

Message from the Editor

With the length of a new year ahead it is an appropriate time to explore some tensions in land and water policy and practice in New Mexico, and to probe some possible solutions. The first article in this edition of the NREEL Newsletter examines the recent *Bounds* decision regarding domestic well regulation, and the difficulty of squaring New Mexico water law with efficient water administration and a growing population. The next article proposes a novel grassroots approach to remediation of contaminated land in Taos. The final article looks at the importance of scientific data to the equitable apportionment of water in the aquifer beneath the U.S. and Mexico border.

If you have any comments or questions regarding these articles or if you would be interested in submitting a short article for our next newsletter, which we hope to publish in late Spring 2009, please contact me at joshsmann@live.com.

Thanks for your support,
Josh Mann, Editor

Domestic Wells: Growing by Leaps and *Bounds*?

Keri Hatley

In New Mexico today, the Office of the State Engineer is *required* to grant every domestic well permit application it receives, regardless of the availability of water.¹ This pliable policy's requirement that there be no requirements attached to residential expansion has allowed developers and land planners to encourage growth to flow in any direction. However, a July 2008 Sixth Judicial District decision finding the State Engineer's mandatory approval of domestic well permits unconstitutional may change all of that.

Before *Bounds*

New Mexico administers its water according to the doctrine of prior appropriation: "first in time, first in right," and the Office of the State Engineer (OSE) administrative process is supposed to protect senior users' water rights from impairment by junior users. Applications to appropriate or transfer water are scrutinized by the OSE to prevent injury to existing users, and applicants are required to publish notice of the application so that senior water users have the option of protesting the application through a formal hearing process. However, applications to appropriate groundwater for domestic

use are automatically approved without notice or scrutiny.²

New Mexico Statute §72-12-1.1³ mandates that the OSE "shall" issue domestic well permits, exempting domestic well applications from the permitting requirements. After paying a small application fee, every applicant for a domestic groundwater well is able to withdraw up to one acre-foot of water per year.⁴ This has come to be understood as a fundamental privilege of home ownership regardless of actual water rights or water availability. In effect, this statute creates an exception through which domestic wells are

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able to wiggle free from the straightjacket of prior appropriation. Due process provisions that protect senior water rights are absent from the OSE's obligatory approval of domestic well applications; no notice is given to senior water rights holders, no determination is made of whether the well will impair existing rights, and there is no opportunity for hearings. Since 1953, the OSE has issued permits for over 140,000 domestic wells⁵ without investigating whether unappropriated water is available and without accounting for senior users.⁶



The Bounds decision

Horace Bounds, Jr. has an 1869 priority right in the Upper Mimbres Basin to irrigate 157.63 acres of land. When the Bounds secured their water right, New Mexico was sparsely populated and most of the water was used for agriculture and ranching. Today, New Mexico has over 2,000,000 residents and is one of the fastest growing states in the nation. The entire Mimbres Basin has been adjudicated and “closed,” therefore the extent and priority of all water rights in the Basin have been determined by judicial proceeding and there is no unappropriated water remaining. However, domestic wells were not included in the adjudication. Despite the growing scarcity of water, domestic wells continued to be drilled in the Mimbres Basin and the Bounds watched the water level in the Mimbres River decline.

The Bounds filed a declaratory action condemning the exemption for domestic well applications under NMSA 1978, §72-12-1.1 (1978) as unconstitutional.⁷ The Bounds alleged that this lack of protection for senior appropriators violated due process and that the OSE, the State of New Mexico and the Legislature had breached their duty to protect the property interests of senior water right owners. Judge Robinson agreed; “It is not logical, let alone consistent with constitutional protections, to require the OSE to issue domestic well permits without any consideration of the availability of unappropriated water or the priority of appropriated water.”⁸ §72-12-1.1 was held to be unconstitutional as an impermissible exception to the priority administration system created by N.M. Const. art. XVI, §2.

The Attorney General has appealed the decision, but meanwhile, in the Sixth Judicial District, the court's decision means that the applications for domestic well permits must now be administered the “same as all other applications, nothing more, nothing less.”⁹ Steve Hernandez, attorney for

the Bounds stated: “The bottom line is you have to find a legitimate water right. We are not going to create a water right out of thin air to create a domestic well. *Bounds* had to happen because no one would do anything. Sometimes you have to push the issue to a point where someone has to listen to you.”

