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STATE OF NEW MEXICO
SAN JUAN COUNTY
THE ELEVENTH JUDICIAL DISTRICT COURT

STATE OF NEW MEXICO, *ex rel.* STATE ENGINEER,

Plaintiff,

vs.

THE UNITED STATES OF AMERICA, *et al.*,

Defendants,

THE JICARILLA APACHE TRIBE AND THE
NAVAJO NATION,

Defendant-Intervenors.

CV-75-184

HON. JAMES J. WECHSLER
Presiding Judge

SAN JUAN RIVER
GENERAL STREAM
ADJUDICATION

Claims of the Navajo Nation
Case No. AB-07-1

SUPPLEMENTAL AFFIDAVIT OF JOHN J. WHIPPLE

I, John J. Whipple, being first duly sworn hereby declare as follows:

1. The State has identified me as both a fact witness and an expert witness in the Navajo *inter se* proceeding in the Adjudication. On April 15, 2013 I prepared an affidavit in support of its motion and brief in support of entry of the Proposed Decrees ("April 15, 2013 Affidavit").

2. I have reviewed the following responses and affidavits submitted in response to the State's motion and brief:

- (1) "Gary L. Horner's Response to the State of New Mexico's Memorandum in Support of Settlement Motion for Entry of Partial Final Decrees," filed May, 2013 ("Gary Horner's Response");
- (2) "Robert E. Oxford's Response to the Settling Parties Memorandum in Support of the Settlement Motion," filed May 10, 2013 ("Robert Oxford's Response");
- (3) "Affidavit of Robert E. Oxford," filed May 10, 2013 ("Robert Oxford's Affidavit");
- (4) "Affidavit of Jim Rogers," filed May 10, 2013 ("Jim Rogers' Affidavit");
- (5) "Community Ditch Response to Purported Dispositive Motions Filed by the Navajo Nation, the United States, and the Office of the State Engineer," filed May 10, 2013 ("Community Ditch Defendants' Response").

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Disclosure of public comments received on the Navajo Nation water rights settlement

3. Gary Horner, at page 13 of Gary Horner's Response, asserts that the State has not fully disclosed the public comments made on the Navajo Nation water rights settlement. While I was employed by the New Mexico Interstate Stream Commission ("ISC") in December 2004 I prepared a document entitled: "Responses to Public Comments Received on Drafts of the San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement," dated December 10, 2004 ("Responses to Public Comments"). The Responses to Public Comments was produced by the State in its initial disclosures in the Navajo *inter se* proceedings in the San Juan River Adjudication ("Adjudication"), and was attached to my April 15, 2013 Affidavit as **Exhibit 6**.

4. The Responses to Public Comments identifies and responds to substantive issues raised by public comments received on drafts of the Navajo Nation water rights settlement (see Responses to Public Comments, page 1). Appendix A to the Responses to Public Comments includes a listing of each entity or person that submitted written comments to the ISC on drafts of the Navajo Nation water rights settlement, and identifies the issue(s) raised by each entity or person. Actual written comments received from the public were filed and kept in the official records at the ISC, which were produced by the State in its disclosure of OSE/ISC business records under Rule 1-033.E. While they are too numerous to be attached, they can be viewed at http://www.ose.state.nm.us/LAP/NNWRS/legal_nnwrs.html, under State's Discovery Responses, Rule 1-033.E Responses-OSE/ISC Business Records.

5. In addition, oral comments on drafts of the Navajo Nation water rights settlement made by the public at ISC meetings in the San Juan River Basin were documented in detail in

meeting minutes which were produced by the State in its Initial Disclosures and attached to my April 15, 2013 Affidavit as **Exhibits 11, 15, and 18.**

6. Other documents previously produced by the State in its Initial Disclosures or discovery in this case that also identify and respond to some of the issues raised by non-Navajo water users regarding the Navajo Nation water rights settlement include the following:

“Concerns of the San Juan Agricultural Water Users Association Regarding the Proposed San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement,” Dated July 9, 2004, memorandum prepared by John Whipple, dated August 9, 2004 (“Memorandum Response to Ag Users’ Concerns”), attached to the April 15, 2013 Affidavit as **Exhibit 14;**

“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,” memorandum prepared by John Whipple, dated March 22, 2005 attached to this Affidavit as **Exhibit 21;**¹

