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## Las Vegas in an Era of Limits: Urban Water Politics in the Colorado River Basin

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LAS VEGAS IN AN ERA OF LIMITS: URBAN WATER POLITICS IN THE  
COLORADO RIVER BASIN

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## ABSTRACT

### **Las Vegas in an Era of Limits: Urban Water Politics in the Colorado River Basin**

By

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Despite its status as the nation's driest metropolis, the Las Vegas metropolitan area's water supply is limited by law and not by local environmental conditions. The federal government allocates 300,000 acre-feet of water per year to the metro-area. During the 1980s the Las Vegas metro-area grew from 400,000 people to 750,000, stressing this allocation. During that same period, the metro-area's water regime consisted of disunity and competition among four separate water agencies, as well as a combination of complex and sometimes competing city, county, state, and interstate laws. This regime contributed to an additional increase in water consumption rates beyond those associated with population growth. In 1991, metro water managers responded to these challenges by creating the Southern Nevada Water Authority (SNWA), an agency that centralized previously separate water agencies into a single organization, one that possessed legal authority to implement conservation policy throughout the metropolitan region and to engage in interstate political negotiations over acquisition of new water resources.

My study of the SNWA highlights a geopolitical condition many American metropolitan areas face in the twenty-first century: water management and resource acquisition occurs at a geographical scale that extends beyond city, county, and even

state boundaries. This reality necessitates both intra and inter-state political interaction, something the SNWA experience demonstrates. Unique to the Las Vegas metro-area, is the degree to which interstate and federal laws influence SNWA water policy. Reliance on the Colorado River required adherence to city, county, state, and interstate laws. During a four-year period of political consolidation, the SNWA absorbed local, county, and state level power, a combination that enabled it to negotiate political boundaries within Nevada, and the legal authority to engage other Basin state governments. The political composition of the SNWA has made it an effective body to navigate an era of limits, in which metropolitan areas face challenges of increased population growth, limited water supply, and complex legal systems.

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In addition, I would like to thank the rest of my committee: Andrew Kirk, who helped me understand the deep history of Las Vegas, Eugene Moehring, whose knowledge of Las Vegas is unsurpassed, and David Tanenhaus who brought a critical eye to bear on the project and provided valuable feedback. And lastly, Thomas Piechota, who not only served as my graduate college representative, but also oversaw the UNLV Urban Sustainability Initiatives program. This Department of Energy sponsored program brought together students from a wide range of disciplines from across the UNLV campus. This program provided vital funding for my research in the form of a four-year

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## CHAPTER 1 | INTRODUCTION

In 1989, water use in the Las Vegas metropolitan area increased to unprecedented levels. Consumption rates there had always exceeded most other metro-areas, in part the result of its location in an arid environment; however, between 1988 and 1989, water use increased by eighteen percent, a development that alarmed many metro area water managers, people such as the Las Vegas Valley Water District's General Manager Patricia Mulroy. Elected officials and water planners had been aware that the Las Vegas metro-area was among the fastest growing in the nation—but they were unprepared for such a dramatic increase in water use in such a short amount of time. Elected officials at both the state and county levels were caught off guard. Planners with the Colorado River Commission of Nevada had no contingency plan in place to address increased consumption rates in the metro-area and in one public meeting, Clark County Commissioner Paul Christensen stated that he was under the impression that the metro-area possessed enough water to last until the year 2020.

Water planners in each of the metro-area's four separate water utilities grew concerned that their water resources would be inadequate to support further population growth, a development that would, according to the University of Nevada, Las Vegas's Center for Economic and Business Research, have an adverse effect on the southern Nevada economy.<sup>1</sup> The Center predicted that without adequate water, there would be a sixty percent decrease in construction jobs, a nineteen percent fall in financial and real estate employment, and an eighteen percent reduction in the amount of hotel related service positions.<sup>2</sup> There was a palpable sense of panic among the metro-area's elected officials and water managers.<sup>3</sup>

In 1989, not waiting for assistance from the state or county government, planners for the metro-area's largest water utility, the Las Vegas Valley Water District, took matters into their own hands. That year they applied for rights to nearly a million acre-feet of groundwater located in several rural valleys, 250 miles north of the metro area (fig. 1). The pipeline into northern Nevada would be difficult from a technical and legal standpoint. In order to utilize this resource, District engineers would have to design a conveyance system capable of transporting thousands of acre-feet of water through desert valleys and over several mountain ranges.

There was also the prospect that groundwater from the region would prove to be an unreliable resource. No one really knew how much water was available, or how long it would last if and when the District completed its pipeline. Despite this uncertainty, District water managers felt they had no other choice. During the 1980s, the Las Vegas metro-area's population roughly doubled in size from 425,000 people to over 750,000.<sup>4</sup> By 1989, growth rates showed no signs of slowing. Water managers feared they would not be able to meet demand.<sup>5</sup> How was this possible though, when the Colorado River, the largest river in the southwestern United States flowing at over fifteen million acre-feet per year, coursed less than twenty miles away from the metro-area? Since one acre-foot was enough water to serve the annual needs for a family of five, the Colorado's volume was certainly enough to supply a metro-area of 750,000. Supply was therefore not the issue. Nor was infrastructure. The Water District possessed the pipelines and pumping stations necessary to convey Colorado River water to the metro-area's homes and businesses. During the 1970s the federal government had built the Southern Nevada Water Project for just this purpose. What

factor, then, compelled the Water District to look north into one of the driest regions of the United States for water resources?

The Law of the River, a common law doctrine of court decrees, legislative acts, and interstate agreements contained the parameters within which Las Vegas metro water managers had to operate. The key component of the law was the congressionally established allocations that specified each state's share of the Colorado River. In Nevada's, and by extension, metropolitan Las Vegas's case, that amount was set at 300,000 acre-feet per year, the lowest allocation among the seven states that shared the river.<sup>6</sup> In 1989, the Water District was not politically strong enough to challenge this law at the interstate and federal level and was thus unable to press for a solution to its impending water shortage. The Water District's inability to utilize the closest available resource illustrates a central irony in metropolitan Las Vegas's late twentieth century water history: despite being the nation's driest metropolis, its water supply was not limited by local environmental conditions, but by federal law.

The inability of the Water District to affect a political solution to its water crisis at the interstate level ushered in a new regime of Las Vegas metro-area water politics, one that is the subject of this dissertation. Dissatisfied with its lack of political power, in 1991 the Water District, along with the water utilities of North Las Vegas, Henderson, and Boulder City, unified into a new superagency, the Southern Nevada Water Authority (SNWA) (fig.3).<sup>7</sup>

*Las Vegas in an Era of Limits: Water Politics in the Colorado River Basin* is an urban history of a desert metropolis within the politically defined region of the Colorado River Basin. The states that comprise this basin are Wyoming, Colorado,

Utah, and New Mexico in the Upper Basin, and Nevada, California, and Arizona in the Lower Basin. Water has always been a limiting factor for human existence within the Las Vegas Valley. But by the midpoint of the twentieth century, it became clear to Las Vegas metro-area water managers that the scale of water management was regional, not local. This is because southern Nevada water managers increasingly utilized the Colorado River as the metro-area's primary water resource. This marked a shift away from reliance on local groundwater, a small resource, albeit one with comparatively few legal restrictions. When metro-area water managers began relying on the Colorado River in the 1970s, they tapped a larger resource, but one that came with a host of regulatory requirements. By 1989, metropolitan population growth began to strain the limits of the metro-area's Colorado River allotment, limits that were imposed solely by the Law of the River. This project examines the manner in which Las Vegas metro-area water managers addressed this challenge between 1989 and 2010.

The central argument of my dissertation is that the Law of the River, not environmental conditions, is the main limiting factor during the fifth (SNWA) regime, from 1989 to 2014. My argument is one that differs from the SNWA's and other political units within the Colorado River Basin. Up until 2005, SNWA spokespersons often blamed the Law of the River for the metro-area's water challenges. Since 2005, however, the SNWA has downplayed the inequitable distribution of the Colorado River. The Authority ultimately found it more productive to work with the other Basin states, and calling for changes to the Law of the River not only exposed the limits of the SNWA's political power in comparison to the other basin states, but it also put officials in those states on the defensive. In other words, the SNWA's



decision to avoid mention of the Law of the River was a political expedient. However, from the historian's vantage point, shortages imposed by the Law of the River are indeed the central issue driving SNWA water policy. After all, federal restrictions on access to the Colorado River served as the impetus for metro-area water managers to create the SNWA.

The Law of the River has influenced nearly every single SNWA policy decision since 1991, including the construction of the groundwater pipeline mentioned above. The SNWA assumed responsibility for this project the year the agency was created. Ironically, the pipeline project reflects the limitations of the agency's political power. The SNWA's pursuit of water in White Pine County represents one of the first times in Nevada history that a water utility has attempted to procure water resources from such a distant location. However, the SNWA has faced enormous opposition from rural interests and the success of the pipeline project is not assured. Additionally, and more importantly, the fact that the SNWA is pursuing it in the first place represents the agency's inability to obtain a greater share of the Colorado River.

The primary contribution of this project is that it examines the impact of the Law of the River at the metropolitan level. Other works tend to focus on intra-state competition for water resources, such as that between Los Angeles, San Diego, and the Imperial Valley agricultural communities, or interstate conflicts, such as those between Wyoming and Colorado, or more often, between Arizona and California.<sup>8</sup> The Las Vegas example is useful in that it presents a case in which the link between federal policy and metro-area is clear and immediate. In all of the other Colorado River Basin states, multiple users possess rights to the Colorado River. These users

are widely distributed geographically, are both urban and rural, and comprise a wide range of economic interests. Metropolitan Las Vegas, on the other hand, presents a more economically homogeneous and geographically constrained case study, and makes the urban reaction to federal policy more easily discernable.

Additionally, this project focuses on the aspects in which the Las Vegas metro-area is truly unique. Many critics have commented on metropolitan Las Vegas's distinctiveness, but often their analysis of the metro-area tends to focus on gaming and divorce, prostitution and alcohol consumption, highlighting the socially permissive aspects of the southern Nevada economy, and implying that "what happens in Vegas" only happens in Las Vegas.<sup>9</sup> These treatments emphasize the sensational and conflate economic drivers with local social norms. In succumbing to these trite characterizations, critics fail to acknowledge traits Las Vegas shares in common with many other urban areas throughout the nation. Many benign aspects of recreation drive the Las Vegas metropolitan economy: hotel room fees, restaurant bills, car rentals, taxi cab fares, tips to bartenders, and so on. These things, however, are not unique, nor especially noteworthy. Reliance on recreation and, increasingly, gaming form the economic underpinning for numerous cities across the nation. The difference between Las Vegas and other resort towns (places such as Atlantic City, New Jersey; Leadville, Colorado; and Ledyard, Connecticut as well as the skiing communities located in New England's White Mountains, the Colorado Rockies, and Sierra Nevada) is a difference of scale, not kind. Like Las Vegas, Americans travel to these areas in order to enjoy a sensory experience.<sup>10</sup>

However, the Las Vegas metropolitan area is unique for the manner in which its water policy developed. Las Vegas metropolitan water policy evolved entirely

within the confines of the Law of the River, a legal regime that applies to a territory of nearly 800,000 square miles. Equally distinctive, was the response to the Law of the River by the metro-area's four water utilities. In an uncommon development within the Colorado River Basin, the five separate water agencies that serviced the Las Vegas metropolitan area decided to unify into a member-based superagency, in which each formerly separate utility had equal standing. This was a departure from other Colorado River Basin water agencies, nearly none of which unified into larger metro-level water agencies. One notable exception, the Metropolitan Water District of Southern California (MET), does represent a member based, multi-city water agency. However, the political standing among the MET's twenty-seven member agencies varies widely.<sup>11</sup> This was a model that Pat Mulroy, the General Manager of the Las Vegas Valley Water District and later the SNWA, actively sought to avoid.<sup>12</sup>

An additional theme of this dissertation is the comparatively late development of the Las Vegas metropolitan area and how that affected water policy decisions. Among major American metropolitan areas, it is one of the newest, being founded in 1905. In fact, it is the only major metropolitan area in the American West to be founded in the twentieth century.<sup>13</sup> Some recent media treatments of the Las Vegas metro-area applaud the development of high-rise condominiums and a move by businesses to relocate downtown, labeling the trend the "Manhattanization of Las Vegas."<sup>14</sup> This mistaken assumption presumes that the southern Nevada metropolis is on the same developmental trajectory as New York City. Every urban area in the United States developed in a unique context, whose circumstances exerted a particular set of pressures. These pressures in turn influenced the course of urban development.

While Las Vegas does share similarities with other major American cities, the historical context in which it developed differed.

In 1989, the greatest challenges facing metro-water managers were water scarcity, metropolitan political fragmentation, and population growth. Though officials in other American metro-areas had also faced these challenges, their counterparts in metropolitan Las Vegas did so in a later era in which a different set of economic, social, and political circumstances existed. For example, the previously mentioned SNWA pipeline project places the Las Vegas metro-area alongside other major cities that have built, and now utilize, hinterland pipelines. Examples include New York (the Croton Aqueduct), Los Angeles (the Owens Valley Aqueduct), San Francisco (the Hetch Hetchy Aqueduct), Denver (the Colorado Big-Thompson Project), Boston (the Pressure Aqueduct System), and Atlanta (which relies on Lake Lanier, an artificial reservoir approximately forty miles distant).<sup>15</sup>

However, Las Vegas, unlike these other cities, is building a pipeline in an era in which the Endangered Species Act exists, a time of increasing environmental uncertainty, and a “Post Owens Valley” era. The notoriety of the Los Angeles Department of Water and Power’s early twentieth century campaign to appropriate water from the Owens Valley has influenced nearly every single water project nationwide since, to include the SNWA pipeline.<sup>16</sup> Not only were there additional political barriers to pursuing more water, but most of the Colorado River Basin’s available water resources had already been appropriated by earlier developing areas. Metropolitan Las Vegas must vie with both metro-areas and agricultural interests that have early twentieth century, and therefore superior, claims to the region’s water sources.

Las Vegas's late development had in-state ramifications as well. Urban governance in southern Nevada has always been subservient to state government. This trait is not unique to Las Vegas; however, other cities throughout the state had longer to develop and have not experienced the same rates of growth as those that have occurred in southern Nevada. The combination of state supremacy and rapid growth challenged local efforts to address various infrastructure needs. Since 1991, the SNWA has labored to recapture a level of local governance, something that could be labeled "regional home rule." Between 1993 and 1995 the SNWA partially achieved this goal when it compelled the Nevada legislature to restructure the state's Colorado River Commission (fig. 4).

Recognizing Las Vegas's water history helps provide a more complete historical picture of western American urban development, and can serve as a useful example for water planners throughout the Colorado River Basin. Las Vegas water managers reacted to shortage by banding together to form a new agency to increase the metro-area's political power and to decrease overall water consumption. This is a model that could theoretically be employed on a larger geographic scale, such as the Colorado River Basin. These realities are what make an examination of Las Vegas water worthwhile.

Though the focus of this dissertation is an analysis of the SNWA from 1989 to 2010, a quick overview of the prior historical water regimes that existed in the Las Vegas Valley (the valley in which the Las Vegas metropolitan area developed) provides some valuable historical context. The first, which I label the Pre-Urban Regime, was the longest, stretching from 10,000 B.C. to A.D. 1905. Dozens of springs flowed throughout the Las Vegas Valley and formed the primary water source

for Native Americans for thousands of years. Little manipulation of water sources occurred during this period. Euro-Americans occupy a small span of time during this regime, beginning in 1855. That year, Mormon missionaries established a fort alongside the Las Vegas wash, through which water from the previously mentioned springs flowed. The Mormons only resided in the valley for two years before being recalled to Salt Lake City for the impending war with federal troops that ultimately never came. After the Mormons left, ranchers moved in. While these Euro-Americans practiced agriculture to a greater degree than their Native American predecessors, their manipulation of local water sources extended primarily to digging irrigation ditches to divert water from the Las Vegas wash to their alfalfa fields.<sup>17</sup>

The second regime marks the beginning of the urban period in Las Vegas's water history. Regime Two lasted from 1905 to 1954, during which the Union Pacific Railroad and its subsidiary, the Las Vegas Land & Water Company managed local water resources. Regime Two is characterized by private ownership of water and the first large-scale manipulation of the local environment to increase water supply. In 1905, the Union Pacific Railroad established a link between Los Angeles and Salt Lake City and utilized the groundwater beneath the Las Vegas Valley as a commodity and as fuel. The railroad spurred economic activity, which in turn drew settlers. By the nineteen twenties the Union Pacific and its subsidiary, the Las Vegas Land & Water Company, were sinking wells, installing pumps, and building pipelines to serve commercial and residential purposes. The inconsistencies between the commercial pursuits of the Union Pacific and the needs of the public initiated the onset of the third regime.<sup>18</sup>

Regime Three occurred between 1954 and 1971, when local water resources came under the control of a public utility, the Las Vegas Valley Water District. The third regime is marked by public ownership of water, local control, and a shift from groundwater to the Colorado River as the metro-area's primary water resource. In 1954, groundwater remained the Las Vegas Valley Water District's primary water resource, but the District also built a modest pipeline, able to convey 54,000 acre-feet per year of the state's Colorado River allocation to the metro-area. This amount equaled only one sixth of the state's entire allocation of 300,000 acre-feet, but it was a sign of things to come. Local boosters like newspaper owner Al Cahlan, and U.S. Senator Alan Bible began to pursue federal assistance to build the Southern Nevada Water Project, an infrastructure system that could pump Nevada's full allocation to the Las Vegas metropolitan area. The central irony of Regime Three is that this was the period in which metro-area water managers traded local environmental limitations for those imposed by the Law of the River. Once Colorado River water began flowing into Las Vegas taps, metro-area water managers were required to abide by a federally imposed legal system applicable to the seven states that used the river. In 1954, however, metro-area water managers did not view this limitation as a problem.<sup>19</sup>

During the next regime, Regime Four, it did become a problem. This period is characterized by metropolitan population growth and increased competition among local governments over water resources, as well as state administration of metro-area water supply. The fourth regime began in 1971, when the federal government completed the first phase of the Southern Nevada Water Project. The legislature had given the Colorado River Commission of Nevada the authority to manage the Las Vegas metro-area's water supply. State management of a local resource proved

problematic. The Colorado River Commission instituted a system of individual allocations for each of the metro-area's municipalities, a system that unintentionally increased overall consumption as each municipality used more water than needed in an effort to justify an enlarged allocation the following year. As consumption increased, so did the level of political tension among metro-area governments. The tension finally came to a head in 1989; the year local water managers sought a way out of the crisis (fig.2). The Fifth (SNWA) Regime, and subject of this dissertation, emerged out of this situation.<sup>20</sup>

Patricia Mulroy, the General Manager of the SNWA from 1993 to 2014, is the primary human actor in this analysis. No person had greater influence on SNWA policy than Mulroy. She was at the forefront of every major political discussion at the city, county, state, and interstate level during her tenure. Mulroy and the SNWA have become synonymous in the public eye, in no small part because she served in the chief executive's post for a quarter century. The degree to which elected officials and the public identify Mulroy with the SNWA is shared by perhaps only one other water figure in history, William Mulholland. Not comfortable with the comparison, Mulroy has nevertheless influenced the historical trajectory of the Las Vegas metropolitan area as thoroughly as Mulholland did Los Angeles. Upon her retirement, Mulroy had become a regarded political figure not only in southern Nevada, but also throughout the Colorado River Basin and by federal water officials. Her presence accompanies the major developments analyzed in this book.<sup>21</sup>

Mulroy's longevity was the result of proficiency and effective leadership. One of the stipulations of her appointment in 1992 was that she appear for an annual review, during which the SNWA board could decide whether to extend her position



for another year. The board, comprised of elected officials from North Las Vegas, Henderson, Las Vegas, and Boulder City, recognized Mulroy's talents for leadership and reaffirmed her position every year for twenty-five years.<sup>22</sup>

Mulroy possessed an unexpected background for the principal water manager for the nation's driest metropolis. Mulroy was born in 1953 in Frankfurt, Germany, the daughter of a German mother and American father who worked as a civilian for the Air Force. She lived there for twenty-one years and then moved to Las Vegas in 1974. There she completed her bachelor's and master's degrees in German literature. She pursued a Ph.D. at Stanford but moved back to Las Vegas for family reasons. She applied for work with Clark County in the late nineteen seventies and worked there in a number of minor management roles for a few years until the county manager, Richard Bunker, took note of her abilities. He thought her leadership skills well suited for use in the Las Vegas Valley Water District, the utility charged with delivering water service to urban Clark County and the City of Las Vegas.<sup>23</sup>

The District was, and still is, the largest water utility in the metropolitan area. Bunker realized someone with a management background was needed to head the LVVWD. This was a departure from previous eras in which engineers held the top leadership positions at the District. Bunker felt the challenges for water management were political, not technical, and that someone with a management background would be a better fit. Mulroy distinguished herself and rose to the general manager's position of the District in 1989 and then the SNWA in 1993.<sup>24</sup>

The basic narrative of SNWA development is one of internal administrative consolidation followed by the wielding of this strengthened position on an interstate political plane. The primary impetus behind this consolidation, then use of political

power, was the Law of the River. As a collection of fragmented water utilities, the Las Vegas metropolitan area's pre-SNWA water regime was a non-entity in Colorado River Basin water politics. Mulroy quipped that the Las Vegas metropolitan area was "the Rodney Dangerfield of the river . . . we got no respect."<sup>25</sup> This apparent lack of respect stemmed from the fact that the Las Vegas metropolitan area posed no threat politically. The political discord among the metro-area's water agencies diffused its political power. The best water source to utilize for the growing urban population, given its proximity and size, was the Colorado River. Since the Law of the River governed the Colorado, any hope to affect change would require a political solution. Mulroy and her counterparts throughout the metro-area recognized that to have any chance to modify the Law of the River, the metro water-agencies would need to pool their political resources and unify.

