EXHIBIT 4

No. 141, Original

IN THE
SUPREME COURT OF THE UNITED STATES

♦

STATE OF TEXAS,

Plaintiff

v.

STATE OF NEW MEXICO and
STATE OF COLORADO,

Defendants

♦

SECOND DECLARATION OF JOHN R. D'ANTONIO, JR.

♦

I, John R. D'Antonio, Jr., P.E., pursuant to 28 U.S.C. § 1746, hereby declare as follows:

1.A) I am over 18 years of age and have personal knowledge of the facts stated herein.

2.A) I am the same John R. D'Antonio, P.E. who submitted a declaration in support of New Mexico's November 5, 2020 motions for partial summary judgment. My credentials and background are discussed therein. NM-EX 002, Declaration of John R. D'Antonio, Jr. (D'Antonio 1st Decl.) at ¶¶ 2-8.[1]

3.A) Texas and the United States demonstrate misunderstandings relating to New Mexico water administration history, authority, and practice in their motions for partial summary judgment, as well as provide erroneous statements of fact. I have been asked to address those. In this declaration I have provided a broad overview of New Mexico authority and practice both in the state-wide, comprehensive context, as well as to specific issues relevant to this litigation.

[1] All exhibits designated "NM-EX" in this Declaration are contained in the State of New Mexico's Exhibit Compendium filed with New Mexico's Partial Summary Judgment Motions on November 5, 2020, and additional exhibits in the State of New Mexico's Supplemental Exhibit Compendium dated December 22, 2020 filed with New Mexico's responses to Texas and the United States motions for partial summary judgment. Exhibits used by the United States and Texas in their motions for partial summary judgment are cited as in those briefs.

New Mexico has a Comprehensive Water Administration System

1) Under the New Mexico Constitution and statutory law, water in New Mexico belongs to the public. This provision was part of the New Mexico Constitution from before the Rio Grande Compact (Compact) was negotiated. Private rights to the use of New Mexico's unappropriated public waters may be established by the appropriation of water for beneficial use. Beneficial use is the basis, measure and limit of a right to the use of water. Priority of appropriation gives the better right. New Mexico Constitution, Art. XVI, §§ 2, 3; NMSA 1978 §§ 72-1-1, -2.

2) ~~These provisions regarding beneficial use and priority of appropriation were first formally adopted into New Mexico law in the 1907 Water Code, NMSA 1978 Title 72 (1907 Water Code). The 1907 Water Code was based on a Model Water Code drafted by an employee of the predecessor to the United States Bureau of Reclamation, Morris Bien, and was enacted in anticipation of the building of the Rio Grande Project (Project) in the Lower Rio Grande (LRG—the area of New Mexico from the Elephant Butte Dam to the Texas state line (A1)).[2] The 1907 Water Code has as its most "striking feature" a centralization of authority in a State [then-Territorial] Engineer. NM-EX 434, Ira Clark, *Water in New Mexico: A History of its Management and Use* (University of New Mexico Press 1987) at 118-119.~~

3) The New Mexico State Engineer is a New Mexico cabinet-level position.

4) ~~Since 1907 the (Territorial, then) State Engineer has actively exercised "broad powers" to administer waters throughout the State in an "exclusive and comprehensive" administrative system. *Tri-State Generation & Transmission Ass'n v. D'Antonio*, 2012-NMSC-039, ¶24, 289 P.3d 1232, *construing* NMSA 1978 §72-2-1 (the State Engineer has "general supervision of waters of the state and of the measurement, appropriation, distribution thereof and such other duties as required").~~

5) For example, among many other duties:

   a) Since 1907, a permit from the State Engineer is required to develop a water right for surface water use. The application proceeding for such a permit requires analysis by the Office of the State Engineer (OSE) of detailed information submitted by the applicant, followed by publication of the application, opportunity for protests, and, if warranted, hearings before the State Engineer. NMSA 1978 §72-5-1 through 7.

[2] This is the New Mexico use of the term "LRG." However, in Rio Grande Compact terminology the area from Elephant Butte Reservoir, New Mexico down to Fort Quitman, Texas is also referred to as the Lower Rio Grande. For purposes of this declaration, I am only using "LRG" to mean Elephant Butte Dam to the Texas state line.

b) Since 1931, an almost identical process has been required for the development of a water right to the use of groundwater once a groundwater basin has been "declared" by the State Engineer--that is, determined to have "reasonably ascertainable boundaries." NMSA 1978 §72-12-1, *et seq.* After a groundwater basin is declared, a State Engineer permit is required to establish a groundwater right within that basin. *State ex rel. Bliss v. Dority,* 1950-NMSC-066, 55 N.M. 12, 225 P.2d 1007 (the State Engineer has the authority to extend his jurisdiction by declaring the boundaries of an underground body of water). As of 2005, all groundwater basins in New Mexico have been declared and are under the State Engineer's permitting jurisdiction. http://www.ose.state.nm.us/RulesRegs/ground-water-regs/GroundWaterRegs-Article7.pdf (showing all groundwater basins in New Mexico, and documenting when they were declared or extended). New Mexico's Lower Rio Grande Underground Water Basin, as discussed in detail below, was declared in 1980 and extended in 1982.

c) The State Engineer produces and maintains the hydrographic surveys that support the adjudication of water rights throughout the State. NMSA 1978 § 72-4-16. The State Engineer works closely with the adjudication courts to assist in these massive cases.

d) The State Engineer administers water rights, enforces water right permit conditions and prevents excessive or illegal uses of water. NMSA 1978 §§72-2-18; 72-5-39.

e) The State Engineer, pursuant to the responsibility for the measurement of the State's waters, may require metering of all groundwater uses and the reporting of metering data to the State Engineer. NMSA 1978 §72-12-27; *e.g.* NM-EX-533, State Engineer Supplemental Order #180 (03/21/2007) (Final Metering Order).

f) By statute, the regulations, codes, and orders issued by the State Engineer are "presumed to be in proper implementation of the provisions of the water laws administered by [the State Engineer]." NMSA 1978 §72-2-8 (H).

g) The State Engineer serves as the Secretary to New Mexico's Interstate Stream Commission (ISC), which oversees New Mexico's compact obligations, expending significant resources to ensure compliance with the Rio Grande Compact and seven (7) other interstate compacts. The declaration of Rolf Schmidt-Petersen contains a detailed discussion of the many responsibilities and significant undertakings by the ISC to assure compact compliance across the state. See NM-EX 009, Rolf Schmidt-Petersen 2nd Decl., ¶¶ 4-22.

h) Both OSE and ISC have dedicated technical staff charged with monitoring and managing all issues impacting New Mexico's stream systems.

i) The State Engineer also serves as New Mexico's Rio Grande Compact Commissioner.