“Institutional Processes and Computational Procedures for Implementing Section 11 of the Act of June 13, 1962, Public Law 87-483,” memorandum prepared by John Whipple, dated May 31, 2005, attached to this Affidavit as **Exhibit 22;**

“Summary of the 2007 Hydrologic Determination Relating to the Navajo Settlement,” New Mexico Office of the State Engineer fact sheet dated November 5, 2007, attached to this Affidavit as **Exhibit 23;** and

“Restrictions on the Export of Water from New Mexico,” New Mexico Office of the State Engineer fact sheet dated November 5, 2007, attached to this Affidavit as **Exhibit 24.**

¹ Exhibits 1 through 20 are attached to my April 15, 2013 Affidavit.

Availability of water for the Navajo Nation water rights settlement

7. On the one hand, Gary Horner's Response at page 16 asserts that the State has not, but should have, challenged U.S. Bureau of Reclamation ("USBR") hydrologic determinations that "reduce" the estimated amount of water available for use in the San Juan River Basin in New Mexico. On the other hand, when the State and the USBR through the 2007 Hydrologic Determination identified and addressed a technical shortcoming in the previous hydrologic determination prepared by the USBR in 1988 which resulted in an increase in the estimated amount of water available for use in the basin in New Mexico as compared to the 1988 hydrologic determination, Gary Horner's Response at pages 63-65 asserts that the increase in the estimated amount of water available for use in New Mexico was the result of "manipulating the numbers," or "magic," a "sleight of hand," or "fun with numbers." The technical bases for the 2007 Hydrologic Determination are described in the determination itself and summarized in the "Summary of the 2007 Hydrologic Determination Relating to the Navajo Settlement," New Mexico Office of the State Engineer fact sheet dated November 5, 2007 attached to this Affidavit as **Exhibit 23**.

8. The 2007 Hydrologic Determination was critically reviewed by engineers, lawyers and others within the Department of the Interior and representing each of the seven Colorado River Basin states. The Upper Colorado River Commission ("UCRC") in June 2006 unanimously passed a resolution supporting the findings of what would become the 2007 Hydrologic Determination, including supporting a determination by the Secretary of the United States Department of Interior ("Secretary") that sufficient water is reasonably likely to be available to fulfill the proposed settlement contract for the Navajo Nation's uses in New Mexico from the Navajo Reservoir supply under the Navajo-Gallup Water Supply Project ("NGWSP")

and the Navajo Indian Irrigation Project (“NIIP”) under the allocations made to New Mexico in the Upper Colorado River Basin Compact (“Compact”), and also supporting Congressional action to approve the Navajo Nation water rights settlement, authorize the NGWSP and approve the contract for the Navajo Nation’s uses in New Mexico from the Navajo Reservoir supply under the NGWSP and the NIIP. The “Resolution of the Upper Colorado River Commission Regarding the Availability of Water from Navajo Reservoir for Navajo Nation Uses within the State of New Mexico,” June 5, 2006, is included as Appendix E to the 2007 Hydrologic Determination, attached to the April 15, 2013 Affidavit as **Exhibit 5**. The UCRC is the agency created by the Compact to administer its provisions.

8. Jim Rogers’ Affidavit at paragraphs 7-9 also asserts that the 2007 Hydrologic Determination is not an objective and scientific evaluation, referring to “predictions” in the December 2012 USBR Colorado River Basin Study (“2012 Study”) to support this claim. The Community Ditch Defendants’ Response at pages 3 and 5 further asserts that the 2012 Study contradicts the 2007 Hydrologic Determination. The Community Ditch Defendants filed additional exhibits as part of their response, including the 2012 Study’s Executive Summary and Technical Report B-Water Supply Assessment.

9. The 2012 Study, however, does not contain “predictions” of the future or evidence that water is not likely to be available for the NGWSP and the NIIP. First, the 2012 Study used four possible water supply scenarios, including the historic hydrologic record (Technical Report B, table B-2, page B-86). The scenarios used in the 2012 Study are alternative views of how the future might unfold, and are not predictions or forecasts of the future (page B-2). The water supply scenarios attempt to bracket the range of conditions that might be experienced over the next 50 years (page B-77). Jim Rogers’ Affidavit criticizes the 2007

Hydrologic Determination, as compared to the 2012 Study, because it was based on “computer modeled simulations” and not the real amount of water in the river. Yet, one of the water supply scenarios in the 2012 Study was the historic hydrologic record, which is what the 2007 Hydrologic Determination used; and two of the scenarios were paleo-hydrology based on tree ring extensions of the hydrologic record using correlations with the historic record, which gives similar average hydrology to the historic hydrologic record but with somewhat greater possible variation in flows than was experienced in the historic record. The fourth water supply scenario in the 2012 Study was based on global warming theories and associated modeling of possible climate changes and of possible hydrologic impacts of possible climate changes. The climate change hydrology scenario is the scenario that suggests that future stream flows in the Colorado River Basin might average significantly less than historic stream flows, and it also is the scenario most based on theory, assumptions and computer modeled simulations.

