

Fighting for the Gila: Where the Old West Meets the New

A CAPSTONE PROJECT

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Nathan Wool Goodman

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ABSTRACT: The Gila River - the last free-flowing river in New Mexico - is under threat. The Arizona Water Settlements Act (2004), meant primarily to adjudicate water disputes in Arizona, permitted the extraction of up to 14,000 acre-feet of water per year with (at most) \$128 million of federal subsidies. The ensuing fifteen years of conflict touches on many of the central, paradigmatic issues facing resource management regimes in the evolving west. These themes are magnified by the sheer impracticality of the Gila extraction; the proposal is both unsound from an engineering perspective and mostly unnecessary given the meager water demands of the southwestern corner of the state. At what cost — economic, ecological, cultural, and otherwise — are we, as a society, still willing to invest in a “fatally flawed” project, when more cost-effective, conservation minded initiatives are available that would yield equal, if not greater, returns on water made available to the public? I examine how grassroots political organization has emerged in response to the proposed diversion, engaging in the central question of how new attitudes towards sustainability compete with the inertia of older, antiquated mindsets on western water development. It becomes a question of both policy implementation, as well as ways of navigating the multiple ways of knowing a “place” and resource management that respects the agency of the many different types of people who call the Gila valley watershed “home.”

“Once in his life a man ought to concentrate his mind upon the remembered earth, I believe. He ought to give himself up to a particular landscape in his experience, to look at it from as many angles as he can, to wonder about it, to dwell upon it. He ought to imagine that he touches it with his hands at every season and listens to the sounds that made upon it. He ought to imagine the creatures that are there and all the faintest motions in the wind. He ought to recollect the glare of noon and all the colors of dawn and dusk.”

– N. Scott Momaday, from *A Man Made of Words*, pg. 45

INTRODUCTION:

The Gila River, seldom spoken of outside the region, is a hallmark of the American West and the last free-flowing river in New Mexico. A tributary to the Colorado River, the Gila “begins on the western slopes of the Black Range in New Mexico and flows through the Gila Wilderness and National Forest. It emerges amidst the agricultural communities of the Cliff-Gila Valley and

flows under Highway 180 west of Silver City” (Oglesby 2012, 217). From there, it “flows west to Red Rock Canyon, through the Virden Valley and into Arizona, where it is joined by the San Francisco River” (Ibid). After traveling through the ancestral territories of the Pima and Maricopa peoples, the river meets and is absorbed by Phoenix, AZ, the great desert metropolis of the twentieth-century. From there, the Gila continues on a meandering path full of sluices and small-scale diversions until it reaches Yuma, AZ – the terminal of the Colorado River. Depleted as a consequence of human-engineered diversion projects (derived in large part from the Central Arizona Project), the river is but a shell of its former-self as it joins the whole sum of Colorado River Basin water making its way to the Gulf of Mexico. The cumulative toll of reclamation and diversions projects – supporting municipalities and irrigation networks – has exacted enough of a toll that, in recent years, the Colorado River itself rarely completes its journey; an artifice to human ingenuity, the historic delta has been transformed into a desert of riparian sediment and dry gullies (Ward 2003).

Perhaps Marc Reisner (in his seminal work, *Cadillac Desert*) best frames the dichotomy of attitudes towards Western water; “To some conservationists, the Colorado River is the preeminent symbol of everything mankind has done wrong – a harbinger of squalid and deserved fate. To its preeminent impounder, the U.S. Bureau of Reclamation, it is the perfection of an ideal” (Reisner 1986, 126). The New Mexico section of the Gila River, however, has somehow managed to escape that fate. In fact, of all the rivers within the U.S., the Gila is one of only 2% that has maintained its free-flowing status (Podmore 2017, 9). The preservation of the Gila River as a largely preserved and ecologically intact area has many directly attributable causes.

Most notable amongst them were Aldo Leopold's efforts in forming our nation's first Wilderness. Phillip Connors, a fire lookout and local writer, details how "the Gila Wilderenss [was] the original American experiment in shielding wild country from the appetites of the machine age. In 1924, as an idealistic young forester, Aldo Leopold convinced his superiors in to... [make] the land surrounding the Gila River headwaters the world's first Wilderness with a capital W" (Connors 2018, 36-7). Indeed, there are few accessible areas left in which there still exists "a big enough stretch of country to allow for a pack trip with mules lasting two weeks, during which the pack string never had to cross a road or its own tracks" (Ibid).

Regardless of the problematic undertones of a romanticized view of "Wilderness" – one defined by white ruggedness and austerity, a Man's world (with a capital "M") vis-à-vis the imaginings of noted Western adventure hermit Edward Abbey –the sheer wonder and the natural beauty of the Gila Wilderness is undeniable. "For some of us it was not only the first Wilderness but one of the best: a beautifully jumbled land of mountains, mesas, and deeply incised canyons, the major wildland bridge connecting the Southern Rockies with the northern Sierra Madre, and a place of rich biological mixing where life from the Nearctic realm mingled with migrants from the Neotropical" (Connors 2018, 37). The freedom of the "wild and scenic" Gila River perfectly contrasts the squalid status of the Rio Grande, the "state's most storied river," whose main branch, once roaring, now consists of a "a desiccated swath of sand... [that] stretches across its middle for much of each year" (160). The comparison, though bleak, is timely and all the more important given the precarious position of the Gila River in New Mexico's political landscape today.

Indeed, the river's coveted "free-flowing" status is being put into question by the fallout

of the “Arizona Water Settlements Act” (AWSA, 2004), which – under very specific parameters – may provide up to \$128 million of federal reimbursements to fund a diversion project that would provide New Mexican irrigators up to 14,000 additional acre-feet per year. The original allocation of the stated rights goes back to the Colorado River Basin Project Act of 1968, which set into motion the Central Arizona Project (CAP). In the following decades, three other diversions to the Gila River were proposed (Hooker Dam, Connor Dam, and the Mangas Creek Dam, respectively) and, later, dashed for host of reasons, including potential damage to public lands, the unnecessary endangerment of species and biodiversity, and, not least of all, the extreme cost of construction (Gaume 2018, Personal communication). The more recent round of debate over the AWSA diversion is different given the tacit availability of federal funds, helping spark the passions and imagination of enough people – on both sides – to launch what has become a fifteen-year conflict over the future of America’s first “Wild” river (Ibid.).

Though every river is unique, the Gila River is emblematic of water conflict in the West insofar as it incorporates many common themes and components of the recurring “reclamation drama.” Additionally, given the pronounced features of the case study, many of those themes are readily apparent and easy to analyze, making the Gila a good starting point to better understand Western water as a general principle. Fundamentally, the conflict has as its starting point the dispossession of water from the Pima and Maricopa communities of central Arizona (Smith 2019, Personal communication). Twentieth century investment in big-engineering projects set into motion a perceived feud between New Mexican and Arizonan water interests. The clandestine activity of the Interstate Stream Commission (ISC) and the incorporation of the New Mexico Central Arizona Project Entity (NM CAPE) brings into question the role and

responsibility of state agencies, as well as the agency of journalists, civil-service organizations, and citizens in the policymaking process. The revolving door of Inter-Tribal, federal, state, and local interests has created what to an observer might appear a jurisdictional nightmare. Beyond the muddiness of tensions across political borders, there exists real and perceived threats to both the integrity of the riparian system and the preservation of the rancher lifestyle in the face of expected scarcity. Everyone involved would label themselves a “conservationist,” though it then becomes a question of what “conservation” – a word with an ever-changing definition – really means in the context of the Gila River.

In this respect, the Gila River Controversy takes on both material and constructed dimensions. On one hand, the policy has clear impacts on the availability of resources, movement of capital, and the physical characteristics of the landscape. On the other, the policy-oriented decision calculus overlooks implicit manifestations of groups’ cultures, epistemologies, and ways of interacting with natural spaces. It begs the question of who has more of a right to call the “Gila” home, the descendants of homesteaded ranchers or transplanted biologists, conservationists, and recreation enthusiasts? Or is keeping the conversation limited to the interests of varying colonial bodies, itself, a misrepresentation of Indigenous communities with the greatest inherent stake in the region? (Smith 2019, Personal communication) According to theories based in political ecology, water and hydrological relationships play a key role in shaping the distribution of power in society. These are systems that play a role in both creating and destroying ways of knowing, perpetuating one system by sufficiently delegitimizing another. “Knowledge precedes power,” as Foucault is often quoted (Robbins 2011). What this paper seeks to achieve, however, is to debunk the “knowledge-power” hierarchy and, in its

place, propose a new way of perceiving the inter-relationship between disparate entities – both living and non-living – in which the epistemologies and agency of all beings are given their due.

The theoretical analysis uses, as its basis, theories of *hydrosocial territoriality* as proposed by the Dutch geographer, Rutgerd Boelens. The writings of Arne Naess, Donna Haraway, and Aldo Leopold – himself the visionary behind the Gila Wilderness – complicate this narrative and question the inherency of power within nature-society interactions. It may be an imaginary world in which we can live in equanimity between all sentient and non-sentient beings, though radical perspectives are almost always first met with suspicion and distrust. If any place were to become the origin of the reimagined West, it would be the Gila Wilderness, a place of wonder that, in many ways, has already succeeded in achieving the impossible. In the face of “miners and loggers and dam builders,” the “Gila River [has] won every time” (Connors 2018, 194-5). The New Mexico section still runs “as high and fast as snowmelt and rainfall dictate,” where “the only predictable thing about it [is] its unpredictability” (Ibid.).

An icon in the world of conservation, the “humility and the commons were at the heart of what the upper Gila River watershed represented: a place where humanity’s industrial tools were kept at bay, to allow the land to be... [and] remain ours to share... with future generations... [along] with the marvelous diversity of nonhuman life that precedes us” (Ibid.). The Gila has a history of framing what is possible in the world of conservation and multi-species inter-subjectivity. With a somber twist, Connors concludes that “If we abandon that ideal here, in the birthplace of American Wilderness, surely we could abandon it anywhere.” On Tuesday, April 16th, *American Rivers* – a national river watchdog and outreach group – named the Gila River “#1” on its list of *America’s Most Endangered Rivers* of 2019 (Gila Conservation Coalition,

2019). Regardless of political orientation, the call to action is clear.

The Gila is a living relic, sacred in its austerity, fortitude, and simple beauty. It is a reverence captured by the efforts of Aldo Leopold, whose activism led to the designation of the Gila range as the nation's first Wilderness. It is a spirit embodied by those who live close to or on its shores, as well as those who frequent its banks as recreationalists and fishermen. It is a place where the imaginary runs wild and people let themselves feel free. It is a home enshrined in the hearts of those who care for it, keeping watch in fire towers and research planes. It is resting place for people have died. Their memory fills the channel as the water churns-on; the current is at once both constant and ephemeral. Shifts in seasonal weather patterns, annual precipitation, and the frequency of fire contribute to the milieu of an ever-changing, yet well-regulated environment.

We, however, have changed that – colonial settlement, an extraction-crazed culture, and climate change disrupt the landscape and mar the sacred. The Gila River has been on the chopping block, in one form or another, for the last one-hundred years. This year – 2019 – will decide the Wilderness' fate. Pending approval of the National Environmental Policy Act's (NEPA) Environmental Impact Statement, the U.S. Secretary of the Interior will submit a Record of Decision (RoD) on whether to continue with the project or, conversely, to postpone making a final decision until 2030 (Fleck 2019, Personal communication).

Rivers give life onto landscapes. They attract humans as much as they do flora and fauna. People have settled along rivers throughout history. They are utilized as both a means of sustenance, as well as a central feature around which to organize society. They are rivers of culture, whose ebbs and flows come to match the of rhythm work cycles and social life. By

taming rivers – through irrigation, floodplain management, and the construction of hydroelectric dams – we harness its power and, as consequence, change its identity. It is critical then, that we be deliberate in the choices we make and how they impact – intentionally or not – the many relational components of riparian habitats.

How do we become changed when we attempt to conquer a wild river? Do we lose part of the wildness within ourselves, or do we become distanced from the sense of home and place that frames our identities? Haraway defines much of the struggle in term of *sympoiesis*. “[It] is a simple word... [that] means ‘making-with.’ Nothing makes itself; nothing is really autopoietic, or self-organizing. In the words of the Inupiat computer ‘world game,’ earthlings are never alone... It is a world for worlding-with, in company. Sympoiesis enfolds autopoiesis and generatively unfurls and extends it” (Haraway 2016, 58). With deliberate foresight, management, and concerted effort, the birthplace of the American Wilderness – the Gila River – can become the crucible for *the New West*; a world defined by the process of *becoming-with* as opposed to *self-making* or simply *becoming* (12).

Perhaps of all the writers, ranchers, lawyers, and biologists who have taken joy in the Gila, it was a child who best knew how to put that passion into words. Ella Jaz Kirk was a fifteen year-old who, along with classmates Michael Mahl and Ella Myers, led a state-champion *ecomonitor* team and conducted ecological surveys on the Gila watershed. In 2014, the trio boarded a small plane to examine a burn scar in the Wilderness. The plane experienced turbulence crashed on landing. There were no survivors. Before her death, Ella Jaz assembled a petition of over 6,400 signatures calling for an end to the Gila Diversion project and spoke in front of the state legislature as a fourteen-year old (Gaume 2018, Personal communication).

Patricia Hollister, Ella Jaz' mother, has posthumously released much of her daughters' writing. The prose cuts to the core of why the issues matter and resonate with detractors and proponents of the New Mexico CAP Unit alike. She writes:

“Water has always been the difference between life and death, boom or bust, and it will be the difference once again between a sustainable future and no future at all... Though it may be hard to transition to a sustainable lifestyle of limited growth and renewable resources, it's mandatory if we want to continue on this planet for a little while longer and leave this good Earth alive after we are gone” (Connors 2018, 161).

The Gila River was an unalienable part of Ella Jaz' and her friends' very beings. The fight to preserve the river was akin to their own survival. The global struggle for water security never strayed far from their hearts. From their relationship to the Gila, the students had a window to understand the broad-ranging effects of water conservation/overuse on human and non-human entities alike. *The Heart of the Gila* is a soon-to-be-released documentary celebrating the lives of the teenagers and the mission to preserve the natural spaces they held dear. Once you accept a river has a heart, it is harder to quantify according to acre-feet.

Piecing together the complex socio-political cluster of the Gila diversion takes place in five parts: (1) the history of Indigenous settlement, the invention of Western water, and the CAP and AWSA; (2) the theoretical framework; (3) an analysis of politics today and (4) a profile of Norm Gaume and concluding remarks on how to understanding the Gila in context.

HISTORY OF INDIGENOUS RIGHTS, THE INVENTION OF WESTERN WATER, & THE CAP/AWSA*The Pima-Maricopa and Gila-River Indian Communities:*

Before discussing the contemporary conflict – or even the origin of tensions between New Mexico and Arizona – it is essential to understand and give respect to the peoples who occupied the region and relied on the watershed far before the introduction of concrete slabs and storage reservoirs. The “Gila Cliff Dwelling National Monument” is a cherished part of the Gila Wilderness. Established in 1907, the 533 acres contain cliff sites dating back to the late 13th that are said to have been inhabited by Mogollon peoples. The Gila River was their water source and almost certainly a determining factor in settling the region.

