STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
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March 22, 2005

Mr. John Stomp
City of Albuquerque
Post Office Box 1293
Albuquerque, New Mexico 87103

Re: San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement; Comments by the City of Albuquerque.

Dear John:

Transmitted herewith for your consideration is John Whipple's memorandum addressing many topics associated with the issues you have raised regarding the proposed San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement, the possible impacts of the settlement on San Juan-Chama Project water supplies, and the City of Albuquerque's comments on the settlement. DL Sanders' legal analysis of the City's request that the San Juan-Chama Project no longer be required to share in shortages with the Navajo Reservoir water supply contract uses is attached to Mr. Whipple's memorandum. Based on the memorandum and analysis, I offer the following observations.

The shortage sharing provisions of Section 11(a) of the Act of June 13, 1962, Public Law 87-483, allow for an effective sharing of available runoff between the co-equal priorities of the San Juan-Chama Project and the Navajo Reservoir water supply contracts consistent with state law. Section 11(a) of the Act allows for Navajo Reservoir operations to cover the administration of runoff as between the project and the reservoir supply for long periods of time to the benefit of the San Juan-Chama Project, only requiring pro-rata sharing of the runoff available above Navajo Dam in years of shortage. The proposed legislation to authorize the Settlement Agreement would provide an additional protection to the San Juan-Chama Project by clarifying that in a year of shortage, the project would be allocated a diversion of 135,000 acre-feet of water, less its pro-rata share of shortage of runoff, which amount if physically available likely would be sufficient both to fulfill its contract deliveries and replenish some amount of storage in Heron Reservoir even though at the same time Navajo Reservoir contract deliveries are shorted and Navajo Reservoir storage

remains essentially fully depleted. The proposed legislation also would amend Section 11(a) to provide a new constraint on Navajo Reservoir water supply contracts whereby the San Juan-Chama Project and Navajo Reservoir contracts approved by Congress prior to or by the proposed legislation would not be required to share in shortages with any Navajo Reservoir contracts that may be approved subsequent to the proposed legislation, if any.

In addition, the proposed settlement would protect the water supplies available to the United States with the June 17, 1955, priority for both the Navajo Reservoir water supply contracts and the San Juan-Chama Project by limiting the senior reserved rights for the Fruitland and Hogback irrigation projects to existing acreage under the ditches without consideration of practicably irrigable acreage or possible expansion of the projects by 11,000 acres as described in Section 11(c) of Public Law 87-483. Further, the proposed settlement would provide for a total contract demand for water from Navajo Reservoir of about 400,000 acre-feet to 430,000 acre-feet per year, on average, as compared to 508,000 acre-feet per year of diversion for the Navajo Indian Irrigation Project authorized by Public Law 87-483, plus 23,000 acre-feet per year of diversion for the Hammond Irrigation Project, plus unspecified amounts for municipal and industrial use contracts. The Settlement Agreement would require the Navajo Nation to make application to the State Engineer to increase its diversions over 353,000 acre-feet per year to further develop its rights related to the Navajo Indian Irrigation Project if any portion of the rights is used for purposes other than to irrigate lands within that project or to supply water to the Fruitland and Hogback projects. Under the settlement, the State Engineer could only approve such an application if the increase in diversions would not impair existing water users, including the San Juan-Chama Project and other Navajo Reservoir water supply contractors.

The proposed settlement and settlement legislation thus enhances the substantial bargain previously obtained by the San Juan-Chama Project interests in 1962 as to the allocations of runoff above Navajo Reservoir between the project, Navajo Reservoir water supply contracts and the Fruitland and Hogback irrigation projects. Several substantial protections and benefits to the San Juan-Chama Project were negotiated in consideration of the comments provided on earlier drafts of the settlement by the City of Albuquerque through Mayor Martin Chavez and yourself.

I believe that the proposed settlement should be compared to a future without settlement, which is not the same as the status quo. Without settlement, the Navajo Nation will litigate its water rights claims, and the potential future demands on the runoff originating above Navajo Reservoir under a litigation scenario are greater than those that would occur under the proposed Settlement Agreement. Some of the protections afforded the San Juan-Chama Project by the proposed settlement also

would not be obtained through litigation. On balance, it is my opinion that this settlement ought to be embraced.

Please call John Whipple to discuss any questions or comments you may have regarding his enclosed memorandum, and, if necessary, have your attorneys call DL Sanders to discuss legal issues should you have any. Naturally, matters of public policy may be discussed with me. Do not hesitate to have Mayor Chavez call me should he so desire.

Sincerely,

John R. D'Antonio, Jr., P.E.
New Mexico State Engineer

copy: Senator Pete V. Domenici
Senator Jeff Bingaman
Congressman Tom Udall
Congresswoman Heather Wilson
Congressman Steve Pearce
Erik Webb
Nate Gentry
Mike Conner
Mayor Martin Chavez
Bill Hume
Steve Farris
Stanley Pollack
Jay Stein
Jim Dunlap
Estevan López

MEMORANDUM
March 22, 2005

To: Erik Webb, Office of Senator Pete Domenici
Nate Gentry, Senate Energy and Natural Resources Committee
Mike Connor, Senate Energy and Natural Resources Committee

Copy: Bill Hume, Office of Governor Bill Richardson
Steve Farris, Office of the Attorney General
John R. D'Antonio, Jr., State Engineer
DL Sanders, Chief Counsel, Office of the State Engineer
Jim Dunlap, Chairman, New Mexico Interstate Stream Commission
Estevan Lopez, Interstate Stream Engineer
Tanya Trujillo, General Counsel, Interstate Stream Commission

From: John Whipple, Staff, New Mexico Interstate Stream Commission

Subject: San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement: Issues Relating to the Entitlements, Availability and Sharing of Water for Navajo Reservoir Water Supply Contracts and the San Juan-Chama Project

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Contents

This memorandum provides information on the following topics relating to the water supplies for the San Juan-Chama Project and Navajo Reservoir contracts:

Executive Summary

This memorandum is the Interstate Stream Commission staff's response to the City of Albuquerque's request that the San Juan-Chama Project no longer be required to share in shortages on the San Juan River stream system under Section 11(a) of Public Law 87-483. The rights held by the Secretary of the Interior to supply water for the San Juan-Chama Project, the Navajo Indian Irrigation Project, the Hammond Irrigation Project, the Jicarilla Apache Nation settlement contract, and municipal and industrial water supply contracts contemplated by Public Law 87-483 were obtained under state law with a priority date of June 17, 1955. All uses of water made under the Secretary's rights are subject to provisions of state law and federal law, including interstate compacts.

Section 11(a) of Public Law 87-483 provides for Navajo Reservoir operations to cover the administration of runoff during the year as between the San Juan-Chama Project and the Navajo Reservoir water supply contractors on an annual basis, as opposed to the State Engineer each year administering pro-rata sharing of the runoff on a daily to weekly basis. The water allocation formula of Section 11(a) is applied only in years of shortage in the San Juan River Basin, and both the formula and the clarifications regarding its application that are proposed by the San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement favor the San Juan-Chama Project in such years. In addition, the proposed Settlement Agreement would reduce risks of shortage to the San Juan-Chama Project by limiting the amount of senior reserved water rights for the Fruitland and Hogback irrigation projects without consideration of the possible extension of the projects by 11,000 acres alluded to in Section 11(c) of Public Law 87-483, by limiting future Navajo Reservoir water supply contract deliveries in the aggregate to substantially less than the total amount currently authorized, and by settling the water rights claims of the Navajo Nation such that the Navajo Nation's uses fit within New Mexico's Upper Colorado River Basin Compact apportionment without displacing existing uses. Also, the San Juan River Basin Recovery Implementation Program provides Endangered Species Act compliance for San Juan-Chama Project diversions in the Basin, and the proposed Navajo-Gallup Water Supply Project is not proceeding at the expense of such compliance.

Background on City of Albuquerque's Request for San Juan-Chama Project

The City of Albuquerque seeks to change the bargain made in the Act of June 13, 1962, Public Law 87-483, for the San Juan-Chama Project to share in the available water supply above Navajo Dam with the Navajo Indian Irrigation Project, the Hammond Irrigation Project, and municipal and industrial contracts for water supply from Navajo Reservoir. In particular, the City of Albuquerque requests that the San Juan-Chama Project no longer be required to share shortages on the San Juan River stream system under Section 11 of the Act (see City of Albuquerque's Comments on Navajo-Gallup Settlement, p. 8, transmitted via letter dated January 15, 2004, from Martin Chavez to John D'Antonio). The City's request stems from its concerns regarding possible impacts that the proposed San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement might have on San Juan-Chama Project diversions, particularly as a result of authorizing the Navajo-Gallup Water Supply Project. The proposed Settlement Agreement, dated December 10, 2004, was approved by the Navajo Nation Council on December 29, 2004, and by the Interstate Stream Commission on January 12, 2005.

Water Rights for the Navajo Reservoir Supply and San Juan-Chama Project

New Mexico state water law is based on the prior appropriation doctrine. The rights held by the Secretary of the Interior to supply water for the Navajo Indian Irrigation Project, the San Juan-Chama Project, the Hammond Irrigation Project and other purposes contemplated by the Act of June 13, 1962, Public Law 87-483, carry a priority date of June 17, 1955 (Office of the State Engineer files; Hearing on San Juan-Chama Project, 94th Congress, 1st session, Senate Energy Research and Water Resources Subcommittee, June 12, 1975, p. 109). Notices of Intention under State Engineer File No. 2847 for the diversion of water by the San Juan-Chama Project and under State Engineer File No. 2849 for storage and diversion at Navajo Reservoir to make up to

630,000 acre-feet of water per year available to the Navajo Project for irrigation, power and domestic purposes were both filed with the State Engineer on June 17, 1955, as was the Notice of Intention under File No. 2848 for the diversion of 23,000 acre-feet per year of water for the Hammond Irrigation Project. The Navajo Indian Irrigation Project diversions made pursuant to File No. 2849 and the Hammond Irrigation Project diversions made pursuant to File No. 2848 are supplied water from Navajo Reservoir. Section 2 of Public Law 87-483 authorizes an average annual diversion of 508,000 acre-feet per year for the Navajo Indian Irrigation Project for irrigation of up to 110,630 acres of land.

The Notices of Intention for the Navajo Reservoir water supply (File No. 2849) and the San Juan-Chama Project (File No. 2847) were assigned to the United States Department of the Interior via letter dated September 27, 1957, from S.E. Reynolds to the Bureau of Reclamation. The Interstate Stream Commission at its September 5, 1957, meeting authorized assigning the state's Notices of Intention for the Navajo, San Juan-Chama and Hammond projects to the Department of the Interior, with the understanding that: (1) the state's priority dates would apply to the projects without prejudicing the ultimate development of either the Navajo or the San Juan-Chama projects; and (2) the Department would consider the desires of the state in developing and administering the waters of the San Juan River originating above Navajo Dam (see minutes of the September 5, 1957, meeting of the Commission, p. 3). The Interstate Stream Commission at its November 26, 1956, meeting adopted a Resolution on Navajo Irrigation and San Juan-Chama Projects requesting the Secretary of the Interior to complete studies for the projects with the understanding that: (1) the Navajo Indian Irrigation Project would not exceed 115,000 acres in size and the Initial Phase of the San Juan-Chama Project would not exceed an average annual diversion of 110,000 acre-feet per year; and (2) the authorizing legislation for the projects would provide that in the event of water shortage, the diversion to the two projects shall be in proportion to their diversion requirements (see minutes of the November 26, 1956, meeting of the Commission, p. 5, and the Resolution of the Commission adopted November 26, 1956).

In addition, the Secretary of the Interior holds rights under New Mexico State Engineer File No. 2917, with a priority date of September 16, 1957, for additional diversions of 225,000 acre-feet per year, on average, to be supplied from runoff originating above Navajo Dam and Navajo Reservoir storage for miscellaneous purposes, including irrigation, domestic, industrial, mining, municipal and power purposes. The Secretary also holds rights under State Engineer File No. 3215, with a priority date of December 16, 1968, for 500 cubic-feet-per-second (cfs) of diversion from the natural flow of the San Juan River and tributaries downstream from Navajo Dam, plus seepage and return flows, to be used for municipal and industrial purposes.[1] The Secretary's

[1] The Department of the Interior filed a Notice of Intention under State Engineer File No. 3215 on August 28, 1967, for the diversion of 200 cfs from the inflows to the San Juan River and tributaries downstream from Navajo Reservoir to supplement water supply from the reservoir for municipal and industrial uses. The Application for Permit under File No. 3215 filed by the Department of the Interior on December 16, 1968, was for the diversion of 500 cfs. Pursuant to these two filings, the Secretary of the Interior holds rights to divert 200 cfs with an August 28, 1967, priority date and 300 cfs with a December 16, 1968, priority date. However, the records of the Office of the State Engineer and the Interstate Stream Commission indicate that no other appropriations were made from the San Juan River stream system in New Mexico between these dates. Consequently, for ease of administration, the proposed Settlement Agreement would provide a December 16, 1968, priority date for all diversions made under File No. 3215.

rights under File No. 3215 to divert inflow to the San Juan River arising below Navajo Dam were acquired to supplement the water supply available to service Navajo Reservoir water supply contracts. The Secretary of the Interior's rights were acquired to provide for the development of New Mexico's Upper Colorado River Basin Compact apportionment.

The Secretary's rights for the Navajo Reservoir water supply would be used to service the water rights of the Navajo Nation for the Navajo Indian Irrigation Project and for the Navajo-Gallup Water Supply Project under the proposed San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement dated December 10, 2004. In addition, the Secretary's rights described above for both the Navajo Reservoir water supply and the San Juan-Chama Project are used to service much of the water rights of the Jicarilla Apache Nation pursuant to the Jicarilla Apache Tribe Water Rights Settlement Act, Public Law 102-441, approved by Congress in 1992. The Partial Final Judgment and Decree on the Water Rights of the Jicarilla Apache Tribe, entered in *New Mexico v. United States*, No. 75-184, District Court of San Juan County (San Juan River Adjudication suit) at paragraph 3 specifically provides that the Tribe's 1880 priority reserved water rights for 40,000 acre-feet of future uses from the Navajo Reservoir water supply and the San Juan-Chama Project are subordinated to its contract rights that are based on the rights held by the United States under state law with a priority date of June 17, 1955, and are subject to the sharing of shortages as provided in Section 11(a) of Public Law 87-483. The contract rights provided the Jicarilla Apache Nation by Public Law 102-441 include 33,500 acre-feet per year of diversion to be supplied from the Navajo Reservoir water supply and 6,500 acre-feet per year of delivery to be supplied from the San Juan-Chama Project. To the extent that the Jicarilla Apache Nation subcontracts most of its contract rights in the San Juan River Basin for uses that divert from the San Juan River below the Animas River confluence, and to the extent that the Navajo Nation would divert most of the water for its Navajo-Gallup Water Supply Project uses from the San Juan River below the Animas River confluence, inflows to the San Juan River below Navajo Dam that are available under the Secretary's rights pursuant to File No. 3215 can supply substantial portions of the diversion demands of these uses.

Public Law 87-483 Principles for Water Allocations in Years of Shortage

Section 11(a) of Public Law 87-483 provides a formula for allocating the supply available above Navajo Dam in the event of shortage. The formula allocates to the San Juan-Chama Project and all Navajo Reservoir water supply contracts in New Mexico the direct flow available to the United States at Navajo Dam based on the proportions of their normal diversion requirements to the total diversion requirement. This is consistent with the Interstate Stream Commission's Resolution on Navajo Irrigation and San Juan-Chama Projects adopted on November 26, 1956, and reflects the equal priority dates for the projects under state law. In addition, the formula makes pro-rata allocations to the Navajo Reservoir water supply contract uses in New Mexico that take delivery at or below the dam of the water previously stored in the reservoir and available for use. The formula is applied only in years when the Secretary of the Interior anticipates a shortage to the normal diversion requirements of the San Juan-Chama Project and the Navajo Reservoir water supply contracts after taking into account both the prospective runoff above Navajo Reservoir and the available water in storage in Navajo Reservoir.

The contractors of the San Juan-Chama Project water supply in the Rio Grande Basin have exclusive use of water previously stored in Heron Reservoir and the water stored in Heron Reservoir is not considered in the water allocation formula of Section 11(a) of Public Law 87-483. Thus, while shortages allocated to Navajo Reservoir water supply contract diversion requirements pursuant to Section 11(a), including to the Navajo Indian Irrigation Project, are actual shortages under water delivery contracts, shortages allocated to the San Juan-Chama Project diversion requirement from the San Juan River Basin pursuant to Section 11(a) do not necessarily result in actual shortages to San Juan-Chama Project water contract deliveries below Heron Dam depending upon Heron Reservoir storage. Further, while in years of shortage the San Juan-Chama Project may be allocated a reduced amount of annual diversion for the year from the San Juan River Basin pursuant to application of the formula of Section 11(a), the actual flows physically available for diversion by the project at the points of diversion can be significantly less than the reduced allocation, in which case the project operation and contract deliveries are unaffected by application of the formula provided in Section 11(a) of Public Law 87-483.