Beyond Bounds

Failed proposals to change the current domestic well statute have dotted legislative sessions for the past eight years.¹⁰ The State Engineer supported one proposal, Senate Bill 565, which would have allowed the OSE to deny domestic well

permits impairing “rivers, streams, or groundwater in high water use areas.”¹¹ According to D.L. Sanders, Chief Counsel to the State Engineer, this “power to deny” would be consistent with the requirement in the New Mexico Constitution that the state engineer's issuance of new permits be limited to the “availability of unappropriated water.”¹² Because this “needed legislative change” has been unsuccessful, D.L. Sanders says that the State Engineer is “limited to granting domestic well permits while protecting against impairment where there is no unappropriated groundwater available for new appropriations.”¹³ Needing to protect senior users against impairment, but unable to deny any domestic well applications, the OSE has taken a different approach, reducing the maximum amount of water pumped under new permits issued to one acre foot per year.¹⁴

A domestic well for New Mexicans living in rural areas has been a way of life for generations. One in five New Mexicans is not connected to a public water supply and are self-served by a domestic well.¹⁵ This use of water has been considered a “universal human right.”¹⁶ Changes in the current domestic well policy could result in converting rural, self-service use to an increased dependence on municipal water supplies. This could have a tremendous impact, as many rural areas in the State are entirely reliant on groundwater.

Since 2000, New Mexico's legislature has protected domestic well water use, refusing to impose any restrictions on domestic wells.¹⁷ In our arid state, sweeping protection of this water use is justified by the argument that depletion caused by domestic wells is negligible, based on the generally-held impression that the majority of households supplied by domestic wells are in rural areas with minuscule groundwater withdrawal.¹⁸ These small domestic well withdrawals look

even smaller when compared to other water uses, such as agriculture, municipal, industrial, and ecological.¹⁹ “Among the major categories of water use, domestic well use is the smallest category and the most sustainable of water uses with the least impact on the water resource and the interrelated streams.”²⁰

Continued growth and continued domestic well drilling, densely concentrated in and around relatively urban areas, has caused this “negligible” depletion to morph into a formidable drain on groundwater supplies. In 2004, over 8,000 new applications to drill domestic water wells in New Mexico were granted.²¹ While much of New Mexico is still sparsely populated, growth continues to condense in the cities and suburbs along her interstate rivers. The Bureau of Business and Economic Research at the University of New Mexico recently released population predictions through the year 2060 which anticipate further concentration of the “New Mexico population into ‘centers’ in the Albuquerque Metro area, Las Cruces, and Santa Fe.”²² According to the report, migration is the “real impetus in New Mexico population dynamics:” from 2001-2005, “sustained growth has been the defining characteristic of the New Mexico population.”²³ Droughts since 2002, resulting in reduced precipitation and stream flows, have limited the variable incoming water and lowered surface water levels. Faced with an ever-increasing population, New Mexico’s urban areas have supplemented their water supplies by withdrawing groundwater, significantly lowering groundwater levels.

While it is unclear how the *Bounds* decision will ultimately be resolved, the influx of people moving into the State juxtaposed with the strict prior appropriation system embedded in our Constitution will not allow inevitable water management decisions to be postponed much longer. In densely populated areas with critically limited water resources, such as the middle Rio Grande Valley, water availability to accommodate future growth is a major issue. Irrespective of this limited water supply, New Mexico remains accountable for hard-and-fast delivery requirements pursuant to eight interstate stream compacts. Steve Hernandez adds, “there are some areas of the state where a domestic well could be drilled without hurting anyone and probably should be drilled, but there are other areas where this is not the case.”

Binding growth in New Mexico?

As the *Bounds* decision marches through the appeals process, the possible administrative burden of having to formally approve domestic well permits looms over the OSE. Exploring ways to expedite domestic well applications is one possible

way to efficiently manage the heightened-review of domestic well applications that *Bounds*, if upheld, could require. For the OSE, this could include granting permits very quickly in areas where it is clear from the hydrology that there would be no injury to existing rights.