While Mogollon communities had long since disbanded by the rise of colonial settlement, other Indigenous groups have relied on downstream flows of the Gila and its tributaries (the Salt and Verde Rivers) well into the modern era. According to David DeJong (the Director of the Pima-Maricopa Irrigation Project):

The Akimel O’otham (River People) or Pima have lived in the middle Gila River Valley for centuries... [The] history of agriculture is part of the social, economic, and cultural fabric of the Pima and their Pee Posh (the People) or Maricopa neighbors. The Pima benefited from sufficient and fertile land, a steady and reliable supply of water, and favorable physiographic conditions to produce an abundance of food and fiber crops in the late eighteenth century and much of the nineteenth century. These conditions continued until the introduction of upstream diversions from the Gila River and its tributaries by non-Indian settlers in the late 1860’s” (DeJong 2011, 7).

As shall be seen, it was in the interests of restoring the Pima-Maricopa and Gila River Indian Community's water rights that, nearly 160 years after the introduction of U.S. colonial regime, the Arizona Water Settlements Act (AWSA) passed the senate floor.

In the mid 19th century, “[the] federal government opened the West to settlement by employing a socioeconomic and political philosophy of economic liberalism,” which, subsequently launched a boom and bust cycle for the Pima peoples” (DeJong 2011, 3-4). The boom, which lasted from 1846-1868, “resulted in greater material prosperity, [the] expansion of the Pima economy, and an increase in Pima acreage under irrigation (an estimated 15,000 acres by 1859)” (Ibid.). That said, the expansion Extending new ditches above the villages and away from the Gila River “led to a period of unprecedented economic growth. This era represents the peak of Pima agriculture and economic activity” (Ibid.).

The economic growth and abundance of agriculture, however, soon brought on an insurgent wave of immigrants and miners following the Civil War that resulted in an accelerated pace of water deprivation between 1869-90 (DeJong 2011, 4). “Total Pima share of river water declined year by year, resulting in widespread famine throughout the village” (Ibid.). Clay Southworth – an engineer assigned to oversee the adjudication of the Gila River by the federal government – recorded a series of interviews in 1914 that were later uncovered and republished by DeJong. *“Although the water supply is small”* explained James Hollen, *“we managed to distribute it equally among us, thereby getting a crop of some kind each year”* (3). The Pima found creative ways *“to keep land in production despite water shortages.”*

After the completion of the upstream Florence Canal in 1889, “the complete capitulation of the Pima economy” began in earnest (DeJong 2011, 2-4). Increasingly,

communities resorted to abandoning “their least productive lands... [and were forced to relocate] a number of villages... in an attempt to maintain an agricultural economy against great odds” (3). Between 1891-1905, “the Pima faced starvation, near-complete water deprivation, and extreme poverty” (4). Juna Osif, a 66-year recounted to Southworth how “[p]verty began to stare us in the face... we did not know how to take it” (5). An eight-year drought compounded the toll taken by upstream diversions by homesteaders, the Gila was left “dry through the reservation and their fields dusty. Many proud Pima starved rather than seek government charity” (1).

Village head Joseph Head, in the 1914 interviews, poignantly cited his grievances towards invasive settlers, stating how ‘White people have no idea how the Pima Indian has suffered by the diversions of their water’” (DeJong 2011, 1). The remark is particularly unnerving given the extent to which ignorance towards Indigenous affairs persists to this day, especially when it concerns issues of environmental justice, water quality, and the escalating frequency of pipeline protests. That said, concerted efforts – largely on the part of Indigenous communities – have been made over the last century to restore the Pima-Maricopa water rights. In the drought’s immediate aftermath (1905-1921), “Congress appropriated funds for a series of irrigation projects designed to protect the limited water that remained in the Gila River for the benefit of the Pima” (124). Furthermore, “[the] passage of the San Carlos Act in 1924... authorized the construction of the Coolidge Dam... and the San Carlos Irrigation Project... [which] provide[d] water first ‘for the irrigation of lands allotted to Pima Indians on the Gila River Reservation’ and second to non-Indian farmers... but only if such water did not ‘diminish the supply necessary for said Indian lands.’” (Ibid).

The decision is at least superficially consistent with the *Winters Doctrine*, the result of a 1908 Supreme Court case in which “[t]he Court concluded that the Indians had priority of claim and, in fact, a special... right to water based on their treaty with the American government. When they came to terms with their conquerors, the tribe reserved enough water for all their future needs. Whether the right had ever been claimed or not was immaterial; the water must be there waiting for the Indians whenever they decided to use it” (Worster 1985, 298).

To the detriment of the Pima-Maricopa communities, however, “[a]dequate conveyance system and an insufficient supply of water... limited the effectiveness of these efforts” (DeJong 2011, 124). Even the Coolidge Dam – a landmark of reclamation infrastructure at the time of its creation - “limited the Pima to just one-quarter of their irrigable land” (125). The process to secure rights lost would take nearly a century, with gains occurring only incrementally until the “Colorado River Basin Project Act” of 1968 launched the Central Arizona Project (CAP) into effect. In a political gesture, “five central Arizona Indian tribes – the Gila River Indian Community, Salt River Pima-Maricopa Indian Community, Fort McDowell Yavapai Nation, Ak-Chin Indian Community, and Tohono O’odham Nation – requested 1,219,200 acre-feet of CAP water [in 1971] based on the application of the Practicably Irrigable Acreage (PIA) standard to each of the reservations [a court-sanctioned principle that Indian tribes were entitled to all the water necessary to irrigate reservation lands that were susceptible to irrigated agriculture]” (126). Total requests for allocation, however, between both Indian and non-Indian users, amounted to ~5.4 million acre-feet, “nearly four times the expected annual delivery capacity and two times Arizona’s total entitlement of 2.8 million acre-feet” (Ibid.). The debate would go on for another thirty years.

In the interests of “removing ‘the cloud over water rights’ in central Arizona,” Senator Ted Kennedy (D-MA) introduced the “Central Arizona Indian Water Resources Act of 1976,” which would require the secretary of the interior to “acquire, by purchase or eminent domain, 170,000 acres of non-Indian land with surface water rights and transfer such rights to the five central Arizona tribes” (DeJong 2011, 127). Averting eminent domain at whatever cost, “the only [remaining] source of settlement water was the reallocation of 240,000 acre-feet of uncontracted CAP non-Indian agricultural water... [and] was agreed to in principle by the Central Arizona Water Conservation District (CAWCD) Board of Directors in 1995” (DeJong 2011, 130). Thusly, the Pima-Maricopa Irrigation Project was formed “as a tribal program using federal funds to construct the backbone delivery system and laterals to irrigate tribal land with CAP contracted water” (Ibid.). These decisions serve as precursors to the full realization of the Arizona Water Settlements Act, which was introduced by Senators Jon Kyl and John McCain in February, 2004 and signed into law December, 10th, 2004 (DeJong 2011, 132). From the beginning, its primary legislative purpose was to adjudicate water relations in central Arizona Indigenous communities as recompense for the cyclic negligence of the previous century.

An unprecedented victory for the five tribes, the act “allocated \$147,000,000... to rehabilitate the San Carlos Irrigation Project and \$53,000,000 to buy down the cost of CAP water for tribal farmers... [and] restored a total annual tribal water budget of 653,500 acre-feet and established a level of certainty in water planning for all of central Arizona” (DeJong 2011, 132). For so long, the Pima-Maricopa community had fought for their water right – the lifeblood of their traditional agricultural way of life. The Pima-Maricopa Irrigation Project is using their funds to modernize existing systems and devise new ways of increasing food security and

creating economic opportunity. “Most [Pima elders] knew that they would never enjoy the benefits of water settlement”, recounts DeJong, “but all of them looked forward to the day when their children, grandchildren, and great-grandchildren would once again enjoy the benefits of an abundant supply of water” (133). The dream has been realized.

That said, from an outsider’s perspective, it seems confusing how or why the “New Mexico Unit of the CAP” (the formal title for the Gila diversion) came to be embedded within the AWSA. Generally speaking, the bill allocates federal funds to reapportion sections of the Gila River watershed, though the claims of maligned Indigenous communities and embittered ranchers seem mostly unrelated. The common tie is revealed through a careful analysis of the political processes that underlie big-water projects and the animus of the engineering era.

Water Politics and the CAP

“Water,” according to Wendy Nelson Espeland, “is a potent symbol of the desert, and this fuels the passion of water politics. For a western politician, delivering the water is like the late Chicago Mayor Richard J. Daley delivering the vote for favored Democratic candidates: it is a pure, dramatic expression of clout” (Espeland 1998, 5). In her book, *Water Politics: Continuity and Change*, Helen Ingram identifies how:

“Water is seen as wealth: A boom is bound to occur if an area has water and can develop it. A locality sees benefits in water beyond any specific uses; water carries a guarantee of a prosperous future. Even when it would seem that an area has more water than it could possibly put to use, local people are loath... to share... Even a preliminary study of a water project can create a local boom... Peoples’ attachments to water goes well beyond

expectations of financial return... [by stirring an emotional] sense of lineage and inheritance” (Ingram 1990, 32).

The connection to posterity is somewhat out of place. The stakeholders are by-and-large descendants of the colonial era and rootedness in place, for many, began at the dawn of the twentieth century and was, at most, only a few decades old. Still, it is with a surprising frequency that bureaucrats, engineers, and investment bankers make “mention of [the] forebears and forefathers... summoning the imagination... of [the] hard-handed go-getters who dug the first irrigation ditches with steam shovels” (Connors 2018, 159). It is a means of attaching legitimacy to the extraction of a resource that they, themselves, are afraid of losing. In the late 70’s, Cecil Andrus, “Carter’s embattled secretary of the interior,” reflected on the *“underlying fear... that some unforeseen hand is going to reach out and turn off the valve”* (Espeland 1998, 6).

Water, here, takes on a Cold-War-like quality, in which fear of outsiders encroaching on one’s territory becomes the basis for passionate displays of ownership and competitive jousting over seemingly scarce resources. “Controlling water signals efficacy; failing to do so signals impotence” (Espeland 1998, 6). The Bureau of Reclamation (BoR), founded in 1902 alongside the National Reclamation Act (NRA), defined itself around a compelling worldview that was, ultimately, self-justifying. “Rooted in frontier narratives, Progressive ideals, and Christian theology, and nurtured by professional aspirations... the ethos [of project sponsors and employees] celebrates our rational mastery of nature as redemptive, an act of worship” (Ibid., 43). Dam building – as the principle vehicle through which the BoR behaved – “transform[ed] technology into God’s tool, mak[ing] irrigation a symbol and expression of democratic

government... [that is] both useful and beautiful” (Ibid.). The symbolic power of big dams is co-created through a combination of “myth, rituals, and folk songs... cost-benefit ratios and arcane reports.” The way of seeing the world is “reproduced in the agency’s structure, in the way budgets are allocated and careers organized” (Ibid.).

Indeed, even “success” is a loose and fickle term in the dam-business, “The institutional and economic incentive structures... that support large dam projects carry no obligation to focus on the actual impacts... [felt] by real people. ‘Success’ is separated from real improvement as judged by local... water users” (Boelens 2019, 427). For a BoR technician and political booster, dams take on value through their very existence; the planning phases of the development process conceive of a community built around the technocratic premise in which the artifice of construction becomes a stand-in for our own power and identity. The reclamation process, regardless of its long-term economic or ecological consequences, becomes a conduit through which the ontological being and worth of the builder is realized. The logic of “dam-building” became so internalized that, in Western water circles, its virtues remained uncontested for decades; “[f]or when ideology becomes naturalized in forms of life... [and] habitualized... in ways that remove it from debate, power becomes ‘hidden in orthodoxy’ and hegemonic” (Espeland 1998, 44). When the Carter administration began challenging the BoR in the late-70’s and putting projects on the chopping-block, he was swiftly and unceremoniously removed from office.

The principles of Western water have, as their foundation, mining rights claims of the mid-nineteenth century boom. The old slogan, “First in time, first in right” demonstrates the logic the for *appropriative use* system of water management, in which all claims are built

around first arrival and seniority (Walston 1986, 6). Striking gold would do little-to-no-good without a corresponding water right to wash and refine the ore. It is distinct from the *riparian rights* system of the east, in which water was plentiful enough to accommodate most agricultural and municipal uses and rights were primarily situated according to the proximity to the river. The West was not so well-endowed. Early surveys – like John Wesley Powell's *Report on the Lands of the Arid Region of the United States* (1878) – recommended that the region could only support relatively small communities bound to local watersheds. The West, he argued, was simply not the place to transplant high-population urban-industrial centers. Nearly forty years later and only a couple decades after Powell's death, the *Colorado River Compact* (1922) – an interstate treaty allocating 16.5 million acre-feet of water – was signed as an act of Congress (Walston 1986, 50), giving teeth to the rise of the water-hungry West.

The CAP was designed as a way to build capacity and operationalize Arizona's claim to Colorado River Basin water. That said, the dream to funnel water from the Colorado predates the Compact. As far back as 1918, an entity known as "the Arizona Engineering Commission proposed diverting water from the Colorado to... the Gila River, in order to irrigate land in southern Arizona" (Espeland 1998, 99). A booster named George Maxwell lobbied extensively for the plan, even getting enough Phoenix businessmen on board "to pay for a survey of an aqueduct to carry the Colorado water" (Ibid.). Considering the relative obscurity and desolation of the Arizona landscape, Maxwell's plan was largely derided as "a mad man's dream." That "mad dream," however, "would obsess Arizonans for another seventy-five years" (Ibid.). Regular legal bouts with California in a famous series of Supreme Court cases (*Arizona v. California*) over the adjudication of Lower Basin water and Indigenous reserved water rights

delayed the advance of federal water projects, though the stampede of Western water could only wait for so long.

After all, “Water projects are the grease gun that lubricates the nation’s legislative machinery... Congress without water projects would be like an engine without oil; it would simply seize up” (Reisner 1986, 319). Members of the House and the Senate, in particular, hedge water bills as a way to leverage their own legislative interests. “Water projects create passionate alliances both locally and in Congress and were for years prime timber for congressional logrolling. The water project expunged in Arizona could also compromise the airport in Maine, the highway in Florida, or the museum in Indianapolis” (Espeland 1998, 9). For a project as ambitious and seemingly unreasonable as the CAP – “a palpable mirage as incongruous a spectacle as any on earth: a man-made river flowing uphill in a place of almost no rain” (Resiner 1986, 304) – it would take some weighty politicking. The decision rested on a brokered-exchange of support; Arizona Sen. Carl Hayden “threatened to stall money” for Colorado Rep. Wayne Aspinall’s longtime initiative, “the Frying-Pan Arkansas water project... and to attach CAP legislation as rider to the Public Works Appropriation Bill, where he could bypass Aspinall’s committee and block appropriations for every other public works project that session” (Espeland 1998, 105). The carrot worked; the bill was introduced to the House floor in 1967 and signed into law the subsequent year.