10. In addition, although Gary Horner’s Response and Jim Rogers’ Affidavit criticize the 2007 Hydrologic Determination for modeling evaporation at Colorado River Storage Project (CRSP) reservoirs based on storage levels, the modeling of evaporation at CRSP reservoirs in the 1988 hydrologic determination and in the 2012 Study also was based on storage levels. The technical shortcoming with the 1988 hydrologic determination was the post-modeling use of New Mexico’s share of the long-term average CRSP evaporation, rather than its share of the critical-period evaporation, to evaluate how much of the critical-period Upper Basin yield was available for development within New Mexico.

11. Second, the 2012 Study evaluated overall risks of Colorado River system shortages under various combinations of possible future demand and supply scenarios, but did not apply certain compact constraints or water rights administration to evaluate which particular

uses were at risk of shortage. If droughts in the future result in years in which the Upper Basin must curtail uses pursuant to administration of article IV of the Compact, the water deliveries under the Animas-La Plata Project ("ALP"), Navajo Reservoir water supply contracts (including for the NIIP, NGWSP and Jicarilla Apache contract uses), the San Juan-Chama Project ("SJCP") and the Hammond Project would be shorted before non-Navajo irrigation uses under rights with priority dates senior to June 17, 1955, such that the more senior water rights below Navajo Dam, including for non-Indian uses, will be greatly protected. The water supply for Navajo Reservoir contracts is diverted or stored with a priority date of June 17, 1955, under Office of the State Engineer ("OSE") File No. 2849, subject to non-impairment of more senior water rights. The subordination of the Navajo Nation's reserved rights priority date for the ALP, NIIP and NGWSP to its contract rights with the United States ("U.S.") thus helps insulate and protect non-Navajo water uses with priority dates earlier than June 17, 1955.

12. Jim Rogers' Affidavit at paragraph 6 reports that former State Engineer Thomas Turney as of 2003-2004 was of the opinion that sufficient water was not available for the Navajo Nation water rights settlement and to maintain the water rights for irrigation under the non-Indian ditches. The San Juan Agricultural Water Users Association ("SJAWUA") has not provided an affidavit or other documentation from Thomas Turney stating his position as to the availability of water for the Navajo Nation water rights settlement. In fact, Thomas Turney in 2001 made presentations to water users in the San Juan River Basin that a Navajo settlement would include completion of the NIIP, the NGWSP and rehabilitation of the Hogback and Fruitland projects. See "Comments of Thomas C. Turney before San Juan Water Commission, Farmington, NM," August 21, 2001, pages 4-7, attached as **Exhibit 3** to April 15, 2013 Affidavit.

Water administration provisions to mitigate against priority calls under low flow conditions

13. Under paragraph 9.1 of the “San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement,” signed in December 2010 (“Settlement Agreement”), the State Engineer in any year may administer diversions from the San Juan River below Navajo Dam during periods of very low flow as if the direct flow in the river at Archuleta was a minimum of 225 cubic-feet-per-second (“cfs”), so long as Navajo Reservoir storage exceeds 1 million acre-feet (“maf”) at the end of May that year. Under paragraph 9.2 of the Settlement Agreement, the Navajo Nation agrees to use up to 12,000 afy of its NIIP contract water to provide an alternate water supply from storage in Navajo Reservoir to the Hogback Project in the event that the direct flow in the river system at some time during the irrigation season becomes insufficient to meet non-contract water demands below Navajo Dam. Delivery of this alternate water supply to the Hogback Project would be in lieu of the Navajo Nation requesting a priority administration against upstream junior non-Navajo water users to make water available to the project, thus avoiding or delaying possible priority calls on the river system that might otherwise occur. The maximum amount of alternate water supply delivery required of the Navajo Nation under paragraph 9.2 of the Settlement Agreement may be reduced in years in which shortages are allocated to NIIP deliveries by the Secretary pursuant to the Act of June 13, 1962, Section 11. The provisions of paragraphs 9.1 and 9.2 of the Settlement Agreement were added and revised in response to comments made on drafts of the Navajo Nation water rights settlement by non-Indian water users which desired benefits from Navajo Reservoir storage as protection to them against possible priority calls (see *Exhibit 6*, Responses to Public Comments, pages 39 and 77-79).