Section 11 of Public Law 87-483 also explicitly authorizes the Secretary of the Interior to enter into long-term contracts for the delivery of water from the Navajo Reservoir water supply in addition to providing water for the San Juan-Chama Project and the Navajo Indian Irrigation Project; provided, that the Secretary has determined by hydrologic investigation that sufficient water is reasonably likely to be available for use under the allocations made in Articles III and XIV of the Upper Colorado River Basin Compact to fulfill the contract and that Congress approves the contract. Section 11(a) requires that the Secretary not enter into contracts for a total amount of water beyond that which, in the Secretary's judgment, in the event of shortage, will result in a reasonable amount being available for the diversion requirements of the San Juan-Chama and Navajo Indian Irrigation projects. The standard of evaluation is not no occurrence of shortage (ie, zero shortage to the San Juan-Chama Project and the Navajo Indian Irrigation Project). Section 11 of Public Law 87-483 thus provides for sharing of the supply available to the United States at Navajo Dam with the San Juan-Chama Project, the Navajo Indian Irrigation Project, the Hammond Irrigation Project and all contracts for water for any other purposes involving waters of the San Juan River and its tributaries originating above Navajo Reservoir to the use of which the United States is entitled.[2]

The provisions of Section 11 of Public Law 87-483 were written and enacted upon the initiative of representatives of the Navajo Nation with the objective to maximize the amount of the waters of the San Juan River that could be used for industrial projects, including thermal electric power generation. By 1958, the Navajo Nation recognized a need for industrial development to improve the standard of living of its members, and water supply studies made in 1958 during the formulation of Public Law 87-483 indicated that, if industrial contracts entered after enactment of Public Law 87-483 were assigned a priority date later than the priority dates of the San Juan-Chama and Navajo

[2] The Hammond Conservancy District holds rights for the diversion of about 536 acre-feet per year under State Engineer File No. 2475, with a priority date of June 1, 1936, for irrigation use on the Hammond Irrigation Project and domestic use, and rights for the diversion of about 3,187 acre-feet per year under State Engineer File No. 2593(1), with a priority date of March 12, 1947, for irrigation use on the project and municipal, domestic, industrial and miscellaneous uses. The District's rights are in addition to the rights for the project held by the Secretary of the Interior under State Engineer File No. 2848, and are not subject to sharing of shortages under Section 11(a) of Public Law 87-483.

Indian Irrigation projects, the amount of water that would be available for industrial use with reasonable shortages would be much reduced (Hearing on San Juan-Chama Project, 94th Congress, 1st session, Senate Energy Research and Water Resources Subcommittee, June 12, 1975, p. 117). A future municipal and industrial water supply project to serve Navajo Nation and City of Gallup water needs also has been considered beginning as early as the mid 1950s. Today, the Navajo Nation has identified a more pressing need for a moderately sized and renewable municipal, industrial and domestic water supply in the form of the Navajo-Gallup Water Supply Project to raise the standard of living of its members, as opposed to a large industrial water supply. The proposed San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement would provide for a new Navajo Reservoir water supply contract only for Navajo Nation municipal, industrial and domestic uses under the Navajo-Gallup Water Supply Project, which would share in shortages in the Navajo Reservoir water supply in accordance with Section 11(a) of Public Law 87-483.

Recent water supply studies using hydrology for the period 1929-1993 suggest that under the proposed Settlement Agreement, the water allocation formula of Section 11(a) of Public Law 87-483 rarely would need to be applied. The water supply modeling of the San Juan River Basin that has been performed for the San Juan River Basin Recovery Implementation Program (which was authorized by Public Law 106-392) and for the Bureau of Indian Affairs' 1999 Biological Assessment for the Navajo Indian Irrigation Project suggest that there would be no physical shortages under Navajo Reservoir water supply contracts with operation of Navajo Dam to meet the Recovery Implementation Program's flow recommendations for endangered fish habitat in the San Juan River and to meet the Navajo Reservoir water supply contract deliveries at full build-out and water usage. The same water supply modeling with the addition of the Navajo-Gallup Water Supply Project indicates that some shortages to contract deliveries could occur if the flow recommendations are not inviolate and if all other existing and authorized water uses in the Basin in Colorado and New Mexico are fully utilized (see the Bureau of Reclamation's September 2004 Biological Assessment for the Navajo-Gallup Water Supply Project).[3] But, the modeling for the Navajo-Gallup Water Supply Project Biological Assessment included about 643,400 acre-feet per year of at-site depletions in New Mexico, as compared to the modeling for the Navajo Indian Irrigation Project Biological Assessment that included about 610,700 acre-feet per year of at-site depletions in New Mexico. The schedule of anticipated depletions in the San Juan River Basin in New Mexico prepared for planning purposes by the Interstate Stream Commission based on realistic assumptions of water use indicates that at-site depletions in the Basin in New Mexico are expected to average about 609,000 acre-feet per year with the proposed San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement (see John Whipple's memorandum to Philip Mutz on Revised

[3] The Fish and Wildlife Service's position and practice in the Recovery Implementation Program is that the flow recommendations are not inviolate and also are subject to adaptive management. For example, during the continuation of extreme drought conditions through 2003 and 2004, the Fish and Wildlife Service accepted Navajo Dam operations that provided minimum base flows in the critical habitat reach of the San Juan River for maintaining endangered fish habitat that were less than the recommended target base flows in order to conserve water for meeting water use demands in New Mexico from Navajo Reservoir and future years' endangered fish flow needs. The San Juan River Basin hydrology model does not incorporate real-time adaptive management considerations and consequent adjustments to fish flow demands and Navajo Reservoir operations during extreme hydrologic conditions.

Upper Colorado River Basin Depletion Schedule for New Mexico).[4] Also, the Biological Assessment for the Navajo-Gallup Water Supply Project indicates that the Navajo Nation may reduce use on the Navajo Indian Irrigation Project to offset new depletions of streamflow occurring as a result of its Navajo-Gallup Water Supply Project diversions to avoid impinging upon the flow recommendations, or a reasonable alternative thereto, if necessary to avoid jeopardy to the continued existence of endangered fish species in the San Juan River.[5]

Navajo Reservoir Contract Deliveries under the Navajo Water Rights Settlement

Under the proposed San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement, the total amount of authorized demand on the Navajo Reservoir water supply would be substantially reduced. Section 2 of Public Law 87-483 authorized the irrigation of 110,630 acres on the Navajo Indian Irrigation Project, and the proposed Settlement Agreement would confirm the Navajo Nation's right to irrigate that amount of acreage on the project. With the project now built for sprinkler irrigation instead of flood irrigation and with consolidation of the acreage further east than was originally planned, the Bureau of Indian Affairs, in its 1999 Biological Assessment for the Navajo Indian Irrigation Project, estimated that the diversion requirement to irrigate the total project acreage will average about 337,500 acre-feet per year assuming that each acre is irrigated each year and that further water conservation measures are implemented as currently planned, notwithstanding the authorization in Public Law 87-483 to divert an average of up to 508,000 acre-feet per year for the principal purpose of irrigation of the project lands. The amount of diversion required could change depending upon project conditions. For example, if planned water management changes and water conservation measures are not implemented or fail to result in as much savings of water as is anticipated, then the diversion requirement to irrigate all project lands each year could be as high as about 372,000 acre-feet per year, according to the 1999 Biological Assessment for the project. A 1974 opinion of the Deputy Secretary of the Office of the Solicitor

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[4] The depletions used in the San Juan River Basin hydrology model do not consider compact apportionments to each Upper Basin state or water rights administration in New Mexico. The modeling uses conservatively high assumptions of at-site depletions in the Basin in New Mexico for purposes of being conservative in evaluating potential impacts on endangered fish habitat of proposed water development projects and water management practices, but does not necessarily reflect actual or anticipated uses of water, water rights or compact administration. The hydrology model does not model the entire Colorado River Basin, and consequently, cannot be used to determine if and when any shortages might be imposed on uses in New Mexico, including diversions under the San Juan-Chama Project and Navajo Reservoir water supply contracts, pursuant to Article IV of the Upper Colorado River Basin Compact. A detailed comparison of modeled depletions and anticipated depletions in New Mexico is provided in the Interstate Stream Commission's Responses to Public Comments Received on Drafts of the San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement, Appendix B.

[5] The Biological Assessment for the Navajo-Gallup Water Supply Project and the San Juan River Basin hydrology model assume an average annual baseline depletion of 280,600 acre-feet per year for the Navajo Indian Irrigation Project, including depletions relating to the build-up of ground water storage underneath project lands resulting from deep percolation of applied irrigation water. Under the proposed San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement, the Navajo Nation would be limited to an average annual depletion of 270,000 acre-feet per year for the Navajo Indian Irrigation Project. The Navajo Nation may agree to further reductions in use on the Navajo Indian Irrigation Project under certain circumstances in order for the Navajo-Gallup Water Supply Project to proceed in compliance with the Endangered Species Act.

referred to a diversion requirement of 370,000 acre-feet per year for the project under the sprinkler design.[6]

The proposed Settlement Agreement recognizes that beneficial use is the limit to the right to use water in New Mexico, including the rights that would be adjudicated to the Navajo Nation. Based on the 1999 Biological Assessment for the Navajo Indian Irrigation Project, the amount of diversion required for beneficial consumptive uses by the project currently is anticipated to average between 337,500 acre-feet per year and 372,000 acre-feet per year if all 110,630 acres were to be irrigated each year, depending on the implementation and effectiveness of planned water management changes and water conservation measures. The difference between the 508,000 acre-feet per year diversion authorized by Public Law 87-483 for the flood irrigation project that was originally planned and the estimated average annual diversion required for the sprinkler irrigation project that is actually constructed is not separable from the consumptive use right for the project, and therefore, is not transferable by itself to other uses. Under the Settlement Agreement, the Navajo Nation would be able to change the purpose or place of use of its rights for the project on Navajo trust lands without State Engineer approval so long as the total average diversion for all uses under said rights in the aggregate does not exceed 353,000 acre-feet per year, and any such changes to other uses must not impair other water rights in the Basin in New Mexico. This amount of diversion assumes that either: (1) planned water conservation measures on the project are about half as effective as anticipated; or (2) water conservation measures do not occur or do not realize any benefits, and about 5 percent of the project acreage, on average, is fallow. If the rights under the project are not used solely for irrigation, the Navajo Nation under the Settlement Agreement would have to file application with the State Engineer to increase the total average diversion by all uses under the water rights associated with the project above 353,000 acre-feet per year, and approval of such application would be subject to not impairing existing uses, including the San Juan-Chama Project and other Navajo Reservoir water supply contracts.

Under the proposed Settlement Agreement, the Navajo Nation's rights to water from the Navajo Reservoir water supply would include rights for the Navajo Indian Irrigation Project and rights for the diversion of up to 22,650 acre-feet, and the depletion of up to 20,780 acre-feet, in any one year from the San Juan River for uses in New Mexico under the Navajo-Gallup Water Supply Project. If rights are obtained within the State of Arizona for the use in the vicinity of Window Rock as part of the Navajo-Gallup Water Supply Project of 6,410 acre-feet of water per year under Arizona's compact apportionment, the proposed Settlement Agreement then would provide for a total diversion of up to 29,060 acre-feet in any year from the San Juan River in New Mexico for Navajo Nation uses under the Navajo-Gallup Water Supply Project.[7] Planning

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[6] The Navajo Nation under the proposed Settlement Agreement would be able to reuse irrigation tail water or other wastewater, including that collected by pumping ground water underlying the Navajo Indian Irrigation Project to prevent waterlogging damage to project fields. To the extent that the Navajo Nation reuses irrigation tail water or waste water on the Navajo Indian Irrigation Project, the entitlement of the Navajo Nation to divert water from Navajo Reservoir to supply the current beneficial use needs of the project would be reduced, as would return flows to the San Juan River available to meet downstream uses.

[7] In a year of shortage, the demand for water from Navajo Reservoir for the Navajo-Gallup Water Supply Project uses in Arizona would be fully curtailed prior to allocating any shortage to the normal diversion

documents for the project indicate that of the 29,060 acre-feet of diversions for Navajo Nation uses, about 3,800 acre-feet would be diverted directly from Navajo Reservoir through Navajo Indian Irrigation Project facilities and about 25,260 acre-feet would be diverted at the Public Service Company of New Mexico's San Juan Generating Station diversion weir on the San Juan River near Kirtland. In addition, the City of Gallup's 7,500 acre-feet of water per year from the project also would be diverted at the San Juan Generating Station weir, and it is anticipated that Gallup's project water would be delivered under a subcontract with the Jicarilla Apache Nation.[8] The 32,760 acre-feet per year of project diversions from the San Juan River near Kirtland would be supplied by a combination of inflow arising below Navajo Dam and releases from Navajo Reservoir. Because inflows below Navajo Dam will be available much of each year to meet the diversion needs of the project at Kirtland, the demand at Kirtland for water from Navajo Reservoir for Navajo Nation and City of Gallup uses under the project may average approximately one-half of the total demand at Kirtland for project water, or less (ie, less than about 16,000 acre-feet per year).

The total diversion demand from the Navajo Reservoir water supply under existing long-term contracts is anticipated to amount to up to about 394,050 acre-feet per year, which is substantially less than the total diversion demand from the Navajo Reservoir supply originally contemplated by the Interstate Stream Commission and the Secretary of the Interior. The anticipated diversion demand includes: (1) up to about 337,500 acre-feet per year, on average, for the Navajo Indian Irrigation Project as redesigned for sprinkler irrigation if each project acre is irrigated each year, assuming the anticipated water conservation measures are implemented and effective; (2) 23,000 acre-feet for the Hammond Irrigation Project; (3) 33,500 acre-feet for the Jicarilla Apache Nation under its settlement contract approved by Public Law 102-441, which amount may be diverted above, at or below Navajo Reservoir; and (4) 50 acre-feet for Williams Gas Processing. The Public Service Company of New Mexico also has a contract for water from the Navajo Reservoir water supply for use at the San Juan Generating Station that expires at the end of 2005, after which the Company will receive at its diversion weir on the San Juan River near Kirtland 16,200 acre-feet of water per year through 2027 delivered under subcontract with the Jicarilla Apache Nation pursuant to its settlement contract. The Navajo-Gallup Water Supply Project diversion demand for Navajo Nation uses of 29,060 acre-feet per year, including 6,410 acre-feet for use in Arizona, but excluding 8,700 acre-feet per year for Jicarilla and Gallup uses to be supplied under the Jicarilla Apache Nation settlement contract, would bring the total anticipated demand to about 423,110 acre-feet per year. Assuming that about one-half of the Public Service Company's annual diversion demand (about 8,000 acre-feet per year) can be met from inflows to the San Juan River arising below Navajo Dam, and considering also that much of the Navajo-Gallup Water Supply Project demand would likely be met from inflows

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requirements of the San Juan-Chama Project or Navajo Reservoir water supply contract uses in New Mexico consistent with Article IX of the Upper Colorado River Basin Compact.

[8] The Jicarilla Apache Nation's uses under the Navajo-Gallup Water Supply Project would be supplied by direct diversion of 1,200 acre-feet from Navajo Reservoir. The uses of water under the Navajo-Gallup Water Supply Project by the Jicarilla Apache Nation and by the City of Gallup would be made pursuant to the rights of the Jicarilla Apache Nation under the settlement contract approved by the Jicarilla Apache Tribe Water Rights Settlement Act, Public Law 102-441. The City of Gallup would be required to obtain State Engineer and Interstate Stream Commission approval to supply its uses under the project using any source other than a subcontract with the Jicarilla Apache Nation.

arising below Navajo Dam, the demand for water from above Navajo Dam would be about 398,150 acre-feet per year. The total amount could increase by as much as 34,500 acre-feet per year if no water management improvements and no water conservation measures were implemented or realized on the Navajo Indian Irrigation Project, though this would require re-consultation with the Fish and Wildlife Service under Section 7 of the Endangered Species Act regarding the potential impacts of the project on endangered fish populations and their critical habitat in the San Juan River.

The proposed Settlement Agreement actually reduces risk of shortage to the San Juan-Chama Project and its contractors to a level lower than originally authorized because the total delivery demand from Navajo Reservoir storage pursuant to all Navajo Reservoir water supply contracts would not be expected to exceed approximately 400,000 to 430,000 acre-feet per year under the settlement, as compared to 508,000 acre-feet per year of diversion solely for the Navajo Indian Irrigation Project authorized by Public Law 87-483, plus 23,000 acre-feet per year of diversion for the Hammond Irrigation Project, plus unspecified municipal and industrial contracts such as the contracts for the Jicarilla Apache Nation and the Public Service Company of New Mexico.[9] Under the proposed Settlement Agreement, the provisions of Section 11 of Public Law 87-483 would be amended to require that any subsequent contracts for new uses of water from the Navajo Reservoir water supply would be subject to the availability of water within New Mexico's Upper Colorado River Basin Compact apportionment and also to not impairing existing water uses, including existing water supply contracts and the San Juan-Chama Project. The San Juan-Chama Project and Navajo Reservoir contracts approved by Congress prior to or by the proposed San Juan River Basin in New Mexico Water Projects and Settlement Act would not be required to share in shortages with any Navajo Reservoir water supply contracts that may be approved subsequent to the proposed Act (see Appendix 3 to the proposed Settlement Agreement, Section 403(c)). Transfers of rights from irrigation on the Navajo Indian Irrigation Project to other purposes, including transfers that would result in an increased diversion demand under the project, also would be subject to not impairing existing water uses in New Mexico, including uses under the San Juan-Chama Project. Further, in years when physical conditions are such that shortages are anticipated and allocated to the San Juan-Chama Project diversion demand and to the Navajo Reservoir water supply contractors pursuant to section 11 of Public Law 87-483, it is likely that in most such years the flows physically available for diversion at the San Juan-Chama Project points of diversion will be less than the water allocated to the project under the legislation and the allocation formula of Section 11 will have no effect on project diversions.

