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The Politics of Scaling Water Governance and Adjudication in New Mexico

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ABSTRACT: This paper discusses the scalar politics of the water rights adjudication process in New Mexico (US). Over the past 150 years, water governance in New Mexico has gradually shifted away from communal management towards more individualised 'water rights'. This paper addresses the consequences of this shift for water users while also addressing the literature on the politics of scale and scalar politics. Actors engaged in water governance mobilise scale, and scalar politics operate in different settings, depending on the priorities of the stakeholders. Using interviews, archival research, and institutional ethnography, I illustrate how scale of various kinds is fundamental to the process of water rights adjudication and water governance in the state of New Mexico. Although the academic sense of the politics of scale remains contested, these debates seem largely abstract to most water users, even if they materially and rhetorically engage in multiple levels of scalar politics. The framing of scale arguments ranges from the biopolitics of individual water rights holders, to the new regionalisation of ditches due to adjudication, to considerations at the larger watershed level.

KEYWORDS: Acequias, adjudication, scalar politics, water governance, New Mexico

INTRODUCTION

> If the unrestrained engineering of water was original sin, it was essentially a sin of *scale*. Anyone who wants to live in the west has to manage water to some degree *(Stegner, 1987).*

Water managers and users in the US Southwest face new and old challenges in the 21st century (Wilder et al., 2010; deBuys, 2011). In this arid to semiarid region, residents have long depended on meagre surface streams and have increasingly tapped groundwater resources. Issues of scale are especially relevant to the governance of water, one of the few universal commons shared by all life (Conca, 2006; Bakker, 2007; cf. Linton, 2008). In New Mexico, 2011 ranked as the sixth driest year on record, and the largest fire in recorded state history scorched the Jemez Mountains just west of Santa Fe. The new attention being paid to climate change, decreased snowpack in mountain regions, and increasing population has only highlighted older processes still unfinished across the Southwest. One of these older state practices is the ongoing process of adjudication of water rights. Even if the legal statutes required adjudication as of 1907, the need for adjudication was driven by large-scale hydraulic projects, legal statutes at the state level, and growing concerns over water scarcity. Yet adjudication attracts far less attention than spectacular wildfires, prolonged drought, and decreasing snowpack. After all, adjudication is a legal process, and the law has few fans in the social sciences (but see Matthews, 1984; Blomley, 2003; Latour, 2010; Jepson, in press). In the western US, adjudication is a state-level

enterprise, even if the US federal government occasionally plays a role in the process or in some settlement negotiations.[1]

As the contributions in this special issue make clear, the governance challenges of managing water, at any particular scale or across multiple scales, are legion. The recent literature on scale, politics of scale, and scalar politics has revived a needed reconsideration of the usefulness of these terms. While most geographers now readily acknowledge that concepts such as scale, region, and community (to name but a few) are socially constructed and dependent on context, these terms remain central to human geographers, political scientists, anthropologists, and sociologists. Critical scholars have, however, challenged our notions of scale as a concept, and whether other versions might be more helpful (Swyngedouw, 1997, 2000; Marston, 2000; Brenner, 2001; Brown and Purcell, 2005; Marston et al., 2005; Budds, 2009).

One of these contributions was the proposal by Marston et al. (2005) to consider a flat ontology that refuses to obey the dichotomy of scale (local vs. global, as one example). It is true that water respects no particular conception of scale and remains, in theory and in fact, only one dimension in water politics. But people do mobilise scale in arguments over, and in the politics of, water. Without grossly oversimplifying the debate over the politics of scale, these exchanges have been more about structural and post-structural notions of production and reproduction in society. Water complicates this bifurcation because it is used by individuals for production (agriculture) and also for reproduction (community, village, family, or suburb). Using multiple examples across several scales of water governance, this paper illustrates how the politics inherent in scale, and scalar politics, remain relevant not only to empirical and interpretive scholarship but also to local residents who mobilise around the use of scale. The goal is not to critique the useful aspects of a flat ontology (as proposed in Marston et al., 2005) but rather simply to balance their careful use of scale with material examples of how water users in New Mexico engage in scalar politics.

The shifting scales of water governance in the state of New Mexico aligned with the ongoing process of water rights adjudication occurring throughout the western US. New Mexico has been engaged in water rights adjudications since the 1950s, although the state water code dates back to 1907. Here, I discuss how adjudications affect local irrigation ditches (*acequias*), interditch relations, and the larger concerns about regional water governance. The analysis illustrates the various levels of scalar politics and finishes with a discussion of why water users and managers mobilise scale on a daily basis.[2] As conceived and practiced, scale is confusing or even infuriating to academic geographers when defined or used vaguely. But scale remains useful for social scientists and for understanding how water actors engage in scalar politics. And, as Leitner and Miller (2007) noted, obsessing on the limitations of scale "may also distract our attention from the concrete spaces, practices and understandings of human and non-human agents, their power relations and their impacts". The attempt is to frame a middle ground for viewing scale as problematic, to seeing it as crucial to understanding politics at or between the various levels of self, societies, and states.

[1] The negotiations to which I refer here are the so-called water settlements that serve to quantify the amount of Indian water rights in any adjudication process. Depending on the state, these settlements have either been a common mechanism to avoid prolonged litigation, or have been spurred by local actors demanding direct negotiations with each other (see Colby et al., 2005 for more on settlements).

[2] While work on this project began in 2007, the majority of interviews and discussions (n= 193) occurred during a 2009-2010 sabbatical and in the summer of 2011. Participants consisted largely of water rights holders, acequia members (parciantes), and water ditch bosses (mayordomos). Of the interviews, some 28 were with water managers, Office of State Engineer personnel (past and current), and attorneys representing acequias and Pueblos, and various technicians. All names cited in the text for interviews or personal communications here are pseudonyms, to protect identities. Interviews were held in either English or Spanish and occasionally both.

ADJUDICATION, SCALE, AND WATER RIGHTS IN NEW MEXICO

If scale remains a rich and problematic concept for academics, multiple notions of scale and scalar politics are also mobilised on a daily basis by water users, managers, and concerned citizens.[3] Like the old notion of region, scale remains a central tool as we begin to add complexity to our understandings of basic geographic terminology. Neumann (2009, 2010) has also made clear that both scale and region are being revitalised by new considerations in political ecology. While the present work is not primarily about the academic politics of scale, it demonstrates that scale still matters and is still used materially, discursively, and symbolically by individuals and institutions across scales. I also suggest that everyday concerns over water, by locals, are a point of convergence for both political ecologists concerned with scale, and scholars of Foucault interested in the biopolitics of scale. Indeed, water adjudication has only heightened local and state awareness of how scale is perceived, used, and debated in New Mexico.

The process of any general stream adjudication is monstrously complex. It entails a lawsuit, triggered by either water users (as in Colorado), or by a central state authority (as in New Mexico), to document the number, type, and locations of water rights owners in a watershed. For example, in New Mexico, nearly 65,000 defendants (water rights holders) are in the active adjudications.[4] Yet less than 25 percent of the state's area has been adjudicated. While seemingly a neutral judicial matter that formalises the informal, adjudication touches on several scalar aspects of water governance. It also remains deeply controversial in almost all settings. Individuals have their water rights quantified; water rights holders can contest the offer of judgment that specifies location, quantity of water right, current ownership, and other details specific to the property that is being watered. Once the offer of judgement is agreed to by individuals, state or federal courts pass decrees (final or partial) on these procedures by watershed, and ultimately the state engineer is responsible for administering rights. These are administrative and court procedures that speak directly to heightened concerns over environmental governance (Liverman, 2004), the human-environment balance, and the scalar aspects of water politics and ecologies.