14. Gary Horner's Response at pages 19-24, Robert Oxford's Affidavit at paragraph 14, and Jim Rogers' Affidavit at paragraphs 11 and 14 make several assertions regarding the evaluation and benefits of the water administration provisions described in paragraphs 9.1 and 9.2 of the Settlement Agreement. In response, first, the requirement of the Navajo Nation to provide alternate water supply from the NIIP contract to the Hogback Project pursuant to paragraph 9.2 of the Settlement Agreement is not conditioned upon Navajo Reservoir containing 1 maf of storage as of the end of May. This condition applies only to the 225 cfs minimum direct flow provision in paragraph 9.1 of the Settlement Agreement.

15. Second, in 2004 before approval of the Navajo Nation water rights settlement by the settling parties, I evaluated the potential effects of paragraphs 9.1 and 9.2 of the Settlement Agreement on future priority calls under low flow conditions, which evaluation is attached to the *Exhibit 6*, Responses to Public Comments as Appendix D ("Appendix D"). The hydrologic evaluation in Appendix D included Navajo Reservoir storage modeled for the draft Navajo Reservoir Operations Environmental Impact Statement ("Navajo Reservoir EIS") that was available at that time as described in Appendix D, page D-2, note 1. The modeling covered only the hydrologic period 1929-1993, and incorporated full use of water under Navajo Reservoir water supply contracts and other uses included in the draft New Mexico depletion schedule, as well as operation of the reservoir to meet the San Juan River Basin Recovery Implementation Program's ("SJ RIP") flow recommendations for conservation of endangered fish habitat in the San Juan River (see *Exhibit 6*, Appendix D, page D-2, notes 1 and 2). Thus, the evaluation was made to address anticipated future water demand conditions, which is a more robust analysis of risk of future priority calls than would be made if the evaluation were to be performed based on historic Navajo Reservoir storage conditions for a period in which there was less water demand

on the reservoir than there will be in the future. The modeling for the Navajo Reservoir EIS was on a monthly time step and did not include any water rights administration rules or show any shortages to modeled water uses in New Mexico. For the evaluation in Appendix D, it was assumed that end of May reservoir storage might be below 1 maf and that there might be shortages under future water development conditions and 2002-2003 hydrology due to substantial drawdown of Navajo Reservoir storage as a consequence of severe drought in 2002. A 10 percent shortage to the NIIP water demand was assumed for both 2002 and 2003 for illustrative purposes (see *Exhibit 6*, Appendix D, page D-2, notes 1 and 2).

16. Third, the historic direct flow of the San Juan River at Archuleta below Navajo Dam after closure of the dam in December 1962 was computed as the maximum of: (1) the Navajo Reservoir inflow computed by the USBR using a water balance approach; and (2) the sum of the gaged inflows near the head of the reservoir from the San Juan River near Carracas, Piedra River near Arboles, Los Pinos River at La Boca and Spring Creek at La Boca, plus 20 cfs for estimated intervening inflows between these gages and Archuleta under pre-dam conditions (see Appendix D, page D-2, assumption 5). Prior to closure of Navajo Dam, the gaged flow in the San Juan River near Archuleta represented the direct flow at Archuleta (the Archuleta gage records are available beginning 1955). Computed historic daily Navajo Reservoir inflows are available at USBR website: Bureau of Reclamation: Upper Colorado Region Historic Data at <http://www.usbr.gov/uc/crsp/GetDateInfo?d0=1720&d1=1793&d2=1873&d3=1929&d4=2304&d5=2387&idCount=6&l=NAVAJO+RESERVOIR>. Gaged daily flow records for the San Juan River near Archuleta, the San Juan River near Carracas, the Piedra River near Arboles, the Los Pinos River at La Boca and Spring Creek at La Boca are available at the U.S. Geological Survey ("USGS") website: [USGS NWIS Site Information for USA: Site Inventory](#) at:

http://waterdata.usgs.gov/nwis/inventory?search_criteria=search_station_nm&submitted_form=introduction.