Navajo Nation San Juan River Water Rights and Risks without Settlement

Non-Navajo water users in the San Juan River Basin at times tend to evaluate the proposed San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement on the basis of comparing a future with the settlement against the status quo.

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[9] The delivery demands under Navajo Reservoir water supply contracts include demands for refilling re-regulation storage facilities on the Navajo Indian Irrigation Project and at the San Juan Generating Station, but do not include Navajo Reservoir evaporation. Navajo Reservoir evaporation is anticipated to average about 27,700 acre-feet per year based on the September 2004 Biological Assessment for the Navajo-Gallup Water Supply Project that factors in both the project demand and the operation of Navajo Reservoir in accordance with the preferred alternative described in the September 2002 draft Navajo Reservoir Operations Environmental Impact Statement.

However, the status quo will not continue indefinitely and is not the baseline to which the proposed Settlement Agreement should be compared. The water rights claims of the Navajo Nation and others will be adjudicated in the ongoing San Juan River Adjudication suit. The proposed Settlement Agreement should be evaluated on the basis of comparing a future with the settlement against a future without settlement, which involves litigation risks associated with the water rights claims of the Navajo Nation and its members.

Pursuant to *Winters v. United States*, 207 U.S. 564 (1908), the Navajo Nation can claim federal reserved water rights to provide for a permanent homeland for the Navajo people. In *Arizona v. California*, 373 U.S. 546 (1963), the United States Supreme Court adopted the "practicably irrigable acreage" standard for quantifying an Indian reserved water right based on the quantity of land that can be practicably or feasibly irrigated on an Indian reservation. The Arizona Supreme Court adopted a more modern approach in the case of *In re General Adjudication of the Gila River System*, 35 P.3d 68 (Ariz. 2001). In that case, the Arizona Supreme Court retreated from the "practicably irrigable acreage" standard as too narrow and not necessarily meeting the purpose of a reservation of creating a permanent homeland; instead, the court adopted a balancing test that takes the facts of each tribe into account.

Non-Navajo water users in the Basin argue that by enactment of Public Law 87-483, the Navajo Nation waived some or all of its *Winters* rights claims.[10] In testimony to Congress, the chairman and executive director of the Navajo Tribal Council stated that the Navajo Tribe consented to all uses from Navajo Reservoir, including future municipal and industrial uses, having an equal priority, and that the Navajo Tribe relinquished its rights under the *Winters* doctrine for the water necessary to irrigate the Navajo Indian Irrigation Project (Hearing on H.R. 2352, 2494 and S. 72, 86th Congress, 2nd Session, May 20, 1960, pp. 64-65; Hearing on S. 107, 87th Congress, 1st session, March 15, 1961, p. 36). The Navajo Nation's view is that the Navajo Tribe agreed that it would not assert a preferential or reserved right priority for water to be supplied from Navajo Reservoir storage for its irrigation, municipal and industrial uses supplied by the reservoir. Section 11(a) of Public Law 87-483 provides for water contracts for Navajo municipal and industrial uses of the Navajo Reservoir water supply in addition to a contract for the diversion of up to 508,000 acre-feet per year authorized by Section 2 of Public Law 87-483 for the Navajo Indian Irrigation Project, subject to sharing of shortages between the San Juan-Chama Project and all Navajo Reservoir water supply contracts. Section 11(c) provides that the contracting and shortage sharing provisions of Section 11(a) shall not be applicable to the water requirements to irrigate up to a particular amount of acreage on the Fruitland-Cambridge and Hogback-Cudei irrigation projects, which are senior direct-flow uses. Nevertheless, Section 13(c) of Public Law 87-483 provides that "no right or

[10] The City of Albuquerque argues that Navajo Tribal Resolution No. CJ-1-55 on Colorado River Storage Project and Participating Projects is evidence that the Navajo Nation waived its reserved rights claims (see City of Albuquerque's Comments on Navajo-Gallup Settlement, p. 1, transmitted via letter dated January 15, 2004, from Martin Chavez to John D'Antonio). Resolution No. CJ-1-55, approved January 14, 1955, resolves that: "1. The Navajo Tribal Council, on behalf of the Navajo Tribe, hereby respectfully petitions the Congress of the United States to adopt the proposed legislation authorizing the construction of the Colorado River [Storage] Project and Participating Projects including the Navajo Project, thereby implementing and aiding in a vital and effective manner the established policy of Congress set forth in the Navajo-Hopi Rehabilitation Act of 1950. 2. The Council, on behalf of the Navajo people, respectfully suggests to Congress that the passage of said Act is the only possible method of fulfilling to a large extent at this late date the aforesaid commitment in the Treaty of 1868 (which is still the law of the land) by making available a substantial amount of farm lands on the Navajo Reservation."

claim of right to the use of the waters of the Colorado River system shall be aided or prejudiced by this Act, ..." Determining the amount of water rights that the Navajo Nation might obtain through litigation in the San Juan River Adjudication suit is difficult.[11]

As part of resolving the Navajo Nation's claims, the proposed Settlement Agreement would provide that the Navajo Nation's water rights for diversions and uses in New Mexico under the Navajo-Gallup Water Supply Project would have an 1868 reserved right priority for the municipal, domestic and other needs of its homeland, but that the project uses would be served and administered under New Mexico State Engineer File No. 2849 with a priority date of June 17, 1955, for water originating in the drainage of the San Juan River above Navajo Dam, and File No. 3215 with a priority of December 16, 1968, for inflow to the San Juan River arising below Navajo Dam. Under the proposed Settlement Agreement, the Navajo Nation would agree that contract deliveries to the project would share shortages pursuant to Section 11(a) of Public Law 87-483. The agreement that the reserved rights for the project be served from the Secretary of the Interior's rights is in exchange for the benefits of federal wet water development to put the rights to use, including for receipt of water from Navajo Reservoir storage, and is consistent with the provisions of Section 11(a) of Public Law 87-483.[12] The Navajo Nation could assert an 1868 reserved right priority for water for the Navajo Indian Irrigation Project and the Navajo-Gallup Water Supply Project only if the ability to receive water for the projects under the proposed Settlement Contract is irretrievably lost, such as due to removal of Navajo Dam. It is not the intent of the proposed Settlement Agreement that the subordination of the reserved right priority be nullified on an acre-foot per annum basis on account of any shortages to the Navajo Reservoir water supply.

The proposed Navajo-Gallup Water Supply Project was sized based on year 2040 projections of municipal, domestic and industrial water demands within the project service area that would not be met from the Navajo Nation's diversions under the Animas-La Plata Project or by ground water diversions. Under the proposed Settlement Agreement, the Navajo Nation would be entitled to divert 29,060 acre-feet per year, and to deplete 27,190 acre-feet per year, for its uses under the project in New Mexico and Arizona; provided, that the 6,410 acre-feet per year to be provided for use in Arizona can be met from apportionments of Colorado River System water made to the State of Arizona. The Navajo Nation also would have rights pursuant to the Animas-La Plata

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[11] A 1980 law review article by Charles DuMars and Helen Ingram, *Congressional Quantification of Indian Reserved Water Rights: A Definitive Solution or a Mirage?*, Natural Resources Journal, Vol. 20 at 17 (1980), presents arguments on both sides of the debate, providing a compelling case for settlement of the issues.

[12] The agreement that the reserved rights for the Navajo Nation's uses in New Mexico under the Navajo-Gallup Water Supply Project are to be served by the Secretary of the Interior's rights is consistent with the subordination of the Jicarilla Apache Nation's reserved rights for future uses under its settlement contract approved by Public Law 102-441. The Navajo Nation made the bargain in support of Public Law 87-483 that all water uses supplied from the Navajo Reservoir water supply would be served with an equal priority, as opposed to the Navajo Nation asserting a preferential reserved right under the *Winters* doctrine for its uses of the Navajo Reservoir water supply (Hearing on H.R. 2352, 2494 and S. 72, 86th Congress, 2nd Session, May 20, 1960, p. 64). Section 11(c) of Public Law 87-483, however, exempts the Fruitland and Hogback irrigation projects from the requirements of Section 11(a). The Navajo Nation has reserved rights to use the direct flow of the San Juan River for the irrigation uses on the Fruitland and Hogback projects that are senior in priority to the June 17, 1955, priority date for storage of water in Navajo Reservoir.

Project water allocations made by the Colorado Ute Settlement Act Amendments of 2000, Public Law 106-554 (Appendix D), to the diversion of 4,680 acre-feet per year, and the depletion of 2,340 acre-feet per year, of water from the Animas River for municipal, domestic and industrial uses, which would be served from the Secretary of the Interior's rights under New Mexico State Engineer File No. 2883 with a priority date of May 1, 1956. In addition, the Navajo Nation would have reserved rights to the diversion of up to 2,600 acre-feet per year, and the depletion of 1,300 acre-feet per year in New Mexico, of water from the San Juan River for municipal, domestic and industrial uses, and to the diversion of up to 2,000 acre-feet of ground water in the San Juan River Basin in New Mexico for such uses.

In comparison, the March 2001 Technical Memorandum on the Navajo-Gallup Water Supply Project prepared by the Navajo Nation Department of Water Resources and others at page 3 indicates that the Navajo Nation's demand for water from the San Juan River to meet its projected municipal and domestic water needs solely within the portion of the project service area within the San Juan River Basin in New Mexico amounts to about 23,700 acre-feet of river depletion by the year 2060. A water needs assessment prepared by a consultant to the Navajo Nation reportedly projected the Navajo municipal and domestic water demand from the San Juan River to be about 82,400 acre-feet per year of diversion, and about 51,100 acre-feet per year of depletion, by the year 2112. The water needs assessment also identified a possible use for diversion of 20,000 acre-feet of water per year, with a depletion of 16,000 acre-feet per year, for a new thermal electric power plant and to utilize coal resources on Navajo lands. Without settlement, the Navajo Nation could claim reserved rights for municipal, domestic, industrial and other purposes for estimated water demands in the San Juan River Basin as may be needed to provide for a permanent homeland. Such claims could compete for water with the other contract uses of the Navajo Reservoir water supply and the San Juan-Chama Project even if the priorities were subordinated to share in shortages. Under the proposed Settlement Agreement, the Navajo Nation's municipal and domestic use claims for water in and from the San Juan River Basin in New Mexico are resolved and the Navajo Nation may transfer the purpose and place of use of its water rights and build such water distribution facilities as are necessary to meet its future demands in New Mexico for municipal, domestic and industrial water supply that are not otherwise satisfied by the municipal, domestic and industrial rights provided in the settlement or by implementation of water conservation strategies.[13]

The proposed Settlement Agreement also would resolve a dispute as to whether the Navajo Nation can call on the full 508,000 acre-feet per year of diversion authorized by Public Law 87-483 for the Navajo Indian Irrigation Project. Under the proposed Settlement Agreement, the Navajo Nation would be entitled to irrigate the authorized acreage of 110,630 acres of land on the Navajo Indian Irrigation Project. The Navajo Nation would be entitled to divert between 337,500 acre-feet per year and 372,000 acre-

[13] The water demand projections for the Navajo Nation used in the planning of the Navajo-Gallup Water Supply Project assume a population growth rate of 2.48 percent per year and a per capita water use rate of 160 gallons per capita per day, which use rate correlates with anticipated community growth and improved standard of living (Technical Memorandum on the Navajo-Gallup Water Supply Project, Navajo Nation Department of Water Resources and others, March 2001, pp. 29-30). To the extent that the Navajo Nation's future growth and water use rates within the project service area in New Mexico are less than those assumed, the Navajo Nation's water rights for project uses will meet its municipal, industrial and domestic water demands in New Mexico farther into the future.

feet per year to irrigate 110,630 acres, and to deplete 270,000 acre-feet per year, on average. Further, the Navajo Nation could not use project water for other purposes if to do so would impair existing water uses in the San Juan River Basin in New Mexico, and would have to make application with the State Engineer to divert more than 353,000 acre-feet per year if any portion of the water rights for the Navajo Indian Irrigation Project are used for non-irrigation purposes. Without settlement, the Navajo Nation could argue that Public Law 87-483 and the existing water delivery contract for the Navajo Indian Irrigation Project grant the Navajo Nation a right to divert 508,000 acre-feet per year, and that the Navajo Nation could use water not needed to irrigate project lands for other purposes without making application to the State Engineer. Also, the Navajo Nation might assert that to fully exercise its right to irrigate 110,630 acres on the Navajo Indian Irrigation Project, it needs to be able to deplete 280,600 acre-feet of water per year based on estimates made in the Bureau of Indian Affairs' 1999 Biological Assessment for the project.[14] In effect, the proposed Settlement Agreement would impose a practical reduction of 155,000 acre-feet per year on the diversion for the Navajo Indian Irrigation Project.

The proposed Settlement Agreement does not recognize any practicably irrigable acreage claims for the Navajo Nation. The provisions of Section 11(c) of Public Law 87-483 indicate that the Navajo Nation did not waive reserved right claims to waters originating above Navajo Reservoir for irrigation uses on the Fruitland-Cambridge and Hogback-Cudei irrigation projects. The proposed Settlement Agreement would provide the Navajo Nation with a federal reserved right with an 1868 priority date to irrigate a total of 12,165 acres on the Fruitland and Hogback irrigation projects combined based on the existing acreages of the projects that are within the current service areas of the ditches and allotted by the Navajo Nation to its members for farming. The Navajo Nation would have the right to divert a total of 66,730 acre-feet per year, and to deplete 29,250 acre-feet per year, on both the Fruitland-Cambridge and Hogback-Cudei projects combined, with a maximum daily combined diversion rate of 321 cfs.[15]

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[14] The Bureau of Indian Affairs in 1999 pursuant to Section 7 of the Endangered Species Act consulted with the Fish and Wildlife Service on completion of the Navajo Indian Irrigation Project. The consultation was for a long-term average annual diversion of 337,500 acre-feet per year for the project, with a near-term average annual depletion of the San Juan River of 280,600 acre-feet per year until return flows from deep percolation reach equilibrium conditions, after which the long-term average annual depletion would be 270,000 acre-feet per year. The Bureau of Indian Affairs or the Bureau of Reclamation would have to consult with the Fish and Wildlife Service under Section 7 of the Endangered Species Act prior to increasing diversions above an average of 337,500 acre-feet per year under the rights for the project. The Navajo Nation under the Settlement Agreement would have to schedule bringing lands into production and cropping patterns on the project in a manner so as to not exceed a maximum depletion of the San Juan River of 310,500 acre-feet in any one year or 270,000 acre-feet per year, on average, in any period of ten consecutive years, regardless of the Biological Opinion for the project that otherwise might provide an allowance for project depletions to average 280,600 acre-feet per year for many decades.

[15] The irrigation diversion rates and annual amounts of diversion provided by the proposed Settlement Agreement for the Fruitland-Cambridge and Hogback-Cudei irrigation projects are subject to increase depending on the quantification standard the court adopts in the San Juan River Adjudication suit for quantifying irrigation diversion rates and project diversion requirements for other irrigation ditches in the San Juan River Basin. Also, the annual diversion amounts for the Fruitland and Hogback irrigation projects would not be enforced unless annual project diversion requirements are enforced for other irrigation ditches in the Basin.

Section 11(c) of Public Law 87-483 provides that the shortage sharing principles and allocation formula of Section 11 do not apply to the water requirements to irrigate lands under the existing Fruitland-Cambridge and Hogback-Cudei Indian irrigation projects or to the water required in connection with the extension of the irrigated acreages of the Fruitland and Hogback irrigation projects in a total amount of approximately 11,000 acres. The Congressional record makes reference to a total combined acreage for the projects of 26,000 acres after expansion (see 85th Congress, 2nd session, Senate, Report No. 2198, August 5, 1958, p. 18). Thus, without settlement, the Navajo Nation might claim federal reserved rights for the irrigation of an additional 13,800 acres of land under the Fruitland and Hogback irrigation projects over and above the water right acreage of 12,165 acres provided by the proposed Settlement Agreement, which would about double the maximum daily combined diversion rate required for the projects to about 650 cfs or more. Such a large daily diversion demand with an early priority date could, if fully utilized, shut down other water users, including cities and power plants in the San Juan Basin, for a significant portion of the summer and fall in many years after the snowmelt runoff recedes to low base flows in the San Juan River, and also would reduce the supply available to the United States each spring during the snowmelt runoff period for storage in Navajo Reservoir to meet diversion demands under Navajo Reservoir water supply contracts. Pursuant to Public Law 87-483, a shortage in any year to the Navajo Reservoir water supply contracts would trigger an allocation that year of the available runoff above Navajo Reservoir between the water deliveries under the contracts and the normal diversion requirement for the San Juan-Chama Project.

