BUREAU OF RECLAMATION
Lower Colorado Region

FINAL ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

for

Storage and Interstate Release Agreement among the United States of America, acting through the Secretary of the Interior: Arizona Water Banking Authority; the Southern Nevada Water Authority; and the Colorado River Commission of Nevada

Prepared By
Bureau of Reclamation
and the
Southern Nevada Water Authority
Boulder City, Nevada

June 2002

United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

IN REPLY REFER TO:

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

02-LC-012-FONSI

FOR

Storage and Interstate Release Agreement Among the United States of America Acting Through The Secretary Of The Interior And The Arizona Water Banking Authority, The Southern Nevada Water Authority, And the Colorado River Commission Of Nevada

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada

Recommended: _____ Date: 6/6/02
Preparer: Regional Environmental Officer

Approved: _____ Date: 6/19/02
Regional Director, Lower Colorado Region

In accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, and based on the following, the Bureau of Reclamation (Reclamation), Lower Colorado Region has determined that approval of this Storage and Interstate Release Agreement (SIRA) and implementation of the Preferred Alternative/Proposed Action among the noted parties would not result in a significant impact on the human environment. It is recommended this FONSI be approved and thus the preparation of an environmental impact statement is not required.

BACKGROUND

On November 1, 1999, Reclamation issued a final rule (64 FR 58986) to help water users in the states of Arizona, California, and Nevada (Lower Division States) satisfy regional water demands by more efficient use of unused apportionment and surpluses on the Colorado River. The final rule (Rule) established a procedural framework for the Secretary of the Interior (Secretary) in considering voluntary interstate agreements. A SIRA would permit state-authorized entities to store Colorado River water offstream, develop intentionally created unused apportionment (ICUA), and make ICUA available to the Secretary for release for use in another Lower Division State. The Rule provided a framework only and did not authorize any specific transactions. A Final Programmatic Environmental Assessment (FPEA) and FONSI (LC-99-3) were completed for the Rule in October 1999. A Biological Assessment (BA) was prepared and informal consultation completed with the U.S. Fish and Wildlife Service (Service) for the most likely storage and release scenarios. Consultation was also completed for the rule making process with the State Historic Preservation Officers (SHPO) of Arizona, California, and Nevada. The FPEA used a programmatic approach, and identified that appropriate environmental compliance would be completed for specific SIRAs as they were developed. The FPEA for the Rule evaluated the most likely scenarios for possible interstate transactions. Because only Arizona had enacted legislation creating a state agency with authority to store water for interstate use and Nevada had the greatest near-term likelihood of entering into a SIRA with Arizona, the FPEA and BA analyzed the effects of offstream storage of Colorado River water in Arizona and the use of ICUA in Nevada. The consultations documents are contained within the FPEA.

The purpose and need for the Preferred Alternative/Proposed Action is to meet part of southern Nevada's future water needs by storing currently unused basic or surplus apportionment of Colorado River water in offstream groundwater basins in Arizona. Nevada entities are fully using all of Nevada's 300,000 acre-feet per year consumptive use allocation of Colorado River water and demands will continue to rise based upon projected population increases. Unused Colorado River water could be stored offstream while it is available and utilized in the future to help meet demands. When the water is needed in the future by Nevada, ICUA would be developed in Arizona and released by the Secretary for consumptive use in Nevada.

ENVIRONMENTAL ANALYSIS PROCESS

National Environmental Policy Act Compliance

Reclamation prepared and circulated a draft environmental assessment (DEA) which evaluated the potential impacts of the Agency Preferred/Proposed Action and the No Action Alternative. The Agency Preferred/Proposed Action is the approval of this SIRA among the noted parties. This action is within the authority of the Secretary under the Boulder Canyon Project Act of 1928 (45 Stat. 1057, 43 U.S.C. 617), and the 1964 Supreme Court Opinion and Decree in *Arizona vs. California*, 373 U.S. 546 and 376 U.S. 340 as supplemented and amended, and is in conformance with the Rule 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). The DEA tiered to and incorporated by reference all information in the FPEA and BA, expands upon the environmental analysis, and completes consultations as appropriate. Two additional alternatives were considered but eliminated from further analysis in the FPEA and in the DEA by reference. These two alternatives were not reasonable because they either did not meet the requirements of the purpose and need for the Proposed Action or were not practical or feasible from an operational and economic standpoint or were not currently allowed under the above authorities.

A notice of Reclamation's intent to enter into a SIRA with the noted parties to store Colorado River water offstream in Arizona aquifers for the benefit of Nevada was published in the Arizona Republic and the Las Vegas Review Journal on February 18, 20, and 22, 2002; and in the Los Angeles Times on February 21, 23, and 25, 2002. The legal notice publicized the availability of the draft SIRA and DEA, indicated where copies of the documents could be obtained, and identified the duration of the public comment period. The public comment period ran concurrently for the DEA and draft SIRA from February 22, 2002 to March 25, 2002. These two documents were also published on Reclamation's Lower Colorado Region web site. The DEA and draft SIRA were mailed to local, state, and Federal agencies; other entities and interested parties; and to others upon request.

Public review of the DEA and draft SIRA produced four comment letters. Comments on the DEA resulted in minor editorial changes, clarifications, additions, and adoption of specific terms and/or concepts in the SIRA. The comments did not provide significant new information, a new alternative, result in changes to the proposed action or selection of the Preferred Alternative, nor raise any significant issues that would require the DEA to be reissued. The final EA (FEA) was completed in June 2002 with supporting consultation documentation appended (attached). The DEA and FEA were prepared in compliance with NEPA, the President's Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508), and the U.S. Department of the Interior, Reclamation NEPA Handbook.

Agency Consultation/Coordination

Reclamation prepared a BA and consulted with the Service, the Service concurred with Reclamation's determinations of effect during informal consultation on the final Rule and most likely storage and retrieval scenarios in August 19, 1998. Reclamation sent a memorandum on August 1, 2001 notifying the Service that the Proposed Action/Preferred Alternative was consistent with the previously evaluated scenarios; that no additional impacts on threatened and endangered species would occur; and no further consultation was necessary for this SIRA.

An updated consultation with the Nevada SHPO was submitted for the Proposed Action/Preferred Alternative on March 7, 2002. At the request of SHPO, Reclamation provided supporting information, and with this information the SHPO, in their letter dated May 8, 2002,

concurred with Reclamation's determination that "historic properties will not be affected by the proposed undertaking" which completed the consultation process.

Reclamation consulted with the International Boundary and Water Commission (IBWC), United States and Mexican Sections, and Mexican officials on the subject SIRA on May 14, 2002 in El Paso, Texas. This consultation was held in accordance with subsection 414.3(g) of the final Rule. Actions under the SIRA were described and analyses in the DEA were discussed. Reclamation reiterated that execution of the SIRA would not affect the United States obligation or ability to meet the requirements of the February 3, 1944, Treaty between the United States and Mexico in terms of both water quality and quantity. Two letters supported this consultation process with IBWC and Mexican officials.

FINDING

Based on the analysis of the potential environmental impacts of the Proposed Action/Preferred Action, as documented in the attached FEA, there will be no significant impacts on the human environment. This finding taken together with a thorough review of public comments and completion of consultations leads Reclamation to conclude that approval of the SIRA will not result in a significant impact on the quality of the human environment or on the natural and cultural resources of the action area.

Since there will be no significant impact on the human environment from the approval of this SIRA, it is recommended that this FONSI be approved for the agency Proposed Action/Preferred Alternative. Preparation of an environmental impact statement is not required. This finding is based upon the consideration of the above discussion, the analysis in the FEA, and Reclamation's obligation to monitor and implement the environmental commitments in Chapter IV of the FEA.

FEA Attached

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IN REPLY REFER TO:

United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

BUREAU OF RECLAMATION
LOWER COLORADO REGION
Final Environmental Assessment
June 2002

EA Number: 02 - LC - 012

Proposed Action Title: Storage and Interstate Release Agreement among the United States of America, acting through the Secretary of the Interior: Arizona Water Banking Authority; the Southern Nevada Water Authority; and the Colorado River Commission of Nevada

Location of Proposed Action: Lower Colorado River, Arizona and Nevada

Applicant: Arizona Water Banking Authority, Southern Nevada Water Authority, and Colorado River Commission of Nevada

I. Introduction

A. Background

In 1996, the State of Arizona passed legislation to create a program of offstream banking of Colorado River water, using Arizona's basic and surplus apportionment that is not otherwise used within the State during any year (HB 2494). The program is focused on storage for intrastate use, but it has an interstate component as well. This legislation required the Secretary of the Interior (Secretary) to adopt a rule to support the interstate component of the Arizona program.

On November 1, 1999, the Bureau of Reclamation (Reclamation) issued a final rule (64 FR 58986) to help water users in the states of Arizona, California, and Nevada (Lower Division States) satisfy regional water demands by more efficient use of unused apportionment and surpluses on the Colorado River. The rule established a procedural framework for the Secretary in considering voluntary interstate agreements. A Storage and Interstate Release Agreement (SIRA) would permit state-authorized entities to store Colorado River water offstream, develop intentionally created unused apportionment (ICUA), and make ICUA available to the Secretary for release for use in another Lower Division State. The final rule provided a framework only, and did not authorize any specific transactions. The rule did not affect any Colorado River water entitlements, and did not address offstream storage and distribution of water for intrastate use.

A Final Programmatic Environmental Assessment (FPEA) and Finding of No Significant Impact (FONSI) (LC-99-3) were completed for the rule in October 1999 (Reclamation, 1999a). A Biological Assessment (BA) was prepared and informal consultation completed with the U.S. Fish and Wildlife Service (Service) for the most likely storage and release scenarios. Consultation was also completed for the rule making process with the Historic Preservation Officers of the States of Arizona, California, and Nevada. The environmental compliance and consultations for the rule used a programmatic approach, and identified that appropriate environmental compliance would be completed for specific SIRAs as they were developed. The environmental analysis for the rule evaluated the most likely scenarios for possible interstate transactions. Because only Arizona had enacted legislation creating a state agency with authority to store water for interstate use, and Nevada had the greatest near-term likelihood of entering into a SIRA with Arizona, the FPEA analyzed effects of offstream storage of Colorado River water in Arizona and the use of ICUA in Nevada. The BA analyzed the effects of the most likely storage and release scenarios.

In January 2001, Reclamation issued a Record of Decision on the Colorado River Interim Surplus Guidelines, Final Environmental Impact Statement (FEIS) (Reclamation, 2000 and 2001). The Colorado River Interim Surplus Guidelines (Guidelines) are to be used annually to determine the conditions under which the Secretary would declare the availability of surplus water. Through the adoption of the Guidelines, the Secretary can afford 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. Nevada is entitled to surplus water to meet domestic use and groundwater banking demands. Arizona may use some of its surplus for offstream banking, including interstate banking for Nevada. The Guidelines will be in effect from 2001 through 2016.

The Arizona Water Banking Authority (AWBA) is an agency of the State of Arizona authorized under Arizona law to engage in the interstate banking of Colorado River water on behalf of the State of Arizona. The Southern Nevada Water Authority (SNWA) is a political subdivision of the State of Nevada responsible for managing and distributing Colorado River water resources for Southern Nevada, and pursuant to its water delivery contracts has the right to divert ICUA released by the Secretary for use within the State of Nevada. The Colorado River Commission of Nevada (CRCN) is an agency of the State of Nevada authorized under State law to acquire, manage, and protect the State of Nevada's water and hydropower resources from the Colorado River, and is involved to facilitate the SIRA on the behalf of the State of Nevada.

In 1992, the Central Arizona Water Conservancy District (CAWCD) developed a demonstration project to test the feasibility of underground storage of Colorado River water. Through agreements with the Metropolitan Water District and SNWA, CAWCD recharged 100,000 acre-feet of Colorado River water in Arizona's underground aquifers. Half of this amount (50,000 acre feet) was stored and is designated for use by Nevada. In the event the Secretary declares a shortage on the Colorado River, it was agreed that Arizona could use the water; in the event of a surplus, SNWA could use 90 percent of its portion of the water when it chose to do so. This

transaction was covered by previous environmental compliance referenced in the FPEA for the Rule. The SIRA addresses this previously stored water and the process for recovery of ICUA.

This Final Environmental Assessment (FEA) was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 as amended, Council on Environmental Quality Regulations (40 CFR Parts 1500-1508), Department of Interior Policies, and Reclamation's NEPA Handbook. This FEA tiers to and incorporates by reference all information contained in the FPEA and documents identified in Section C. Related Projects, Programs and Actions.

B. Purpose and Need for Proposed Action

The purpose and need for the Proposed Action is to meet part of southern Nevada's future water needs by storing currently unused basic or surplus apportionment of Colorado River water in offstream groundwater basins in Arizona. Nevada entities are fully using all of Nevada's 300,000 af/y consumptive use allocation of Colorado River water, and demands will continue to rise based upon projected population increases (SNWA, 2002; CBER, 2000). Unused Colorado River water could be stored offstream while it is available, and utilized in the future to help meet demands. When the water is needed in the future by Nevada, ICUA would be developed in Arizona and released by the Secretary for consumptive use in Nevada.

C. Related Projects, Programs and Actions

In addition to the environmental compliance documents for the Final Rule and the Interim Surplus Guidelines, the Proposed Action is related to a number of other plans, programs and actions, but has independent utility from these actions. These related documents are briefly described below. These plans and documents are tiered to and incorporated by reference into this EA as appropriate.

SNWA has adopted a "Water Resource Plan" to identify projected water demands for the region and how SNWA plans to meet those demands, for the next 50 years. The plan is reviewed at least annually and revised as needed. SNWA's most recent plan was published in 2002 (SNWA, 2002). Projected water demands are developed from population forecasts generated by the Center For Business and Economic Research at the University of Nevada, Las Vegas. The most current forecasts are from 2000 (CBER, 2000).

Reclamation completed an FEIS for "Water Allocations and Water Service Contracting for the Central Arizona Project (CAP)" in 1982 (Reclamation, 1982). The FEIS analyzed the environmental consequences of the allocation of water and of water service contracting for Arizona's remaining entitlement of Colorado River water to be delivered by the CAP. Construction of CAP components was analyzed in several NEPA documents (Reclamation, 1972, 1973, 1974, and 1975).

An EA and FONSI were completed in 1992 for "Proposed Contract between the U.S. Department of Interior and Colorado River Commission and the Southern Nevada Water

Authority for the Remaining Nevada Allocation of Colorado River Water" (Reclamation, 1992). The contract entitled CRCN and SNWA to Nevada's remaining unallocated Colorado River water and Nevada's entitlement to 4 percent of any surplus declared on the river.

Reclamation and CRCN completed an EA and FONSI in 1995 for "Improvements to the Southern Nevada Water System" (Reclamation, 1995), and in 1996 Reclamation and SNWA completed a FEIS and Record of Decision for the "Southern Nevada Water Authority Treatment and Transmission Facility" (Reclamation, 1996a and b). The combined system of regional water supply facilities withdraw existing Nevada allocation of Colorado River water from Lake Mead, treat it, and convey it to SNWA purveyors.

The Lower Colorado River Multi-Species Conservation Program (LCR-MSCP) is being developed by a partnership of State, Federal, Tribal, water and power agencies, and other stakeholders along the lower Colorado River. The program will work toward the recovery of listed species through habitat and species conservation, and attempt to reduce the likelihood of additional species listings under the Endangered Species Act. It will also accommodate current and projected water diversions and power production, and optimize opportunities for future water and power development. It is planned to be implemented over a 50-year period, and will address future Federal agency consultation needs under the Endangered Species Act's Section 7 and non-Federal agency needs for endangered species incidental take authorization approval under the Act's Section 10. A draft EIS/Environmental Impact Report/Biological Assessment is planned to be released in 2003.

The Service issued the "Clark County Multiple Species Habitat Conservation Plan" and FEIS in September 2000 to maintain natural habitats and species of concern residing in those habitats within the county (Service, 2000a and 2000b). The Section 10 incidental take permit issued from the plan authorizes incidental take of listed threatened and endangered species and other non-listed species of concern in connection with the development of non-Federal lands in Clark County and other Federal actions associated with the economic growth and development of Clark County (Service, 2001). Covered species include two Federally-listed species, one candidate for listing, and 76 non-listed species of concern.

