of Western under this Plan shall be a final act of the Secretary of Energy and shall be subject to review pursuant to the judicial review provided by the Administrative Procedure Act (5 U.S.C. 553, et seq.).

IX. REVENUE COLLECTION AND DISTRIBUTION

Western shall deposit all revenue collected from the marketing of Navajo Surplus under this Plan into the Development Fund, where it will be used:

- A. First, to pay all costs of operation and maintenance determined to be associated with the sale and Exchange of Navajo Surplus, including actual costs for services performed by Reclamation and Western under this Plan including appropriate administrative expenses of Reclamation and Western.
- B. Second, for the purposes set forth in 43 U.S.C. 1543(f), as amended by the Arizona Water Settlements Act of 2004, Pub. L. 108-451, including crediting funds against the annual CAWCD repayment obligation and funding specific Indian water-related activities.

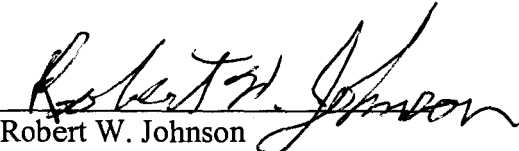
X. EFFECTIVE DATE

This Plan will become effective 30 days after publication in the Federal Register following adoption by the Secretary of the Department of the Interior.

XI. CONSULTATION

This Plan is deemed most acceptable in accordance with section 107(c) of the Hoover Power Plant Act of 1984, Pub. L. 98-381, after consultation with Western (Secretary of Energy), the Governor of Arizona, and CAWCD.

Adopted:


Robert W. Johnson
Commissioner
Bureau of Reclamation

9-18-07
Date