The proposed Settlement Agreement also provides that the Navajo Nation's water rights for tributary uses would be determined by hydrographic survey of historic and existing uses, with no recognition of practicably irrigable acreage or other future use reserved right claims other than 2,000 acre-feet for domestic groundwater uses. Also, any rights of the Navajo Nation or the United States under licenses for industrial uses at the Shiprock Helium Plant under New Mexico State Engineer File No. 2472 and for uranium ore processing and site reclamation uses at and near Shiprock under State Engineer File Nos. 2807 and 2875 would be cancelled.[16]

The amounts of water that would be adjudicated to the Navajo Nation without settlement cannot be known at this time. However, without settlement, the Navajo Nation might conceivably claim water rights for additional uses in an aggregate amount on the order of 100,000 acre-feet over and above the amounts provided by the proposed Settlement Agreement. There is not water available within the apportionment made to the State of New Mexico by the Upper Colorado River Basin Compact to supply such claims for additional amounts of water without taking the water away from existing water uses in the San Juan River Basin. There is a litigation risk that water right claims could result in rights being adjudicated to the Navajo Nation in an aggregate amount that would cause a reduction in non-Navajo uses in the San Juan River Basin in New Mexico,

[16] The United States Department of the Interior under State Engineer File No. 2472 appropriated 1,448 acre-feet per year with a 1944 priority for use at the Navajo Helium Plant at Shiprock, which has been dismantled. Kerr-McGee Oil Industries under State Engineer File No. 2807 appropriated 500 acre-feet per year with a 1954 priority and under State Engineer File No. 2875 appropriated 700 acre-feet per year with a 1957 priority for use in uranium ore processing near Shiprock. Changes of ownership for the licenses issued to Kerr-McGee pursuant to the latter two filings were filed in the name of the Navajo Nation in 1976, and little use has been made under the licenses in the past couple decades. The licenses contain no return flow requirements.

including reductions in water supply available to the United States under the June 17, 1955, priority of State Engineer File Nos. 2847, 2848 and 2849 to service the San Juan Chama Project, the Hammond Irrigation Project, and the Navajo Indian Irrigation Project and other Navajo Reservoir water supply contracts. By contrast, the Interstate Stream Commission staff believes that under the proposed Settlement Agreement, the quantifications of rights to be decreed to the Navajo Nation fit within the amount of water available to New Mexico under the compact without displacing other water users.

Further, substantive measures to protect existing water uses in the San Juan River Basin in New Mexico were negotiated as part of the proposed Settlement Agreement. The measures provide some assurance and protection against possible reductions in non-Navajo water uses that otherwise could result if Navajo Nation claims cause priority administration on the San Juan River stream system in New Mexico or an over-allocation with respect to current conservative estimates of New Mexico's Upper Colorado River Basin Compact apportionment. Specifically, the proposed Settlement Agreement provides for the Navajo Nation to: (1) use a portion of its Navajo Indian Irrigation Project water under the proposed Settlement Contract to provide an alternate water source for the Fruitland-Cambridge and Hogback-Cudei irrigation projects so as to avoid or substantially reduce the occurrences of priority calls to satisfy the senior-priority rights under the two projects; (2) forgo uses as necessary to protect the municipal water uses within the Four Corners region in New Mexico under the Animas-La Plata Project in the event of over-allocation of New Mexico's Upper Basin apportionment or curtailment during drought to meet the Colorado River Compact Article III delivery requirement at Lee Ferry; and (3) reduce its surface water uses as necessary to offset impacts of streamflow depletions and protect river flows if the Navajo Nation's ground water uses result in an aggregate depletion of the flow of the San Juan River in excess of 2,000 acre-feet per year. The significant amount of subordination to junior priorities, the alternate water source provisions for the Fruitland and Hogback irrigation projects, the protection afforded the Animas-La Plata Project, the protection afforded San Juan River flows from increased ground water uses, and a release of further reserved water right claims of the Navajo Nation, and also of the United States as trustee for the Navajo Nation, together with the provisions favoring the San Juan-Chama Project in the allocation of water in years of shortage pursuant to Section 11(a) of Public Law 87-483 and the Settlement Agreement, substantially protect existing water uses in and from the San Juan River Basin in New Mexico against curtailment from priority call during times when the direct flow is otherwise insufficient to meet demands, against shortages in stored water supplies, and against curtailment for compact purposes. These protective measures would not be obtained through litigation of the Navajo Nation's water right claims in the San Juan River Adjudication suit.

Also, because the United States has set aside land allotments for use by individual members of the Navajo Nation that are separate from lands held in trust for the Navajo Nation, the United States has separate trust responsibilities to the allottees. The United States, not the Navajo Nation, represents the allottees in the San Juan River Adjudication suit. The number of allottees reportedly is on the order of 20,000 people. Although the Settlement Agreement would settle the claims of the Navajo Nation to the use of waters of the San Juan River Basin in New Mexico, it would not settle claims of individual allottees, which will be settled or litigated later through the San Juan River Adjudication suit as is the case with other individual water users in the Basin. The Navajo Nation under the Settlement Agreement would agree to reduce its total use of water to offset any

uses under water rights that may be awarded individual members of the Navajo Nation for future uses in excess of existing uses on allotted lands.

In return for settlement, the Navajo Nation would have its water rights adjudicated, get the Navajo-Gallup Water Supply Project authorized and developed, get an associated contract for water from the Navajo Reservoir water supply to source the project, secure funding to ensure rehabilitation of San Juan River irrigation projects, and gain authority to transfer, lease or subcontract its water, including its Navajo Indian Irrigation Project water, for other beneficial purposes. The Navajo Nation's ability to lease or subcontract, and to transfer, its rights for other uses within New Mexico on or off Navajo lands so as to provide benefits to the Navajo Nation and others are subject to non-impairment of other water rights in New Mexico. Further, the Navajo Nation under the Settlement Agreement is contractually agreeing that it would not lease or subcontract its rights for uses outside the State of New Mexico without Interstate Stream Commission concurrence, even if interstate marketing is determined to be permissible under the Law of the River. The Interstate Stream Commission is committed to ensuring that water needs within New Mexico are met before any of its water is moved out of state. The proposed Settlement Agreement provides a potential mechanism for cities in the Rio Grande Basin, as well as in the San Juan River Basin, to in the future acquire from the Navajo Nation by lease or subcontract additional water supplies for municipal uses.

Hydrologic Investigation of Water Availability for the Navajo-Gallup Project

Section 11(a) of Public Law 87-483 provides that the Secretary of the Interior, before entering any contract for water from Navajo Reservoir for municipal and industrial purposes, must determine by hydrologic investigation that sufficient water is reasonably likely to be available within New Mexico's Upper Colorado River Basin Compact apportionment to fulfill the contract and that Congress must approve the contract. For this purpose, the Secretary has submitted such hydrologic investigations to Congress. The most recent investigation is the Bureau of Reclamation's 1988 Hydrologic Determination approved by the Secretary in 1989 in support of the settlement contract approved by the Jicarilla Apache Tribe Water Rights Settlement Act in 1992.

The 1988 Hydrologic Determination found that the yield available to the Upper Basin States under the apportionment of water to the Upper Basin by Article III of the Colorado River Compact is at least 6.0 million acre-feet of water annually based on a minimum objective release of 8.23 million acre-feet per year from Glen Canyon Dam, assuming protection of the minimum power pool at Lake Powell, and assuming tolerable shortages to the Upper Basin. The Upper Colorado River Commission disagrees with the assumption of a minimum release of 8.23 million acre-feet per year from Glen Canyon Dam, but the Commission does not object to the use for planning purposes of the estimated yield available to the Upper Basin states of at least 6.0 million acre-feet per year. The Hydrologic Determination avoided a critical compact interpretation as to the quantification of any responsibility of the Upper Basin to provide water at Lee Ferry to assist in meeting the United States' delivery to Mexico in the Colorado River under the Mexican Water Treaty of 1944.[17] Also, Article IV(b) of the Colorado River Compact

[17] Article III(c) of the Colorado River Compact provides that deliveries of water to Mexico pursuant to the Mexican Water Treaty of 1944 shall be supplied first from waters which are surplus over and above the aggregate of the quantities specified in Articles III(a) and III(b) of the compact, and that if such surplus is

provides that the impoundment and use of water for the generation of hydroelectric power is subservient to the use of water for beneficial consumptive use for agricultural and domestic purposes, meaning that the water stored above the dead pool and in the minimum power pool should be available for delivery to Lee Ferry in accordance with Article III of the Compact.[18] A study prepared by Tipton and Kalmbach, Inc., for the Upper Colorado River Commission in 1965 indicates that under 1921-1964 period hydrology, operation of the Colorado River Storage Project reservoirs would allow the Upper Basin to deplete the flow of the Colorado River at Lee Ferry by 6.3 million acre-feet annually while delivering 7.5 million acre-feet annually to the Lower Basin in satisfaction of Article III(d) of the Colorado River Compact. The 1988 Hydrologic Determination indicates that under 1906-1986 period hydrology, the yield available to the Upper Basin States would be 6.3 million acre-feet of water annually without shortages assuming a minimum objective release of 7.5 million acre-feet per year from Glen Canyon Dam and protection of the minimum power pool at Lake Powell. The estimated yield increases by 0.1 million acre-feet annually if water in storage in the minimum power pool at Lake Powell is made available for delivery to the Lower Basin.

On the basis of the Tipton and Kalmbach study, it is estimated that the State of New Mexico under the apportionments made by Article III(a) of the Upper Colorado River Basin Compact may deplete the flow of the San Juan River system at or adjacent to the sites of use by 727,000 acre-feet per year (Hearing on San Juan-Chama Project, 94th Congress, 1st session, Senate Energy Research and Water Resources Subcommittee, June 12, 1975, p. 115). The 727,000 acre-feet per year includes an estimated 24,000 acre-feet for salvage by use. The use of water in the Upper Basin results in a reduction in natural losses between the sites of use and Lee Ferry, which reduction is referred to as "salvage by use" (House Committee on Interior and Insular Affairs, Lower Colorado River Basin Project, August-September 1965, Serial No. 17, p. 230). Beneficial consumptive use by the Upper Basin under the compact is measured as depletion at Lee Ferry, and each Upper Basin state's consumption at sites of use may exceed, by the amount of salvage by use, the depletion of flow at Lee Ferry that the state is entitled to make. The Interstate Stream Commission staff estimates that New Mexico's share of such salvage by use amounts to 24,000 acre-feet per year.

It should be noted that the yield to the Upper Basin from the Tipton and

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insufficient for this purpose, then the burden of the deficiency shall be equally borne by the Upper Basin and the Lower Basin such that the states of the Upper Division shall deliver at Lee Ferry water to supply one-half of the deficiency whenever necessary. No determinations or findings have been made as to the quantification of either surplus water or deficiency.

[18] A reduction or loss of hydroelectric power generation at Glen Canyon Dam results in a reduction in revenues of the Colorado River Storage Project that are provided by the sale of the electrical power. Pursuant to Public Law 106-392, power revenues fund the base operation costs and portions of the capital costs of the San Juan River Basin Recovery Implementation Program and of the Upper Colorado River Endangered Fish Recovery Program. Both programs promote recovery of Colorado pikeminnow and razorback sucker and are essential to providing Endangered Species Act compliance for water development and use in the Upper Basin. Power revenues also fund annual costs of the Glen Canyon Dam Adaptive Management Program developed pursuant to the Secretary of the Interior's 1996 Record of Decision on the Glen Canyon Environmental Impact Statement and in response to the Grand Canyon Protection Act, Public Law 102-575. In addition, power revenues credited to the Upper Colorado River Basin Fund are used to pay costs of the Colorado River Storage Project units and of participating projects per Section 5 of Public Law 84-485 and to pay costs of salinity control units pursuant to Section 205 of the Colorado River Basin Salinity Control Act, Public Law 93-320.

Kalmbach study is supported by the later studies in the 1988 Hydrologic Determination. Nevertheless, for purposes of project planning, the Upper Colorado River Commission has for practical reasons used very conservative water supply assumptions to, from time to time, update schedules of Upper Basin depletions that indicate how the Upper Basin states plan to develop under their Upper Colorado River Basin Compact Article III(a) apportionments. The depletion schedules to date have shown the Upper Basin apportionments for each state based on a conservatively low estimate of the yield available to the Upper Basin under Article III of the Colorado River Compact of 6.0 million acre-feet per year, and have not included salvage by use even though salvage by use in the amount of about 4 percent of at-site depletions was included in the November 29, 1948, Final Report of the Engineering Advisory Committee to the Upper Colorado River Compact Commission and in the Department of the Interior's July 1965 projections of depletion at Lee Ferry. The Bureau of Reclamation in its preparation of long-range operating criteria for the Colorado River pursuant to Section 602 of Public Law 90-537 also considered salvage by use estimated to be about 4 percent of at-site depletions in the Upper Basin to project depletions of flow at Lee Ferry (Meeting of Federal and State Representatives for Review of Basic Data Pertinent to the Preparation of Operating Criteria for the Colorado River Pursuant to Section 602 of Public Law 90-537, US Department of the Interior, Bureau of Reclamation, July 25, 1969, table entitled: "Upper Colorado River Water Uses with Projected Depletions at Lee Ferry"). Based on these conservative assumptions, the depletion schedules used in the 1988 Hydrologic Determination and those updated since compare at-site depletions in New Mexico to a state allocation of 669,000 acre-feet, including New Mexico's share of evaporation from Colorado River Storage Project reservoirs. The Upper Colorado River Commission in its depletion schedules has used such conservative assumptions, and has not made determinations of salvage by use or of methodologies for accounting certain consumptive uses such as irrigation depletions or ground water uses, because the Upper Basin states have not approached full development of the Upper Basin apportionment.[19]

The depletion schedules used in the 1988 Hydrologic Determination projected depletions by the states of the Upper Division through the year 2040. The Upper Colorado River Commission at its December 1999 meeting approved updated depletion schedules for planning purposes, dated January 2000, which projected depletions by the Upper Division states through the year 2060, including depletions for the Navajo-Gallup Water Supply Project. Because the Navajo-Gallup Water Supply Project is not expected to be completed until almost 2020, a contract that would supply water for the project to serve the Navajo Nation's project water demands in New Mexico should be based on a determination that there is sufficient water likely to be available to supply the indicated

[19] Article VI of the Upper Colorado River Basin Compact provides that the quantity of the consumptive use of water for the Upper Basin and each Upper Basin state made under the apportionments of Article III(a) of the compact shall be determined by the inflow-outflow method in terms of man-made depletions of the flow at Lee Ferry, unless the Upper Colorado River Commission unanimously adopts a different method of determination. The Commission has not explicitly adopted a different method for this purpose; however, the inflow-outflow method is not practical. Depletion schedules approved by the Upper Colorado River Commission for planning purposes and estimates of consumptive uses provided in the Bureau of Reclamation's Colorado River System Consumptive Uses and Losses Reports periodically submitted by the Secretary of the Interior to Congress pursuant to Section 601(b) of Public Law 90-537 to date have included irrigation depletions computed using the original Blaney-Criddle method for the Upper Basin and the Lower Basin within the State of New Mexico.

quantity of water for the project through 2060 within the apportionment made to the State of New Mexico by the Upper Colorado River Basin Compact.

As part of the planning process for the Navajo-Gallup Water Supply Project, the State Engineer via letter dated February 19, 2002, transmitted to the Bureau of Reclamation an updated schedule of anticipated depletions in the San Juan River Basin in New Mexico that indicated that sufficient water would likely be available through the year 2060 to service the existing and authorized uses in New Mexico and also the project. Subsequently, the Upper Colorado River Commission by Resolution dated June 17, 2003, approved the use and accounting of Upper Basin water supplied by the project to the Lower Basin in New Mexico, and stated the Commission's support for Congressional action to authorize the project. The Interstate Stream Commission staff has since updated the New Mexico depletion schedule to incorporate minor revisions to its projected depletions over time to reflect newly acquired information and the proposed San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement, but has not yet indicated on the schedule changes to the very conservative assumptions described above regarding the availability of water for use in New Mexico under the compact apportionments (see John Whipple's memorandum to Philip Mutz on Revised Upper Colorado River Basin Depletion Schedule for New Mexico).[20]

With the proposed Settlement Agreement, the conclusion remains that sufficient water is reasonably likely to be available under New Mexico's compact apportionment through the year 2060 to service the existing and authorized uses in New Mexico and the Navajo Nation's Navajo-Gallup Water Supply Project uses in New Mexico. Upon execution of the proposed Settlement Agreement by the Navajo Nation and the State of New Mexico, the Interstate Stream Commission will request the Bureau of Reclamation to extend the 1988 Hydrologic Determination to the year 2060 and to have the Secretary of the Interior submit to Congress a determination concluding the same to satisfy the requirements of Section 11 of Public Law 87-483.