To say the CAP merely impacted life in Arizona is a vast understatement. Well before the bill became a reality, Senator Hayden had this to say about the CAP: “This legislation is just based on sheer necessity. We have in central Arizona a desert... we have to irrigate our land. We have done it by digging wells until we have exhausted the underground water supply. It is

absolutely essential that a supplementary water supply be obtained, and the only source is from the Colorado River” (U.S. Senate 1947, quoted by Espeland 1998, 101). Meanwhile, in the present day “[o]ver five million people in Phoenix rely on [CAP water] for domestic water supplies... [while] while Tucson uses the diverted water to recharge groundwater used for its municipal supply” (Oglesby 2012, 219). And Arizona is still building its capacity, with plans to eventually use diverted water to irrigate “over 800,000 acres throughout the State” (Ibid.).

The Gila diversion is presupposed by concessions made during CAP vetting process. Similar to Sen. Hayden’s bidding war over Rep. Aspinall’s support, Arizona lawmakers needed the support of New Mexico Senator Clinton P. Anderson (Schulke 2019, Personal communication). Steven Reynolds, the State Engineer of NM, at the time, negotiated a compromise. He deduced (using his own figures) that the standing adjudication of the Gila River robbed New Mexico of the equivalent to nearly 18,000 acre-feet of irrigable land and, in exchange for Sen. Anderson’s vote, guaranteed that said provisions be included in the act (Ibid.). It was decided that, as part of the agreement, New Mexico irrigators would have to purchase an equivalent amount of diverted water for downstream users purchased at the standard CAP exchange-rate (Ibid.). Designed to safeguard Arizonan users’ interests in case of increased scarcity, New Mexico has, as of yet, failed to attract the funding or build the infrastructure to utilize the agreement. The AWSA-inspired “New Mexico Unit” marks the fourth iteration of stakeholder’s attempts to make good on the CAP allocation.

Many of the proposed Gila diversion projects have focused their attention on similar points on the river, most notably the area just below “the confluence of Mogollon Creek with

the mainstem river, lying immediately outside of the wilderness boundary” (Podmore 2017, 10). Adrian Oglesby offers a summary of the failed proposals of the 70’s and 80’s:

“[The Hooker Dam... [was designed to be built] just below the Gila Wilderness. However, the reservoir created would have backed up into the Wilderness. By the late 1970s, pressure from the burgeoning conservation movement decreased the push for the dam... [and the combined] lack of any identified need for a storage reservoir... killed the project... Several years later, the State Engineer and Bureau of Reclamation considered a second diversion project, named the Conner Dam. They planned to located it in the Middle Box Canyon, 20 miles downstream of the Hooker Dam site. The listing of the loach minnow as a threatened species, however, eventually killed the Conner Dam proposal [as well]. Reclamation later considered a third diversion project on Mangas Creek... but nonetheless failed due to a negative cost-benefit analysis, expensive local cost-share requirements, and the realization that Silver City has significant groundwater reserves” (Oglesby 2012, 220).

The AWSA is simply next in a long-history. That said, none of the other proposed diversions (Hooker, Connor, or the Mangas) have had quite as much staying power. In many ways, the New Mexico Unit has experienced the greatest sense of legitimacy, with a government-sponsored planning group and a secure source of funding. Depending on where one stands, this admission could be taken a blessing or a curse.

It’s not as if the Gila River were free of any diversion. There has never been any *permanent* or concrete-laden structures, though farmers and ranchers have been using Gila

water to irrigate for over a century. In the dry season, when water levels are relatively low, irrigators use tractors to move sediment into the riverbed, creating a plateau and a crest that water will flow over (Campbell 2019, Personal communication). Given the water-level is higher in these sections, the flow will be slowed for just long-enough that some of the water can be diverted through a man-made ditch (the path of least resistance). Once every several months during flood season, the *valley whip* – local, colloquial term for a canal – will be worn down and sediment will have to be piled anew.

To some locals, like Gila Valley resident Howard Smith, the idea of creating a permanent diversion seems absurd and would purportedly serve no practical benefit (Smith 2019, Personal communication). The continuing success of existing means of irrigation (along with the ongoing satisfaction of irrigator's water needs) suggests that a permanent diversion – aside from obstructing the river and disrupting riparian life – would not significantly advance the cause of irrigators. This apparent contradiction strikes at the heart of Boelens' earlier argument, that "Success' is separated from real improvement as judged by local... water users." The demand for water is based less on necessity and only minimally on the accumulation of capital.

Research and interviews indicate, rather, that the cause of diverting the Gila is driven by sociocultural conditions rising largely from multi-generational propertied families who, according to Todd Schulke (cofounder of the Center for Biological Diversity), experience a sense of "entitlement." Building off the energies of the reclamation era, some members feel cheated by the allocation of Gila waters to Arizona, with the belief – emboldened through familial reinforcement – that it was water to which their parents and grandparents were promised.

Watching water flow down the river purportedly “feels like a waste” (regardless of the role it plays for downstream users, particularly the Gila River Indian Community); the question often arises, “how could you just let it go?” (Schulke 2019, Personal communication). The Gila Basin Irrigation Commission (GBIC, and the entity from which many of the NM CAPE members originate) stakes their claim that, “At present, during high water events, excess water flows down the river into Arizona and is lost to New Mexico water users” (“Final Tier-2 Proposal” 2010). The sense of injustice runs deep in the old-time ranching community of the Gila Valley.

Gila diversion boosters harken back to the unfairness of the adjudication process, recalling how some irrigators were “away during the Korean War and were unable to attend to their affairs at home and lost their water rights” (Campbell 2019, Personal communication). Also cited are the lost revenue opportunities for selling the water opportunities to downstream users – Allen Campbell, longtime resident of and owner of the Gila Hot Springs, calculated fifty-year profit horizons of \$219 million in sales and \$241 million in agricultural production. On face value, however, those figures seem to neglect the CAP exchange-rate (the NM CAP Unit water will be *paid for*) and the cost of maintaining infrastructure.

Howard Smith, for one, is perplexed why, in the context of saving water and making money, users would invest in a diversion over fortified canals, drip-irrigation systems, and municipal planning that would, (1), reduce water consumption and, (2), create an economic stimulus by leasing the conserved water to downstream irrigators. Freeport McMoRan (formerly Phelps-Dodge) – a Tyrone-based, Grant County copper and gold mine – would be the most likely recipient of excess water in any case, given they have the most senior water rights in

the region (having bought them off ranchers on dubious pretense in the 1980's) and are the in position to absorb the most water through their operations (Smith 2019, Personal communication). According to Smith, Freeport McMoRan, already part of one of the largest mining conglomerates in the world and, arguably, the business least in need of government assistance, would be the diversion's primary beneficiary.

Smith lives on a mesa overlooking the river and was an original member of the Upper Gila Watershed Alliance (UGWA). He has watched the changing conditions of the Gila River from his back porch for the last thirty-five years. Watching the riparian ecosystem recover and flourish over the decades as a result of increased efforts to protect against illegal grazing, Smith has trouble understanding the motivations of small-time (and often struggling) irrigators who support a project that, in effect, will hand the mining industry a ready-made water conveyance system. By all appearance, simply the "idea" of a diversion has spawned a life of its own. The inertia-driven project has a way of coming back, again and again.

Precedents of planned, large-scale diversions, in one form or another, go back to 1910, when "a British-born mining engineer... [and cattle baron named] *Thomas the Lion*... attract[ed] investors from London and New York to incorporate the Gila River Power Company... with the goal to *generate, sell, distribute, and transmit power* [for all types of industrial purposes]... by any means whatsoever" (Connors 2018, 23). The *Lion's* imaginary dam "would have stood 200 feet tall, with a span across the canyon of 1,000 feet... [and] would funneled the river... nearly seven miles... to an off-site reservoir with a capacity pf more than 217,000 acre-feet" (Ibid., 24). Even if the AWSA is for naught and the Gila remains unimpeded, "the idea will not die... if

history is a guide, as long as there is water in the river, someone will want to take it.” (Walton 2015, ‘Gila River Diversion in New Mexico Pits New West vs Old’).

True to form, the AWSA passed according to a similar as it antecedent, the CAP. In 2003, when the bill was being considered, “New Mexico Senator Pete Domenici was the highest ranking member of both the Senate Committee on Energy and Natural Resource and the Senate Appropriation Subcommittee, making his support... critical to the bill’s passage” (Oglesby 2012, 216). In many respects, Sen. Domenici adopted the role of his immediate predecessor, Sen. Anderson, as a facilitator. Meanwhile, Craig Roepke, the Deputy Director for the ISC in 2004 and an engineer by training, took on the task of filling Steve Reynolds shoes (Schulke 2019, Personal communication). It is widely believed that the “New Mexico Unit” of the Central Arizona Project was Roepke’s brainchild and, looking to posterity perhaps, spent the rest of his career chasing down the vision of a dam that would define his legacy. “To obtain Senator Domenici’s support”, Oglesby elaborates, “the parties... agreed that New Mexico *may* take up to 14,000 acre-feet of water more than it currently takes from the Gila and San Francisco Rivers, but only if New Mexico does not impair downstream user rights [i.e., the senior irrigators of the Gila River Indian Community]” (Oglesby 2012, 216).

An often neglected, yet serious impact of the Act is that “[the] new diversion is only possible if the Gila River system in New Mexico become part of the federal Central Arizona Project” (Oglesby 2012, 216). The agreement is not merely a handout, but an abdication of at least some level of New Mexico’s sovereignty in determining its own water rights claims. It is the sublimation of a highly-federalist water management regime in which, lacking a definite

precedent, the designated role of state and local actors becomes increasingly unclear.

Broadening the scope of Western water management should be approached with relative caution; abstracting water away from local users' locus of control removes safeguards against top-down abuses of power and senior water users claims.

The Arizona Water Settlements Act

The AWSA, in brief, provides funds to help support water supply project in the *Southwest Water Planning Region* of New Mexico. The Interstate Stream Commission defines the region to include Catron, Luna, Hidalgo, and Grant Counties (Oglesby 2012, 217). The Act provides for three separate "pot" of federal dollars for a maximum of \$128 million. The first category takes the form of a block grant – \$66 million in federal subsidies to perform, quite literally, any water-related task in the region (Ibid., 215). There are no conditions for the grant outside of specificity to the region; prospective projects can range from installing drip irrigation systems to developing the municipal utility into the oft-talked-about "Grant County Joint Powers Agreement." The second pot consists of approximately \$34 million that can only be issued as reimbursements for building costs towards new infrastructure towards a diversion (Ibid.). The third pot may provide up to \$28 million of funds that are appreciating in the CAP-related, *Colorado River Basin Investment Fund*. A resource for all projects in the CAP network, the feasibility of this bucket reaching the NM CAP Entity is completely dependent on the Investment Fund's relative success, which, according to recent figures, does not appear promising (Schulke 2019, Personal communication). The first pot is guaranteed, whereas the latter two are dependent on pursuing the diversion.

The ISC and, now, the NMCAP Entity are determined to access the fullest extent of funds available, which explains, in part, their stubbornness towards the New Mexico Unit without considering alternative options. The region is quite poor, even by New Mexico standards, and federal funding opportunities rarely present themselves to local irrigators, especially anything in the nine-figure range (Smith 2019, Personal communication). The first pot of funds has been distributed to the ISC/NMCAPE in annual installments of ~\$6.6 million per year (rate adjusted to reflect inflation). There will be ten installments in total, from 2012-2021 (Oglesby 2012, 217), and it is up to the governing water body on how to spend the allowance. There are two clear options: (1), to take the \$66 million and invest in regional water planning and conservation or, (2), to move headlong into the diversion. The ISC, under the leadership of Craig Roepke, favored the latter approach from the start. Adrian Oglesby – a former Special Assistant Attorney General for the ISC and co-chair for the NM AWSA Planning Process – thinks otherwise.

He argues how “[the] analysis of the costs and liabilities associated with diverting additional Gila River water concludes that it is possible to assure a more sustainable and certain long-term water supply through alternative water utilization projects” (Oglesby 2012, 215). Declining the second subsidy grants New Mexico the freedom to do as it sees fit and support local water project without being compelled by far-away, federal directives. The expected economic toll is considerable; the first two prospective (and subsequently dashed) plans would range anywhere from several-hundred million to a billion dollars, while the surplus cost – well exceeding the \$128 million maximum payment – would be put off on the taxpayer (Gaume 2018, Personal communication). Even disregarding the superfluous costs of construction, New Mexicans would be responsible to pay for “the delivery of Central Arizona Project water for use

by the Gila River Indian Community and the San Carlos Irrigation and Drainage District to offset in advance the diversion of an equivalent amount of water from the Gila system in New Mexico” (Oglesby 2012, 223). Only this way, according to the AWSA logic, will Arizona water users be protected from injury by upstream diversions.

Additionally, expected scarcity will inflate existing costs, the “price to pay to deliver an acre-foot of Central Arizona Project water will increase every year” (Oglesby 2012, 224). At today’s price, 14,000 additional acre-feet of CAP water would cost New Mexico “1,904,000 per year” (Ibid.). According to Oglesby, the rate per acre-foot was predicted to increase by ~16% – from \$122 to \$141 – by 2016. The real figure is even more dramatic. The “CAP Final 2015-2016 Rate Schedule” reports, at minimum, a rate of \$161 per acre-foot for a Long Term Subcontract. Accordingly, the annual cost for the Gila diversion in 2016, had it existed, would have been \$2,254,000 - an increase of \$350,000 in only four years. Advisory estimated rates for 2020 are \$196 per acre-foot, which would lead to an annual cost of \$2,744,000, a 44% increase in just eight years. At this pace, Campbell’s “fifty-year profit horizon” will soon appear less forgiving.

Indeed, 2012 figures from the CAP indicate that “Colorado River shortages may begin as soon as 2016 and high-priority customers like municipalities may experience shortages as soon as the mid-2020’s” (Oglesby 2012, 219). With flow shortages foreseeably around the corner, “it is important to note that a new diversion in New Mexico will be subordinate to all Arizona and New Mexico water uses with a priority date prior to September 30, 1968” (Ibid.). For all the talk of the New Mexico Unit being the one thing “to make a difference during a dry season” (D’Amassa 2018), there are many other users with priority rights that will sooner access water. The Gila diversion, by virtue of prior appropriation law, will do little to nothing to make

Southwestern New Mexico more prepared in case of drought. If anything, conservation-minded water supply projects – leaving senior rights claims in Arizona alone – will yield the greatest net savings of water and is an option far better suited for the uncertain world that lies ahead.

Beyond the principal allocation of federal dollars, the AWSA sets into place painfully specific procedures for the administering those funds. Embedded in the legislation is “a technical agreement called the New Mexico Consumptive Use and Forbearance Agreement (CUFA)... [that] sets forth the complex and detailed constraints under which additional water can be diverted” (Oglesby 2012, 221). In the most basic terms, the CUFA required the ISC submit a *Record of Decision* (RoD) by the end of 2014 that would either forward or halt the planning process for the New Mexico Unit (Siwik 2019, Personal communication). The 2014 RoD then must be followed by a completed Environment Impact Statement (in compliance with NEPA) in anticipation of a 2019 RoD deadline. Pending the approval of the EIS by the BoR, the 2019 RoD represents the final threshold for approval of the diversion project and the release of the second and third federal pots. If, for whatever reason, the NMCAPE and BoR are unable to make the 2019 deadline – and it is not the fault of New Mexico – the CAP Entity can apply for an extension through the end of 2030.