The outline of this book begins with the local unification process by the four separate water utilities of North Las Vegas, Henderson, Boulder City, and the LVVWD. This process included restructuring the Nevada Colorado River Commission, the body charged with distributing the state's Colorado River water to the Las Vegas metropolitan area. The state legislature gave the Colorado River Commission this authority largely as a result of the competition among the metro-area's separate city governments. But the formation of the SNWA entirely arrested this competition, which rendered the Colorado River Commission redundant, and from the point of view of local water managers such as Mulroy, superfluous.

After consolidating city, county, and state level political control over the Las Vegas metro-area's water supply, Mulroy and the SNWA began to negotiate with the six other Basin States to modify the Law of the River. Since 1991, these interactions

have resulted in interstate shortage sharing agreements and temporary increases to the amount of Colorado River water the SNWA can withdraw annually. These modifications represent unprecedented changes to the Law of the River, changes that were, in part, the direct result of initiatives Mulroy and the SNWA spearheaded.

As we shall see, however, despite the SNWA's consolidation of local, county, and state level political power, the Authority has only been able bring about temporary changes to the amount of Colorado River water available to the metro-area. Between 1995 and 2005, the governments of the other Colorado River Basin states agreed to allow the SNWA to withdraw additional water from the Colorado River. However, these agreements only provided temporary relief. They specified that the SNWA could only withdraw water until its pipeline project came online. This was problematic on two counts. The first was that it only granted a temporary right to additional Colorado River water. Second, scientists who have analyzed the SNWA pipeline either do not know how long the resource will last or predict that groundwater pumping will deplete aquifers and eliminate them as a long term resource option. Given that it took tens of thousands of years to fill these aquifers, it is entirely plausible that any amount of pumping will draw these aquifers down faster than natural recharge. If the pessimistic predictions come true, then the SNWA will be back where it started: looking to the Colorado River to alleviate its water resource challenges. The temporary nature of the agreements and the SNWA's continued reliance upon the pipeline demonstrate a fundamental rigidity to the Law of the River. Neither option provides resource security for the Las Vegas metro-area.

Which returns us to the original assertion that the Law of the River exerts unique pressure upon the Southern Nevada Water Authority and the Las Vegas metro-

area community. Despite the fact the pipeline is hydrologically independent of the Colorado River, it nonetheless remains entwined within the complex political framework of Colorado River water politics and serves to illustrate how all water use in Las Vegas, regardless of the source, is ultimately tied to the Colorado River.<sup>26</sup>

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## NOTES

<sup>1</sup> Technically, five agencies comprise the SNWA. The fifth, the Big Bend Water District (BBWD) services the town of Laughlin, sixty miles south of the Las Vegas metropolitan area. Since the BBWD relies on the Colorado River for the entirety of its water resources, Southern Nevada water officials incorporated it into the SNWA. The BBWD was not a significant factor in the metropolitan political discussions leading to the creation of the SNWA and for that reason I have purposely excluded the agency from this analysis.

<sup>2</sup> William White, Thomas Carroll, and R. Schwer, "The Impact of a Water-Imposed Interruption of Growth in the Las Vegas Region," *Publications (WR)*, August 1, 1992, [http://digitalscholarship.unlv.edu/water\\_pubs/108](http://digitalscholarship.unlv.edu/water_pubs/108).

<sup>3</sup> Patricia Mulroy, interview by Author, December 12, 2013, Author's Collection; Kay Brothers, interview by Author, March 2, 2013, Author's Collection.

<sup>4</sup> M.W. Schofield, Assessor, "Clark County Population" (Clark County, NV, July 2006), Clark County Assessor, <http://www.co.clark.nv.us/assessor/Census.htm>.

<sup>5</sup> Southern Nevada Water Authority, "2006 Water Resource Plan" (Southern Nevada Water Authority, 2006), Las Vegas Valley Water District.

<sup>6</sup> Norris Hundley, *Water and the West: The Colorado River Compact and the Politics of Water in the American West* (Berkeley: University of California Press, 2009); Norris Hundley, *The Great Thirst: Californians and Water-A History, Revised Edition*, Revised edition (Berkeley: University of California Press, 2001).

<sup>7</sup> Southern Nevada Water Authority, "2006 Water Resource Plan."

<sup>8</sup> Hundley, *Water and the West*; Hundley, *The Great Thirst*; Marc Reisner, *Cadillac Desert: The American West and Its Disappearing Water* (New York: Viking, 1986); Daniel Tyler, *Last Water Hole in the West: The Colorado-Big Thompson Project and the Northern Colorado Water Conservancy District* (Boulder: University Press of Colorado, 1992); Gary Libecap, *Owens Valley Revisited: A Reassessment of the West's First Great Water Transfer* (Stanford: Stanford Economics and Finance, 2007); Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Oxford University Press, 1992); Robert W. Righter, *The Battle over Hetch Hetchy: America's Most Controversial Dam and the Birth of Modern Environmentalism* (Oxford University Press, USA, 2005); Robert Gottlieb, *Thirst for Growth: Water Agencies as Hidden Government in California* (Tucson: University of Arizona Press, 1994); William L. Kahrl, *Water and Power: The Conflict over Los Angeles' Water Supply in the Owens Valley* (Berkeley: University of California Press, 1982); David Carle, *Water and the California Dream: Choices for the New Millennium*, 1 edition (San Francisco, Calif.: Sierra Club Books, 2003);

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Steven P. Erie and Harold, *Beyond Chinatown: The Metropolitan Water District, Growth, and the Environment in Southern California* (Stanford: Stanford University Press, 2006).

<sup>9</sup> Larry Gragg, *Bright Light City: Las Vegas in Popular Culture* (Lawrence, Kansas: Univ Pr of Kansas, 2013); Hunter S. Thompson, *Fear and Loathing in Las Vegas: A Savage Journey to the Heart of the American Dream*, 2nd edition (New York: Vintage, 1998); Timothy Egan, *Lasso the Wind: Away to the New West*, 1st edition (New York: Knopf, 1998); Hal Rothman and Mike Davis, *The Grit Beneath the Glitter: Tales from the Real Las Vegas* (Berkeley: University of California Press, 2002).

<sup>10</sup> Hal Rothman, *Neon Metropolis: How Las Vegas Started the Twenty-First Century*, First Edition, First Printing edition (New York: Routledge, 2002); Hal K. Rothman, *Devil's Bargains: Tourism in the Twentieth-Century American West* (Lawrence: University Press of Kansas, 1998); Michael W. Childers, *Colorado Powder Keg: Ski Resorts and the Environmental Movement* (Lawrence: University Press of Kansas, 2012); Professor Dennis R. Judd and Professor Susan S. Fainstein, *The Tourist City* (New Haven, CT: Yale University Press, 1999).

<sup>11</sup> Patricia Nelson Limerick and Jason Hanson, *A Ditch in Time: The City, the West and Water*, First Edition edition (Golden, Colo: Fulcrum Publishing, 2012); Erie, *Beyond Chinatown*; Gottlieb, *Thirst for Growth*.

<sup>12</sup> Patricia Mulroy, interview by Christian Harrison, August 14, 2014, Author's Collection.

<sup>13</sup> "Las Vegas (Nevada, United States)," *Encyclopedia Britannica*, accessed August 24, 2014, <http://www.britannica.com/EBchecked/topic/330838/Las-Vegas>.

<sup>14</sup> "Hal Rothman on How the Old-Fashioned Approach to Growth Has Reclaimed Las Vegas from a Concept That Was Doomed from the Start - Las Vegas Sun News," accessed November 8, 2014, <http://www.lasvegassun.com/news/2006/jul/23/hal-rothman-on-how-the-old-fashioned-approach-to-g/>; Ed Koch, "The Many Colors of Mayor Oscar Goodman," *LasVegasSun.com*, accessed November 8, 2014, <http://lasvegassun.com/news/2008/may/15/many-colors-mayor-oscar-goodman/>.

<sup>15</sup> Gerard T. Koeppel, *Water for Gotham: A History.*, First edition (Princeton, N.J: Princeton University Press, 2000); Sarah S. Elkind, *Bay Cities and Water Politics: The Battle for Resources in Boston and Oakland* (Lawrence: University Press of Kansas, 1998); Righter, *The Battle over Hetch Hetchy*, 2005; Charles Fishman, *The Big Thirst: The Secret Life and Turbulent Future of Water* (New York: Free Press, 2011); Tyler, *Last Water Hole in the West*.

<sup>16</sup> Libecap, *Owens Valley Revisited*; Erie, *Beyond Chinatown*; Limerick and Hanson, *A Ditch in Time*; Tyler, *Last Water Hole in the West*; Elkind, *Bay Cities and Water Politics*; Fishman, *The Big Thirst*; Kahrl, *Water and Power*; Reisner, *Cadillac Desert: The American West and Its Disappearing Water*.

<sup>17</sup> Heidi Roberts et al., *Coyote Named This Place Pakonapanti: Corn Creek National Register Archaeological District, Desert National Wildlife Refuge, Clark County, Nevada* (Las Vegas, Nev.? HRA, Inc., Conservation Archaeology, 2007); Florence Jones and John Cahlan, *Water: A History of Las Vegas - Volume I*, First edition (Las Vegas Valley Water District, 1975); Eugene P. Moehring, *Resort City in the Sunbelt, Las Vegas, 1930-2000, Second Edition* (Reno: University of Nevada Press, 2000); Eugene P. Moehring, *Las Vegas a Centennial History / Green, Michael S., Wilbur S.*

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<sup>18</sup> Jones and Cahlan, *Water*; Moehring, *Resort City in the Sunbelt, Las Vegas, 1930-2000, Second Edition*; Moehring, *Las Vegas a Centennial History / Green, Michael S.*

<sup>19</sup> Jones and Cahlan, *Water*; Florence Jones, *Water: A History of Las Vegas, Volume 2* (Las Vegas Valley Water District, 1975); Gary E. Elliott, *Senator Alan Bible And The Politics Of The New West* (Reno: University of Nevada Press, 1994).

<sup>20</sup> Jones and Cahlan, *Water*; Moehring, *Resort City in the Sunbelt, Las Vegas, 1930-2000, Second Edition*; Colorado River Commission of Nevada, *Colorado River Commission of Nevada Reference Library Collection*, 1922; David Donnelly, interview by Hal Rothman, 2005, Author's Collection; Patricia Mulroy, interview by Hal Rothman, April 26, 2005, Author's Collection; Pat Mulroy, Colorado River Water Users Association--Nevada, Tape #8, Pat Mulroy (Tape #1), Oral History Interview, December 13, 2007, December 13, 2007, <http://www.crwua.org/documents/about-us/oral-histories/Pat-Mulroy.pdf>.

<sup>21</sup> Patricia Mulroy, August 14, 2014; Emily Green and Las Vegas Sun, "The Chosen One," *Las Vegas Sun*, June 8, 2008,

<http://www.lasvegassun.com/news/2008/jun/08/chosen-one/>; Pat Mulroy, Colorado River Water Users Association--Nevada, Tape #8, Pat Mulroy (Tape #1), Oral History Interview, December 13, 2007; Michael Weissenstein, "The Water Empress of Vegas," *High Country News*, April 9, 2001, <https://www.hcn.org/issues/200/10404>.

<sup>22</sup> Southern Nevada Water Authority, "Southern Nevada Water Authority: 1995 Amended Cooperative Agreement Among Big Bend Water District, City of Boulder City, City of Henderson, City of Las Vegas, City of North Las Vegas, Clark County Sanitation District, and Las Vegas Valley Water District" (Southern Nevada Water Authority, January 1, 1996), Nevada Division of Water Resources, [http://water.nv.gov/hearings/past/springetal/browseabledocs/Exhibits%5CSNWA%20Exhibits/SNWA\\_Exh\\_197\\_Amended%20Cooperative%20Agreement.pdf](http://water.nv.gov/hearings/past/springetal/browseabledocs/Exhibits%5CSNWA%20Exhibits/SNWA_Exh_197_Amended%20Cooperative%20Agreement.pdf).

<sup>23</sup> Patricia Mulroy, August 14, 2014.

<sup>24</sup> David Donnelly, 2005; Patricia Mulroy, August 14, 2014.

<sup>25</sup> Patricia Mulroy, August 14, 2014.

## CHAPTER 2 | 1989: AN ERA OF LIMITS AND THE POLITICS OF SCARCITY

The 1980s serve as the prologue for the creation of the Southern Nevada Water Authority (SNWA). In that decade there existed a contentious relationship among Las Vegas metropolitan area water agencies: the Las Vegas Valley Water District (LVVWD) which served the City of Las Vegas and urban Clark County, and the public utilities for Henderson, North Las Vegas, and Boulder City (fig. 2). Also present within this political milieu was the Colorado River Commission of Nevada (CRC). The CRC was a branch of state government that administered Nevada's annual 300,000 acre-foot allocation of Colorado River water. By 1982, this resource comprised ninety-percent of metropolitan Las Vegas's water supply.

On March 7, 1989, members of the CRC and LVVWD gathered together in what turned out to be a contentious meeting, one originally intended as a forum to discuss the water crisis facing water agencies in the Las Vegas metropolitan area. It had become apparent that population growth was threatening to exhaust the metro-area's Colorado River water supply, a contingency that, if not addressed, would occur by the mid nineteen-nineties. During the meeting LVVWD general manager Pat Pine rose and publically accused CRC director Jack Stonehocker of not doing enough to ease the crisis. Pine had good reason to be angry. The CRC administered the metro-area's Colorado River water supply. Pine even implied that the Commission's policies were making the situation worse. Stonehocker sarcastically responded that the CRC could not simply manufacture additional water. He was not alone among his fellow commissioners in thinking the metro water agencies themselves were to blame for the water crisis. Stonehocker noted that metropolitan Las Vegas had one of the highest per capita water usage rates in the nation (nearly 400 gallons per day), pointing out

that residents in Phoenix and Tucson used far less (250 and 155 respectively) than their counterparts in southern Nevada.<sup>1</sup>

This exchange between Pine and Stonehocker illustrated the frustration many metro-area water managers felt over the state of their water resources in 1989. Pine, whose anger with the CRC was representative of his counterparts in Henderson, North Las Vegas, and Boulder City, felt that his agency did not have enough water to meet demand in the rapidly growing metropolis, and he felt powerless to get more. He (and other metro water officials) also wanted a greater degree of local control over the southern Nevada water supply, of which the Colorado River comprised the majority.

Establishing local control, however, would require a greater level of collaboration among the metro-area's four separate utilities. But for various political reasons these agencies were unwilling to work together. In short, metropolitan Las Vegas water managers wanted more control over their own water resources but were too suspicious of one another to put a plan in place to make that happen. In March of 1989, it appeared that Henderson, North Las Vegas, Boulder City, and the LVVWD were in imminent danger of running out of water.<sup>2</sup>

The year 1989 marked a pivotal point in the history of metropolitan Las Vegas. Three key events occurred that year that would alter the trajectory of metro-area water policy, all of which contributed to the creation of the Southern Nevada Water Authority (SNWA) in 1991. In the last year of the 1980s, the Lower Colorado River Basin States (Arizona, California, and Nevada) collectively used 7.5 million acre-feet of water from the Colorado River. This represented the entire amount of Colorado River water entitled to the Lower Basin under federal law. This heralded what the United States Bureau of Reclamation (USBR) called the "era of limits," an



era in which surplus water on the Colorado River would likely never occur again. The population of the Lower Basin States had grown from a 1980 population of just over twenty-seven million, to almost thirty-five million by the end of the decade.<sup>3</sup> Any surplus Colorado River water from 1989 forward would have to come from the Upper Colorado River Basin States (Utah, Colorado, New Mexico, and Wyoming). It was only a matter of time before these states would also develop to the point they would need their full 7.5-million acre-foot per year allocation of the Colorado River.

As water planners in the seven-state Colorado River Basin region faced the prospects of increasing water scarcity, in November 1989 casino impresario Steve Wynn opened a resort of unprecedented size and cost on the Las Vegas Strip. At over 2,049 rooms and a cost of over 600 million dollars, the Las Vegas Mirage was larger than any casino ever built on earth. It was also more exotic and opulent, featuring attractions that no previous casino had possessed. The Mirage contained a 1.6 million gallon dolphin habitat that initially housed five of the aquatic mammals. Additionally, Wynn included a 20,000-gallon exotic fish aquarium behind the concierge, an evening show featuring the magicians Siegfried and Roy and several of their Siberian tigers, several fine dining restaurants, and a fifty-four foot replica volcano that emitted flames and steam to entertain and attract patrons.<sup>4</sup> Wynn was the first person to combine all these elements into one resort, and the Mirage established a new standard for anyone else who wanted to open a casino on the Las Vegas Strip. In order to compete, would-be casino operators had to build bigger and higher quality resorts. Two individuals, William Bennett and Kirk Kerkorian, followed Wynn's lead. In the five years following the opening of the Mirage, Wynn, Bennett, and Kerkorian opened four additional mega-resorts: Bennett's Excalibur (1990) and the Luxor

(1993), Kerkorian's MGM Grand (1993), and Wynn's Treasure Island (1993). These resorts raised the hotel room total in the metropolitan area by approximately 20,000 rooms and triggered an economic expansion that brought the population from 850,000 in 1990 to just over 1.5 million ten years later.<sup>5</sup>

It was against the backdrop of a fully appropriated Colorado River and an immanent casino construction boom on the Las Vegas Strip that on October 17, 1989 LVVWD officials filed a claim with the Nevada State Water Engineer for rights to groundwater in over twenty desert valleys in White Pine and Lincoln Counties, as far as 250 miles north of the metro-area (fig. 10).<sup>6</sup> Pat Pine (as well as his counterparts in Henderson, North Las Vegas, and Boulder City) was worried that the District could not supply water to all the new homes and businesses that the casino construction would initiate. Pine's first choice for water would have been to look to the Colorado River, but federal and state law prevented this. The Law of the River did not allow states to withdraw an amount beyond their basin allocation.<sup>7</sup> Additionally, the CRC possessed legal authority over the state's Colorado River allocation.<sup>8</sup> The only option left for Pine was water contained within the borders of Nevada, and the only unappropriated water remaining in the state was located underground in rural Lincoln and White Pine counties.

The groundwater filings were an act of desperation by the LVVWD and illustrated how Pine and other metro water managers felt about the existing water regime: state administration of Colorado River water and balkanization among metro water utilities was a fundamentally flawed system. The solution, at least from Pine's point of view, was local control over Colorado River resources. The main obstacle to

this was intra-metropolitan struggles over water, struggles that were largely the result of CRC policy.

The CRC had a system of allocating specific amounts of water to each metro-area water utility. The District received the majority of this water (LVVWD—174,712; North Las Vegas—17,962; Henderson—16,161; and Boulder City—7,273).<sup>9</sup> Continued rights to these allocations were contingent upon amounts used. In other words, a metro water utility only received as much water as it had consumed the previous year. The unintended consequence of this “use it or lose it” policy, as local water officials called it, was that it incentivized consumption. Each utility used as much water as possible to protect their allocations. Indeed, water managers in Boulder City once uncapped their fire hydrants to ensure they utilized their full yearly allocation.<sup>10</sup> This in turn increased metropolitan water rates to some of the highest in the nation.

The CRC, for reasons we will examine in greater detail in Chapter 4 was, in effect, the central water agency for metropolitan Las Vegas. It was the only agency with an inter-metropolitan purview. By the late 1980s, metropolitan water officials became increasingly vocal in their opposition to this arrangement. They believed the CRC worked to maintain a position of supremacy over metro-water agencies by using the promise of allocations as a way to pit them against one another. In 1989, there was near universal opposition to CRC policy among metro water agency officials, but these same individuals were also not willing to work with one another to produce a locally created solution—at least at first.<sup>11</sup>

Among metro water agencies, the direction of the animus flowed from the smaller cities—Henderson, Boulder City, and North Las Vegas—toward the

LVVWD, which represented both the City of Las Vegas and urban Clark County, a region that included the Las Vegas Strip (fig. 8). Opposition from the smallest cities was based largely on the fact that the Clark County Commission served as the LVVWD board of directors. Officials from the smaller cities suspected that the county commission simply wanted to take over the CRC's responsibilities. In March of 1989 the county commissioners stoked this fear when they adopted a water resource plan that called for, among other things, the county to assert control over the state's 300,000 acre-foot Colorado River allocation.<sup>12</sup>

For its part, the county commission also proposed a conservation plan to reduce consumption rates within the LVVWD service area.<sup>13</sup> Officials in the smaller cities did not support this effort, however, because of the "use it or lose it" policy. Why conserve if it meant a possible decrease to their annual allocation? It was the apparent impossibility of the situation that compelled Pine to seek a solution.