A determination that sufficient water is reasonably likely to be available under New Mexico's compact apportionment to service a Navajo Reservoir water supply contract for the Navajo Nation's uses under the Navajo-Gallup Water Supply Project is

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[20] The Interstate Stream Commission developed the depletion schedule only for planning purposes based on realistic assumptions of anticipated use within the water rights in the San Juan River Basin in New Mexico. The depletion schedule indicates long-term average annual depletions anticipated to occur over time at future levels of development. The depletions in the schedule in several instances represent less than full water rights depletions because irrigation practices and physical supplies may limit full use. The compact apportionment to New Mexico is of actual beneficial consumptive use computed or measured at Lee Ferry, not of paper water rights. If the full water rights were used to project average annual depletions, it would guarantee that some of New Mexico's Upper Basin apportionment would remain unused. The depletion schedule does not, however, anticipate how much water rights previously adjudicated under the Echo Ditch Decree will be found in the San Juan River Adjudication suit to be forfeited, abandoned or transferred to municipal uses. The depletion schedule does not define, adjudicate or otherwise limit the exercise of water rights in the Basin in New Mexico. For example, while over 70 years of hydrology data through the year 2000 at the points of diversions for the San Juan-Chama Project and operational limitations indicate that the project over the long-term will be able to divert approximately 105,200 acre-feet of water per year, on average (Bureau of Reclamation), the project pursuant to Section 8 of Public Law 87-483 is entitled to divert up to 1,350,000 acre-feet during any period of ten consecutive years if the supply is available. The amounts of depletion shown in the depletion schedule are estimates at the sites of use in New Mexico, and neither the depletions nor New Mexico's apportionment shown in the depletion schedule consider or apply salvage by use.

not a guarantee that water will be physically available every year to meet the water demands of the project without any shortages. Section 11 of Public Law 87-483 provides for sharing of the runoff above Navajo Reservoir available to the United States in years of shortage to Navajo Reservoir water supply contract deliveries. Under the proposed Settlement Agreement, the Navajo Indian Irrigation Project and the Navajo-Gallup Water Supply Project would be allowed to divert direct flow supplied under New Mexico State Engineer File No. 2849 with a priority date of June 17, 1955, for water originating in the drainage of the San Juan River above Navajo Dam and File No. 3215 with a priority date of December 16, 1968, for inflow to the San Juan River arising below Navajo Dam, as available, and will be allowed to receive water from Navajo Reservoir storage as needed and available.[21]

Shortage Provisions Favoring the San Juan-Chama Project

The formula provided by Section 11(a) of Public Law 87-483 for allocating the supply available above Navajo Dam to the San Juan-Chama Project and to contractors of the Navajo Reservoir water supply, including to the Navajo Indian Irrigation Project, in years when the Secretary anticipates a shortage favors water uses under the San Juan-Chama Project because the formula does not consider storage in Heron Reservoir that is available to meet the current contract delivery demands of San Juan-Chama Project contractors. The formula shorts actual contract deliveries in the San Juan River Basin, but does not short contract deliveries in the Rio Grande Basin under the San Juan-Chama Project and may not result in shortages to project contract deliveries depending upon the flows physically available for diversion by the project and Heron Reservoir storage. However, there could be debate as to how to quantify the "normal diversion requirements" for use in the formula, and whether the formula applies to annual or daily available flows. The provisions of Section 403 of the proposed San Juan River Basin in New Mexico Water Projects and Settlement Act would further define or clarify specific parameters for applying the formula (see Appendix 3 to the San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement). The provisions would favor the San Juan-Chama Project.

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[21] Specific years of shortage within the period of hydrologic record requiring implementation of the water allocation formula of Section 11(a) of Public Law 87-483, if any, and consequent annual amounts of shortage, under a full development scenario cannot be identified at this time because of uncertainties as to: (1) the accounting of consumptive uses in the Upper Basin under Article III(a) of the Upper Colorado River Basin Compact, including salvage by use; (2) the occurrences of any curtailments of uses in New Mexico that may be required under Article IV of the Upper Colorado River Basin Compact as a result of implementation of Articles III(c) and III(d) of the Colorado River Compact; (3) the implementation of habitat flows to conserve populations of endangered fish species in the San Juan River; and (4) the hydrologic modeling of the San Juan River Basin. The San Juan River Basin hydrology model used to date by the Bureau of Reclamation and the Bureau of Indian Affairs for National Environmental Policy Act and Endangered Species Act compliance activities uses 1929-1993 period hydrology. An updated version of the model is in preparation that should include also 1994-2003 period hydrology and revisions to hydrologic data, water use data and possibly reservoir operations rules. The San Juan River Basin Recovery Implementation Program, authorized by Public Law 106-392, anticipates using the model also to investigate optimizing reservoir operations to meet the dual goals of the program: (1) to conserve populations of Colorado pikeminnow and razorback sucker in the San Juan River Basin consistent with the recovery goals established under the Endangered Species Act; and (2) to proceed with water development in the Basin in compliance with federal and state laws, interstate compacts, Supreme Court decrees and federal trust responsibilities to the Southern Utes, the Ute Mountain Utes, the Jicarillas and the Navajos (see the Program Document, p. 1).

Pursuant to Section 403(b) of the proposed Act, the normal diversion requirements for Navajo Reservoir water supply contractors would be quantified based on either: (1) the diversion or water delivery demands anticipated to be needed to irrigate lands actually being irrigated during the current year; or (2) the current year diversion or water delivery demands anticipated for non-irrigation uses, excluding any current demand for surface water from the Navajo-Gallup Water Supply Project for placement into aquifer storage to meet future year water demands (see also Section 403(c) of the proposed Act). The normal diversion requirements for Navajo Reservoir water supply contractors also would not include those portions of the current year demands that reliably can be anticipated to be diverted from inflows to the San Juan River arising below Navajo Dam under State Engineer File No. 3215 or the amounts of water anticipated to be supplied through re-use. On the other hand, the normal diversion requirement for the San Juan-Chama Project would be defined as 135,000 acre-feet for the year notwithstanding the current year delivery demand under project water supply contracts, use of the water diverted in a year of shortage in the San Juan River Basin to replenish storage in Heron Reservoir for future year contract deliveries, or the average annual diversion for the project. The long-term average annual diversion from the San Juan River Basin into Heron Reservoir is about 105,200 acre-feet per year, and the release from Heron Dam of project water in any year does not exceed 96,200 acre-feet, which includes about 91,200 acre-feet per year for deliveries under the contracted yield of the project below the dam plus up to 5,000 acre-feet for use to offset annual evaporation losses from the Cochiti Lake recreation pool as authorized by Public Law 88-293.

The provisions of Section 403(b) of the proposed Act would provide that the normal diversion requirements for Navajo Reservoir water supply contractors are less than the contracted or authorized amounts and that the normal diversion requirement for the San Juan-Chama Project is its authorized ten-year average amount, which results in the San Juan-Chama Project being allocated a favorable pro-rata share of the prospective runoff originating above Navajo Reservoir. Because the total delivery demand from Navajo Reservoir under all Navajo Reservoir water supply contracts would not be expected to exceed approximately 400,000 acre-feet per year under the proposed San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement, the San Juan-Chama Project in years of shortage would receive pursuant to Section 11(a) of Public Law 87-483 an annual allocation amounting to about 25 percent or more of the runoff above Navajo Reservoir anticipated for the year.[22] Years of shortage requiring application of the water allocation formula of Section 11(a) of Public Law 87-483 are expected to occur only rarely, and in such years, the actual current year demands for water from Navajo Reservoir under Navajo Reservoir water supply contracts would have to be shorted by a substantial amount before the normal diversion requirement for the San Juan-Chama Project is allocated less water than the contracted yield or water delivery demand of the project. Even if the allocation formula was limiting in a given year, which is a remote possibility because of the hydrology of the San Juan River Basin, it can be

[22] An example implementation of the water allocation formula of Section 11(a) of Public Law 87-483, as clarified by Section 403 of the proposed San Juan River Basin in New Mexico Water Projects and Settlement Act, is provided for illustrative purposes in the Interstate Stream Commission's Responses to Public Comments Received on Drafts of the San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement, Appendix C.

anticipated that some amount of water would be available in Heron Reservoir storage to make contract deliveries from the project.

Section 403(c) of the proposed Act would require that in years of shortage under Section 11(a) of Public Law 87-483, the Navajo Nation's Navajo-Gallup Water Supply Project uses in Arizona must be curtailed up to the full amount of the normal diversion requirement for those uses prior to making any allocation of shortage to the normal diversion requirements of the San Juan-Chama Project or Navajo Reservoir water supply contracts for uses in New Mexico.[23] Section 403(c) also would amend Section 11(a) of Public Law 87-483 to require that the normal diversion requirements for new uses under water supply contracts approved by Congress subsequent to the proposed Act, if any, must be curtailed up to the full amount of the normal diversion requirement for those uses prior to making any allocation of shortage to the normal diversion requirements of the San Juan-Chama Project or Navajo Reservoir water supply contracts for uses in New Mexico approved by Congress in the proposed Act or prior. The San Juan-Chama Project and approved Navajo Reservoir water supply contracts, including the proposed Settlement Contract for the Navajo Nation's Navajo Indian Irrigation Project and Navajo-Gallup Water Supply Project uses, would not be required to share shortages with contracts for new uses approved by Congress subsequent to the proposed Act.

Section 403(d) of the proposed Act would clarify that the sharing and apportionment of water determined pursuant to Section 11(a) of Public Law 87-483 is to be applied on an annual volume basis, meaning that the San Juan-Chama Project could divert the flows available for diversion at the project's points of diversion until such time as the annual allocation is reached and that the project diversions would not be shorted each day by some percentage or volumetric shortage (flows available for diversion are those in excess of the daily bypass flow requirements). This approach allows Navajo Reservoir operations to provide for San Juan-Chama Project diversions by exchange, regardless of the impacts of the diversions on the Navajo Reservoir water supply on a given day, consistent with State Engineer Permit No. 2847, 2849, 2873, 2917 Combined. Under this approach, it is likely that in most, if not all, years of shortage when the formula would be applied, the San Juan-Chama Project diversions would be more limited by the flows physically available for diversion at the project's headworks and not by the paper allocation made pursuant to Section 11(a) of Public Law 87-483. Also, the San Juan-Chama Project is required by Section 8 of Public Law 87-483 to maintain minimum bypass flows at the points of diversion to protect downstream rights and fish habitats in Colorado regardless of whether the Secretary of the Interior has determined a shortage in any year pursuant to Section 11(a) of Public Law 87-483.

Because the direct flow physically available for diversion at the San Juan-Chama Project's headworks may fluctuate widely from year to year, it is not meaningful to argue that there is a shortage or a surplus in any year in which the actual diversion by the project is less than or greater than the average annual diversion that may be expected for the project based on long-term hydrology. Rather, the project is designed to divert direct

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[23] Article IX of the Upper Colorado River Basin Compact provides for the storage and diversion of water in an upper signatory state for delivery for consumptive use in a lower signatory state when such use is within the apportionment to such lower state made by the compact; provided, that the rights to do so shall be subject to the rights of water users in the upper signatory state to receive and use water, the use of which is within the apportionment to such upper state made by the compact.

flow when available into storage at Heron Reservoir in the Rio Grande Basin, where the stored water, less reservoir losses, then becomes available for release from Heron Dam to meet an annual firm yield of 96,200 acre-feet below the dam for delivery to project uses. Until the project is unable to supply 96,200 acre-feet of delivery below Heron Dam in any year, the project contractors have not suffered any shortage. The San Juan-Chama Project contractors in the Rio Grande Basin have not experienced a delivery shortage under their contracts to date because Heron Reservoir has filled during periods of excess diversions by the project into reservoir storage and has been drawn down to meet contract deliveries during the recent drought. Similarly, Navajo Reservoir water supply contractors experience a shortage only when their contract water delivery demands go unmet, and not when inflow to Navajo Reservoir is less than average or less than that needed to refill the reservoir. To date, the Navajo Reservoir water supply contractors in the San Juan River Basin have not had a delivery shortage imposed on them under their contracts because Navajo Reservoir has filled during periods of excess direct flow available for diversion into storage and has been drawn down to meet contract deliveries during the recent drought.[24] The capture of water for storage during years of good water supply and the operation of reservoirs to meet contract deliveries are as designed for both the San Juan-Chama Project and the uses from the Navajo Reservoir water supply.

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[24] The City of Albuquerque argues that the San Juan-Chama Project has suffered shortages in the past, including a 94 percent shortage in 2002, while water users, compact deliveries and flows to maintain endangered fish habitat in the San Juan River Basin have not suffered any shortages (Martin Chavez' January 15, 2004, letter to John D'Antonio, p. 1). In 2002, the San Juan-Chama Project diversion into Heron Reservoir amounted to about 6 percent of average, and the inflow into Navajo Reservoir available to the United States under State Engineer File No. 2849 also was about 6 percent of average or less (reservoir inflow during the snowmelt runoff period in 2002 was about 10 percent of average and some flows were bypassed through Navajo Dam to meet downstream senior water rights). Also, some water was released from Navajo Reservoir to maintain flows through the endangered fish critical habitat reach of the San Juan River. Contract deliveries in 2002 were satisfied from reservoir storage for both San Juan-Chama Project and Navajo Reservoir water supply contracts. In 2003, Navajo Reservoir inflow during the snowmelt runoff period was about 37 percent of average. By the end of 2003, Navajo Reservoir was nearly depleted of active storage available to meet water supply contract deliveries, and the storage in the reservoir was maintained above the intake to the Navajo Indian Irrigation Project because the major water users on the San Juan River in New Mexico at and below Navajo Dam, including both direct-flow water users and Navajo Reservoir water supply contractors, voluntarily reduced water usage in anticipation of shortage to save water that year under a cooperative water sharing agreement for San Juan River operations and administration (see Recommendations for San Juan River Operations and Administration for 2003, dated February 20, 2003, and related correspondence). The water users that participated in the cooperative agreement included the Navajo Nation (representing the Navajo Indian Irrigation Project and the Fruitland and Hogback irrigation projects), the Jicarilla Apache Nation, the Public Service Company of New Mexico, the Arizona Public Service Company, BHP-Billiton, the City of Farmington, the Hammond Conservancy District, the Bloomfield Irrigation District, the Farmers Mutual Ditch and the Jewett Valley Ditch. Also, the United States Fish and Wildlife Service, in consultation with the San Juan River Basin Recovery Implementation Program, for 2003 accepted reduced target base flows for fish population maintenance in the endangered fish critical habitat reach of the San Juan River, as compared to the target base flows otherwise specified by the Recovery Implementation Program's flow recommendations, which helped to conserve water in Navajo Reservoir for meeting water use demands and future years' endangered fish flow needs. Consequently, shortages were experienced in the San Juan River Basin in 2003 even though the Bureau of Reclamation did not administratively impose shortages to Navajo Reservoir water supply contract deliveries. In contrast, diversions by the San Juan-Chama Project into Heron Reservoir during 2003 amounted to about 59 percent of average, releases from Heron Reservoir in 2003 were made to fully satisfy the project water delivery contract amounts, and Heron Reservoir at the end of 2003 contained about 122,900 acre-feet of project water in active storage, which amount is equivalent to over one full year of project contract deliveries.

Administration of Water Rights under State Law

The State Engineer under State of New Mexico statutes has authority over the general supervision of waters of the state and of the measurement, appropriation and distribution thereof. Pursuant to that authority, the State Engineer in December 2004 adopted active water resource management rules and regulations to undertake the supervision of the physical distribution of water and to administer the available water supply within the state (19.25.13 NMAC). The rules establish a framework for the State Engineer to carry out his responsibility to supervise the physical distribution of water to protect senior water rights owners, to assure compliance with interstate stream compacts and to prevent waste by administration of water rights. During 2005, the State Engineer is expected to promulgate district-specific rules and regulations and develop a water master manual for administering water rights within the San Juan River Basin in New Mexico. Doing so will allow for administration of water rights by priority or alternative administration in accordance with state law. Examples of alternative administration are the cooperative water sharing agreements for San Juan River operations and administration that were endorsed by water users in New Mexico for 2003 and 2004.

The rights held by the Secretary of the Interior for the San Juan-Chama Project, the Hammond Irrigation Project, the Navajo Indian Irrigation Project and other purposes contemplated by Public Law 87-483 were appropriated under New Mexico state law and carry a priority date of June 17, 1955, pursuant to State Engineer File Nos. 2847, 2848 and 2849, respectively. The State Engineer has the authority to monitor and administer the diversion, use and storage of water made pursuant to these filings, including the diversion and storage of water by the Bureau of Reclamation, and to order adjustments or curtailments to the diversion, storage or use of water as necessary to ensure that water rights with priority dates senior to June 17, 1955, are not impaired. That is, diversions of the available runoff above Navajo Dam by the San Juan-Chama Project and under all Navajo Reservoir water supply contracts, including the diversion of streamflow into Navajo Reservoir storage, could be curtailed whenever the inflow to Navajo Dam is insufficient to meet downstream senior water rights in New Mexico.