NM CAP Entity can use “In response to this opportunity, five entities formed the Gila-San Francisco Coordinating Committee [GSFCC] and began working to fund studies illustrative of the impacts of diversion” (Podmore 2017, 11; referencing Craig Roepke 2016, Personal communication). A sister-group to the Gila Basin Irrigators Commission, the GSFCC was a diversion-booster group that, towards the beginning of 2006, petitioned state legislators to grant “\$943,000 [of the AWSA funds] on studies seeking the best way to meet water needs.”

Very quickly, a technical committee boasting representation from several environmental groups (The Center for Biological Diversity, Gila Conservation Coalition, NM Wilderness Alliance, etc.) emerged on the scene and requested that Gov. Bill Richardson (D-NM) veto the AWSA funding, citing the attempt of the proponent groups to “railroad” over the opposition and build the dam without considering user needs and riparian impacts (Ibid.; Schulke 2019, Personal communication). Richardson responded to the call by redirecting the project, shifting from the top-down strategy of the ISC and choosing, instead, to embrace a research cohort that was comprised of more local elements. The newly formed “Southwest New Mexico Stakeholders Group” spent three years investigating plans for the New Mexico Unit and alternative water supply initiatives, discovering upwards of fifty high-priority, non-diverting water projects (Schulke 2019, Personal communication). In 2008, however, recently elected Republican Governor, Susanna Martinez, and the ISC suspended the stakeholder process and sparked a regime of intense dam speculation, cycling from one infeasible project to the next.

Leading up to the first RoD deadline, the ISC had for two years already begun utilizing the first pot funds (consisting of the \$66 million block grant) to hire engineering firms to prepare diversion plans (Guame 2018, Personal communication). Bohannon-Huston, a company based out of Albuquerque, NM, was early on the scene. Proceeding with a two-sentence, bare bones statement in the affirmative (Fleck 2019, Personal communication), ISC firmed up its commitment to making the New Mexico Unit a reality. Around this time, in January of 2015, the ISC was pulled away from its direct role in the New Mexico Unit planning process. In its place rose the *New Mexico Central Arizona Project Entity*, a state-sanctioned Joint Powers Agreement that is composed of representatives from across the four counties of the Southwest Planning

Region (Schulke 2019, Personal communication). They arrived with experience as ranchers, farmers, and businessmen and are affiliated with a variety of irrigators' associations and soil & water conservation districts ("NM CAP Entity" Website). The absence of a Silver City representative is a notable exception; the silence of the empty space speaks volumes of Silver City's attitude towards the diversion. A formal counterpart to the GBIC, the NM CAP Entity has, as of 2019, carried on with the mission of producing the New Mexico Unit and, like the ISC, has exhibited a tendency of producing incomplete work.

The evolving ISC/NMCAPE cohort has moved onto its third proposed iteration of the Gila diversion. The first and second plan, in many respects, mirrored the decades-old Hooker Dam and Connor Dam projects in both method and location. The first plan – better known as the *billion-dollar boondoggle* – was a byproduct of the Martinez era and is the project for which Craig Roepke will go down in name and legend (Schulke 2019, Personal communication). The proposal called for boring a nine-foot diameter pipe through several hundred feet of mountains that would enable the flow of water from the headwaters to storage-retention ponds near Deming, NM for, as it would appear, largely municipal use. It is evident that Deming would have benefitted greatly from the original proposed dam and, consequently, it is easy to surmise the reason for their allegiance towards the New Mexico Unit; like the exchanges that mark some of our nation's most prominent legislation, Deming's support was – by appearance – bought and paid for by the ISC (Gaume 2018, Personal communication).

As opposed to the Hooker Dam, which was proposed on Forest Service land within the Wilderness boundary, the "boondoggle" was just downstream of the confluence with Mogollon creek on land owned by The Nature Conservancy (Gaume 2019, Personal communication).

Anthony Gutierrez, the director of the NM CAP Entity (and the recipient of a \$90,000 annual salary) purportedly commented that land was chosen on private land instead of public land, since the EIS would be easier to complete without USFS involvement (Smith 2019, Personal communication). The Nature Conservancy, however, did not bow so easily. On one side were the unseemly cost of construction and obvious logistical constraints and, on the other, the apparent destruction of a cherished section of the Wilderness (by Turkey Creek) and the obvious havoc would wreak on the riparian environment (Gaume 2018, Personal communication). Many journalists, engineers, and local residents did not start taking the boondoggle seriously until about 2013 or 2014 given, as Norm Gaume once put it, “I never in my wildest imagination believed this project might happen.” Upon a quick review of ISC proposal, it was he who, in a definitive gesture, declared the project “fatally flawed” and an engineering impossibility. The unique features of the channel and the limitation of the adjacent wilderness made the diversion, even with a billion-dollar budget, utterly infeasible (Ibid.). Naturally, the NM CAP Entity soon had to hit the drawing board, once again.

In late 2015, the NM CAP Entity formally tossed the boondoggle and, in short order, turned their heads to the latest incarnation of the Connor Dam. The catalyst for the formation of the Gila Conservation Coalition (GCC) in 1984, Connor Dam failed given the endangered status of the loach minnow (*Gila Conservation Coalition*, Website). The diversion planners, thirty-years later in 2016, once again knocked on the doors of private property owners along the Middle Box of the Gila River. One of those residents was Howard Smith, who recounts his conversation with Anthony Gutierrez. With an informal, yet serious air, Smith details the many issues with the two-thousand-foot-long, concrete cap structure that will drive reinforcement

pilings deep underground and disrupt sub-surface water flows, leave alone its impact on the surface riparian ecosystem (Smith 2019, Personal communication).

Smith asks, frankly, “Your group is planning this project, if I say no will your group go along with it anyways?” Gutierrez’ response: “We won’t, but the ISC might go ahead and condemn your property” (Smith 2019, Personal communication). The comment speaks to a trend, in which the NMCAPE blames the ISC for wasting \$12 million AWSA dollars on failed engineering plans, trying to distance themselves from the entity that, at the time, every member supported with reverent zeal. Smith has trouble taking the criticism seriously, given the NMCAPE has continued on in much the same way as the ISC; they’re spending habits are similar. Even now, the CAP Entity is purportedly paying up to \$17 million to complete the EIS statement on their forthcoming proposal – the third and possibly final plan of the AWSA saga.

The NM CAP Entity has received consistent ridicule for their support of ridiculously high-ticket diversion projects. In this respect, the new proposal is a notable departure. Coming in at a predicted \$78 million price-point, the diversion would conceivably be within the given allotment of remaining AWSA funds. The proposal calls for three, smaller-scale diversion projects (Schulke 2019, Personal communication) throughout the Gila River watershed: diversions along the San Francisco (a tributary) and the upper watershed of the Gila (near Cliff) and the construction of storage-ponds in the Virden Valley (marking the border between AZ and NM). In some ways, the proposal shows sign of compromise. There will no longer be a massive dam bisecting the river in the immediate vicinity of Wilderness and the taxpayer will not be held unduly accountable. That said, the consequences of the diversions are still incommensurate with the limited foretold gains.

For one, those benefitting occupy only a small segment of society, a few dozen ranchers at most. As Donna Stephens, the director of the Upper Gila Watershed Alliance, jokingly contends, “If you were going to use \$50 million to help fifty or so ranchers, wouldn’t we all be better off just to give each of them a million dollars?” (Stephens 2018, Personal communication). Secondly, many of the irrigators who stand to benefit come from within the ranks of the NMCAPE. Not to accuse anyone of misconduct; even abiding the highest ethical standards, however, the conflict of interest is undeniable and leaves a sour taste (Smith 2019, Personal communication). Third, as with any diversion, Freeport McMaRon – the owner of more than 70% of the private land in-and-outside the valley – comes away as the winner and, consequently, deprives small-scale irrigators of the speculative benefits of the diversion from the get-go (Schulke 2019, Personal communication).

For thirteen years, Roepke, as Deputy Director of the ISC, promised that the diversion would only effect waters in flood-level conditions and the dam would cease operation when the river dropped below 150 CFS. Under these parameters, boosters claim the diversion would only minimally disturb the ecosystem and the flora and fauna, alike, would not significantly suffer (Schulke 2019, Personal communication). “Skimming off the top,” as Allen Campbell would say, “will not impact the system. The diversion will cause no harm.” To the contrary, the fallout of regulating surge flows, especially for a river as unpredictable as the Gila, can be disastrous to riparian species whose life-cycle rhythms have evolved specifically in relation to the variability of flood conditions. For better or worse, Roepke’s *ex machina* promise is no longer a relevant point of conversation; his word was only good for as long as he remained in office. Upon his retirement in 2017, the ISC and NMCAPE backed away from the Roepke legacy and rescinded

the commission's commitment to maintaining a minimum flow requirement. The New Mexico Unit has become like a Pandora's Box. It looks benign, yet, with though with little-to-no enumerated safeguards for riparian health, there is no telling what damage it may cause.

While it is critical to engage directly with the claims and assumptions of both proponent and opposition groups, there are thorns sticking in the heel of the CAP Entity that need to be addressed. They involve unavoidable limitations of the diversion that, regardless of the boosters' best efforts, make the project inviable. Adhering to the CUFA, New Mexico will only be able to divert water if "30,000 acre-feet is already in storage in San Carlos Reservoir for use under the terms of the 1935 adjudication of the Gila River Basin water rights... [and] the Globe Equity Decree" (Oglesby 2012, 222). In periods of drought and water scarcity which, by all measures, are anticipated to occur with greater frequency, it is unlikely New Mexico, even with a foolproof diversion design, will qualify under CUFA to redeem their junior rights.

Adding to the trouble is an ISC written clause that Norm Gaume has sardonically labeled "the poison pill" (Gaume 2018, Personal communication). By accepting the section of the CUFA that mandates for the absorption of the upstream Gila River into CAP apparatus, the ISC has agreed to "obligations that will survive past the termination of the New Mexico Unit." What this means is that, even well after the disaster-scenario that will be blow-up and make useless the AWSA infrastructure, New Mexico and the Southwest Planning Region will be beholden to satisfy the full suite of CUFA and CAP guidelines in perpetuity. For instance, even in the event that New Mexico stops pulling water from the Gila, the state will still be indebted to maintain the aforementioned 30,000-acre-foot San Carlos storage requirement.

In closing, a 2010 “ISC Regional Demand Study” for the Southwest Planning Region concluded that Southwestern New Mexico “will experience only modest population growth in the near future... [I]rrigated agricultural acreage... [is predicted to] remain stable, although the frequency of surface water shortages for agriculture suggests farmers may desire some increased supply” (Oglesby 2012, 229). That said, “water rights in the... [r]egion currently exceed irrigation demand... [T]he current total irrigated acreage in production... is well below the maximum irrigated acreage allowed by the State Engineer.” What, then, is the purpose of dedicating untoward time and resources towards projects that, even in the face climate disaster, pose little-to-no-utility?

The real beauty to the Gila and Arizona Water Settlements Act is that the story is not yet finished. The remaining \$54 million (adjusted to \$73.6 million in 2019) in available AWSA funds is still out there (Schulke 2019, Personal communication). In 2008, the Southwest New Mexico Stakeholder’s published a list of 50-60 high-priority water supply projects. The money – born out of an act primarily intended to do good and enfranchise previously dispossessed Indigenous peoples of Central Arizona – can be used for new, exciting, and creative purposes. Many of the ideas are tried-and-true approaches to improving water conservation: installing drip-irrigation systems, fortifying ditch systems, updating appliances and installing grey water systems in public buildings, etc. Others are more specific to the Southwest Planning Region. For instance, irrigating local ditches is a mechanical process that involves “pushing riverbed sediment up... [to create] an earthen diversion... [that] moves nearly the entire flow of the river from its course” (Podmore 2017, 16). Norm Gaume, for one, sees the anachronistic bulldozer-irrigation system

as an “opportunity for increased efficiency,” claiming that most pasture irrigation could be done with one fourth of the water presently used.

A popular alternative project is the creation of the “Grant County Joint Powers Agreement” (Stephens 2018, Personal communication). Many of the smaller towns in the low-income county lack access municipal utilities. Some are off the grid, while others – like Hurley – rely on short-term leases from Freeport McMoRan. In fact, the majority of county residents – 26,000 out of 35,000 – lack community-wide water services (Ibid.). Silver City, as the economic and cultural capital of the region, is uniquely situated over a large store of groundwater and, generally speaking, experiences little water stress. Other settlements and homesteads are less fortunate. Hurley, in particular, is under risk as Freeport McMoRan is prepared to terminate the lease agreement. To distribute water for human consumption, wells have to comply with the state’s potable water standard – in lieu of cleaning up, the mining giant is opting to back out (Schulke 2019, Personal communication). Hurley and its ~1,500 residents are in particularly dire straights. Here, I recall Secretary Andrus’ description of the “*underlying fear [of reclamation-era bureaucrats]... that some unforeseen hand is going to reach out and turn off the valve*” (quoted by Espeland 1998, 6). The people of Hurley are unlike the dam barons who define their identities off some unsubstantiated fear. The threat is real and the consequences grave, there is no mistaking the experience of necessity.

The “Grant County Joint Powers Agreement”, with an an estimated cost of \$20 million (well within the AWSA budget), would create the infrastructure to guarantee sustainable water access for nearly everyone (Fleck 2019, Personal communication). The situation is desperate

enough and the AWSA support arriving so slowly that towns like Hurley, Baird, and Santa Clara – all subject to disproportionate poverty – are considering taking out loans they can't afford to repay (Ibid.). Imagine the juxtaposition: if given the choice, would you spend \$78 million to give a few dozen ranchers a meaningless diversion to play with, or would you invest \$20 million to improve the health, well-being, and economic security of anywhere from 1,500 – 26,000 people? If the scope of impact is the determining factor, just do the math and the answer should be clear.

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How do we, as a community, prepare to make the jump in logic necessary to compel compassion-driven conservation? My first inclination would be to dive head-first into the fantastical world of Donna Haraway and swim laps through constructivist soup, though I would be surprised to see a conversation with a random Gila Valley resident about “the tentacular ones” or “strings figures” last for very long at all. In the spirit of guided transformation, it would be helpful to offer an intermediary step. The *Orme Dam*, proposed in the twilight of the engineering era, was shot down and discarded as a result of pressures put on by the Yavapai community. Similar forces are at work – the same grating takes place when the “old” West rubs shoulders with the “new” and the two bleed as people struggle to weigh and measure seemingly incommensurable values.

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Case Study: The Yavapai and the Battle against Orme Dam

The Yavapai people have been living in the Fort McDowell Reservation since its inception in 1903 and, before then, have resided in their ancestral territory since time immemorial. The reservation spans roughly twenty-five square miles, with currently hosts ~900 tribal members. Twenty-three miles to the northeast of Phoenix, the community sits immediately above the confluence of Salt and Verde Rivers (Espeland 1998, 1). They are both tributaries to the Colorado River. In the late 1970's and early 1980's, the reservation community erupted into heated conflict. Some might say "[i]t was the Yavapai's misfortune to live just below an ideal dam site" (2). A confluence dam was originally proposed at the site by the Bureau of Reclamation in 1944.