Pine knew that rates of water consumption were unsustainable. He discovered that between 1987 and 1989 water use increased by over seventeen percent within the metro-area.<sup>14</sup> Furthermore, the District did not know how much water it had committed to developers. For Pine there was a real concern that his agency would not have enough water to honor the commitments it had already made. Pine brought these concerns to the attention of the Clark County Commission, acting in its capacity as the Board of the Las Vegas Valley Water District. Several commissioners, including Paul Christensen, Jay Bingham, and Thalia Dondero, had expected supplies to last until at least the year 2020. Under Pine's predictions, however, the consumption rates would exhaust the metro-area water supply by the turn of the century.<sup>15</sup>

Pine happened upon a possible solution to the crisis when perusing an engineering trade journal.<sup>16</sup> In it Pine noticed an article describing a consulting firm, Water Resources Management, Inc. (WRMI), that specialized in moderating multi-party disputes over water—exactly the situation then occurring in the Las Vegas metro-area. According to LVVWD Deputy General Manager David Donnelly, Pine had a genuine interest in trying to help find a solution to the diminishing water supply and political acrimony among the metro-area’s water agencies. During a conversation with Donnelly, Pine discussed his wish to establish a partnership with WRMI.

Pine was never able to follow up on his desire to invite WRMI to the Las Vegas metro-area. Despite this desire to pursue a resolution, the Clark County commission began to identify flaws in Pine’s management style. Chief among these was Pine’s contentious relationship with other metropolitan water managers. In 1989, the commission published a water resource plan that stressed the need to work across political and municipal boundaries to arrive at regional solutions to the metro-area’s dwindling water supply.<sup>17</sup> Instances in which Pine publicly berated the director of the CRC noted earlier in this chapter set a tone counter to that which the County Commission was attempting to establish. According to one assessment, Pine acted “like a bull in a china shop” during interactions with other metro-water agencies. As a result, the county commission requested Pine’s resignation. The board needed someone with a better understanding of the political complexities and nuances of the Las Vegas metropolitan water regime, someone who was assertive, but also more politic.<sup>18</sup>

They found this combination in the person of Patricia Mulroy. The county commission recognized that water management was becoming an increasingly

complex task in metropolitan Las Vegas and thought that someone with a more refined set of management skills was needed. In a decision that would have a significant impact on the future of the metro-area, the commissioners appointed Patricia Mulroy to take over Pine's position as General Manager.<sup>19</sup> Mulroy had previously served as a research analyst and legislative lobbyist for Clark County, and was also well connected politically, having been originally recruited into county government by the most powerful lobbyist in Nevada, Richard Bunker. Bunker was head of the Nevada Gaming Commission and had been involved in Las Vegas urban issues since the 1970s.<sup>20</sup> He thought Mulroy possessed the political acumen to be an effective administrator within the county government. Initially, Mulroy served in a variety of general management positions, but moved over to the LVVWD in 1985. By 1989 she had become Deputy General Manager – one step below Pine.<sup>21</sup> Starting with Pine, the County Commission began appointing individuals with an administrative, rather than engineering, background. Mulroy had the requisite experience.

By her own assessment, Mulroy's previous jobs had prepared her well for the task of managing the water district.<sup>22</sup> She served as a lobbyist for Clark County during legislative sessions in the 1980s, a position that honed her negotiating skills and ability to work with a wide range of constituents. Mulroy fully supported the WRMI initiative that Pine had started. She also knew, however, that Pine's manner had damaged political relationships among the metro-area's municipalities. One of her first tasks, therefore, was to "walk ... hat in hand to every single manager and apologize" stating "we need to start over. Can we ... create a process how we do this together?"<sup>23</sup> Shortly after this outreach, Mulroy and her staff conducted an initial round of meetings with the other water agencies to begin formal talks discussing a

way out of the crisis.<sup>24</sup> By August of 1989, Mulroy had calmed the political situation down enough that metro-area water agencies were ready to begin formal negotiations over local water supplies. As a result, that same month the LVVWD board directed Mulroy to contract with WRMI.

One District water official remembers that when she became General Manager it “was a real breath of fresh air.”<sup>25</sup> Other LVVWD officials shared this sentiment. According to SNWA Deputy General Manager Dick Wimmer, “Making that change to Pat Mulroy was a change to a person with a much better managed ego, and more political acumen than what her predecessor [Pine] had. Which is what got him in a little trouble.”<sup>26</sup>

Negotiations among metro water agencies began in November 1989.<sup>27</sup> As part of the process, WRMI officials invited managers from a wide range of southern Nevada agencies dealing in water. These interests included the Big Bend Water District, the City of Boulder City, the Clark County Department of Comprehensive Planning, the Colorado River Commission of Nevada, the City of Henderson, the City of North Las Vegas, the City of Las Vegas, the Las Vegas Valley Water District, Nellis Air Force Base, the Nevada Department of Conservation and Natural Resources, and the United States Bureau of Reclamation.<sup>28</sup> WRMI’s guiding philosophy was to build coalitions. This meant involving every interested party. In this way opposing interests could express their positions, establish common ground, and move forward.

The Clark County Commission assumed financial responsibility for the WRMI proceedings, and did so for a number of reasons. One, it was the largest government body in southern Nevada. Two, the Clark County Commissioners

comprised the board of the LVVWD, the largest water agency in the metro-area. The commission therefore needed to demonstrate leadership to move the project forward. Lastly, given the scale of construction in the LVVWD service area, the county was facing the most pressure from developers and business leaders among the metro-area's cities and townships. As the commission discovered when it published the previously mentioned water resource plan, unilateral actions had thus far been ineffective in curbing increased water use. Henderson and North Las Vegas officials chose not to adopt a conservation policy.<sup>29</sup> In essence, what arose was a classic "tragedy of the commons" situation in which one entity, the county, attempted to save water, but the other two, Henderson and North Las Vegas, did not see conservation as being in their best economic interests and continued to commit water to future housing development projects.<sup>30</sup> Because the county did not wish to lose development projects to either of these smaller cities, it too failed to fully commit to the conservation policy.

While it was a valuable first step, Clark County's 1989 conservation program was not enough for District Planners. In February 1991, Mulroy told the County Commission that she was issuing a temporary moratorium on building permits (referred to by the LVVWD as will-serve letters). On February 14, the LVVWD stopped providing water to developers for all construction projects in an event the local press dubbed the "St. Valentine's Day Massacre."<sup>31</sup> Inexplicably, up until this point, the District had no water accounting system in place. Between 1982 and 1989, if a developer brought a construction proposal to the District and asked for a water commitment, he or she received it.<sup>32</sup> The District did not keep a ledger comparing these transactions against the amount of water the agency possessed. By 1991 District



personnel had grown sufficiently concerned that they had over committed the water they had available. They therefore called for a halt in issuing any additional will-serve letters until the District could properly take stock of its resources.<sup>33</sup>

The will-serve cessation had significant ramifications for the Las Vegas Valley. Without water, developers could not build housing tracts, and without construction, a major pillar of the local economy was removed. To give a sense of how much money local government generated through construction, considered in 1989 alone, Clark County collected over one billion dollars in housing permit fees.<sup>34</sup> During the assessment process Donnelly noted that the District had promised developers significantly more than the agency possessed.<sup>35</sup> It turns out that this “significant amount” was a little over 18,000 acre-feet.<sup>36</sup> This was a surprise to District personnel, local governments, and the development community. The District began preparing to revoke water rights, and developers clamored for assurances that their projects were not in jeopardy, assurances the District could not provide.<sup>37</sup> However, these actions were not enough. New supplies of water were needed, but securing new water was impossible since the only new source of water was the Colorado River, and the Basin states and federal government remained opposed to increasing Nevada’s allocation.<sup>38</sup>

While developers in the District’s service area wrung their hands over the will-serve cessation, other cities like Henderson and North Las Vegas allowed construction to proceed.<sup>39</sup> While North Las Vegas and Henderson were not legally obligated to stop building, their actions came at the expense of the City of Las Vegas and urban Clark County. County Commissioner Paul Christensen criticized the mayors of these two cities in a letter when he stated, “We all take our water from the

same glass, just through different straws. From my vantage point, you are drinking our water.”<sup>40</sup> Christensen noted that developers merely started going to Henderson and North Las Vegas when the District ceased issuing will-serve letters, a trend that did nothing to alleviate the impending water shortage. North Las Vegas Mayor Michael Dyal countered, “We the water suppliers look forward to having an allocation of 53,000 acre feet. With that coming, I don’t see us doing anything differently.”<sup>41</sup> County Commissioners realized the danger embodied in this attitude. It meant that a single city had the power to significantly decrease the entire metro-area’s water supply. Without collective action, efforts at the metropolitan level toward conservation were destined to fail.

County Commissioners and LVVWD staff guided the process forward because they recognized that water agencies in Henderson, North Las Vegas, and Boulder City did not have the financial capacity to assume this responsibility, nor did they have the experience of administering water to as large a population. The LVVWD had administered water to the City of Las Vegas and urban Clark County since the 1960s. Additionally, the District interacted with a more diverse set of governments, including the State of Nevada and the federal Bureau of Reclamation. Collaborating with the metro-area’s three other water agencies was merely an expansion of the LVVWD’s metropolitan operations.

WRMI’s specialty was facilitating compromise and agreement among competing parties over contested water resources. The key to the organization’s success was structuring negotiations in a way that forced technical experts from each of the agencies to collaborate on the same set of problems. In this case, engineers and technicians from the LVVWD, Henderson, North Las Vegas, and Boulder City would

first engage in a process of data collection, specifically how much water was available to the metro-area. With this data, technicians could then address potential responses to water shortages. As a result of the WRMI exercises, technicians discovered that, under present conditions, the metro-area's municipalities would tap their entire Colorado River allocation by 1995, a mere five years away. The respective water agencies could postpone this event by adopting rigorous conservation measures, but this would still only preserve the local water supply until 2007.<sup>42</sup> After that only the acquisition of new water sources (almost definitely, Colorado River water) would allow the continuation of urban development in southern Nevada.

Remembering the panic she and others felt upon hearing this news, Mulroy recounts that after the WRMI exercise, "we all realized that we were going to run out of water between 1992 and 93, and that it was just a matter of months before each one of us was going to go off the cliff first, second, third."<sup>43</sup> (The sequence to which Mulroy alluded was in reference to the allocations and priority rights each metro-area water agency possessed.) Under the worst-case scenario WRMI representatives put forth, the LVVWD would possess an adequate water supply for the longest amount of time since it had the largest allocation (approximately seventy-five percent) of Colorado River water. However, Henderson and North Las Vegas would experience economic hardship more quickly. Each of these cities had to split the remaining quarter of the metro-area's Colorado River allocation. (Boulder City possessed a slow-growth policy and its officials were less concerned over the amount available). Presented with this stark version of the future, technicians from the various agencies set about finding a solution. They found two, one contingent upon the other.<sup>44</sup>

During the course of the WRMI process, technicians discovered that the metro-area could potentially access an additional 58,000 acre-feet of water per year from the Colorado River. This would be available in the form of return flow credits. Southern Nevada theoretically possessed rights to return flow credits since the 1963 *Arizona v. California* Supreme Court decision. The Court defined consumptive use of Colorado River water as “diversion from the main stream less ... return flows.”<sup>45</sup> What this meant was that water agencies in California, Arizona, and Nevada could withdraw more than their basic allocation as long as they returned the difference. For example, Nevada could legally withdraw 450,000 acre-feet of water per year as long as it returned 150,000 acre-feet after use. Since 1971, Nevada had been taking advantage of return flow credits to varying extents. But during the 1970s and early 1980s, return flow credit accounting was not a priority for local water agencies, since the metro-area was not withdrawing more than its basic allocation (300,000 acre-feet). The situation changed in the late 1980s, as the metro-area began using more than its basic allocation. At that point, return flow credits became a vital resource.<sup>46</sup>

The WRMI process helped expose the extent to which metropolitan political fragmentation had diminished the amount of water available to southern Nevada. Not only did the fragmentation lead to increased use within the metro-area (thus decreasing the amount flowing back to the Colorado River), it also made the Colorado River Commission and Bureau of Reclamation reticent about providing the metro-area with additional return flow credits. These two agencies especially did not want to become involved in local political conflicts, and were not going to assume responsibility for accounting the return flow credits.<sup>47</sup> Instead, metro-area governments needed to account for return flows and then submit their findings to the

USBR. The USBR would verify these figures and provide a corresponding amount of return flow credits to individual metropolitan water agencies.

Differing policies among the individual municipalities precluded the opportunity to take full advantage of the return flow credits available through the Law of the River. In order to receive these credits, metro water agencies needed to standardize policy governing the treatment and return of wastewater to the Colorado River. In 1989, however, there was no metro-wide policy governing return flows. North Las Vegas, urban Clark County, and the City of Las Vegas each cleaned their Colorado River allocation and returned it to Lake Mead, but Henderson and Boulder City did not. Instead, those two cities used their allotments for domestic purposes, cleaned it, and then used it for various other functions, such as outdoor irrigation of public green space. This policy, known as “full consumption”, represented a situation in which a municipality continued to reuse its water until it was gone. This was an efficient use of water, though it did not provide Henderson and Boulder City—and by extension the rest of the metro-area—a larger amount of Colorado River.

The prospect of implementing a policy that each of the metro-area’s water agencies would agree to follow was daunting. The historical tension among municipalities created deep political divisions. However, the collaborative WRMI process reduced the collective suspicion. It was designed to present scientific data in transparent terms. This gave everyone involved access to the same information. As a result, technicians from each agency knew how much water was available to the metro-area as a whole. Because they had all worked through the process together, water officials knew the other agencies were not hiding intelligence. This

transparency reduced the level of paranoia among the metro-area's water agencies and allowed them to move closer to a political solution.

Following a workshop in November 1990, officials from various agencies got together for dinner and drinks. Present were David Donnelly of the LVVWD, Mort Cowland and Kurt Segler of Henderson, and Gary Holland of North Las Vegas.<sup>48</sup> The plan's complexity was a frequent topic of discussion among WRMI negotiators, and it happened to be the topic this particular evening as well. Donnelly recounted that after several hours of discussion, one person in the group said, "you know, when you look at all these problems we've got . . . the best thing is probably a regional water agency."<sup>49</sup> But what form would it take? The dinner attendees debated the merits of having the Colorado River Commission assume the role, but they quickly decided that was not something they wanted. During the 1960s, officials with the City of Las Vegas and the LVVWD had opposed state efforts to designate the Commission as the metro-area's master water agency. Donnelly and his colleagues knew this history, and wanted something different. After all, the main point of the WRMI process was to establish local control over water. They did not want an arm of the state government in charge of the metro-area's water supplies. Donnelly recounted that another suggestion was for the LVVWD to assume responsibility over metropolitan water distribution. This idea was also dismissed. At that point there was still too much distrust among the agencies to have the District take over water administration for the entire metro-area.<sup>50</sup> By the end of the evening, Donnelly and his counterparts realized they needed to create an entirely new organization. Essentially, they were proposing a "do-over"—to ignore, to an extent, the existing framework and design an entirely new

agency that was not beholden to the myriad municipal jurisdictions and the long history of conflict present throughout metropolitan Las Vegas.

In December, Donnelly and his colleagues took their proposal to their respective agencies' general managers (principals).<sup>51</sup> The principals agreed to meet in early January 1991, at which time they would conduct negotiations over the contours of the new regional water agency. Donnelly recounts the meeting:

Each of the agencies were to write down their proposal and bring it to a common table. And we had this table, and we all had out attorneys. We had our Colorado River attorneys. Henderson had theirs. North Las Vegas had theirs. We made the attorneys sit on the outside of the table, they could not talk. They could be in the room but they could not say anything. So we all, me and Mulroy, we put our proposal together, and we basically at that time said 'look, we are the big bad guy, we are the Water District.' Now all the other cities were much smaller then, so we have to show some leadership here because if we don't do it, it is not going to get done because they were just scared of us because we were the big bad gorilla. So we put together a proposal on how we would allocate the water, [an agreement] we thought was fair.

We put a proposal together, we all came to the table, and who is going to go first. Who is going to be the first to turn up their cards? Of course Pat [Mulroy] can't stand it, and she said 'I will turn mine.' She turns hers up and says 'this is how I think we should do it.' Phil Speight [Henderson City Manager] takes his and puts it into his brief case. They were all happy with it.<sup>52</sup>

The substance of Mulroy's proposal was that the new organization would be a member based super authority in which each of the water purveyors would have an equal say in policy decisions.<sup>53</sup> The Southern Nevada Water Authority (SNWA), as it would be called, would consist of seven "member" agencies. Five of the agencies, the Las Vegas Valley Water District, the City of Boulder City, the City of Henderson, the City of North Las Vegas, and Big Bend Water District were water providers and were classified as "purveyor agencies." The remaining two were wastewater agencies—the

City of Las Vegas and the Clark County Reclamation District—and did not hold the same political status within the SNWA as the five purveyor agencies. Additionally, the principals established allocation levels for each of the purveyor agencies that would stay the same each year irrespective of how much each entity used.<sup>54</sup> Purveyors would not, therefore, have to use their allocation in order to protect it. This policy would enable the SNWA to implement a number of conservation strategies in the coming years.

During this round of negotiations the principals agreed to the provision that purveyor agencies would have equal standing within the SNWA, regardless of size. This meant that Boulder City, then a town of just over ten-thousand residents would be on par with the Las Vegas Valley Water District, which had the responsibility of delivering water to over half-a-million residents. Under this arrangement, certain policy decisions would require unanimous consent. These included: amendments to the SNWA Cooperative Agreement, implementation of strict conservation programs, the incorporation of a new SNWA member agency, individual agency water allotments, cost sharing for the construction of infrastructure, and shortage sharing agreements in time of drought.<sup>55</sup>

These were the most critical issues with which local managers were concerned. The basis for concern, among the smaller city agencies, was of a financial nature. For example, Boulder City did not possess the tax base, nor the population to necessarily justify a project such as the LVVWD's Cooperative Water Project. Boulder City adopted a slow growth policy in the 1970s, which allowed for the construction of only thirty to forty structures per year.<sup>56</sup> The pipeline project was in



fact, a major reason why the other member agencies expressed some reticence about joining the SNWA.

Mulroy, however, also proposed that each agency be given the right to veto certain capital works projects; additionally, she offered to share the water from the District's Cooperative Water Project with each member agency if and when the project went forward. The so-called veto provision provided a measure of security for the smaller purveyors and was key to the SNWA's creation. The veto clause protected small city member agencies against capital expenditures they viewed as harmful to their interests. No less a factor in moving the project forward was the promise that the District would share a significant amount of its own water with the other member agencies.<sup>57</sup> After the principals established the basic working arrangement for the SNWA they had to take the proposal to the metro-area's county commission and city councils. Their stamp of approval was necessary for the SNWA to become a reality.

The water agencies briefed local elected officials in January 1991.<sup>58</sup> Because there was consensus among the water agencies, the metro-area's governments required little convincing, with one exception. Clark County was the first to join, though it did not do so with the unanimous consent of the commission. Commissioners Don Schlesinger and Karen Hayes, were concerned that the metro-area was growing too rapidly and that the LVVWD's Cooperative Water Project would only help fuel this trend. Furthermore, they also worried that county residents would have to pay for the project through increased taxes. They wanted to debate that issue before lending support to the SNWA because they felt that joining the new agency would increase the likelihood that the CWP would go forward.<sup>59</sup>

Despite Schlesinger's and Hayes' opposition, the five remaining Commissioners held no reservations about the speed of urban development in southern Nevada and voted to join the SNWA in early July.<sup>60</sup> Next to follow were Henderson and North Las Vegas, both with pro-growth city governments. Boulder City then joined on July 10. Upon signing the agreement, City Manager George Forbes reassured residents that the SNWA Cooperative Agreement provided legal safeguards that would protect its autonomy within the new super-agency.<sup>61</sup>

The situation with Las Vegas, on the other hand, was rather different. As early as March, Las Vegas Mayor Jan Jones and the City Council expressed reservations over the composition of the SNWA. The City of Las Vegas was initially left out of high level negotiations because it was not a water purveyor (it did not deliver potable water to customers).<sup>62</sup> This task was left to the LVVWD, which provided water for the city of Las Vegas and for urban Clark County. This worried city officials who felt they might not receive fair representation under the new regime. Numerous city officials reacted negatively to the exclusion. During the course of negotiations, Las Vegas voters elected a new mayor. Despite the change in administrations, the new mayor, Ron Lurie, was also opposed to the city being left off the SNWA board. Shortly after taking office, Lurie declared "we need to be working together . . . water is important to our growth and we should be involved [with] the county [in] making these decisions."<sup>63</sup> Las Vegas City Councilman Steve Miller, engaging in a bit of hyperbole, stated that the exclusion would lead to a conflict between the city and county on par with "World War III."<sup>64</sup> As a result, city officials refused to offer political support for the SNWA, a stance that threatened to undo the entire collaborative process.