In New Mexico, water rights adjudications are under the purview of the Office of the State Engineer (OSE) and occur in two general phases (Levine, 1990). The first phase consists of field and archival research to map water rights; the second begins a legal process of confirming offers of judgment. Adjudications in New Mexico become known by the first alphabetical water rights holder (as in 'Aamodt' or 'Abeyta'). These last names, for better or for worse, become the shorthand for referring to particularly long and difficult legal cases involving water rights.[5] Adjudications have triggered, since their inception, a variety of arguments over 'water politics' (Ingram, 1990; Rodriguez, 1990). Adjudications are also a vivid example of a technology of governance, a kind of hydromentality[6] (to paraphrase Agrawal, 2005), one in which a particular sector of the state attempts to quantify citizenship (translated by water rights) on a legal basis for managing state resources. New Mexicans do not own the water, from the state's perspective; they own rights. The state is responsible for quantifying, monitoring, and certifying those claims to rights. But adjudication is not just about property rights. The process fundamentally challenges community notions of who owns the water, who has the power to

[3] This argument parallels the recent comments by MacKinnon (2011) on the importance of scalar politics, without getting lost in arguments over the politics of scale. The argument here is not to abandon scale in geography but rather to carefully consider how grounded uses of scale are deployed by water users in this case.

[4] Similar to Norman and Bakker (2009) in their analysis of transboundary water management developments in Canada and the US, the state of New Mexico has not receded in its role; in fact the presence of the state is now more palpable than it was forty years ago at the local level. It was only in the late 20th century that the state of New Mexico was able to insert itself into local water governance concerns.

[5] Remarkably, these last names now serve as stand-in blind references to particular watersheds. Mention any of the active cases based on the last name in question, and interested parties know exactly what area is in question.

[6] A combination of hydrological and governmentality, emphasizing that state mapping of water rights creates a specific kind of citizenship.

manage the water, and how water will be apportioned in the future. The process can also draw attention to the fact that state jurisdiction over water governance may not even be recognised or abided by local water users.

For a variety of historical, cultural, and political reasons, the United States federal government promoted national land policies for settlement at the same time that it remained oddly silent on water issues in the West. At least, this is the traditional script given in even new western histories. There was a slim window of opportunity in the 19th century to enact settlement policy that would have joined water and land issues. The explorer and polymath, John Wesley Powell, recommended that the political division of the western US proceed along the lines of basins and watersheds, since water supply was sure to be limited west of the Mississippi river. Powell's advice about organising settlement and political governance by watershed – and not by Cartesian state political boundaries – was obviously ignored (Worster, 2003). Even if Powell's recommendations might have made logical, physical sense in the long term, they were not expedient to transferring large portions of the public domain to private hands. Settlers, after all, preceded any large contingent of cartographers, surveyors, or engineers in the 19th century. The national void in systematic water (rights) policy was gradually filled by state law and state court interpretations that administratively asserted control over territorial surface waters (first), and later to groundwater (Lane, 2011). Discussion here is largely confined to surface water issues in the modern (post-1907) period.

It is ironic that adjudication as a process today *does* operate on the underlying watershed logic that Powell championed as a way to govern. In other words, although rectangular grids were good for disposing of large square plots of land, many states realised that Powell's proposal about using watersheds was logical for adjudicating water rights in some fashion. Many local water users in New Mexico understood the importance of watersheds before 'the state' came along to assert its own governance.[7] For early users, of course, the watershed was simply the closest water source that could be turned out of a streambed and applied to fields and crops. Today, adjudicating by watershed has become the spatial-legal terrain for quantifying state and individual water rights. This is not to dispense with the problems of watersheds, since they would carry their own challenges for use as administrative or political units (see Cohen and Davidson, 2010).

New Mexico today relies on the doctrine of prior appropriation for managing the system of water rights ownership. Prior appropriation codifies the 'first in time, first in right' nature of water rights in the state. This creates a system of senior (older water rights) and junior water rights, based on the first date of beneficial use. But the state continues to struggle with three implicit, overlapping systems of water governance since legal pluralism is not fully recognised by the state's courts and water authorities.[8] The Pueblo had their own customary norms of water management, although the details of that system and 'who did what' remains rather murky both for historians and for contemporary water scholars.[9] Using seasonal floodwaters along natural stream courses in the Southwest was clearly a widespread pre-Columbian practice. However, it is unclear whether longer, off-channel canal systems existed in New Mexico prior to Spanish colonisation. The Spanish and Mexican Indian colonists brought their own norms and understandings of water management systems, along with institutions strongly shaped by

[7] This is not to privilege the 'local' as Brown and Purcell (2005) warned against the local trap, the notion that assumes that the local is inherently superior to other scales of governance. This is merely to point out that residents on the landscape did, in fact, have to figure out how to make use of local surface waters long ago. For an excellent example on state insertion of governance in water issues, see Banister, 2011.

[8] See Roth et al., 2005, for more on the concept of legal complexity and legal pluralism. For New Mexico, at least three notions of legal pluralism for water can be recognised: prior and paramount Indian water rights and customs, Hispano water uses and customs, and lastly Anglo-American prior appropriation legal understandings of water as a severable right from the land. Water law in the eastern US relies on riparian water law that gives access and use rights to water appurtenant to the land.

[9] The Pueblo Indians are the name given to the tribes along the Rio Grande River. They acquired this collective and rather inaccurate name from the Spanish who perceived them to be residential and settled than their nomadic neighbours like the Navajo or the Apache. Pueblo refers to village or people in Spanish. For more on the Pueblo, see Barrett, 2002.

the Moorish customs embedded in the Iberian Peninsula for some 700 years (Wescoat, 1995). These customary irrigation assumptions dominated local understandings of water use, sharing, and customary law between roughly 1600 and the early 1900s (Meyer, 1984; Rivera, 1998).[10]

Since 1848, the system of American water jurisprudence has incrementally evolved to impose the third system of water law: one fundamentally based on individual water rights. If American destiny was made manifest in the middle of the 19th century (Correia, 2008), governance over the vast spaces of the Western states was most certainly not visible until the middle of the 20th century. In New Mexico, several late 19th century attempts at regulating water use and establishing hydrological expertise resulted eventually in the 1907 water code (Lane, 2011). Even as a territory, politicians in the future state of New Mexico (in 1912) knew that a full accounting of natural resources would be necessary so the state could manage resources. Water resources were of vital concern, as were the relevant citizenship rules bound up in water rights and their holders. The scale of cultural, state, and federal citizenship bound to water governance complicated any neat transition to a holistic understanding of how to organise access to these rights. The next section examines the scalar politics of water governance, and frames these disputes upwards across scale, from micro- to macroscale, to highlight the challenges when it comes to governing water.[11]

THE BIOPOLITICS OF WATER RIGHTS

Although individuals may have a 'water right' in the Western US, as mentioned earlier, this does not mean ownership of the water itself. If we can think of access rights to natural resources as a deck of playing cards, the water right itself is only one card out of the whole deck. Yet this approach to separate and private rights to property was ingrained in neither Native nor Spanish understandings of the environment (Meyer, 1984). Because of the long history of alienation of Spanish and Mexican-era land grants in parts of the Southwest, it is impossible to talk about water and water rights without mentioning land grants (Dunbar-Ortiz, 2007). When what is now the Southwestern US was lost by Mexico to the US through the Treaty of Guadalupe Hidalgo (1848), the protection of land and water rights was paramount to most residents of the region, even if they were only vaguely aware of the details at the time of nation-state transfer. Through a process of political and judicial manipulation, the vast majority of communal land grants was transferred to private hands or is now part of the public domain in New Mexico.