6) The State Engineer has established seven District Offices across the State. The LRG is administered by District IV in Las Cruces, where unique issues arise relating to the Elephant Butte Irrigation District (EBID) and the Project, as well as the complex hydrology of the area.

7) While the United States Bureau of Reclamation (Reclamation) and EBID control delivery of Project water, the State Engineer retains authority over and ensures compliance with all water rights and river diversions of New Mexico water, including the use of New Mexico water outside the state.

New Mexico's Comprehensive Administration Scheme Has Been Applied to Ensure Compliance with the Rio Grande Compact

8) Using the broad authority over water matters in New Mexico delegated to the State Engineer, the State Engineer has administered water from a centralized perspective that has allowed the State Engineer to address Compact compliance and administrative issues together. ~~The most famous example of this convergence of State Engineer duties specifically involved the interconnections between surface and groundwater on the Rio Grande. In *City of Albuquerque v. Reynolds*, 1962-NMSC-173, 71 N.M. 428, 379 P.2d 73, the New Mexico Supreme Court upheld State Engineer Steve Reynolds' 1956 decision to publish guidelines for the Middle Rio Grande groundwater basin that required those seeking to appropriate groundwater to offset the new impacts on surface water caused by their diversions of groundwater. By this administrative action, State Engineer Reynolds pioneered the principle of conjunctive management of surface and groundwater. Following State Engineer Reynolds' lead, many other prior appropriation states have adopted conjunctive management principles in water administration. The New Mexico State Engineer's responsible, science-based approach to compliance with the Rio Grande Compact has had national effects. Any suggestion that the New Mexico State Engineer ignored or failed to understand the science of conjunctive management cannot be supported in the light of New Mexico's general history of comprehensive water administration, as well as New Mexico's specific history of taking strong action to ensure compliance with the Rio Grande Compact.~~

9) ~~As he explained at an April, 1968 conference on "International Water Law Along the Mexican-American Border," State Engineer Reynolds imposed this hydrologic realism regarding conjunctive management in part because of New Mexico's Compact obligations, as it was imperative under the Rio Grande Compact that water flowing through the Middle Rio Grande above Elephant Butte be protected from depletions in order to meet New Mexico's delivery~~

obligations at Elephant Butte reservoir.[3] State Engineer Reynolds also observed in that same conference that the Compact was designed so that New Mexico has an incentive to comply with the Compact, as the farmers below Elephant Butte Reservoir are New Mexico citizens, so some of the water is intended for New Mexico lands.[4]

10) The fact that New Mexico has both a legal obligation and a political incentive to comply fully with the Compact was, and still is, the background for the State Engineer's rigorous, science-based and practical administration on the Rio Grande, which has successfully achieved the goal of compliance. State Engineer Reynolds' decisions are a good example of this. He fought hard to initiate conjunctive management principles in the Middle Rio Grande because the Compact required that New Mexico make deliveries to Elephant Butte Reservoir, in part to serve New Mexico lands. State Engineer Reynolds' different approach to groundwater in the LRG reflected the very different circumstances there, described in the following paragraphs ¶¶ 12-15.

11) New Mexico's centralized, comprehensive scheme, together with the work of the local District Offices, has allowed the State Engineer to tailor administration to particular conditions. For example, while State Engineer Reynolds' establishment of the principle of conjunctive management applied to all of New Mexico, State groundwater permitting administration was not required in the LRG during the early life of the Project because of the particular hydrologic and historical conditions of the LRG. The State Engineer continued to have general administrative authority over the LRG as over all of the waters of New Mexico. NMSA 1978 § 72-2-1.

12) Up until 1980, the Project was run by Reclamation as a single unit that delivered surface water to farm headgates on a basis of equal amounts of water for each acre throughout the Project. *See* NM-EX 506, Affidavit of Filiberto Cortez (4-20-2007) (Cortez Aff.) at ¶8. In the earlier days of the Project, the system was hydrologically self-regulating so that groundwater pumping had no lasting effects on Project Supply. In drought years farmers in both Texas and New Mexico, with the encouragement of Reclamation, pumped groundwater to supplement the surface supply delivered by the Project. In wetter years, the groundwater table throughout the Project rebounded quickly from the effects of that pumping. The state line was irrelevant. New Mexico groundwater permitting administration would not have been helpful under these conditions. NM-EX 100, Expert Report of Margaret Barroll, Ph.D. ("Barroll Rep.") at §§2.1, 2.2.

[3] TX_MSJ_005776-5783, S.E. Reynolds, State Engineer, The Rio Grande Compact (April 29, 1968; and TX_MSJ_005741-5754, S.E. Reynolds, State Engineer, State of New Mexico, "The Rio Grande Compact," in Clark S. Knowlton, ed., International Water Law Along the Mexican-American Border, Contribution No. 11 of The Committee on Desert and Arid Zones Research, Southwestern and Rocky Mountain Division, A.A.A.S. (El Paso: University of Texas, 1968) at 58-59.

[4] TX_MSJ_005776-5783 and TX_MSJ_005741-5754.