The Clark County Wetlands Park is being developed along a 7-mile reach of the Las Vegas Wash. The Wash captures stormwater, treated wastewater effluent, and urban runoff from the Las Vegas Valley, and empties into Las Vegas Bay in Lake Mead. Increased flows from urban development in the region have accelerated erosion and channelization, reducing wetlands present in the Wash. The primary goals are to control erosion, reduce headcutting, restore wetlands, and provide a park for outdoor recreation and educational use. Reclamation issued a Final Program EIS and Record on Decision on the Park in 1999 (Reclamation, 1999b and c).

The Bureau of Land Management (BLM) issued a Record of Decision and FEIS on the "Las Vegas Resource Management Plan" to provide management direction over BLM-administered public lands within the Las Vegas region (BLM, 1998a and b). In conjunction with the Southern Nevada Public Land Act of 1998 (PL 105-263), public lands available for disposal were

identified. The planning document and Federal legislation allows for the orderly disposal of BLM-managed Federal lands within the Disposal Area, and provides for the acquisition of environmentally sensitive lands within the Nevada.

Clark County adopted a Comprehensive Plan in December 1983 to establish policy for planning and development within the county (Clark County, 1983). The plan, which has been subsequently amended, contains six Tasks and several elements that consider land use compatibility and balance, public service availability, and other approaches to accommodate development while enhancing environmental integrity and conserving natural resources. Some of the documents that guide the County's conservation and natural resource management efforts include a Federal Lands Element, Conservation Element and Population Element of the Comprehensive Plan, Carbon Monoxide Air Quality Implementation Plan, Particulate Matter Attainment Demonstration Plan, and Las Vegas Valley 208 Water Quality Management Plan.

The 208 Plan comprehensively addresses water quality issues in Clark County in compliance with the Clean Water Act amendments of 1972 and 1977 (Clark County, 1979). The 208 Plan presents objectives, policies, and programs for managing water quality in the County. It was amended in 1997 to address water quality issues specific to the Las Vegas Valley such as wastewater treatment methods as well as flow projections, water reclamation, nonpoint sources, the Las Vegas Wash wetlands, integrated planning, coordination, and new or revised regulation (Clark County, 1997). The 1997 amendment was approved by Clark County, State of Nevada, and U.S. Environmental Protection Agency.

The Las Vegas Valley 208 Water Quality Management Plan was most recently amended to include, by addendum, the Las Vegas Wash Comprehensive Management Plan, and the Areawide Reuse Study. The request for revision to the 208 Plan to include these two documents was sent to the Nevada Division of Environmental Protection (NDEP) by the Clark County Department of Comprehensive Planning in June of 2001. The NDEP responded with a notification of their approval on February 6, 2002. Upon the NDEP approval, they have also forwarded this request to the EPA Region IX, for EPA approval.

As described above, the Colorado River Interim Surplus Guidelines (ISG) (Reclamation, 2000 and 2001) are to be used annually to determine the conditions under which the Secretary may declare the availability of surplus water for use within the states of Arizona, California and Nevada during the interim period through calendar year 2016. Through adoption of specific interim guidelines, the Secretary can afford mainstream users of Colorado River water, particularly those 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. The increased level of predictability with respect to the prospective existence and quantity of surplus water assists in planning and operations by all entities that receive surplus Colorado River water pursuant to contracts with the Secretary.

Reclamation prepared a draft EIS for the proposed execution of an Implementation Agreement (IA), Inadvertent Overrun and Payback Policy (IOP), and Related Federal Actions (Reclamation

2002). Execution of the IA would commit the Secretary to make Colorado River deliveries in accordance with the terms and conditions of the IA to enable certain southern California water agencies to implement a proposed Quantification Settlement Agreement (QSA). The FEIS is expected in mid-2002.

The QSA (Coachella Valley Water District et al., 2002) is an agreement in principle among several southern California water agencies that establishes a framework of conservation measures and water transfers within southern California for up to 75 years. It provides a substantial mechanism for California to reduce it diversions of Colorado River water in normal years to its basic apportionment of 4.4 million acre-feet per year. The proposed Federal action includes the following components: Execution of an IA, wherein the Secretary agrees to changes in the amount and/or location of annual deliveries of Colorado River water that are necessary to implement the QSA; adoption of an IOP, which establishes requirements for payback of inadvertent overuse of Colorado River water by Colorado River water users in Arizona, California, and Nevada; and implementation of biological conservation measures to offset potential impacts from the proposed action that could occur to federally listed fish and wildlife species.

II. Description of Proposed Action and Alternatives

A. No Action Alternative

Under the No Action Alternative, Arizona (through the AWBA) will continue to divert and store Arizona's unused basic and/or surplus entitlement of Colorado River water offstream for intrastate purposes. The CAWCD diverts and conveys approximately one-half of Arizona's combined basic and surplus apportionment of Colorado River water through the CAP, pursuant to CAWCD's master repayment and water delivery contract with the Federal government (Contract No. 14-06-W-245, Amendment No. 1, dated December 1, 1988). Pursuant to an Intergovernmental Agreement among AWBA, CAWCD, and Arizona Department of Water Resources (ADWR), CAWCD diverts and conveys Colorado River water through the CAP to storage, for which ADWR issues long-term storage credits to AWBA. Under the No Action Alternative, Arizona will continue to divert and store for intrastate use the maximum quantity of Colorado River water possible, limited only by available capacity of the CAP, availability and capacity of storage facilities, and available CAWCD entitlement to Colorado River water.

Under Arizona law, AWBA may not own, develop, operate, or construct storage facilities, but can contract to reserve storage capacity at existing facilities that have been permitted and approved by the State. AWBA is required to maintain a Storage Facility Inventory identifying available storage facilities in the State, which is updated a minimum of every 5 years. The latest inventory (1997) was included in the environmental compliance for the Final Rule. Additional storage facilities may be needed and developed in the future by Arizona entities for intrastate purposes, which would then be added to subsequent updates to the Storage Facility Inventory. Contracting and permitting for future storage facilities would follow the process designated by Arizona law; some of these facilities may also require Federal permits or approvals. Under the

No Action Alternative, AWBA would continue to use these facilities for intrastate storage. However, no portion of this stored water would be designated as Long-term Storage Credits for Nevada.

Under the No Action Alternative, SNWA would still be entitled to recover water stored in Arizona under the demonstration project with CAWCD. Under that agreement, SNWA is entitled to recover 45,000 acre-feet (90 percent of 50,000 acre-feet originally stored). SNWA would divert this water from Lake Mead when needed with an agreement between Arizona, Nevada and the Secretary.

Under the No Action Alternative, the Secretary would not consider, sign, or administer a SIRA between AWBA, SNWA and CRCN. SNWA would not have ICUA water available to help meet future demands, and would have to develop and rely upon its other alternative water resources to meet future water demands. In addition to its Colorado River water resources, SNWA has other current and future water resource options as shown on Table 1 below. The resources listed on this table are those for which SNWA has existing applications, rights or ownership.

Table 1
SNWA Alternative Water Resources

Water Resources	Quantity
Clark County groundwater	30,000 af/y
Arizona demonstration project	80,000 af (estimated diversion amount with return-flow credits
Las Vegas Valley Shallow aquifer	20,000 af
Muddy River	8,000 af/y
Virgin River	113,000 af/y (average annual diversion)
Southern Nevada Groundwater Bank	241,000 af (total available)
Cooperative Water Project Applications	180,000 af/yr (estimated)
Total	**351,000 af/y plus 321,000 af**

Source: SNWA, 2002 (af=acre-feet, af/y=acre-feet per year)

In addition to these existing water resource options, there are a number of other future options that SNWA is pursuing, including Colorado River transfers/marketing, seawater desalinization

exchanges, and Las Vegas Valley stormwater (SNWA, 2002). Some of these options may require additional administrative/legal authorizations and/or technological advances to implement, but have been identified by SNWA as means to meet future demands (SNWA, 2002).

The schedule for the development and recovery of alternative water resources in the future by SNWA under the No Action Alternative is unknown, because it is dependent upon several factors including actual water demands, other available water resources, and conditions on the Colorado River. Under the Interim Surplus Guidelines if there are full surplus conditions on the Colorado River (Lake Mead elevation at or above 1145), SNWA may not need to develop and utilize these alternative water resources until sometime after 2016. However, if there is limited or no surplus water available (Lake Mead elevation at or below 1145), SNWA may need to begin developing and utilizing some of these alternative water resources in the next few years. Use of these alternative water resources instead of Colorado River water would not change SNWA's water demands, which are based upon population forecasts (CBER, 2000). Even with no ICUA being available to SNWA under the No Action Alternative, and if there were no surplus conditions on the Colorado River, the total of these alternative water resources in Table 1, in conjunction with Nevada's Colorado River entitlement, are sufficient to meet SNWA's projected water demands past the year 2050 (SNWA, 2002).

Recovery of some of these alternative water resources would require construction of new diversion, transmission, and treatment facilities. These new facilities could include pipelines, pumping stations, storage reservoirs, and associated facilities to convey Clark County groundwater to the SNWA system, and a pipeline to convey water from the Virgin and Muddy Rivers to southern Nevada. Because SNWA's specific retrieval schedule is not known, a construction schedule and plan for new facilities cannot yet be determined. However, due to the environmental impacts and costs associated with construction of new facilities, SNWA would defer large capital improvement construction to the latest date possible. Although SNWA would first utilize its local resources that require minimal capital construction, these resources are not equivalent to the quantity of ICUA available under the proposed SIRA. Therefore, for the purpose of analyzing environmental effects of the No Action Alternative, construction of a transmission system to convey water from the Muddy and Virgin River has been selected to represent the type of action that may occur for SNWA to continue to meet projected water demands.

Because SNWA has alternative water resources, and use of these resources does not require Reclamation approval, Reclamation believes it is reasonable to conclude that SNWA would continue to meet future water demands in southern Nevada. These projected municipal and industrial water demands have been developed based upon population forecasts for southern Nevada (SNWA, 2002; CBER, 2000). Reclamation believes the projected increases in population would continue to occur under the No Action Alternative.

SNWA's water demand projections have already incorporated reductions due to water conservation. In the early 1990s, SNWA and other Federal, State, and local entities in southern

Nevada began an aggressive water conservation program, utilizing education, incentives, and pricing. To date, a 13.5 percent reduction in use has been achieved due to conservation, and continued reduction is being pursued. SNWA plans to achieve a 25 percent reduction in use from conservation by the year 2010, and a 26.5 percent reduction by the year 2020. These conservation reductions have been assumed and built into SNWA's water demand projections.

B. Proposed Action/Preferred Alternative

Under the Proposed Action/Preferred Alternative, the Secretary, through Reclamation would enter into a SIRA between AWBA, SNWA, and CRCN, under which Colorado River water would be stored offstream in Arizona aquifers creating long-term storage credits for the benefit of Nevada. When Nevada requests stored water in a future year, AWBA will recover and exchange the Long-term Storage Credits with Colorado River water users in Arizona. The Colorado River water users in Arizona who participate in the exchange will reduce their use of Colorado River water, and this reduction in Colorado River water use will develop ICUA which the Secretary will release from Lake Mead for consumptive use within Nevada during the year of recovery. This action is within the authority of the Secretary under the Boulder Canyon Project Act of 1928 (45 Stat. 1057, 43 U.S.C. 617), and the 1964 Supreme Court Opinion and Decree in *Arizona vs. California*, 373 U.S. 546 and 376 U.S. 340 as supplemented and amended, and is in compliance with the Final Rule 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) (Final Rule).

To develop a program of interstate banking of Colorado River water between Arizona and Nevada, three contractual agreements are required: 1) an interstate agreement between Arizona and Nevada identifying the relative rights and responsibilities for the delivery, storage, and recovery of the banked water; 2) an agreement between entities in Arizona regarding future development of the ICUA; and 3) a SIRA between Arizona, Nevada, and the Secretary to govern offstream storage of Colorado River water and the subsequent development and release of ICUA.

AWBA, SNWA, and CRCN have developed the first of these agreements, titled an "Agreement for Interstate Water Banking." This agreement was approved in a public meeting of the Board of Directors of the AWBA on March 21, 2001 and a special joint public meeting of the Boards of Directors of the SNWA and CRCN on June 12, 2001. The second agreement was signed by all parties on July 3, 2001. Under the terms of this agreement, AWBA shall acquire and store Colorado River water in Arizona and thereby create Long-term Storage Credits to be held in a SNWA Interstate Account. AWBA shall recover the Long-term Storage Credits at a later date and exchange the recovered water with other Colorado River water users in Arizona to develop ICUA. Another intrastate agreement, an *Agreement for the Development of Intentionally Created Unused Apportionment,* will be entered into by those Arizona entities, including AWBA and CAWCD, that are necessary to ensure Arizona reduces its consumptive use of Colorado River water in order to develop the ICUA. The third agreement is the SIRA that is the subject of this Federal action. Pursuant to the SIRA the Secretary will verify the storage of water,

creation of Long-term Storage Credits, and that ICUA has been developed, and will release this ICUA for consumptive use within Nevada.

Under the Proposed Action, Arizona would divert and store a portion of its unused basic and/or surplus apportionment, of Colorado River water offstream for interstate purposes in the same manner as described under the No Action Alternative. State of Nevada unused basic and/or surplus apportionment of Colorado River water can also be stored offstream in Arizona for interstate purposes as described in the SIRA. Because Nevada is fully using its basic apportionment, it would not be available for interstate storage purposes in the future. The Proposed Action adds an interstate component to the banking program, as permitted by Arizona law, and SNWA would accrue Long-term Storage Credits associated with the water stored. All Colorado River diversions under the Proposed Action would be pursuant to CAWCD's existing water delivery contract with the Secretary. Stored water would be either unused Colorado River water that is within Arizona's basic or Nevada's or Arizona's surplus apportionment.

As identified in the FPEA for the Final Rule, the interstate agreement between Arizona and Nevada, and the proposed SIRA, SNWA desires to accrue 1.2 million acre-feet (maf) of Long-term Storage Credits. In addition to the 50,000 acre-feet of existing SNWA Long-term Storage Credits from the demonstration project with CAWCD, the total Long-term Storage Credits credited to a SNWA Interstate Account would not exceed 1.25 maf. AWBA has agreed to use its best efforts to place a sufficient volume of water into storage, but realization of this goal may be limited by the amount of unused Colorado River water available and the availability of storage facilities in Arizona after the water needs of Arizona water users are satisfied first. As analyzed in the environmental compliance for the Final Rule and specified in the SIRA, the maximum amount of Long-term Storage Credits that SNWA could accrue each year from storage of Colorado River water or assignment of existing Long-term Storage Credits, is 200,000 af/y. But because the factors limiting diversion and storage under the Proposed Action are the same as for the No Action, the interstate element of Arizona's banking program would not change the total quantity of Colorado River water diverted and stored by Arizona through the AWBA.

The Proposed Action does not require construction of new water diversion, delivery, storage, or treatment facilities in either Arizona or Nevada. The AWBA would use capacity within existing CAP facilities to convey Colorado River water to storage facilities. The water would be stored in storage facilities with excess capacity at which AWBA has already contracted and permitted for storage space. Under Arizona law, AWBA may not own, develop, operate, or construct storage facilities, but can contract to reserve available storage capacity at existing facilities that have been permitted and approved by the State of Arizona. Contracting and permitting for storage facilities follows the process designated by Arizona law. AWBA is required to maintain a Storage Facility Inventory identifying available storage facilities in the State, which is updated a minimum of every 5 years. The latest inventory (1997) was included in the FPEA for the Final Rule. Some of these existing facilities, and other facilities that AWBA contracts with and permits for storage in the future, would be used to store water for Nevada under the proposed SIRA.

AWBA determines annually which storage facilities it will use during development of its Plan of Operation. As part of the development of this plan, AWBA would determine if there is unused storage capacity available for interstate banking. As identified in the interstate agreement between Arizona and Nevada, SNWA will not obtain any ownership rights in specific storage facilities, and no new storage facilities will be constructed specifically to store water for SNWA. Intrastate storage by AWBA is within the purview of the State of Arizona, and is not subject to the Final Rule. Use and development of storage facilities in Arizona will continue to occur regardless of the proposed interstate banking program with Nevada, and will continue to be permitted and approved by the State of Arizona. For these reasons, Reclamation has concluded that use and development of specific storage facilities are not part of the Proposed Federal Action.