There is a long record of resource conflict in New Mexico, especially since the United States never recognised many pre-existing Spanish and Mexican land grants given to communities (Nostrand, 1992; Ebright, 1994; Montoya, 2002; Correia, 2008). As one resident put it, in describing this repetition of historical resource losses at the hands of Anglo-Americans: "first they came for us, then they took our land, then our forest, then our animals, and now they want our water... enough is enough" (Lobato, 2009). In many villages, the deep cultural wounds left by such acts of dispossession remain daily conversation. For the heirs of existing or extinguished land grants, whether Hispano or Pueblo, the ties connecting land and water remain vital. They view land and water as inseparable and consider adjudication to be a process that can lead to the alienation of water. The assignment of water rights to individuals can then lead to the loss of water, away from the original ditch (see Crawford, 2003).[12]

[10] See Boelens et al. (2010) for an excellent recent collection of recent studies on issues of water rights, customs, politics, and identity.

[11] Ettlinger (2011) has recently suggested that Foucault's notion of ascending analysis, while different from the traditional geographic approach of scale, is a fruitful way to pursue documenting biopolitics. Here, my use of biopolitics may seem problematic for some since the individual level (body) mixes with the more traditional macro-perspective Foucault espoused for describing state biopolitics (census, mapping, etc).

[12] While unfortunate in the sense that categorisation of peoples in New Mexico leads to the language of ethnicity, 'Hispano' here means anyone of Latino, Mexicano, Chicano, or Indo-Hispano descent. While there are other groups of Indians in New Mexico, this piece limits itself to the Pueblo peoples because of the study area involved and the peculiarities of Pueblo water

Stanley Crawford (1990), a noted Southwest author and a former ditch boss, described adjudication as "social policy disguised as something else". His implicit commentary was that what appears to be an *equalising* judicial process can impact the social dynamics of water use, ownership, and access in the state (see also Boelens et al., 2010). From a state's perspective, adjudication is a way of formalising, or codifying, what state experts view as the informal way that water has long been managed at the community level.[13] The US has but rarely considered 'communal' as a meaningful land or water tenure arrangement.[14] Just as the US would not accept the legal basis for communal land grants in the 19th and 20th centuries, any notion of community or collective water remains deeply problematic for courts and American law.[15]

Yet the scale of the individual, of the body, has informed water governance in a meaningful way: US and state legal norms insist on written documentation for individuals as water rights holders. The atomisation of community into individual rights can be seen clearly in the adjudication process. First, as described above, the OSE engages in a mapping of water rights through extensive cartographic, archival, and fieldwork. Second, the OSE begins the court phase by making offers of judgment to individual water rights holders based on its earlier research. Water rights holders can then either sign these offers of judgment, agreeing with the research conducted by the OSE, or they can contest any single part of the offers if they believe details are incorrect. These details can range from typos in spelling of the claimants names, to priority dates (dates of first use of water), to allocation quantities, to name but a few examples. Ultimately, state courts finalise adjudications with a judge declaring partial (if incomplete) or final decrees (when all work is done).

Federal courts are involved when any Indian tribe is included in a general stream adjudication. About half of all adjudications underway are in federal court. While the legal purview of New Mexico's procedure seems biophysically holistic in using the watershed for adjudicating rights, the ultimate aim of these proceedings is to certify water use as a separate resource right from the land with no consideration for communal or collective rights of ownership. The exception to this rule is Indian water rights, negotiated collectively, which fall under federal reserve jurisdiction. This is the same kind of legal dissonance experienced by both indigenous peoples and by Hispanos referring to any kind of customary 'commons' in many situations. For land-based communities, social organisation around water can serve as the last expression of communal identity in a globalising world (McCarthy, 2005). Tribal water rights, then, are at least recognised as a collective resource. For non-Indians, however, the assumption and treatment by New Mexico is geared towards individual water rights.

However, in many places – and not just in New Mexico – the right to water and how it was allocated and shared is a community enterprise not tied to individual ownership (Rivera, 1998; Rodriguez, 2006; Perrault, 2008). Adjudication, as explained above, is not nearly complete (see figure 1) in New Mexico. Even a hundred years after water codes prescribing adjudication were created, this administrative and legal process continues in courts and along streams across the Western US.

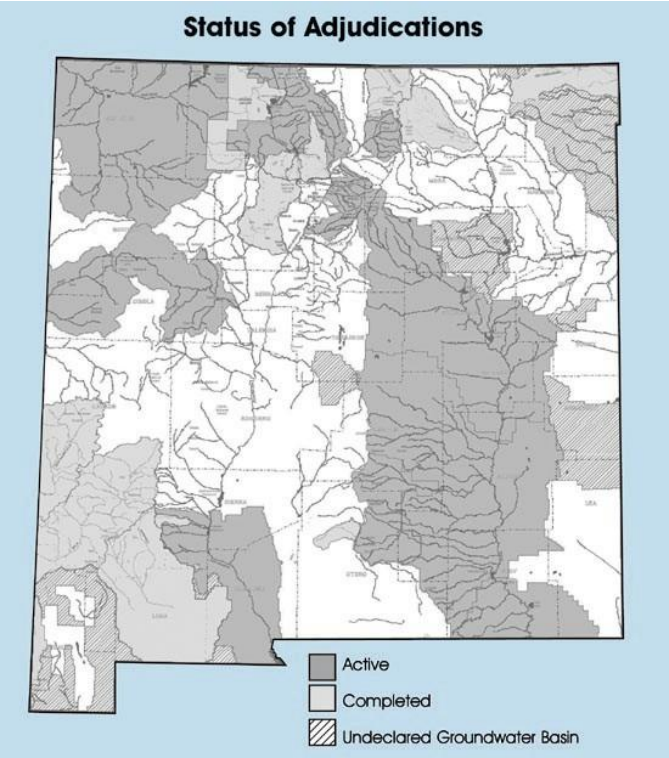
law as compared to other North American Indian groups. Anglo-American is a grossly inadequate term to refer to all people who are not indigenous, and not of Hispano descent in the state.

[13] This is strange considering how codified and strict governance handbooks and rules are now on most ditches and acequias throughout the state of New Mexico (see NMSA, 2008).

[14] In the San Luis Valley of Colorado, for example, a recent court decision in the early 2000s gave partial and limited communal access rights back to the heirs of the old La Sierra land grant, although most heirs live in the nearby town of San Luis, CO. This is a rare exception, however, as most previous judges in a long-standing dispute refused to acknowledge community or communal property as a meaningful category.

[15] For an excellent set of essays on the effects of adjudication in New Mexico, see the special issue of the Journal of the Southwest 32(3) from 1990.

Figure 1. Location map of active and completed water adjudications in the state of New Mexico.



Note: The map is complete as of 2005. Two adjudications mapped above and described as 'active', Aamodt (Pojoaque Valley), and Abeyta (Taos Valley), are in the settlement stage and were funded by the US federal government in late 2010. Areas in white indicate regions where adjudication has not yet begun. Source: OSE, New Mexico (n.d.).

