



SUMMARY OF THE 2007 HYDROLOGIC DETERMINATION RELATING TO THE NAVAJO SETTLEMENT

November 5, 2007

Background Regarding Relevant Federal Laws

In 1956, Congress enacted the Colorado River Storage Project Act, which authorized the construction and operation of Navajo Dam and Reservoir on the San Juan River. In 1962, Congress enacted PL 87-483, which authorized the construction and operation of the Navajo Indian Irrigation Project (NIIP) to irrigate approximately 110,630 acres in the San Juan River Basin and the San Juan-Chama Project to supply uses in the Rio Grande Basin. Section 11 of the 1962 Act provides that no person or entity is entitled to use water from the Navajo Reservoir supply without a contract with the Secretary of the Interior. The Navajo Nation has an existing contract with the Secretary for the delivery from Navajo Reservoir of up to 508,000 af/yr of water for its uses on the NIIP. Section 11 of the 1962 Act also provides that no additional contracts shall be entered into for the delivery of water stored in Navajo Reservoir unless and until the Secretary has determined by hydrologic investigations that sufficient water to fulfill the contract is reasonably likely to be available for use within the State of New Mexico under the allocations made in Articles III and XIV of the Upper Colorado River Basin Compact, and the Congress has approved the contract.

Hydrologic Determinations

In 1988, in connection with the Jicarilla Apache Nation's water rights settlement process, the Secretary of the Interior signed a Hydrologic Determination that concluded that sufficient water is reasonably likely to be available within New Mexico's Upper Basin apportionment to fulfill a proposed Jicarilla Navajo Reservoir water supply contract. The Jicarilla's water contract was later approved by Congress as part of the Jicarilla Apache Tribe Water Rights Settlement Act of 1992. The April 2005 Navajo Nation water rights settlement includes a proposed Navajo Reservoir water supply contract to supply approximately 20,800 acre-feet per year of new Navajo depletions from the San Juan River for municipal and domestic uses under the Navajo-Gallup Water Supply Project. In May 2007, the Secretary signed a hydrologic determination that concluded that sufficient water is reasonably likely to be available within New Mexico's Upper Basin apportionment and from Navajo Reservoir to fulfill the proposed Navajo Reservoir water supply contract for the Navajo uses under the Navajo-Gallup Project, in addition to the NIIP. The 2007 Hydrologic Determination took into account the supply available to the Upper Basin under the Colorado River Compact, the supply available for uses in New Mexico under the Upper Colorado River Basin Compact, the physical availability of water from Navajo Reservoir, and all water demands in the San Juan River Basin in New Mexico, including demands to meet reasonably anticipated future depletions under existing and authorized water projects and uses.

The 2007 Hydrologic Determination was reviewed by hydrologists and engineers from the United States and each of the Colorado River Basin States prior to the Secretary signing it, and its conclusions are technically sound. The chronology below presents highlights of the Secretary's approval process, and the table below highlights the key difference between the 1988 Hydrologic Determination and the 2007 Hydrologic Determination.

Approval Steps for the 2007 Hydrologic Determination

April 19, 2005 – New Mexico Governor Richardson and Navajo Nation President Shirley signed the Navajo Nation Water Rights Settlement Agreement.

June 5, 2006 – After months of technical review by representatives of the Bureau of Reclamation and the States of Colorado, Utah, Wyoming and New Mexico, the Upper Colorado River Commission passed a resolution providing its support for the findings of the Bureau of Reclamation's May 2006 draft Hydrologic Determination that: (1) at least 5.76 maf of water is available annually for use by the Upper Basin, exclusive of shared Colorado River Storage Project reservoir evaporation; and (2) sufficient water is reasonably likely to be available to fulfill the Navajo Settlement water supply contract under the allocations made to New Mexico in Articles III and XIV of the Upper Colorado River Basin Compact.

July 13, 2006 – Reclamation staff met with the Lower Division States of Arizona, California and Nevada to brief them on the May 2006 draft Hydrologic Determination, and agreed to consider any comments provided by the Lower Division States regarding the draft Hydrologic Determination.

September 6, 2006 – The Lower Division States via letter to the Secretary of the Interior stated their concerns with the May 2006 draft Hydrologic Determination, and requested that the Secretary direct the Bureau of Reclamation to reexamine its hydrologic analysis in light of their concerns.