For developers, it is much cheaper to drill domestic wells than it is to buy and transfer water rights. This is an area where the *Bounds* decision, if upheld, will have a tremendous impact. In densely populated areas, such as Albuquerque and Santa Fe, or in areas with extremely limited water sources, such as the Estancia Basin, water rights are expensive and sellers are reluctant to sever these rights from their land. The question is should the state engineer make decisions based on land planning concerns? Santa Fe currently requires developers to purchase water rights for proposed subdivisions before the City will allow them to solidify their subdivision plans. This has served to limit the amount of growth in this critical water area. Denying domestic well permits in areas with limited available water will stifle the options available to developers and impose geographical limits on where new homes can be built.

Endnotes

¹ NMSA 1978, § 72-12-1.1 (1978)

² “Domestic wells are individual wells that deliver water for household purposes, including drinking, cooking, bathing, washing, flushing and watering a lawn and garden.” W. Peter Balleau and S.E. Silver, *Hydrology and Administration of Domestic Wells in New Mexico*, 45 Nat. Resources J. 807, 808 (2005).

³ NMSA 1978, § 72-12-1.1 (1978)

⁴ NMSA 1978, § 19-27-5.9 (1978)

⁵ As of August 2000, the OSE reported 136,816 recorded domestic well files. Hydrology Bureau, N.M. Office of the State Eng’r, *Domestic Wells in New Mexico: The Impact of, and Problems Associated With Domestic Water Wells in New Mexico* 10, 23-24 (2000).

⁶ In 1953, the New Mexico legislature passed a law which solidified the state engineer’s policy of automatically granting domestic well permits. D.L. Sanders, *New Well Rules Won’t Leave Anyone High, Dry*, Albuquerque Journal, April 27, 2006, ¶ 4.

⁷ *Bounds v. State of New Mexico*, ex rel., John D’Antonio, No. CV-2006-166, ¶ 24.

⁸ *Bounds*, ¶ 23.

⁹ *Bounds*, ¶ 29.

¹⁰ *Id.* This wide-range of proposed legislative intervention

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Local Responses to Environmental Issues: The Taos Community and Questa Mine

Nick Gilbert

What is to be done when the local impact of national environmental regulation aimed at remediating contaminated land is nominal or nonexistent? What happens when national agency actions do not square with local desires? MolyCorp's Questa mine began in 1923, and ever since has had a schizophrenic relationship with the Taos community—it has been both a benefactor and a bane. While local residents have realized some economic benefits because of the mine, they have also implored MolyCorp to fully reclaim the site. Despite these local desires, and the need to restore the Red River watershed, MolyCorp instead sought a waiver from the New Mexico Mining and Mineral Division.¹ The purpose of this article is to explore the legal authority and feasibility of a novel local approach to this intractable issue.

Questa mine, as with most extractive industries in the early West, was the economic backbone upon which the local community was erected. However, in 1999, Questa mine employed just 154 persons, accounting for only 2.6% of employment in Taos County. While Questa mine languishes, recreational industries funnel hundreds of millions of dollars into the local economy.² In addition to its diminishing economic stature, its ecological disturbance spans approximately two thousand acres, and includes yellow tailings piles, fluted by run-off, which slope toward the Red River. Not surprisingly, today the mine is included on the National Priorities List (NPL) pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).³ Accordingly, it is possible that monies may be obtained from MolyCorp or the Hazardous Substance Superfund (Superfund) for its remediation.⁴

Because barren tailings piles now stand in place of mixed forests, rivulets of acidic runoff sluice into the Red River during rainstorms. Moreover, hydrological connections allow acidic seepage to leak from the tailings to the river.⁵ According to the New Mexico State Water Quality Commission, “the Red River is one of the most severely impacted perennial stream systems in regard to metal loading in New Mexico.”⁶ Additionally, soil erosion has caused more frequent landslides and flashfloods, adding to the pollution and further disrupt-



ing aquatic habitats in the Red River.⁷ Cumulatively, the pollution and disturbances in the river have caused a biological dead zone for several miles.