Land without water, then, is not only useless, it is also senseless. The concept in Spanish of *querencia* echoes what humanist geographers and anthropologists consider the 'sense of place' created by a desire to remain close to home, in a village, next to a canal that sustains crops and life. Residents cannot imagine their village, town, or even suburban neighbourhood without the sound of rushing water in the canals during irrigation season. To many New Mexicans, the notion of individual rights atomises and divides the notion of commons or community that is fundamental to the ongoing success of many local institutions. Yet, Anglo-American in-migrants to New Mexico are relatively comfortable with the more individualistic notions of American jurisprudence (Quintana, 1990). Because the priority of a water right is then incorporated into the ideal type of a water rights 'holder', a property owner's body, Foucault's notion of biopolitics is apt (Bakker, 2010). At the same time, the local ambivalence towards the notion of 'junior' or 'senior' water rights holders is understandable.[16]

To illustrate why the notion of individual biopolitics matters in daily water governance, here I draw on an example from the area of original Spanish settlement in New Mexico. When the Spanish coloniser and conquistador Juan de Oñate entered New Mexico in 1598 with colonists from Mexico, both Spanish and indigenous Mexicans (Tlaxcalans primarily), one of their first priorities was founding a site for permanent occupation. They soon realised that a location near one of the existing Pueblo villages was to their advantage for two reasons: the Pueblo already occupied some of the best arable lands near stream courses, and the Pueblo themselves could be drafted into agricultural labour (Nostrand, 1992;

[16] See the special issue of *Foucault Studies* (2009) for an interesting set of essays that combine Foucault's notion of governmentality squarely addressing issues of neoliberal policies. For a deeper spatial critique and appreciation of governmentality, see Ettlinger, 2011.

Barrett, 2002). Near present-day Ohkay Owingeh Pueblo (San Juan Pueblo), the Spanish settled on the western bank of the Rio Grande around what is today the small village of Chamita.

Within three years, some version of a shared acequia, an irrigation ditch, had been built and was put to use for agricultural purposes in this settlement. These acequias, however, are more than just a canal or ditch: the term acequia also refers to the institution, and not just the landscape capital of a canal. In theory, an acequia's governance is overseen in New Mexico by three elected commissioners and a *mayordomo* (a water boss), all from the same ditch. Commissioners serve basic governance needs for members of the ditch (parciantes), oversee the acequia budget, and work with the mayordomo to ensure that water rights and acequia maintenance proceed in an organised fashion. The mayordomo position pre-dates that of commissioner, and has traditionally been a powerful local figure, with his or her central mission being to allocate water on a fair basis and ensure that the ditch remains functional, clean, and in good working order.[17] Since the original Spanish and later New Mexican towns of Hispanic origin are typically located near existing Pueblos, canals typically crossed both Indian and Hispano fields. What has endured, however, is a custom of shared water governance where the rules have become increasingly difficult to decipher, much less enforce. This is the case for Chamita and Ohkay.

In this region, where the Chama river joins the Rio Grande, the biopolitics of water governance and management are unavoidably complicated. Here, the biological is all about cultural identity compounded by the 'blood quantum' (percentage of Native descent) understandings of tribal membership as constructed and reinforced by the United States federal government over the course of a century of indigenous policy.[18] What complicates being 'native' among the Pueblo is that they were incorporated into the US as Mexican citizens under the Treaty of Guadalupe Hidalgo, and not as indigenous tribes. In fact, the Pueblo were not allowed 'Indian' status until 1948, and they were deprived of voting rights until that status was formalised.

Little to no publicly available scholarship exists on Pueblo irrigation customs, practices, and beliefs as Rodríguez (2006) noted recently in her own work on acequias in the Taos valley.[19] What information is available comes largely from early to mid-20th century ethnographies whose central interests were not on agricultural production much less water management (but see Brown and Ingram, 1987). Much of the commentary and analysis here has to do with a necessarily one-sided narrative from the local acequia perspective. It is only a partial perspective on relations between Hispano acequia institutions and Pueblo representatives.[20] Because of shared canals running between Ohkay Owingeh Pueblo and Chamita, cooperation has been necessary for hundreds of years. Typically, the commissioners and the mayordomos in Chamita have struggled but have found ways to communicate and problem solve with the representative from the Pueblo. The latter representative is not elected like a mayordomo or a commissioner, but rather is selected by the Governor of the Pueblo.

Juan Pacheco is a member of one of the Chamita acequias, and has been active in its oversight and governance for decades. He considers himself NuevoMexicano, of joint Indian and Hispano descent, and actively participates on local affairs. His brother, Miguel, self-identifies, however, as a member of

[17] For more on acequia history in New Mexico, see Rivera, 1998. For details on how a mayordomo works within a local community, allocates labour responsibilities and water, see Crawford, 1988. On the link between Spanish customary acequia use, and especially its link to Catholic ritual and place, see Rodríguez, 2006.

[18] See Kauanui, 2008, for a fascinating discussion of how variable blood quantum rules created problems of identity in Hawai'i. Issues of Hispano self-identity, and the politics of identity, are addressed by Nieto-Phillips, 2008.

[19] See Rodríguez, 2006, for more on the difficulty of working with full knowledge on any aspect of water management, especially when and where water law or water adjudication matters are the issue, since access is only open on a partial level. Especially problematic is access to internal organisation and even daily management practices of the Pueblo, and many Indian groups in general, because of the long history of abuses at the hands of non-Pueblo authors.

[20] There is a long and rich history of how New Mexicans refer to themselves, especially for NuevoMexicanos, alternately self-labelling as Spanish-Americans, Hispanos, and now more recently Indo-Hispanos. This latest discursive move is intriguing for several reasons but seems to still fit into Wilmsen's (2007) conceptualisation of how Latino residents of the state have occasionally been caught between the category of Indian on one hand and the Anglo-American population on the other.

Ohkay Owingeh Pueblo and has also been prominent in local and regional Pueblo affairs. Two brothers, from the same family, with completely different allegiances, also are partitioned into two different categorisations for water adjudications. Juan, as a non-Pueblo (as litigation calls all non-indigenous peoples), falls under state jurisdiction of the OSE and the rather rigid terms of prior appropriation. Those disciplinary categorisations ('Indian' and 'non-Indian') bifurcate their legal treatment into federal and state courts, and their bodies are also treated as biopolitically distinct.

Juan uses scale as a concept in his appeal to the local and shared community norms of management. Miguel as a member of a recognised Indian Pueblo, falls under federal purview for water issues. Thus, Miguel argues for the scale of nation-state (federal) interventions as a way to privilege Pueblo prior and paramount water rights. Both use scale differently, and frame their arguments accordingly. While they both appeal to scalar arguments, Juan and Miguel remain aware they are caught within different state-scales of governance because of the state-federal divide. Many Pueblos, and certainly individual Pueblo members, do not recognise the state's laws in managing much less designating water uses on Indian lands. Like the blood relationship in this example, water is also shared across the Indo-Hispano communities (see Brooks, 2002). In fact, this notion of identity and state recruitment of scaled water governance does support a notion of flat ontology of water politics (Marston et al., 2005). Juan and Miguel, after all, exist at the same level of scaled space but are bounded in very different water governance jurisdictions.