The Las Vegas city council was the second largest local government in the metro-area after the county commission. Over 250,000 people lived in Las Vegas in 1990, and the city governed an area of over 125 square miles.<sup>65</sup> Given the scale of its demographic and geographic responsibility, the city council was concerned it would not have a direct say in major policy matters concerning water. City officials therefore wanted assurances that they would receive at least half of any new water supplies due to the LVVWD. At play was a significant amount of water. Under the conditions established during the WRMI process, the District was poised to receive 32,000 acre-feet of water per year, an amount that in 1991 could support approximately 128,000 people.<sup>66</sup> If Las Vegas city officials had their way, they would be entitled to a guaranteed supply of 16,000 acre-feet.

The opposition from the City of Las Vegas is easier to understand when placed in a broader historical context. Political tension between the City of Las Vegas and Clark County existed since the 1940s; arising first over city plans to annex territory along the Las Vegas Strip. In 1954 the legislature established the LVVWD as a special service district primarily to service the water needs of the city of Las Vegas. The legislature also gave the District the authority to administer water to the handful of small settlements scattered throughout the Las Vegas Valley and Clark County. During the 1960s, growth in the unincorporated county south of the Las Vegas city limits began to drastically increase. During the 1970s, unincorporated Clark County began to rival, and by 1980, surpassed the city of Las Vegas in population.<sup>67</sup> The Clark County Commission became the default “city” government for the unincorporated townships. As such, it became a rival local government to the Las Vegas City Council. Not only that, the added constituency and economic power of the

resort sector along the Las Vegas Strip actually made the county commission the most powerful form of local government in southern Nevada. In 1975 the legislature further increased the power of the county commission when it passed a law stipulating that the Clark County Commission would also serve as the Las Vegas Valley Water District board of supervisors. This reflected the reality that the LVVWD was no longer essentially just a Las Vegas city utility, but one with a purview regional in scale. Population growth drove all of this change and created a new political landscape that some Las Vegas city officials found difficult to accept.

The historical tension between the county commission and Las Vegas city government notwithstanding, there were more recent factors at play in the city's opposition. In the summer of 1991, city officials were still reeling from the District's February "will-serve" moratorium. This action threatened a number of construction projects within Las Vegas city limits, most notably the Summerlin master planned community, a 22,500-acre development on the west side of the metro-area.<sup>68</sup> Dozens of developers were already building in this community, and dozens more had plans to. The majority of homes there catered to middle and upper class residents and tended to be more expensive on average than most others in the metro-area. Sales of these homes would generate property tax revenue for the City of Las Vegas. City officials were therefore motivated to ensure they had the requisite water to support the Summerlin project.

The primary factor in this was that city officials had no say in the moratorium decision. They instead had to defer to the county commission and LVVWD leadership. Las Vegas City Councilman Scott Higginson gave voice to this larger discontentment when he asserted, "Once again, the City of Las Vegas has no

jurisdiction over the allocation and determination of water use in the city limits. We're subject to another elected board.”<sup>69</sup> Viewed in this context, it becomes easier to understand why officials such as Lurie, Higginson, and Nolen wanted a guaranteed amount of any new water under the SNWA agreement. They did not want to face a situation in the future in which they had no official standing in water policy decisions and no recourse but to accept a District mandate.

Mulroy and other District staff, on the other hand, were not solely focused on events within the metro-area. There were several issues, regional in scope, driving Mulroy's ambition to have the city of Las Vegas join the SNWA as quickly as possible. In the spring and summer of 1991, District officials were engaged in discussions with the CRC, USBR, and California and Arizona over the SNWA's impending acquisition of 58,000 acre-feet of Colorado River water. As stated previously, this water would come in the form of return flow credits and only if the metro-area's water agencies successfully created the SNWA. Mulroy needed to provide assurances to the federal government and other Basin states that the metro-area would implement a uniform water policy. Mulroy understood the larger regional political reality and needed the support of every metro-area government for the creation of the SNWA. She knew that every city in the metro-area, demonstrations of independence to the contrary, was still subject to the Law of the River.

There was also concern from Mulroy and others that if metro agencies did not form the SNWA, the Bureau of Reclamation would allow California to withdraw the 58,000 acre-feet instead. Since 1985 drought conditions had existed in California, a condition that provoked a range of urban and agricultural interests to pressure California Governor Pete Wilson to procure additional water. In 1991 the

Metropolitan Water District of Southern California expected to receive only half of its normal Colorado River allotment, and farmers in the Imperial Valley only received thirty-five percent of their annual supply. The drought became enough of a challenge for California that Interior Secretary Manuel Lujan took notice and urged Colorado governor Roy Romer to “loan” the Golden state some of its Colorado River water. Given the magnitude of the Basin States’ regional political situation, Mulroy did not want to be overtaken by events and lose the water she hoped to acquire. She therefore set a July 15 deadline to form the SNWA to avoid that contingency.<sup>70</sup>

Throughout this process, the moratorium exerted pressure that compelled local agencies to come together and think about water at a metropolitan, rather than municipal scale. There is some question as to the degree to which Mulroy employed the moratorium as a coercive tactic. It is clear that Mulroy and District staff were genuinely concerned whether they possessed enough water supplies.<sup>71</sup> The moratorium and subsequent cancellation of building permits did in fact increase the District’s water reserves. On the other hand, it also appears that Mulroy intended to use the moratorium as a wake-up call for metro-area water agencies. Mulroy herself indicated this was the case when she asserted, “I think the thing that put pressure on the creation of the Authority was the declaration of a moratorium. Because it took the creation of the Authority to lift the moratorium...[which] put a huge [amount of] community pressure on the process.”<sup>72</sup>

This was not simply a case of a large agency bullying a smaller one; the county was feeling the effects of the moratorium just as much as the City. The District delayed projects on county lands and cancelled others. Developers and business leaders lobbied the county commissioners, urging them to allow the resumption of

construction as soon as possible. Commissioner Jay Bingham, himself a partner in a local housing construction company, was eager to lift the moratorium for political and financial reasons. Ten months into the process he and fellow commissioners Thalia Dondero and Paul Christensen began discussing the possibility of lifting the moratorium with Mulroy; but Mulroy held fast. She acknowledged the fact that the commissioner's constituencies were exerting a "tremendous amount of pressure to keep people in jobs," but that until the metro-area obtained new water, the District would not issue any new permits.<sup>73</sup> As time progressed, tensions between the commission and city increased, to the point that some commissioners accused city officials of deliberately stalling as a way to leverage additional water rights. Jan Jones, the newly elected mayor of Las Vegas stated as much, declaring that the city was holding out to improve its negotiating position.<sup>74</sup>

City officials recognized that their strategy was proving politically costly, generating animus among metro-area water agencies. One opinion piece in the *Las Vegas Review-Journal* criticized the city council's decision to delay, arguing that, not only was it against the city's interests, but that it hurt the community as a whole.<sup>75</sup> Aware of growing disapproval of the city's delay tactics, in July the county commissioners extended an olive branch to Las Vegas officials. The commissioners verbally agreed to Mayor Lurie's and the city council's terms to divide new water. This proved acceptable to the city officials, who then agreed to support the creation of the SNWA (fig. 6). On July 25, 1991, Nevada Attorney General Frankie Sue Del Papa signed the agreement between the Las Vegas Valley Water District, Boulder City, Henderson, North Las Vegas, and Big Bend Water District, thus bringing the SNWA into existence (fig. 3).<sup>76</sup>

With the creation of the SNWA came an independent organization whose primary responsibility was procuring additional water for the Authority's member agencies. The immediate concern of the SNWA board was obtaining the remainder of the state's Colorado River allocation. Its first move in this direction was to appoint Walter Fite, a former Bureau of Reclamation official, as the SNWA's first director. During Fite's twenty-five year career he worked extensively with officials in the Colorado River Basin states and seemed to have a firm grasp of the regional political composition. According to Mulroy, "Our number one focus for the new authority is the Colorado River, and that's where [Fite's] experience lies."<sup>77</sup> The choice of Fite was an important political decision for the SNWA board. There was a crucial need to establish the legitimacy of the new agency at the metropolitan and interstate level. Las Vegas metropolitan water purveyors needed to see that someone independent of local politics was going to lead the Authority. The Board also hoped Fite's appointment would project a degree of competence to the other Basin states and federal government. Referring to Fite's appointment, Mulroy said: "It gives the Authority instant credibility."<sup>78</sup>

Despite the SNWA board's initial enthusiasm for hiring Fite, it was not long before his leadership style became an issue. In the words of one former District official, Fite "had a divide and conquer mentality."<sup>79</sup> According to Mulroy, Fite "was extremely competent technically [and] knew the river soup to nuts, but [he] didn't understand the organization dynamic, so he failed."<sup>80</sup> Fite had not taken part in the WRMI process and was therefore not present to witness the emergence of the cooperative ethos among the member agencies. Upon assuming command, Fite tried to assert the supremacy of the LVVWD within the SNWA's member agency



framework—essentially trying to make the District the first among equals. This was an alarming development to officials in the member agencies. Phil Speight of Henderson called Mulroy within the first three months of Fite’s tenure saying he did not think he [Fite] was the right person for the job. According to Mulroy, “he made the classic mistake. He came in and right away wanted to play the great game of divide and conquer. If you tip one agency against the other, then all of a sudden you are more important. We [the principals] all looked at each other after he had been there six months and went, ‘oh, this is not going to work because that is not the way the Authority was built.’”<sup>81</sup> According to Donnelly, Fite “couldn’t work the local politics, [which] as you know are pretty brutal. He was playing purveyors against each other and this ran contrary to the spirit of the SNWA.”<sup>82</sup> One SNWA board member stated, “Walt Fite is a lifelong federal bureaucrat who knows the ins and outs of water, who knows the Colorado River, but who hasn’t got a political antenna in his body.”<sup>83</sup>

From the SNWA Board’s point of view, Fite was engaging in the same type of political intrigue that caused tension among metro-area water agencies during the 1980s. Fite’s actions revealed that he did not understand the emphasis the creators of the SNWA placed on the equality of each agency within the Authority. Egalitarianism was the central tenet of the SNWA and the most important element contributing to its internal political solidarity.

Fite’s management style was not the only problem from the SNWA board’s perspective. While the individual water agencies had been interested in creating a separate and independent SNWA, Fite’s policies may have been a bit too independent. Upon signing the SNWA Cooperative Agreement in July 1991, the

District officially transferred responsibility for its Cooperative Water Project to the Authority.<sup>84</sup> Despite this, the District continued to be deeply involved in the planning of the project—especially on the political front. District staff publicly asserted the need for the project and the vital role it would play in the metro-area’s water supply. Water from the CWP was also an enticement for the other member agencies, and the promised use of this water was one of the reasons they agreed to join the Authority. In April 1992, Fite contradicted the District’s disciplined message over the need for the CWP, stating that at the rate Las Vegas was growing, it would run out of water before the project would come online and that other options “needed to receive more attention.”<sup>85</sup> This not only put Fite at odds with the County Commission and the LVVWD, but also the other member agencies who had a vested interest in the CWP.

One potential result of Fite’s political position was the effect it would have on local lending institutions doing business with construction companies. A message of uncertainty over future water resources could certainly have had this effect. Fite’s declarations that the metro-area would run out of water before it could build the CWP contrasted with the county commission’s message that the SNWA would be able to meet this challenge. Indeed, a small group of planners within the Authority had begun to formulate a new policy in which the SNWA would base estimates of the available resources on future acquisition efforts.<sup>86</sup> This was an unprecedented way of crafting water policy, and one that Fite, a veteran of the conservative Bureau of Reclamation would likely not have sanctioned.

According to the *Las Vegas Review-Journal*, Mulroy “bristled” over Fite’s assertions, stating that he was not “close enough to the project to know” how vital it was to the metro-area.<sup>87</sup> Fite’s opposition to the CWP was in part the result of his

newcomer status. The LVVWD had been involved in planning the CWP since the mid-1980s. It was a project that emerged from concern among District officials that the agency would not be able to procure enough water from the Colorado River to keep up with the growing population. Because Fite had come to the metro-area after 1989, he had not witnessed the convergence of Colorado River shortages, casino construction, and groundwater applications. As a result, he did not have the same sense of urgency as his metro-area counterparts, especially Mulroy. While it may have seemed like a good idea in 1991 to hire an outsider like Fite, it became clear that the expertise he brought with him did not outweigh the political discord he caused. As a result, in April 1992, the board notified Fite that they were beginning a nationwide search for his replacement.<sup>88</sup>

The Board wanted someone who understood local politics, had knowledge of the Colorado River, and knew about water administration in a desert climate. On April 16, 1992 the Board authorized a recruitment effort throughout the American West for a new general manager. In the following months the Board received 132 applications for the position, but, according to County Commissioner and SNWA board member Pat Shalmy, “no one person jumped out at us as the person we would recommend.”<sup>89</sup> To help expedite the process, Chairman Hardy recommended the board narrow its focus to people already in water management positions in the southern Nevada and Lower Basin states.<sup>90</sup> However, this too failed to produce an acceptable candidate.<sup>91</sup> As the board searched for a new general manager, people continued to move to southern Nevada, which increased the pressure to find a solution.

During the nearly yearlong search for Fite’s replacement, a parallel development emerged that would have lasting legacy. During this time, several board members began expressing support for the idea of having the District take over staffing duties for the SNWA.<sup>92</sup> While the board searched for a replacement, it simultaneously realized that the composition and size of the Authority was insufficient for the job at hand. At that time the SNWA had a staff of four people. This was inadequate for an agency tasked with representing the Las Vegas metro-area on the political and geographical scale of the Colorado River Basin. Las Vegas-area water officials created the SNWA, in part, to negotiate and work with the other Basin states and federal government to secure additional Colorado River water. The river was (and remains), the most hotly contested waterway in the nation.<sup>93</sup> For example, from the 1920s to the 1960s, on four separate occasions, the state of Arizona sued California over Colorado River rights.<sup>94</sup> In the 1970s Mexican President Luis Echeverría threatened to take the United States to the World Court in The Hague over the river’s rising salinity levels.<sup>95</sup> Additionally, over 20 million people throughout the American West relied on the Colorado River for drinking water in the early 1990s. To effectively negotiate this challenging political environment, the SNWA would need greater institutional depth going forward, including a cadre of lawyers and engineers.

During an October 1992 board meeting, Director Paul Higginson officially proposed the LVVWD should administer the SNWA.<sup>96</sup> Going one step further, he pointed out that Mulroy’s knowledge of local politics made her an ideal choice to replace Fite and suggested she be placed in charge of the reorganized SNWA. Director Higginson seconded this and declared “it is the board’s responsibility to the people in this community ... to hire the best people they can to do this job of finding

new water for this valley ... this contract, by placing the technical responsibility for that with the Las Vegas Valley Water District, does just that.”<sup>97</sup>

Board members representing the smaller agencies immediately expressed reservations about Higginson’s proposal. Director Lorin Williams of Henderson was concerned that Mulroy would be unable to keep her role as General Manager of the LVVWD and SNWA separate. Williams was concerned that the District might come to dominate local policy choices to the detriment of the smaller agencies.<sup>98</sup>

This was a reasonable concern. The previous years witnessed not only conflict among the metro-area’s water agencies, but also the domineering leadership style of Walt Fite. Vice Chairman Brent Hardy of North Las Vegas was concerned that allowing one agency—the District—to manage the SNWA would potentially undercut the spirit of consensus that formed the foundation of the SNWA.<sup>99</sup> At the most fundamental level, each board member was trying to protect his or her city’s ability to continue growing.<sup>100</sup>

In order to help persuade representatives of the smaller member agencies, Chairman Dondero pointed out that the SNWA Cooperative Agreement, to which they were all signatories, established and protected each of their water allotments, as well as their financial obligation to the Authority. The current proposal would in no way threaten that arrangement.

Compelling as Dondero’s argument may have been, neither Williams nor Hardy were ready to support the merger in October and voted against the measure. Though he supported the merger, Director Bingham voted with the opposition. He did not want to pass the bill unless there was unanimous board support.<sup>101</sup> After the vote he stated he would spend the next month meeting with Hardy and Williams to build

consensus. Bingham stated that if he was unsuccessful he would vote to either dissolve the SNWA or override the others—because each of southern Nevada’s city’s faced too many challenges for the Board to “sit around for another year and wait for things to happen.”<sup>102</sup>

During the intervening thirty days, District officials negotiated with the other member agencies to find a way around the impasse. For the smaller agencies, not only would the metro-area’s largest and most powerful water agency assume responsibility over water policy, but one of the most politically savvy people in southern Nevada, Pat Mulroy, would also lead it. By this time nobody doubted Mulroy’s political competence. She had played a key role in bringing together the disparate water agencies to create the SNWA and had begun the process of procuring additional water resources in the metro and Basin state region.

While the combination of the LVVWD/SNWA merger and Mulroy’s potential ascendance to the General Manager’s position caused significant unease among the member agencies, the growth challenges affecting the metro-area were not going away. As the agencies negotiated, growth continued, and individual water purveyors continued to face increasing pressure from the business community and elected officials. Ultimately, Williams and Hardy agreed to allow Mulroy to lead, and the District to administer, the SNWA. What ultimately convinced them to support the initiative was an additional change to the cooperative agreement. The member agencies agreed to a stipulation that each year they would vote whether to reaffirm Mulroy’s tenure as General Manager and whether to allow the District to continue staffing the SNWA. If there was not unanimous agreement among the member agencies, then this arrangement would come to an end.<sup>103</sup>

Mulroy's ascendance to leadership may seem surprising given the earlier opposition among the smaller member agencies. However, according to several of her counterparts in Henderson, North Las Vegas, and Boulder City, Mulroy had proven herself to be both proficient in her job, as well as just. Her overall performance and impartiality throughout the entire SNWA negotiation process demonstrated her trustworthiness to her colleagues. But it appeared that the member agencies were only willing to extend their trust so far—they trusted Mulroy, but could not be assured that anyone else would exhibit the same qualities of job proficiency and fairness. This was the flipside to the annual agreement reaffirming Mulroy's tenure. The member agencies also wanted to ensure they could hire someone who, like Mulroy, possessed the necessary attributes to lead a member-based water agency. Should someone less fair-minded step into the General Manager's position, the member agencies wanted the legal recourse to rectify the situation in a timely fashion.<sup>104</sup>

In retrospect, the suspicion over Mulroy's appointment was unfounded. Phil Speight, Henderson City Manager, observed that Mulroy "earned the compliance" of the member agencies: "Whether she could . . . put on another hat and become the regional czar was something that she had to establish with all of the entities . . . she was able to develop trust with all of the administrators as well as the political leaders of each of the entities through her work ethic."<sup>105</sup> It did not take long after her appointment that Mulroy became the face of the SNWA, both to the member agencies and to the wider public.

When the District merged with the SNWA, it created an agency with a significantly different geographic orientation than what its creators had originally intended.<sup>106</sup> Planners had initially envisioned the SNWA as an organization with a

geographically outward orientation. Local water issues would be the domain of the individual member agencies, and the SNWA would operate at the county and interstate level. In other words, they saw the Authority as an organization that would have minimal influence on local (domestic) policy and would spend most of its time trying to obtain additional water from the Colorado River. This would mean that the Authority would interact primarily with the Colorado River Commission, the Bureau of Reclamation, and the other Colorado River Basin states.

However, when the LVVWD and SNWA merged, it integrated the domestic orientation of the District and the outward orientation of the Authority. While the official SNWA position is “the LVVWD operates the SNWA under contract, [and] the two entities are legally separate,” for all intents and purposes, the agency is a single unit.<sup>107</sup> According to SNWA Natural Resources Director Kay Brothers, “The [District], is one organization with two missions. One is the purveyor mission [the District] and the other is the regional mission [SNWA]. But it is one organization.”<sup>108</sup> Instead of there being two agencies with two separate geographic foci, it became a single organization able to launch policy initiatives at the metropolitan and interstate levels.

The standardization of effluent policy across the valley was one such example of the new agency’s capabilities. This policy enabled the SNWA to withdraw additional water from the Colorado River, increasing the metro-area’s water supply through resource acquisition. Conversely, the SNWA was also able to increase the volume of its resource pool by eliminating wasteful consumption practices. This occurred as a result of the shortage sharing agreement among the member agencies. Under SNWA guidelines, if a water shortage occurred in the metro-area, each



member agency would assume a proportional burden of shortage. This changed the dynamic of the individual municipality allocations. Since each had to share in shortage, this discouraged overuse of water and contributed to an overall decrease in consumption rates. Furthermore, under the Cooperative Agreement, allocations were no longer contingent upon use. As a result of policies such as these, the SNWA found itself better able to simultaneously coordinate regional acquisition efforts with local conservation measures, leading to a more comprehensive system of water management.

In the decade following the SNWA/LVVWD merger, one of the Authority's chief policy initiatives was water conservation. Staff specifically began targeting various forms of outdoor water use. Water used outdoors had a greater impact on Las Vegas's water supply than indoor water use. After consumption, water used indoors for drinking and cleaning flowed back into the metro-area's water system, was cleaned, and returned to Lake Mead. This water was then used for return flow credits, and thus actually helped the SNWA obtain additional water from the river. However, water used outdoors was lost to the system. After a resident sprayed water on their car or lawn, it evaporated. The SNWA could not recover any of this water. The SNWA therefore began restricting outdoor water use in the early 1990s.<sup>109</sup> In 1999, the SNWA augmented this policy with financial incentives. That year the Authority initiated a rebate program that paid southern Nevadans to remove grass in favor of more geographically appropriate desert plant species. As of 2013, the "Cash for Grass" program has removed enough grass to decrease the metro-area's consumption rate by seven billion gallons per year.<sup>110</sup>

While programs such as these increased the metro-area water supply, they also served a valuable public relations purpose. Conservation efforts in the metro-area helped improve the Authority's political standing within the Colorado River Basin, a point of importance since the Authority was poised to seek additional Colorado River water. The Authority's conservation efforts served to demonstrate to the Basin states that the metro-area was actively working to get its own house in order before it sought any non-local water sources.