Although the City of Albuquerque's request is that language in federal legislation simply provide that the San Juan-Chama Project no longer be required to share in shortages on the San Juan River stream system under Section 11 of Public Law 87-483, the City's intent is that the federal legislation make the San Juan-Chama Project senior in priority to the Navajo Indian Irrigation Project, other Navajo Reservoir water supply contracts, and possibly all other uses in New Mexico (see Martin Chavez' January 15, 2004, letter to John D'Antonio and the City of Albuquerque's Comments on Navajo-Gallup Settlement, pp. 6-7, transmitted via the letter). The City suggests that its requested language would allow the San Juan-Chama Project to divert all the flow physically available over and above the minimum bypass flows required by Section 8(f) of Public Law 87-483, regardless of downstream water rights in New Mexico and state law. However, the requested language does not provide an explicit preemption of state water law, nor should one be provided. Congress should not consider turning state water law on its head by preempting the June 17, 1955, priority date for the San Juan-Chama Project obtained by the Secretary of the Interior pursuant to application to appropriate public waters of the State of New Mexico under state law and confirmed by the court in the San Juan River Adjudication suit (see Memorandum from DL Sanders to John R. D'Antonio, Jr., on San Juan River Basin in New Mexico Navajo Nation Water Rights

Settlement Agreement: Legal Effect of Proposed Amendment to Shortage Sharing Provisions of the Act of June 13, 1962, Public Law 87-483, copy attached).[25]

The City argues that the San Juan-Chama Project is shorted naturally and sufficiently by the minimum bypass flow requirements of Section 8(f) of Public Law 87-483. Public Law 87-483 bypass requirements for the project at its points of diversion are governed by Sections 8(b) and 8(f). Pursuant to Section 8(b), the project must be operated so that there is no injury, impairment or depletion of existing or future beneficial uses of water within the State of Colorado, the use of which is within the apportionment made to the State of Colorado by Article III of the Upper Colorado River Basin Compact, as provided by Article IX of the Upper Colorado River Basin Compact. Section 8(f) requires that the project be operated so that for the preservation of fish and aquatic life the flow of the Navajo River and the flow of the Blanco River shall not be depleted at the project diversion points below the values set forth at page D2-7 of Appendix D of the United States Bureau of Reclamation's 1955 report entitled: "San Juan-Chama Project, Colorado-New Mexico." Historically, no bypass flows in excess of those required by Section 8(f) have been required at the project's points of diversion on the Rio Blanco and the Navajo River to meet water right demands in Colorado. In addition to the project bypass requirements to protect water rights, compact apportionments and instream habitat flows in the State of Colorado, appropriations to beneficially use water in the State of New Mexico under state law are subject to not impairing water rights in New Mexico with senior or equal priority dates, including senior federal reserved rights, and subject to New Mexico's compact apportionments.

During the irrigation season and under full utilization of water rights, up to about 450 cfs of Navajo Reservoir inflow must be bypassed, if available, at Navajo Dam to meet the diversion demands of downstream water rights in New Mexico that have priority dates senior to June 17, 1955; except, that as little as 160 cfs to 170 cfs may be required for this purpose at times when inflow to the San Juan River below Navajo Dam, principally from the Animas River, is available to satisfy demands on the San Juan River downstream from the Animas River confluence.[26] The Preferred Alternative of the

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[25] Paragraph 3 of the Partial Final Judgment and Decree on the Water Rights of the Jicarilla Apache Tribe entered in the San Juan River Adjudication suit provides that the Tribe's reserved rights for 40,000 acre-feet of future uses from the Navajo Reservoir water supply and the San Juan-Chama Project are subordinated to its contract rights that are based on the rights held by the United States under state law with a priority date of June 17, 1955, and are subject to the sharing of shortages as provided in Section 11(a) of the Act of June 13, 1962, Public Law 87-483. If the San Juan-Chama Project was to no longer be required by federal law to share in shortages in accordance with Section 11(a) of Public Law 87-483, the Partial Final Judgment and Decree might be modified to not require the Jicarilla Apache Nation's 6,500 acre-feet of San Juan-Chama Project contract water to be subject to sharing of shortages under Section 11(a) of Public Law 87-483. However, the priority dates for the rights held by the United States under state law for the diversion, storage and use of water originating above Navajo Dam, including for the diversion of such water by the San Juan-Chama Project, has been determined by the court in the San Juan River Adjudication suit and would not be revised.

[26] A preliminary review of the records of the Office of the State Engineer indicate that the downstream senior water rights on the San Juan River between Navajo Dam and the Animas River confluence primarily include about 140 cfs of diversion rights at Citizens Ditch to supply irrigation uses under the Bloomfield Irrigation District, the La Pumpa Ditch and the Jaquez Ditch, municipal uses of the City of Bloomfield, industrial uses by El Paso Natural Gas, and miscellaneous domestic and other uses, with priority dates ranging from 1878 to 1954. Diversions by the Citizens Ditch of an additional 12 cfs with a priority date of October 24, 1955, serve water rights that are junior to the Navajo Reservoir storage priority. The potential

September 2002 Navajo Reservoir Operations Draft Environmental Impact Statement would provide for a minimum allowable release from Navajo Dam of 250 cfs, which is anticipated to be sufficient to supply, in whole or in large measure, both the downstream senior rights above the Animas River confluence, including those under the Citizens Ditch, and the Hammond Irrigation Project, except possibly at times when a priority administration on the San Juan River is in effect and diversion rights may be curtailed for reason of being out of priority. A Final Environmental Impact Statement on Navajo Reservoir operations is undergoing internal Department of the Interior review, and it is anticipated that a Record of Decision will be issued during 2005.

If Congress were to amend Section 11(a) of Public Law 87-483 to no longer require that the San Juan-Chama Project share in shortages on the San Juan River stream system in accordance with the formula provided therein, the State Engineer under state law could be required to administer by priority the flows available for uses in New Mexico in the stream system above Navajo Dam. The principle espoused by the Interstate Stream Commission in its Resolution on Navajo Irrigation and San Juan-Chama Projects adopted at the November 26, 1956, meeting of the Commission is that the most upstream diversion may not divert all the flow physically available at its diversion point to the detriment of downstream diversions of equal priority. With respect to the San Juan-Chama Project, the Hammond Irrigation Project contract, the Navajo Indian Irrigation Project and other Navajo Reservoir water supply contracts, the distribution of available runoff to rights of equal priorities under state law is similar to the formula provided in Section 11(a) of Public Law 87-483; except, that the flows available on a daily to weekly basis, not annual runoff, are shared pro-rata based on the current beneficial use diversion demands, not the normal annual diversion requirements. Beneficial use is the limit to the right to divert and use water in New Mexico, both under state law and Article III of the Upper Colorado River Basin Compact.

The maximum diversion demand of the San Juan-Chama Project from all three of the project's diversion points combined is 950 cfs, which is the physical capacity of the Azotea Tunnel that conveys water from the San Juan River Basin to the Rio Grande Basin. The maximum diversion demand for the San Juan-Chama Project includes the demand for water to meet concurrent water delivery demands below Heron Dam and the demand for water to refill Heron Reservoir storage for future contract delivery and use. The maximum diversion rate from Navajo Reservoir for the Navajo Indian Irrigation Project under the proposed San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement would be 1,800 cfs, which is the existing physical diversion capacity of the project's main canal. The Hammond Irrigation Project has the right to

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exists for the Citizens Ditch to also convey Animas-La Plata Project water by exchange if contractual arrangements to do so are made, but such exchange and diversion of water also would be junior to the Navajo Reservoir priority. Other senior rights above the Animas River confluence are for small amounts of diversion for irrigation at the Turley Ditch, for municipal and domestic water uses and for Giant Refinery, with a total diversion rate of about 12 cfs or more and with priority dates ranging from 1876 to 1953. The Hammond Conservancy District has about 3,723 acre-feet per year of diversion rights with priority dates ranging from 1936 to 1947, and the diversion amount is subsumed within the 90 cfs diversion rate permitted for the Hammond Irrigation Project because the Project as described in the Notice of Intention under State Engineer File No. 2848 serves the acreages from which the water rights were acquired by the District. The Office of the State Engineer currently is working on complete abstracts of the rights below Navajo Dam. The Bureau of Reclamation is not required by state law to bypass reservoir inflows to provide sufficient head in the river channel to get water into ditches; rather, owners of water rights are responsible for providing their own access to water in the river channel.

divert at its canal capacity of 90 cfs at the point of diversion below Navajo Dam. In addition, the Navajo-Gallup Water Supply Project as proposed would divert about 84 cfs maximum, including for uses by the Navajo Nation under the proposed Settlement Agreement and uses by the Jicarilla Apache Nation and the City of Gallup under the Jicarilla Apache Nation's settlement contract. Also, the Public Service Company of New Mexico pursuant to State Engineer File No. 3258 for diversion under its Navajo Reservoir water supply contracts diverts up to about 23 cfs to supply uses at the San Juan Generating Station. Thus, the total diversion demand on runoff above Navajo Reservoir that the United States is entitled to under State Engineer File Nos. 2848 and 2849 amounts to about 2,000 cfs, excluding the water demand to refill Navajo Reservoir storage for future contract delivery and use that can amount to the entire flow available above Navajo Reservoir.

Under priority administration, the runoff above Navajo Reservoir available to the United States with the June 17, 1955, priority would be determined by the State Engineer after determining any curtailments of use required of New Mexico to comply with interstate compact obligations and after determining the bypass of reservoir inflow required to meet the senior water rights downstream from Navajo Dam.[27] The available runoff then would be distributed in the proportions that the San Juan-Chama Project diversion demand and the Navajo Reservoir demand have to the total diversion demand. The Navajo Reservoir demand includes the diversion demand under Navajo Reservoir water supply contracts, which at full utilization would amount to about 2,000 cfs, plus the amount of water needed to refill Navajo Reservoir. The diversion demand for the San Juan-Chama Project could be less than 10 percent of the total demand depending upon the quantification of the demand to refill Navajo Reservoir. Each day, the San Juan-Chama Project would be allocated its pro-rata share of the runoff originating above Navajo Dam that is available to the United States under State Engineer File Nos. 2847, 2848 and 2849. If the allocation is less than the combined flow physically available for diversion that day by the San Juan-Chama Project at the project's points of diversion, the State Engineer could order that the project's diversions be curtailed so that the total project diversion does not exceed the allocated rate. The State Engineer would need to exercise judgment, however, in considering whether such curtailment at any time is necessary to avoid impairment to the Navajo Reservoir water supply contractors, taking into account projections of runoff and any anticipated spills from reservoir storage or releases in anticipation of spills.

Without the provisions of Section 11(a) of Public Law 87-483, the water allocation procedure described above could be applied each year during both the spring snowmelt runoff period and the summer, fall and winter base flow period. State Engineer Permit No. 2847, 2849, 2873, 2917 Combined also allows Navajo Reservoir to provide water for the San Juan-Chama Project by exchange. The Secretary of the Interior, as the holder of the permit, may choose to use storage in Navajo Reservoir for meeting contract deliveries so as to allow San Juan-Chama Project diversions to continue. With the provisions of Section 11(a) of Public Law 87-483 or any similar water allocation and operation criteria which the Secretary of the Interior may implement, Navajo Reservoir operations can regulate inflows each year to cover the administration of daily runoff as

[27] For technical and practical reasons, the amount of runoff available at Navajo Dam may need to be determined on the basis of average reservoir inflows over the course of three or more days. Nevertheless, the need to administer the distribution of the available runoff could be daily.

between the San Juan-Chama Project and the Navajo Reservoir water supply contractors in accordance with the bargain previously made by the San Juan-Chama Project interests, the Navajo Nation and the Hammond Irrigation Project, which bargain appears favorable to the San Juan-Chama Project and also less demanding and controversial in its application as compared to priority administration. Under a daily priority administration, for example, there would be more periods of time during which San Juan-Chama Project diversions would be regulated, particularly in years of below average runoff or low Navajo Reservoir storage during which spills would not occur, as compared to the approach provided by Section 11(a) of Public Law 87-483. Consequently, there would be less water available for the San Juan-Chama Project under a daily priority administration.

Compliance with Interstate Compacts and Environmental Laws

The City of Albuquerque's request is that language in federal legislation provide that the San Juan-Chama Project no longer be required to share in shortages on the San Juan River stream system under Section 11 of Public Law 87-483. The City suggests that its requested language would allow the San Juan-Chama Project each year to divert with certainty and without risk all the flow physically available over and above the minimum bypass flows required by Section 8(f) of Public Law 87-483, regardless of interstate compacts and federal environmental laws (see the City of Albuquerque's Comments on Navajo-Gallup Settlement, pp. 6-7, transmitted via Martin Chavez' January 15, 2004, letter to John D'Antonio). Section 8(b) of Public Law 87-483, however, specifically subjects the operation of the San Juan-Chama Project to Article IX of the Upper Colorado River Basin Compact. Moreover, Section 13 of Public Law 87-483 subjects the operations of both the Navajo Indian Irrigation Project and the San Juan-Chama Project, and also the uses and users of water under the projects, to the Colorado River Compact, the Upper Colorado River Basin Compact, the Boulder Canyon Project Act, the Boulder Canyon Project Adjustment Act, the Colorado River Storage Project Act and the Mexican Water Treaty (Treaty Series 994), and provides that the use of water under both projects, including water diverted to the Rio Grande Basin by the San Juan-Chama Project, shall be included within and in no way increase the total quantity of water to the use of which the State of New Mexico is entitled and limited under said compacts, statutes and treaty. Section 16 of Public Law 87-483 further provides that the diversion of water for both the Navajo Indian Irrigation Project and the San Juan-Chama Project shall in no way impair or diminish: (a) the obligation of the states of the Upper Division under Article III(d) of the Colorado River Compact to not cause the flow of the Colorado River at Lee Ferry to be depleted below an aggregate of 75 million acre-feet for any period of ten consecutive years; or (b) the obligation of the states of the Upper Division to meet their share of the Mexican Treaty burden as provided in Article III(c) of the Colorado River Compact.

Pursuant to Article IV of the Upper Colorado River Basin Compact, the states of the Upper Division, including New Mexico, may be required to curtail consumptive uses of water apportioned by Article III of the compact at such times that curtailment of uses becomes necessary in order that the flow at Lee Ferry shall not be depleted below that required by Article III of the Colorado River Compact. Diversions from the San Juan River Basin into the Rio Grande Basin by the San Juan-Chama Project cannot be exempted from possible curtailment under Article IV of the Upper Colorado River Basin Compact because they are not a use of water under rights perfected prior to November 24, 1922. At such times that a call is made to curtail uses pursuant to Article IV of the

Upper Colorado River Basin Compact, the diversions by the project under state law would be subject to curtailment in priority with a priority date of June 17, 1955.

Based on the Bureau of Reclamation's 1988 Hydrologic Determination and the schedules of anticipated depletions for the states of the Upper Division approved by the Upper Colorado River Commission that incorporate conservative assumptions for planning the uses of water within the yield available to the Upper Basin with the Colorado River Storage Project in operation, there is a small risk of shortages to uses in the Upper Basin resulting from implementation of Article III of the Colorado River Compact and Article IV of the Upper Colorado River Basin Compact during times of extreme drought in the Colorado River Basin.[28] To do what the City of Albuquerque desires would be to place the San Juan-Chama Project's share of the existing risk and consequent burden of compact calls first on other contract uses that have priority dates equal to June 17, 1955, including uses made under the proposed Settlement Contract for the Navajo Nation, under the Jicarilla Apache Nation's settlement contract approved by Public Law 102-441, and under the Hammond Irrigation Project. Any remaining risk and burden of compact calls could be placed on other water users in New Mexico with rights perfected after November 24, 1922. The largest water users with rights perfected after November 24, 1922, include municipalities in the San Juan River Basin in New Mexico and BHP-Billiton, which supplies water for use at the Four Corners Power Plant operated by the Arizona Public Service Company and the San Juan Generating Station operated by the Public Service Company of New Mexico, and for use for related coal mining activities in the San Juan Basin.

Although the City of Albuquerque suggests that its requested language would allow the San Juan-Chama Project to divert all the flow physically available over and above the minimum bypass flows required by Section 8(f) of Public Law 87-483 regardless of federal environmental laws, the requested language does not explicitly preempt the Endangered Species Act or exempt application of the Act to the project's diversions in the San Juan River Basin.[29] Further, the project bypass requirements to

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[28] The 1988 Hydrologic Determination found that the yield available to the Upper Basin states under the apportionment of water to the Upper Basin by Article III of the Colorado River Compact is at least 6.0 million acre-feet of water annually assuming a minimum objective release of 8.23 million acre-feet per year from Glen Canyon Dam and protection of the minimum power pool at Lake Powell. The finding is based on 1906-1986 period hydrology and tolerable shortages, whereby the full yield can be sustained in 98.5 percent of the years with the over-all Upper Basin shortage not exceeding 6 percent in any year. However, the Hydrologic Determination at page 10 also indicates that the yield available to the Upper Basin States is 6.3 million acre-feet annually without shortages assuming a minimum objective release of 7.5 million acre-feet per year from Glen Canyon Dam and protection of the minimum power pool at Lake Powell. The Upper Colorado River Commission maintains that the minimum objective release should be 7.5 million acre-feet each year plus the amount of water necessary to meet one-half of any deficiency in the Mexican Treaty delivery as defined by Article III(c) of the Colorado River Compact, which deficiency has not been determined. The estimated yield increases by 0.1 million acre-feet annually if water in storage in the minimum power pool at Lake Powell is made available for delivery to the Lower Basin.