Because of US Indian policies in the 20th century, these two brothers fall under completely different legal categories because of (blood) identity politics. Biopolitics is thus germane to eventual administrative matters under state law (non-Pueblo) and federal law (Pueblo).[21] Cooperation does continue between the nearby villages and Ohkay Owingeh Pueblo, of course, but because of jurisdictional fragmentation for water law and administration, these relations are strained not at the local level, but at the level of the body. This clearly underscores the importance of considering issues of (biopolitical) social reproduction, and not just material production in water governance issues. The social construction of ethnic identity then feeds directly into the social construction of scalar water politics in this example (see also Espeland, 1998). Anglo-American residents who moved to small villages also faced issues of cultural translation, and struggled at first to integrate into the communal notions of acequia and water use. Now it is more than common to have ditches where Anglo-Americans not only participate in ditch activities, but also serve as commissioners and mayordomos. Perhaps the most troubling aspect of this separation of governance authority (state and federal) is that it tends to reinforce social categories created by both federal and state interests, and in undeniable ways creates differential citizenship for water resource governance. This parallel is also visible at the meso scale of regional governance, especially when addressing water adjudication.

SCALING DITCH GOVERNANCE TO ADJUDICATION

Adjudication as a process accelerated in the 1960s, when the state envisioned several water diversion and irrigation projects (Clark, 1987). As a way of finding and certifying owners of water rights, adjudication was clearly linked to the economic development imperatives of New Mexico. As was common in other Western US states, then, hydraulic development plans drove the legal need for adjudication of water rights. Even as the push for dams, reservoirs, and large canal projects reached its frenzy in the mid-20th century, only now is it clear that surface water was already overallocated in many basins. In other words, paper water rights exceeded actual water, or what engineers variably term 'wet' or 'raw' water. The state's agents, from their own perspective, had to adjudicate and quantify existing water uses so that they could plan for future storage and diversion projects. So at this macrolevel of the

[21] The US federal government has so-called federal reserve rights to water, and various federal agencies are responsible for Indian tribes and their water allocations as well as quantifying the necessary flows for endangered (non-human) species in streams. Both are federal responsibilities.

state, there are clear indications that structural arguments about hydraulic bureaucracies and the development imperatives of mobile capitalism hold true and are compelling (Worster, 1985; White, 1990; Swyngedouw, 1999). But what of the inner workings of state agencies tasked to carry out the rescaling of water governance?

For state officials in New Mexico, trying to map and certify these water rights was and largely remains a completely rational act. As one technician in the Office of the State Engineer (OSE) working on water rights put it, "how can you manage and regulate a limited resource when you do not understand who has rights to that water"? (Thompson, 2009). There are eleven active adjudications, with another two awaiting settlement. The latter two (Aamodt, Abeyta) are currently in conjoined local, state, and federal negotiations, backed by substantial federal resources as parties attempt to resolve some of the longest-standing legal disputes over water in the West. Settlements are a process, and negotiations continue on the finer points of quantifying Pueblo water rights with no clear outcome yet.[22] Both settlements and adjudications are done on the regional watershed basis. In response, many non-Pueblo (Hispano and Anglo-Americans) water rights holders have organised themselves into regional acequia organisations. Regional coalitions of local ditches were created to provide legal and financial resources for individual claimants. The regional acequia bodies are then supported with legal aid during the adjudication process. Simply put, the small ditches were forced to scale 'up' their politics, to a multiple ditch and small regional level, in response to adjudication.[23]

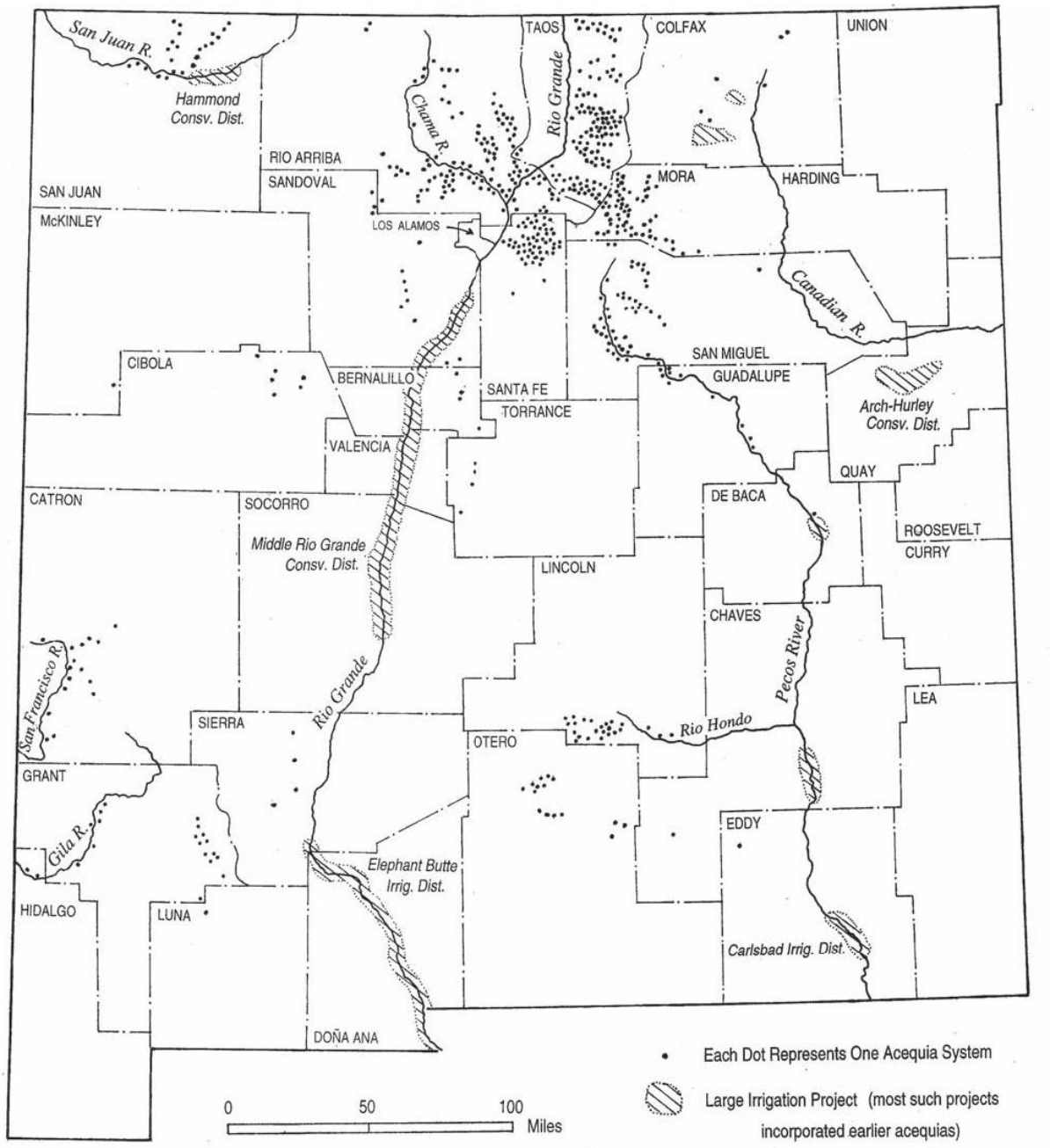
The vast majority of acequias are in northern New Mexico (see figure 2), and one of the central non-state actors in the acequia movement is the New Mexico Acequia Association (NMAA). NMAA has only recently started to concern itself with the southern part of the state largely because of where the bulk of acequias are located. The member canal systems face many *internal* pressures, quite apart from any *external* stresses produced by the adjudication process. For example, rural depopulation has continued in New Mexico, thereby threatening the human and social capital base that sustains acequias. This rural depopulation, and the resulting decline in food crop agriculture, has had consequences for water use as well (Ortiz et al., 2007). Participation rates in acequia governance, even with stable rural demography, vary dramatically by area. Small acequias might have only between four and five members, and state statute requires three commissioners and a separate mayordomo for each one (NMSA, 2008). This means, on those small ditches, a lifetime commitment to one or the other obligation of local water governance. On larger ditches, the number of irrigators can approach 500, and while finding participation may be less difficult, the sheer number of demands can make the formal positions of commissioner and mayordomo less attractive because of heightened, more complex ditch politics.