In the future, SNWA would utilize ICUA to help meet demands. Use of ICUA instead of SNWA's alternative water resources (Table 1) would not change SNWA's water demands. AWBA would recover the Long-term Storage Credits held in the SNWA Interstate Account, and exchange the recovered water with other Colorado River water users in Arizona to develop ICUA. As identified in the interstate agreement between Arizona and Nevada, the choice of facilities used to recover the Long-term Storage Credits to create the ICUA during any year will be at the discretion of AWBA. This allows consideration of Arizona water management goals, system operational requirements, water quality issues, opportunities for using shared or joint facilities, and opportunities to reduce recovery costs. AWBA would certify to the Secretary the development of the ICUA. Under the proposed SIRA, the Secretary would verify the development of ICUA and then release it for consumptive use within Nevada.

Under Arizona law, the maximum quantity of ICUA that can be developed for interstate use in any given year is 100,000 af/y. The environmental analysis for the Final Rule identified and analyzed retrieval of this maximum quantity of water. The specific retrieval schedule of the ICUA by SNWA in the future is unknown, because it is dependent upon several factors including actual demands, available water resources, and conditions on the Colorado River. Under the Interim Surplus Criteria if there are full surplus conditions on the Colorado River (Lake Mead elevation at or above 1145), SNWA may not need to utilize the ICUA until sometime after 2016. However, if there is limited or no surplus water available (Lake Mead elevation at or below 1145), SNWA may need to begin utilizing some of the ICUA as early as 2006. SNWA estimates the maximum annual retrieval of ICUA would be approximately 79,000 af/y in the year 2025. However, under Arizona law the maximum annual retrieval could be up to 100,000 af/y, which is the quantity used in this EA and analyzed in FPEA and BA for the Final Rule (Reclamation, 1999a). SNWA's estimated schedule for diversion of ICUA for consumptive use in Nevada is provided in Table 2.

No construction of new facilities would be required for the SNWA to recover the ICUA. SNWA would use existing diversion facilities in Lake Mead and/or Laughlin to withdraw the ICUA. These facilities have sufficient capacity to divert the ICUA in addition to Nevada's other Colorado River water entitlements. SNWA's existing water delivery contracts with the Federal government would allow withdrawal of the ICUA. Existing water delivery, storage, and

treatment facilities would be used to distribute the recovered water to SNWA's purveyors.

Because SNWA has alternative water resources, and use of these resources does not require Reclamation approval, Reclamation believes it is reasonable to conclude that SNWA would continue to meet future water demands in southern Nevada. These projected municipal and industrial water demands have been developed based upon population forecasts for southern Nevada (SNWA, 2002; CBER, 2000). Reclamation believes the projected increases in population would continue to occur with or without the Proposed Action.

The proposed SIRA would become effective when executed by all parties and would continue until June 1, 2050, or until termination of the Agreement for Interstate Water Banking, whichever is sooner.

C. Alternatives Considered, But Eliminated from Detailed Analysis

Two other alternatives were considered but eliminated from further analysis, the same as described in the FPEA for the Final Rule (Reclamation, 1999a). The first would be a revision to Arizona law, removing the requirement for Federal involvement in a SIRA. This alternative was eliminated from further analysis because it does not meet the requirements of the purpose and need for action. The second would be banking of water onstream in Lake Mead. This alternative was considered but eliminated because at present it is not practicable or feasible from an operational or economic standpoint.

III. Environmental Impacts

A. No Action Alternative

The following critical elements of the human environment are listed below as required by statutes, regulations, executive and secretarial orders as being either affected or not affected by the No Action Alternative.

Critical Element	Affected		Critical Element	Affected	
	Yes	**No**		**Yes**	**No**
Air Quality	X		Indian Sacred Sites		X
Cultural Resources	X		Indian Trust Assets		X
Environmental Justice		X	T & E Species	X	
Farmlands, Prime/Unique		X	Water Quality	X	
Floodplains	X		Wetlands/Riparian Zones	X	
Hazardous Material		X	Wild & Scenic Rivers		X

If ICUA from the Colorado River were not available, SNWA would first utilize its local resources that require minimal capital construction, including Clark County groundwater, the Las Vegas Valley shallow aquifer, and the Southern Nevada Groundwater Bank. These resources could help meet SNWA's future demands for a short time period, but are not

equivalent to the maximum quantity of ICUA available under the Proposed Action. Therefore, under the No Action Alternative, SNWA would have to accelerate use of its Virgin and Muddy River resources. Because of the two rivers' proximity to one another, capture of these water rights is combined. SNWA would prefer to capture its Virgin and Muddy River water rights by allowing them to flow naturally in their channels into Lake Mead, and take the water through a changed point of diversion at SNWA's existing intakes off Saddle Island in Lake Mead. However, existing contracts and legal interpretations do not currently allow this concept, also called "wheeling." Therefore, construction of facilities to transmit the Virgin and Muddy River water rights to the Las Vegas Valley is considered the most likely scenario for the No Action Alternative.

The facilities necessary to convey SNWA's Virgin and Muddy River water rights to SNWA's service area are still conceptual, since detailed plans and design have not been initiated. SNWA has prepared a feasibility report to identify options for withdrawal and transmission of this water (SNWA, 2001). Assumptions from that feasibility report are used in this EA. It is not the intent of this EA to imply that the preliminary plan presented is the one that will ultimately be proposed for construction, nor is the analysis in this EA a comprehensive analysis of all specific environmental impacts that could occur from construction of this project. This EA only summarizes the environmental impacts that may occur from this project, for purposes of comparison with the Proposed Action. Additional environmental analyses would be required with further phases of project planning for a Virgin and Muddy River water project.

New intakes would be required in the Virgin and Muddy Rivers to withdraw SNWA's water rights. SNWA's permitted point of diversion on the Virgin River is at Halfway Wash, and the presumed diversion on the Muddy River would be south of the town of Glendale. These intakes could be wells located adjacent to the river, to extract groundwater from the saturated alluvial sediments beneath and immediately adjacent to the active river course, or an infiltration gallery (a conduit into which water infiltrates from the overlying or adjacent river). The wells or conduit would deliver water to a storage reservoir or forebay, as the first stage of a pumping facility. An approximate 5-acre site for the pumping facility would be required near the intakes on both rivers. A 42- to 54-inch diameter pipeline would transmit the water to the Las Vegas Valley. A total of about 57 miles of pipe would be required, with a total temporary construction and permanent easement width of about 150 feet. The pipeline would follow existing roads, powerline corridors, and the Interstate-15 corridor into Las Vegas. An additional pumping station would be required along the route to lift the water into the Las Vegas Valley. Water from the Virgin and Muddy Rivers has high levels of minerals and total dissolved solids, and would require treatment to meet potable standards before it could be connected into SNWA's existing water delivery system. An approximately 50-acre site may be required for a treatment facility, which may be sited near the intakes or along the pipeline route. The total construction disturbance is estimated to be about 1,100 acres.

Siting of these facilities would be along existing utility/transportation corridors as much as feasible to minimize environmental impacts, but it is expected that construction activities could result in impacts to: air quality, cultural resources, floodplains, threatened and endangered

species, water quality, and wetlands/riparian zones. Temporary impacts to air quality would occur during construction, but these could be minimized with implementation of dust control measures, use of best available control technology, and other air quality mitigation measures. Cultural resource sites may be affected by construction, however detailed inventories and mitigation of any sites within the construction area would be required prior to initiating construction. Threatened and endangered species and their habitat, including the desert tortoise (*Gopherus agassizii*) and southwestern willow flycatcher (*Empidonax trailii extimus*), and other wildlife species of concern within the construction area may be affected. Floodplains, water quality, and wetlands/riparian zones may also be affected by construction, depending upon the siting of the intakes and intake pumping stations and construction methodology.

Operation of these facilities may also result in impacts to threatened and endangered species, floodplains, water quality, and wetlands/riparian zones. Withdrawal of water from the Virgin and Muddy Rivers would reduce downstream flows, potentially affecting fish species in the rivers, including the endangered Virgin River chub (*Gila robusta seminuda*) and woundfin (*Plagopterus argentissimus*). Vegetation communities along the rivers and the species they support may also be affected. Studies of the Lower Virgin River riparian corridor have identified 24 species of special concern (Federally listed threatened and endangered species and other species of special concern to the State of Nevada) (Bio/West, 2001). The area is also important to migratory birds, which may be affected by a reduction in the amount and structural complexity of the wetlands/riparian vegetation along the rivers. Diversion of water from the rivers may also affect downstream floodplains and water quality, as a reduction in flows affects sediment transport and salinity levels within these drainages.

No adverse impacts are anticipated on Lake Mead or the Colorado River below Hoover Dam from the No Action Alternative.

B. Proposed Action/Preferred Alternative

The following critical elements of the human environment are listed below as required by statutes, regulations, executive and secretarial orders as being either affected or not affected by the Proposed Action. The Proposed Action is the Preferred Alternative.

Critical Element	Affected		Critical Element	Affected	
	Yes	**No**		**Yes**	**No**
Air Quality		X	Indian Sacred Sites		X
Cultural Resources		X	Indian Trust Assets		X
Environmental Justice		X	T & E Species		X
Farmlands, Prime/Unique		X	Water Quality		X
Floodplains		X	Wetlands/Riparian Zones		X
Hazardous Material		X	Wild & Scenic Rivers		X

Under the Proposed Action, there would be no new construction of water diversion, delivery, treatment, or storage facilities, and thus no construction-related environmental impacts are

evaluated in this EA. Because existing facilities will be used in Arizona pursuant to State Law, there would not be a change in environmental conditions subject to NEPA analysis for this action. The Federal action under consideration, execution of a SIRA with Arizona and Nevada, was evaluated in the FPEA and BA for the Final Rule (Reclamation, 1999a). The environmental compliance for the Final Rule evaluated the most likely scenarios for offstream storage and development and release of ICUA, including storing Colorado River water offstream in Arizona for Nevada, and the subsequent development and release of ICUA to Nevada. The Proposed Action is consistent with the storage and retrieval quantities and parameters identified in the environmental compliance for the Final Rule. The following discussion summarizes the environmental issues and impacts from the FPEA and updates and expands upon them as appropriate for the Proposed Action.

1. River Management Environment: Offstream storage of unused Arizona or unused Nevada or Arizona surplus apportionment would not significantly change the distribution or delivery of Colorado River water (Reclamation, 1999a). The Proposed Action would not affect any Colorado River water entitlement holder's right to use its full entitlement, nor cause a change in operating criteria for the Colorado River in the Lower Basin.

The Proposed Action would not affect Reclamation's obligation or ability to meet the requirements of the February 3, 1944 Treaty between the United States and Mexico in terms of both water quantity and water quality. However, offstream storage may include Nevada and/or Arizona surplus apportionment, which could result in a minor reduction in the quantity of flood control releases not including surplus delivery to Mexico. Flood control releases reaching Mexico are in excess of U.S. needs, reflect regional climatic conditions, and are not guaranteed nor a dependable water supply below the international boundary (Reclamation, 1999a). Computer modeling conducted as part of the FPEA and BA for the Final Rule projected that offstream storage of 1.2 maf of water over a 12-year storage period would reduce the average annual quantity of flood control releases available to Mexico by 23 kaf/y from 1999-2015 (Reclamation, 1999a). This is not considered a significant effect on excess flows to Mexico. Recent modeling for Interim Surplus Guidelines for the period 2002-2016 indicate the occurrence of excess flows exceeding 250,000 af in any year is 24.5 percent for baseline conditions (one year in four), and 21.3 percent (one year in five) for the Interim Surplus period. The above probabilities indicate conditions below Morelos Dam would be similar to those presumed to be beneficial and the change in benefits to species and habitat would likely be insignificant (Reclamation 2000:3.16-18). Updated modeling for the IA and IOP also indicates the probability that excess flows to Mexico will exceed 250,000 af differs no more than 1.2 percent between the combined IA and IOP and No Action and is not viewed as an adverse impact to hydrology. Modeling for potential increases in salinity indicates an approximately 1.5 percent increase in salinity at Imperial Dam and would be within the fluctuation observed from month to month. It is assumed that additional salinity control measures would be implemented and water quality objectives would be met. Results of this modeling also indicates that neither the IA nor IOP would have an adverse impact on any federally listed species in Mexico and that impacts to fish and wildlife species within the Mexican Delta and within the Sea of Cortez would be negligible or non-existent (Reclamation 2001:3.12-1 to 32). The Arizona and Nevada

apportionments that could be stored for interstate purposes were included in the modeling for Interim Surplus Guidelines and the IA and IOP actions.

In the FPEA and BA for the Final Rule, Reclamation analyzed the potential effects of offstream storage and development and release of ICUA on water surface elevations in the riverine reaches and reservoirs of the Lower Colorado River (Reclamation, 1999a). Offstream storage of unused Arizona or unused Nevada or Arizona surplus apportionments residing in Lake Mead would be delivered downstream to Lake Havasu for diversion by CAP facilities. This storing action would have the same effect as if Arizona was storing water for intrastate purposes. The effects of Arizona diverting Nevada's unused apportionment for this storing action would be the same as if California diverted the water for its use from Lake Havasu. There would be no change in water surface elevations of Lake Mead or the river reaches between Hoover Dam and Lake Havasu. Storage of a maximum of 200,000 af/y would be equivalent to a maximum of 0.78 foot of water in Lake Mead. This amount of water released from Hoover Dam and delivered downstream to Lake Havasu for storage in Arizona would be equivalent to the following maximum increments of water in the flow column: 0.24 foot below Hoover Dam, 0.34 foot at Willow Beach, and 0.24 foot at Topock Gorge. The storing action will not change or affect the water surface elevations of Lake Mohave or Lake Havasu as their operational levels are controlled. The storing action would be within normal operating ranges for reservoirs and river reaches and there would not be a change from current or projected operations. To develop ICUA in the future, Arizona would reduce its order of Colorado River water by the amount requested by Nevada, and that amount would remain in Lake Mead for diversion by SNWA facilities. Arizona's apportionment is held in Lake Mead for eventual downstream delivery. Since its apportionment resides in Lake Mead, no change in reservoir operation is needed to allow ICUA developed by Arizona to be released by the Secretary for delivery to SNWA. The ICUA portion of Arizona's apportionment would be within reservoir capacity and would be diverted by SNWA or otherwise delivered downstream. Retrieval of the maximum of 100,000 af/y of ICUA, from Lake Mead would be equivalent to 0.05 foot of reservoir water. When an amount of ICUA is diverted by SNWA facilities at Lake Mead, there would be an equivalent decrease in flows below Hoover Dam to Lake Havasu. The corresponding maximum decrease in water surface elevation of the river would be a 0.12 foot below Hoover Dam, 0.17 foot at Willow Beach, and 0.12 foot at Topock Gorge. The action of retrieving ICUA will not change or affect the water surface elevations of Lake Mohave or Lake Havasu as their operational levels are controlled. This action would be within normal operating ranges for reservoirs and river reaches. Neither the small increment of water in Lake Mead nor the decreases in water surface elevations below Hoover Dam are adverse impacts on the environment (Reclamation, 1999a).

2. Biological Environment: Reclamation prepared a BA and consulted with the Service as part of the environmental compliance for the Final Rule (Reclamation, 1999a; Appendix C). The Proposed Action is consistent with Scenarios 1, 2 and 3 as described and evaluated in the Biological Assessment. Reclamation concluded that the identified Scenarios:

- Will have "no effect" on the American peregrine falcon, bald eagle, desert tortoise, flat-tailed horned lizard, brown pelican, and Colorado squawfish;

- "is not likely to adversely effect" the razorback sucker, bonytail chub, Yuma clapper rail, or southwestern willow flycatcher. Effects on these species are expected to be discountable or insignificant and a take of the species is not expected to occur; and

- Will "not adversely modify" critical habitat for the razorback sucker and bonytail chub in the Lower Colorado River.

Reclamation also determined that the storage and retrieval scenarios would not inhibit or diminish Reclamation's ability to implement the provisions and terms and conditions of the Biological and Conference Opinion on Lower Colorado River Operations and Maintenance, nor have any effect on the efforts by the LCR-MSCP or others to obtain water for fish and wildlife. Reclamation agreed to accelerate conservation efforts for the bonytail chub and manage flood control releases to provide freshening flows through Service refuges. The Service concurred with Reclamation's determinations of effect during informal consultation for the Final Rule concluded on August 19, 1998 (Appendix C of Reclamation, 1999a).