When the SNWA board voted to allow the District to manage the Authority, it gave the agency the tools it needed to effectively manage water at the metropolitan and interstate scale. Between 1989 and 1993, from the WRMI process to the LVVWD/SNWA merger, the SNWA was imbued with authority from the local and county levels. This allowed it to implement conservation measures throughout southern Nevada in a more uniform fashion, something that had never occurred up this point. Member agencies no longer had to use their water or lose it. Water managers could conserve and not face the threat of losing the following year's allotment. The creation of the Authority also established an organization that could work across municipal boundaries, a rarity in southern Nevada. The main factor to its success was the egalitarian nature of its political structure—each member agency possessed a veto on vital policy decisions regardless of the size of the agency or population it served. The Cooperative Agreement, therefore, helped the SNWA to solidify its political power within the metro-area. As a result, the SNWA was in a far better position to engage with the Basin states and Bureau of Reclamation to seek a change to the Law of the River.

In March 1992, the Authority obtained the rights to the final 58,000 acre-feet from the Bureau of Reclamation.<sup>111</sup> As the Authority distributed the new water to the member agencies, planners rested a bit more easily. The new water went to support several large-scale housing developments throughout metropolitan Las Vegas, which in turn spurred the local economy.<sup>112</sup> But while metro-area planners may have thought their troubles were over, the influx of new Colorado River water complicated policy and threatened the stability of the SNWA. This helped bring about the next phase of SNWA history, the Paradigm Shift.

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## NOTES

<sup>1</sup> American Society of Civil Engineers, *From the Spanish Trail to the Monorail: A History of Civil Engineering Infrastructure in Southern Nevada* (InstantPublisher.com, 2009), 38.

<sup>2</sup> Patricia Mulroy, April 26, 2005.

<sup>3</sup> Social Science Data Analysis Network, "Census Scope, Population Change, 1990-2000," *Census Scope, Population Change, 1990-2000*, September 4, 2014, [http://www.censusscope.org/us/map\\_popchange\\_90-00.html](http://www.censusscope.org/us/map_popchange_90-00.html).

<sup>4</sup> Christina Binkley, *Winner Takes All: Steve Wynn, Kirk Kerkorian, Gary Loveman, and the Race to Own Las Vegas*, Reprint edition (New York; London: Hyperion, 2009), 44.

<sup>5</sup> Mark Gottdiener, *Las Vegas: The Social Production of an All-American City*, 1 edition (Malden, Mass: Wiley-Blackwell, 2000), 36.

<sup>6</sup> Tracy Taylor, "Ruling #5726" (Nevada State Division of Water Resources, April 16, 2007), [http://www.greatbasinwater.net/doc/snwa\\_ruling\\_5726\\_spring\\_valley.pdf](http://www.greatbasinwater.net/doc/snwa_ruling_5726_spring_valley.pdf).

<sup>7</sup> Colorado River Commission of Nevada, *Laws of the Rivers: The Legal Regimes of Major Interstate River Systems of the United States*, ed. Dan Seligman and James H. Davenport (Las Vegas, NV: Colorado River Commission of Nevada, 2006).

<sup>8</sup> Colorado River Commission of Nevada, *Colorado River Commission of Nevada Reference Library Collection*.

<sup>9</sup> Nevada and Nevada, *State of Nevada, Colorado River Commission, Audit Report, Year Ended June 30, 1989* (Carson City, Nev: Legislative Counsel Bureau, 1989).

<sup>10</sup> Patricia Mulroy, April 26, 2005; Pat Mulroy, Colorado River Water Users Association--Nevada, Tape #8, Pat Mulroy (Tape #1), Oral History Interview, December 13, 2007.

<sup>11</sup> David Donnelly, interview by Author, September 24, 2007; Patricia Mulroy, August 14, 2014; American Society of Civil Engineers, *From the Spanish Trail to the Monorail*.

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<sup>12</sup> Clark County, *Clark County Water Resource Strategy: A Plan of Action to Develop, Conserve, and Manage Clark County's Limited Water Resources* (Clark County, 1989), University of Nevada, Las Vegas.

<sup>13</sup> Ibid.

<sup>14</sup> American Society of Civil Engineers, *From the Spanish Trail to the Monorail*.

<sup>15</sup> Ibid., 35–38.

<sup>16</sup> David Donnelly, 2005.

<sup>17</sup> Clark County, *Clark County Water Resource Strategy: A Plan of Action to Develop, Conserve and Manage Clark County's Limited Water Resources*, 1989.

<sup>18</sup> David Donnelly, 2005.; Pine's inability to work with other agencies in the valley was actually a matter of record. In 1989, in a meeting among the various local water agencies, Pine rose to verbally chastise the director of the Colorado River Commission, Jack Stonehocker, accusing the CRC of being responsible for the metro-area water shortages. It was the CRC's "use-it-or-lose-it" policy of water distribution that was the reason for the problems, Pine asserted. While this may have been true, commissioners probably would have preferred Pine address this issue in private. As it happened, Pine's exchange with Stonehocker found its way into the *Las Vegas Review-Journal* the next day. Commissioners also began to notice that Pine alienated other local water agencies, often during public settings. For example, during a LVVWD board meeting with representatives from Boulder City and Henderson's water agencies, he paternalistically criticized aspects of their water policy. These repeated occurrences convinced all seven county commissioners that Pine no longer possessed the ability to continue as LVVWD General Manager. In March 1989, the board requested Pine's resignation (American Society of Civil Engineers, *From the Spanish Trail to the Monorail*, 36-41).

<sup>19</sup> Pat Mulroy, Colorado River Water Users Association--Nevada, Tape #8, Pat Mulroy (Tape #1), Oral History Interview, December 13, 2007; American Society of Civil Engineers, *From the Spanish Trail to the Monorail*, 42.

<sup>20</sup> Emily Green, "Satiating a Booming City," *Las Vegas Sun*, June 1, 2008, <http://www.lasvegassun.com/news/2008/jun/01/satiating-booming-city/>.

<sup>21</sup> Green and Sun, "The Chosen One."

<sup>22</sup> Pat Mulroy, Colorado River Water Users Association--Nevada, Tape #8, Pat Mulroy (Tape #1), Oral History Interview, December 13, 2007.

<sup>23</sup> Patricia Mulroy, December 12, 2013.

<sup>24</sup> Patricia Mulroy, April 26, 2005.

<sup>25</sup> Pat Maxwell, interview by Hal Rothman, May 3, 2005, Author's Collection.

<sup>26</sup> Dick Wimmer, interview by Hal Rothman, May 19, 2005, Author's Collection.

<sup>27</sup> Water Resource Management, Inc., "WRMI Process"; Clark County, *Clark County Water Resource Strategy: A Plan of Action to Develop, Conserve and Manage Clark County's Limited Water Resources* (Clark County, 1989).

<sup>28</sup> Big Bend Water District administers water for the town of Laughlin, a small resort town south of Las Vegas. It too had been experiencing high rates of growth, and since it was also reliant upon the Colorado River was included in the WRMI negotiations; WRMI Report.

<sup>29</sup> Water Resource Management, Inc., "WRMI Process" (Water Resource Management, Inc., 1989), Author's Collection; Clark County, *Clark County Water*

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*Resource Strategy: A Plan of Action to Develop, Conserve, and Manage Clark County's Limited Water Resources.*

<sup>30</sup> Garrett Hardin, "The Tragedy of the Commons," *Journal of Natural Resources Policy Research* 1, no. 3 (2009): 243–53, doi:10.1080/19390450903037302; Mary Hynes, "Water District Official Rips Henderson, NLV," *Las Vegas Review - Journal*, May 18, 1991.

<sup>31</sup> According to District personnel, the restriction on issuing will-serve letters was technically not a moratorium since the policy would last only as long as it took the agency to properly assess how much water it had committed and how much it had at its disposal.

<sup>32</sup> Mary Hynes, "District Ready to Commit More Water," *Las Vegas Review - Journal*, August 4, 1991.

<sup>33</sup> Will-serve letters are legal notifications the District issued to developers for construction projects.

<sup>34</sup> "UNLV Center For Business and Economic Research," University, *Las Vegas/Clark County Economic Data*, (September 4, 2014), <http://cber.unlv.edu/CCEconData.html>.

<sup>35</sup> David Donnelly, 2005.

<sup>36</sup> Hynes, "District Ready to Commit More Water."

<sup>37</sup> Mary Hynes, "Hotel Water Pact Canceled," *Las Vegas Review - Journal*, March 21, 1991; Mary Hynes, "Water Issue Hurts LV Developers," *Las Vegas Review - Journal*, December 23, 1991.

<sup>38</sup> James S. Lochhead, "Upper Basin Perspective on California's Claims to Water from the Colorado River Part II: The Development, Implementation and Collapse of California's Plan to Live within Its Basic Apportionment, An," *University of Denver Water Law Review* 6 (2003 2002): 318.

<sup>39</sup> Mary Hynes, "County Asked to Delay New Water Commitments," *Las Vegas Review - Journal*, February 15, 1991.

<sup>40</sup> Hynes, "Water District Official Rips Henderson, NLV."

<sup>41</sup> Ibid.

<sup>42</sup> Southern Nevada Water Authority, "2006 Water Resource Plan," 5.

<sup>43</sup> David Donnelly, 2005.

<sup>44</sup> In 1989 the LVVWD had a Colorado River allocation of approximately 194,000 acre-feet; contrasted with Henderson and North Las Vegas each with allocations of approximately 23,000 acre-feet (Douglas N. Beatty, *Comprehensive Annual Financial Report of the Colorado River Commission of Nevada* [Las Vegas: Colorado River Commission of Nevada, 30 June 1996], 90.)

<sup>45</sup> "Arizona v. California - 466 U.S. 144 (1963)," *Justia US Supreme Court Center*, 1, accessed May 8, 2014, <http://supreme.justia.com/cases/federal/us/466/144/>.

<sup>46</sup> Colorado River Commission of Nevada, *Laws of the Rivers*.

<sup>47</sup> David Donnelly, September 24, 2007.

<sup>48</sup> Las Vegas Valley Water District, "Memo: Letter to WRMI Technical Committee" (Las Vegas Valley Water District, December 4, 1990), Copy on file with author, Las Vegas Valley Water District; David Donnelly, September 24, 2007.

<sup>49</sup> David Donnelly, 2005.

<sup>50</sup> David Donnelly, September 24, 2007.

<sup>51</sup> Las Vegas Valley Water District, "Memo: Letter to WRMI Technical Committee."

- <sup>52</sup> Donnelly, Rothman, 2005.
- <sup>53</sup> Hal Rothman, Phil Speight, 2005, Author's Collection; Phil Speight, interview by Author, September 24, 2013, Author's Collection.
- <sup>54</sup> Southern Nevada Water Authority, "Southern Nevada Water Authority: 1995 Amended Cooperative Agreement Among Big Bend Water District, City of Boulder City, City of Henderson, City of Las Vegas, City of North Las Vegas, Clark County Sanitation District, and Las Vegas Valley Water District."
- <sup>55</sup> Ibid.; The Cooperative Agreement is essentially the founding document, the Constitution, if you will, of the Authority. It has been amended two times since the initial adoption, both times with the unanimous consent of the purveyor agencies. The City of Las Vegas and Clark County Reclamation District were included as member agencies because of their responsibility for reclaimed water. This water formed the basis for the return flow credits that the SNWA could access and was vitally important. Neither agency, however, directly delivered water to consumers, and were thus not responsible for the costs of treating water for human consumption, nor for building infrastructure to convey water throughout the urbanized area. The principals[ thus felt that they should not be given full voting power on the SNWA board. Thus, only the purveyor agencies had full veto power on the board.
- <sup>56</sup> Moehring, *Las Vegas a Centennial History / Green, Michael S.*, 131.
- <sup>57</sup> Michael Weissenstein, "The Water Empress of Vegas"; Patricia Mulroy, December 12, 2013.
- <sup>58</sup> Water Resource Management, Inc., "WRMI Process."
- <sup>59</sup> Jon Ralston, "Schlesinger, Hayes Fail in Attempt to Torpedo Water Pact," *Las Vegas Review - Journal*, July 3, 1991.
- <sup>60</sup> Ibid.
- <sup>61</sup> Review-Journal, "Boulder City Votes to Join Proposed Water Authority," *Las Vegas Review - Journal*, July 10, 1991.
- <sup>62</sup> Jon Ralston, "Local Governments near Pact on Metropolitan Water Board," *Las Vegas Review - Journal*, June 23, 1991.
- <sup>63</sup> Mary Hynes and Jane Ann Morrison, "Groups Seek Board to Allot Water Supply," *Las Vegas Review - Journal*, March 12, 1991.
- <sup>64</sup> Ibid.
- <sup>65</sup> City-Data.com, "City-Data.com," *Las Vegas Population Profile*, September 5, 2014, <http://www.city-data.com/us-cities/The-West/Las-Vegas-Population-Profile.html>.
- <sup>66</sup> John Gallant, "LV Council Votes to Join Water Agency," *Las Vegas Review - Journal*, July 16, 1991; Mary Hynes, "Agencies Want Rights to Nevada's Water Supply," *Las Vegas Review - Journal*, March 13, 1991.
- <sup>67</sup> Moehring, *Resort City in the Sunbelt, Las Vegas, 1930-2000, Second Edition*, 294.
- <sup>68</sup> Moehring, *Las Vegas a Centennial History / Green, Michael S.*, 233.
- <sup>69</sup> Hynes and Morrison, "Groups Seek Board to Allot Water Supply."
- <sup>70</sup> Lochhead, "Upper Basin Perspective on California's Claims to Water from the Colorado River Part II."
- <sup>71</sup> Hynes, "Water Issue Hurts LV Developers."
- <sup>72</sup> Patricia Mulroy, December 12, 2013.
- <sup>73</sup> Mary Hynes, "Bingham Says Water Curbs Hurt Economy," *Las Vegas Review - Journal*, November 27, 1991.

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- <sup>74</sup> John Gallant, "Las Vegas Delays Vote on Water Panel," *Las Vegas Review - Journal*, July 4, 1991.
- <sup>75</sup> "Opinion City Should Join New Water Compact," *Las Vegas Review - Journal*, July 10, 1991.
- <sup>76</sup> Sean Whaley, "Attorney General OKs New Water District," *Las Vegas Review - Journal*, July 26, 1991.
- <sup>77</sup> Mary Hynes, "New Water Panel Holds First Meeting," *Las Vegas Review - Journal*, August 23, 1991.
- <sup>78</sup> Ibid.
- <sup>79</sup> David Donnelly, 2005.
- <sup>80</sup> Patricia Mulroy, August 14, 2014.
- <sup>81</sup> Patricia Mulroy, April 26, 2005.
- <sup>82</sup> David Donnelly, 2005.
- <sup>83</sup> Jon Ralston, "Debate over Water Board's Chief Staffer Reveals Politics, Dangers," *Las Vegas Review - Journal*, April 30, 1992.
- <sup>84</sup> Southern Nevada Water Authority, "Southern Nevada Water Authority: 1995 Amended Cooperative Agreement Among Big Bend Water District, City of Boulder City, City of Henderson, City of Las Vegas, City of North Las Vegas, Clark County Sanitation District, and Las Vegas Valley Water District."
- <sup>85</sup> Ralston, "Debate over Water Board's Chief Staffer Reveals Politics, Dangers."
- <sup>86</sup> Susan Greene and Mary Hynes, "Southern Nevada's New Paradigm for Water Management Means Going Outside the Lines. The Politics of Water: [Final Edition]," *Las Vegas Review - Journal*, October 13, 1996, sec. A.
- <sup>87</sup> Mary Hynes, "Official: Water Plan Too Late," *Las Vegas Review - Journal*, April 17, 1992.
- <sup>88</sup> Mary Hynes, "Board Seeks New Manager," *Las Vegas Review - Journal*, September 18, 1992.
- <sup>89</sup> Ibid.
- <sup>90</sup> "SNWA Board of Directors Meeting, September 17, 1992," Southern Nevada Water Authority.
- <sup>91</sup> Southern Nevada Water Authority, "SNWA Board of Directors Meeting, October 15, 1992" (Southern Nevada Water Authority, October 15, 1992), Las Vegas Valley Water District.
- <sup>92</sup> In other words, the SNWA and LVVWD would essentially become a single agency, with the District assuming the logistical support to execute the SNWA mission of regional water acquisition. While SNWA and LVVWD staff are careful to point out that they are in fact two separate and distinct organizations, this is a stance that reflects political necessity of showing proper deference to the smaller city agencies in an effort to foster political cohesion within the SNWA.
- <sup>93</sup> Marc Reisner, *Cadillac Desert: The American West and Its Disappearing Water* (New York: Viking, 1986).
- <sup>94</sup> Hundley, *Water and the West*.
- <sup>95</sup> Reisner, *Cadillac Desert*, 463.
- <sup>96</sup> "SNWA Board of Directors Meeting, October 15, 1992," October 15, 1992, Las Vegas Valley Water District.
- <sup>97</sup> "SNWA Board of Directors Meeting, December 8, 1992," December 8, 1992, Las Vegas Valley Water District.

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<sup>98</sup> “SNWA Board of Directors Meeting, September 17, 1992.”

<sup>99</sup> Ibid.

<sup>100</sup> Julie Wilcox, interview by Author, October 5, 2007, Author’s Collection.

<sup>101</sup> “SNWA Board of Directors Meeting, December 8, 1992”; “SNWA Board of Directors Meeting, October 15, 1992”; “SNWA Board of Directors Meeting, December 8, 1992.”

<sup>102</sup> “SNWA Board of Directors Meeting, December 8, 1992”; “SNWA Board of Directors Meeting, October 15, 1992”; “SNWA Board of Directors Meeting, September 17, 1992.”

<sup>103</sup> David Donnelly, 2005; Southern Nevada Water Authority, “Southern Nevada Water Authority: 1995 Amended Cooperative Agreement Among Big Bend Water District, City of Boulder City, City of Henderson, City of Las Vegas, City of North Las Vegas, Clark County Sanitation District, and Las Vegas Valley Water District.”

<sup>104</sup> David Donnelly, September 24, 2007; David Donnelly, 2005.

<sup>105</sup> Michael Weissenstein, “The Water Empress of Vegas.”

<sup>106</sup> The SNWA insists that the two organizations never “merged.” Spokespersons have always asserted that the two organizations were separate entities with separate functions. This, however, is somewhat disingenuous since LVVWD personnel were engaged in duties reserved for the SNWA. It was politic for the SNWA to assert the distinction in order to assuage the fears of the other member agencies.

<sup>107</sup> SNWA, “Southern Nevada Water Authority, Comprehensive Annual Financial Report, Fiscal Year Ended June 30, 2013” (Southern Nevada Water Authority, June 30, 2013), [http://www.snwa.com/assets/pdf/about\\_reports\\_cafrr.pdf](http://www.snwa.com/assets/pdf/about_reports_cafrr.pdf).

<sup>108</sup> Kay Brothers, interview by Hal Rothman, April 26, 2005, Author’s Collection.

<sup>109</sup> Southern Nevada Water Authority, “Southern Nevada Water Authority 2009 Water Resource Plan” (Southern Nevada Water Authority, 2009), 16, Southern Nevada Water Authority, [http://www.snwa.com/assets/pdf/wr\\_plan.pdf](http://www.snwa.com/assets/pdf/wr_plan.pdf).

<sup>110</sup> “Email with J.C. Davis,” May 20, 2013.

<sup>111</sup> Mary Hynes, “Fed Agency Gives Valley River Water,” *Las Vegas Review - Journal*, February 27, 1992.

<sup>112</sup> Ibid.



## CHAPTER 3 | THE PARADIGM SHIFT: BECOMING A METROPOLITAN WATER AGENCY

“We created a bookkeeping nightmare”—David Donnelly

“The greatest distractor for anybody who has a very large external mission is internal turmoil. I mean, it’ll cripple you. You won’t be able to put the time and effort into what you need to do if your internal organization is crumbling in front of you.”—Patricia Mulroy

On January 22, 2000, U.S. Senator Harry Reid, Governor Kenny Guinn, and Clark County Commissioner Mary Kinkaid, Chairwoman of the SNWA and a host of other dignitaries and members of the metropolitan growth coalition gathered at the base of the River Mountains southeast of the Las Vegas metro-area to celebrate the completion of the Capital Improvements Project (CIP). The cornerstone of the CIP, the “second straw,” a massive water intake valve approximately twelve feet in diameter had just been finished and was ready to begin siphoning water from Lake Mead and sending it to customers throughout metropolitan Las Vegas.<sup>1</sup> The CIP was capable of withdrawing 700,000 acre-feet of water per year, more than twice Nevada’s annual Colorado River allocation. The large scale of the CIP reflected the expectation by SNWA planners that the Authority would acquire additional water resources in the decades to come. This expectation was the central tenet of the Paradigm Shift, a term coined by Mulroy to describe the SNWA’s new policy of eliminating individual member agency allocations and sending water to where it was needed most in the Las Vegas metro-area, irrespective of municipal boundaries.

