

MEMORANDUM

March 22, 2005

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

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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

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

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

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.

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.”