Reclamation sent a memorandum on August 1, 2001 notifying the Service that the Proposed Action/Preferred Alternative is consistent with the previously evaluated Scenarios; that no additional impacts on threatened and endangered species would occur; and no further consultation was necessary (Attachment 1). The estimated recovery period for ICUA has shifted into the future from that originally analyzed in the BA and consultation. As a result, the future recovery of ICUA, beginning in 2017, has been included as a covered action in the LCR-MSCP consultation as requested by the Service in addition to being analyzed in the BA. The future diversion schedules are also analyzed in the EISs for ISG and the IA.

Reclamation also consulted with the National Marine Fisheries Service, Southwest Region by letter dated June 22, 1998. Since the United States has no authority (or discretion) regarding the flow of water to the Colorado River delta, a section 7 consultation on the potential effects of its lower Colorado River operations and maintenance on the endangered Totoaba was not required. Likewise, because actions under the proposed Rule will not change the delivery of treaty water to Mexico, Reclamation determined that section 7 consultation on the Totoaba was not required on the proposed Rule nor for this SIRA. This consultation included the BA analyzing the effects from the most likely storage and retrieval scenarios (Reclamation, 1999a)

3. Human Environment: The FPEA for the Final Rule evaluated potential effects on Indian Trust Assets (Reclamation, 1999a). The Proposed Action would utilize unused water that is within Arizona's basic apportionment or unused Arizona or Nevada surplus water. As specified in the draft SIRA, this water can be stored for Nevada only after it has first been offered to all entitlement holders within Arizona, who have the opportunity to divert their maximum entitlement for beneficial use. As a result, the Proposed Action would have no adverse effect on water rights of entitlement holders, including Indian Tribes. Tribal lands that may be located near offstream storage facilities in Arizona may temporarily benefit from higher groundwater levels associated with the underground storage, until the stored water is used in the

future during development of the ICUA. Arizona has committed to affording Tribes, as well as other entities in Arizona, an opportunity to participate in future development of ICUA. Reclamation has determined that the Proposed Action would have no impact on trust resources and assets, including Indian Tribes.

Consultations with the State Historic Preservation Officers (SHPOs) of Arizona, Nevada, and California was undertaken as part of the FPEA for the Final Rule (Reclamation, 1999a). Reclamation determined that the Final Rule would have "no effect" on historic properties, but agreed to reinitiate the consultation process for individual SIRAs.

An updated consultation with the Nevada SHPO was submitted on March 7, 2002 for the proposed action. No new ground disturbance, facilities, or modifications to existing facilities, are required to implement the Proposed Action. Because alternate sources of water are available for SNWA to meet its projected demands, and the consumptive use of ICUA by SNWA would become part of their general water supply and not dedicated to any specific development or location in their service area, the Proposed Action would not have growth-related impacts on cultural resources in the SNWA service area and thus is not an indirect affect of this undertaking. The very small decreases in river elevations below Hoover Dam during retrieval of ICUA are within the normal operating range for the river reaches. No historic properties remain within this operating zone that have integrity nor meet criteria for nomination to the National Register of Historic Places. For these reasons, Reclamation made the following determination of affect for this undertaking; "No potential to cause effects" [If the undertaking is a type of activity that does not have the potential to cause effects on historic properties, assuming such historic properties were present, the agency official has no further obligations under section 106, Subpart B, Section 800.3(a)(1)] and/or there are "no historic properties affected." The Nevada SHPO requested additional information on Reclamation's efforts to identify historic properties in the area of potential effect by letter dated March 26, 2002. Reclamation responded with the requested information by letter dated April 24, 2002. With this supporting information the Nevada SHPO concurred with our determination that historic properties will not be affected by the proposed undertaking (letter dated May 8, 2002). These consultation letters are included in Attachment 2.

Reclamation did not reinitiate consultation with the Arizona SHPO as existing facilities would be used and thus there was no potential to cause effects on historic properties. Consultation with the California SHPO was not reinitiated as there was no potential to cause effects on historic properties nor was California a party to this SIRA.

C. Indirect and Cumulative Impacts

SNWA has existing alternative water resources that could be developed and used to meet its projected water demands, and growth in Clark County would continue to occur in the absence of the Proposed Action (the provision and consumptive use of ICUA). Federal, State of Nevada, and local agencies have prepared numerous planning and compliance documents that address growth related impacts in the County consistent with the Clark County Comprehensive Plan. In addition, the Clark County Multiple Species Habitat Conservation Plan and Final EIS issued in

September 2000 addresses effects to natural habitats and species of concern residing within the County that could be affected by economic growth and development.

The LCR-MSCP is being developed to mitigate direct, indirect and cumulative effects on resources of the lower Colorado River from current and future river operations. The Proposed Action taken together with past, present and future Lower Colorado River initiatives, as identified in Chapter I. C, will result in the more efficient use of existing apportionments and resolve common water resource problems and demands that are addressed in the Interim Surplus Criteria (Reclamation, 2000; 2001), the Implementation Agreement (Reclamation, 2002), and developing LCR-MSCP. The cumulative impact of these River initiatives is believed to be positive in making better use of existing apportionments, reducing consumptive uses to basic apportionments in normal years, and protecting the environment by restoring habitat for species.

IV. Environmental Commitments

Reclamation identified environmental commitments in the FPEA (Appendix G) and FONSI for the Final Rule (Reclamation, 1999a). The SIRA and this EA, with supporting consultations, are in conformance with and satisfy those commitments. No new environmental commitments are proposed for this action. The following environmental commitments from the FPEA and FONSI are brought forward as they pertain to this SIRA. The commitments for threatened and endangered species were predicated upon the implementation of a SIRA as the Rule only established a procedural framework for development of voluntary interstate agreements. The dates for the accomplishment of native fish conservation efforts are also dependent on implementation of a SIRA. Some of the native fish conservation efforts may have already been accomplished as part of other programs and this commitment will be further reviewed for its appropriateness.

A. General

1. All costs incurred by the United States in evaluating, processing, and/or executing a SIRA must be funded in advance by the entities which are a party to that agreement.

B. Threatened and Endangered Species

1. Reclamation will accelerate conservation efforts for the bonytail chub. Provision 1, of the RPA for Lower Colorado River Operations requires that once efforts to grow-out 50,000 razorback suckers in facilities on the Colorado River Indian Tribe (CRIT) reservation have finished, the ponds will be used to rear Bonytail chubs (bonytails) for reintroduction below Parker Dam (providing the Service gains approval to reintroduce bonytails below Parker Dam). To accelerate conservation efforts for bonytails, Reclamation will immediately begin to work with the Service and the CRIT, to implement several actions. By spring 1999, two additional 3-acre CRIT ponds will be renovated and stocked with bonytails produced at the Service's Dexter, New Mexico facility. Reclamation will also work with the Service to explore the feasibility of

initiating additional rearing at the Service's Willow Beach Hatchery, Arizona. By early 2000, several additional 1/4 to 1-acre CRIT ponds will be renovated to continue growing out of bonytail chubs. Coordination will be initiated with the Lake Mohave Native Fish Work Group to capture wild bonytails in spring 1999 to provide any needed augmentation of existing bonytail brood stock at Dexter. These efforts will expedite conservation work on bonytails by several years.

2. Reclamation will improve the habitat along the lower Colorado River through management of required flood control releases from Hoover Dam to provide freshening flows through Service refuges or other suitable areas to benefit existing southwestern willow flycatcher habitat and backwater habitats for endangered fish. This action will be developed in consultation with Colorado River stakeholders and consistent with Corps of Engineers flood control criteria. The idea is for Reclamation to make minor adjustments within its existing operating criteria that will allow the release of flows in a manner that will improve conditions for sustaining an existing habitat. In addition, Reclamation will also explore, in consultation with the Service and other Colorado River Stakeholders, the potential biological benefit and feasibility of providing water in years of surplus determinations to Service refuges or other suitable areas below Hoover Dam.

C. Indian Trust Assets

1. Reclamation will work with authorized entities and the Lower Division States banking Colorado River water to ensure that offstream storage of Colorado River water and development and release of ICUA pursuant to the Rule does not adversely impact local tribal water rights.

V. Consultation and Coordination

A. Persons/Agencies Consulted

The following persons or agencies were consulted during preparation of this EA:

Arizona Water Banking Authority
Central Arizona Water Conservation District
Colorado River Commission of Nevada
International Boundary and Water Commission, United States and Mexican Sections
Nevada State Historic Preservation Office
Southern Nevada Water Authority
U.S. Fish and Wildlife Service

Reclamation consulted with the International Boundary and Water Commission, United States and Mexican Sections, at a meeting in El Paso, Texas, on May 14, 2002. Actions under the SIRA were described and analyses in the EA were discussed. Questions were answered on Colorado River operations relating to potential affects on Reclamation's obligation or ability to

meet the requirements of the February 3, 1944 Treaty between the United States and Mexico in terms of both water quantity and quality. Questions also addressed the content of the FPEA and Rule.

B. Public Notice/Involvement

A notice of Reclamation's intent to enter into a SIRA with CRCN, SNWA and AWBA to store Colorado River water offstream in Arizona aquifers for the benefit of Nevada was published in the Arizona Republic and the Las Vegas Review Journal on February 18, 20, and 22, 2002, and in the Los Angeles Times on February 21, 23, and 25, 2002. The legal notice publicized the availability of the draft SIRA and a draft EA, indicated where copies of the documents could be obtained, and identified the duration of the public comment period. Public review of the draft EA was coincident with review of the draft SIRA. The comment period began on February 22, 2002 and ended on March 25, 2002. These documents were also published on Reclamation's Lower Colorado Region web site.

C. Public Review of the Draft EA

Three comment letters were received on the DEA and SIRA during the public comment period and a fourth comment letter was received after the close of the comment period. Reclamation has provided responses to substantive comments in the four letters received. (Attachment 3, Comments and Responses). These comments resulted in minor editorial changes, clarifications, additions, and adoption of specific terms and/or concepts in the SIRA. The comments did not provide significant new information, a new alternative, result in changes to the proposed action or selection of the Preferred Alternative, nor raise any significant issues that would require the DEA to be reissued.

VI. List of Preparers

David A. Curtis, Bureau of Reclamation, Environmental Specialist/Reality Specialist
James P. Green, Bureau of Reclamation, Environmental Compliance Team Leader
Lisa Luptowitz, SNWA, Environmental Planner

VII. References

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_____, 2000b. Clark County Multiple Species Habitat Conservation Plan Record of Decision for Clark County Multiple Species Habitat Conservation Plan and Environmental Impact Statement. November 22, 2000. Michael J. Spear, Manager, California-Nevada Operations Office, U.S. Fish and Wildlife Service.

_____, 2001. Clark County Multiple Species Habitat Conservation Plan Incidental Take Permit No. TE034927-0. January 9, 2001. Michael J. Spear, Manager, California-Nevada Operations Office, U.S. Fish and Wildlife Service.

SNWA's Estimated Schedule for Diversion of Intentionally Created Unused Apportionment (ICUA)

The diversion of ICUA will depend upon SNWA demands, available water resources, and conditions on the Colorado River. The following is SNWA's probable diversion schedule, which assumes surplus conditions under the Colorado River Interim Surplus Criteria (Lake Mead elevation above 1145) and all demands being met through the end of the Interim Surplus Criteria period in 2016.

Year	Projected Demand (kafy)	Estimated Diversion (kafy)
2017	344	44
2018	348	48
2019	352	52
2020	357	57
2021	361	61
2022	366	66
2023	370	70
2024	374	74
2025	379	79
2026	375	75
2027	371	71
2028	375	75
2029	378	78
2030	381	60
2031	386	60
2032	390	60
2033	394	40
2034	398	40
2035	402	40
2036	406	40
2037	411	10
	Total	1200

kafy: thousand acre-feet per year

Note: Agreements with Arizona stipulate that once the stored water in Arizona is between 400,000 and 200,000 acre-feet, Nevada will only withdraw 60,000 afy; once the stored water is below 200,000 acre-feet, Nevada will limit withdrawals to 40,000 afy.

United States Department of the Interior

BUREAU OF RECLAMATION
Boulder Canyon Operations Office
P.O. Box 61470
Boulder City, NV 89006-1470

IN REPLY REFER TO:
LC-2506
ENV-7.00

AUG 0 1 2001

MEMORANDUM

To: Fish and Wildlife Service, 23 West Royal Palm Road, Suite 103
Phoenix AZ 85021-4951, Attention: Mr. David Harlow, Field Supervisor

From: ACTING William E. Rinne
Area Manager

Subject: Storage and Interstate Release Agreement Under The Final Rule at 43 CFR Part 414, Offstream Storage of Colorado River Water and Development and Release of Intentionally Created Unused Apportionment in the Lower Division States Between Reclamation, Arizona, and Nevada. (File No. AESO/SE 98090, August 19, 1998).

The Bureau of Reclamation (Reclamation) is participating in the development of a Storage and Interstate Release Agreement (SIRA) with Arizona and Nevada entities pursuant to the Final Rule published on November 1, 1999, in the Federal Register (Vol. 64, No. 210, Pg. 58986). Participating parties in this SIRA are Reclamation, the Arizona Water Banking Authority, the Southern Nevada Water Authority (SNWA), and the Colorado River Commission of Nevada. The Final Rule provides a procedural framework for the Secretary of the Interior (Secretary) to follow in considering, participating in, and administering a SIRA among the States of Arizona, California, and Nevada. A SIRA will permit State-authorized entities to store Colorado River water offstream, develop intentionally created unused apportionment (ICUA), and make ICUA available to the Secretary for release for use in another Lower Division State.

Previous Consultation With the Service: Conformance With Operational Parameters and Most Likely Action Scenarios Analyzed in the Biological Assessment

Reclamation initiated informal consultation with the Fish and Wildlife Service (Service) by memorandum and biological assessment (BA) dated June 5, 1998, for the proposed Rule for Offstream Storage of Colorado River Water. The BA assessed the potential effects on listed species and critical habitat for six most likely potential interstate storage agreement action scenarios. Reclamation's memorandum sought concurrence from the Service on a finding of "is not likely to adversely affect" for listed species and designated critical habitat in the action area. The June 5, 1998, memorandum also identified a number of constraints and/or commitments that would apply to the review and approval of all SIRA developed pursuant to the Final Rule.

Subsequent informal discussions with the Service resulted in Reclamation's memorandum of August 14, 1998, which proposed two modifications to the proposed action that addressed concerns for the recovery of listed species and their habitats in the action area. With acceptance of the two modifications/measures, to offset potential impacts of the proposed Rule and improve the status of listed species, the Service concurred with Reclamation's finding of "is not likely to adversely affect" for listed species or critical habitat from the project as described for the six most likely action scenarios analyzed in the BA (Memorandum dated August 19, 1998).

Reclamation committed to consult with the Service when a SIRA was in preparation and specific details of the SIRA were known. We have reviewed the proposed SIRA and conclude that it is consistent with the operational parameters and storage/retrieval actions described in scenarios one, two and three that were evaluated in the BA.

SNWA's proposed diversion schedule for ICUA has changed from that identified and analyzed in the BA. The release of a quantity of ICUA for consumptive use within the State of Nevada and diversion by SNWA from Lake Mead will depend upon SNWA demands, available water resources, and conditions on the Colorado River. SNWA's most probable diversion schedule assumes that demands would be met through basic and surplus supplies of Colorado River water through the end of the Interim Surplus Criteria period (2016) as presented in Table 1. Under this proposed agreement, diversion of ICUA would begin in year 2017 and continue through year 2037 (21 years). In addition, in any year during this period that a surplus condition or a flood control operation is included in the Annual Operating Plan for the Colorado River, ICUA would not be requested. The most probable diversion schedule approximates a bell shaped curve and ramps up gradually to a maximum annual diversion amount of 79 thousand acre-feet per year (kaf/yr) in year 2025, remains at or below this level for 5 years, and subsequently declines to about 10 kaf/yr in 2037. The maximum diversion of 79 kaf/yr is less than the 88 kaf/yr evaluated in the BA (see Table 3). Because the recovery period has shifted into the future ICUA will be included as a covered action in the Multi-Species Conservation Program (MSCP).

In summary, we conclude that no further consultation is necessary because this SIRA is consistent with the scenarios included in our previous consultation with your office for the Offstream Storage Rule and because the diversion period (2017-2037) will be included as a covered action under the MSCP. This satisfies our commitment to consult with and notify you as agreed in our informal consultation and documented in your concurrence with our findings in your Memorandum of August 19, 1998.

Attachment

cc: Ms. Nancy Kaufman, Regional Director, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103

bc: LC-1000, LC-2506, BCOO-1000,

BCOO-4000 Chrono Daily WBR:JGreen:tj:7/30/01:293-8519
t:\ltr\4000\1000\2001\SIRAS7no5.wpd

Table 1.