Indeed, Fort McDowell was uniquely situated for dam construction, "[t]he confluence site gave the facility tremendous flexibility, allowing one structure to control the flows of... the Salt, Verde, Agua Fria, and Gila Rivers" (Espeland 1998, 2). The project, however would come at great cost, "destroy[ing] miles of cottonwood, mesquite, and willow trees, a unique riparian habitat... home to... a dozen threatened species... including the bald eagle, Gila topminnow, hedgehog cactus, river otter, and Gila monster". Not to mention, the Orme Dam would flood much of the reservation, throwing an already dispossessed people into even greater turmoil.

In typical contradictory fashion, society seeks to grow and expand using technology as a vehicle, yet – in the selfsame pursuit of advancement - society manages to threaten a lot of what it holds dearest. To quote Max Horkheimer, "The history of man's efforts to subjugate nature is also the history of man's subjugation by man" (Espeland 1998, 1). The Orme dispute

highlights that contradiction and, at the same time, provides a model for restorative justice. “Conflict”, as exhibited at the Fort McDowell Reservation, “can transform physical locations into social locations. By investing ‘place’ with meanings that are incompatible with and irreducible to instrumental logic, the terms of value can become the terms of struggle” (40). Here, the dispute was just as much over the physical characteristic of landscape as it was a transformative struggle of the mind and the various ways of knowing and assigning meaning. The dam, as an object, is imbued with a technocratic tautology built around notions of power and domination. The dam, as conqueror, vanquishes both physical manifestation of space as well as diminishing culturally-defined ways of determining place.

The assertion of reclamation-related infrastructure on captive communities (like the Yavapai) imposes an epistemological hierarchy, in which objects, ideas, and places deemed incommensurate with the aims of capital accumulation and technological advancement are made to be worthless. People with contested ways of knowing are, similarly, ousted and assigned to the inferior. Commensuration, a practice defined by “measuring different properties normally represented by different units with a single, common standard or units” (Espeland 1998, 24), becomes a vehicle for whitewashing. “[B]y transforming and transgressing the important social and cultural boundaries that mark and sustain relationships” (28), commensuration and the ideal of uniformity break down bonds of community and create divisions that manifest animosity.

“[I]ncommensurate categories,” meanwhile, “are vital expressions of some important value and... may be a qualification for having certain kinds of relationships” (Espeland 1998, 29). The Orme event was a meeting point for groups with categorically incommensurate values. One

group – the Yavapai – was, at the most basic level, trying to survive, while the Old Guard representatives were too preoccupied by the game of development (“For the advance of civilization,” they presumed) to think of much else. In the haze of gridlock and uncertainty, there existed another group that split the distance between the two. *The New Guard* – “planners, biologists, social scientists, and engineers” – were assigned by the Bureau of Reclamation to “create, investigate, and evaluate a range of alternative plans for improving Arizona’s water supply” (4). While a definite part of the establishment, the New Guard differed from the Old insofar as they were willing to consider that other ways of knowing could have their own intrinsic value, too, apart from and outside the rat-race of the engineering era.

The Old Guard, when confronted by the new, “was both baffl[ed] and threaten[ed]... [by opposition to Orme Dam]... find[ing] it hard to acknowledge that [the] ‘consensus’ over water development had evaporated” (Espeland 1998, 7). To accept this new, non-instrumental way of knowing – or at the very least to tolerate it – “was to admit having wasted much of their careers... that their engineering ideals were controversial... [and that] their power had eroded” (16). Insofar as the apparent goal of infrastructure and development is to provide for future generations, it also becomes a proxy for a valuation-of-self defined by the capacity to leave a legacy. Questioning a career in building dams as, perhaps, not a legacy worth fighting for could prove devastating. Extrapolate the same idea, now, to the ranchers and homesteaded irrigators of the Gila Valley – what would become of their existence if, for instance, they suddenly realized their grievances towards Arizona were just a misunderstanding or that the rightful place of water is in the river? The only thing more startling would be if their cattle started to stand-up, speak, and express discontent over the existential quandary of rotational grazing. It is

from this place of empathy that a self-identified “environmentalist” could reach across the epistemological void and relate through a mutual respect for incommensurate values.

The Orme dispute catalyzed a series of encounters between groups “who were forced, by politics, to define and defend themselves to one another publicly... [and] to try to interpret each other’s motives and meanings... [In] the process of doing so, each group was transformed” (Espeland 1998, 17). Actors emerged from dialogue “articulate about... [issues that] had formerly been tacit... [The upending] of normal bureaucratic... [forced participants to state and defend the obvious routine” (Ibid.). Events such as these offer actors rare opportunities to “revise interpretations and... observe hegemonic forms of power as [they] are practiced and challenged” (Ibid.). Indeed, “relations between the New Guard, the Old Guard, and the Yavapai community reveal the tensions, contradictions, and ambivalences that arise when modes of rationality collide” (16).

The object and expectation of inter-subjectivity training is not to somehow awaken from solipsistic slumber and immediately see the world through another person’s eyes. Values and ways of knowing, in large part, remain incommensurate; the void is never fully breached. It is primarily a tool to break down the ridged, often-unstated hierarchies in which one way of knowing is valued over another. The goal, in places like Fort McDowell and the Gila Valley, is learning to co-create and mutually inhabit place-worlds. Place-making, according to anthropologist Kenneth Basso, “is a way of constructing history... [and] fashioning novel versions of ‘what happened here...’ whenever the constructions [of developed place-worlds] are accepted by other people as credible and convincing... they enrich the common stock on which everyone can draw to muse on past events... and imagine them anew” (Basso, 6). More

than simple nostalgia, the process of “sharing place-worlds... [is] a means of exploring... [how things] might have been different from what others have supposed” (Ibid.).

Every year, the Yavapai host a powwow celebrating their victory over the dam. “[V]ery directly... [these festivities celebrate] what it means to be Yavapai” (Espeland 1998, 3). While I doubt the Old Guard is busying themselves celebrating failure, working to bridge incommensurate values is mutually impactful experience. The Bureau representatives arrived with the overt mission to conquer – not the people – but the landscape. The landscape, however, was an unalienable, constitutive element of the Yavapai people and the two could not be separated. The first hurdle for the white men was to accept that, for their Indigenous counterparts, the dichotomy of nature and society was not so black and white. For the Yavapai, society was simply a manifestation of nature and nature a manifestation of society. There was no clear dividing line from which they could safely observe the flooding of their ancestral territory. Even sitting on top of a Phoenix skyscraper would not do.

Not only is there no need for engineers to assimilate into the Yavapai cosmology, they couldn’t even if they tried. Emulation, no matter how well practiced, remains a fiction. The more serious the ruse, the more it lends itself to claims of ownership. Take our rancher friends; a man-bunned, Greenpeace activist should not attempt to *become* a homesteader and blend into rural life as a ploy to achieve empathy. It is not the worlds from which the environmental and rancher come that matter most. Rather, it is the world they make together – impartial and understanding of difference – that yields the seeds of revolution. It is not syncretism that is valued, but a well-place and deliberate mosaic. When the New Guard representatives arrived at

the Yavapai reservation, they didn't try to fit in. They stayed in their suits, but instead of hiding behind their clipboards and using fancy language, they stayed to talk.

The world the Yavapai and Bureau representatives created together is a history unique to that point in time. When the engineers left, so too did the Yavapai slowly exit the constructed place-world of the Orme Dam. The bureaucrats knew enough that the place-world of the Yavapai people was not theirs to share forever. The groups returned home and resumed their "typified" lives, transformed, yet by no means overtly changed. Appreciating the value of multiple epistemologies is recognizing – with humility and awe – the inherent right to believe in one's own truth with total authority and, at the same time, to take joy in the infinite divergent truths that compose our crazy and unpredictable world.

Howard Smith and Anthony Gutierrez are neighbors in the Gila Valley. They are on as good terms as anyone might expect for longtime acquaintances. There is no blood lost over politics. Smith, in conversation, is keen to highlight the courageous and noteworthy attributes of his fellow Gila Valley community members, even those with whom he respectfully and unapologetically disagrees. "In a small town," Smith elaborates, "you can speak what you believe is true and people will still treat you with respect." The ISC, if anything, is the closest source of shared antipathy. Even though the ISC and NMCAPE, in effect, practice similar ideologies, the ISC is so far removed from the community that there is little to no hope of establishing kinship ties. How do we make and maintain kin as our world is, by all appearance, falling apart? Donna Haraway, a Professor Emerita in the History of Consciousness at UC Santa Cruz, walks the fine line between what *is* and what *ought be*; you never are quite sure where she is going to fall.

THEORY: HYDROSOCIALITY TERRITORIALITY VS. MAKING KIN IN THE POST - “BIG WATER” ERA

To understand the social implications of water and water management, one must disassemble the synergistic relationship between man and nature. Let us consider the ‘nature-society dialectic’ of Karl Marx; “‘Man opposes himself to Nature as one of her own forces, setting in motion... the natural forces of his body... to appropriate Nature’s productions in a form adapted to his own wants. By thus acting on the external world and changing it, he at the same time changes his own nature” (Linton 2014, 115). In this way, the *hydrosocial cycle* is framed as “a socio-natural process by which water and society make and remake each other over space and time”. Dependent on water as a structural tool for survival, the changes we wreak on landscapes are critical in the dialectic of nature-society interactions and the making and remaking of ourselves in the material world. The Gila river and proposed diversion are vehicles through which hydrosocial relationships are changed and worked upon;

While *hydrosocial cycling* is a novel way of describing the evolution of social and political organization, the phrase does little to chart the prescriptive force of power. For this, one must take things a step further – “*territories*” are regional political spheres “actively constructed and historically produced through the interfaces amongst society, technology and nature” (Boelens 2016, 2). The union of hydrosocial cycles with territoriality (*hydrosocial territoriality*) is a theory of political ecology in which “river basin management, water flows, water use systems and hydrological cycles are mediated by governance structures and human interventions” (Ibid.).

Humans, consequently, create new and unforeseen territories – both concrete and constructed – through the use and appropriation of water. “[T]he outcomes of... hydroterritorial intersections [and] conflicts... are not predetermined... [they] celebrate the

visions of the elite networks, reveal the scars suffered by the disempowered and nurture the possibilities and dreams for alternative visions” (Boelens 2016, 6). Under this conceptual lens, shifting tides of power, influence, and advantage bear an inherent connection to the physical realities of nature and resource management. Territoriality, by definition, creates a dichotomy between belonging and not belonging. In this way, “[Exclusion- and] inclusion-oriented’ policies... aim to involve local water user communities... in ruling groups’ hydroterritorial... rationalities and... reinforce the dominant hydroterritorial order” (10).

Aligning oneself with top-down ideology of territorial structures reinforces the “cultural supremacy” of the ruling class – ‘modernity’ is embraced as more idiosyncratic elements of local knowledge are made defunct – which helps “[deepen] unequal water distribution” and enables “unsustainable extraction of surpluses and resources from local communities” (Boelens 2016, 10). The power hierarchy implicit within the territorial mindset is internalized by the individual, who, in turn, perpetuates and makes real those very-same constructed ideals. Uniformity of identity, thus, becomes a source of power. “Territorial governmentalization... seek[s] to... alter local water users’ identification with community [and] change water users’ ways of belonging and behaving according to new identity categories and hierarchies” (6).

The ever-changing governance structure of the New Mexico Unit of the CAP poses a unique set of challenges. The revolving door of federal government, the ISC, grassroots organizers and the looming auspice of the Arizona-dominated CAP management apparatus makes it awfully unclear who or what will primarily benefit and garner power from the territorial restructuring of the Gila River. For whom is the diversion an expression of dominance? How does the diversion reinforce or demean different ways of knowing?

Modern water is defined as “the dominant... way of knowing and relating to water, originating in Western Europe and North America” (Linton 2014, 112). A broad-sweeping sociopolitical construct, the specter of modern water “abstract[s]... the world’s waters [away] from their local, social, cultural, religious, and ecological contexts” (113). From here, water is “reduce[d]... to a single substance” and, thus, removed from any cultural backdrop, “render[ed] commensurable” (113). Even if we, ourselves, forget at times, water remains a universal substance, intrinsically related to essential facets of life and culture. Similarly, we must remember that “true scarcity does not reside in the physical absence of water... but in the lack of monetary resources and political and economic clout... [marginalizing] governance... [is what] makes people die of thirst” (Swyngedouw 2009, 58).

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Under Boelens’ rationale, power as an institution remains unquestioned. Though his work correctly positions hydrosocial territories and the animus of water reclamation as they exist today, it lacks the imagination to conceive of a world functioning outside the parameters of territoriality or power. The birth of the Gila Wilderness, however, speaks to an alternate premise. Debates over the Gila are uniquely situated to where fetishization of power is so

strongly rooted and, therefore, movable. The Gila, then, could serve as a *revolutionary training ground* of sorts to subvert some of the underlying premises of western water management.

Hierarchies are formed and reinforced through expressions of ownership. Water is a catch-all; it can give life to struggling people in a drought and take life away in floods or other natural disasters. The sea is a symbol of peace, longing, and torment, sometimes all at once. Water can convey power through material prosperity or reinforce the position of the oppressed through targeted dispossession. Hydrosocial territoriality is both constitutive of and derived from regimes of power and influence. It's like the chicken and the egg, you never know which came first, though – for a successful territorial regime – it is a certainty that water security, irrigation, or mineral refinement are issues close to the chest of whomever is in power.

U.S. House Majority Leader Jim Wright (D-TX) publicly criticized then-President Carter in the late-1970's for actively disparaging the reclamation industry. Water, according to Wright, "is man's most indispensable commodity and man's most useful servant. Trapped, harnessed and directed by human intelligence, it runs our mills and grows our crops; it powers out machinery and lights our homes; cleanses our waste and moves our commerce. Unharnessed and left to rampage, it can inundate our cities and our farms, destroy our homes and our hopes, afflict us with disease and death, and carry away to the seas the fertile topsoil upon which our vaunted civilization rests" (U.S. Congress 1977, quoted by Espeland 1998, 10).

Though emphatic, Wright's tone carried a hint of helplessness. After all, who amongst us can claim true mastery in harnessing the tempestuous resource? Dams are an artifice to supersede the limits we assign to human agency. "In promoting technical solutions to social problems," Espeland argues, "we promote a vision of nature as God's unfinished handiwork, a

resource to be tamed according to man's will, and an aesthetic celebrating dams as both useful and beautiful... the ideology rendered dams distinctive, their designers immortal" (Espeland 1998, 16). Moving mountains was the work of God, was it not? Do we approach the divine by climbing the steps of the Hoover Dam, or do we just increase our chances of getting burnt by the man-made, reflective surface of the reservoir? Or maybe the nebulous, highly polarized hydrogen-dioxide molecule is playing a shell-game, and we have no idea what comes next.

"Knowledge precedes power," says Foucault, though where does knowledge get you when you have nothing to drink? Water is an entry-point for discovering truth, just look at the "advanced interrogation techniques" (waterboarding) made famous at Guantanamo Bay. It seems more likely, however, knowing that there are an infinite number of individuals, that the clout enshrined by processes of hydrosocial territoriality allows the user to pick-and-choose. Jesse Udall, a scion of the famed political family of the American West, utilizes the version of the truth most amenable to his interests: "[Land] is on the verge of reverting back to the desert. The sight of burning crops, dying trees, parched lands that once were fruitful makes a close observer wonder if this generation is keeping faith with the generations of pioneers that carved an empire out of the deserts... It is imperative that additional sources of water be brought into central Arizona... In Arizona it isn't acres, but acre feet that spell prosperity and success" (U.S. Congress 1951, quoted by Espeland 1998, 102).