Considering MolyCorp's refusal to remediate, perhaps the answer for the local community lies in the Soil and Water Conservation District Act (SWCDA), which declares that “the land, waters and other natural resources are the basic physical assets of New Mexico,” and that their preservation is “necessary to protect and promote the health and general welfare of the

people of the state.”⁸ The SWCDA also warns that “soil erosion and water loss result in economic waste in New Mexico through the deterioration of the state's natural resources.”⁹ Furthermore, it provides for the creation of soil and water conservation districts. The Taos Soil and Water Conservation District (TSWD) happens to be responsible for the Red River watershed's viability. Its purposes are to “control and prevent soil erosion,” “prevent floodwater and sediment damage,” “to preserve wildlife,” and to protect the health and general welfare of the people of New Mexico.¹⁰

Despite its statutory buster, however, the SWCDA fails to provide the TSWD a hammer with which to break through the Questa-mine impasse. Enter the Watershed District Act (WDA), which allows for the creation of watershed districts, subdistricts of the soil and water conservation districts formed under the SWCDA.¹¹ The WDA's purpose is to further water conservation and flood prevention measures “thereby preserv[ing] and protect[ing] New Mexico's land and water resources.”¹² When at least fifty landowners, or twenty percent of landowners in a proposed district (whichever is less) petition the board of supervisors, they may be commissioned as a watershed district.¹³ If commissioned, the district may develop and execute plans relating to “any phase” of water conservation, water usage, flood prevention and control, and erosion prevention and control.¹⁴ Additionally, this watershed district may exercise eminent domain—the heretofore missing hammer—in order to effectuate the WDA's purpose.¹⁵ Although, these condemnation proceedings need be approved by a board of elected supervisors and conducted in a manner consistent with the Eminent

Domain Code, where good-faith efforts have been made to purchase the mine, Molycorp may not object to condemnation proceedings.¹⁶ As a result, its acquiescence or recalcitrance in response to these proceedings warrants no further discussion. Therefore, whether condemnation proceedings are authorized and feasible seem to hinge on the germaneness of statutory language to the harms occasioned to the watershed, the costs incurred, and the benefits gained. First, the plain language of the WDA allows a watershed district, once created, to initiate condemnation proceedings against the mine in furtherance of its statutory objectives.¹⁷ The harms that the mine has inflicted on the watershed, which include soil erosion, water quality degradation, and flood exacerbation, are enumerated in the statute. Because the WDA's eminent domain provision allows watershed districts to rectify these harms, it authorizes condemnation of the mine.

Second, although the initial costs associated with condemnation and remediation of the mine might be quite daunting, the watershed district could seek federal assistance, as provided in Public Law 566, to restore the watershed; this should offset some of the costs.¹⁸ In addition, because the mine is listed on the NPL, the watershed district might be able to seek reimbursement from Molycorp or the Superfund, depending on its liquidity, for its remediation fees.¹⁹

Finally, the benefits of condemnation and reclamation are both direct and indirect, and may be substantial. Aside from the obvious benefits to the watershed and the ecosystem services it provides, Talberth, et al. estimate that a complete reclamation may yield nearly one billion dollars in economic benefits over the next twenty years. Furthermore, they assert that remediation would diversify and stabilize the local economy, thereby increasing revenue streams.²⁰ It appears, therefore, that in spite of the mine's closure, the local economy would be helped substantially rather than hurt. Thus, the benefits gained from Questa mine's condemnation and reclamation seem to suggest that the proposed action would be feasible.

In conclusion, the novel use of the WDA and SWCDA to solve a seemingly intractable local environmental issue seems legally supportable and economically feasible. The plain language of the statute allows the condemnation proceedings in order to discontinue ongoing harms, and remediate the watershed. The possible costs incurred by the local government during condemnation and remediation could be daunting;

however, they may be offset through Federal assistance, or private reimbursement. Finally, the long term economic and ecosystem benefits tip the scales in favor of condemnation.

Endnotes

¹ JOHN TALBERTH, ET AL., A FRAMEWORK FOR ASSESSING THE ECONOMIC BENEFITS OF MINE RECLAMATION: A CASE STUDY ADDRESSING RECLAMATION OF THE MOLYCORP MINE, QUESTA, NEW MEXICO at 21 (2001).

² *Id.* at 2.

³ Environmental Protection Agency, NPL Site Narrative for Molycorp, Inc., <http://www.epa.gov/superfund/sites/npl/nar1599.htm>.