17. Fourth, the evaluation in Appendix D included Animas River flows at Cedar Hill as being available to meet water demands on the Animas River and on the San Juan River below their confluence (see *Exhibit 6*, Appendix D, page D-2, assumptions 3 and 4). Gaged daily flow records for the Animas River near Cedar Hill are available at the USGS website.

18. Fifth, the evaluation in Appendix D indicates that with the provisions in paragraphs 9.1 and 9.2 of the Settlement Agreement, shortages to direct flow water users might occur under the hydrology experienced in 1956 and 1959 and then again in 2002 and 2003. If 2 years of shortage are repeated every 45 years or so, this would amount to shortages occurring in about 4 percent of the years. Regardless of whether the risk of shortage is interpreted as 4 or 8 percent of the years with the provisions of paragraphs 9.1 and 9.2, these provisions avoid or delay possible priority calls. And by providing alternate water supply to the Hogback Project from storage in Navajo Reservoir at times when there would otherwise be a priority call due to substantial low flow conditions, the non-Navajo water users may continue using direct flow water without being curtailed as out of priority to get water to the Hogback. The alternate water supply is charged against the NIIP contract delivery amount; but, while the alternate water supply is delivered to the Hogback Project, the non-Navajo water users essentially get the water use benefit of it because their water uses then do not have to be curtailed and they do not have to pay for storage or replacement water.

19. Lastly, it is noted that despite assertions to the contrary, the USBR must bypass through the reservoir all inflow (or all direct flow) to the extent that is needed to meet downstream water demands under rights with priority dates senior to June 17, 1955, in order for

Navajo Reservoir operations to not impair more senior rights, regardless of whether the direct flow exceeds the USBR's minimum Navajo Dam release rate of 250 cfs.

Water use authorizations with and without the settlement

20. Despite assertions to the contrary in Gary Horner's Response at page 11 and elsewhere, the water uses for which water rights are proposed for the Navajo Nation in the Proposed Decree are authorized by federal law, OSE appropriation filings and Department of the Interior water contracts. For example, the Navajo Nation's uses of water under the NIIP and ALP were authorized prior to the Navajo Nation water rights settlement. The diversion of up to 508,000 afy for use on the NIIP is authorized by the Act of June 13, 1962, Public Law 87-483, Section 2, the existing NIIP water supply contract between the Navajo Nation and the Department of the Interior, and OSE File No. 2849 for the Navajo Project. Neither the Act of June 13, 1962, nor OSE File No. 2849 quantifies the amount of depletion for uses on the NIIP; however, the "Final Biological Opinion for the Navajo-Gallup Water Supply Project," prepared by the U.S. Fish and Wildlife Service and dated February 26, 2009, available at <http://www.usbr.gov/uc/envdocs/eis/navgallup/FEIS/vol1/Volume1.pdf> and identified in the State's Initial Disclosures at http://www.ose.state.nm.us/LAP/NNWRS/legal_nnwrs.html, under Laws and Congressional Records, provides Endangered Species Act compliance for completion of the NIIP with an associated total depletion of 280,600 afy for the project.

21. The "Recommendations for San Juan River Operations and Administration" annual water sharing agreements entered by major water users on the San Juan River system for the years 2003, 2004, 2005, 2006, 2007-2008 and 2009-2012 ("Recommendations") reflect current water demand conditions for the Hogback and Fruitland projects each year. Disclaimers in the Recommendations indicate that they are not to be a determination or evidence of any water

user's water rights, a precedent for water administration in the San Juan River Basin in New Mexico in succeeding years, an establishment of any priorities between given uses of water, or an establishment of any entitlements to water (see, for example, the Recommendations for 2007-2008, page 1). The Recommendations do not in any way limit future water demands of the Navajo Nation that may develop with further construction of the NIIP or rehabilitation of the Hogback and Fruitland projects. The Recommendations for 2007-2008, and the endorsements of the water user entities party to the Recommendations, were produced in the State's Initial Disclosures or during discovery in the Adjudication and are attached to this Affidavit as **Exhibits 25, 26, and 27**.