The Paradigm Shift was arguably the single most important development in the history of the SNWA. The Paradigm Shift itself was a policy change from a system of allocating specific amounts of water to each of the SNWA member

agencies to a new system based on sending water where it was needed. Under the new Paradigm Shift system, or simply Paradigm Shift, individual member agency allocations were eliminated. Water became a metropolitan resource, collectively owned and administered. Distributing water in this fashion, however, required the acquisition of new water resources. This was not an immediate concern among SNWA planners. The agency had enough reserve water supplies in 1991 to support construction projects for the next two decades. After that point though, the Authority would need more water. The Paradigm Shift was thus also an institutional risk management program.<sup>2</sup>

Under the Paradigm Shift, SNWA planners did not set aside water for specific municipalities. Instead it was based on a first come, first served process. This provided builders throughout the metro-area an equal chance to start construction projects. Additionally, the policy required builders to build. This eliminated speculation over water rights. If developers did not initiate construction projects, the SNWA would not grant water permits. The highest profile example of this new system occurred in 1993 when Steve Wynn began building the Treasure Island Resort and Casino. Prior to construction he requested a water permit from the SNWA, but under the new water distribution system he was denied. He was well into the project when the SNWA finally gave him the water he needed. The Authority wanted to make sure Wynn was serious about the project before it committed water. The SNWA also convinced Wynn to implement a number of water conservation measures in the new resort, to which he agreed.<sup>3</sup>

Two distinct components comprised the Paradigm Shift. The first was the conceptual phase. In this phase SNWA planners established the philosophical and

technical framework that would guide the Paradigm Shift policy, to include the water permitting process mentioned above. Fundamental to this was the expectation that the SNWA would be able to procure additional water resources for the metropolitan area through various means.

The second phase is the process by which the Paradigm Shift moved from abstract principles to physical infrastructure. Reflecting the expectation of new water, the SNWA planners had to expand the existing water infrastructure, sometimes by as much as fifty percent.

Infrastructure expansion occurred later in the Las Vegas metropolitan area than other western cities. While this reflects growth patterns common to many metropolitan areas, the CIP is unique in that the infrastructure is tied to a specific policy. This was not the case in San Francisco and Los Angeles during the early twentieth century and in Denver and Phoenix in the 1940s and 1960s. Policy and infrastructure in the Las Vegas metropolitan area are integrated to a degree not found in these cities. The Paradigm Shift could not have occurred without infrastructure, and infrastructure could not have been built without the Paradigm Shift.

The Las Vegas metropolitan growth coalition was a key ally in the SNWA's campaign to enact the Paradigm Shift. As we shall see in the pages that follow casino resort owners, housing developers, and labor unions lent financial and political support to the project since it promised to bring economic expansion and additional jobs to Southern Nevada. The Paradigm Shift was not without its detractors, however.

Critics assailed the SNWA on a number of points. Was it wise to base water resources on future supplies? What about the environmental impact of bringing more water to the metro-area?<sup>4</sup> More water would likely attract a greater population, which

would then necessitate the bulldozing of more tracts of fragile desert landscape, spewing dust and other pollutants into the atmosphere. The added number of residents would also increase pressure on public institutions such as schools, libraries, parks, medical facilities, and most importantly for this study, water infrastructure. Existing water infrastructure was barely large enough to provide water for the rapidly growing metropolis during the early 1990s. Additionally, the Paradigm Shift would raise Clark County taxes, sparking opposition from the libertarian leaning *Las Vegas Review-Journal*, the Republican Liberty Caucus, Las Vegas state assemblyman Harry Mortensen, and the Nevada Seniors Coalition, a metro-area senior citizens advocacy group.

Criticism over the cost of the Paradigm Shift revealed a misperception over the cost, necessity, and effectiveness of urban water infrastructure not unique to metropolitan Las Vegas. Reliance upon infrastructure to deliver water to residents is common to every urban settlement in the United States. The only difference is the scale in physical size and geographic expanse. Los Angeles, New York City, Boston, San Francisco, Denver, Phoenix, and Salt Lake City all expended large sums of money to build reliable water delivery systems. But these are merely arbitrary examples. As Historian Martin Melosi points out, the more reliable a water delivery system is, the less visible it becomes. Water's delivery into a home becomes so deeply internalized that it does not even register in the mind of a consumer as an amazing thing to behold. Historian William DeBuys writes, "the fact that faucets in Malibu flow with snowmelt mixed from the Wind River Mountains of Wyoming, the Colorado Rockies, and both sides of the Sierra Nevada is a daily miracle." Malibu presents an extreme case of reliance upon infrastructure, but the average resident of

that town likely thinks very little about the effort and materiel involved in conveying water directly into their household. This infrastructural ignorance is common to most urban areas, and it manifested itself in metropolitan Las Vegas in 1998 at the height of the SNWA's Paradigm Shift fund raising campaign.<sup>5</sup>

The Paradigm Shift was an important step in strengthening the internal political solidarity of the SNWA. The individual member agency allocations were a vestige of the old, pre-1991 system. They were only included as a political expedient to make the process of forming the SNWA easier. However, the continued presence of allocations in the SNWA cooperative agreement had the potential to create political strife within the Authority. To become a water agency with a truly metropolitan purview, the SNWA needed to eliminate the system of individual water allocations. The pages that follow will take the reader through the process by which the Paradigm Shift moved from a plan in the abstract to an official SNWA policy and a physical system of infrastructure.<sup>6</sup>

### **Part I | The Conceptual Paradigm Shift: The Plan**

As part of the original SNWA negotiations, the representatives from Boulder City, Henderson, and North Las Vegas (small cities) insisted upon including specific allocations for each prospective SNWA member agency, as well as a shortage sharing agreement. These were essentially placeholders, inserted into the cooperative agreement in case the SNWA failed (fig. 6). The small-city member agencies wanted the legal means to maintain a claim on the metropolitan water resources portfolio.<sup>7</sup> While this eased the SNWA creation process, including individual allotments in the cooperative agreement created the potential for individual member agencies to hoard water. This was the same thing that occurred during the 1980s that led to political

tensions among the metro-area water agencies. Unintentionally then, the member agencies included a proviso that potentially threatened the long-term survivability of the SNWA.

Even before the SNWA was created, at least two County Commissioners, Paul Christensen and Jay Bingham, expressed reservations about adopting a cooperative agreement in which individual cities retained specific allocations. In September 1991 they worried allocations could lead to further political divisions and would “politicize development questions.”<sup>8</sup> These two recognized that concessions would have to be made in order to coax the small cities into joining the SNWA, and they did not make an issue out of their concerns. However, two years later, several SNWA officials began to address this topic once again.

In 1993 the SNWA’s allocation system became a matter of concern to several of the Authority’s top leaders, General Manager Patricia Mulroy, and Deputy General Managers David Donnelly and Richard Holmes.<sup>9</sup> Each of them recognized the inherent danger of having a membership based upon individual allocations. They knew this system threatened internal political solidarity among member agencies. Mulroy’s prior experience with the LVVWD showed her that internal divisions were a more dangerous threat to an organization’s effectiveness than any other factor. During the 1980s the relationship between management and labor within the LVVWD had become strained. Interaction between supervisors and subordinates were often contentious. Mulroy recounted that morale among the workforce in 1989 had reached an all time low. One of her first acts as LVVWD General Manager was to hire a consultant to create a plan to improve the situation. For two years, Mulroy oversaw the process, spearheading efforts to establish an employee generated mission

statement and a code of ethics. These later became official LVVWD policy. Furthermore, Mulroy fired at least one manager who was reported to have verbally abused subordinates. Over the course of two years, Mulroy had reinvigorated the LVVWD's workforce and improved morale. Mulroy recounted that her number one concern throughout the process was to improve the internal solidarity of the LVVWD. She said the organization simply could not function in the way it was intended if the workforce was pitted against one another. Mulroy brought this value with her when she assumed command of the SNWA.<sup>10</sup>

Donnelly and Albright explained that they did not want to see a situation arise in which developers began choosing locations to build based on water availability. Donnelly recalled individual allocations created a situation in which you had “some people who have got more water on their ledgers than others. Pretty soon we are going to have some developers in Henderson [who] can't build, and [we] are going to have to tell them to go to Las Vegas because they are the only ones with any water in their ledger. That is going to destroy this community.”<sup>11</sup>

Donnelly recognized that if developers built in some municipalities and not in others, this would increase the economic disparity among the metro-area's cities. As shown in the first chapter, local governments welcomed developers since housing construction was an economic asset. Indeed, the desire to attract developers to individual municipalities over others was a central reason for increased metropolitan water consumption and political tension among the local governments. The allocations reflected the fundamental irony in the SNWA's creation: the very point of creating the SNWA was to end competition over resources by individual metropolitan

water agencies, yet, member agency allocations were threatening to reproduce these exact conditions.

In 1993 neither Mulroy nor Donnelly knew what to do. There were no examples the SNWA could look to for guidance. The most closely analogous western water agency was the Metropolitan Water District of Southern California, but for reasons that will become apparent below, it was not an agency Mulroy and her staff wished to emulate.

The Metropolitan Water District of Southern California (MET) was created in 1928 to manage the state of California's Colorado River allocation. It was comprised of twenty-six member agencies representing over three hundred cities and municipalities. Membership in MET was not based on equality, rather, it was based on assessed valuation. In other words, the more money your city was worth, the greater your political power within MET. And the more political power a member agency had, the larger its allocation. This has led to considerable tension among members, especially the San Diego County Water Authority (SDCWA) and the Los Angeles Department of Water and Power (LADWP).

Decades-long tension has existed between these two organizations with the SDCWA charging that it has long been dominated by the LADWP. Part of this was the result of SDCWA being nearly totally reliant upon the Colorado River water that MET delivered. Indeed, San Diego is in much the same position as metropolitan Las Vegas in that its water supply is almost entirely comprised of Colorado River water. San Diego's near total dependence on a single water source has placed it in a politically vulnerable position. SDCWA officials, fearing their over-reliance upon a single resource, have long chafed at the restrictions MET has placed upon its water



use. For their part, officials with the LADWP have charged that residents of Los Angeles are paying higher prices for Colorado River water as a result of higher valuation within the city of Angels, therefore subsidizing water that San Diegans consume. At the core of the dispute, however, is the inequitable nature of membership voting power within MET and allocation distribution. Tensions between the two organizations have in fact led to at least five lawsuits between them since the mid-1990s.<sup>12</sup>

Donnelly was clear about his distaste for the MET model: “All the problems the metropolitan water district in southern California was having was because what we considered, or what I considered, an archaic way of allocating water. That you have the haves and the have-nots. It just doesn’t work.”<sup>13</sup> Mulroy felt the same way. She wanted to increase the political solidarity among the SNWA member agencies and knew the MET model would not accomplish this goal. Mulroy remembered that she and her staff “looked at [MET] when we created the SNWA and said okay, we’re not crazy about ... the voting [structure], we’re not crazy about a lot of things they’ve got embedded in there. I mean ... they don’t have a shared shortage arrangement, in fact, we did a lot of things deliberately different because we had witnessed ... the consequences ... of MET’s structure.”<sup>14</sup> Donnelly was first to actually propose doing away with the allocation system. He recruited Mulroy, Albright, and Richard Bunker, president of the National Resorts Association and an influential member of the metropolitan growth coalition who had influence with gaming and development interests, to also push for the Paradigm Shift.

Additionally, individual allocations “created a bookkeeping nightmare” for Donnelly. He recalled the difficulty of attempting to keep track of each member

agency's water allocations during early SNWA planning meetings. The SNWA acquired three new sources of water during its first three years as an institution, totaling nearly 100,000 acre-feet.<sup>15</sup> As the SNWA gained title to this water, Donnelly had to recalculate how much each member agency was entitled to. Complicating matters further, agencies were not using their maximum allotment, only a portion. This required the SNWA to distribute water on a percentage basis, and one that frequently shifted. He also had to oversee the permitting process for development projects and keep track of how much water the Authority had committed.<sup>16</sup> Finally, there was the responsibility of accounting for return flow credits. It was not simply a matter of keeping track of how much water to distribute to each member agency, but also the volume each agency returned to the Colorado River.<sup>17</sup> Donnelly was understandably ready to adopt a different accounting procedure.

Mulroy was initially reticent about the Paradigm Shift. She supported the philosophy but questioned the political timing. The SNWA was only two years when discussions over the Paradigm Shift began, and while the unification had decreased the political tension among member agencies, the potential for a flare up was a distinct possibility.<sup>18</sup> Water allocations remained a politically sensitive topic—other member agencies were covetous of water and saw the allotments as their security to future growth. Donnelly, Bunker, and Mulroy discussed the merits of the Paradigm Shift and came to the conclusion that the risks of delay outweighed the risks of upsetting the status quo. The Paradigm Shift required action on several fronts—obtaining water, planning infrastructure, and securing funding. The SNWA needed to move forward on these components, which is why Mulroy made the decision to support the Paradigm Shift.<sup>19</sup>

Hesitance among the member agencies over adopting the Paradigm Shift is more understandable when placed in historical context. The Paradigm Shift represented an entirely new water management policy. There was no local or regional precedent. The SNWA was asking member agencies to do two things. One, relinquish rights to its water and throw them into a commonly held trust, and two, base the water supply on future acquisitions. It was a large step for member agencies to take.

There are times in history when personality has had a major influence over future events. This was one such occasion. Mulroy was the right person to have in this position at this pivotal moment. By 1993 metropolitan water managers and elected officials had recognized Mulroy's leadership abilities. Mulroy had demonstrated courageous leadership on a number of occasions, to include her central role in the WRMI negotiations, the politically perilous decision to issue the will-serve letter cessation on Valentines Day, 1991, and her recent assumption of the General Manager's position with the SNWA. She had replaced Walt Fite, whom SNWA board members and water managers considered ineffective and domineering. For over a year Mulroy briefed the SNWA board over the need for the Paradigm Shift and in November 1994 the SNWA board gave its final ascent to adopt the policy.<sup>20</sup>

### **Criticism**

The Paradigm Shift allowed development to occur throughout metropolitan Las Vegas (most of all, at the urban periphery and along the Las Vegas Strip, fig. 8). The SNWA predicted it had a large enough supply of water to support development until 2010. Growth after this point, however, required additional resources.<sup>21</sup> This was the most critical aspect of the Paradigm Shift—it relied on the acquisition of future water resources.

The SNWA came under criticism for this policy. One article in particular encapsulated many of the themes present in negative assessments of the Paradigm Shift. Two metro-area journalists and environmental advocates, Susan Green and Mary Hynes, found fault in the SNWA policy, implying the Authority was basing its future acquisition efforts on faith alone. The authors asserted SNWA officials were being irresponsible, writing the Authority's approach to water management was akin to "a family not balancing its checkbook, confident that some new but unknown income will trickle in." Green and Hynes noted that the LVVWD had previously taken the responsible approach in February 1991 when the agency had ceased issuing will-serve letters.<sup>22</sup>

Green and Hynes continued that the chances of obtaining new supplies of Colorado River water were unlikely, citing political opposition from the Basin States and the legal challenges inherent within the Law of the River. However, Green and Hynes ignored certain key facts. At the time they wrote their article, the SNWA had already concluded a Colorado River Commission Restructuring campaign. The result of this campaign was that the SNWA gained state level power and the ability to negotiate directly with other Colorado River Basin states and the Secretary of Interior for water. In 1996, the SNWA was involved in political discussions with California, Arizona, and the Secretary of the Interior over Colorado River water. These talks ultimately lead to agreements that provided the SNWA additional Colorado River water.<sup>23</sup> (Green and Hynes had to have ignored this because their colleague at the Las Vegas Review Journal, Jon Ralston, had written several articles on the CRC restructuring campaign the year before.)<sup>24</sup>

Instead, Green and Hynes asserted that “None of these [Colorado River] options is in hand” and that “economics is at the core of the Paradigm Shift.” The criticism that the SNWA was collaborating with the local business community relied upon a premise that this was simultaneously sinister and unique. However, coordinated efforts between utilities and growth coalitions are a nearly universal practice throughout the nation. In Los Angeles, San Francisco, Denver, Seattle, New York City, and Boston water utilities worked hand in hand with development interests and mainly did so in a transparent fashion.<sup>25</sup> The same held true for the SNWA in the 1990s.

Rick Holmes conceded that there was more private land in metropolitan Las Vegas in 1991 than the Authority had water for. In other words, if private developers built on every square mile of undeveloped land in the metro-area, the SNWA would not have enough water to provide them. Holmes said this scenario was unlikely. He equated the Paradigm Shift to the risk insurance companies assume when providing policies to their customers. Insurance specialists employ various actuarial tables in an effort to predict how much money the company will need in reserves in order to provide insurance benefits. Company specialists know that not every one of their customers will require an insurance payout at the same time. Likewise, Holmes, Mulroy, and Donnelly realized not every tract of private land would be developed at once. They had SNWA technicians conduct their own actuarial studies and discovered that the rate at which the SNWA was acquiring new water resources, coupled with its potential to acquire more, justified the adoption of the Paradigm Shift.<sup>26</sup>

Green and Hynes’ assertions notwithstanding, there was good reason for SNWA planners to be optimistic. In 1992, as a result of unifying local water agencies

into the SNWA, the Authority gained rights to 58,000 acre-feet per year of additional Colorado River water. This volume of water came in the form of additional return flow credits. In 1993 the Authority purchased rights to 23,000 acre-feet per year from the defunct California Edison Power Plant, and in 1994 purchased 14,000 more from Basic Management, Inc. in Henderson for a total increase of 95,000 acre-feet per year. None of this water was “new” Colorado River water, however, a fact that provided at least some substance to Green’s and Hynes’ charges. The state did not increase its Colorado River allocation. This amount remained at 300,000 acre-feet of consumptive use per year. What the return flow credit and power plant acquisitions represented was an internal reorganization of the state’s Colorado River allocation being sent to the Las Vegas metro-area.

In addition to these purchases, SNWA planners were already establishing strategies to obtain three more water sources: the Virgin River, Cooperative Water Project (Great Basin groundwater pipeline), and an increase to the state’s Colorado River allocation (fig. 1).<sup>27</sup> Faith was thus unnecessary. SNWA planners had a substantial amount of empirical evidence supporting the Paradigm Shift.

### **Water Resource Plan**

In 1996, the SNWA published its first water resource plan as a means of countering misperceptions over the Paradigm Shift.<sup>28</sup> In it the SNWA identified current water resources and their size. It also listed future water resource options and the measures the authority was employing to execute its resource acquisition strategy. The water resource plan reflected a policy of transparency and a conscious decision to involve the public in aspects of metropolitan water policy. Mulroy recognized that support from the metropolitan community was vital for the SNWA to implement

various aspects of the Paradigm Shift. One area of support was in the issue of conservation. At approximately the same time the SNWA released its water resource plan, it initiated a study to determine the effects of residential turf removal in the metro-area. The SNWA predicted it might be able to decrease metropolitan water consumption by as much as twenty percent, water it could then use as an additional resource.<sup>29</sup> The SNWA would expand its conservation efforts during the 1990s to include bans on car washing, proscribed watering days for grass, providing incentives to use swimming pool covers, and tiered pricing to discourage water consumption.<sup>30</sup> Additionally, the SNWA set conservation goals of reducing the metropolitan water consumption ten to fifteen percent by 2000. The SNWA listed these conservation programs in its water resource plans beginning in 1997.<sup>31</sup>

The water resource plan and conservation efforts served two purposes. One, they helped bring transparency to the SNWA's Paradigm Shift. The public was able to read about the SNWA's efforts and stay abreast of developments (the SNWA revised its water resource plan on an annual basis).<sup>32</sup> Two, resource plans and conservation involved the metropolitan community in water acquisition efforts. Every acre-foot saved was an acre-foot gained. Conservation efforts came to play a vital role in the SNWA's overall acquisition strategy from 1996 onward. All of the SNWA's acquisition and conservation efforts promised to bring over 100,000 additional acre-feet of water to the metropolitan area per year. This brings us to the second part of the Paradigm Shift equation.

## **Part II | The “Physical” Paradigm Shift: Infrastructure**

In 1982 the Bureau of Reclamation completed the Southern Nevada Water Project. This water system was capable of delivering 299,000 acre-feet per year to

metropolitan Las Vegas. This system was not big enough to absorb the volume of the SNWA's recently acquired water. To successfully implement the Paradigm Shift, then, the SNWA would also have to build the infrastructure to absorb and distribute the metro-area's enlarged water supply. The SNWA called this infrastructure expansion the Capital Improvements Program (CIP).

The SNWA began planning the CIP at about the same time Mulroy and her staff began discussing the need for the Paradigm Shift. By 1995, the SNWA was ready to begin construction. The CIP was the largest and most expensive capital works project in southern Nevada since the construction of Hoover Dam in the 1930s. The CIP called for the construction of thirteen pumping stations, almost sixty miles of laterals (underground pipelines) around the periphery of the metropolitan area, nineteen storage reservoirs, a new water treatment plan to augment the existing one, a 2,089 foot tunnel through a mountain range, and a new intake valve into Lake Mead (fig. 7).