Thus, the challenges for water governance at even the internal ditch level have intensified in modern New Mexico. Namely, acequias and community ditches (as they are called in southern New Mexico) have had to intensify and formalise their political process and activism. For example, acequias are now required to maintain open records, recordings of all minutes, release meeting agendas, and advertise these meetings well in advance. This forced (local) transparency by state statute has taxed many small, sometimes disorganised acequias across the state. On budgetary matters, the OSE has indeed attempted to facilitate a centralised process for financial support, but even this assumes some basic or even advanced spreadsheet skills. As ditches struggle to prove, sustain, or dispute priority date assignments by the OSE, they must also pay attention to what the neighbouring ditches claim as a priority date. Parciantes and mayordomos do their best to maintain good relations between ditches, such as when multiple ditches share the same surface stream, downstream and upstream.

[22] The Pueblo groups in the Aamodt and Abeyta adjudications, as is common, have prior and paramount rights to water. In other words, they have senior water rights over all other claimants. Negotiations over these settlements continue as of August 2011. Aamodt as an adjudication began in 1966, Abeyta in 1969, and negotiations have been ongoing since the 1990s. For more on Aamodt, please see DuMars et al., 1984. On Abeyta, see Rodriguez, 2006.

[23] There are some notable parallels here to what has occurred in South American communities where state actors have tangled with local notions of the scale of governance (Perrault, 2005; Boelens et al., 2010).

Figure 2. Locations of acequias throughout the state of New Mexico, as of 2009.



Source: Water Matters (Utton Center, 2009).

However, priority dates that determine who has a senior (older) or junior (more recent) water right can be a point of friction between ditch communities. Senior water rights are the most valuable, since these rights holders can demand their full allocation of water regardless of stream conditions or effects on junior water rights holders. Senior water rights holders typically will refer to their individual assigned priority date, attached to the plot level of beneficial use. This can then create discord between villages or families if there is disagreement about dates. In contrast, junior water rights holders will appeal to the notion and level of community, again using scale quite differently. This is why most acequia communities now push for ditch-wide priority dates (internally) and also try to create written

agreements between ditches that minimise the future use of prior appropriation, to retain their usual customary agreements. This also minimises scalar politics and disagreements. It is one way of deflecting the built-in inequality of prior appropriation, which privileges time and earlier use as the basis of water governance.

On top of these local governance and priority date disputes, more effective or devoted acequia members are frequently organised, cajoled, and pressured to maintain active roles in the larger regional acequia organisations. The NMAA organises these acequias for the purposes of internal organisational representation, with type one organisations as the regional bodies, and type two as smaller, non-regional acequia bodies.[24] So the demands of scalar politics at all scales or levels have intensified for these water users. As one parciante from the Jemez river basin put it, referring to this blurring of scales and demands for governance, "it's like we're caught in a telescope, and we're either pulled back to our acequia or the regional organisation wants something bigger, something totally different, and our time gets sucked out of the village again" (Trujillo, 2010).[25]

The upside to this forced rescaling of acequia politics, because of adjudication, is that acequias are now in better touch, sharing information, governance handbooks, tips, and the latest insight from their own region with other parciantes and mayordomos. The statewide Congreso de las Acequias held in Santa Fe (usually in November or December), brings together committed acequia activists, mayordomos, and those hoping to learn more about their neighbours' efforts. This decade-old meeting has produced a network for local irrigators, and has been helpful for the new internal administrative demands mentioned earlier (open meetings, budgets) as it has for coordinating larger requests for improving stream diversions shared by multiple acequias, to name but one example. But the Congreso is also a way to publicly recognise outstanding members of local acequias; one award is given each year to the outstanding acequia in the state. There are also awards for acequia champions, and for recognising mayordomos who have been particularly effective in their water management and sharing capacities. In addition, the Congreso features talks and workshops that are truly educational given the changing legal and political demands on acequias.

Acequias have responded well to this new demand for both increased local and regional political and administrative capacity. The drive to adjudicate by basin, nevertheless, has forced a new kind of regional scalar politics on these institutions. Other aspects of regional water governance have remained, in some ways, removed from this kind of acequia and even Pueblo oversight. One of the more recent activities has been regional water planning, addressed below.

ELITE CO-OPTION OF WATERSHED-SCALE POLITICS?

One of the more notable efforts in making regional water governance at least seem more democratic and transparent is the creation of watershed groups: regional assemblages for putting together a 'regional water plan' that brings interested stakeholders to comment, draft, and amend water plans for their particular area of interest (see figure 3). In this, there is nothing new, as most parts of the world have become beholden to some version of water governance that bridges the local to the regional (see Molle, 2009 for more). And in theory, these are laudable efforts to include citizens and multiple stakeholders in a process to be transparent in water planning. Like all notions of participatory democracy, however, they are also subject to the potential of elite capture or at least co-option. The meetings tend to attract the water elite in any given locality or region (see Larson and Lach, 2010). It is

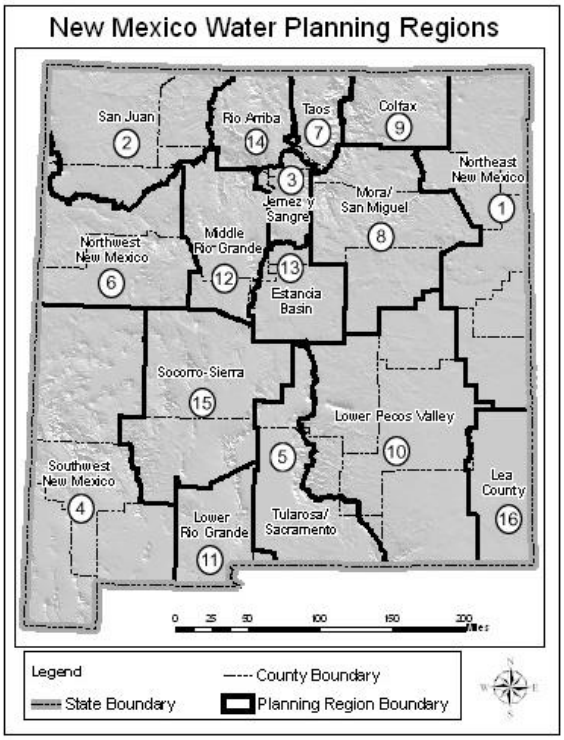
[24] There is a separate, state-recognised advisory group, the New Mexico Acequia Commission that functions as an advisory group with a small budget for the state's governor. The commission has attempted to coordinate some of its activities with NMAA to avoid conflicts, and to maximise resources. The NMAA is a state-recognised non-profit organisation, but is not part of the state's executive branch of power.