Calculation of NIIP return flows and depletions

22. Robert Oxford's Affidavit at paragraph 17 and Jim Rogers' Affidavit at paragraph 16 assert that there is no reliable method to measure return flows and depletions on the NIIP, and thus the depletion amount for the NIIP in the Proposed Decree cannot be administered. The Community Ditch Defendants filed additional exhibits as part of their response, including an excerpt from the March 26, 2013, deposition of Lionel Haskie, pages 93-96, in which Mr. Haskie stated that accurate measurements of at-site depletion on the NIIP cannot be made unless deep percolation losses were measured underneath all irrigated acres, crop consumptive uses on the NIIP can be calculated, and he did not know what would be needed to measure surface and sub-surface return flows from the NIIP to the San Juan River. The Proposed Decree would provide that the depletions on the NIIP be determined as the depletions of flow from the San Juan River, and includes depletions caused by the use of water on the project and any depletions incident to use (see Proposed Decree, paragraph 3(a) and last sentence of paragraph 3). Therefore, it is return flows from the NIIP to the San Juan River that must be determined to calculate NIIP

depletions for administration of the Proposed Decree, not estimates of at-site depletions by crop consumptive uses or measurements of deep percolation losses to ground water underneath project lands.

23. The United States Bureau of Indian Affairs ("BIA") prepares annual water budgets for the NIIP that include, among other things, measured diversions into the NIIP Canal from Navajo Reservoir and data on return flows at the NIIP boundaries. The BIA's annual water budgets for the period 1976-1997 were provided and described in the 1999 NIIP Biological Assessment at pages 32-36 and Appendix A. For later years, the BIA's annual water budgets were provided and described in irrigation and drainage reports for the NIIP, including, for example, the "Navajo Indian Irrigation Project Irrigation and Drainage 2009-2010 Analysis," prepared by the BIA and Keller-Bliesner Engineering, dated November 9, 2011 ("NIIP Report"), attached to this Affidavit as **Exhibit 28**, at pages 7-18 and Appendices 1-4.

24. Return flows at the NIIP boundaries prior to 2005 were estimated or based on ground water modeling output and spot measurements, and beginning 2005 were determined from return flow measurements at up to 16 surface channel and spring sites identified in the NIIP Report at Appendix 9, Figure 9.3, plus a small amount of unmeasurable ground water discharge that was estimated based on ground water modeling (see **Exhibit 28**, NIIP Report, pages 9-10). The BIA for its purposes has estimated NIIP depletions as NIIP diversions minus total return flows at the NIIP project boundaries, and its calculations of historic annual NIIP depletions are summarized in the State's Technical Assessment at the Appendix, Table 1. These calculations give a measure of on-site depletions for the NIIP, but understate the actual depletion of flow from the San Juan River because some of the return flow at the NIIP boundaries is incidentally

lost in transit between the NIIP boundaries and the river such that it does not all accrue back to the river (see State's Technical Assessment, pages 23-24).

25. For administration of the Proposed Decree, return flow credits for the NIIP must be based on demonstrated return flows accruing to the San Juan River, for example, return flows in surface channels measured near the river. This may require the Navajo Nation to expand the current measurement and monitoring of return flows from the NIIP to receive full credit for all actual return flows to the river. The calculations of return flows from the NIIP to the San Juan River and depletions from the river by the NIIP must be made using a methodology that is technically sound and acceptable to the State Engineer (see Proposed Decree, paragraph 16).

Information issues for Navajo inter se proceeding

26. Gary Horner's Response at page 51 complains that the State has not mentioned or made clear the amounts of acres under the Hogback and Fruitland Projects that were idled or abandoned in any year. The amounts of acres under the Hogback and Fruitland Projects that were irrigated in particular years for which irrigated acres data are available are provided in Table 2 of the State's Technical Assessment (see State's Technical Assessment, pages 5 and 7 and Table 2). The amounts of acres under these projects that were idled or abandoned as of any year beginning the mid 1960s when extensive rehabilitation and extension of the existing Hogback Canal was completed can be deduced by subtracting the amount of acres irrigated from the total project acreages.