Who made the decision to "carve an empire out of the deserts"? Arizona was doing fine for thousands of years without imported water, I don't think the Hohokam and Mimbres were too worried about missing out playing golf on Kentucky bluegrass in Scottsdale. Udall, himself, did not make the decision, though he is positioned to reap the benefit. Jim Wright and Jesse

Udall were members of Old Guard – technocrats and power-brokers wound so tight by tautology that they never had the chance to escape. “A dark bewitched commitment to the lure of Progress (and its polar opposite) lashes us to endless infernal alternatives” (Haraway 2016, 50). Unrelated to luck or intelligence, it was lawmakers’ lack of imagination that did them in; they were unable to conceive “other ways to reworld, reimagine, relive, and reconnect with each other in multispecies well-being” (Ibid.). How about the New Guard or the Yavapai, where are they? Better yet, how can we describe the relational aspects of power in the Gila River Valley? Do we even want to ask the question, or is it counterproductive?

In as much as hydrosocial territoriality is a useful device to describe material conditions of power, it details a world that I think many people – if given the choice one way or another – would choose not to inhabit. The model may be more realistic and telling of the nature of global hydrosocial relations, things will never get better until at least some of choose to step out of the box and accept that, for a while at least, we might look, sound, and act ridiculous. To take a leap of faith and have the bravery to imagine a world without power is a risk I, a voyeuristic writer, am willing to take. As we reevaluate the basic function of being a human in a capitalist-driven, hydraulic society, it is essential that we return to the most basic philosophies as a means of building ourselves up again.

And so, it seems fitting to return, once again, to the forester famed for founding the nation’s first Wilderness. “All ethics,” he wrote, “rest upon a single premise that the individual is a member of a community of interdependent parts. His instincts prompt him to compete... but his ethics prompt him also to co-operate” (Leopold 1949, 203). *The Sand County Almanac* (from which this essay was a part) pioneered the scientific study of ecosystems and, in many

respects, was revolutionary in its assertion of the “plainness” of humans in the biotic community. “The land ethic,” the conceptual cornerstone of Leopold’s philosophy, “simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land” (Ibid.). All living things, according to the land ethic, exist on the same horizontal plane as every other living being. The cosmic significance of a human is no greater than a bee or a jackrabbit. Leopold’s humility is immediately cathartic in comparison to the tormented hubris of Wright and Udall. Aldo Leopold’s work has circulated extensively, inspiring many conservationists around the world, a Norwegian philosopher Arne Naess, in particular, conveys a strong sense of ideological kinship.

Naess posits that our identities are defined relationally to our environment. Subject to the popular influence Cartesian dualism and Enlightenment Era philosophy, we limit ourselves by basing our existence according to the experience of the mind and body. We fail to exist if naught for our environment and, therefore, a serious appraisal of the *ecological self* is called for. Implicitly, our ecological selves drive our need and want for connection to place; it is a part of us that is as unalienable as skin and bone. “If people are relocated or, rather, transplanted from a steep mountainous place to the plains below, they... [too late] realize... that their home-place was a part of themselves... [T]hey are now not the same as they were.” (Naess 1987, 521). Love for nature or a fellow human or creature is also love for oneself. Deep Ecology insists that hierarchies between living and non-living entities are inherently flawed; we all become subjugated through intolerance. To name things as lesser or greater, you are qualitatively degrading one’s own ecological self.

According to Ness, a view of conservation in which “people feel that they un-selfishly give-up, or even sacrifice, their self-interests to show love for nature... [is] a treacherous basis” for environmental ethics (Naess 1987, 519). On the contrary, Naess insists that, “[t]hrough identification, [people] may come to that their own interests are served by conservation, through genuine self-love, the love of a widened and deepened self” (Ibid.), Less teleological and more of a practice-based discipline, Naess’ holds that “the notion of a being’s interests furnishes a bridge from self-love to self-realization” (Ibid.). Fulfillment and environmental stewardship, Naess contends, are fueled through the completion of *beautiful acts*. Doing “what the moral law says is right on the basis of positive inclination” is a *beautiful act* (527).

“[I]nclination” is a more powerful tool for sustainably performing right actions than “morality.”

Many people have “the false impression that... [environmentalism] primarily asks them to sacrifice... [and show] better morality” (Naess 1987, 527). Guilt and shame do not generate *beautiful acts*. Rather, the key is found through celebrating “the immense variety of sources of joy” that stem from “diversity of life and...free nature” (Ibid.). *Seeking joy*, as a philosophy, is a long shot away from the instrumentality that inspired the Central Arizona Project. *Beautiful acts* are hard to come by in our modern-day and world. The rarity of joy as it exists in unadulterated forms is a key feature of the Gila Wilderness and one of the many reasons why people rise so fervently in its defense. The ISC and CAP Entity are performing what they believe – in their world view – is a moral prerogative. From the far outside looking in, I don’t see all too much joy. Naess’ articulation of embracing the *ecological self* and *beautiful acts* creates a compelling model for compassion-driven conservation. What then, is the scope of right action? To whom

are we most concerned, and how can we learn to access radical, revolutionary joy. In many respects, revolutionary joy is what the Gila needs most.

Multi-species inter-subjectivity is a way of seeing beyond the needs and constraints of the human shell. We exist in a constant state of interaction with infinite some of beings, including insects, birds, house-plants, the neighbor next door, the tens-of-thousands of microbes that live in our gut, or even the soil on which we stand. Notice the slight give; the inanimate-presenting earth moved in response to our stimuli. A real interaction, I would not exist as I do now without the soil that rests beneath me and applies equal-opposite pressure to the balls of my feet. “Partners,” argues Haraway, “do not preexist their relating; all that is, *is the fruit of becoming with*” (Haraway 2008, 17; quoted by Sundberg 2011, 321). The *fruit* of life is built upon encounters with “ordinary knotted beings” that “gather up those who respond to them into unpredictable kinds of *we*” (Haraway 2008, 5; quoted by Sundberg 2011, 321).

Posthumanist philosophers take pains to avoid “framing agency... [as] the product of conscious intention... [and restricting agency] to the imaginary figure of an all-knowing human” (Sundberg 2011, 321). Similarly, the privileging of speech “as the sole property of humans assumes an a priori human–nonhuman ontology,” (322) which creates even more distance between human and non-human relational-partners. “[A]ll actors can be said to leave traces, whether these take the form of texts, oral narratives, footprints, or feces... Landscapes, for instance, tell stories through specific configurations of vegetation, soil types, and [a] myriad [of] other traces that can be interpreted and represented through various scientific practices and translations” (Latour 2004, 1999; referenced by Sundberg 2011, 322).

The process of better understanding relationships to non-human entities – or, as

Haraway puts it, *making kin* – is “learning to live and die well with each other in a thick present... to make trouble” (Haraway 2016, 1). What Haraway means by *making trouble*, however, is different from what might at first be expected. As opposed to pivoting “between awful or edenic pasts and apocalyptic or salvific futures,” staying with the trouble requires being truly in the present or, as Haraway phrases it, to accept our role “as mortal critters entwined in... [a variety of] unfinished configuration[s] of places, times, matters, and meanings” (Ibid.). She rejects the idea of a mosaic pattern of beings, or even the notion of a cultural melting pot. Haraway calls for something much more dramatic, like a hot pile of *compost* (Haraway 2016, 4). It is an all or nothing proposition, we either “become-with each other or not at all.” The concept is paradigmatically opposed to the perspectives of technocrats or dam-builders. Leopold even once asked, “*What is a species more or less among engineers?*” (Connors 2018, 193). Endangered fish are viewed as “pests whose death... would represent a green light to the backhoes” as opposed to “*fellow voyagers in the odyssey of evolution*” (Ibid.).

Haraway takes the proposition quite a few steps further, preferring the language of the *tentacular ones* over Leopold’s voyagers. “[They] tangle me in SF. Their many appendages make string figures; they entwine me in the poiesis – the making – of speculative fabulation, science fiction, science fact, speculative feminism, *soin de ficelle*, so far. The tentacular ones make attachments and detachments; they make cuts and knots; they make a difference; they weave paths and consequences but not determinisms; they are both knotted in some ways and not others” (Haraway 2016, 31). She continues, clarifying how “SF is storytelling and fact telling; it is the patterning of possible worlds and possible times... gone, here, and yet to come.” She uses string figures as gesticulating models to help form inference, “as material-semiotic composting,

as theory in the mud, as muddle” (Haraway 2016, 31).

Posthumanism, as far as Haraway is concerned, is an outdated term. She suggests that we “jump into the wormy pile” and start talking about “*humusities* instead of *humanities*” (Haraway 2016, 32). Society has the potential to advance itself and evolve “if we could [only] chop and shred human as Homo, the detumescing project of a self-making and planet-destroying CEO” (32). Just think of it, a world in which the “Capitalist Restructuring University” has gone bankrupt and we hold conferences on “the Power of the Humusities for a Habitable Multispecies Muddle” in its place (Ibid.). After all – *composting is hot*, right?

The approach lacks the definitiveness and absolutism of science, embracing the quantum world of probabilities where everything as it is may change again in an instant. That is, once again, the spirit of *making trouble*, to live fully in the uncomfortable, unpredictable, and ever-changing present. The Gila, itself, is an entity of the SF variety. We must drag ourselves into the compost heap and ring ourselves through the muddle to understand more fully the impacts yielded by a diversion. It means entering the slimy-skin of the ecologically vulnerable, endemic loach minnow, whose males “excavate a pocket beneath a flat rock” in which the female may lay her eggs (Connors 2018, 17). “Being buoyant, the eggs adhere to the bottom of the rock. The male acts as the lookout over his progeny, cleaning away any fungus that attaches to the eggs and warding off insect predators and bottom-feeding desert suckers, until the eggs hatch and another generation takes its place in the weave of life that constitutes the river” (Ibid.). How would a diversion impede the lifecycle of a loach minnow? The dilemma – in tandem with the Endangered Species Act – is what stopped the Connor Dam back in the 1980’s.

A similar phenomenon occurs with the configuration of wildfire. *Karrikins* are the common moniker for a group of organic compounds named for *karrik*, “an Indigenous word for smoke... used by the Aboriginal Noongar people of western Australia” (Connors 2018, 150). The topic of recent studies, they are produced “when plant sugars are burned... Vaporized and transported in smoke, the compounds eventually bind with surface soil particles,” where they are absorbed by rainfall and percolate deep underground. There, the karrikins make “contact with long dormant seeds, which respond to the signal by germinating en masse” (Connors 2018, 151). The research represents a revolution in forester attitudes, using evidence to prove that “*plants have not only learned to live with [smoke and] fire, but also to exploit it*” (Ibid.). Incidences of wildfire, which historically sparked the fear and ire of Smokey-the-bear era practitioners, are revealed as necessary for forest health; life (through the germination of dormant seeds) could *literally* not take place any other way.

Where Haraway likes the operative term *sympoiesis*, N. Scott Momaday – a famed Kiowa writer, essayist, and poet – borrows Leopold’s language and advocates for an *American land ethic*. “I am interested in the way that a man looks at a given landscape and takes possession of it in his blood and brain,” he writes, “None of us lives apart from the land entirely... We have sooner or later to come to terms with the world around us... as it is perceived more truly in the long turn of seasons and of years” (Moomaday 1998, 47). We must come to moral terms with our environment, “[t]here is no alternative... We Americans need now more than ever before... to imagine who and what we are with respect to the earth and sky” (Ibid.). Like the tentacular ones and SF, the way forward is paved through imagination. It is not to be confused with fantasy; imagination takes its bearing from the concrete and

undeniable present. The speculative element is in visioning what, from where we currently stand, the world – in all of its potentialities – *may* become (or should we say, *become-with*).

Engineers and dam-builder *imagine*, though their perspective is impaired by a limited scope of reference. Whether it be for reasons of profit or familiarity, they choose between one of only a few permitted possibilities. They see dams instead of loach minnows, burnt homes in the wildland-urban interface (WUI) to the neglect of karrakins. Borders, as lines of exclusion, reinforce exclusionary epistemologies through which bureaucrats and lawmakers can easily operate. The Arizona-New Mexico border, for instance, gives upstream users by the headwaters justification to disregard the interests of downstream users in Arizona, if given the chance. According to their worldview, the water is “wasted” once it crosses over the border. Through the creation of *the other beyond the pale*, political boundaries bolster the capacity of disgruntled citizens to form tensions with the constructed *outside world*. “[They] are set up to define the places that are safe and unsafe” Gloria Anzaldúa writes, “to distinguish *us* from *them*” (Anzaldúa 1980, 25). Borders, dismantle the potential to bond over shared resources and river-access. “Narrow strips over a steep edge” (Ibid.), they embrace solipsistic/self-making attitudes, embolden the clichéd individualism of pioneering “frontiersmen”, and reinforce anthropocentrism. It is through the institution of borders that we learn to forgo the agency of the Gila River and its riparian co-habitants.

The proposed NM Unit contributes to a border regime in which “New Mexico will give the federal government significantly more control over the Gila system” (Oglesby 2012, 228). To reiterate, the CUFA clearly stipulates that any further development of the river would transform the “locally operated and managed system into a subdivision of a huge federal water

development project, the Central Arizona Project” (Ibid.). The subsequent jurisdictional crisis will likely lead to a “disconcerting loss of local control... [in which] New Mexico’s use of Gila River water will be subject to far greater scrutiny under federal environmental laws” (Ibid.) and current users will abdicate much of their authority to manage diversion from earthen pile-ups.

The adjudication of water, according to the border relationship, “imposes... [an] alien, form of hydrosocial relationship as the state inserts itself as the authoritative body for water management... [which] bypass[es] notions of communal governance and pre-existing hydrosocial society” (Perramond 2016, 174). The insertion of “vertical relationships between local users and... [federal] experts” leads to a loss of trust and harmony within the region. The territorial relationship is flipped, as CAP water comes to hang over the heads of New Mexico water users like Tantalus (of Greek myth) reaching for fruit in the deepest reaches of Tartarus; so close, yet – for an eternity – so far away. Chains keep him back from relieving his unrelenting hunger, which parallels New Mexico irrigators’ unsated thirst for Arizona water.

Analysis suggests that the diversion will reinforce existing border tensions, creating a setting of distrust and fear amongst the communities of the Gila River Basin. The conflict, however, is ultimately antithetical to their identities as residents-in-common of the Southwestern United States; they have every reason to collaborate – and *become-with* together – as they learn to face shared struggles of the Anthropocene. That capacity, however, is limited through the perpetuation of a rigid borderlands epistemology. “[A] vague and undetermined place,” borderlands are “created by the emotional residue of an unnatural boundary... The prohibited and forbidden are its inhabitants,” (Anzaldúa 1980, 25). How can we strategically break down constructed borders and reimagine the role of partnership in collective

management of resources? To start, we can figuratively assemble the knotted-fist of symposium and muddle the fine lines of the hydrosocial regime. Power is transmuted into compost through grassroots mobilization. Politics is interchangeably liberatory and oppressive; both functions can be explored through the Gila controversy.