[25] It should be noted that the issue of 'representation' in this case is for voting rights at the larger annual Congreso de las Acequias and does not in any way have to do with representation for adjudication issues.

also, technically speaking, a state-mandated effort to have regional watershed groups guide the state of New Mexico's water plan into the future.

The New Mexico Interstate Stream Commission (ISC), essentially a branch within the OSE, is charged with describing criteria for these regional plans and for their acceptance (both technical and public scrutiny). Special concerns of the ISC are interstate compacts (agreements between states on major watersheds) and their role in complying with strategic and/or ecologically mandated reserves – say, for an endangered species like the silvery minnow in the Middle Rio Grande river. The ISC is also charged with maintaining flows and water deliveries between compact states, like Colorado, and Texas, on the Rio Grande. For the Pecos river, to use another example, the ISC must work only with the state of Texas. On the internal water regional plans for the state of New Mexico, the ISC provides a template for suggested content and aspects to be considered by all users. These regional plans create another example of both jurisdictional fragmentation and conflated governance organisation, where overlapping political authorities simply do not correspond with the watersheds being used by the state for other purposes. The separation in region water planning regions, seen in figure 3, is largely a matter of governance convenience. For example, the Pecos river originates in area 8 (Mora/San Miguel) but continues into the then hydrographically named region ten 'Lower Pecos Valley'. While the planning regions do group large blocks of counties together, they do not correspond to the watershed itself.

Figure 3. Water planning regions according to New Mexico's gross watershed boundaries.



Note: There is only partial overlap, however, between hydrographic (river) boundaries and the advisory organisational watershed group boundaries. Source: WRRI (n.d.).

The regional plans are then used, in theory, for the larger 'state water plan' assembled by the OSE. This provides both an actual and a theoretical role for public participation, even if the vast majority of participants seen in the forums are not directly managing water at the landscape level. Attorneys, activist groups, new residents, policy enthusiasts and interested members of the public all attend. But is this the audience that needs to be hearing the latest on water policy? Is it the audience that needs to

be heard when it comes to water governance scaled to particular watersheds? At the state level, a citizen group organises an annual New Mexico Water Dialogue to discuss broader sets of watershed region concerns. There is obvious and understandable tension between what individuals, individual regional water planning groups, and the OSE view as acceptable or sustainable. Language used in both presentations and during question-and-answer sessions also highlighted a translocal perspective. Presenters and panellists spoke about the need for "holistic regional planning" and "getting away from your individual gripes" about water management. Abstracting individual concerns for a larger, regional concern, was one effective way of avoiding difficult topics.[26] For participatory democracy to work effectively on issues of resource governance, all users must feel included or at least considered. This regional scaling approach diminishes individual concerns, on the one hand, while the approach recognizing water rights as individual claims, on the other hand, seems to create an ironic tension.

Few Native individuals, or Hispano members of acequias, actually attend these events that tend to be heady but populist discussions about climate change, urbanisation, and moving water to the 'highest use for the resource'. The 2010 version of this discussion was also clearly dominated in numbers by a highly involved and highly educated Anglo-American presence. There was also a fee to attend the NM Water Dialogue, so it implicitly includes the public as long as that public can afford the price of entry to hear and be heard.[27] Yet, water discussions and formalities are put in longstanding cultural and identity terms, even if such representation is not strong at these public events. And these forums actually do matter, and can influence how (water) governance develops at all levels

In my discussions with mayordomos and parciantes, however, it became clear that they considered these larger planning or participatory meetings as simultaneously unimportant and closed to their presence. As Raul (Arellano, 2009) from Taos explained, "Sure, I'm aware of those meetings and it would be fun to hear about it, maybe learn some new stuff, but some of those require a fee at the door, something like $20 and I'm not gonna pay that when that's a full dinner for my family". When I pointed out that most of these discussions have no entry fee, Raul simply shrugged and followed with

> OK, sure then I would. But I'm not sure how that changes anything... I mean, they are talking about planning for dams, or conservation, or endangered species, whatever, and not about the things we actually care about which is things like date ditches, metering of our ditches and streams, priority dates, that kind of stuff.

So Raul was returning, once again, to a local scale perspective on water governance that does not privilege regional development efforts (such as irrigation projects, dams). While this gives an anecdotal clarification for ambivalence towards water planning on a regional scale, at least 42 other parciantes and mayordomos expressed similar scepticism to these regional participatory efforts.

CONCLUSIONS, WITH NO END

At a recent and rather informal symposium on water adjudication at the University of New Mexico, one of the participants asked a rhetorical question: "Why did we even think that adjudication could work in this state"? At the local (micro) scale, water managers of all types are concerned about the implications of adjudication for their own purposes, of course. But they are also rightfully worried that any senior water right is at risk in a state where urbanised watersheds are still unaccounted for in adjudication.[28]

[26] These are my perceptions after having attended the state-wide meeting and several regional planning meetings, and recording statements that captured these sentiments.

[27] This is not meant to critique the valuable New Mexico Water Dialogue or its earnest organisers. It is, rather, a reflection of what informants had to say *about* the notion of water planning, the *use* of hydrological regions, and *how* perceptions of participation can be obviously limited because of financial resources and travel distances. The annual NM water dialogue is usually held in January in Albuquerque, NM.

[28] The Santa Fe area has not been fully adjudicated yet, while the Albuquerque region has yet to be mapped for adjudication purposes.

Translation: if rural users are quantified and disciplined by adjudication (Boelens, 2009), even as senior water rights holders, are those rights 'safe' when rapid and unadjudicated urban development and demand is occurring in cities? The seniority of a water right is based on its original age, and that historical seniority conveys with the water right. Thus when senior water rights are traded, leased, sold, the date conveys. This is what makes senior water rights so valuable in a system that reifies the original, first 'beneficial use' of the water This market in 'water use history' has not been seriously addressed in the burgeoning literature that seeks to connect rural to urban water issues. Water rights have been increasingly disciplined by the state, and tied spatially to the adjudicatory spatial understanding of the legal process, in New Mexico.

At the regional mesoscale, watershed groups and even larger assemblages of acequia defenders, are worried that the spatial mismatch of jurisdictional boundaries (political-administrative ones) with natural boundaries (watersheds/basins) will create incommensurate water disputes between watersheds, or even within them. Ditches, for example, cross between county boundaries, and also between the 'regional water plan' area boundaries. So who governs, or what rules to follow, is up for daily debate and contention. For many, the incompatibility of county, city, regional water planning boundaries, and OSE service office boundaries does not create a sense of ease. Finally, at the macroscale, the state's drive to pull together individual users, acequias, larger irrigation districts and watersheds, and into its accounting process will surely create unintended consequences. How can state water administrators, river masters (much less the state engineer), and field officials in New Mexico make their management flexible enough when prior appropriation is so geared to individual priority date claims? Ditch-wide priority dates may help internally but these do not ease community politics between ditch villages.