[29] Section 208 of Public Law 108-137 provides that the Secretary of the Interior and the Bureau of Reclamation cannot use discretion to reallocate water stored in Heron Reservoir to meet requirements of the Endangered Species Act, as such requirements relate to populations of endangered species in the middle Rio Grande valley in New Mexico, unless such water is acquired from a project contractor that is willing to sell or lease its contract delivery from Heron Dam for such purpose. The provisions of Section 208 of Public Law 108-137 are specific to the annual delivery of water in the Rio Grande Basin out of Heron Reservoir for satisfaction of water delivery and repayment contracts entered into under the San Juan-

protect fish and wildlife habitat in the State of Colorado under Section 8(f) do not substitute for any requirements under the Endangered Species Act that may apply to the project diversions in the San Juan River Basin and to the impacts of such diversions on endangered species in the Basin. What the City desires would be to shift the San Juan-Chama Project's share of the existing risk and consequent burden of possible regulatory shortages that might result from implementation of the Endangered Species Act in the San Juan River Basin primarily onto uses under the Navajo Nation's and the Jicarilla Apache Nation's Navajo Reservoir water supply settlement contracts, uses on the Hammond Irrigation Project, and uses under the Animas-La Plata Project in both New Mexico and Colorado, including uses of the Southern Ute and Ute Mountain Ute tribes made pursuant to the Colorado Ute Settlement Act Amendments of 2000, Public Law 106-554 (Appendix D).

The San Juan River Basin Recovery Implementation Program, which was authorized by Public Law 106-392, adopted flow recommendations for the San Juan River between Farmington and Lake Powell that are intended to provide for the habitat needs of Colorado pikeminnow and razorback sucker, both listed as endangered under the Endangered Species Act and with critical habitat in the San Juan River. A final environmental impact statement is expected to be issued in 2005 analyzing the impact of operating Navajo Reservoir to meet the flow recommendations, or a reasonable alternative, while not impairing downstream senior water rights and providing water for delivery pursuant to Navajo Reservoir water supply contracts. Such operation of the reservoir and endangered species recovery activities of the Recovery Implementation Program provide reasonable and prudent alternatives and reasonable and prudent measures for compliance with Sections 7 and 9, respectively, of the Endangered Species Act for water development and water management activities in the San Juan River Basin, including for Navajo Reservoir water supply contracts, operation of the San Juan-Chama Project and operation of the Animas-La Plata Project.[30] The amount of water needed in any year to be released from Navajo Reservoir to meet the flow recommendations, or a reasonable alternative, depends on the availability of water and flow statistics. Also, both the flow recommendations and Navajo Reservoir operations are subject to change through adaptive management.[31] Included in the benefits of the Recovery

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Chama Project and to the allocation of the project yield. The provisions reflect the notion that populations of native endangered species in the Rio Grande Basin should have no claim on water imported to the Rio Grande Basin by transmountain diversion, as opposed to native Rio Grande Basin water. Section 208 does not apply to the diversion of water from the San Juan River Basin and does not preempt application of the Endangered Species Act to the San Juan-Chama Project diversions with respect to the possible impacts of the project diversions on endangered fish species in the San Juan River Basin.

[30] The Coordination Committee of the San Juan River Basin Recovery Implementation Program on June 19, 2002, adopted Principles for Conducting Endangered Species Act Section 7 Consultations on Water Development and Water Management Activities Affecting Endangered Fish Species in the San Juan River Basin. The United States Fish and Wildlife Service uses the principles to define how actions of the Recovery Implementation Program will be used to provide Endangered Species Act compliance for impacts to listed fish species in the Basin from water development and water management activities.

[31] The San Juan River Basin Recovery Implementation Program anticipates periodically reevaluating the flow recommendations for the San Juan River through an adaptive management process that incorporates review of new information on the hydrology, geomorphology and biology of the river, including status of endangered fish populations and implementation of capital improvements to fish habitat. The Preferred Alternative in the September 2002 draft Environmental Impact Statement on Navajo Reservoir Operations provides for adaptive management to periodically review reservoir operation rules based on new

Implementation Program and of operating Navajo Reservoir to meet the flow recommendations, or a reasonable alternative, is coverage for both federal and non-federal water uses in the San Juan River Basin, including the San Juan-Chama Project diversions, against incidental take under Section 9 of the Endangered Species Act.

The Recovery Implementation Program has dual goals: (1) to conserve populations of two endangered fish species in the San Juan River Basin; and (2) to proceed with water development in the Basin in compliance with federal and state laws, interstate compacts, Supreme Court decrees and federal trust responsibilities to the Indians in the Basin, including the Navajo Nation and the Jicarilla Apache Nation in New Mexico and the Southern Ute and Ute Mountain Ute tribes in Colorado.[32] In the latest available water supply modeling of the San Juan River Basin, which modeling includes operation of Navajo Dam to meet the Recovery Implementation Program's quantitative flow recommendations for endangered fish habitat in the San Juan River and to meet Navajo Reservoir water supply contract deliveries at full build-out and water usage, including deliveries to the Navajo-Gallup Water Supply Project, there might be some physical water supply shortages to contract deliveries if the flow recommendations are not inviolate and if all other existing and authorized water uses in the Basin in Colorado and New Mexico are fully utilized (see the Bureau of Reclamation's 2004 Biological Assessment for the Navajo-Gallup Water Supply Project). However, the Fish and Wildlife Service's position and practice in the Recovery Implementation Program is that the flow recommendations are not sacrosanct or inviolate. A limitation of the San Juan River Basin hydrology model is that it does not incorporate adaptive management adjustments to fish flow demands and Navajo Reservoir operations during extreme hydrologic drought conditions. Also, the modeling does not reflect realistic assumptions of water use under anticipated development conditions, as compared to assuming full water right or build-out usage for Indian and other uses.[33]

Nevertheless, the Navajo-Gallup Water Supply Project is subject to Endangered Species Act compliance with or without settlement. The September 2004 Biological Assessment for the Navajo-Gallup Water Supply Project includes a proposal that the Navajo Nation would reduce use on the Navajo Indian Irrigation Project to offset new depletions of streamflow occurring as a result of its Navajo-Gallup Water Supply Project diversions to avoid impinging upon the flow recommendations, or a reasonable

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information, including revisions to the flow recommendations or reasonable alternatives; provided, that Navajo Dam generally will be operated to provide a peak flow during the spring snowmelt runoff period to create a hydrograph below the Animas River confluence that mimics the natural hydrograph and to maintain base flows at other times of the year below the confluence that support populations of endangered fish species, and that the releases from Navajo Dam will range between a maximum allowable release of 5,000 cfs, excluding spills, and a minimum allowable release of 250 cfs.

[32] Governor King in 1992 executed the Cooperative Agreement for the San Juan River Basin Recovery Implementation Program, thereby committing the State of New Mexico to participate in the program. Other participants in the program include the State of Colorado, the Bureau of Reclamation, the Bureau of Indian Affairs, the Fish and Wildlife Service, the Bureau of Land Management, the Navajo Nation, the Jicarilla Apache Nation, the Southern Ute Tribe, the Ute Mountain Ute Tribe and the water development interests representing both New Mexico and Colorado water users.

[33] A comparison of modeled depletions in New Mexico and New Mexico's anticipated depletions under 2060 conditions is provided in the Interstate Stream Commission's Responses to Public Comments Received on Drafts of the San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement, Appendix B.

alternative thereto, if necessary to avoid jeopardy to the continued existence of endangered fish species in the San Juan River. The proposal is not contingent upon the Bureau of Reclamation reducing the San Juan-Chama Project diversion below the amount of diversion authorized for the project pursuant to Section 8 of Public Law 87-483. Implementation of the proposal may not be necessary, however, in light of the San Juan River Basin Recovery Implementation Program's Principles for Conducting Endangered Species Act Section 7 Consultations on Water Development and Water Management Activities Affecting Endangered Fish Species in the San Juan River Basin, which have been accepted by the Fish and Wildlife Service to define how actions of the Recovery Implementation Program will be used to provide Endangered Species Act compliance for impacts to listed fish species in the Basin from water development projects based on sufficient progress being made towards recovery.

New water development for the Navajo-Gallup Water Supply Project is not proceeding at the expense of other projects that have already been included in the Fish and Wildlife Service's environmental baseline. The environmental baseline includes the daily diversions of the San Juan-Chama Project for the period of hydrologic record assuming that Sections 8(a), 8(b), 8(f) and 11 of Public Law 87-483, and not daily priority administration, control the distribution of available runoff above Navajo Reservoir between the project and Navajo Reservoir water supply contracts.[34] Although the environmental baseline is often summarized as a table of average annual depletions from the San Juan River Basin for the period of hydrologic record, the environmental baseline model actually includes the variability in the daily and annual diversions by the San Juan-Chama Project assuming no daily water rights administration.

The Bureau of Reclamation has yet to consult with the Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act on the operation of the San Juan-Chama Project in the San Juan River Basin. It may be reasonably anticipated that the consultation will acknowledge that the hydrological and biological impacts of the project on populations of endangered fish species in the San Juan River is already included in or covered by the environmental baseline. Still, the Fish and Wildlife Service in consultations on federal water projects and water management activities in the Basin in New Mexico and Colorado also is likely to continue its practice of requiring as

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[34] The San Juan River Basin hydrology model does not actually model the allocation of water in years of shortage to the San Juan-Chama Project or Navajo Reservoir water supply contracts under Section 11(a) of Public Law 87-483, or the administration of uses under the Upper Colorado River Basin Compact. The model simply allows the San Juan-Chama Project to divert all the flows physically available for diversion at the project's points of diversion, after the bypass flow requirements are met, up to the total diversion capacity of the project. The model then determines whether there is sufficient water supply available to meet the Recovery Implementation Program's flow recommendations for the San Juan River with all the modeled depletions in New Mexico and Colorado. The flow recommendations include: (1) high spring peak flows that have a natural variability as measured by statistics for the recurrence intervals and exceedance frequencies of specified flow levels and durations of flows at the San Juan River at Four Corners gage during the spring snowmelt runoff season for the period of hydrologic record used in the model; (2) summer, fall and winter target base flows for the critical habitat reach as measured by an average for three of the four streamflow gages on the San Juan River located at Farmington, Shiprock, Four Corners and Bluff; and (3) summer, fall and winter spike flows in excess of the target base flows when excess releases from Navajo Dam are necessary to avoid uncontrolled spill from the dam (see Flow Recommendations for the San Juan River, May 1999, prepared by the Biology Committee of the San Juan River Basin Recovery Implementation Program, and the memorandum from the Biology Committee to the Bureau of Reclamation dated July 16, 2002, on San Juan River Base Flow – Guidance for Navajo Reservoir Operation).

reasonable and prudent alternatives for the continued operation of water projects the operation of Navajo Dam to meet the flow recommendations, or a reasonable alternative, and the continuation of the Recovery Implementation Program.[35]

The City of Albuquerque desires, in essence, that the San Juan-Chama Project be afforded all the benefits of Endangered Species Act compliance activities of the Recovery Implementation Program while other water users, including Indians, in the San Juan River Basin in both New Mexico and Colorado, and primarily the Navajo Reservoir water supply contractors, assume all the risk of supplying water to maintain endangered fish habitat in the San Juan River sufficient to provide for recovery of the endangered species in the river. Water users under federal water projects in both New Mexico and Colorado, including the four Indian tribes in the San Juan River Basin, and the State of Colorado would object to the San Juan-Chama Project not sharing in the burden to deal with the conservation and recovery of the endangered fish species in the San Juan River, if necessary, and to any federal legislation that might have the effect of shifting, or that might be perceived to shift, any such burden on the project that may now exist to the other water users. More particularly, the contractors of the Navajo Reservoir water supply, including the Navajo Nation, the Jicarilla Apache Nation and the Hammond Conservancy District, would be concerned about taking upon themselves all the risk and responsibility of Endangered Species Act compliance for both themselves and the San Juan-Chama Project should shortages to contract deliveries occur as a result of the Bureau of Reclamation releasing water from Navajo Reservoir storage to conserve the endangered fish populations in the San Juan River.

[35] Navajo Dam and Reservoir was constructed as a unit of the Colorado River Storage Project, and its authorized purposes under Public Law 84-485 include regulation of streamflow so as to allow the Upper Basin states to develop their apportionments to use water under the Colorado River and Upper Colorado River Basin compacts. Operating Navajo Reservoir to regulate river flows to meet the flow recommendations, or a reasonable alternative, allows the development and use of water under the compact apportionments to New Mexico and Colorado to proceed in compliance with the Endangered Species Act.

MEMORANDUM
March 22, 2005

To: John R. D'Antonio, Jr., State Engineer

Copy: Bill Hume, Office of Governor Bill Richardson
Steve Farris, Office of the Attorney General
Jim Dunlap, Chairman, Interstate Stream Commission
Estevan Lopez, Interstate Stream Engineer
Tanya Trujillo, General Counsel, Interstate Stream Commission
John Whipple, Staff, Interstate Stream Commission

From: DL Sanders, Chief Counsel, Office of the State Engineer

Subject: San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement: Legal Effect of Proposed Amendment to Shortage Sharing Provisions of the Act of June 13, 1962, Public Law 87-483.

Introduction

This memorandum addresses the changes requested by the City of Albuquerque to the existing provisions governing shortage sharing among the San Juan-Chama Project and the contractors to the Navajo Reservoir water supply. In its comments on draft legislation that is part of the proposed San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement, the City of Albuquerque requested that the Act of June 13, 1962, Public Law 87-483 (the "1962 Act" or "Act") be amended by exempting the San Juan-Chama Project from shortage sharing provisions contained in Section 11(a) of the Act.

As discussed below, to the extent the proposal seeks to exempt the San Juan-Chama Project from priority administration on the San Juan River in New Mexico, it should be rejected as contrary to New Mexico water law and long-standing federal deference to state jurisdiction over state water resources. If on the other hand, the proposal does not seek to preempt state water law and merely seeks to change the method by which shortage sharing is carried out, the change is unwarranted because it would likely place a significant administrative burden on the State without any discernable

benefit to San Juan-Chama Project contractors. In my view, the proposal would likely only serve to alter the allocation regime from an annual to a cumbersome method, which could include daily or other administration as determined by the State Engineer. I do not believe San Juan-Chama Project contractors should want such a change, because it would likely have the practical effect of reducing San Juan-Chama Project supply available to meet project water contracts held by the City and others.

Furthermore, the proposal is unacceptable to the extent that the City is attempting to use the Navajo settlement as a vehicle to modify San Juan-Chama Project contractors' position vis-à-vis Navajo Reservoir contractors, two of whom, the Jicarilla Apache Nation and the Hammond Conservancy District, are not signatories to the settlement. First, this is not the proper mechanism nor is it appropriate for the City to use this settlement to achieve that objective. Second, the effort to exempt the City from the shortage sharing provisions would surely create far greater opposition to the settlement than the City's concerns warrant.

The settlement would secure substantial protections for the San Juan-Chama Project. The City should support the settlement rather than potentially undermining it.

Existing Law

The 1962 Act establishes an annualized accounting of the water apportioned between the San Juan-Chama Project and Navajo Reservoir water supply contractors in years of shortage. Section 11(a) of the Act provides in pertinent part:

> (a) No person shall have or be entitled to have the use for any purpose, including uses under the Navajo Indian irrigation project and the San Juan-Chama project authorized by sections 2 and 8 of this Act, of water stored in Navajo Reservoir or of any other waters of the San Juan River and its tributaries originating above Navajo Reservoir to the use of which the United States is entitled under these projects except under contract satisfactory to the Secretary and conforming to the provisions of this Act. Such contracts, which, in the case of water for Indian uses, shall be executed with the Navajo Tribe, shall make provision, in any year in which the Secretary anticipates a shortage, taking into account both

> prospective runoff originating above Navajo Reservoir and the available water in storage in Navajo Reservoir, for a sharing of the available water in the following manner: ***The prospective runoff shall be apportioned between the contractors diverting above and those diverting at or below Navajo Reservoir in the proportion that the total normal diversion requirement of each group bears to the total of all normal diversion requirements.*** In the case of contractors diverting above Navajo a sharing of the runoff apportioned to said group in the same proportion as the normal diversion requirement under said contract bears to the total normal diversion requirement of all such contracts that have been made hereunder: *Provided*, That for any year in which the foregoing sharing procedure either would apportion to any contractor diverting above Navajo Reservoir an amount in excess of the runoff anticipated to be physically available at the point of his diversion, or would result in no water being available to one or more such contractors, the runoff apportioned to said group shall be reapportioned, as near as may be, among the contractors diverting above Navajo Reservoir in the proportion that the normal diversion requirements of each bears to the total normal diversion requirements of the group. In the case of contractors diverting from or below Navajo Reservoir, each such contract shall provide for a sharing of the remaining runoff together with the available storage in the same proportion as then normal diversion requirement under said contract bears to the total normal diversion requirements under all such contracts that have been made hereunder.

Public Law 87-483 (emphasis added).