POLITICS TODAY: CONSIDERING BOTH SIDES

“The project remained a folly in search of justification,” Phil Connors loudly proclaims “but none of the men around that table had one, other than ancestral spite for Arizona. Their delusions were more entrenched than ever. Their self-interest was so naked as to be embarrassing” (Connors 2018, 189). He goes on to deride the CAP Entity for mounting a charade that would cost the state more than \$2 million annually, in addition to the already devastating *billion-dollar boondoggle* that would pump water through the mountains of the continental divide (Ibid.). With beneficiaries ranging from Freeport McMoRan to “a number of farmers who could fit comfortably in a Silver City bar,” Connors claims that proponents are fundamentally unwilling to even consider water supply projects that would benefit all the “60,000 residents of the four-county area” (Connors 2018, 190). The stake into the heart of the CAP Entity’s character runs deeper:

“For all their high-minded talk, one thing appeared clear. They would eventually do as most men do when handed power and a big pot of free money. They would privilege their own private interests. And to what ultimate purpose? There was no rational answer. An obscure provision in a pork-barrel spending bill had set in motion a process that now moved under its own momentum... And the mission, by all appearances, was

to spend a big wad of government cash to throw down some concrete in the shape of a middle finger pointed toward Arizona” (Connors, 190).

The CAP Entity’s activities, as “the group that would have the ultimate responsibility for designing, building, and operating any diversion-dam project on the Gila” is dismissed as having already spent “\$12 million into work by lawyers, consultants, and engineers fattening at the public trough by committing acts of vandalism against good government... [with] only a vague conviction among all involved that the river had to be dammed, somehow, somewhere” (Connors 2018, 188).

Connors depiction of the CAP Entity, however, is mostly a caricature. Though his arguments are built off real figures, he is so entrenched in his positionality as a conservationist and as *a protector of the Gila* that he is blind to the dignity of neighbors with whom he simply happens to disagree. When politics supersedes the quality of inter-personal relationships, the social fabric begins to take on territorial-esque properties. One way of knowing (the lens of *environmentalism*) is taken as *a priori* and is used as vehicle to write-off other ways of knowing (the ranching economy and homestead culture) in their totality. Those with some distance from the conflict – like former *Albuquerque Journal* “Water Beat” journalist John Fleck – reflect on how both sides have become more and more dogmatic and entrenched over the last fifteen years (Fleck 2019, Personal communication).

In this way, firebrands like Connors – regardless of the correctness of their accusations – create new relationships of power that have their own set of potentially disastrous consequences. While they appreciate the agency of the river, they use rhetoric that dehumanizes and “otherizes” members of irrigator communities; by adopting absolutism, the

pathway to making kin and genuinely *becoming-with* is unattainable. Learning to listen and *respectfully disagree* is a precursor to running off and jumping into a heap of steamy compost. It means hearing-out people like Anthony Gutierrez, the Director of the CAP Entity, and Craig Roepke, the ex-Deputy Director of the ISC and mastermind behind the failed *boondoggle*.

In conversations 2016-17 *State of the Rockies Fellow* Mollie Podmore, Roepke explained that “the Gila area wrestles with a way to balance the environmental importance of the river with the human need for its water ‘*to feed their families basically*’” (Podmore 2017, 12; referencing Roepke 2016, Personal communication). He firmly believes that “*there is no question regarding the need for water*” and that the New Mexico Unit is needed to address “dropping aquifers” that add up to a “deficit of up to 30 to 40,000 acre feet per year” (Ibid.). Even considering the undisputed high cost of CAP water, Roepke claims that “*people are... willing to [pay],’* as it is cheaper to pay for water than to lose an entire crop” (Ibid.). To diversion proponents, the environmentalist crusade to “*restore the wild and free-flowing nature of the Gila*” could only take place if people were forced to “*get... out of there*” (Ibid.). To Roepke the designs of river-centered advocates are incompatible with the needs of people living along the river; someone or something will have to sacrifice and, for irrigators fearing water scarcity, better the river loses out than than their families.

That said, many people – like Anthony Gutierrez – argue that diversions will benefit irrigators as well as the health of the river. His current, smaller-scale *three diversion* model is designed to divert water during peak flow season when river sections are in excess of 125 CFS (Gutierrez 2019, Personal communication). According to Gutierrez, the flows (equaling up to the allotted 14,000 acre-feet) would be kept in storage reservoirs until the shoulder-season, at

which point they would be siphoned back the river (Ibid.). In particularly rough dry seasons, parts of the river purportedly stop flowing, damaging the local ecosystem in the process. Gutierrez and the CAP Entity claim that the diversions would compensate for the loss of seasonal flow and help restore the health of the riparian ecosystem.

“I’ll be the first to say, it’s expensive water,” Gutierrez reasons, “but by adding water to the system, irrigators are able to plant higher-value, water-intensive crops [as opposed to cheap grazing grasses like *fescue*]... greater production will mean they can pay higher costs for water use” (Ibid.). On top of which, the existing earthen diversions used by irrigators are highly inefficient and much of the water is lost before being put to beneficial use; “a planned diversion would be more efficient” (Ibid.). Gutierrez is an easy conversationalist and conveys a real sincerity. The simplest explanation of the CAP Entity’s motivations is that “[f]or the last 50 years, only Arizona has benefited from Gil water... Perhaps it is a sense of greed for New Mexico - but why wouldn’t we want some of that water and develop it safely?” (Ibid). The difference CAP water makes for irrigators would be “huge.”

Gutierrez disagrees with the common misconception that farmers and ranchers are frequently conceived as *anti-environment* and could never be real conservationists. “I understand ecology. I walk up and down the river every day... Water security in the west is one of the most valuable things on the planet - water is life... [We] have to be good stewards of the land just like everyone else” (Gutierrez 2019, Personal communication). He even credits groups like the Gila Conservation Coalition for positively contributing to changes in the diversion design, “If we didn’t have public and environmental community, this project probably wouldn’t look the same” (Ibid.). Gutierrez and CAP Entity representatives demonstrate evident care for

the river and an appreciation for the resources that fundamentally sustain their communities. What they conceive of as constituting care for the river, however, varies tremendously.

The rhetoric of dam dissidents that treats CAP Entity members as cruel, dumb, and heartless is simply false and out of touch. In a world of making-kin, the manner by which we act and form connections must come prior to the (still necessary) dialogue on the feasibility and logistics of a proposal. An amicable milieu defined by mutual respect is the most productive space to debate diverging value structures and perceptions on the role of resources. It is also a place to identify common ground and ways of moving forward. That said, the burden of upholding decorum is shared mutually between all groups.

CAP Entity public meetings are notably ineffective (Siwik 2019, Personal communication) and the preceding ISC hearings were marred by scandal surrounding repeated *Open Meetings Clause* violations (Gaume 2018, Personal communication). Siwik has gone so far to say that the ISC “‘creat[ed] a water crisis’ in order to get the promised federal funding the state so avidly pursues (Podmore 2017, 14; referencing Siwik 2016, Personal communication) Calling for the consideration of irrigators’ worldviews by no means discredits the many fact-based critiques of the diversion that challenge the underlying logic of the CAP Entity’s proposals. “*Any rational person,*” Siwik argues, “*would say ‘oh my God’ this is not doable*” (Ibid.).

Opponents to the dam – like Norm Gaume – contest that most of the CAP water would go to “hobby farmers;” the crops in the Gila-Cliff Valley lack the economic value to sustain a profitable industry (Gaume 2018, Personal communication). The CAP Entity model only works under the assumption the monsoon rains and snow-runoff remain consistent. Climate change, however, “poses a major threat to water resources through increased evapotranspiration along

with altered spatiotemporal precipitation patterns, in particular the reduction of snowpack and changes in the timing of spring runoff” (Perry & Paskievicz 2017, 438). Predicted annual flows for the Gila, according to water settlement agreements, are already inflated; as it turns out, the river was allocated following a series of particularly wet seasons (Siwik 2019, Personal communication). Given the improbability of the Gila running at “full flow” and the anticipated impact of climate change, Gaume predicts that the New Mexico Unit will be unable to divert water according to CUFA standards at least 10% of the time (Gaume 2018, Personal communication). If Gaume’s figures are correct, the CAP Entity’s plan of using the AWSA surplus water to generate higher-value crops would be thrown into jeopardy.

In a drought-saturated era, water *resiliency* will likely become the key to continued agricultural success. Gutierrez argues that water supply projects – like the Grant County Joint Powers Agreement – can be performed in tandem with a series of diversions; the two are not mutually exclusive. The case, however, rests on the presumption with available funds. The eight-figure AWSA budget is already well beyond the means typically available to Southwestern New Mexico for any project, let alone water development. The diversion proposal, as it exists now, is poised to absorb the majority of remaining funds. While both projects could theoretically take place at the same time, budget logistics make the outcome doubtful. There will likely be no federal funding available for local projects if New Mexico pursues construction of a New Mexico Unit” (Oglesby 2012, 233).

In this vain, much of the opposition’s arsenal is focused on a comparison of the economic efficiency and expected water yield of various diverting and non-diverting projects. Alternative proposals include “improving existing wells, water lines, regional systems, effluent

treatment systems, rural supply, and sewage systems, as well as agricultural diversion structures” (Oglesby 2012, 233). Other ideas plan ahead for future need, like the Nature Conservancy suggestion to place “the \$66 million federal subsidy into a permanent endowment, the proceeds of which would fund water use projects in the Southwest Planning Region as they develop” (Ibid.). Specific projects could range from “forest thinning, prescribed fire, erosion control, and road drainage improvement” to “floodplain connectivity and recharge, riparian habitat enhancement, wetland restoration, and water quality improvement projects.” The \$66 million subsidy is not just some nebulous prize, but is the expression of “a real need” that has the potential to “address existing and future water supply demands” (Ibid.).

For one example, the GCC estimates that the installation of “high-efficiency toilets could reduce demand at a cost of \$360 per acre-foot saved, high-efficiency clothes washers could reduce demand at a cost of \$1,136 per acre-foot saved, and low-flow showerheads could reduce demand at a cost of \$261 per acre-foot” (Oglesby 2012, 234). In addition to reducing municipal leaks “below 10 percent and increasing rates charged to large water users,” these water-saving measures could save as much as 4,269 acre-feet per year from a \$10.4 million investment (Ibid.). For 12.5% of the cost, these minimal projects would yield savings that equal roughly 30% of the AWSA water allocation. Water supply projects deliver with 2.5 times greater efficiency than the CAP Entity. Even disregarding ecological concerns for a moment, the diversion looks to be an all-around bad short term investment.

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New Mexico political indicators suggest that the downfall of the New Mexico Unit may be around the corner. Attacking the issues chronologically, the diversion had longstanding, tacit support from former Gov. Susana Martinez (R; 2011-19). The administration, for instance, maintained the *billion-dollar boondoggle* as a viable recipient of AWSA funds and allowed ISC planners to continue advancing infeasible project designs. The legislature, meanwhile, was quickly getting fed-up by the recurring head of what – from a Santa Fe perspective – was an unwanted project. State Senate Majority Leader Peter Wirth (D), for instance, proposed legislation in 2017 that would reorganize the selection process for ISC commissioners and prioritize technical experts over politically-motivated appointments (Stephens 2018, Personal communication). This way, the integrity of the ISC as an institution could perhaps be redeemed. Similarly, former Silver City Senator Howie Morales introduced a bill in 2018 that would allocate AWSA to specifically non-diverting projects¹ (Gaume 2018, Personal communication). It is a clever, uncomplicated way of killing the project; the diversion would lose any economic solvency while maintaining its political legitimacy.

Though neither bill passed at the time, momentum has since built-up after the overwhelming political turn around (some call it *the blue wave*) that swept New Mexico during the 2018 Mid-Term election. Lujan Grisham (D) won the race for governor and the democratic/progressive caucus in the legislature now assumes an even greater majority. Howie Morales has become Lieutenant Governor and many hoped he would keep water as a principle item on the agenda. During her campaign, Grisham already committed herself to protecting the

¹ While the ISC most directly controls the administration of AWSA funds to the CAP Entity, the state legislature can pass bills that set additional parameters and guidelines. Governors, meanwhile, can veto the allocation of funds to specific projects.

free-flowing status of the Gila (Gaume 2018, Personal communication). As of Spring 2019, the fledgling governor has only been in office a few months and has had little time to prove herself. That said, Grisham made major news headlines when she vetoed ~1.69 million of AWSA dollars (from the first pot) in funding for ISC planning and proposal research (Siwik 2019, Personal communication). To opposition leaders, the 2019 legislative session yielded promise; they waited to see if candidates would live up to their word. Grisham's veto, while just a first-step in a long process, gives project opponents newfound hope that the New Mexico Unit to the CAP will be nixed and thrown-away for good.

Additionally, the CAP Entity is beginning to run up against serious CUFA deadlines. The AWSA requires that a second RoD be submitted by the Bureau of Reclamation at the end of 2019 for final approval on a project – the much anticipated moment when the second pot of funds would be made available for a diversion (Oglesby 2012, 226). The issue, however, is that the CAP Entity is well behind its timetable for meeting required NEPA benchmarks. The *National Environmental Policy Act* is “[a]n innovative piece of legislation... [that requires] the federal government to prepare and environmental impact statement (EIS) in advance of federal policy in order to determine its environmental consequences... [R]ational decision-making models where the ‘costs’ and ‘benefits’ of policy are articulated... [are used to compare] a range of alternatives” (Esepland 1998, 7).

Before administering AWSA funds, “[t]he Secretary [of the Interior] must complete a NEPA environmental review by issuing a Record of Decision... [that] include[s] the final action to be taken, alternatives considered, the environmentally preferred alternative, mitigation plans, enforcement and monitoring commitments, and a discussion of how all practical means to

avoid or minimize environmental harm have been adopted, and if not, why they were not” (Oglesby 2012, 226). CAP proponents label their activities as simply “adhering to the law” (Campbell 2019, Personal communication), while others perceive their attitudes as “entitled” (Schulke 2019, Personal communication). Indeed, much of the discrepancy boils down to a question of which party has the primary burden of obtaining the funds.

People like Gutierrez and Campbell, for instance, are under the impression that their job (along with the CAP Entity) is to simply check a few bureaucratic boxes; the funds have already promised now it is the duty of the federal government to deliver (Campbell 2019, Personal communication). Conversely, conversation groups push the idea that diversion funds are available contingent on the quality of the proposal – they believe the language of the AWSA puts the federal government under no obligation to administer the second and third category of funds towards an unsatisfactory project. Disagreement over the spirit of the law will be hotly debated over the summer of 2019, as the BoR recently announced that earliest completion of the New Mexico Unit EIS will be 2021, well past the current deadline.

The CAP Entity has reportedly responded to the BoR statement with outrage and indignation, calling for an expedited procedure and demanding the BoR meet the 2019 deadline (Siwik 2019, Personal communication). The Bureau, however, has responded by listing a series of deadline extensions initiated by the CAP Entity, whose project has repeatedly changed over the last five years – the BoR only received a completed blueprint by the beginning of 2019. It is logistically impossible for any federal agency to complete an aptly thorough EIS without having a fully-defined project on the table. Lacking such information – as has been the case for the last several years – would mean completing an environmental review well below NEPA standards.