Although the state has improved the transparency of certain adjudicatory practices, the pace of adjudication, and the hearing process for disputes, the entire legal basis for administering water law – prior appropriation – seems inflexible and unadaptive both socially and ecologically. But to harp on the rigidity of the state in this case is disingenuous. The problematic biopolitics of water rights, as discussed above, are increasingly recognised by state agencies and individuals working in the legal process. In many of the adjudications, state attorneys for New Mexico *have* attempted to accommodate local-level negotiations and settlement processes, by being more flexible about how water is managed. For example, state attorneys in the Aamodt adjudication were willing to use ditch-wide dates for priority, instead of priority by individual parcels, as they argued that administering a priority system on parcel basis would be impossible. While lawyers and state engineer personnel argued on pragmatic governance grounds ("it would be impossible"), they realised that individuated dates for every watershed to manage prior appropriation was biopolitically problematic. In contrast, some federal attorneys representing tribes in New Mexico argued vehemently (and some judges early on agreed) that parcel-level dates were a necessity because of state code and statute for prior appropriation. Once again, distinguishing between 'state' and nation-state scalar politics here matters, and to conflate or confuse the state at two levels of hierarchy (or verticality) is unhelpful. Politics are indeed scaled here, in ways that matter to residents and to attorneys and water managers.

In terms of scalar politics, and their geographic outcomes, three important dimensions will continue to impinge on water governance, local control, and the increasing state struggles to secure water resources in an arid setting. First, adjudication potentially enables, but does not guarantee, full marketing and transfer of water. Individuals can sell their water right after it has been registered with the state of New Mexico, even before adjudication is complete. This is already occurring on sections of the Rio Grande river, especially around the Albuquerque metropolitan area (Shiveley, 2001; Pease, 2010). Second, The New Mexico state water code makes no explicit recognition for 'environmental

flows' even if they are, in fact, mandated by federal laws for species protection.[29] Third, the State Engineer of New Mexico can appoint river or water masters and insert a new level of middle management into water governance even prior to basin adjudications, thereby affecting the scale of governance, the degree of local control, and access to water. This last effort, termed 'active water resource management' (AWRM) in New Mexico, was started in 2004 to address basins where arid conditions and local irrigation disputes seemed to merit special attention by the OSE. This new insertion of state expertise at the local level, however, has been problematic in several basins. All of these should be of interest, and attract attention, from social scientists.

Easy appeals for a rational approach such as integrated water resources management (IWRM) are not without problems (Blomquist and Schlager, 2005). First, IWRM "raises the question of which scale is the most ecologically meaningful one" for water governance with no clear answers in most cases (Bakker, 2010). Second, IWRM elevates the privilege of expertise, if not the 'rule' of experts, which most progressive water managers and planners realise can be problematic for transparency and stakeholder participation (Mitchell, 2002; Birkenholtz, 2008). This has certainly been the case for New Mexico in its own version of IWRM, the active water resource management effort described above, and there has been strong local reaction regarding this new initiative. Finally, attempting to extend rights to nature in a form of ecological governance is not without problems in New Mexico. On this last point, the parable of forest management conflicts between local residents and some environmental groups in the 1980s and 1990s still weighs heavily (Kosek, 2006). When residents, in other words, feel shortchanged about their *own* loss of land and water, they are unlikely to feel sympathetic to owls, fish, or nature in general. So while a principle of ecological and ethical water governance is laudable (Groenfeldt, 2010), and in many areas sorely needed, there are both political and legal challenges to implementing a rights-based approach for non-human nature (Glennon, 2006), especially in a region where human poverty is still notable (Wescoat et al., 2007).

Some aspects of using scale remain, arguably, problematic. The concerns originally identified by Marston (2000) and Marston et al. (2005) cannot be easily addressed by a range of case studies. Parts of their argument align well with the aims of law, markets, and the state: these three all hope to 'flatten scale' to treat all water rights holders equally, to rid the world of difference, even if their end games are putatively different. The states (federal and the state of New Mexico) also have encoded identity in the same locality in different (but related) bodies, as we saw above in the example of Juan and Miguel. In those cases, then, scale confounds. Hierarchical notions of scale also are problematic, since in this case, acequias are recognised as a unit of political governance in the state and by the state. Therefore, one could argue that the state is omnipresent even at the local level. This does add validity to the notion that a flat ontology of scale can make both conceptual and pragmatic sense. Still, states and citizens continue to use and conceive of scale in different ways.

If states and corporations behave in a way that aims to accumulate capital (or water, in this case) through dispossession as Harvey (2005) has argued, adjudication is about the step *prior* to dispossession. In turn, the notion of scale is built into the very process of adjudication.

Adjudication can be viewed as the state's efforts to 'see' individual owners, to be able to identify targets for free-market buyers and markets in general (Scott, 1998).[30] This is not to besmirch all market approaches to water, but it is to acknowledge that in different settings, the local sensitivity to allocate market value to water is context driven (Bakker, 2010). In urban areas, it may make clearer sense to

[29] In 1998, the state attorney general for New Mexico lodged an opinion that state statute does allow the state engineer to consider instream flows a beneficial use; this opinion was crucial to managing for the silvery minnow in the Rio Grande as an endangered species.

[30] To reiterate, note that the buying and selling of water rights *can* precede full adjudication of a watershed in New Mexico. Even in areas where adjudication has not yet begun, such as the Middle Rio Grande area near Albuquerque, active water marketing is occurring (Shiveley, 2001; Pease, 2010). The state engineer also has the power to administer water prior to full adjudication in a basin.

price water (and water use) rates in an aggressive, progressive fashion. This has been the recent working model for municipal versions of water utilities, whether public or privately owned (Bakker, 2010). Markets do have the ability to change individual behaviours, even if mechanisms for pricing are never perfected (Matthews, 2003; Bauer, 2004). In rural areas, however, the capital heft that cities carry in offering lease rates to farmers is terrifying to other agricultural producers. If water rights can be bought and then transferred or retired from use, upstream and downstream farmers on the same ditch could be affected.[31]

All water use, like politics itself, is local (Ingram, 1990). In New Mexico, as in countless other semiarid regions, the relevance of water supply, provision, and conservation has only increased in recent decades. Actors at every level of daily life (e.g. household, community, local, regional) continue to use the language of scale, and the act of scale framing, to support their arguments and claims. State and federal law can divide individuals biopolitically, even if water governance realities lead to cooperation. The regional politics of scaling adjudication to watersheds, and the responses by ditches and even non-profit organisations, are now heightened and shaped by legal and administrative processes. However, the new regional, translocal associations and pressures do not necessarily translate to participatory water governance or planning on the regional level as we have detailed above. Even as law attempts to treat all citizens equally, important notions of equity can be forgotten, if not lost (Whiteley et al., 2008).

The conflation of water governance, scalar politics of water, biopolitics of identity, and imposition of regional democratic water planning decisions are intertwined in this particular case, and we would do well to separate out the conceptual (read 'academic') preoccupations we might have with the (academic) politics of scale from the actual (read 'everyday') and consequential scalar politics so visible in modern waterscapes. This is where the scale question in political ecology and its respect for local knowledge, and in Foucault's writings converge: both are concerned with how everyday users rely on arguments and rhetoric to pitch explanation and rationales for decisions. How scale operates, and how people make scale work for their own purposes, remain vital concerns (Neumann, 2009). Like its older geographic sibling, the defining of a region, scale is a geographic construct meant to help academics communicate and visualise. In the end, the scalar politics and ecologies drive much of what we hope to understand, even if the political and the ecological are often well hidden in languages of the natural, the scientific, or embedded in cultural relations. Furthermore, it is clear that understandings of water, like markets as Polanyi (1944) argued long ago, remain embedded in particular societies. This explains why water rights, politics, and scale still have resonance in New Mexico and for water users everywhere (Agnew, 2011).

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[31] See Colby et al., 1989 and Brewer et al., 2008 for a review of water transfer mechanisms in several western US states.

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