13) By 1980 the debts owed to the United States by Elephant Butte Irrigation District and El Paso District No. 1 were paid off. In accordance with Reclamation law, title to much of the infrastructure of the Project was then handed over to the two districts ("Title Transfer"). This led to changes in how the Project was run. Reclamation retained administrative control over releases from Elephant Butte Reservoir but, rather than delivering water to farm headgates on the basis of equal amounts of water for each acre throughout the Project, Reclamation changed its practice to deliver instead to the two districts at the major Project diversions. The districts then took over the duty to distribute the water within each district. NM-EX 100, Barroll Rep. at §§2.2, 6.2; NM-EX 506, Cortez Aff. at ¶ 8-9. This change meant that the Project was no longer administered as one project in disregard of the state line. It was unclear at that time what the effect of this change would be.

14) At approximately the same time, the City of El Paso, Texas expressed its intent to appropriate a hundred-year supply of groundwater in New Mexico, a circumstance that raised the possibility of drastically affecting the balance of the Compact. New Mexico's concern for that possibility was ultimately rejected in *El Paso by Pub. Serv. Bd. v. Reynolds*, 563 F. Supp. 379 (D.N.M. 1983) (because the Compact does not apportion groundwater, El Paso's appropriation of groundwater would not violate it). At the time of El Paso's original expression of interest in appropriating groundwater in New Mexico, however, it was unclear what the effect would be on the Compact.[5]

15) The uncertainties that these two developments (¶¶ 13-14) created suggested that there was an increased need for State participation in the administration of groundwater in the LRG. Accordingly, State Engineer Steve Reynolds in September of 1980 defined the boundaries and "declared" the LRG Underground Water Basin as to the Mesilla Valley under State Engineer Order #126 (NM-EX 427, State Engineer Order #126), in accordance with his powers under the New Mexico groundwater statutes at NMSA 1978 §72-12-1 *et seq.* In 1982 State Engineer Reynolds expanded the boundaries of the LRG Underground Water Basin to include the

[5] In ¶61 of his declaration (TX_MSJ_001618-001619), Dr. Miltenberger states that a document purporting to summarize the results of a streamflow study that was retrieved from the files of former IBWC Commissioner Joseph F. Friedkin was created and circulated by the OSE. *See id.*, fn 106. I am not aware of this document and after diligent investigation the document is not within OSE files and no OSE personnel are familiar with the document. As stated in New Mexico's Responses to Texas's First Requests for Admission (RFA No. 57) New Mexico does not believe the document was authored by New Mexico. NM-EX 603, New Mexico Responses to Texas RFAs (9-2-20). It is not and has never been OSE practice to circulate or adopt the position of unsigned, unattributed documents. I have no reason to believe this document or the conclusions therein were created or endorsed by the OSE.

Rincon valley by State Engineer Order #135 (NM-EX 428, State Engineer Order #135) (collectively, the LRG Groundwater Basin). Under New Mexico law, by declaring a groundwater basin the State Engineer asserts administrative control over the groundwaters of the basin.

16) The State's administration of water in the LRG is premised on the fact that the surface water of the Rio Grande has been fully appropriated since 1908, after the United States filed notices to appropriate all unappropriated surface water of the Rio Grande and its tributaries for the Project. Since 1908, no new appropriation of surface waters has been permitted in the LRG.

17) ~~The fact that the surface water was fully appropriated meant that, following the declaration of the LRG Groundwater Basin and under the principles of conjunctive management established by State Engineer Reynolds~~, no permit to use groundwater would be issued after 1980 unless surface water was protected from any new depletion caused by the groundwater pumping.

18) ~~There were numerous existing wells in the LRG at the time of the declaration of the LRG Groundwater Basin. Groundwater wells had been drilled for irrigation from at least the early 1900, if not before. A significant number of irrigation wells were drilled during the 1950s through 1970s, with the encouragement of Reclamation. NM-EX 112, Expert Report of Jennifer Stevens, Ph.D. ("Stevens Report") at 91; NM-EX 113, Jennifer Stevens Reb. Rep. at 5-6; NM-EX 100, Expert Report of Margaret Barroll, Ph.D. ("Barroll Rep.") at 4.1.~~[6]

19) Under NMSA 1978 §72-12-5, water rights users who claim a priority date earlier than the September 1980 LRG Groundwater Basin declaration could file with the State Engineer individual "declarations" describing their claimed existing rights ~~and were encouraged to do so by the State Engineer.~~[7] ~~The vast majority of these declarations reflect that the subject wells were drilled during the droughts of the 1950s and 1970s, often in cooperation or with the encouragement of Reclamation. NM-EX 100, Barroll Rep. at 4.1.~~ The State Engineer now directs all claims, including proposed declarations, to the adjudication court.

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[6] ~~In addition to individual EBID farmers' groundwater rights, in 1977 EBID itself began pumping groundwater from five (5) wells it had drilled to make groundwater available to supplement the surface water during dry years. *See Mestas v. Elephant Butte Irrigation District*, Civ. No. 78-138-B D.N.M (1979) at 6-7. EBID drilled those wells on Reclamation land, based on sites chosen by Reclamation. *Id.* The pumped water was distributed to EBID constituents. *Id.* EBID has claimed a water right in these five wells in New Mexico's LRG Adjudication.~~

[7] Once an adjudication is initiated, claimants for groundwater rights may no longer file declaration but must, instead, present their evidence in the adjudication and specifically to the hydrographic survey team for its investigation of the proffered proofs.

20) Following Title Transfer to the districts, Reclamation incorporated pre-1980 groundwater uses in both Texas and New Mexico into the calculations that resulted in the D2 Curve. NM-EX 100, Barroll Rep. at Appx. E.