The laterals were capable of transporting over seventy million gallons of water per day throughout the metropolitan area. While the laterals were technically designed to support the metro-area as a whole, they were strategically placed in the areas of highest growth along the urban periphery. The need for the laterals was increasing daily. In 1995 alone, the year the SNWA launched the CIP, Clark County granted permits for the construction of over 27,000 homes and 1,000 commercial properties.<sup>33</sup> The cost of the CIP to the SNWA was substantial—just over two billion dollars. The only funding mechanisms available to the SNWA in 1995 were connection fees that housing developers paid to connect new homes to municipal water mains, and sales of water to customers. Planners were concerned that basing the entire cost of the CIP on



these two funding methods would drastically increase water rates and exert a disproportionate financial burden upon new homebuyers. SNWA officials wanted to phase in a cost increase, but reliance on the existing funding options made this impossible.

In an effort to consider other options, the SNWA created a committee, the Integrated Resource Planning Advisory Committee (IRPAC), a group of twenty-one residents of the metro-area representing a range of business interests. The SNWA used the IRPAC as a kind of think tank, the members of whom would examine alternative methods for funding the CIP beyond simply raising hookup fees and water rates. Once a month for two years IRPAC met and discussed a range of funding options. They came to a consensus that some type of tax assistance was needed. They considered a range of options to include excise, gaming, and room taxes. However, they ultimately decided that increasing the Clark County sales tax rate by a quarter of one percent would be the most effective means of raising funds for the CIP.<sup>34</sup>

The Committee reasoned that, unlike in other metro-areas, the large number of annual visitors to southern Nevada would help the community spread the tax burden more equitably among the population. Metropolitan Las Vegas was unique in that it was the destination for over thirty million visitors per year, all of whom IRPAC assumed would contribute sales tax revenue. Analysis conducted by the SNWA revealed metropolitan residents and businesses each contributed thirty five percent of the sales tax burden, with tourists accounting for the remaining thirty percent. Developers supported the measure because it would prevent an increase in home prices, and the gaming industry supported it since it would affect casinos less than the gaming and room taxes IRPAC had considered.<sup>35</sup> SNWA adopted this

recommendation and introduced a bill (AB291) at the legislature in 1997 to raise the Clark County sales tax.<sup>36</sup>

The SNWA needed legislative approval because under the Nevada constitution, the state had supremacy in powers of taxation. Local governments were barred from unilaterally raising taxes. This arrangement became an issue during the 1990s because the state legislature met biennially. Though not unique (most cities and counties are political subdivisions of, and therefore subservient to, the state) the inability of the Clark County Commission to raise the sales tax rate added to a list of challenges it faced, including building enough schools, roads, and hospitals to serve the three to four thousand people per month moving to the metro-area during the 1990s. That decade, Clark County was the fastest growing metropolitan region in the nation.<sup>37</sup>

Mulroy, along with several of her staff and IRPAC members lobbied lawmakers throughout the six-month legislative session. Members of this contingent testified before assembly and senate committees on over ten separate occasions to explain the need for the tax increase. One session in particular illustrated the general theme of the SNWA's lobbying efforts. In May, SNWA Deputy Director Dick Wimmer and Irene Porter, an IRPAC member and Executive Director of the Southern Nevada Homebuilders Association, argued that without the sales tax increase the cost of homes in the area could rise to as high as thirty thousand dollars beyond their current cost.<sup>38</sup> Wimmer explained that under the current funding plan, seventy-nine percent of the infrastructure revenue came from the regional connection charge, a charge the Authority levied on all newly built structures in Clark County. He pointed out that this targeted new homebuyers. He added that both regional connection

charges and water rates would increase dramatically unless other forms of revenue were found. Porter reinforced Wimmer's message testifying, "without the [sales tax], the connection fees ... would make purchasing a home beyond the reach of most families."<sup>39</sup>

Mulroy, her staff, and members of the metropolitan Las Vegas growth coalition continued their economics-based lobbying efforts in subsequent committee meetings. As general manager of a major metropolitan water agency, Mulroy wanted to be able to keep up with urban growth, casino representatives wanted to foster the positive image of Las Vegas in the minds of tourists, housing developers wanted to continue selling homes, and labor representatives wanted to maintain a healthy job market for individuals looking for employment. Mulroy's cohort found a sympathetic audience. Just over sixty percent of the legislators came from districts in metropolitan Las Vegas, many of whom represented new homebuyers and developers. In July 1997 the legislature passed the sales tax bill (AB291) and granted the Clark County Commission the authority to raise the sales tax.

In a complete surprise to Mulroy, the Clark County Commission chose not to use their recently obtained authority to implement the tax increase. Instead, fearing a potential public backlash, the Commission proposed placing the issue before voters. Mulroy and the IRPAC felt this was a serious threat to the CIP. The CIP was a major capital works project, one of the most important in the metro-area's history; as a result of the County Commission's actions, the CIP was now subject to a voting population with a historically mixed record on supporting public funding measures. In 1994 voters rejected a bond issue that would have provided funding for overcrowding in the metro-area's schools. The pivotal voting block in that election had been the metro-

area's senior citizens, many of whom had recently moved to southern Nevada to retire. They often did not have any familial ties to the area and therefore saw no need to support a tax increase. However, two years later, seniors widely supported another bond measure for the same issue. Mulroy, her staff, and the metro-growth coalition therefore had no way of knowing how the sales tax funding measure would turn out. It was possible that water infrastructure would resonate with a broader cross-section of the metro community than the issue of public schools. At that point, however, it was impossible to tell. The uncertainty over the sales tax increase inspired the SNWA and Paradigm Shift supporters to initiate a public relations campaign urging voters to support the sales tax increase.<sup>40</sup>

The *Las Vegas Review-Journal* editorial staff was opposed to the sales tax increase on idealist grounds. The *Review-Journal* had long displayed the libertarian views of its publisher Sherman Frederick. The newspaper sponsored a number of polls leading up to the 1998 Clark County general election. Many of the polling questions were presented in a way that emphasized the impact of taxation over the benefits to be derived from the CIP.<sup>41</sup> The *Review-Journal's* stance is somewhat surprising, given that news media are frequently part of metropolitan growth coalitions. It becomes more puzzling still when considering that the CIP would likely support Las Vegas metropolitan population growth, which would in turn increase readership of the newspaper.

The Republican Liberty Caucus was another metro-area opponent of the sales tax increase. The group's spokesperson Chuck Muth argued, "government should look for ways to cut spending first – this was the only option never considered."<sup>42</sup> What Muth did not realize, was that there were a range of issues that compelled

metro-area governments to “not consider” scaling back in other areas, not least of which the financing of government and water utilities was completely separate. As a political subdivision of the state, the SNWA’s funding mechanisms were highly proscribed and clearly delineated. In short, they were limited. As per state law, the SNWA received the entirety of its funding through connection charges and sale of water. Indeed, the SNWA’s largest member agency, the LVVWD had for several decades sought to obtain tax funds for various infrastructure projects. However, the District’s 1947 enabling legislation specified the agency could only collect funds through hookup fees, water rates, and bonding.<sup>43</sup> This law remained unchanged and was also the basis for the SNWA’s funding options. It was impossible for metro-area governments to cut back in order to support the CIP. There was no legal mechanism in place to redistribute any saved money to the SNWA.

Muth’s attitude was actually representative of a larger issue, one that is present in any developed society and stems from the widespread failure to understand the cost and resources necessary to provide reliable water services. In Muth’s case, it showed that he did not have a firm grasp of the basic composition of water infrastructure in the Las Vegas Valley. Not only this, he did not understand the scale of the infrastructure and its vitality. In this, he was not alone. Residents of the metro-area likely did not see the River Mountains Pumping station, the pipelines, or the water treatment plants that conveyed water to their homes; these people simply turned the faucet handle and water came out. Muth, like so many Americans, remained ignorant of where their water came from. Indeed, this ignorance reflects the central irony of urban water infrastructure: the more reliable the system, the greater the degree of

ignorance over its operation. If it works seamlessly, it is invisible. And if it is invisible, people rarely have any reason to investigate.<sup>44</sup>

Others within the community were concerned over the inherently regressive nature of a sales tax. Democratic Assemblyman Harry Mortensen from Las Vegas thought that a sales tax would unfairly burden families of lesser means. He asserted that the gaming and construction industry should bear the cost since they were the two entities drawing new residents to the metro-area in the first place.<sup>45</sup> His proposal to add a room tax to casinos in addition to continued reliance on hookup fees and water rates was a view shared by Ken Mahal, spokesperson for the Nevada Seniors Coalition. Mahal argued those living on a fixed income were especially vulnerable to a regressive sales tax. He asserted seniors should not have to “subsidize growth” for the construction and casino industries.<sup>46</sup>

Mulroy and the IRPAC worked to counter the anti-tax advocate’s message. They wrote letters to the editor, sponsored news and television advertisements, and IRPAC members created a public relations advocacy group—Nevadans for Solutions—to initiate a campaign to educate the metropolitan community about the stakes in the upcoming election. They contributed over 300,000 dollars for an advertising campaign and countered tax opponents direct-mailing efforts with mailers of their own.<sup>47</sup> Nevadans for Solutions drew financial support from the Nevada AFL-CIO, Nevada Resort Association, Nevada Taxpayers Association, the Bellagio Hotel Casino, as well as local homebuilders Del Webb Communities, Lewis Homes of Nevada, and American West Homes.<sup>48</sup>

After a year of campaigning, Mulroy penned an op-ed piece in the *Review-Journal* just one week before the November general elections. Mulroy reiterated the

need for system reliability and the advantages that a sales tax provides since it allowed tourists to pay a large portion of the CIP cost. She was also careful to point out that, contrary to charges from people like Mortensen and Mahal, the tax was not, to use their phrase, a subsidy for the growth industry. The SNWA already charged builders a connection fee on new homes, money that went back to the SNWA for their own operations. Since the revenue from the quarter-cent tax would also come back to the SNWA, this would prevent additional increases in hookup fees and water rates. It is difficult to deny critic's assertions, however. Wimmer and Porter had specifically stated the reason for the tax was to make it easier for consumers to purchase new homes, which directly assisted housing developers. Mulroy closed by countering Muth's criticism, declaring the SNWA had limited funding options and that "the Legislature has given us only one option – the sales tax – to help pay for this much-needed project."<sup>49</sup>

Mulroy was also concerned at this time about how local events would affect the regional political setting. During this period the SNWA was trying to establish its stature within the Colorado River Basin State's political landscape. Guiding and implementing the quarter-cent sales tax initiative would help establish the still new SNWA's ability to follow through with difficult political campaigns, thus enhancing its reputation throughout the Colorado River Basin. It would show that the SNWA was able to handle its domestic affairs.

The most pressing regional concern for the SNWA in 1998 was interstate water banking agreement negotiations with Arizona. SNWA officials were attempting to establish an agreement that would allow Nevada to store its unused apportionment of Colorado River water in Arizona's aquifers.<sup>50</sup> This was a complex arrangement

involving water managers from Nevada and Arizona, as well as federal officials in the Interior Department. Key to Arizona's willingness to support the agreement was Nevada's ability ensure the quality of water flowing into Lake Mead through the Las Vegas Wash. And this was another area in which the quarter-cent tax came into play. A significant portion of the money raised through the sales tax would fund Las Vegas Wash remediation efforts, ones intended to reduce the level of pollutants then flowing into Lake Mead. Since the wash helped purify water that could potentially be sent into Arizona's aquifers, water planners there and in the SNWA were paying close attention to events in the metro-area.

At this point in its history, the SNWA still did not have enough influence to guarantee the outcome of the sales tax campaign. From the point of view of the Colorado River Basin states, this created a sense of uncertainty over the direction of Las Vegas metropolitan water policy. The SNWA did not want to convey this message to the region, which is one of the reasons officials worked tirelessly with other sales tax supporters. Losing the sales tax battle would have damaged SNWA's credibility among the five SNWA member agencies, in the Nevada capital, and with the state governments of the six other Basin states. It was essential, therefore, that the SNWA continue defeating political opponents throughout the 1990s to establish itself as the undisputed central water agency for the Las Vegas metropolitan area.

Despite numerous *Review-Journal* polls indicating up to seventy percent disapproval for the tax increase, just the opposite result occurred. On Election Day approximately seventy percent of the voting public endorsed the sales tax increase.<sup>51</sup> The SNWA campaign had succeeded. Mulroy was understandably elated by the news.



Immediately following the election results she stated, “I feel pretty darn good. We worked really hard, and we were very pleased to see the results of the election.”<sup>52</sup>

The following year (1998), sales tax revenue began flowing toward CIP projects underway.<sup>53</sup> The CIP would support a metropolitan population increase of over 600,000 people in the next ten years.<sup>54</sup> The implementation of both aspects (conceptual and physical) of the Paradigm Shift had resulted in a larger metropolitan area in physical size and population. It fostered the continued expansion of the development and gaming economies, both of which were central goals of the metropolitan growth coalition. Conversely, the Paradigm Shift also contributed to increased congestion, which required freeway widening and interchange improvements, further school crowding that necessitated additional bond initiatives, continued air quality degradation, and higher sales taxes. In short, the effect on the metropolitan area was good for some residents and bad for others

Solely from an administrative viewpoint, however, the benefit of the Paradigm Shift to the SNWA’s political structure is difficult to overstate. Eliminating the allocation-based policy removed the final barrier to creating a truly metropolitan water agency. The Paradigm Shift made water a common resource shared by the metro-area as a whole and had the effect of turning a confederation into a singular unit. The Paradigm Shift was also important in the sense that it was the final component in a process of local political consolidation. Member agencies were now fully integrated into the SNWA.

The SNWA would now project this power to seek changes in water policy, first at the state level in Carson City, and then at the Colorado River Basin States level. This outward focus of power was the opening phase of a campaign to change

the Law of the River. The next chapter examines the SNWA's acquisition of state level power that enabled it to operate on an interstate plane alongside other state governments.

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- <sup>11</sup> David Donnelly, 2005.
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## CHAPTER 4 | REGIME CHANGE: SEIZING STATE POWER

Thus far this narrative has focused on SNWA efforts to consolidate control over Las Vegas metropolitan water policy. This had been a two-part process consisting of the creation of the SNWA in 1991 and the adoption of the Paradigm Shift between 1991 and 1998. Between 1991 and 1995 a parallel political process occurred in which the SNWA waged a campaign to assert control over the state's Colorado River allocation. Since 1935 authority over this resource resided with the Colorado River Commission of Nevada, an executive agency under the direction of the governor. While the Colorado River ostensibly belonged to the state as a whole, the Las Vegas metropolitan area alone was geographically situated to use the waterway. The historical role of state government is to moderate disputes among competing users over a shared resource. However, the creation of the SNWA and implementation of the Paradigm Shift eliminated disputes among the only competing interests in Nevada that used the Colorado River. For SNWA officials this rendered the CRC irrelevant and superfluous (figs. 2, 4).

The SNWA strategy against the CRC evolved over a two-year campaign. When the SNWA initiated its efforts in 1991, Authority leadership sought to abolish the CRC. However, the CRC had existed as an institution since the 1930s and had administered the state's allocations of both water and hydroelectric power. It had supporters in the governor's office and the state legislature. This made it a more resilient institution than Mulroy had expected. SNWA officials began to think that outright elimination of the CRC was increasingly unlikely. The SNWA therefore changed tactics and in 1993 lobbied for the legislative restructuring of the CRC's governing board to include three SNWA appointees of the seven directors.

The SNWA campaign would instigate a public conflict between officials in the Authority and the Colorado River Commission of Nevada, a majority of which would play out during the 1993 legislative session. At its root, the contest represents a philosophical difference over which level of government can best manage resources for the citizenry. SNWA officials felt that since they had to deal with the challenges of limits and growth firsthand, they were a more appropriate body to administer the state's Colorado River supply. After all, the entire allocation went to the Las Vegas metropolitan area. Officials with the Colorado River Commission, on the other hand, were not confident that the SNWA, less than two years old at the time, would survive. Conflict, not collaboration, was the predominant theme during the majority of metropolitan Las Vegas's water history. As a result of this contentious history, the Colorado River Commission did not want to entrust the SNWA with the state's precious Colorado River allocation.

But how had this state level agency come to be responsible for the metro-area's water supply in the first place? Like the Law of the River, the Colorado River Commission came into being when the demographic, economic, and political composition of Nevada and the Southwest were much different. The CRC had, since the 1920s, been responsible for the state's Colorado River allocation. It had assumed this responsibility because at the time the state gained rights to the river, southern Nevada's population and governmental institutions were too small to justify local control over the water supply. Furthermore, there was little interest among Las Vegas officials to import Colorado River water into the Las Vegas Valley in the 1920s and 1930s. Groundwater remained abundant, and construction of water infrastructure to

bring water from Lake Mead was not economically justifiable for such a small population.

When the CRC assumed control over the state's Colorado River allocation, the Las Vegas Valley contained fewer than 20,000 residents. By 1990, this figure had risen to over 700,000.<sup>1</sup> The Colorado River was the only resource that could sustain this type of population growth. In an effort to more effectively manage local water supplies, the SNWA wanted the ability to directly engage federal and Basin state officials over Colorado River policy. In 1991 the SNWA did not have this legal authority. Within the first year of the SNWA's existence, officials came to see the CRC as a barrier that hindered their ability to change the Law of the River. This was the central issue driving the SNWA campaign to seize administrative control of the Colorado River.

The result of this campaign is one of the most significant aspects of SNWA history. With the CRC restructuring, the SNWA absorbed state level authority. This provided the SNWA a position of power from which it could directly challenge the Law of the River. It would no longer need a state intermediary to conduct discussions with other Colorado River Basin state representatives and federal officials. The SNWA, however, did not completely displace the state's role in Colorado River negotiations. Representatives of the CRC would continue to take part in interstate political interactions. From 1993 onward, however, SNWA officials would also be a part of this process. With the possible exception of the Southern California Metropolitan Water District, no other local agency had sought this degree of political authority over a state's Colorado River allocation.

## **The State and the Colorado River**

Nevada state officials had been interested in the Colorado River from as early as 1869. That year Congress expanded Nevada's boundaries to their present dimensions, which established the Colorado River as the state's southeast border. During the final three decades of the nineteenth century, the state government's chief concern was developing the Colorado River's navigability. Initially, state leaders hoped riverboats could access various settlements along the Colorado River and that this might spur agricultural production there. The Colorado River proved too volatile for river born commerce, however, and by 1902, the state's interests had shifted to reclamation and hydro-electrical power generation. That year elected officials throughout the American West and Washington D.C. began to see the river's potential to support agriculture in the region.

In 1919, officials from the seven states that shared the Colorado River (Arizona, California, Nevada, Utah, Colorado, New Mexico, and Wyoming—the Colorado River Basin states) identified the stream's economic potential and met to discuss ways they might develop and share the waterway. These Basin states established themselves as the League of the Southwest, the two most influential being California and Colorado. They possessed the greatest population, political power, and most developed agricultural economies. Despite having none of these attributes, Nevada was an interested party. Nevada officials recognized that, while the state could not put to use as great an amount of water as other Basin states, it could still foster modest agricultural production and utilize electrical power in various mining enterprises in southern Nevada. By 1920, state officials recognized the need for action, prompting Governor Emmett Boyle to appoint a Commission on Colorado



River Development, comprised of seven citizens and the State Engineer, James G. Scrugham. The Commission's task was to "safeguard the interests of Nevada in all of the extensive negotiations under way and imminent, looking to the utilization of the stream." The Legislature added its imprimatur in 1923 when it "re"-created the Colorado River Development Commission, by officially establishing the body as an agency of the state government, and increasing its responsibilities, funding, and legal power.<sup>2</sup>

By 1922, the Basin States had established a broad plan for division of the Colorado River. Delegates to the negotiations established an upper and a lower basin. The upper basin consisted of Utah, Colorado, Wyoming, and New Mexico, with California, Nevada, and Arizona comprising the lower. Each basin was to receive 7.5 million acre-feet of water per year, with the remainder going to Mexico. Of importance was the perception by negotiators that the Colorado River's annual flow was approximately 16.5 million acre-feet. As revised meteorological records have shown, the Colorado River has an average flow rate of over twelve million acre-feet per year. The period in which negotiators established basin allotments was one of the wettest periods in the geologic history of the Colorado River. In subsequent decades, the disconnect between climatological reality and river allotments would contribute to an enormous amount of political tension.<sup>3</sup>

In 1928, Congress passed the Swing Johnson Bill, which federally sanctioned the Colorado River Compact and authorized the Secretary of Interior to build Boulder (Later Hoover) Dam. In order to seize upon the economic benefit the Dam might provide Nevada, in 1935, the legislature increased the agency's responsibilities and funding. It also shortened the Colorado River Development Commission's name to

the Colorado River Commission of Nevada (CRC). The CRC's central legal function from that point forward was to safeguard the state's share of Colorado River water and the hydroelectric power from Hoover Dam. For the first four decades of the Commission's existence, its primary focus was hydroelectricity. This was because there was no infrastructure capable of delivering the state's allocation to Las Vegas until 1971. Furthermore, groundwater remained plentiful enough to support the metro-area during this period. This changed, however, in 1971, when the federal government completed the first phase of the Southern Nevada Water Project (SNWP). At that point, the CRC became the metro-area's de-facto water distribution agency. The legislature had designated the CRC as the state's guardian of Colorado River water in the 1930s and since no other metropolitan water agency existed with this authority in the 1970s the CRC began to distribute water to the metro-area's individual municipalities.<sup>4</sup> Almost as soon as the CRC assumed the role of metropolitan water agency, local officials voiced their disapproval with the arrangement.<sup>5</sup> In a trend that would last until 1991, local water managers came to view many of the CRC's water distribution methods and policies as inappropriate and ineffective in a metropolitan setting.