SNWA's Estimated Schedule for Diversion of Intentionally Created Unused Apportionment (ICUA)

The diversion of ICUA will depend upon SNWA demands, available water resources, and conditions on the Colorado River. The following is SNWA's probable diversion schedule, which assumes surplus conditions under the Colorado River Interim Surplus Criteria (Lake Mead elevation above 1145) and all demands being met through the end of the Interim Surplus Criteria period in 2016.

Year	Projected Demand (kafy)	Estimated Diversion (kafy)
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kafy: thousand acre-feet per year

Note: Agreements with Arizona stipulate that once the stored water in Arizona is between 400,000 and 200,000 acre-feet, Nevada will only withdraw 60,000 afy; once the stored water is below 200,000 acre-feet, Nevada will limit withdrawals to 40,000 afy.

United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

IN REPLY REFER TO
LC-2530
ENV-3.00

MAR 07 2002

Mr. Ronald James
State Historic Preservation Officer
Capitol Complex
100 North Stewart Street
Carson City NV 89701-4258

Subject: Section 106 Consultation on a Storage and Interstate Release Agreement Under the Final Rule at 43 CFR Part 414, for Offstream Storage of Colorado River Water and Development and Release of Intentionally Created Unused Apportionment in the Lower Division States Among the Bureau of Reclamation, State of Arizona, and State of Nevada

Dear Mr. James:

Reclamation is participating in the development of a Storage and Interstate Release Agreement (SIRA) with Arizona and Nevada entities pursuant to the Final Rule published on November 1, 1999, in the Federal Register (Vol. 64, No. 210, Pg. 58986). The Final Rule provides a procedural framework for the Secretary of the Interior (Secretary) to follow in considering, participating in, and administering a SIRA among the Lower Division States of Arizona, California, and Nevada. A SIRA will permit State-authorized entities to store Colorado River water offstream, develop intentionally created unused apportionment (ICUA) and make ICUA available to the Secretary for release for use in another Lower Division state.

Reclamation, acting for the Secretary, has the authority to enter into a SIRA and release ICUA for use in Nevada pursuant to various Federal laws and executive orders, court decisions, and decrees, particularly the Boulder Canyon Project Act of December 21, 1928, the Supreme Court opinion rendered June 3, 1963 (373 U.S. 546), and the decree entered March 9, 1964 (376 U.S. 340), in *Arizona v. California,* as supplemented and amended.

Reclamation consulted with your office by letter dated April 6, 1998, requesting concurrence with a determination of "no effect" on historic properties for the rule making. By letter dated April 16, 1998 your office concurred with Reclamation's determination of "no effect" on historic properties. Your letter stated that when specific agreements between the states are drafted, the effects of water transfer on lake and river levels should be assessed.

The Undertaking

Reclamation intends to enter into a SIRA with the Arizona Water Banking Authority (AWBA), Southern Nevada Water Authority (SNWA) and the Colorado River Commission of Nevada (CRCN), under which Colorado River water would be stored offstream in Arizona aquifers for the benefit of Nevada. When Nevada requests stored water, AWBA will recover and exchange the stored water with Colorado River water users in Arizona. The Colorado River water users in Arizona who participate in the exchange will reduce their use of Colorado River water, which the United States will release as ICUA at Lake Mead for diversion and use within Nevada during the year of recovery.

Background

The participating parties in the SIRA are Reclamation, the AWBA, the SNWA, and the CRCN. The draft SIRA describes how the State of Arizona acting through the AWBA will store Colorado River Water in their aquifers consistent with state laws for the benefit of Nevada entities. The Nevada entities would pay for this service. Water available for storage under the SIRA will be diverted from the Colorado River and will be within either Arizona's or Nevada's unused basic or surplus apportionment of Colorado River Water. The Central Arizona Water Conservation District will divert Colorado River Water via the existing Central Arizona Project and deliver this water to existing permitted storage facilities in central Arizona. The Nevada entities would develop long term storage credits (LTSC) as part of their ground water storage bank account that would be called upon in future years. When the SNWA has a need to draw upon their account of LTSC, they would make a request to the AWBA to recover the water stored in storage facilities and convert the LTSC to ICUA. The ICUA would become "wet" water in Lake Mead, be diverted by SNWA facilities, and become part of their general Colorado River water supply for use in the Las Vegas Valley and Clark County, Nevada. The SNWA already has water stored in Arizona for their benefit under a pilot program that will be added to their LTSC account managed by the AWBA. At present it is estimated that Nevada will not need to request to withdraw a portion of their LTSC for conversion into ICUA until sometime after year 2016.

Area of Potential Effects

The Area of Potential Effects (APE) is the geographic area in which the undertaking may directly or indirectly cause alterations in the character or use of historic properties. The APE includes the following areas:

1. The normal operating ranges in Lake Mead (i.e., for Lake Mead, from the maximum pool elevation of 1229 feet above mean sea level (msl) to the minimum water surface elevation for effective power generation of 1083 feet msl) and Lakes Mohave and Havasu; the river reaches between these reservoirs on the Lower Colorado River (i.e., maximum flood stage elevation to minimum flow channel).

2. Areas of existing diversion, conveyance, and groundwater storage facilities in central Arizona.

3. Areas of existing diversion, conveyance, and distribution systems in Clark County, Nevada served by the SNWA.

Assessment of Affects

Reclamation believes this undertaking is not the type of activity that has the potential to cause effects on historic properties for the following reasons:

1. This action utilizes existing Colorado River water apportionments under contract from the Secretary to simply move existing water supplies around for better efficiency and use.

2. No new facilities or modifications of existing facilities are needed to deliver, divert, convey or store the Colorado River water used for this undertaking. There is no change to the function of any of these facilities.

3. Reclamation has determined there are no historic properties meeting National Register criteria remaining within the operational zones of the Lake Mead-to-Lake Havasu portion of the APE.

4. At present, Nevada is fully using its basic apportionment of Colorado River water, so the water that could be stored would be either Nevada's unused surplus apportionment or Arizona's unused basic or surplus apportionment. There would be no change to operations in the Lake Mead to Lake Havasu portion of the APE for the ***storage action*** of storing up to a maximum of 200,000 acre-feet per year (af/yr) for this undertaking. Colorado River water would be delivered downstream to Arizona in the same manner as it would without the undertaking.

When Nevada requests ICUA, this ***retrieval action*** from Lake Mead by the SNWA, of up to a maximum of 100,000 af/yr, does not require any operational change for Lake Mead. This maximum amount would be equivalent to 0.05 foot of reservoir water. When up to 100,000 af/yr of ICUA is released by the Secretary from Lake Mead for diversion by the SNWA, there would be an equivalent decrease in flows below Hoover Dam to Lake Havasu. The corresponding maximum decrease in water surface elevation of the river would be 0.12 foot below Hoover Dam, 0.17 foot at Willow Beach, and 0.12 foot at Topock Gorge. The ***retrieval action*** will not change or affect the water surface elevations of Lake Mohave or Lake Havasu as their operational levels are controlled. The ***storing*** and ***retrieving actions*** that will be within normal operating ranges for reservoirs and river reaches do not require any change in function or modification of existing facilities, and are not of the type that would affect historic properties if present. Reclamation believes there are no historic properties meeting National Register criteria in the noted operational zones (see No. 3 above).

5. The release of ICUA by the Secretary for diversion and use by the SNWA within their service area utilizes existing diversion and conveyance facilities. An estimated retrieval schedule indicates a maximum of 79,000 af/yr could be diverted and become part of the SNWA's general water supply, and is not dedicated to any specific development or location in their service area. The potential use of ICUA is consistent with local master planning, is not considered growth inducing, and thus is not an indirect affect of this undertaking.

Native American Consultation

Extensive Native American consultation has taken place as part of the Rule making process and preparation of the Rule and Final Programmatic Environmental Assessment (FPEA). The analysis in the FPEA was for the most likely storage and retrieval scenarios associated with a SIRA between Arizona and Nevada. This is documented in Appendix H of the FPEA (comments and responses). Based on comments from Tribes, and Reclamation's responses, there are no affects on Tribal resources or other interests. Public noticing of the SIRA and supporting Draft Environmental Assessment (DEA) requests comments from the public, agencies, and interested parties. Reclamation will address any comments and respond as part of the review of the draft SIRA and DEA.

Request For Concurrence

Reclamation requests your concurrence with our determination that this undertaking is not of the type that has the potential to cause effects on historic properties and/or there are "no historic properties affected." If Reclamation does not receive an objection to this determination of affect within 30 days of receipt of this consultation request, we will assume concurrence with our determination and that the agency official's responsibilities under section 106 are fulfilled.

If you have any questions concerning this submission, please contact me at 702-293-8519.

Sincerely,

JAMES P GREEN

James P. Green, Team Leader
Environmental Compliance and Realty Group

Enclosures
Draft Storage and Interstate Release Agreement
Draft Environmental Assessment
Final Rule and FPEA for Offstream Storage of Colorado River Water and Development and Release of ICUA in the Lower Division States

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STATE OF NEVADA
DEPARTMENT OF CULTURAL AFFAIRS
Nevada State Historic Preservation Office
100 N. Stewart Street
Carson City, Nevada 89701

KENNY C. GUINN
Governor

SCOTT K. SISCO
Interim Director

RONALD M. JAMES
State Historic Preservation Officer

March 26, 2002

James Green
Regional Environmental Officer
Bureau of Reclamation
Lower Colorado Regional Office
P.O. Box 61470
Boulder City NV 89006-1470

RE: Storage and Interstate Release Agreement Under the Final Rule at 43 CFR Part 414, for Offstream Storage of Colorado River Water and Development and Release of Intentionally Created Unused Apportionment in the Lower Division States Among the Bureau of Reclamation, State of Arizona, and the State of Nevada.

Dear Mr. Green:

The Nevada State Historic Preservation Office (SHPO) reviewed the proposed undertaking.

The Bureau of Reclamation determined that no historic properties exist within the operational zones of the Lake Mead-to-Lake Havasu portion of the area of potential effect (APE) (Item 3, page 3). Your letter does not state what efforts the Bureau of Reclamation has made to identify historic properties within this portion of the APE. In order for this office to comment on the Bureau of Reclamation's determination of project effect, the SHPO requests that agency provide a description of its identification efforts.

In preparing a reply to this letter, the SHPO reminds the Bureau of Reclamation that the agency should not emphasize the significance of archaeological and architectural resources that might have been affected by alterations to the existing water levels to the exclusion of resources that could be of religious or cultural significance but contain no archaeological or architectural materials. The SHPO could find no evidence that the federal agency specifically requested information about the undertaking's potential to affect historic properties of religious or cultural significance from the tribal representatives that were consulted.

If you have any questions concerning this correspondence, please feel free to call Rebecca Lynn Palmer at (775) 684-3443 or by E-mail at rlpalmer@clan.lib.nv.us.

Sincerely,

Alice M Baldrica

Alice M. Baldrica, Deputy
State Historic Preservation Officer

MR OFFICIAL OFFICE COPY		
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United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

IN REPLY REFER TO:

LC-2541
ENV-3.00

APR 24 2002

Ms. Alice Baldrica
Deputy
State Historic Preservation Officer
Nevada State Historic Preservation Office
Capitol Complex
100 North Stewart Street
Carson City NV 89701

Subject: Bureau of Reclamation Identification Efforts Along the Reach of the Lower Colorado River Between Lake Mead and Lake Havasu in Support of the Storage and Interstate Release Agreement for Offstream Storage of Colorado River Water (LC-NV-02-08 [N])

Dear Ms. Baldrica:

In response to your letter dated March 26, 2002, requesting additional information concerning Reclamation efforts to identify historic properties along the reach of the Colorado River between Lake Mead and Lake Havasu, we offer the following.

In 2000 as a part of its effort to identify historic properties that might be affected by implementation of the Lower Colorado River Multi-Species Conservation Program (LCR MSCP), Reclamation awarded a contract to Archaeological Consulting Services (ACS), Inc., in Tempe, Arizona, for a Class I inventory covering the reach of the Colorado River from Separation Canyon in Grand Canyon to the Southerly International Border (SIB). The area of potential effect (APE) of the LCR MSCP includes a considerable portion of the historic floodplain of the Colorado River where habitat restoration and conservation activities would most likely be implemented over the next 50 years, and all of the area encompassed by Lakes Mead, Mohave, and Havasu, including an area one mile wide extending from the maximum pool elevational contour around Lake Mead, and a one-quarter mile wide area extending from the maximum pool elevational contours around Lakes Mohave and Havasu. As defined in our original submission to your office dated March 7, 2002, the APE for the Storage and Interstate Release Agreement for Offstream Storage of Colorado River Water (hereafter referred to as the Offstream Storage Program), comprises the normal operating ranges in Lake Mead (i.e., the area between the maximum pool elevation of 1,229 feet above mean sea level [msl] and the minimum water surface elevation for effective power generation of 1,083 feet msl), and Lakes Mohave and Havasu; the reaches of the Colorado River between these reservoirs

(i.e., maximum flood stage elevation to minimum flow channel elevation); areas of existing diversion, conveyance, and groundwater facilities in Arizona; and areas of existing diversion, conveyance, and distribution facilities in Clark County, Nevada, served by the Southern Nevada Water Authority. Thus, with the exception of existing diversion, conveyance, distribution, and storage facilities in Arizona and Nevada (none of which will be altered as a part of the Offstream Storage Program), the APE for the Offstream Storage Program is encompassed in its entirety by the APE for the LCR MSCP.

As a part of the Class I inventory for the LCR MSCP, ACS reviewed site and project records on file at the following agencies and repositories: Reclamation's Lower Colorado Regional Office (LCRO); the National Park Service's (NPS) Western Area Conservation Center (WACC) in Tucson; the Harry Reid Center at the University of Nevada Las Vegas; the Arizona State Museum and Arizona State Historic Preservation Office; and Information Centers in California holding records for Riverside, San Bernadino, and Imperial counties. ACS also examined Government Land Office township survey plats at state offices of the Bureau of Land Management (BLM) in Arizona, California, and Nevada, and contacted cultural resources program staff at Lake Mead National Recreation Area (LMNRA), and local offices of the BLM and the U.S. Fish and Wildlife Service to determine if they had information on sites and projects that may not have made it into state repository files. Unfortunately, the draft Class I inventory report for the LCR MSCP (Clark et al, n.d.; references cited list enclosed), is undergoing substantial revision, so is unavailable for distribution at this time.

Taking into consideration the scope and potential effects of the undertaking, Reclamation determined the appropriate level of identification effort for the Offstream Storage Program should consist of a Class I inventory. A decision was made to utilize the draft LCR MSCP Class I inventory report as the primary source for information to be employed in the Offstream Storage Program analysis, as the APEs overlap and the information contained in that report is still reasonably current. Information concerning cultural resources in the Offtream Storage Program APE presented in this letter, then, has been extracted from site and project distribution maps, and site forms accompanying the draft LCR MSCP Class I inventory report. Additional information was obtained through examination of other reports, maps, site forms and project files housed at Reclamation's LCRO.

Literally hundreds of archaeological and historic sites have been recorded in the vicinity of the lakes and along the reach of the lower Colorado River between Separation Canyon in Grand Canyon and the SIB. We have enclosed a list of sites known to have been inundated by Lake Mead, that appear to be located wholly or partially in the operational zone of the reservoir. Virtually all of the sites on the list are located in the Overton Arm of the lake, and were recorded during the 1920s and 1930s by Mark Harrington and Civilian Conservation Corps (CCC) crews. Please note that many of these sites were partially or completely excavated prior to inundation (e.g., Harrington 1925, 1926, 1927, 1937; Shutler 1961; CCC site and excavation records on file at WACC and Reclamation's LCRO). We are also enclosing a list of sites that appear from the records to be partially or wholly located in the operational zone of Lake Mohave. The majority of these sites were recorded by Baldwin (1943, 1948) prior to construction of Davis Dam.

That any site or portion of a site located within the operational zones of Lakes Mead and Mohave would retain sufficient integrity to be considered eligible for listing on the National Register, individually or as a contributing element to a larger site, is questionable, given the results of various inundation studies conducted by the NPS and the U.S. Army Corps of Engineers (COE; e.g., Dunn 1996; Lenihan et al.1981; Ware 1989). Taken together the results of these studies suggest cultural resources located within the operational zones of reservoirs are subject to substantial impact from wave action caused by wind and power boats. Wave action removes the fine silty fraction of the soil matrix to deep water and transports the heavy fraction to an offshore shoal. In reservoirs with fluctuating pool levels (like Lakes Mead and Mohave), the offshore shoals are themselves eroded which allows waves to continue to erode the shoreline, the result being that the shoreline never achieves a stable profile (U.S. Army Corps of Engineers, Nashville District 2001).