21) Since 1980, an application must be filed with the State Engineer and a permit must be issued before any changes to a groundwater use can be made in the LRG. Changes may include replacement wells, supplemental wells, or changes to the point of diversion or place or purpose of use. Notice of the application must be published, affording the public the opportunity to protest the changes proposed in the application. Thereafter the OSE rigorously evaluates the application to determine if the proposed change will impair existing rights or will cause new depletions to surface water, in addition to considering whether the proposed change is contrary to conservation within New Mexico or detrimental to the public welfare. *See* NMSA 1978 §72-12-3. If the application is found to impair other water rights or to cause depletions to the stream, the permit may be denied, or the amount of water requested reduced, or the permit may be issued with conditions to address the impairment or depletion, which may include a requirement that any resulting depletions of surface water be offset. The permitting process ensures that no new depletions to the stream system are allowed.[8]

22) In 1999, the State Engineer published the primary guidelines for water rights evaluations in the LRG: the Mesilla Valley Administrative Area Guidelines (MVAA). The MVAA provides that the "criteria apply to applications for new appropriations, applications for supplemental wells, and applications to change point of diversion, and/or place and/or purpose of use." *See* MVAA Guidelines, TX_MSJ_001243-1266. In practice, with trivial exceptions, no permits for new appropriation in the Mesilla or Rincon basins have been granted since 1980.[9] *See, e.g.*, NM-EX 233, Thacker Dep. (4-18-19) at 22:9-23:4.

23) Since the LRG Groundwater Basin was declared in 1980, no State Engineer groundwater permits have been granted without conditions to ensure that no new depletions would be caused to the surface waters of the Rio Grande. All applications are subject to a rigorous and thorough investigation. *See* NM-EX 233, Thacker Dep. (4-18-19) at 15:17-26:2, 37:15-21, 37:15-48:25, 58:7-59:10, 74:1-12, 77:13-78:6-22, 98:3-99:4.

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[8] Analysis of hydrologic conditions and the implications of groundwater use in the Project area are fully addressed in the expert reports filed by Dr. Margaret Barroll (NM-EX 100, 101, 102 and 103) and her declarations filed with New Mexico's dispositive motion briefing (NM-EX 001 and 006), as well as the hydrologic and modeling information prepared by New Mexico's experts as referred to in the Barroll Supplemental and Amended Supplemental reports (NM-EX 102 and 103).

[9] OSE extensively researched this statement. We found three (3) minor exceptions to this statement which are more fully explained in NM-EX 010, Serrano Decl. at ¶ 21: LRG file numbers 1232, 5406, and 17587. The total diversions of these three permitted groundwater diversions is 13.865 AF/yr.

24) If over-diversions occur, they must be repaid to the stream system. New Mexico's LRG Water Master enforcement assures reconciliation. ~~These concepts are more fully explained in the declaration of New Mexico's LRG Water Master Ryan Serrano, NM-EX 010 at ¶¶ 22-27 (Serrano Decl.), filed simultaneously.~~

Specific Compliance and Enforcement Issues in the LRG

25) District IV, situated in Las Cruces, New Mexico, is the OSE district charged with implementing State Engineer administration in the LRG. In addition, the New Mexico LRG Water Master manages from this office. District IV conducts the on-the-ground administration, compliance, and enforcement activities of the OSE in the LRG. ~~Those issues that cannot be resolved by District IV are referred to appropriate divisions within the OSE, including the Administrative Litigation Unit (ALU). *See* NM-EX 010, Serrano Decl. at ¶¶ 10, 13, 14, 23, 28.~~

26) The District IV Manager is Andrea Mendoza. Ryan Serrano, the New Mexico LRG Water Master, reports to Ms. Mendoza. ~~Ms. Mendoza has a staff of water management specialists. Among their duties, they receive and evaluate every application for water rights permits for compliance with all water rights rules, regulations, and guidelines. NM-EX-233, Thacker Dep. (4-18-19) at 15:17-26:2, 37:15-21, 37:15-48:25, 58:7-59:10, 74:1-12, 77:13-78:6-22, 98:3-99:4. Based upon the analysis of an application, which includes analysis of impacts on the stream system and other water rights owners, the OSE, through District IV, denies, imposes conditions, or approves each application as appropriate. NM-EX-233, Thacker Dep. (4-18-19) at 15:17-26:2.~~

27) OSE staff inputs all water rights information into the OSE's water management software known internally as WATERS. All information input into WATERS is publicly available through the public interface version of the system, the New Mexico Water Rights Reporting System (NMWRRS) at http://nmwrrs.ose.state.nm.us/nmwrrs/index.html.

28) ~~A detailed explanation of the work of New Mexico's day-to-day administration and enforcement of water rights in the LRG is provided in Water Master Ryan Serrano's declaration. NM-EX 010, Serrano Decl. at ¶¶ 4-37.~~

Adjudicating New Mexico Water Rights and New Mexico's LRG Adjudication

29) The 1907 Water Code requires that the State Engineer perform a hydrographic survey of New Mexico stream systems. NMSA 1978 §72-4-13. The State Engineer may then request that the New Mexico Attorney General bring an adjudication lawsuit on behalf of the State. NMSA 1978 §72-4-15. If an adjudication lawsuit has been filed by a private party, as happened in the LRG, the State Engineer may recommend that the Attorney General intervene on behalf of the State if in the State Engineer's opinion the public interest warrants intervention. If an

adjudication is initiated by either New Mexico or a private party, hydrographic surveys performed by the State Engineer or filed with the State Engineer are considered as evidence in the adjudication lawsuit. NMSA 1978 §72-4-16.

30) The State Engineer devotes significant agency resources to support adjudication work in New Mexico. There are 11 active adjudication cases in New Mexico. More than 50% of New Mexico has adjudications in progress. *See* https://www.ose.state.nm.us/Legal/adjudications.php

31) Many New Mexico stream system adjudications address complex legal and factual challenges that take time and expertise to resolve, involving Native American water rights dating "from time immemorial" (New Mexico is home to 19 Native American Pueblos, the Mescalero Apache Tribe and the Jicarilla and Navajo Nations), Spanish and Mexican land and water rights dating from the pre-1600s and the more newly-established American water rights from 1848, all competing for the very limited water resources in arid New Mexico.

32) A lawsuit for the adjudication of water rights was commenced in the LRG by EBID and the State intervened in 1996. *State of New Mexico ex rel. State Engineer v. Elephant Butte Irrigation District et al.,* No. D-307-CV-96-888 (the "LRG Adjudication"). The LRG Adjudication has unique and complex legal challenges relating to the Project and to other matters specific to the area.