⁴ 26 U.S.C.A. § 9507(West, Westlaw through Nov. 2008) pursuant to 42 U.S.C.A. §§ 9601-9675 (West, Westlaw through Nov. 2008); 40 C.F.R. § 300.430 (West, Westlaw through Nov. 2008) (The feasibility of obtaining these funds, considering the complexity of CERCLA, is outside the scope of this article.).

⁵ Environmental Protection Agency, NPL Site Narrative for Molycorp, Inc., <http://www.epa.gov/superfund/sites/npl/nar1599.htm>.

⁶ TALBERTH, ET AL., *supra* note 1, at 15.

⁷ *Id.* at 4.

⁸ N.M. STAT .ANN. §73-20-26(A) (West, Westlaw through the Second Special Session of the 48th Legislature).

⁹ *Id.*

¹⁰

N.M. STAT .ANN. §73-20-26(B).

¹¹ N.M. STAT. ANN. § 73-20.

¹² *Id.* § -3

¹³ *Id.* § -6.

¹⁴ *Id.* § -4.

¹⁵ *Id.* § -13(B).

¹⁶ N.M. STAT. ANN. § -13, -38.N.M. STAT. § 42A-1-6 (West, Westlaw through the Second Special Session of the 48th Legislature).

¹⁷ This article assumes that the requisite watershed district has been created under the TSWD, and concedes that where such a district does not exist, the feasibility hurdle is that much higher.

¹⁸ N.M. STAT .ANN. § 73-20-3; Watershed Protection and Flood Protection Act, 16 U.S.C.A. §§ 1001-1111 (West, Westlaw through Nov. 2008) (providing federal reimbursement for works of improvement to watershed areas)

¹⁹ 42 U.S.C.A. §§ 9601-9675.

²⁰ TALBERTH, ET AL., *supra* note 1, at 1-3

Science and Diplomacy: The Bellagio Draft Treaty and the Transboundary Aquifer Assessment Act

Patrick Schaefer¹

Almost twenty years ago, Professor Al Utton of the University of New Mexico School of Law collaborated with legal scholars from around the world to create a proposed legal mechanism for the management of transboundary aquifers, an effort resulting in the Bellagio Draft Treaty.²

Over the last two decades, demand for fresh, groundwater resources has outstripped the development of binding law and policy to deal with such pressures and the apportionment of the water in the underground aquifers between the United States and Mexico, for example, remains perilously uncertain. The Bellagio Draft Treaty, though, has continued to exert significant influence on the issue and recent federal legislation, Senator Bingaman's United States-Mexico Transboundary Aquifer Assessment Act (TAAA), has implemented many of the draft treaty's principles.³

During the 20th century, international "fluvial" or surface water law had advanced substantially, not only in the area of customary law, but also with respect to binding bi-lateral and multi-lateral treaties between states. Groundwater law, in contrast, was only just beginning to receive serious interest, most notably after the International Law Association's Law of International Groundwater Resources.⁴ Yet despite this interest, many of the legal rules and doctrines formulated with regard to transboundary groundwater mostly remained "soft law" and lacked any real authority or practical application. In order to give these doctrines binding force, Professor Utton and his colleagues began work on a series of draft treaties that would serve as platforms to give practical, legal effect to those otherwise "soft law" rules and doctrines. His first major draft treaty was a proposed legal instrument that would apply to the U.S.-Mexico border region, resulting in the Ixtapa Draft Treaty of 1985, which sought to resolve the legal uncertainty regarding the use and conservation of transboundary aquifers.⁵

After its publication, scholars and practitioners from around the world commented on the Ixtapa Draft Treaty, pointing out concepts and methods that needed work as well as those that represented significant progress. To correct the prior treaty, Professor Utton and his partners created the Bellagio Draft Treaty, which emphasized an international rather than



regional application. It was a necessary first step for any transboundary resource management scheme aimed at correctly measuring and accounting for groundwater quality and quantity. Though not a ratification of the Bellagio Draft Treaty, the TAAA, by authorizing the measurement of the U.S.-Mexico aquifers, gives legal life to many of the treaty's principles

and represents substantial progress with respect to the creation of an actual bi-lateral management scheme between the two countries.

At its heart, the Bellagio treaty was a call for rational, scientific management of the transboundary aquifer through a bi-national Commission and a corresponding database containing the measurements and quality analysis of the transboundary aquifers. This Commission would hold authority not by virtue of surrendering sovereignty, but rather by the strength of the scientific management of the database and thorough understanding of the circumstances of each problem.