Reclamation cultural resource program personnel are aware of at least two sites on the enclosed list for Lake Mead (Salt Cave and the Main Ridge locality at Lost City near Overton), and several other sites on the list for Lake Mohave, which have been relocated and their condition assessed in recent years. Conditions observed on these sites are well in line with the general conclusions of the NPS and COE inundation studies, and are summarized below.

Salt Cave (26CK6) seems to have been located almost entirely within the upper levels of the operational zone of Lake Mead. In 1982, WACC personnel paid a brief visit to the site and reported it to be "marked by sinkholes, heavy erosion, and slumping of soil structures." The area at the lake edge had been "severely degraded and deflated," and all artifacts observed were "in secondary context, and [were] clustered through erosional processes and wave sorting" (Teague 1982:1). Shortly after WACC's visit and following consultation with your office (U.S. Bureau of Reclamation 1982; Nevada State Historic Preservation Office 1982), Reclamation archaeologist Joan Middleton visited the site to collect the artifacts, noting in her report:

> ....the site has been inundated twice by Lake Mead, once in 1941 and more recently in the late 1950's to the present. With much of the substrate composed of crystalline salt which is fissured in unpredictable patterns, the danger exists that extensive solution cavities have formed. In addition, the surface has lost much of its' integrity and has acquired the consistency of the slush of thawing snow.....[Lost City] museum personnel commented on the fact that during the period of a month since their previous visit.....they could detect increased erosion and enlargement of solution cavities just below the surface (Middleton 1982).

Middleton indicated nothing could be done to stabilize the site, and to attempt any salvage excavation would be too dangerous. Salt Cave has been inundated several more times since Middleton's 1982 visit, so it can be reasonably assumed erosion, dissolution, and collapse of the salt deposits has continued to occur. Recent efforts by LMNRA personnel to relocate the site were unsuccessful (Steve Daron, personnel communication, 1999), suggesting it has been completely destroyed.

A similar, but somewhat different situation exists at the Main Ridge locality at Lost City (26CK2148; referenced in correspondence as Pueblo Grande de Nevada). In 1979, in response to news reports the water level at Lake Mead was rising to levels not seen since 1941, Margaret Lyneis and other members of the University of Nevada Las Vegas faculty visited the Main Ridge locality to assess the condition of the site, and found it had deteriorated substantially since their last visit in 1977. House 42 could not be reached as it was on an island, and Houses 18, 19, 22 and 24, which were "apparently situated just at the high water mark" had been "obliterated" by the rising water (Lyneis 1982:1). Structures at Main Ridge were generally constructed on thin beds of sandstone that occur within the Muddy Creek Formation. These beds of sandstone were noted to be "interstratified with silts and sands that are highly permeable and easily eroded" (Lyneis 1982:3). When the water level is high, the silts and sands are easily eroded, leaving the sandstone beds unsupported so they crack and break. These cracks collect runoff during storms which serves to further undermine the sandstone lenses, and headward erosion, accelerated by piping, begins to occur (Lyneis 1982).

Acknowledging its responsibility to preserve and protect sites eligible for listing on the National Register, Reclamation prepared a scope of work for mitigation at the Main Ridge locality, and consulted with your office and the Keeper with respect to the eligibility of the site for listing on the National Register (U.S. Bureau of Reclamation 1979). All parties concurred the site was an eligible property and it was eventually listed on the National Register. Your office also concurred with Reclamation's finding of no adverse effect to the site with respect to "the potential damage expected to occur" at the site (Nevada State Historic Preservation Office 1979), presumably because the agency was planning a data recovery program to salvage information from features likely to be affected by continued erosion. The Advisory Council on Historic Preservation (1979) did not object to Reclamation's determination of no adverse effect. The data recovery program was implemented by Margaret Lyneis, who went on to perform additional work at the site in 1986, and later prepared a report synthesizing the data from both projects (Lyneis 1992).

During the last three years, the Main Ridge locality has been visited on several occasions by Reclamation and LMNRA cultural program personnel who have observed the following. A wave cut bench (strand line) is forming below the high stand elevation. As noted by Lyneis in 1982, the fine silt and sand lenses in the Muddy Creek Formation are being eroded and transported away leaving the more resistant sandstone beds unsupported. A number of these have collapsed and pieces, some of considerable size, are being shifted about by wave action. One fragment was host to several bedrock mortar holes, which I'm certain you will recall, LMNRA consulted with your office about removing two or three years ago. Artifacts below the high water mark are all in secondary context. The fines in the soil matrix are being removed and larger materials (including artifacts and fire cracked rock), are lagging onto the sloping surface of the bench and are being reworked by wave action into linear rows paralleling the long axis of the bench. While the part of the Main Ridge locality located above the high water mark is in good condition and still qualifies for listing on the National Register, the portion of the site situated within the operational zone is now best considered a non-contributing element owing to a lack of integrity.

The inundated portions of the Main Ridge locality have completely lost their integrity as a result of having been eroded by wave action, which does not bode well for other sites located within the operational zone of Lake Mead. Maximum and minimum elevations for Lake Mead for the years 1939 through 2001 were examined to get some sense of how frequently over the last 64 years the inundated portion of the Main Ridge locality may have been at the lake margin, and thus subject to erosion by wave action. Examination of these data indicates 22 percent of the maximum and minimum elevation readings fall between 1201 to 1229 feet above msl, 56 percent fall in the 1151 to 1200 feet above msl range, and 22 percent fall between 1075 to 1151 feet above msl. The inundated portion of the Main Ridge locality is situated in the 1201 to 1229 feet msl range, and as indicated above, has lost its integrity due to erosion. Using the amount of erosion observed at Main Ridge as a rough guide, these data suggest sites in the 1151 to 1200 feet above msl range should have been situated at the lake margin roughly twice as often as sites in the 1201 to 1229 feet above msl range, so should exhibit substantially greater damage from erosion from wave action. Sites located within the 1075 to 1151 feet above msl range should have been situated at the lake margin as often as the inundated portion of the Main Ridge locality, so should exhibit roughly the same level of damage as that observed at Main Ridge. Thus, given the extent to which erosion has damaged the inundated portion of the Main Ridge locality, it appears extremely unlikely there are any sites located within the operational zone of Lake Mead that would retain sufficient integrity to be considered eligible for listing on the National Register.

The majority of the sites known or suspected to be within the operational zone of Lake Mohave, were recorded by Baldwin (1943, 1948) prior to construction of Davis Dam (see enclosed list). Sites located in what would become the upper, northern portions of the lake, were described as being associated with sand bar deposits and aeolian sand dunes situated at the mouths of large and small tributary canyons where they opened into Black Canyon. In more open valley settings to the south, sites were most frequently recorded on the first terrace above the Colorado River. All of the sites located in valley settings are now submerged deep beneath the waters of Lake Mohave, so are not included on the enclosed list as they lie below the operational zone of the reservoir. Many of the sites recorded by Baldwin in canyon settings in what is now the upper end of Lake Mohave, fall wholly or partially within the operational zone of the reservoir. Since Baldwin's surveys in the 1940s, several other sites have been recorded by Brooks et al (1977) and Jones (1991) in similar topographic settings at the upper end of the lake. These researchers indicated cultural materials observed on beaches below the high water mark at newly discovered sites and sites previously recorded by Baldwin, were out of context, having been eroded from the sand deposits and redeposited along the beaches that appear when lake levels are low. Areas of the sites situated above the operational zone retained a higher degree of integrity, but were being degraded as a result of heavy recreational use (Jones 1991).

Reclamation and LMNRA cultural program staff visited several sites located on Lake Mohave below Willow Beach the week of April 8, 2002, including AZ F:2:6(ASM), 26CK4473, and 26CK4474/5595/AZ F:2:68 on the Nevada side, and a cluster of sites here combined and designated AZ F:2:11/9/10/43/44/45(ASM), AZ F:2:85(ASM), and an unnumbered site in a sand dune on the Arizona side. The following observations were made during this visit. All sites visited are being

eroded by wave action. Beaches have developed that slope upward toward the main body of sand; artifacts located on beach surfaces are all in secondary context. Vertical cuts are present on the faces of sandbar and dune deposits located above the high water mark, which have likely developed as a result of undercutting and collapse of the deposits. Erosion along some cuts appears to have stabilized, other cuts seem to be in the process of stabilizing, while the vertical faces of others seem far from reaching a state of equilibrium. Buried hearths and lenses of ash and charcoal were noted in the cut faces of sand deposits at AZ F:2:6(ASM) and 26CK4774/AZ F:2:68(ASM) on the Nevada side, and the unnumbered site on the Arizona side. All sites visited have been disturbed to varying degrees as a result of recreational use. Artifact densities seem lower than those observed by previous investigators, suggesting illicit collection of surface artifacts is an on-going problem. Based on these observations, it is highly likely sites located in the upper reach of Lake Mohave having areas situated above the high water mark, could still retain sufficient integrity to be considered eligible for listing on the National Register. Sites or portions of sites situated within the operational zone, however, will lack integrity so would be considered not eligible for listing.

Below Nelson's Landing, Lake Mohave begins to widen out. In the area between Nelson's Landing and Cottonwood Cove, a few sites have been recorded on alluvial fans bordering the lake (see entries for the Fire Mountain quadrangle on the enclosed list; no sites have been recorded near the lake margin on the Mt. Davis quadrangle), but it is not clear from information on the site forms if these extend or extended into the lake. Below Cottonwood Cove, the lake widens even more. In the area between Cottonwood Cove and Davis Dam, all previously recorded sites have likely been inundated given the locational descriptions on the site forms.

We have also enclosed a list of sites located along the reach of the Colorado River extending from Hoover Dam downstream to River Mile 331 (the northern terminus of Lake Mohave). Six historic and three prehistoric sites have been recorded along this reach of the river. All historic sites appear to be associated with construction and operation of Hoover Dam, and are at elevations above the river high water mark. Two of the prehistoric sites consist of rockshelters exhibiting some evidence of occupation. Information on the site forms indicates both shelters are located above the river high water mark associated with operations. The third prehistoric site is located in a similar topographic setting as prehistoric sites found along the upper portion of Lake Mohave. Given this, it is assumed the same erosional processes at work on those sites are also operating on this small site.

No sites have been identified adjacent to the river channel along the reach of the Colorado River below Davis Dam to River Mile 257.5, which marks the tri-state boundary point between Nevada, Arizona, and California. Known sites in this area tend to be situated on terraces overlooking the Colorado River, not on the floodplain, placing them well beyond the Offstream Storage Program APE.

In response to your request for additional information concerning efforts by Reclamation to determine if sites of importance to tribal members are located within the Offstream Storage Program APE, Reclamation has indeed consulted with tribes concerning this undertaking, and other proposed actions where proposed changes in operations would result in alterations in reservoir elevations and

river flows. In all cases, including the Offtream Storage Program, changes in reservoir elevations and river flows resulting from the actions have been predicted to be within the historic operational parameters for reservoir and river operations. In every case, the tribes consulted elected not to respond to Reclamation's inquiries for information concerning resources of cultural importance that might be affected by an undertaking. In situations where the effects of an undertaking to resources of cultural importance have been more readily apparent (e.g., the Hoover Bypass Project; Stoffle et al., 2000), tribal representatives and elders have been more willing to share general and specific information concerning resources of importance to their tribes. As a result of its participation in such consultations, Reclamation has become aware of several resources of importance to tribes that are located in, or touched on by, the Offstream Storage Program APE. These include: the Colorado River; Black Canyon; the Salt Song Trail (a portion of which has been inundated by Lake Mead; where the trail enters and leaves the lake is only generally known [Laird 1979:frontispiece]); the Ha 'tata traditional cultural property located near Hoover Dam; villages in the Overton area (specific locations unknown; some have likely been inundated by Lake Mead); Cottonwood Island (now submerged deep beneath the waters of Lake Mohave); and Willow Beach (now partially submerged under Lake Mohave). As all predicted changes in reservoir elevations and river flows that might result from implementation of the Offstream Storage Program are well within historic parameters for river and reservoir operations, and absent any information from the tribes concerning positive or negative effects that might occur to these or other resources of cultural importance, were the program to be implemented, Reclamation has concluded there will be no effect on these resources as a result of this undertaking.

If you have any questions concerning the information contained in this letter, please feel free to direct them to Ms. Pat Hicks, Regional Archaeologist at 702-293-8705, or to Mr. Pat Green, Environmental Compliance Team Leader, at 702-293-8519. All records and maps utilized in the preparation of this letter are on file in this office, and are available for your inspection.

Thank you in advance for your prompt response to our request for your concurrence on Reclamation's finding of no effect to historic properties resulting from implementation of the Offstream Storage Program. It is always a pleasure to work with you and your staff.

Sincerely,

TOM BURKE

Deanna J. Miller, Director
Resource Management Office

Enclosures

2530 bc: Regional Director, Boulder City NV
2541 Attention: LC-1000, 1100, 4440,
2543 (w/encls to ea)
2001
Daily
WBR:PHicks:lb:4/19/02:293-8705
(COM2200:nv-02-06Nadd.shp.PH)

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Advisory Council on Historic Preservation

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Nevada State Historic Preservation Office

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STATE OF NEVADA
DEPARTMENT OF CULTURAL AFFAIRS
Nevada State Historic Preservation Office
100 N. Stewart Street
Carson City, Nevada 89701

KENNY C. GUINN
Governor

SCOTT K. SISCO
Interim Director

RONALD M. JAMES
State Historic Preservation Officer

May 8, 2002

Deanna J. Miller
Director
Resource Management Office
Bureau of Reclamation
Lower Colorado Regional Office
P.O. Box 61470
Boulder City NV 89006-1470

RE: Storage and Interstate Release Agreement Under the Final Rule at 43 CFR Part 414, for Off Stream Storage of Colorado River Water and Development and Release of Intentionally Created Unused Apportionment in the Lower Division States Among the Bureau of Reclamation, State of Arizona, and the State of Nevada.

Dear Mr. Green:

The Nevada State Historic Preservation Office (SHPO) reviewed the entire undertaking. Given the disturbances documented in your letter of April 24, 2002 and the previous inventory efforts in the operational zone of the Colorado River, the SHPO concurs with the Bureau of Reclamation's determination that the inventory has been adequate to identify historic properties. The SHPO concurs with the Bureau of Reclamation's determination that historic properties will not be affected by the proposed undertaking.

If you have any questions concerning this correspondence, please contact me by phone at (775) 684-3443 or by E-mail at rlpalmer@clan.lib.nv.us.

Sincerely,

Rebecca Lynn Palmer
Historic Preservation Specialist

MR OFFICIAL OFFICE COPY		
RECEIVED 5/13/02		
REPLY DATE		
DATE	INITIALS	CODE
5/13/02	Miller	2000
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		2011
5/15/02	JDM	2530
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STATE OF NEVADA
DEPARTMENT OF CULTURAL AFFAIRS
Nevada State Historic Preservation Office
100 N. Stewart Street
Carson City, Nevada 89701

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May 8, 2002

Deanna J. Miller
Director
Resource Management Office
Bureau of Reclamation
Lower Colorado Regional Office
P.O. Box 61470
Boulder City NV 89006-1470

RE: Storage and Interstate Release Agreement Under the Final Rule at 43 CFR Part 414, for Off Stream Storage of Colorado River Water and Development and Release of Intentionally Created Unused Apportionment in the Lower Division States Among the Bureau of Reclamation, State of Arizona, and the State of Nevada.

Dear Mr. Green:

The Nevada State Historic Preservation Office (SHPO) reviewed the additional information for the proposed undertaking. This comprehensive review of the architectural, archaeological, religious, and cultural resources previously recorded in the area of potential effect was very informative. In addition, the analysis of the effects of inundation, wave erosion, desiccation, and recreational activities on cultural resources was very thorough. Congratulations on such an excellent response.

The SHPO looks forward to receiving the Class I inventory conducted for the Lower Colorado River Multi-Species Conservation Program (LCR MSCP).

If you have any questions concerning this correspondence, please feel free to call Rebecca Lynn Palmer at (775) 684-3443 or by E-mail at rlpalmer@clan.lib.nv.us.