33) The hydrographic survey prepared for the LRG Adjudication divided the stream system into five sections: Nutt-Hockett, Rincon, Northern Mesilla, Southern Mesilla and Outlying Areas. Surveys for each of these sections have been filed with the LRG Adjudication court. The hydrographic survey includes all information available from State Engineer and county records relating to claimed water rights, as well as in-person surveys, historic crop and water use information, and aerial photography.

34) The LRG Adjudication court divided the work of determining individual water rights in the LRG adjudication into the five sections of the hydrographic survey. Within each section, the State Engineer evaluates the information for each claimed water right and the result is provided to the individual water right claimant in an "Offer of Judgment" within a "subfile" to the adjudication. The claimant has the option to accept the Offer of Judgment or to provide new information for consideration. The State Engineer and the claimant may either agree on the Offer of Judgment, mediate a different result or try the case to the court. The result of those processes then becomes a "Subfile Order" entered by the court.

35) The State Engineer's most recent status report in the LRG Adjudication reflects that there are presently approximately 14,050 subfiles in the adjudication, which encompass 18,546 water

right claimants. Approximately 66% of these subfiles have been sent Offers of Judgment and 50% have been adjudicated.

36) There is another phase to the adjudication process that will follow the completion of all Subfile Orders. Once each water right claimant within a section has a final Subfile Order, there will follow an "*inter se*" process by which every claimant within that section has the opportunity to contest the water rights of others. When the *inter se* phase is completed, the Adjudication Court will enter a final order as to the water rights in that unit. This order is final as to the statutory elements of a water right: "the priority, amount, purpose, periods and place of use, and as to water used for irrigation, except as otherwise provided in this article, the specific tracts of land to which it shall be appurtenant, together with such other conditions as may be necessary to define the right and its priority." NMSA 1978 §72-4-19.

37) Apart from individual subfiles, there are issues common to many parties to an adjudication. In the mid-2000s, the LRG Adjudication court determined that there were several overarching issues impacting the LRG which should be addressed separately. These were termed "Stream System Issues" and "Expedited *Inter Se* Proceedings" and were or will be litigated and tried apart from the individual water rights claims. Of import to this litigation are the following:

a) ***Stream System 101 (SS101 LRG Adjudication Order):*** In August 2011 the LRG Adjudication court entered a Final Judgment in Stream System 101, specifically addressing the consumptive irrigation requirement (CIR) and farm delivery requirements (FDR) throughout the LRG, thereby setting the limits on groundwater and surface water use affecting all LRG claimants. NM-EX 541, SS101 Final Judgment (August 22, 2011) (SS101 LRG Adjudication Order). The SS101 LRG Adjudication Order adopted a settlement of these issues among the major parties to the adjudication, was not appealed. ~~The SS101 LRG Adjudication Order is binding on all participating parties in the LRG adjudication, including the United States~~. Its limits on irrigation water use apply to all LRG water rights owners, including all EBID (*i.e.* Project) constituents[10] in New Mexico as well as owners of pre-Project rights.

~~In relevant part the SS101 LRG Adjudication Order:~~

- ~~Sets the annual FDR for the LRG at 4.5 AF/acre unless a claimant is able to prove beneficial use of up to 5.5 AF/acre.[11] Surface water and groundwater use combined~~

[10] In the LRG, the vast majority of surface water rights belong to EBID constituents.

[11] ~~Out of over 18,000 claimants in the LRG Adjudication, there were 956 Notices of Intent to file proof of beneficial use of up to 5.5 AF/yr filed by the December 2012 deadline. The opportunity to provide evidence supporting those claims of beneficial use closed in 2013. (Note that in his deposition testimony cited by the United States, Ryan Serrano mistakenly testified that over 1000 Notices of Intent had been filed; we have since verified the number as 956.) (US 84)~~

cannot exceed this total, ***and surface water available must be exhausted before groundwater may be used.*** *See id*. at §§ II(D), V(B). Consistent with historic Project operations, the maximum FDR for surface water was set at 3.024 AF/acre per year. The FDR AF/acre numbers were approved by experts in the litigation and supported by historic use.

- The OSE enforces these water rights limits based on "actually irrigated acreage," as identified by the hydrographic survey. "Actually irrigated acreage" is often less than the acreage assessed by EBID for surface water delivery, which may include buildings, roads, etc., in the EBID-assessed tract, which is subtracted to obtain the OSE-permitted acreage.

- Establishes that combined surface and groundwater rights cannot be separately transferred.
- Establishes that transfers of irrigation water rights to a non-irrigation purpose of use may only transfer a CIR of 2.6 AF/yr. This provision takes into account that in irrigation use a large portion of the FDR returns to the stream system as return flow.

b) ***Stream System 103 (SS103)*** addresses domestic wells and is currently on hold. Throughout the Basin, domestic wells and stock well use is approximately 2-3,000 AF/yr. and represents less than 1% of total surface water – groundwater use in the Mesilla and Rincon basins. Domestic well and stock well water use has a negligible effect on the issues in this case.[12]

c) ***Stream System 104 / Expedited Inter Se Proceeding (SS104):*** This Stream System issue addressed "the interests of the United States deriving from the establishment of the Rio Grande Project" for determination in the LRG Adjudication.[13] NM-EX-534, Order Designating Stream System Issue/Expedited *Inter Se* Proceeding No. 104 (1-8-2010).

[12] The United States mistakenly places great importance on domestic well use. (US 59) Under the 2006 Domestic Well rules, new domestic wells for single-family use require meters and are permitted for 1 AF/yr; if livestock is included the permit may be for 2 AF/yr. These uses are monitored represent less than 1% of the total combined use of surface and groundwater in the LRG. Of the several thousand domestic use wells drilled through the decades in the LRG, many are plugged and many are no longer used because residences now have municipal water. In any event, the small amount of domestic and stock water use in the LRG has no appreciable impact on surface water supplies.