Only in this way can it achieve impartiality in assessing the information and data it compiles. Data has to be delivered to the Commission according to an agreed design providing uniformity and compatibility, in order that the composite database may be created.⁶

The comments to Article V of the Bellagio Draft Treaty elucidating the relevant provision of the Commission's database and character are a testament to the faith in scientific reasoning as a neutral bridge upon which to build mutual understanding and trust.

The TAAA is a substantial step in this direction. Senator Bingaman, in his remarks upon the bill's introduction underlined the lack of consensus among the authorities on both sides of the border concerning the long-term viability of future groundwater resources.⁷ Echoing the spirit of the Bellagio Draft Treaty, Senator Bingaman advocated in the Senate for a scientific approach:

Given the rapid population growth along the border, and the corresponding increase in demand

for potable water, there is a strong need to gain a common and detailed understanding of our shared groundwater resources. A science-based understanding of the resource is the first step to avoid conflicts similar to the one arising in south Texas over Rio Grande water deliveries under the 1944 U.S.-Mexico treaty.⁸

These statements attest not only to the general belief in science to ameliorate international environmental disputes, but also foreshadow the practical, particular details that the TAAA addresses. To reach such an understanding, the TAAA creates of a database, as introduced in the Bellagio Draft Treaty, to be accessed and utilized by both countries.

In fact, many of the initial articles of the Bellagio Treaty call for the collection of data regarding the transboundary aquifers. Article V, ¶ 1 of the Draft Treaty states:

The Commission is charged with the creation and maintenance of a comprehensive and unified database pertaining to transboundary groundwaters, in the languages of the Parties. The database shall include an inventory of all transboundary groundwater resources taking into account quantity, quality, aquifer geometry, recharge rates, interaction with surface waters, and other pertinent data and shall identify all transboundary aquifers.⁹

Section 4 (B) (1) (b) *et seq.* of the TAAA, while not specifically calling for the creation of a bi-national Commission charged with data sharing *de jure*, nevertheless calls for substantial scientific cooperation in the form of joint studies and information sharing—a sort of Commission *ad hoc*.

The TAAA has set the groundwork for significant progress regarding the knowledge of the transboundary aquifers. More interestingly, though, has been its effect to generate discussions in Mexico concerning the desirability of entering into a groundwater treaty with the United States. A recent report from the Latin American Database points to the effectiveness of the TAAA in bringing about the kind of scientific and diplomatic cooperation envisioned by Al Utton and the other authors of the Bellagio Draft Treaty. According to the report, Mexican officials worry that the TAAA would overestimate U.S. transboundary groundwater reserves at the expense of their own. Felipe Arreguín, Director of Mexico's National Water Commission (Comisión Nacional del Agua) (CNA), has asked the United Nations Educational, Scientific, and Cultural Organization (UNESCO) for advice

regarding the negotiation of a groundwater treaty with the United States.¹⁰

This worry on the part of Mexico may, however, be overstated and the TAAA contains several explicit provisions not only calling for scientific cooperation with Mexico, but also providing matching funds for Mexican studies. Section 4(a) of the law, establishing the parameters of the program, directs the Secretary of the Interior, through the U.S. Geologic Survey, both to consult and cooperate with the appropriate Mexican authorities in the measurement, mapping and modeling of the transboundary aquifers.¹¹ Indeed, one of the central objectives of the TAAA is to provide the scientific information needed by water managers and natural resource agencies on both sides of the United States-Mexico border to effectively accomplish the missions of the managers and agencies.¹²

Notwithstanding the misconceptions of the TAAA and its provisions, the law's effect of inspiring diplomatic rapprochement regarding an issue too long ignored by both countries is a positive step. Along the 2,000-mile international boundary separating the United States and Mexico, there are approximately seventeen aquifers that extend into both countries.¹³ Since implementation of the North American Free Trade Agreement, these cities have experienced a spectacular rate of population growth and urban expansion. Conserving and protecting these aquifers is essential to improving the economic, ecological and security interests of both New Mexico and the region at large.

