

Deep Water Permitting: The Good, The Bad and The Just Plain Ugly

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She has over 20 years of legal experience in Pueblo Indian water rights and has participated as an active attorney in several Pueblo water rights adjudications, including New Mexico ex rel. State Engineer v. Aamodt, State of New Mexico ex rel. State Engineer v. Abbott, and State of New Mexico, ex rel. State Engineer v. Kerr McGee, et al.



Introduction

I am a lawyer and we deal with words. Never give a lawyer anything written to review when a lawyer has a pen or pencil, even a crayon, in her hands – it will be edited when you get it back. Since we deal with words, I don't do PowerPoint presentations. I leave the pictures to others.

The firm I work with, Chestnut Law Offices, represents Pueblo governments, one of which is Acoma Pueblo. Acoma is nominally within the Rio Grande Groundwater Basin, as a tributary to the Rio Puerco. The Rio Puerco's contribution to the Rio Grande, and the aquifers underlying the alluvial aquifers of the Rio Grande is minimal: 4% of the annual flow, and at the surface most of this is sediment. The Rio Puerco delivers 78% of the total suspended sediment load of the Rio Grande.¹

Acoma Pueblo is very concerned about water matters because it is located in a very water scarce region, and the little water there is has suffered severe depletion and contamination in the past due at least in part to the boom-bust cycle associated with uranium development in the area. Acoma cannot exist anywhere else, as a matter of federal law and of Acoma culture. Acoma is home to the oldest continuously inhabited site in North America. Its survival has always depended on wise use of all water resources. Now, this is more critical than ever before. Acoma does not plan to exist for decades; Acoma plans to exist for centuries - in the same location. For that reason even water that some would consider nonpotable, or too deep, must be taken into consideration when the Pueblo's water future is shaped.

¹ (USGS, 2009) U.S. Department of the Interior, U.S. Geological Survey. This page is http://esp.cr.usgs.gov/rio_puerco/puerco2/high_erosion.html, and is maintained by Richard Pelltier. Last modified: 15:04:23 on 15-Mar-2006.

Issues that Arise with the Deep Water Permitting Amendments of 2009

Acoma Pueblo takes the position that it is the government that controls all water on, running through, or under its land surface. Federal law protects the Pueblo from assertions of state jurisdiction over its lands and waters. The New Mexico Enabling Act states:

The people inhabiting this state do agree and declare that they forever disclaim all right and title to... all lands...owned or held by an Indian or Indian tribes, the right or title to which shall have been acquired through the United States or any prior sovereignty; and that until the title of such Indian or Indian tribes shall have been extinguished the same shall be and remain subject to the disposition and under the ABSOLUTE JURISDICTION AND CONTROL OF THE CONGRESS OF THE UNITED STATES.

There is some debate today about whether this was only a disclaimer of the state's proprietary interest, but that is of no consequence to what we are talking about today. In 1910, when this law was enacted by Congress, groundwater was generally under the control of the landowner as part of the land. New Mexico was the first state to regulate groundwater as something separate from the land itself and that was still 20 years away. We can quibble over whether Congress intended the Pueblos to have an owner's right based on the doctrine of the owner's absolute dominion, or the doctrine of correlative use which requires sharing among competing land owners.² In either context, there are important rights of the Pueblo to protect. So, the first things on my checklist when I review a proposed deep water well are:

1. Where is the well located on the surface?
Is it near the Pueblo or areas of known recharge to Pueblo waters?

But, you say, if it isn't on Pueblo land, it isn't Pueblo water, right?

No. Water does not respect the boundaries drawn by people on a map. For example: One of the recharge areas for the Horace Spring which provides a large part of the surface water flowing through Acoma in the Rio San José is the Zuni uplift on the other side of El Malpais National

Monument; another is the Dakota Sandstone aquifer which used to flow at the surface at Ojo de Gallo just west of the Malpais at San Rafael. Of course that flow is now non-existent – not because of surface water use, but because of increased groundwater pumping (mining) near Grants, New Mexico. Another source was the Rio San Jose and its alluvial aquifer itself – that flow is now close to non-existent because of Bluewater Dam and the groundwater pumping in the Bluewater-Toltec Irrigation District.

It is a shame that the legislature did not take this opportunity to require the Office of the State Engineer to enter into Memoranda of Agreement with Indian Tribes for management of these deep aquifers that potentially serve both the Tribes and the State. Collective management might take more time to put into place but it can forestall many greater debates and issues in the future.