[13] The United States had previously attempted to get its claim that groundwater is part of the Project litigated in federal court, side-stepping the LRG Adjudication. In 1997 the United States brought suit in New Mexico federal court to quiet title to its Project water rights, including groundwater in its claim to Project water. The federal district court dismissed the suit in favor of allowing the LRG Adjudication court to determine the issues. *See United States v. City of Las Cruces*, 289 F.3d 1170 (10th Cir. 2002).

- ~~By Order dated August 16, 2012 the LRG Adjudication court ruled on summary judgment that the United States had no interests in groundwater. It found that groundwater and surface water are separate sources of water, the United States had not appropriated groundwater for the Project, and that groundwater is not Project water. NM-EX-535, Order on Summary Judgment. This Order is subject to appeal when final. Should the United States ultimately prevail against New Mexico I believe that the United States will cite such a New Mexico state judgment in other venues to argue that hydrologically connected groundwater belongs to the United States in all Reclamation projects. That has never been the rule in New Mexico or, to my knowledge, in any other Western state. The August 16, 2012 Order did recognize, however, the right of the United States to use return flows to the Rio Grande or to Project conveyances~~.

- SS 104 went to trial in summer 2016 on the sole issue of the priority date of Project surface water, ~~all other issues having been resolved.~~ The LRG Adjudication court entered its Findings of Fact and Conclusions of Law (2017 Findings) on April 17, 2017 (NM-EX-536, Findings of Fact and Conclusions of Law) holding the Project has a surface water priority date of March 1, 1903. No final order has been issued on these Findings.[14]

- With a (non-final) priority date of March 1, 1903, the United States' Project water rights are senior to most of the groundwater rights in the LRG. One exception is New Mexico State University's groundwater right, which has a priority date of 1890. Should there ever be a need for priority administration in the LRG, these relative priority dates would be significant.

Active Water Resources Management – the Statute and the Practice

38) Adjudications can be complex and time-consuming, while the need for the actual administration of water can be urgent, especially in times of increasing population and increasing drought related to climate change. The State Engineer has the authority to address those urgencies regardless of the progress of adjudications. The New Mexico legislature recognized this explicitly in 2003 when it enacted NMSA 1978 §72-2-9.1, known as the Active Water Resource Management statute (AWRM Statute), which directed the State Engineer to promulgate regulations governing how priority administration of water rights would be done whether or not an adjudication had been completed. NMSA 1978 §72-2-9.1 states:

> The legislature recognizes that the adjudication process is slow, the need for water administration is urgent, compliance with interstate compacts is imperative and the

[14] ~~The SS 104 trial took place and the court's 2017 Findings were filed well into this litigation.~~ Periodically New Mexico and the United States appear before the LRG Adjudication court to request that the court stay the entry of a final order in SS 104.

state engineer has authority to administer water allocations in accordance with the water right priorities recorded with or declared or otherwise available to the state engineer.

39) In 2004, in compliance with the legislative mandate to issue regulations for how priority administration would be done if necessary, the State Engineer created and promulgated Active Water Resources Management regulations (AWRM Framework Rules). 19.25.13 NMAC. The AWRM Framework Rules provide rules of statewide applicability and allow for the adoption of specific rules that could be promulgated separately for individual Water Master Districts. A central provision of the AWRM Framework Rules defines types of priority administration to be used as circumstances dictate, including Alternative Administration based on water sharing agreements among affected water rights, if those agreements are acceptable to the State Engineer. 19.25.13.7(C) 1-4.

40) Alternative Administration is a part of the AWRM Framework Rules of which I am particularly proud. It provides an opportunity for water rights owners to agree upon an alternative to strict adherence to priority administration, which cuts off junior water rights completely until senior water rights get all of the water to which they are entitled. The AWRM Framework Rules' identification of the possibility of Alternative Administration allows the State Engineer to support water right owners' creation of agreements that share shortages among themselves. Although New Mexico is a prior appropriation state, water sharing is a part of New Mexico's unique cultural history. New Mexico's Native American Pueblos and Spanish-settled communities have a 400-year old history of water sharing in times of shortage, which is statutorily specified, for instance, in those portions of the 1907 Water Code governing acequia associations. NMSA 1978 § 73-2-1 *et seq.* Throughout New Mexico I have frequently observed a cultural preference for working out water shortage situations rather than for enforcement of a strict priority call completely cutting off certain water rights.[15] The LRG Groundwater Conservation Pilot Program, funded by the New Mexico legislature and currently being implemented by the OSE and ISC, was strongly supported by the major groundwater users in the LRG as a means to develop data and information that could support future proposals for Alternative Administration.

41) Other key provisions of the AWRM Framework Rules address:
    a) The creation of Water Master Districts, 19.25.13.12 NMAC
    b) The appointment of Water Masters and staff, 19.25.13.15 NMAC
    c) The measurement of water use, 19.25.13.19 NMAC
    d) The formalization of what had previously been an informal hierarchy of evidence of priority in administering water use or rights:

[15] ~~"Priority administrations where we make a call on the river and shut a whole bunch of water rights down" might be considered a "nuclear option." NM-EX-229, Thacker 30(b)(6) Dep. at 76:14-19~~.

i) Final decree from adjudication
ii) Subfile order from an adjudication
iii) Offer of judgment from an adjudication
iv) Hydrographic survey
v) License issued by the State Engineer
vi) Permit issued by the State Engineer
vii) Determination by the State Engineer using the best evidence of historic, beneficial use. NMAC 19.25.13.27

42) Shortly after the promulgation of the AWRM Framework Rules, on December 30, 2004, an electric power cooperative holding water rights filed a district court action challenging the AWRM Framework Rules' constitutionality. While the case worked through the court system, the State Engineer refrained from implementing some of the provisions being challenged, while working toward accomplishment of the goals and intent of the AWRM Framework Rules. On November 1, 2012, the New Mexico Supreme Court upheld the State Engineer's position and found the AWRM Framework Rules constitutional in their entirety. *Tri-State Generation & Transmission Ass'n v. D'Antonio*, 2012-NMSC-039, 289 P.3d 1232.