Settlement negotiation and public input process

27. Jim Rogers' Affidavit at paragraph 3 asserts his feelings or perceptions that the negotiation and public review process for the Navajo Nation water rights settlement was a "sham" that really did not consider suggestions of the SJAWUA, but provides no facts to support

this assertion or his contention that the description of the negotiation process and the public review and input process given in the Whipple Affidavit was wrong, inaccurate or misleading. The fact that significant changes were made to draft settlement documents in response to comments received from the SJAWUA and others is illustrated in the Memorandum Response to Ag Users' Concerns, in the quantification of the Navajo Nation's water amounts for the Hogback and Fruitland Projects in the Proposed Decree consistent with the CIRs, FDRs and PDRs for non-Indian ditches given in the 1938 Survey Report (see *Exhibit 6*, Responses to Public Comments, pages 42-46), in the addition of paragraph 9.6 to the Settlement Agreement to provide waivers that the Navajo Nation will not challenge in the Adjudication rights adjudicated by the Echo Ditch Decree unless upon a claim of forfeiture or abandonment subsequent to entry of the decree (see *Exhibit 6*, Responses to Public Comments, pages 72-77), and in the addition and modification of the alternate water supply provisions of paragraph 9.2 of the Settlement Agreement to mitigate against possible future priority calls (see *Exhibit 6*, Responses to Public Comments, pages 77-79).

28. Jim Rogers' Affidavit at paragraph 4 further asserts his feelings and perceptions that the Court-ordered public meetings held in the San Juan River Basin in June of 2011 for the settling parties to explain the settlement and answer questions about it did not provide the public sufficient time to make statements and did not provide answers to their questions. Interestingly, at the public meeting in Bloomfield on June 29, 2011, I observed Victor Marshall asking people who were standing in line to make statements or ask questions of the settling parties to hold their statements or questions so that the public meeting could be shortened and he could hold his own meeting with the public. Victor Marshall was the attorney for the SJAWUA at the time of the meeting, and is now the attorney for the Community Ditch Defendants.

EXHIBITS
To Supplemental Affidavit of John J. Whipple

May 24, 2013

Exhibit No. 21 "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," memorandum prepared by John Whipple, dated March 22, 2005

<http://www.ose.state.nm.us/LAP/NNWRS/Initial%20Disclosures/Reports%20and%20Memoranda/Navset%20sjcp%20032205.pdf>;

Exhibit No. 22 "Institutional Processes and Computational Procedures for Implementing Section 11 of the Act of June 13, 1962, Public Law 87-483," memorandum prepared by John Whipple, dated May 31, 2005

<http://www.ose.state.nm.us/LAP/NNWRS/Responses/053105%20Whipple%20Memo%20re%20Instit.%20Processes%20and%20Comput.%20Proc.%20for%20Implemtg%20Sec.%2011%20of%20Act%20of%20061362.pdf>;

Exhibit No. 23 "Summary of the 2007 Hydrologic Determination Relating to the Navajo Settlement," New Mexico Office of the State Engineer fact sheet dated November 5, 2007

<http://www.ose.state.nm.us/LAP/NNWRS/Initial%20Disclosures/Settlement%20Documents/Summary%20of%20the%202007%20Hydrologic%20Determination%20re%20Navajo%20Settlement%20110507.pdf>

Exhibit No. 24 "Restrictions on the Export of Water from New Mexico," New Mexico Office of the State Engineer fact sheet dated November 5, 2007

<http://www.ose.state.nm.us/LAP/NNWRS/Initial%20Disclosures/Settlement%20Documents/Restrictions%20on%20the%20Export%20of%20NM%20Water%20110507.pdf>

Exhibit No. 25 "Recommendations for San Juan River Operations and Administration for 2007 and 2008," dated December 15, 2006

<http://www.ose.state.nm.us/LAP/NNWRS/Initial%20Disclosures/Agreements%20and%20Contracts/Recommendations%20for%20SJR%20Operations%20&%20Administration%202007%20&%202008.pdf>

Exhibit No. 26 "Recommendations for San Juan River Operations and Administration for 2006," dated December 19, 2005

<http://www.ose.state.nm.us/LAP/NNWRS/Responses/GaryHorner/2006%20SJ%20Administration%20&%20endorsements.pdf>

Exhibit No. 27 "Endorsement of Recommendations for San Juan River Operations and Administration for 2007 and 2008," dated June 13,

2007 <http://www.ose.state.nm.us/LAP/NNWRS/Responses/GaryHorner/Endorsements%20-%202007-08.pdf>.

Exhibit No. 28 "Navajo Indian Irrigation Project Irrigation and Drainage 2009-2010 Analysis," prepared by the BIA and Keller-Bliesner Engineering, dated November 9, 2011