2. What are the known facts about groundwater flow in the area? Will the proposed pumping affect water quantity or flow? What about water quality?

But, you say, this should not be important because these deep water aquifers must have an "hydraulic separation from overlying aquifers" to establish that it only contains non-potable water.

It is important. It is so important that it is almost a rhetorical question. "Hydraulic separation" sounds really good, but in the natural world it is quite rare. With groundwater, there is always uncertainty. For many centuries courts did not even try to regulate groundwater – there was too much that could not be known. There has been some movement. For example, in 1861 the Ohio Supreme Court refused to apply any law to groundwater issues:

[T]he existence, origin, movement and course of such waters, and the causes which govern and direct their movements, are so secret, occult and concealed, that an attempt to administer any set of legal rules in respect to them would be involved in hopeless uncertainty, and would be, therefore, practically impossible.

² In Louisiana, the civil law of Spain and France is interpreted to reach essentially the same result as the absolute dominion rule, while the Roman law appears to apply something similar to the reasonable use rule. See 3 Water and Water Rights 2003 Repl. Vol. §20.02.

Frazier v. Brown, 12 Ohio St. 294, 311 (1861). In the early 1980s a hydrologist remarked on the importance of a strong research component to any effort to manage groundwater:³

Hydrologically we operate largely in a sphere of ignorance, not because we lack understanding of the laws of nature as they relate to groundwater flow and quality, but because we lack the practical means to assess the extent of the resource ... [we] have to learn to operate within the range of uncertainties which exist of a given data base.

There is not much difference in the substance of these two statements.

I often see hydrologists refer to a thick layer of clay as impermeable, and therefore, creating hydraulic separation between ground and surface water. Or hydrologists speak of aquitards as barriers, but these are not really barriers. An aquitard is considered to be impermeable because it has low permeability. It can store a large volume of water, but the water cannot pass through easily. Even so, given a certain set of facts, it does transmit water. Have you ever set a clay pot with a plant in it on a carpet? Give it about one month and there will be a permanent stain where the water from the clay pot has slowly, but ever so surely seeped from inside the pot to the rug. An aquitard is very similar to the clay pot. It slows the flow, but it does not stop it.

What water cannot seep through, it dissolves or erodes. There is mechanical erosion where the earth is physically broken down by water but does not change the chemical composition. Then there is chemical change where the water incorporates the earth to transform itself into some other liquid. Arsenic tea, anyone? Erosion is even greater where water meets the definition of "non-potable". Just think about what salt and water combined can do to steel. Then there are geological rifts where the earth under has moved so that water can move similar to a person in a maze.

For the Pueblo, where a century is a relative small part of its existence, the fact that these processes take a long time does not mean they should be ignored.

With wells, you also need to consider how much pressure a well is going to produce; the greater the pressure pulling the water in and up the well, the greater pressure to pull water from an adjacent aquifer or aquitard into the aquifer that is serving the well. This can be so great as to actually change the direction of groundwater flow, cutting off recharge, even if water is presently hydraulically separated.

An example is the Malpais area just west of Acoma. For many years learned geologists took the view that it blocked the flow of water. Tribal elders knew better. There are cracks in the malpais and wonderful watering holes. Traditionally, the depth to water in the watering holes was an indication of the availability of water from the Rio San Jose and some springs located on the Pueblo. Now it is taken as a given that water from the Zuni uplift region saturates the earth and flows into the Rio San Jose through springs.

The uncertainty surrounding groundwater management exists today and as a water lawyer I have to acknowledge its existence. That is why this second question is largely rhetorical. Absent unequivocal findings that the water that is proposed to be tapped (1) does not support aquifers that Acoma is using today, (2) is not recharge for Acoma present use (3) will not be needed for future use, (4) is not located under Pueblo land surface, in whole or in part, (5) will not further deplete existing groundwater sources of the Pueblo, I have to present the Pueblo with the opportunity to protest the application.

3. How do I file a protest for my client?

This is where the new law simply does not work, or perhaps it does its work too well. Different regimes are now in place depending on the type of use to be made of the "nonpotable" water. Under the old law this section was a limit on the State Engineer's ability to declare groundwater basins – the act that allows the State Engineer to exercise jurisdiction over groundwater.