43) In accordance with the structure of water administration outlined in the AWRM Framework Rules and relying on long-standing statutes that underlie those rules, the State Engineer established several Water Master Districts throughout the state, including the LRG Water Master District. NM-EX-429, State Engineer LRG Water Master District Order #169. *See* NMSA 1978 §72-3-1, *et seq.*

44) Simultaneously with the creation of the LRG Water Master District, the State Engineer issued a metering order in the LRG, requiring that all groundwater wells[16] in the LRG be metered by March 1, 2006. NM-EX-430, State Engineer Order #168 (12-3-2004). *See* NMSA §72-12-27 (the State Engineer has the authority to require the metering of wells). This order was immediately contested by EBID, resulting in legal action.[17] The State Engineer worked in many ways with EBID on its complaints about the order and variations of it, including providing a state-backed re-loan program for purchase of meters. These negotiations cannot properly be construed as a "grace period" as characterized by the United States; (US 77) rather, it was time spent in legal action and negotiations ultimately resulting in settlement and the March 28, 2007 final order on metering. NM-EX-533, Final Metering Order; *see also* NM-EX-229, Dorman Dep. at 71:18-25 (discussing the State Engineer providing a low interest loan

[16] Excepting single family domestic wells and stock wells.

[17] EBID immediately fought the metering order and I engaged in discussions with EBID representatives, resulting in the December 2005 First Amended Metering Order #172. EBID was not content with the concessions in Order #172 and it, along with one of the EBID farming enterprises, filed a "Motion to Set Aside State Engineer's Metering Order and For Injunctive Relief" in the LRG Adjudication court in February 2006. I again engaged in discussions with EBID attempting to resolve their complaints about OSE-required meters and measuring. We reached settlement on the metering issues, and I issued Order #180 on March 28, 2007. NM-EX-533, Final Metering Order.

program). By 2008 all irrigation, commercial, multi-family domestic, and municipal wells in the LRG were metered.

45) Pursuant to the AWRM Framework Rules, and despite the pending litigation, the State Engineer made a list of priority water districts that would be first in line for District Specific Rules ("DSRs"). A group of specialists comprising hydrologic, legal, and water administration professionals was assigned to each such district to consider the unique conditions that would affect water rights administration in each individual district.

46) The State Engineer's group dedicated to developing the LRG DSRs released a draft for public comment on June 28, 2006. NM-EX-538, Proposed Rules and Regulations Providing for Active Water Resources Administration of the Waters of the Lower Rio Grande Water Master District - First Public Draft. Although the State Engineer did extensive outreach, these draft regulations received negative response from New Mexico stakeholders, including EBID. The State Engineer continued to revise and refine these draft rules, with inputs from stakeholders, for some months. A revised draft was released on November 14, 2006. NM-EX-539, Proposed Rules and Regulations Providing for Active Water Resources Administration of the Waters of the Lower Rio Grande Water Master District - Second Public Draft. However, further development of the DSRs was interrupted by other events occurring from mid-2006.

47) In 2006, Reclamation adopted the D3 method for the allocation of Project water and also began allowing carryover of water at Elephant Butte reservoir, changes in Project operations which were adopted into the 2008 Operating Agreement. These were dramatic modifications to the way the Project had been operated for decades and violate Compact apportionment to New Mexico's detriment. Reclamation's actions were taken without evaluation or approval by either the State Engineer or the Rio Grande Compact Commission. NM-EX 100, Barroll Rep. at §6.3; NM-EX 002, D'Antonio 1st Decl. at ¶10.

48) Reclamation's dramatic, unilateral changes to Project operations halted the progress on the LRG DSR drafts. No further productive work or public comment on any LRG DSRs could be done until significant issues relating to Reclamation's changes in Project operations and allocation were studied and addressed. Attention turned instead to study of these Project changes and discussions with Reclamation and EBID relating the new Project operations. *See* NM-EX 002, D'Antonio 1st Decl. at ¶¶11-12.

49) When the 2008 Operating Agreement was made public, I cautioned that the impacts needed to be evaluated. NM-EX 002, D'Antonio 1st Decl. at **¶11.** By late 2009 and early 2010, my office's evaluation of the effects of the 2008 Operating Agreement demonstrated that Texas was now receiving far more than the 43% share of Project Supply to which Texas is entitled, while New Mexico was receiving far less than its 57% and less than New Mexico crops required. New Mexico farmers were forced to increase their groundwater use steeply in order to maintain their crops. Drawdowns to the aquifer accelerated and the aquifer fell to unprecedentedly low levels. *See e.g.*, NM-EX 100, Barroll Rep. at §§6.3, 6.4, 9.3, 9.4, 9.5.

These issues were repeatedly discussed by myself and other OSE personnel with Texas, Reclamation and EBID, all of which continued to maintain, incorrectly, that the 2008 Operating Agreement was beneficial to EBID. NM-EX 002, D'Antonio 1st Decl. at ¶¶10-12.

50) Under New Mexico law, an application must be filed with the State Engineer to obtain a permit for the transportation of waters outside of New Mexico. NMSA 1978 §72-12B-1. I have acted under this statute. *See, e.g.,* NM-EX 545, Permit to City of Eunice, NM to Transport Water for Use Outside the State of New Mexico. The LRG Water Master has also enforced compliance with this statute. *See* NM-EX 010, Serrano Decl. at ¶ 17. Under the 2008 Operating Agreement, Reclamation delivers New Mexico's surface water to Texas without the required permit from the State Engineer.

51) Reclamation's transport of New Mexico surface water to Texas also interferes with the conjunctive management principles and underlying goals and assumptions that formed the basis for the SS101 LRG Adjudication Order, which mandated that surface water be exhausted before groundwater may be used. *See* ¶ 37(a) above.