Sincerely,

Alice M Baldrica

Alice M. Baldrica, Deputy
State Historic Preservation Officer

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RECEIVED 5/13/02		
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DATE	INITIALS	CODE
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INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER
UNITED STATES SECTION

MAR 2 2 2002

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U.S. Bureau of Reclamation
Attn. Mr. Dale Esminger
Boulder Canyon Operations Office
P.O. Box 61470
Boulder City, Nevada, 89006-1470

Dear Mr. Ensminger:

This letter is to provide comments on the *Draft* Environmental Assessment (EA) titled *Storage and Interstate Release Agreement among the United States of America, acting through the Secretary of the Interior: Arizona Water Banking Authority; the Southern Nevada Water Authority; and the Colorado River Commission of Nevada* and the Colorado River *Storage and Interstate Release Agreement* accompanying the EA released by the U.S. Bureau of Reclamation (Reclamation) for this purpose in February 2002.

The United States and Mexico entrust to the International Boundary and Water Commission (IBWC), the application of the rights and obligations assumed by the Governments of the United States and Mexico in the 1944 Water Treaty and other international agreements related to the waters of the Colorado River. Our comments reflect the views of the United States Section of the IBWC.

We understand that the agreement involves the off-stream diversion and storage for future uses, by Arizona of a portion of that State's or, for a more limited time, Nevada's unused basic and/or surplus apportionment of Colorado River. We understand that surplus water could be available under the Colorado River Interim Surplus Guidelines that, as Reclamation is aware, were a subject of United States and Mexico consultations, conducted by the IBWC in 2000. We are informing the Mexican Section of the IBWC of the referenced proposal, considering the terms of the final rule that provided the framework for voluntary interstate water transfer agreements. We would welcome Reclamation's support in our consultative process with Mexico. 1-1

Sincerely,

Sylvia A. Waggoner

Sylvia A. Waggoner
Division Engineer
Environmental Management Division

The Commons, Building C, Suite 310 • 4171 N. Mesa Street • El Paso, Texas 79902
(915) 832-4100 • (FAX) (915) 832-4190

Comment Letter Number 1.

1. International Boundary and Water Commission, United States and Mexico (IBWC).

Response 1-1. Thank you for your comments. The Rule requires Reclamation to complete environmental compliance documentation and appropriate prerequisites before executing a specific storage and interstate release agreement (SIRA). Reclamation has met with the International Boundary and Water Commission (IBWC) and Mexican officials to consult with Mexico on the subject SIRA. Based upon our environmental analysis and review of comments to date, Reclamation anticipates executing a finding of no significant impact (FONSI) for the proposed SIRA. Reclamation will continue to work with IBWC on this and other related Colorado River issues. Please see the attached Reclamation letters dated April 24, 2002 and May 29, 2002 for additional information and responses on the proposed action.

United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

IN REPLY REFER TO:

BCOO-4445
WTR-4.03

APR 2 4 2002

Commissioner Carlos Ramirez
International Boundary and Water Commission
United States Section
The Commons, Building C, Suite 310
4171 North Mesa Street
El Paso, Texas 79902-1441

Subject: Draft Storage and Interstate Release Agreement Among Southern Nevada Water Authority (SNWA), Colorado River Commission of Nevada, Arizona Water Banking Authority (AWBA), and the United States

Dear Mr. Ramirez:

This letter is to provide the International Boundary and Water Commission (IBWC) with additional information on a proposed action involving the offstream storage and retrieval of Colorado River water.

Reclamation and the aforementioned Arizona and Nevada entities have been developing a draft storage and interstate release agreement (SIRA) that provides for offstream storage and retrieval of Colorado River water. This SIRA was developed in accordance with the final rule for Offstream Storage of Colorado River Water (Rule) published in the Federal Register on November 1, 1999 (Vol. 64, No. 210, Pg. 58986). Subsection 414.3 (g) of the Rule anticipates that Reclamation would provide information to the IBWC for coordination with Mexico prior to executing any specific SIRA.

Execution of the SIRA by Reclamation would not affect Reclamation's obligation or ability to meet the requirements of the February 3, 1944 Treaty between the United States and Mexico (Mexican Water Treaty) in terms of both water quantity and water quality.

A copy of the draft SIRA is enclosed for your information. The SIRA provides for the storage of up to 1.2 million acre-feet of recoverable Colorado River water in underground Arizona aquifers for the benefit of SNWA. When SNWA requests stored water in the future, AWBA will retrieve it, at a rate not to exceed

100 thousand acre-feet per year, and exchange it with Colorado River water users in Arizona. The Arizona Colorado River water users who participate in the exchange will reduce their use of Colorado River water, thereby developing intentionally created unused apportionment which the United States will release for use within Nevada during the year of retrieval. Although Colorado River water available for storage for purposes of this SIRA can be within the basic or surplus apportionment of either Arizona or Nevada, Arizona plans to store this water using only unused Arizona apportionment.

The Rule requires Reclamation to complete environmental compliance documentation and appropriate prerequisites before executing a specific SIRA. Accordingly, Reclamation and SNWA jointly prepared an associated draft environmental assessment (DEA) that analyzes the potential impacts of the storage and retrieval actions that will occur under the draft SIRA. The draft SIRA and DEA were provided to the Lower Basin States and the general public for review and comment. Based on our analysis and review of comments to date, we anticipate executing a Finding of No Significant Impact.

Reclamation has completed environmental compliance documentation for several projects that tie into the analysis of the potential impacts of those projects on the delivery of water to Mexico under the Mexican Water Treaty. First, we completed a final programmatic environmental assessment for the Rule (FPEA) in November 1999. In January 2001, Reclamation issued a Record of Decision on the Final Environmental Impact Statement (FEIS), dated December 2000, for the Colorado River Interim Surplus Guidelines (Guidelines). As noted above, Reclamation released a DEA, dated March 17, 2002, for the SIRA. The Arizona and Nevada apportionments that could be stored for interstate purposes were included in modeling for the FEIS for the Guidelines.

The DEA for the SIRA tiers to and incorporates by reference the analyses contained in the FEIS for the Guidelines, the FPEA, and the Rule. Reclamation believes, based on these analyses, that the proposed action would have no effect on the delivery of treaty water to Mexico. We look forward to discussing these analyses with IBWC in the near future.

If you have any questions, the point of contact is Mr. William E. Rinne at 702-293-8411.

Sincerely,

WILLIAM E. RINNE

Robert W. Johnson
ACTING FOR Regional Director

Enclosure

cc: Mr. Bobby Ybarra
International Boundary and Water Commission
United States Section
The Commons, Building C-310
4171 North Mesa Street
El Paso, Texas 79902
(w/cy of SIRA, DEA, and Federal Register Notice (11/1/99)

bc: Field Solicitor, Phoenix, Arizona
(w/o cy encls)

LC-1100 (w/o cy of encls)
LC-2530 (w/0 cy of encls)

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United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

IN REPLY REFER TO
BCOO-4445
WTR-4.03

MAY 2 9 2002

Commissioner Carlos Ramirez
International Boundary and Water Commission
United States Section
The Commons, Building C, Suite 310
4171 North Mesa Street
El Paso, Texas 79902-1441

Subject: Consultation with Mexico Through the International Boundary and Water Commission (IBWC) on a Proposed Storage and Interstate Release Agreement

Dear Mr. Ramirez:

Thank you for Reclamation's opportunity to meet with the United States and Mexican Sections of IBWC on May 14, 2002, in El Paso, Texas. We appreciated the opportunity to meet with IBWC and to consult with Mexican officials on the subject proposed Storage and Interstate Release Agreement (SIRA). This consultation was held in accordance with subsection 414.3 (g) of the rule for Offstream Storage of Colorado River Water.

Based on our analysis and review of comments during a public comment period for the SIRA, we anticipate preparing a Finding of No Significant Impact with respect to environmental compliance for the SIRA. Accordingly, we intend to execute the proposed SIRA among Southern Nevada Water Authority, Colorado River Commission of Nevada, Arizona Water Banking Authority, and the United States in late June 2002. As stated in our letter to you dated April 24, 2002, the execution of this proposed SIRA by Reclamation would not affect the United States obligation or ability to meet the requirements of the February 3, 1944, Treaty between the United States and Mexico in terms of both water quantity and water quality.

If you have any questions please contact Mr. William E. Rinne at 702-293-8411.

Sincerely,

ACTING FOR WILLIAM E. RINNE

Robert W. Johnson
Regional Director

cc: Mr. Bobby Ybarra
International Boundary and Water Commission
United States Section
The Commons, Building C, Suite 310
4171 North Mesa Street
El Paso, Texas 79902

bc: Field Solicitor, Phoenix, Arizona

LC-1100
LC-2530

STATE OF CALIFORNIA – THE RESOURCES AGENCY

GRAY DAVIS, Governor

COLORADO RIVER BOARD OF CALIFORNIA
770 FAIRMONT AVENUE, SUITE 100
GLENDALE, CA 91203-1035
(818) 543-4676
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March 22, 2002

Mr. Robert Johnson
Regional Director
Lower Colorado Regional Office
Bureau of Reclamation
P.O. Box 61470
Boulder City, NV 89006-1470

Re: Storage and Interstate Release Agreement (SIRA) among the United States, Arizona Water Banking Authority, the Southern Nevada Water Authority, and the Colorado River Commission of Nevada and Draft Environmental Assessment

Dear Mr. Johnson:

The Colorado River Board of California (Board) appreciates the opportunity to provide comments on the draft agreement entitled "Storage and Interstate Release Agreement among the United States of America, acting through the Secretary of the Interior: Arizona Water Banking Authority; the Southern Nevada Water Authority; and the Colorado River Commission of Nevada" (SIRA) and accompanying Environmental Assessment (EA No. 02-LC-012). The Board's comments are referenced by page number and paragraph, and are intended to clarify specific elements contained within the draft SIRA and EA.

Comments on the Draft Storage and Interstate Release Agreement

Page 9, Section 4.4.3, second line: The Board suggests that after the word "Secretary," that the following language be inserted "*in consultation with the other Basin States,*" 2-1

Page 10, Section 4.7.2: The Board recommends that the Interstate Recovery Schedule and Certification should be made available to the Basin States. Language in this section should be modified to reflect this requirement. 2-2

Page 11, Section 4.9, last line: The Board suggests changing the typographic error to the reference to Section "4.15" to "4.13." 2-3

Comments on the Draft Environmental Assessment

Page 5, 3rd complete paragraph: In the first sentence, the date referenced for termination of the "interim period" is given as "2015." The Board believes this date should actually be 2016. 2-4

Page 5, 4th complete paragraph: The last line on the page should read "4.4. million acre-feet...," not "acre-feed." 2-5

Page 6, top of the page: In the second line, the sentence should be corrected to read "and/or," from the existing "an/or." 2-

Page 12, Section II, Subsection C, 1st paragraph: The Board believes that more explanative narrative could have been provided regarding the elimination of the on-stream Lake Mead banking alternative. In other words, the discussion should be expanded to explain what operational or economic impediments led to the elimination of the alternative. 2-

Page 12, Section III, Subsection A, No Action Alternative: In the context of the State of Nevada's stated preference to "wheel" Virgin or Muddy River water through Lake Mead to the Saddle Island Intake Facility, the Board suggests that Reclamation include language which addresses the potential impact to downstream senior mainstream entitlement holders. 2-

Page 16, last paragraph: In the first sentence, the Board suggests that the word "them" be replaced with "it." 2-

In conclusion, the Board is in general support of the process for creation of the Intentionally Created Unused Apportionment, pursuant to the proposed Storage and Interstate Release Agreement among the United States and entities in the States of Arizona and Nevada. The Board believes the Off-Stream Storage Rule is one of the tools available to the Lower Division States for optimizing the use of mainstream Colorado River water supplies.

Execution of the SIRA, with the corrections as suggested by the Board, brings reality to the first program to be authorized under this Rule and further advances cooperative efforts being under taken by the Basin States to address our existing and future water supply needs.

Please feel free to contact me if you have any questions, or require clarification of any of the Board's comments. I can be reached at (818) 543-4676.

Sincerely,

Gerald R. Zimmerman
Executive Director

c: George Caan, Executive Director, Colorado River Commission of Nevada
Joseph Smith, Director, Arizona Department of Water Resources
Colorado River Basin States' Representatives

Comment Letter Number 2.

2. Colorado River Board of California.

Responses to Comments on the SIRA.

Response 2-1. Page 9, sub-article 4.4.3. Your comment was adopted by adding after the first reference to the "Secretary" the following language: "after consultation with the Governors' representatives of the Basin States."

In conjunction with this change, the term "Basin States" was added as a new definition in sub-article 1.1 of the SIRA at 1.1.7.

Response 2-2. Page 10, sub-article 4.7.2, now renumbered 4.8.2. Your comment was adopted by adding the following language at the end of the paragraph: "The Secretary shall provide a copy of the Interstate Recovery Schedule and the Interstate Recovery Certification to the Governors' representatives of the Basin States."

Response 2-3. Page 11, sub-article 4.9. The reference at the end of the sentence was corrected.

Responses to Comments on the DEA.

Response 2-4. This correction was made.

Response 2-5. This correction was made.

Response 2-6. This correction was made.

Response 2-7. A discussion of the "Onstream Storage Alternative" was discussed in the PFEA and not needed in this EA.

Response 2-8. SNWA's proposal to "wheel" Virgin and/or Muddy River water through Lake Mead to the Saddle Island Intake Facility, has been discussed in their Water Resource Plans. Because in-stream wheeling of tributary water is not currently allowed under the Law of the River, it is not a reasonable or a viable alternative, so it was not further analyzed in the EA.

Response 2-9. This correction was made.

New Mexico Field Office
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March 25, 2002

Via Fax and Mail

Mr. Dale Ensminger
Contract and Repayment Specialist
Boulder Canyon Operations Office
Bureau of Reclamation
P.O. Box 61470
Boulder City, NV 89006

Re: Storage and Interstate Release Agreement among the United States of America, acting through the Secretary of the Interior; Arizona Water Banking Authority; the Southern Nevada Water Authority; and the Colorado River Commission of Nevada, Draft Environmental Assessment

Dear Mr. Ensminger:

These comments are submitted on behalf of Defenders of Wildlife (Defenders). Defenders is a national non-profit, public-interest organization with over 470,000 members and supporters. Defenders works to preserve the integrity and diversity of natural ecosystems, prevent the decline of native species, and restore threatened habitats and wildlife populations.

Thank you for the opportunity to review and comment on the Proposed SIRA and Draft EA regarding water banking between Arizona and Nevada. As with other ongoing projects in the Lower Colorado River basin, we applaud Nevada's efforts to live within the Lower Basin's apportionment and to plan for increased demand. And as Defenders has said throughout these processes, this should not be accomplished at the expense of the river itself. The lower portion of the river, especially the delta, contains more native riparian vegetation than the rest of the river. The loss of this vegetation and the water that supports will mean not only a loss of rare native cottonwoods, willows and endangered species habitat, but also the loss of restoration opportunities to recover these species.

Unfortunately, the analyses presented by this Draft EA assure just that. Defenders continues to assert that the impact to the limitrophe and delta, due to reduced water flowing through the river, is not insignificant. The absence of any real examination of cumulative impacts to the riparian area is, therefore, even more troubling. Defenders requests that the Bureau of Reclamation (BOR) revise and reissue this Draft EA with the environmental analyses of cumulative impacts, as discussed below.

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The Draft EA states:

> The Federal action under consideration, execution of a SIRA with Arizona and Nevada, was evaluated in the environmental compliance for the Final Rule. The environmental compliance for the Final Rule evaluated the most likely scenarios for offstream storage and development and release of ICUA, . . . The Proposed Action is consistent with the storage and retrieval quantities and parameters identified in the environmental compliance for the Final Rule. The following discussion summarizes the environmental issues and impacts from the Final EA (Reclamation 1999a) and updates and expands upon them as pertinent for the Proposed Action. (Draft EA at 14.)

However, this expansion and update does not include consideration of the additional (cumulative) impacts of actions implemented or not foreseen in 1999. These include the Quantification Settlement Agreement (QSA), Implementation Agreement (IA), Inadvertent Overrun and Payback Policy (IOP), Imperial Irrigation District Water Conservation and Transfer, and the minimum of a two-year delay in finalizing the LCR MSCP. The failure of the Draft EA to evaluate the cumulative impacts of these projects and the Proposed Action, as explained below, requires the redrafting and reissuance of this Draft EA.