The TAAA's furtherance of the aims of the Bellagio Draft Treaty for the creation of a bridge of scientific understanding as well as its ability to spark diplomatic movement is no small victory. Unfortunately, the TAAA has not received the amount of congressional funding necessary to implement fully the law's provisions. Without the appropriation of adequate congressional funding in the coming congress, the achievement of creating a nascent transboundary scientific database will remain stillborn.

Endnotes

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varied from focusing on sustainability of aquifers and groundwater sources to defining areas of heightened protection. For a complete listing of unsuccessful groundwater legislation through 2005, see W. Peter Balleau and S.E. Silver, *Hydrology and Administration of Domestic Wells in New Mexico*, 45 Nat. Resources J. 807, 810 (2005).

¹¹ *Id.*

¹² D.L. Sanders, *New Well Rules Won't Leave Anyone High, Dry*, Albuquerque Journal, April 27, 2006, ¶ 6.

¹³ *Id.* at ¶ 7.

¹⁴ NMSA 1978, § 19-27-5.9(D)(1) (1978)

¹⁵ Based on the 136,816 recorded domestic well files. See note viii supra. W. Peter Balleau and S.E. Silver, *Hydrology and Administration of Domestic Wells in New Mexico*, 45 Nat. Resources J. 807, 833 (2005).

¹⁶ *Id.*

¹⁷ For a complete listing of unsuccessful groundwater legislation through 2005, see W. Peter Balleau and S.E. Silver, *Hydrology and Administration of Domestic*

Wells in New Mexico, 45 Nat. Resources J. 807, 810 (2005).

¹⁸ The New Mexico OSE fact sheet on domestic wells cites that households with a domestic well withdraw an average of 0.3 acre-feet per year (less than 100,000 gallons per year). New Mexico Office of the State Engineer Fact Sheet: Can you tell me about domestic wells in New Mexico 2 (undated) available at <http://www.ose.state.nm.us/water-info/NMWaterPlanning/fact-sheets/domesticwells.pdf> (last visited Dec. 1, 2008).

¹⁹ Seventy-six percent of New Mexico's water goes to irrigated agriculture. http://www.ose.state.nm.us/faq_index.html (last visited Dec. 1, 2008)

²⁰ *Id.*

²¹ Frank B. Titus, *On Regulating New Mexico's Domestic Wells*, 45 Nat. Resources J. 853, 854 (2005).

²² <http://www.ose.state.nm.us/PDF/Publications/TechnicalReports//BBER-WPR-Estimates-Projections-Aug2008.pdf>, p.6.

²³ *Id.* at 5-6.

“Science and Diplomacy” *continued from page 7*

2 ROBERT D. HAYTON & ALBERT E. UTTON, *Transboundary Groundwaters: The Bellagio Draft Treaty*, 29 Nat. Res. J. 663 (1989) [hereinafter *Bellagio Draft Treaty*].

³ United States-Mexico Transboundary Aquifer Assessment Act, § 3 (1), Pub. L. No. 109-448, 120 Stat. 3328 (2006) [hereinafter *TAAA*].

⁴ See International Law Association, *Helsinki Rules on the Uses of the Waters of International Rivers*; International Law Association, *Report of the*

Sixty-Second Conference Held at Seoul 1987.

⁵ ANN BERKLEY RODGERS & ALBERT E. UTTON, *The Ixtapa Draft Agreement Relating to the Use of Transboundary Groundwaters*, 25 Nat. Res. J. 713 (1985).

⁶ *Bellagio Draft Treaty*, art. V, Comment 4, 29 Nat. Res. J. 663, 688-89 (1989).

⁷ 151 Cong. Rec. S649-01, S659 (Jan. 31, 2005) (statement of Sen. Bingaman).

⁸ *Id.*

⁹ *Bellagio Draft Treaty*, art. V, ¶ 1, 29 Nat. Res. J. 663, 687-88 (1989).

¹⁰ CARLOS NAVARRO, *Mexican Government Considers Adding Aquifers to 1949 Water Treaty*, SourceMex, Latin American Database, Sept. 10, 2008.

¹¹ *TAAA*, § 4a

¹² *Id.* at 4(b)(3)(B)

¹³ MARILYN O'LEARY, *The Bellagio Draft Treaty as a Tool for Solving Border Groundwater Issues*, 11 U.S.-Mex. L.J. 57 (2003).