52) Because of the excess amounts of water allocated to Texas under the 2008 Operating Agreement, the draft LRG DSR provisions aimed at protecting Compact deliveries to Texas were no longer necessary and any alleged need for curtailment of water rights in New Mexico to get water to Texas became moot. New Mexico sued Reclamation in August 2011 after New Mexico's concerns about the adverse effects of the 2008 Operating Agreement fell on deaf ears.[18] NM-EX 002, D'Antonio 1st Decl. at ¶12. In retaliation, in 2013, Texas sued New Mexico in this Original Action No. 141. Further work on LRG DSRs cannot move forward until significant issues are resolved in this litigation.

53) There has never been a priority call in the LRG. No LRG water user has requested the State Engineer investigate a water shortage or initiate priority administration. No priority call has been made to the Rio Grande Compact Commission. Should any water rights owner in the LRG request of the State Engineer a priority call due to water shortage, the State Engineer would promptly take the following actions:

a) Investigate the validity and cause of the claimed shortage, and
b) Determine appropriate short-term and long-term actions.

Any response to a priority call is necessarily dependent upon the cause of the shortage and must take into consideration such things as the public health issues of essential drinking water and sanitation uses. Potential responses include, but are not limited to, release of storage water, curtailment of junior surface water diversions, curtailment of junior groundwater rights, and

[18] New Mexico's lawsuit also raised the issue of Reclamation's 2011 unilateral release of New Mexico credit water in violation of Compact provisions and the resolutions of the Rio Grande Compact Commission.

the possibility of a range of agreed-upon alternatives to strict priority administration.[19] ~~The required analysis, decision on response, and implementation of response could take place in a matter of days for a short-term response to a matter of weeks or months to address long-term or systemic response. *See, e.g.*, NM-EX-226, Barroll 30(b)(6) Dep. at 37:5-22 (errata).~~

54) Both before and after declaring the LRG Groundwater Basin, the State Engineer had and continues to have administrative jurisdiction and responsibilities regarding the surface waters of the Rio Grande as part of the State Engineer's "general supervision" of the waters of the State. NMSA 1978 §72-2-1. For example, the State Engineer has authority over-diversions of surface water from the Rio Grande. EBID, in turn, has the authority delegated to it by the New Mexico legislature to distribute among its members the surface water diverted. NMSA 1978 §§ 73-10-16, -24. The legislature reaffirmed this division of authority between the State Engineer and irrigation districts when in 2003 it enacted a law allowing the establishment of a "special water users' association" to allow the leasing of water from members of an irrigation district with the approval of the State Engineer and the affected irrigation district. NMSA 1978 § 73-10-48. This statute recognizes the existing authority of the State Engineer to permit changes to surface water rights by directing the State Engineer to adopt specific rules governing "changes in place or purpose of use or point of diversion of annual allotments of project water…." [20]

55) ~~The State Engineer's comprehensive administrative authority in the LRG has been exercised appropriately based on changing circumstances. While the Project was administered by Reclamation as one unit the State Engineer did not need to exercise groundwater permitting jurisdiction. After the transfer of title to the districts, EBID and its counterpart in Texas assumed many Project responsibilities that had formerly been performed by Reclamation, while Reclamation retained the responsibility for releases of Project water from the reservoirs and delivery to the districts' major diversion points. NM-EX 100, Barroll Rep. at §§2.2, 6.2. The State Engineer, in response to these changed circumstances, acted responsibly by declaring the LRG Groundwater Basin and ensuring that any change to groundwater use would not result in new depletions. Since that time, the State Engineer has continued New Mexico's rigorous, hydrology-based approach to administration in the LRG by providing technical expertise and significant agency resources to support the LRG adjudication and by issuing and acting under the AWRM regulations~~.

[19] The United States repeatedly confuses the idea of "curtailment" under priority administration with State Engineer actions to ensure compliance with permits. For instance, the State Engineer has not had to *curtail* water use through priority administration because, as set forth herein, there has never been a need for priority administration in the LRG. *Compare* USMF 68. However, the State Engineer regularly enforces groundwater use limits and over-diversions throughout New Mexico and in the LRG, as more fully explained in the New Mexico's LRG Water Master's declaration. NM-EX 010, Serrano Decl. (US 68)

[20] ~~However, the obligation to actually deliver water to the members of an irrigation water district such as EBID rests with the district. *See, e.g.*, NMSA 1978 § 73-10-16, -24, and -48.~~

56) I am aware that Texas water authorities have not made similar efforts to control groundwater use in Texas, ~~despite the detrimental effects of Texas' extensive groundwater use on historical Project Supply.~~ ~~*See* NM-EX 606, Comparison of Select New Mexico and Texas water administration facts.~~

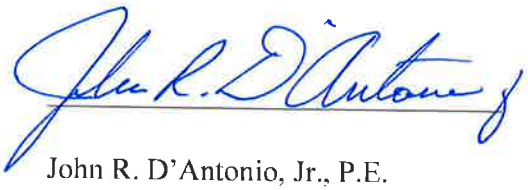
57) Under the comprehensive compliance and enforcement processes diligently pursued by the OSE as described in this declaration, it is incorrect and disingenuous to claim that "groundwater pumping in New Mexico continued unabated" or that New Mexico does not regulate its groundwater pumping and use. Groundwater pumping is closely monitored by the OSE and water rights strictly enforced. ~~This is in stark contrast to the complete lack of Texas groundwater administration.~~

58) Under the comprehensive compliance, enforcement, and cooperation processes diligently pursued by the OSE as described in this declaration, and of the ISC as described in the declaration of ISC Director Rolf Schmidt-Petersen (NM-EX 009, Schmidt-Petersen 2nd Decl.), it is incorrect and disingenuous to assert that New Mexico in any sense fails in its water administration responsibilities or Compact obligations.

59) As described in this declaration, the Second Declaration of Mr. Schmidt-Peterson (NM-EX 009) and the Declaration of Mr. Serrano (NM-EX 010), the State of New Mexico has a robust and comprehensive system for water administration and enforcement in the LRG. New Mexico has successfully employed this system to ensure compliance the Compact and stands ready to utilize that system to vigorously enforce the orders of the Court in this case, whatever those orders may be.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 21, 2020



John R. D'Antonio, Jr., P.E.