§72-12-25(NMSA 1978) OLD VERSION:

NO PAST OR FUTURE ORDER OF THE STATE ENGINEER declaring an underground water basin having

³ Rodgers, A.B. and Utton, A. "The Ixtapa Draft Agreement Relating to the Use of Transboundary Groundwaters" 25 Nat. Res. J. 713, 732 (July, 1985)

reasonably ascertainable boundaries SHALL INCLUDE WATER IN AN AQUIFER, THE TOP OF WHICH AQUIFER IS AT A DEPTH OF 2,500 FEET OR MORE BELOW THE GROUND SURFACE at any location at which a well is drilled and which aquifer contains non-potable water. “Nonpotable water” for the purpose of this act [72-12-25 to 72-12-28 NMSA 1978] means water containing not less than one thousand parts per million of dissolved solids.

With this limit on State Engineer jurisdiction, it was not unusual that protests were not to be filed with the State Engineer but with the state district court. §72-12-28 (NMSA 1978). There was no administrative jurisdiction to consider protests to a notice of intention to drill. §72-12-27 did authorize the State Engineer to require data to be filed with respect to a deep well, metering and water chemical analysis. The State Engineer had no authority to stop the drilling of the well.

Now, despite a nonpotable deep aquifer being subject to the State Engineer’s jurisdiction, there are many uses that are governed by the old process, thereby removing any ability to challenge the notice of intent to drill through an administrative process. These uses are: oil and gas exploration and production, prospecting, mining, road construction, agriculture, generation of electricity, use in an industrial process or geothermal use. All other uses, such as municipal, domestic, etc., are subject to the existing administrative process for a regular groundwater permit application.⁴ I wonder how many lobbyists had their hands on this bill before it was enacted by the legislature? I submit that there can be no rational basis for these distinctions between uses. What is special about generation of electricity, industrial uses, or agriculture so that they should be shielded from challenge during any administrative process.

I do question the purpose of altering the statute

to allow the State Engineer to declare these deep well basins if there was no intent to require the largest of users to comply with an administrative process.

So, before I can file a claim, I now have to take into consideration what type of use is proposed for the “nonpotable” water. If one type of use, file in court. If another, file in the Office of the State Engineer.

For those uses where one must go into court, protests are limited to persons who can claim impairment of existing water rights due to the appropriation of nonpotable water. This could be construed to require fairly sophisticated hydrological work before any claim could be filed. The law applicable to a regular application for groundwater permit does not limit claims in this manner. In addition to those whose use may be impaired, under §72-12-3 an application can be challenged as being “contrary to the conservation of water within the State or detrimental to the public welfare” if the challenger can show that it will be substantially and specifically affected by the granting of the application. For Pueblos, where protection of their water rights is a public trust or federal trust duty, this can be a basis for challenging an application even where the hydrology is not sufficiently certain to support a claim of impairment.

Conclusion

It is important for the State to regulate water use and to work with other regulators such as Indian Tribes and other states to insure a water supply for the future.

At least these amendments address the ability of the State to regulate. The bad part is the legislature did not take advantage of the opportunity to acknowledge that water resources in New Mexico are not subject to state regulation alone, and to require collaborative, complementary regulation by Tribes and the State.

⁴ §72-12-25(B)(2009Supp.):

“If the State Engineer declares the type of underground basin described in Subsection A of this section, all appropriations of nonpotable water from that basin for

(1) oil and gas exploration and production, prospecting, mining, road construction, agriculture, generation of electricity, use in an industrial process or geothermal use shall remain subject to Sections 72-12-25 through 72-12-28; and

(2) all other uses shall be subject to 72-12-1 through 72-12-24.”

It is also important that regulation is given to the State Engineer's Office, where there are supposed to be sufficient resources to analyze all the technical aspects of an application. However, it is just plain ugly to require two different processes for challenging or objecting to a deep well permit application or notice of intent to drill, giving greater protection to certain specific users over other users without rhyme or reason.

As desalinization and other water treatment becomes common place, what is technically nonpotable in the ground will become potable on the surface. While Deep Water will never be the source for all water users, just from a cost perspective if nothing else, it is going to be an important part of the water supply picture for New Mexico – at least until we run out of the energy to power the submersible pump.

There are problems with the new regime adopted by the last legislature. I hope the legislature and the State Engineer's Office will consider resolving those problems through additional legislation soon.