All is not necessarily lost for the CAP Entity, however. Embedded in the CUFA is a provision that would allow the diversion-planning-body to apply for an extension up to 2030. The extension will be granted, so long as the New Mexico CAP Entity can demonstrate the delay was not the fault of the state. That said, CAP Entity representatives – under the guidance of their legal counsel, Pete Domenici, Jr. (ironically the son of the former U.S. Senator) – have suggested that they shouldn't have to apply for an extension (Schulke 2019, Personal communication) or that the extension should be granted with little question (Campbell 2019, Personal communication). This perspective goes back to the earlier discussion of the spirit of the law, that it is the Bureau of Reclamation's job to find a way to give the CAP Entity their money and, if they don't give an extension automatically, the BoR is failing on exercising their duty.

Writing this piece in April of 2019, it is fully possible that, in the next few months, the diversion will be killed purely by virtue of its lateness. Even if the CAP Entity submits a request for an extension, it appears that the BoR (not to mention GCC and a host of other advocacy groups) have ample evidence that demonstrate the culpability of state organizations (the ISC and NMCAPE) in protracting the timeline and creating an impossible logistical situation for the Department of the Interior. To quote Norm Gaume: "There's no doubt that the diversion will be killed, it is just a question of how and when it will die" (Gaume 2018, Personal communication).

New Mexico politics are historically unpredictable, so I prefer making somewhat less declarative concluding remarks - in a game of probabilities, I would err on the side that the project will not happen. That said, what can the Gila diversion saga – as a whole – tell us about where we stand as a society in relation to our environment? Has it all just been another iteration of the "old vs. new guard" conflict? Or can we see in it something greater, that by

rejecting the diversion on moral grounds we stand at the precipice of Haraway's imagined *Cthulucene*?

Reclaiming the river does not have to mean dispossessing irrigators and delegitimizing their way of knowing the world. As Rumi once said, "There is a grey field between right and wrong, and that's where I'll meet you." The Gila winds through a gray field of collective memory, contemporary developments involving the river management cannot be divorced from the cultural trappings of history and a shared experience of place. The project, as the subject of this case study, has been an exercise in trying to understanding the historical significance of a moment as it is in the process of happening. It would be useful to revisit the Gila River and the AWSA diversion in a few years; it is only then we will know anything for sure.

Epilogue: A profile of Norm Gaume, "Hero of the Gila":

Norm Gaume is, perhaps, the most prolific, publicly known figure tied to the Gila diversion controversy. The former Director of the ISC (1997-2002), Gaume left retirement to do battle with his former organization and save his childhood river.

Born and raised in nearby Deming, the Gila Wilderness has forever been a place wonder, solace, and adventure for Norm Gaume. An avid whitewater enthusiast, he knows the nooks and crannies better than most. Nearly ten years into retirement, it took Gaume a while to fully comprehend and recognize the circus going on from within the Interstate Stream Commission. Away on a canoe trip in Costa Rica, it only took Gaume 10-15 minutes of reading the preliminary report on the "billion-dollar boondoggle" to realize that the project – at its very core – was "fatally flawed". He was incised as a water advocate, engineer, and, not least of all,

as a boater. “To be honest,” he confides, “I would have never gotten involved if they weren’t fucking with my river” (Gaume 2018, Personal communication). Familiar with the ISC, Gaume resolves to attend a few meetings, say his piece, and leave knowing there was no possible way this project would get off the ground. “I was so naïve,” he tells me.

It rapidly dawned on Gaume that the ISC – the cherished institution with whom spent the most accomplished parts of his career – was breaking the law with a particularly egregious violation of the Open Meetings Clause (Gaume 2018, Personal communication). The commission members were holding closed meetings in secret and withholding minutes from the public. Decisions were often made within these meetings that would later find their way onto the record, but with no apparent trace of their origin. Exercising his legal rights, Gaume submitted a “Freedom of Information Act” (FOIA) request to uncover the missing transcripts. Gaume, knowing the ISC all too well, recognized the extent to which the organization had been corrupted, both in regard to its scruples and disciplinary expertise. Consequently, he filed a lawsuit against the ISC for violating the Open Meetings Clause. Drawing an explosive fanfare of media attention, Gaume sought primarily to reform the ISC by seeking procedural reparations in court and from the pressure of public embarrassment that, he thought, was sure to follow.

John Fleck, an accomplished water writer and Professor of Water Resources Management at the University of New Mexico, calls Norm “the hero” of the struggle for the Gila. (Fleck 2019, Personal communication). The water beat reporter for *The Albuquerque Journal*, Fleck was the first of a handful of journalists to regularly follow the story. Closer analyses of the ISC’s crime was met with widespread shock when the general public, for the first time, became aware of the albatross that was CAP Entity boondoggle. Fighting against a

half-million-dollar defense, Norm won the case at the cost of \$225,000 of his own savings. The state rewarded Gaume \$80,000 legal fees and ISC was forced to apologize and repeat all of its clandestine meetings in public. A fighter for the Gila, Norm was just as much petitioning for a standard of transparency in government dealings. “The way the ISC was acting – the lies – I just couldn’t believe it. I had never seen anything like it before. It’s strange looking back, almost as if it foreshadowed what was to going to happen on the national stage with the Trump administration and *post-truth politics*.”

Norm doesn’t mince his words. He speaks his mind. That said, he shares very special words for Craig Roepke. A former colleague, Gaume knows him well. “Craig’s competent, he’s just a sociopath” (Gaume 2018, Personal communication). Roepke, according to Norm, “is fully aware of what he’s doing. He knows the engineering is nonsense. He wants to be ‘the hero’ to deliver the Gila diversion to the state. It’s all ego, Craig has no remorse.” In 2013, Roepke gave Gaume a presentation on the New Mexico Unit. Consisting of eighty slides, Norm saw it as “a sales pitch,” straw-manned of any technical acumen. The “yield of water” was given as a cartoon and it lacked any sophisticated mention of the history of junior water rights. Gaume cut to the chase and asked Roepke for the model. Roepke said no. Gaume, subsequently, filed an Inspection of Public Records Act (IPRA) request. Esteban Lopez – the acting Director of the ISC – attempted to block Gaume’s application, using the Database Act as a loophole. Intended as a way of keeping voter registration away from telemarketers, the Act allows agencies to use discretion when releasing public records that could be used for political purposes. The “Database Loophole” has become an unfortunate feature of the political landscape, as of late.

The State Attorney General’s Office eventually realized the innocence of Norm’s inquiry

and granted access to the documents. As expected, the model was unsound; keeping it hidden was Roepke's attempt at saving face and maintaining the project's illusion of promise. A single line, however, stood out. Email correspondence was revealed between Roepke and an associate to whom he forwarded the model. It read, "Don't give this away." Here, we see Roepke at his most vulnerable. "Don't give this away," the phrase is insidious. Is it not the perfect summary of the Gila saga?

"Don't give this [water] away [to Arizona]."

"Don't give... away [the prayers of your ancestors]."

"Don't give... away [the first 'Wild' river]."

Roepke, here, most concretely referenced a breach of justice and the repeated abuse of public office. That said, like playing in the sand of a dried creek-bed that wind its way through *Little Bear Canyon* en route to the Middle Fork, we are co-creators in the generative space of "becoming-with." Craig Roepke may have been repeatedly dishonest, though he is tied up in the string figures just as much as much as Ella Jaz and the Mogollon people and Aldo Leopold. Howard Smith and Anthony Gutierrez are friends. In a high-profile political dispute that threatens to tear a whole Wilderness, how do people manage to keep their "post-humestic," composting relationships alive? Sometimes, the tightest webs are the hardest to break, yet break and reassess we must in the hopes of moving forward together.

CONCLUSION: UNDERSTANDING THE GILA IN CONTEXT

Donna Haraway has played an integral role inspiring the perspective for much of this Capstone project. She jumps with ease between conversations on climate policy and the imaginary scope of *becoming-with* and making better worlds. In forming her worldview, Haraway has drawn inspiration from Hannah Arendt, specifically her commentary on the senseless evil embodied in figures like Adolf Eichmann. She witnessed in him something “much more terrifying” than an “incomprehensible monster” (Haraway 2016, 36). To Arendt, Eichmann embodied the essence “a human being unable to make present to himself what was absent, what was not himself, what the world in its not-one-selfness is and what claims-to-be inhere in not-oneself.” In other words, the remorseless engine of the Nazi genocidal machine was marked by “commonplace thoughtlessness” (Ibid.). Wedged in an autopoietic echo-chamber, Eichmann could not “entangle... could not cultivate response-ability, could not make present to itself what it is doing, could not live in consequences or with consequence, could not compost. Function mattered duty mattered, but the world did not matter for Eichmann” (Ibid.).

It is the prerogative of this paper – for the perpetuation of the Gila River, its riparian co-habitants, and, indeed, the well-being of the whole world – that we do everything in our power to remain *thought-ful* as opposed to *thought-less*. Cliff-Gila Valley irrigators are *tentacled* insofar as they engage in the co-constitutive process of place-making with their neighbors. Perhaps the scope of what is considered a *neighbor* needs to be expanded, though that is an easier problem to fix than starting from scratch; it is quality people like Anthony Gutierrez and Norm Gaume – regardless of overt political disagreement – that make *staying with the trouble* worthwhile. Craig Roepke’s path with the ISC, however, veers closer than comfortable to ill-

fated thoughtlessness; the *billion-dollar boondoggle* and Open Meetings violation have led into escalating levels of distrust from which the region has still yet to recover. That begs the question, how can we recover – or, Haraway puts it – “how to revolt?... How to matter and not just want to matter?” (Haraway 2016, 47).

The *revolution of thought*, in some ways, will have to be deliberate. Creative and ingenious solutions are needed to make up for the harm we, as humans, have caused and to try our best – through active participation – to avert future disaster. Still, sometimes the key to revolution (and moving out of a humanistic, anthropocentric worldview) is simply sit by the banks of a river and watch as the thinking-minds of other creatures do their work. David Probst, a scientist for the NM Department of Game and Fish, has watched with awe the recovery of the endangered species, which was thought to have “nearly gone extinct... but now claim[s] a solid foothold in the headwaters” (Connors 2018, 191). Subsequent studies have shifted focus to examine how “native fish respond to historic wildfires in a relatively intact river system” (Ibid.). Following historic mega-fires in 2012, data indicated “radically diminished numbers of loach minnow and spikedace... and not a single instance of the headwater chub” (Ibid.). Researchers feared the worst. The 2017 survey, however, yielded unexpected results.

Just, downstream of the proposed dam, “spikedace and loach minnow appeared... in numbers not seen in years... [and the chub] in places where it had been completely absent since before the big fires” (Connors 2018, 191). Probst asked the essential question, “*If you have devastating disturbances, and at all sampling locations you’re not finding species, and then all of a sudden they’re back, and in some cases superabundant – where are the refugia?*” (192). He theorizes that *connectivity* is at the root for the marine species’ success in surviving

post-fire conditions in the Gila. “Somewhere in the watershed, survivors had hung on in little scattered pockets, finding havens amid floodwaters dark with ash and sediment. As the burn scars recovered and the watershed stabilized, the survivors began to leave their regugia and recolonize stretches of the river where the floods had wiped them out” (Ibid.).

The capacity for the chub, loach minnow, and spikdace to connect is unique to the undammed and relatively intact Gila River; by comparison streams that been “dammed up and sucked dry... fragment habitat and isolate surviving species” (Connors 2018, 192). In is a process which “erodes genetic diversity” and decrease species’ “resilience to threats such as such as drought, non-native predators, and floods thick with ash” (Ibid.). Using his research as an advocacy tool against the diversion, Probst argues that “[b]uilding a dam would be like building a wall... The wandering of the wanderers would forever be curtailed” (193). His case – even down to the rhetoric – bears remarkable similarities to Haraway’s prose and worldview. Fish species interface and relate to the river, Wilderness, and wildfire through mechanisms beyond our human way of knowing.

“[C]oral and lichen symbionts also bring us richly into the storied tissues of the thickly present Chthulucene, where it remains possible – just barely – to play a better SF game, in non-arrogant collaboration with all those in the muddle... Alternatively, we can join in the metabolic transformations between and among rocks and critters for living and dying well. ‘*Do you realize,*’ the phytolinguist will [one day] say to the aesthetic critic, ‘*that [once upon a time] they couldn’t even read Eggplant?*’ And they will smile at our ignorance, as they pick up their rucksacks and hike on up to read the newly deciphered lyrics of the lichen on the north face of Pike’s Peak” (Haraway 2016, 56).

Science like Probst's research can help, though we need to relate to and learn directly from non-human entities. It has critical bearing, not just on the future river management, but on the well being and future of the world as a whole.

As this paper concludes, I would like to recall the Momaday quote from the first page. "[A] man ought to give himself ought to give himself up to a particular landscape, to look at it from as many angles as he can... He ought to imagine that he touches it with his hands at every season... He ought to imagine the creatures that are there and all the faintest motions in the wind." The Gila Wilderness is the *remembered earth* for so many people and non-human entities already. Momaday sees the existential tie to place and the remembered earth as the basis for his environmental ethics; "people have always had the example of a deep, ethical regard for the land... Surely that ethic is merely latent in ourselves. It must now be activated... The alternative is that we shall not live at all" (Momaday 1998, 49).

I feel privileged and honored to have had the opportunity to give myself up to the Gila Wilderness, at least for a little while. The river is a refuge, for humans and the chub alike, and an inspiration to better serve and protect the natural world. The means to do so, in many cases, are accessed through the overlapping networks of policy, power politicking, and publicity. Sometimes, however, the first step is to quiet the manic voice in your head and sit long enough to listen to the gentle swaying of the current along the river. A breeze rummages through the brush. Perhaps a bird is chirping in the distance.

You look at the water and imagine the scope of its journey, from the Mogollon mountains, through the middle-fork of the Wilderness, and into Arizona. Often the water exits the channel and travels over the *valley whip* and into the ditch where it is distributed for

irrigating grasslands in the Cliff-Gila Valley. Perhaps you take the journey further downstream and you find yourself, suddenly, entering into Phoenix's municipal supply water, popping-up in a road median fountain and then dropping-back down to the subterranean, urban water-conveyance system. Maybe you would be so lucky as to enter the *Pima-Maricopa Project*, the proud result of a century-and-a-half long effort to restore the water rights of Indigenous communities.

All of these people, places, and ideas are connected through the Gila. Focusing-in on the experience of solitude reveals that – when sitting along a river – there is no such thing as being alone; you have become a part of a system much greater than yourself, that has existed long before you were born and will continue to exist (in some form) long after you die. It is equal parts the Gila of the whitewater-paddling enthusiast as it is the Gila of the homesteaded rancher families or the javelina or the headwaters chub.

Even if the AWSA Gila diversion drama could be resolved through strictly political venues, the solution would probably miss the point. *Becoming-with* the Gila means stretching out the space inside your heart to include a whole new world of creatures and things that define place. It is on those occasions when... “we are deprived of these attachments and find ourselves... literally *dislocated* in unfamiliar surroundings... [that something so] subtle... [as] absent smells in the air or not enough visible sky... [can bring sense of place] surging [back] into awareness” in pressing and powerful ways (Basso 1996, xiii). The Gila, as a place, has had a small yet profound impact on my life. It has a permanent lease in a corner of my imagination, playing with memory through the ethereal qualities of the river's spirit. I can only speak for myself, though I believe the same to be true for many. The fight for the river is a fight for home.

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