December 3, 2006 – The Assistant Secretary for Water and Science via identical letters to each of the Lower Division States reported that: (1) Reclamation's technical staff completed a thorough review of the issues raised by them in their September 6, 2006, letter regarding the draft Hydrologic Determination; (2) as a result of the review, the Interior Department does not anticipate a change to the conclusion reached in the May 2006 draft Hydrologic Determination that sufficient water is likely to be available for the proposed Navajo-Gallup Project; and (3) Reclamation staff will consult with the Basin States to review their conclusions prior to submitting the determination to the Secretary for approval.

May 23, 2007 – The Secretary of the Interior approved and signed the Bureau of Reclamation's April 2007 final draft Hydrologic Determination finding that sufficient water is reasonably likely to be available within New Mexico's Upper Basin apportionment and from the Navajo Reservoir supply to service a contract for the Navajo Nation's uses under the Navajo-Gallup Project.

June 8, 2007 – The Secretary of the Interior via identical letters transmitted the 2007 Hydrologic Determination to the Governors of each of the seven Colorado River Basin States. The letters state that the finding of the 2007 Hydrologic Determination removes any Department of the Interior concerns about potential limitations on water supply for the proposed Navajo Nation water supply contract.

Comparison of 1988 and 2007 Hydrologic Determinations

Both the 1988 and 2007 Hydrologic Determinations evaluate the availability of water for development in the Upper Basin, and consequently, for uses in New Mexico, based on the worst or driest period of hydrology in the historic record, commonly referred to as the “critical period”. The supply available during wetter years outside the critical period exceeds the supply available during the critical period, and as such is not the focus of the evaluation. Because extension of the hydrologic record to include the hydrology of the past two decades did not result in the occurrence of a new critical period, the 2007 Hydrologic Determination found essentially the same amount of water yield available to the Upper Basin at Lee Ferry as did the 1988 Hydrologic Determination (about 6.0 maf). The most significant difference between the two determinations relates to how, in computing the amount of water available during the critical period for development and use by the Upper Division States, each determination treated reservoir evaporation at Colorado River Storage Project (CRSP) unit reservoirs that is shared among the States. Evaporation from Lake Powell, Flaming Gorge Reservoir and the Aspinall Unit reservoirs is shared among the Upper Division States because these reservoirs are operated to regulate the flow of the Colorado River at Lee Ferry for meeting the Upper Basin’s obligations under Article III of the Colorado River Compact, as well as to generate hydroelectric power for CRSP participating projects. The 1988 Hydrologic Determination assumed an average demand of about 0.52 maf/yr for shared CRSP evaporation based on the long-term average evaporation for the entire period of hydrologic record; whereas, the 2007 Hydrologic Determination utilized the average demand of about 0.25 maf/yr for shared CRSP evaporation estimated to actually occur during the critical period only. The evaporation demand for the critical period only, not for the lengthier period of record, was used in the 2007 Hydrologic Determination so that demand and supply is compared for the same period of time, which provides a consistent basis for planning water uses for the critical period. CRSP evaporation is less during the critical period than outside the critical period because reservoir storage is drawn down to consistently lower levels, on average, during periods of dry hydrology.

	<u>1988 HD</u>	<u>2007 HD</u>
Upper Basin Water Supply		
Upper Basin Yield at Lee Ferry for Critical Period	6.00 maf/yr	6.01 maf/yr
Upper Basin Apportionment to Arizona	0.05 maf/yr	0.05 maf/yr
Depletion Available to Upper Division States for Critical Period	5.95 maf/yr	5.96 maf/yr
Upper Basin Water Demand		
Shared CRSP Reservoir Evaporation	0.52 maf/yr _(LT)	0.2maf/yr _(CP)
Depletion Available for Development within Upper Division States	5.43 maf/yr	5.71 maf/yr

	<u>1988 HD</u>	<u>2007 HD</u>
State of New Mexico Uses		
New Mexico's 11.25% Share (per Upper Basin Compact)	611 taf/yr	642 taf/yr
New Mexico's Anticipated Future Upper Basin Depletions	622 taf/yr	642 taf/yr

US Commitment to Buy and Retire Private Water Rights

Based on the results of the 1988 Hydrologic Determination, the United States in the Jicarilla's Settlement Contract approved by Congress in 1992 agreed to make provision for the buy-out of private water rights aggregating 11,000 af/yr of depletion from the San Juan River stream system by 2040 to reconcile New Mexico's anticipated future Upper Basin depletions with the State's share of Upper Basin water, or to make other satisfactory provision to reconcile New Mexico's demand with New Mexico's supply. With the Settlement Agreement with the Navajo Nation, the State of New Mexico is willing to recommend that the 2007 Hydrologic Determination provides the other satisfactory reconciliation of New Mexico's anticipated depletions with the State's Upper Basin allocation without requiring the United States to buy-out and retire any existing private water rights.