For example, in the Final Rule, 64 Fed. Reg. 58985, 58993 (Nov. 11, 1999), BOR states that, in minimizing impacts to the Lower Colorado River and delta riparian resources, that it expects releases from Hoover Dam to equal 10 maf/yr during the "next few years." Is this still accurate given the intervening ISG and other actions? Are these projected releases still expected, or have these "few years" passed since 1999? Given the implementation of the ISG in particular, it is likely that projections of flows and impacts to riparian resources have been underestimated, and that BOR has placed too much reliance on 1999 Final Rule EA by not supplementing the current Draft EA. 3-1

Secondly, we request analysis of the Proposed Action's effects for the life of the contract. The current analysis examines the impacts on flood releases only from 1999-2015, yet the proposed contract will be in effect until 2050. While we understand that several variables control Arizona's ability to store water for Nevada, we also believe that Arizona may be storing water beyond 2015 because (1) the ISG are in effect for a year beyond 2015 and (2) just as the estimated period of recovery has shifted into the future, the period of storage may as well. BOR must consider the impacts of this eventuality.[1] 3-2

Lastly, and at the heart of our comments, we request the BOR substantiate their conclusion, "The cumulative impact of these River initiatives is believed to be positive in making better use of existing apportionments, reducing consumptive uses to basic apportionments in 3-3

[1] In addition, the inclusion of the amounts of water Arizona has banked offstream each year, before and after the promulgation of the Final Rule, as well as Nevada's and Arizona's yearly consumptive use, would benefit BOR and the public in understanding the quantities of water which may be banked in a given year, and their relation to each state's entitlement.

normal years, and recovering and protecting the environment." (Draft EA at 18.) First, we dispute the conclusion that impacts to the environment will be positive, when cumulative impacts will reduce flows to Mexico, will reduce flows in the mainstem of the river, will remove water available for ecosystem sustenance and restoration, and none of these impacts are analyzed in the Draft EA or in analyses done elsewhere. River flows to the limitrophe and the delta will be reduced in magnitude and frequency by the ISG and Proposed Action by over 3%; it is unknown what additional impact the IA, QSA, and IOP will have.

Second, reliance on the "developing LCR-MSCP" in the discussion of cumulative adverse impacts and their mitigation is misplaced. BOR cannot base a finding of positive effect on a future action of uncertain terms and actions. The same holds true for the inclusion of the recovery of ICUA as a covered action in the MSCP. (Draft EA at 16.) The Draft EA must provide for the contingency that the MSCP is not finalized, and may not provide Endangered Species Act coverage or mitigation for the Proposed Action.

Likewise, the Draft EA cannot cite to the Implementation Agreement (Reclamation 2002), Draft EA at 18, for support of its belief that the Proposed Action, taken together with past, present and future actions will result in more efficient use of Colorado River water or positive impact to the environment, because the Implementation Agreement has not examined the Offstream Banking Rule in its cumulative impacts analysis. That cumulative analysis of impacts on hydrology, biological resources, and transboundary impacts wrongly omits consideration of the impacts of the Rule for Offstream Storage. See IA DEIS 4-12 ("Table 4.2-1 and Table 4.2-2 detail the expected combined impacts of the ISG, IA, IOP, and PVID Program, which would be similar, and in addition, to impacts resulting from the Offsteam Storage Rule.") (emphasis added). The IA DEIS excuses this omission in the transboundary impacts section by claiming, "without a specific proposal to evaluate, no prediction of impacts is possible." DEIS 4- 20. Thus, BOR referenced neither the PEA and Biological Assessment issued in 1999 nor this Draft EA. 3-3

Third, the positive effect of these "River initiatives" (an undefined term that encompasses or omits unknown local, state or federal actions) in "reducing consumptive uses to basic apportionments in normal years" is specious. By definition, in a normal year water users are restricted to using their basic apportionment; i.e., whether or not these initiatives exist, in a normal year consumptive use will equal the basic apportionment.

In sum, the cumulative impacts analysis is sorely lacking. "Consideration of cumulative impacts requires 'some quantified or detailed information; . . . [g]eneral statements about 'possible' effects and 'some risk' do not constitute a 'hard look' . . .." *Kern v. U.S. Bureau of Land Management*, No. CV-98-06063-HO, *4746 (9th Cir. 2002) (citing *Neighbors of Cuddy Mountain v. USFS*, 137 F.3d 1372, 1379-80 (9th Cir. 1998) (available at http://caselaw.lp.findlaw.com/data2/circs/9th/9935254p.pdf). There is no discussion of the River initiatives' impacts or of which initiatives are considered to impact the environment, whether adversely or beneficially. Also, this does not even consider the possibility that other states may begin offstream banking programs similar to Arizona's, further reducing the amount of water available for environmental purposes. It is reasonably foreseeable that additional states, given

the pressure on the Lower Basin to live within its apportionment, will develop offstream banking programs.

We also have two other questions regarding the Draft EA and SIRA. Under the Proposed Action, 50 kaf would be credited to SNWA's account, Draft EA at 10, while under the No Action alternative, Nevada would be able to recover 45 kaf of the 50 kaf in storage, Draft EA at 6. Also, the Draft states Arizona must update AWBA storage facilities a minimum of every 5 years, Draft EA at 10, while the SIRA states that AWBA shall update the inventory "if AWBA chooses to use [addiotional] Storage Facilities." SIRA Sec. 3.1. If the former assertion dictates, then the inventory dated March 1, 1997, must be updated. The revised Draft EA must address each of these discrepancies. 3-4 3-5

In conclusion, the Draft EA may tier to the PEA issued in 1999, but "shall concentrate on the issues specific to the subsequent action." 40 C.F.R. § 1502.20. The cumulative impacts section of the Draft EA does not provide a "useful analysis of the cumulative impacts of past, present, and future projects," *Muckleshoot Indian Tribe v. USFS*, 177 F.3d 800, 810 (9th Cir. 1999), and the relevant past, present and future projects have changed since the initial PEA. Thus, the Draft EA must be reissued to evaluate cumulative impacts to the environment of the Lower Colorado River and delta.

Thank you again for this opportunity to comment, and please do not hesitate to contact me with any questions.

Sincerely,

Kara Gillon
Wildlife Counsel

FAX TRANSMISSION
DEFENDERS OF WILDLIFE ** NEW MEXICO FIELD OFFICE
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ALBQUERQUE, NM 87102
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TO: Dale Ersminger

AGENCY: Bureau of Reclamation

FAX #: 702-293-8042 FROM: Kara Gillon

NUMBER OF PAGES: 4 FOLLOW DATE: 3/25/02

MESSAGE:

Dale,

Following are Defenders' comments on the Arizona - Nevada water banking agreement. Hard copy will follow in the mail.

-Kara

If transmission problems occur, please let us know. Thank you.

Comment Letter Number 3.

3. Defenders Of Wildlife.

Responses to Comments on DEA and SIRA

Response 3-1. We do not agree with your conclusion that additional (cumulative) impacts of other actions were neither foreseen in 1999 nor analyzed in the DEA. The EA for the SIRA tiers to and incorporates by reference the analyses contained in the various environmental documents identified in Chapter I.C. The modeling for these River actions considered the projected depletion schedules for Arizona and Nevada under the Interim Surplus Guidelines (ISG), which includes allowance for offstream interstate storage in Arizona and a build up of use in Nevada which assumes the use of recovered water from this interstate storage in Arizona. The FEIS for the Implementation Agreement, Inadvertent Overrun Policy, and Related Federal Actions expands on the Surplus modeling and has been modified to clarify the analysis that has already been done for the offstream banking rule, particularly the proposed action of executing a SIRA that would benefit SNWA through offstream storage of up to 1.2 maf of Colorado River water by AWBA. Although, as you noted, the finalization of the LCR- MSCP has been delayed, that program is being developed to mitigate the direct, indirect, and cumulative effects on resources of the lower Colorado River from current and future river operations. The actions to be covered have been agreed to by the stakeholders and will be in the environmental documentation covering the LCR- MSCP. We believe the cumulative impacts of the various actions are appropriately analyzed and referenced in the cumulative impact chapters of the tiered documents for lower Colorado River initiatives.

Arizona, California and Nevada are already storing Colorado River water offstream for intrastate purposes which is a beneficial use of their Colorado River apportionments under the Law of the River. Colorado River water available for storage and retrieval pursuant to the SIRA and Rule will be within either the State of Arizona's or the State of Nevada's basic or surplus apportionments and in conformance with the Law of the River.

Response 3-2. We acknowledge that the storing period could extend a year beyond the period analyzed in the PFEA and DEA for the SIRA, as the ISG will be in effect through 2016. However, Nevada will want to store up to 1.2 maf of water as quickly as possible, so if basic apportionment or interim surplus remains available, AWBA will store it, in amounts up to 200 kaf per year to meet their goal in the early years of the program. It is possible that the projected recovery schedule could be moved forward or delayed depending on River conditions. However, because the schedule for the development and recovery of water resources in the future by SNWA is dependent upon several factors, including actual water demands, alternate water resources, and conditions on the Colorado River, it is too speculative to provide a more meaningful analysis of such a scenario and thus we have used the best information available in our analyses.

Response 3-3. You have questioned the statement in the DEA at the end of Section III. C. on page 18. We stand behind our statement that the cumulative impact of these river initiatives is believed to be positive. While some Lower Colorado River (LCR) initiatives may alter flows in the mainstream of the river, one of the initiatives, the Lower Colorado River Multi-species Conservation Program (LCR-MSCP), addresses the needs of various resources and the sometimes conflicting needs of fish and wildlife species, particularly threatened and endangered species. As we noted above, the finalization of the LCR-MSCP, although delayed, will mitigate the direct, indirect, and cumulative effects on resources of the lower Colorado River from current and future river operations. The actions to be covered have been agreed to by the stakeholders and will be in the environmental documentation covering the LCR-MSCP. The partnership formulated among the Federal and non-Federal agencies and other interests recognizes the sometimes conflicting objectives in Colorado River management by attempting to accommodate water diversions and power production while conserving habitat and working toward the recovery of species pursuant to the Endangered Species Act. The LCR-MSCP addresses some tradeoffs between the interests of resource users and environmental needs. Considered together the identified and proposed Colorado River initiatives will result in overall positive impacts on the river environment.

Reclamation is actively participating in the Fourth Technical Work Group (Delta Task Force), which is a bi-national group working to conduct a joint baseline study of the water and natural resource conditions in the Cienega De Santa Clara and the adjoining lowermost part of the delta of the Colorado River utilizing the resources of these agencies in monitoring, field work, photography and data exchange. This cooperation was further affirmed by the International Boundary and Water Commission, United States and Mexico, Minute No. 306, of December 12, 2000, which established the "Conceptual Framework for United States-Mexico Studies for Future Recommendations Concerning the Riparian and Estuarine Ecology of the Limitrophe Section of the Colorado River and its Associated Delta" as it may relate to the various Colorado River initiatives.

The FEIS for the Implementation Agreement, Inadvertent Overrun Policy, and Related Federal Actions expands upon river modeling that was done for the Interim Surplus Guidelines and has been modified to clarify the analysis that was done for the offstream banking Rule, particularly the proposed action for executing a SIRA that would benefit Nevada through offstream storage of up to 1.2 maf of Colorado River water in Arizona. The apportionments that could be stored were identified in delivery schedules that formed the basis for the updated modeling and the affects analysis in these documents.

We agree, that by definition, in a normal year water users are restricted to using their basic apportionments. However, a number of the Colorado River initiatives will help the California water districts use their Colorado River water more efficiently through conservation and better management practices. We believe the cumulative impacts of the various actions are appropriately analyzed and referenced in this document and in the cumulative impact chapters of the tiered and incorporated documents for the other lower Colorado River initiatives.

Response 3-4. The 45 kaf of water reference as recoverable under the No Action Alternative in the DEA represents the amount of long-term storage credits less a ten percent cut for aquifer retention. Arizona law requires that when long-term storage credits are recovered, ten percent of the stored water is left in the underground aquifer. AWBA must comply with State law, but whether the amount of recoverable long-term storage credits held by CAWCD for SNWA is 45 or 50 kaf is a State matter within AWBA's operating discretion.

Response 3-5. You are correct that AWBA is required to update the storage facility inventory every five years; this is required by Arizona Revised Statutes (A.R.S.) § 45-2452 F. However, the inclusion of additional facilities in the storage facility inventory does not mean those facilities will be used to store water for the benefit of SNWA under the SIRA. It is AWBA's discretion as to whether those additional facilities will be used to store water for interstate water banking purposes to benefit SNWA under the SIRA.

ESTABLISHED IN 1918 AS A PUBLIC AGENCY

COACHELLA VALLEY WATER DISTRICT

POST OFFICE BOX 1058 • COACHELLA, CALIFORNIA 92236 • TELEPHONE (760) 398-2651

March 27, 2002

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Robert W. Johnson, Regional Director
U. S. Department of the Interior
Bureau of Reclamation
Lower Colorado Regional Office
Post Office Box 61470
Boulder City, Nevada 89006

Dear Mr. Johnson:

Subject: Comments on Storage and Interstate Release Agreement

This letter is prompted by the request for comments on the proposed Storage and Interstate Release Agreement between Southern Nevada Water Authority and the United States.

Thank you for the opportunity to comment on this document.

Enclosed is attachment A which lists our comments.

If you have any questions or require additional information please call Robert Robinson, resource engineer, extension 424.

Yours very truly,

Tom Levy
General Manager-Chief Engineer

Enclosure/1/as

RAR:md\eng\res\mar\johnson

COACHELLA VALLEY WATER DISTRICT

ATTACHMENT A

AGREEMENT
Suggested additions to existing wording shown in underline

Sub-section 3.4.5

All records of AWBA concerning the amount of Water Stored in that Year, including all records used by AWBA to prepare the final verified accounting, shall be available for inspection by the Secretary and the CRCN, Arizona Department of Water Resources and Colorado River Board of California. 4-1

Section 4.12

By April 1 of the Year after ICUA is developed, AWBA shall submit to the Secretary with copies to the CRCN, Arizona Department of Water Resources and Colorado River Board of California, a report documenting how ICUA was created and confirming that the amount of ICUA set forth in the Interstate Recovery Schedule was developed. 4-2

Section 5.8

Once the Secretary has determined that ICUA created pursuant to this agreement will be released to SNWA under sub-article 5.5, such ICUA shall not be available for release to any Entitlement Holder in the States of Arizona or California in that Year. Nothing in this Agreement affects ICUA created pursuant to separate Storage and Interstate Release Agreements by other Colorado River Entitlement Holders. 4-3

ENVIRONMENTAL ASSESSMENT
Suggested additions to existing wording shown in underline. Suggested deletions shown in ~~strikeout~~.

Page 12 Section III, A, last three sentences of third paragraph

SNWA would prefer to capture its Virgin and Muddy River water rights by allowing them to flow naturally in their channels into Lake Mead, and take the water through a changed point of diversion at SNWA's existing intakes off Saddle Island in Lake Mead. However, existing contracts, divergence in water quality and legal interpretations do not currently allow this concept, also called "wheeling." Therefore, construction of facilities to transmit the Virgin and Muddy River water rights to the Las Vegas Valley is considered the most likely scenario for the No Action Alternative. 4-4

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COACHELLA VALLEY WATER DISTRICT
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Comment Letter Number 4.

4. Coachella Valley Water District. This comment letter, was dated two days after the close of the comment period and was not received until more than 30 days after the close of the comment period. However, the comments have been substantively addressed in changes made in response to comment letter Number 2, from the Colorado River Board of California.

Responses to comments on SIRA and DEA.

Response 4-1. AWBA will provide information to Arizona Department of Water Resources (ADWR), Colorado River Board of California (CRB), and Colorado River Commission of Nevada on accounting for long-term storage credits (sub-article 3.4.2) and the recovery of long-term storage credits (sub-article 4.8.2). Under sub-article 6.6, each party agrees to make available to the other parties, all of its records relating to the storage and recovery of water pursuant to the agreement. Although ADWR and CRB are not parties to the agreement, we believe the parties to the agreement will cooperate with those agencies in allowing them access to records that relate to this agreement.

Response 4-2. This comment has been incorporated into a modification of sub-article 4.8.2.

Response 4-3. Your comment is noted. The Secretary will release to SNWA under sub-article 5.4 only that ICUA created pursuant to this agreement, and not ICUA created pursuant to separate agreements with other authorized entities.

Response 4-4. Thank you for your comment. This is not an issue and no change is required to the environmental assessment.