Section 11(a)'s shortage sharing provisions reflect the equal priority date of the water rights underlying all of the federal contracts for water from either Navajo Reservoir or the San Juan-Chama Project. Under Notices of Intention Nos. 2847 and 2849 filed with the State Engineer, the Secretary appropriated respectively water for the diversion and use by the San Juan-Chama Project and for diversion and storage at Navajo Reservoir. File No. 2849 authorizes diversion of up to 630,000 acre-feet of water per year to the Navajo Project for irrigation, power and domestic purposes. Both Notices were filed with the State Engineer on June 17, 1955. The Act provides for both: (1) Navajo Reservoir operations to cover the administration of runoff as between the San Juan-Chama Project and Navajo Reservoir water supply contracts; and (2) a convenient mechanism for division of the available runoff above Navajo Dam in a year of shortage between uses of equal priority by adopting an annualized proportionate sharing regime.

The supply available for the San Juan-Chama Project and Navajo Reservoir contracts, under the Act, is not all of the runoff originating above the dam. Rather, the supply available to the contractors is the projected "runoff" reduced by the amount of water required to meet the demand of San Juan River water rights in New Mexico having a priority date earlier than June 17, 1955.

It is axiomatic under both constitutional and statutory law of New Mexico that the prior right holder has the superior right. *See* N.M. Const. art. XVI, § 2; NMSA 1978, § 72-1-2 (1907). As discussed in more detail below, federal Reclamation law requires the United States to obtain interests in water for federal Reclamation projects in conformity with state law. Therefore, the operations of both the San Juan-Chama Project and Navajo Reservoir are subject to pre-existing water rights in New Mexico, including senior federal reserved rights. As of June 17, 1955, under State Engineer File Nos. 2847 through 2849, the United States established its right to appropriate unappropriated surface water from the San Juan River above the then-proposed Navajo Reservoir, subject to prior existing water rights. Under these rights, the Secretary of the Interior may not divert for use or impound for storage water whose bypass is needed to satisfy downstream senior rights. Furthermore, under New Mexico law, rights of equal priority are subject to one another and as co-equals in priority must both be curtailed if necessary to satisfy the demand of prior and senior water rights. An upstream diverter of co-equal priority would be subject to its downstream co-equal, and the two would be required to be curtailed and to share shortages based upon proration of respective beneficial uses. In the instance of the San Juan-Chama Project and Navajo Reservoir supply, Section 11(a) of the Act specifies the method for prorating and sharing of shortages between the two.

In addition, Section 8(f) of the Act requires that the San Juan-Chama Project be operated so that, for the preservation of fish and aquatic life, the flow of the Navajo River

and the flow of the Blanco River shall not be depleted at the project diversion points below the values set forth at page D2-7 of Appendix D of the United States Bureau of Reclamation's 1955 report entitled: "San Juan-Chama Project, Colorado-New Mexico." Section 8(b) of the Act further requires that the San Juan-Chama Project must be operated so that there is no injury, impairment or depletion of existing or future beneficial uses of water within the State of Colorado, the use of which is within the apportionment made to the State of Colorado by Article III of the Upper Colorado River Basin Compact, as provided by Article IX of the Upper Colorado River Basin Compact. *See* NMSA 1978, § 72-15-26 (1949).

Request to be Removed from Shortage Sharing

By letter dated January 15, 2004, from Mayor Martin Chavez to State Engineer John D'Antonio, the City requests that the proposed Navajo settlement legislation be revised to remove the San Juan-Chama Project from the shortage sharing requirements of Section 11(a) of the Act. Representatives of the City have further explained the City's position in subsequent meetings with representatives of the State, most recently on March 2, 2005. At the meeting on March 2, City representatives stated that the City is not seeking to exempt the San Juan-Chama Project from priority calls by downstream seniors on the San Juan River system in New Mexico, but instead seeks to modify the project's shortage sharing obligations to its co-equal Navajo Reservoir contractors by only requiring the project to meet the terms of Section 8(f) of the Act. Despite the City's stated intent, the legislative language proposed by the City does not distinguish between its obligation to seniors or co-equals in priority in New Mexico. The proposed language arguably would only require the City to bypass water as needed to meet project obligations to Colorado, regardless of the demands downstream on the San Juan River in New Mexico.

Despite the City's recent disclaimers to the contrary, the amendatory language proposed by the City may be seen by other diverters from the San Juan River in New Mexico as an effort to preempt the application of New Mexico water law to the project's diversions, in whole or in part. On its face, the request does appear to seek exemption by the San Juan-Chama Project from demands of rights of equal priority, and possibly rights of senior priority, on the San Juan River in New Mexico, and perhaps also from the provisions of Articles IX and XIV of the Upper Colorado River Basin Compact, as long as the project is bypassing enough water to satisfy the Section 8(f) bypass requirements.

The City's requested modifications to the proposed settlement legislation consist of the additional language indicated by underlining below:

SEC. 104. DELIVERY AND USE OF PROJECT WATER.

* * *

104(j) SHARING IN AVAILABLE WATER SUPPLY. -- Contract deliveries of water from the Navajo Reservoir water supply to the Navajo-Gallup Water Supply Project shall be subject to the provisions of section 11 of the Act of June 13, 1962 (76 Stat. 96; Public Law 87-483) and section 403 of Title IV of this Act, except that the San Juan-Chama Project shall no longer share shortages on the San Juan River under section 11 but shall continue to meet by-pass requirements of section 8(f) in accordance with the values set forth at page D2-7 of appendix D of the United States Bureau of Reclamation report entitled "San Juan-Chama Project, Colorado-New Mexico," dated November 1955, and the historical operation of the San Juan-Chama Project.

* * *

SEC. 203. NAVAJO INDIAN IRRIGATION PROJECT.

(a) AMENDMENTS TO ACT OF JUNE 13, 1962. -- The Secretary is authorized to continue to construct, operate and maintain the Navajo Indian Irrigation Project, with the following amendments to the Act of June 13, 1962 (76 Stat. 96; Public Law 87-483):

(1) Irrigation works shall be constructed to serve no more than 110,630 acres of land defining the total serviceable area of the Navajo Indian Irrigation Project.

(2) The average diversion by the Navajo Indian Irrigation Project from Navajo Reservoir shall not exceed 508,000 acre-feet per year, or the quantity of water necessary to supply an average depletion of 270,000 acre-feet per year, whichever is less, during any period of ten consecutive years for the principal purpose of irrigation of up to 110,630 acres of land; provided, that the quantities of diversion and depletion in any one year do not exceed the aforesaid ten-year average quantities, respectively, by more than 15 percent.

(3) The Navajo Indian Irrigation Project water supply described in subsection (a)(2) of this section and in Title III of this Act may be used for the following purposes, in addition to irrigation, within the area served by the Project facilities:

(A) aquaculture purposes, including rearing of fish in support of the San Juan River Basin Recovery Implementation Program authorized by the Act of October 30, 2000 (114 Stat. 1602, Public Law 106-392);

(B) domestic, industrial or commercial purposes relating to agricultural production and processing; and

(C) the generation of hydroelectric power as an incident to the diversion of water by the Project for the foregoing purposes.

(4) The San Juan-Chama Project shall no longer share shortages on the San Juan River under section 11 but shall continue to meet by-pass requirements of section 8(f) in accordance with the values set forth at page D2-7 of appendix D of the United States Bureau of Reclamation report entitled "San Juan-Chama Project, Colorado-New Mexico," dated November 1955, and the historical operation of the San Juan-Chama Project.

(5) The Navajo Indian Irrigation Project water supply described in subsection (a)(2) of this section and in Title III of this Act also may be used to implement the alternate water source provisions described in subparagraph 9.2 of the Settlement Agreement, and may be used for other purposes, including but not limited to municipal and industrial uses, and transferred to other places of use either within or outside the area served by the Project facilities in accordance with the Settlement Agreement, the Partial Final Decree described in paragraph 3.0 of the Settlement Agreement, the Settlement Contract, and other applicable law.

(~~5~~6) The Secretary is authorized to use capacity of the Navajo Indian Irrigation Project works to convey water supplies for purposes of the Navajo-Gallup Water Supply Project authorized by Title I of this Act and for purposes described in subsection (a)(4) of this section. Use of Navajo Indian Irrigation Project works to convey water for the Navajo-Gallup Water Supply Project or for other non-irrigation purposes

consistent with subsection (a)(4) of this section shall not be cause for the Secretary to reallocate, or to require repayment of, construction costs of the Navajo Indian Irrigation Project.

* * *

(e) SHARING IN AVAILABLE WATER SUPPLY. -- Nothing in this Act shall be construed to modify section 11 of the Act of June 13, 1962 (76 Stat. 96) except that the San Juan-Chama Project shall no longer share shortages on the San Juan River under section 11 but shall continue to meet by-pass requirements of section 8(f) in accordance with the values set forth at page D2-7 of appendix D of the United States Bureau of Reclamation report entitled "San Juan-Chama Project, Colorado-New Mexico," dated November 1955, and the historical operation of the San Juan-Chama Project.

Legal Conclusions

I conclude that the City's request should not be accepted because it appears that the proposed amendments to the settlement legislation may be used to argue the applicability of New Mexico water law and interstate compacts to the operations of the San Juan-Chama Project, and particularly that by federal fiat the project is exempt from priority administration on the San Juan River, in whole or in part. Such a change would be contrary to New Mexico water law and to long-standing deference by the federal government to the regulation and administration by states over their respective water resources.

Even if the effect of the proposed amendatory language were limited to exempting the San Juan-Chama Project only from shortage sharing with its priority co-equal Navajo Reservoir contractors, that result is objectionable. It is not conceivable that the Navajo Nation, the Jicarilla Apache Nation and the Hammond Conservancy District, all of whom would be affected, would agree to the proposal. Absent their agreement, the proposal could only take effect by congressional imposition. Aside from the fact that such an imposition would likely undermine the Navajo settlement, it would represent a federal infringement of three state water rights. Even though the State Engineer issued to the

United States the permits for the San Juan-Chama Project and the Navajo Reservoir, the State would oppose changes imposed by federal law that redound to the detriment of permit beneficiaries who now hold valid New Mexico water rights.

If the City's intent is not to exempt the San Juan-Chama Project from the operation of New Mexico law, then the proposed amendments would serve only to alter the allocation regime from what is now a manageable annual method to a potentially cumbersome one. Neither the State nor the City should endorse such a result.

Conclusion No. 1. Federal exclusion of the San Juan-Chama Project from all priority administration in New Mexico would require the preemption of state law. Likewise, federal exemption of the San Juan-Chama Project from shortage sharing with Navajo Reservoir contractors without their consent would contravene state water rights. The State should oppose either outcome as an improper federal infringement of state jurisdiction over water resources and administration.

The United States Supreme Court consistently has interpreted the acts of Congress to demonstrate a policy of deference toward state water law:

> The history of the relationship between the Federal Government and the States in the reclamation of the arid lands of the Western States is both long and involved, but through it runs the consistent thread of purposeful and continued deference to state water law by Congress.

See Sporhase v. Nebraska ex rel. Douglas, 458 U.S. 941, 959 (1982), (*quoting California v. United States,* 438 U.S. 645, 653 (1978)); *see also California Oregon Power Co. v. Beaver Portland Cement Co.,* 295 U.S. 142 (1935).

Federal Reclamation law requires the United States to obtain interests in water for federal Reclamation projects in conformity with state law. *See Nevada v. U.S.*, 463 U.S. 110, 122 (1983); *Nebraska v. Wyoming*, 325 U.S. 589 (1945); *California v. United States*, 438 U.S. 645, 672 (1978). In particular, Section 8 of the Reclamation Act of 1902 makes explicit that, in constructing and operating Reclamation projects, the federal government

cannot interfere with state "control, appropriation, use, or distribution of water..., and the Secretary of the Interior, in carrying out the provisions of the Act, shall proceed in conformity with such [state] laws." *See* 43 U.S.C. § 383.[1]

One of the areas of water law where federal deference to state law has been the strongest is in the adjudication and administration of water rights. This policy was made the centerpiece of the McCarran Amendment of 1952. The McCarran Amendment provides in relevant part:

> (a) Consent is hereby given to join the United States as a defendant in any suit (1) for the adjudication of rights to the use of water of a river system or other source, or (2) for the administration of such rights, where it appears that the United States is the owner of or is in the process of acquiring water rights by appropriation under State law, by purchase, exchange, or otherwise, and the United States is a necessary party to such suit. The United States, when a party to any such suit, shall (1) be deemed to have waived any right to plead that the State laws are inapplicable or that the United States is not amenable thereto by reasons of its sovereignty, and (2) shall be subject to the judgments, orders, and decrees of the court having jurisdiction, and may obtain review thereof, in the same manner and to the same extent as a private individual under like circumstances.

43 U.S.C. § 666 (1952).[2] The Court has declared that the McCarran Amendment represents "Congress' judgment that the field of water rights is one peculiarly appropriate

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[1] Section 8 states:

> That nothing in this Act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State or Territory relating to the control, appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions of the Act, shall proceed in conformity with such laws, and nothing herein shall in any way affect any right of any State or of the Federal Government or of any landowner, appropriator, or user of water in, to, or from any interstate stream or the waters thereof: *Provided*, That the right to the use of water acquired under the provisions of this Act shall be appurtenant to the land irrigated, and beneficial use shall be the basis, the measure, and the limit of the right.

Reclamation Act of 1902, 32 Stat. 388, § 8 (codified at 43 U.S.C. §§ 372, 383 (1994)).

[2] The Senate committee report on the McCarran Amendment underscored the form of federalism underlying State authority in the area of water resources regulation: "Down through the years,...the courts of the respective States marked out the pathway whereby order was instituted in lieu of chaos. Rights were established, and all of this at the expense, trial, and labor of the pioneers of the West, without material aid from our United States Government until a much later time . . . ." *See* S. Rep. No. 755, 82nd Cong., 1st Sess. (1951) at 3. Even when the federal government did enter the picture, "Congress was most careful not

for comprehensive treatment in the forums having the greatest experience and expertise, assisted by state administrative officers acting within the state courts." *Moses H. Cone Hospital v. Mercury Constr. Corp.*, 460 U.S. 1, 16 (1983).

The United States secured a water right for the San Juan-Chama Project by appropriating water under state law pursuant to State Engineer File No. 2847. That appropriation was born of state law and must remain a creature of it.

Conclusion No. 2. Absent preemption of state law, removal of the San Juan-Chama Project from the shortage sharing requirements of federal law would not eliminate the State's authority and responsibility to administer water rights in priority.

New Mexico is a prior appropriation state. The state Constitution succinctly provides: "The unappropriated water of every natural stream, perennial or torrential, within the state of New Mexico, is hereby declared to belong to the public and to be subject to appropriation for beneficial use, in accordance with the laws of the state. Priority of appropriation shall give the better right." *See* N.M. Const. art. XVI, § 2. New Mexico's Water Code incorporates this fundamental principle: "Priority in time shall give the better right." *See* NMSA 1978, § 72-1-2 (1907). Water rights having the same priority date have a co-equal right to water. In a prior appropriation system, the right to use a certain quantity of water is inextricably linked to the priority date of that right. *See City of Raton v. Vermejo Conservancy Dist.*, 101 N.M. 95, 678 P.2d 1170 (1984).

The State Engineer "has general supervision of waters of the state and of the measurement, appropriation, distribution thereof and such other duties as required." *See* NMSA 1978, § 72-2-1 (1907); *State ex rel. Reynolds v. Pecos Valley Artesian Conservancy Dist.*, 99 N.M. 699, 700, 663 P.2d 358, 359 (1983). New Mexico statutes

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to upset, in any way, the irrigation and water laws of the Western States." *Id.* "It is therefore settled," the report concludes, "that in the arid Western States the law of appropriation is the law governing the right to acquire, use, administer and protect the public waters as provided in each such State." *Id.* at 4.

also grant the State Engineer the authority and obligation to supervise "the apportionment of water in this state according to the licenses issued by him and his predecessors and the adjudications of the courts." *See* NMSA 1978, § 72-2-9 (1907). He can "adopt regulations and codes to implement and enforce any provision of any law administered by him . . . to aid him in the accomplishment of his duties . . . ." *See* NMSA 1978, § 72-2-8(A) (1953). The State Engineer can impose conditions on licenses and permits issued. *See Roswell v. Berry*, 80 N.M. 110, 112, 452 P.2d 179, 181 (1969). The State Engineer has the power to appoint water masters, to apportion water consistent with priorities, and to install headgates and meters for measuring the quantity of water being used. *See* NMSA 1978, §§ 72-3-2 (1907), 72-5-20 (1907), 72-12-3 (1931), 72-12-7 (1931).

In the event the annualized shortage sharing regime provided for in Section 11(a) of the 1962 Act were removed, the State Engineer could not abdicate his duty to "apportion water consistent with priorities." Water diverted for the San Juan-Chama Project and for uses of Navajo Reservoir water supply would continue to be subject to prior existing uses, including senior federal reserved rights, and would be administered accordingly. The two rights would also be subject to one another and would be required to share shortages in a manner acceptable to or determined by the State Engineer.

If the annual allocation method currently contained in Section 11(a) of the 1962 Act were modified to exclude the San Juan-Chama Project, the State would have to implement its own method of administering the Project's June 17, 1955 priority vis-à-vis rights of the same priorities on the San Juan River system. In contrast to the current annual method, any other interval of administration would <u>not</u> appear to benefit the San Juan-Chama Project because it would result in more periods of regulation of project diversions and likely less water diverted by the project. Any other interval of

administration also would require substantial effort to carry out and could entail considerable controversy, with little apparent benefit to the City.