Between 1971 and 1991 metro-area water managers came to see the arrangement of having a state agency in charge of urban water distribution as unworkable. They took issue especially with the Commission's apparent unwillingness or inability to take a leadership role in local water politics.<sup>6</sup> The Commission was noticeably absent in local political scuffles among water agencies, and by the late 1980s this absence had eroded the Commission's legitimacy in the metro-area. The failure to lead also played a role in the metro-area's dwindling water

supply. The Commission was the only agency that had the statutory power to implement policy across municipal boundaries. Had it worked more closely with local water agencies to enact a uniform policy, the metro area could have withdrawn an additional 58,000 acre-feet of water per year. However, the Commission never did take this course of action, and it was the SNWA that ultimately unified policy and utilized the return flow credits.<sup>7</sup>

SNWA officials were dissatisfied with the CRC's performance. They did not think the CRC was a proactive agency and believed that it accepted the status quo on the river. For Mulroy and others, this was born from a disconnect based on distance between events in the Las Vegas metropolitan area and the state capital four hundred miles away. It was the metro-area's proximity to, and reliance upon, the Colorado River that drove local officials to seek greater control over the state's allocation. In short, metropolitan water officials wanted local control over what they considered a local resource.

The creation of the SNWA was a local response to local environmental and legal conditions. It was also a rejection of the previous regime in which the CRC administered water to individual metro-water agencies. The issue of local versus state control came to a head in 1991 after the creation of the SNWA, when metropolitan water managers came to see the state's role as redundant. According to Mulroy, "The Colorado River Commission always functioned as the mediator between us [the Las Vegas metropolitan area]" and the federal government. "Well, once we created the Authority, we didn't need a mediator. We didn't need anybody that would play parent to us. Because we'd grown up. And, the Colorado River Commission represents the governor ... We said, you know, this makes no sense."<sup>8</sup> This rationale inspired

Mulroy and other staff to pursue legislation at the state level in 1993 to increase the SNWA's authority over local water resources.

Two things formed the basis for the SNWA viewpoint, the first of which was the Authority's geographical proximity to its customers. The SNWA board, comprised largely of locally elected officials representing southern Nevada's cities, felt they were better geographically suited to act on behalf of southern Nevadans than officials within the state government.<sup>9</sup> The second reason was of a financial nature. The SNWA argued that since the local population was funding water acquisition efforts and paying for utility services, that a local –not state – agency should be in charge of water from the Colorado River. Las Vegas City Councilman Scott Higginson gave voice to this larger discontent just prior to the 1993 legislative session when he stated, “the decision of which options should be pursued I believe should be with the local elected officials [since] I'm going to be the one to push the button to raise rates.”<sup>10</sup>

The SNWA also wanted the legal authority to engage in regional water acquisition efforts. There was a period of confusion following the SNWA's creation in 1991 over what role each agency would play in efforts to obtain more water. During the next two years the SNWA began putting together a regional water procurement strategy, looking at water sources in Utah and Arizona. These efforts clearly intruded upon the CRC's purview. Indeed, in 1991, when the Authority was created, State Senator Hal Smith sponsored legislation clarifying and emphasizing the CRC's role in representing “the state of Nevada in consultations with other states, the United States, foreign countries and nongovernmental persona.”<sup>11</sup> Tensions over their respective roles publicly erupted in 1992 after the CRC issued a draft mission

statement and list of objectives which included: “acquiring or leasing water rights from Indian tribes and other entities; as well as desalinating ocean water for seaside communities in exchange for additional Colorado River water.”<sup>12</sup> What seemed like a simple enumeration of the CRC’s responsibilities was in fact a clear and direct message to the SNWA: the CRC would handle matters related to the Colorado River, not the SNWA.

The SNWA reacted strongly against this mission statement. Mulroy argued, “there is no revenue source for [the CRC] to do the ambitious things they outline in their objectives statement.”<sup>13</sup> Mulroy’s contention was based on the difference in funding structures for the CRC and the SNWA. The CRC, as a state agency, was not as financially vulnerable as the SNWA. The CRC could draw upon state funds, as well as revenue from water and power sales. Until the late 1990s, the SNWA was entirely reliant upon water rates and hookup fees. This revenue was generated entirely within Clark County and was consequentially much smaller than the CRC’s financial resources.

SNWA board member Paul Christensen seconded Mulroy’s view, stating: “I don’t want to fund the Colorado River Commission’s search for water because I have no say in where they go and what they do.” Christensen revealed an additional reality: the SNWA board members, invariably elected officials, constantly faced pressure from their voting constituencies. The projects the CRC pursued would create a financial obligation that the citizens of the metro-area would have to pay off. The citizens would look first to the local utility (the SNWA) as the agency responsible for increasing local taxes. For this reason as well, SNWA officials wanted a presence on the CRC board.

Robert Crowell, chair of the CRC board countered, stating that the CRC's mission statement was "not an attempt to step on the Southern Nevada Water Authority's toes," but nonetheless declared, "the Southern Nevada Water Authority does not speak for Nevada."<sup>14</sup> CRC officials were clear that they intended to continue their work as guardians of the state's Colorado River allocation, and appeared ready to assert themselves with the SNWA. The disagreement between SNWA and CRC officials revealed the jurisdictional crisis that affected the metro-area in 1993. Officials in both the CRC and SNWA felt their individual agency was best suited to address the metro-area's water needs, not the other. As each agency pursued independent strategies, tensions increased, as did collisions over jurisdictional authority.

For Mulroy the issue boiled down to geographic appropriateness and what agency was more accountable to its constituency. Mulroy contended, "the SNWA is able to perform certain functions that the CRC cannot. The CRC cannot make a commitment for either the Clark County Sanitation District or the Las Vegas treatment plant to put the return flows back into the Colorado River. The CRC cannot dictate conservation standards or how shortages will be allocated amongst members of the SNWA," and "these duties can only be performed by the SNWA, because it has been assigned these responsibilities and holds the contracts with the federal government."<sup>15</sup> In the minds of metro-area planners, including Mulroy, the problems of growth, coupled with the CRC's lack of responsiveness, were acute enough to compel the SNWA to lobby Governor Bob Miller and state lawmakers to either abolish, or restructure the Colorado River Commission.<sup>16</sup>

Mulroy's dissatisfaction with the CRC did not emerge from nowhere. She was merely the latest in a line of metropolitan water managers dating back to the early 1970s who viewed the CRC with disdain. These individuals had wanted local control since that time, but the conditions had not been right to force a political change until 1993. Population growth, a legislature that met every other year, and the threat of water shortage coalesced to create a crisis that gave the SNWA the political capital it needed to establish itself as the metro-area's sole guardian of the state's Colorado River Allocation. In the pivotal year of 1989, these political factors slowly began the process of alignment.

In 1989, the Clark County Commission put the first piece of a strategy together to wrest control of the Colorado River away from the CRC. That year the County Commission published a water resource plan that asserted the need for the establishment of a uniform water policy throughout the metropolitan area. The plan also called for county control over the state's Colorado River allocation. County Commissioners were well aware of the effects of the CRC's "use it or lose it" water distribution policy. They were also disappointed in the CRC's unwillingness to lead and the power vacuum this created. The plan's authors argued that much of the tension and political conflicts among metro-area water agencies was the fault of the CRC.<sup>17</sup> The report also noted that the balkanized nature of the metropolitan water agencies meant the region could not take full advantage of the return flow policy. This meant the metro-area was missing the opportunity to acquire an additional 58,000 acre-feet per year.<sup>18</sup>

The report gave several local officials the idea that perhaps restructuring the composition of the CRC board would be the most politically viable method of gaining

local control over the state's Colorado River allocation and "suggested that the membership of the Colorado River Commission be reevaluated by the legislature." Metro-area politicians such as North Las Vegas City Manager Michael Dyal recognized that the county commission was serious about exerting additional control over the Colorado River stating that the county commissioners "obviously want to see the Colorado River Commission disappear."<sup>19</sup> Three years after the reports publication, the county commissioners' ambition became a reality when the SNWA asked for legislation to restructure the CRC board.<sup>20</sup>

However, Colorado River Basin water politics complicated the situation. At the same time metro-area planners began calling for the CRC's dissolution, Governor Bob Miller and the River Commission were actively engaged in secret negotiations for water with state officials in Colorado.<sup>21</sup> These negotiations highlighted a significant philosophical difference between the SNWA and CRC. In 1991 the River Commission entered into negotiations with oil and gas interests in the state of Colorado. Chevron Shale Oil Co., and Getty Oil Exploration Co., possessed rights to water in a Colorado River tributary called Roan Creek. According to CRC officials, the deal would mean a fifty year guaranteed supply of water for the Las Vegas metro-area.

By 1993 the CRC had progressed far enough into negotiations with Chevron and Getty to reach, in the words of Director Tom Cahill, a "gentleman's agreement" with the oil company consortium.<sup>22</sup> Upon hearing details of the proposal Mulroy, incredulous, replied, "build a new reservoir on the Colorado? Are you serious? Fifty years, that's it? That's useless. What happens to the reservoir after fifty years? It blows up?"<sup>23</sup> CRC policy emphasized the acquisition of new water resources. Such an



approach was indicative of an older, pre-1990s water management philosophy that focused on acquiring resources and building dams over conservation and comprehensive management of resources.<sup>24</sup> Donnelly shared Mulroy's concern. He noted, "we don't want to build any more dams, reservoirs, or construction projects. We want to do things that cost less and that are more politically, socially and environmentally acceptable."<sup>25</sup>

The SNWA only found out about the negotiations after Cahill had publicly announced the "gentleman's agreement." For Mulroy, the CRC's decision to keep the Roan Creek negotiations secret was simply one more reason why the SNWA needed a presence on the River Commission's board. From her point of view, not only had the CRC acted unprofessionally by not notifying SNWA staff about the negotiations, it was pursuing a strategy that was fundamentally at odds with Mulroy's. From the SNWA's inception, Mulroy and her staff adopted a comprehensive strategy of identifying any and all types of local water resources, and carefully managing them, a policy formalized in the Paradigm Shift.<sup>26</sup> Mulroy believed policy should be a two-part equation, one based on both conservation and the acquisition of new resources. The problem, from Mulroy's point of view, was that the CRC's pursuit of the Roan Creek Deal, provided only one half of the equation – obtaining more supply. The SNWA, on the other hand, could provide both.

Mulroy and Donnelly were incensed that the CRC had left the Authority out of the negotiations.<sup>27</sup> Technicians in the SNWA would have no way to accurately plan for the future if they were unaware of what water was available to them. These concerns helped support the SNWA's larger argument that the CRC had pursued water to the best of its abilities for two decades, but it was an agency that was not

designed to operate effectively in the Las Vegas metro-area of the 1990s. Conditions had changed too much for a state level agency to effectively manage urban water policy. The CRC was simply obsolete. The SNWA, on the other hand, had been specifically designed for the conditions facing the metro-area. It simultaneously possessed a local and regional orientation with respect to water resource management, and SNWA officials were eager to establish its supremacy in southern Nevada.

Given the history of water politics in the Colorado River Basin, it is fair to question the judgment and optimism of the CRC for pursuing water in the Upper Colorado River Basin. Mulroy was well schooled in the region's history as well, and would have been aware of the failed Galloway Plan, an attempt by San Diego in the mid 1980s to purchase water from oil companies in the Upper Colorado River Basin. In some ways, San Diego occupied a similar legal position in its relationship to the Colorado River as the Las Vegas metro-area. San Diego, like Las Vegas, was almost entirely reliant upon the Colorado River for its water needs, having virtually no other local water resources upon which to rely. In a drive to seek resource independence, San Diego water officials approached private interests in the Upper Basin to directly purchase rights to a portion of the Colorado River. However, this plan met with fierce resistance from other California water users, as well as from the State of Colorado. As a result, the plan failed.<sup>28</sup> Examples like Galloway served as reminders that prospects for any type of water transfer between the basins would be politically challenging.

CRC Director Cahill anticipated the critical comparison between San Diego's Galloway Plan and the River Commission's Roan Creek Deal and attempted to draw distinctions between the two examples by pointing out "the main difference is that the Galloway Plan did not identify specific things that were going to be done. It was

largely a speculative venture that was going to make money for the people who were doing it.”<sup>29</sup> He failed to point out, however, that the Galloway plan was the result of San Diego attempting to establish some measure of water independence from the Metropolitan Water District of Southern California, an agency dominated by the city of Los Angeles. The motivation behind San Diego’s Galloway plan was the same as that behind the CRC’s Roan Creek Deal – to provide water to a large and arid metropolis. Cahill’s assertions to the contrary, the two deals were quite similar. Despite the SNWA officials’ public castigations of the Roan Creek Project, they quickly withdrew their opposition when news that Governor Robert Miller himself sanctioned these negotiations. Mulroy did not want to publicly embarrass the governor and the Authority quietly withdrew its opposition. Instead, Mulroy and her colleagues turned their attention to a legislative solution to their problem.<sup>30</sup>

### **1993 Legislative Session: A.B. 692, the CRC Restructuring Initiative**

SNWA officials realized that outright abolition of the CRC was unlikely. Instead, they sought a compromise of sorts – to restructure the CRC board to include at least three SNWA board members. The venue to seek such a compromise was at the state legislature. In the 1993 legislative session, the SNWA proposed a bill to restructure the CRC board of directors. Under the present system, the governor appointed each of the five-member CRC board. The SNWA proposed raising the board membership total to seven, three of whom the SNWA board would appoint. The Governor would retain the right to appoint the remaining four. Though Mulroy considered the bill a reasonable compromise it was met with passionate, though not widespread, opposition. The most vocal critics of A.B. 692 were State Senator Hal Smith of Henderson, a politician with several decades of experience in water issues,

CRC Chair Karen Galatz, a former journalist with strong ties to the local business community, and Colorado River Commissioner Garth Winckler, Chief Executive of the Las Vegas branch of the United Way Charity.

During the course of the legislative session Smith argued that the CRC was better equipped to manage Nevada's Colorado River allocation and to negotiate with other states. Smith reminded the committee that he had sponsored legislation the previous legislative session that clearly stipulated the CRC was "the sole authorized negotiating agency for the State of Nevada."<sup>31</sup> The tension among metro-area water agencies was one likely reason Smith introduced this legislation in 1991. That year, political relations among local governments were severely strained as they navigated their way toward a sharing agreement, one that ultimately resulted in the creation of the SNWA. While Smith lauded the creation of the Authority, he also did not have confidence that it would survive. Smith, with over three decades of experience in the legislature, thought the historic animosity among local governments over water sharing was too great, and that ultimately they would revert to waging political battles. Smith did not want the state's Colorado River allocation mixed up in metropolitan internecine political battles.<sup>32</sup>

For her part, Galatz argued that the Colorado River was a state resource that belonged to all Nevadans, and was too valuable to be entrusted to a county level agency. Like Smith, Galatz also thought the state was in a position to more responsibly manage water for a historically fractious collection of metro-area water agencies. Galatz criticized the SNWA's CRC restructuring campaign during her testimony, stating that the water shortage Mulroy complained about so bitterly was actually the result of poor planning by the SNWA's member agencies themselves.<sup>33</sup>

To support this claim, she invoked the example of the 1991 “St. Valentine’s Massacre,” in which Mulroy’s Water District had to take the draconian step of implementing a water permit moratorium. Galatz pointed out that the District had to take this action because the agency had not kept track of how much water it had promised developers.<sup>34</sup> While the Water District had in fact overpromised water delivery service, Mulroy made a politically dangerous decision to stop issuing will serve letters. Her choice could just as easily be regarded as the responsible course of action.

Furthermore, Galatz ignored SNWA conservation efforts. Conservation was in fact a fundamental tenet of the SNWA. Indeed, during the SNWA negotiating process 1989-1991, representatives from the individual metro water agencies agreed that a conservation program had to be part of the standard SNWA operating plan. In other words, establishing a conservation program as part of the SNWA standard operating procedure was a precondition to the creation of the agency. After all, the amount of water waste occurring in the metro-area was one of the reasons these agencies came together in the first place to create the SNWA.<sup>35</sup> Additionally, as noted in the second chapter, the SNWA also began publishing an annual water resource plan in 1996 and implemented a new water commitment process by which the Authority would only provide water to developers after they were well into the construction phase of their projects.

It was clear to the SNWA, and likely Galatz herself, that her statements were disingenuous. Not only did she fail to credit the SNWA for its major policy changes, she also failed to acknowledge the rather pronounced lack of leadership by the River Commission to push for a stricter conservation policy. As the only agency in southern

Nevada with the ability to operate across municipal boundaries, the CRC had a responsibility to assume leadership. On this score it had failed. Rather than attempting to moderate the conflict among metropolitan water agencies it had remained outside the fray continuing its policy of providing allotments base on prior use. This made the Commission just as complicit as any other metro-area entity in the water shortage crisis.

Opponents of the SNWA pipeline into rural Nevada also weighed in on the CRC restructuring initiative. The SNWA maintained its goal was to assert control over the metro-area's Colorado River supply. Pipeline opponents, however, feared the CRC restructuring would increase not only the agency's interstate capabilities, but its political reach within the state of Nevada as well. State Senator Dean Rhoads, who represented the rural eastern part of the state, read a letter from one of his constituents who wrote that restructuring the CRC was akin to "allowing the fox to be in charge of the henhouse." Letters like this indicated the concern that once the SNWA acquired some measure of state authority, there would no longer be a check on its ambition. Citizens Alert, a government watchdog group, and well-known critic of the SNWA pipeline project, also expressed reservations about the concentration of power within the SNWA and its intra-state ramifications.<sup>36</sup>

State Senator Mark James of Las Vegas and Mulroy argued this scenario could not legally occur. They noted the CRC's mandate was specifically worded to include only matters relating to the Colorado River. A restructuring of the board would not alter its purview. James asserted, "if southern Nevada is going to solve its water problems, the solution revolves around the Colorado River ... southern Nevada does not have a shortage of water, it has a shortage of rights to the waters of the

Colorado River.” His solution to this problem would be the creation of “a body in the state that would be an effective, unified voice for the State of Nevada,” and that “this body would be responsible for changing the law of the river ... as well as effectively negotiating for water rights in other states.” The entire basis for the SNWA’s campaign was to enable the Authority to focus its energy toward the Colorado River Basin, not rural Nevada.<sup>37</sup>

While rural residents were suspicious of James’s and Mulroy’s assurances, evidence shows that in 1993, the SNWA was overwhelmingly focused on Colorado River issues. SNWA officials remained optimistic that they would be able to affect some type of political agreement among the Basin States allowing them to obtain additional Colorado River water. Indeed, the SNWA was already in talks with California and Arizona officials about potential water storage plans in which Las Vegas could acquire additional Colorado River water above its legal entitlement.<sup>38</sup> Considering the amount of Colorado River water the SNWA was poised to receive, it makes little sense to assume that the pipeline into northern Nevada would have been a priority. The SNWA considered the pipeline project a last ditch option should the metro-area’s Colorado River supply fail.<sup>39</sup>

James and Mulroy did, however, issue a subtle threat during their testimony. James alluded to the possibility that “if water is not available in the southern portion of the state, other options will have to be pursued.” The “other options” in question was the SNWA pipeline project. Mulroy echoed this sentiment. She stated that “there are two solutions to solving southern Nevada’s water problems: one, by pursuing the cooperative water project; or two, by changing the makeup of the CRC in an attempt

to increase Nevada’s allocation to the Colorado River water.” The message was clear: approve the CRC restructuring initiative or the SNWA will build the pipeline.<sup>40</sup>

Galatz warned against these assurances. Concerned over the SNWA’s growing power, Galatz argued that until 1993 a series of “checks and balances” had existed among southern Nevada water agencies. She explained that the CRC had safeguarded the state’s water from the excesses of the metro-area’s water agencies. Fellow board member Garth Winckler supported this view during his testimony. According to Winckler, restructuring the River Commission:

represents verticle [sic] integration of resource development, policy development, implementation, and management of water and water issues. Checks and balances are greatly diminished in this structure. This committee must weight these conflicting concepts of representation and oversight. Verticle [sic] integration might be good business, but is it good government, or is it self-dealing? The real issue is power – not the electrical kind (which this proposed legislation totally ignores) but the back-room, closed-door kind of power that lets a few individuals seal the fate of the future of southern Nevada by controlling water.

The vehemence and public nature of Winkler’s denunciations are striking. He was, after all, making these statements in his official capacity as a member of the Colorado River Commission.<sup>41</sup>

Based on the tone of Galatz’s and Winckler’s testimony it is evident they considered the SNWA campaign audacious and even reckless. The sense of pride in the River Commission was evident in the legislative record. However, this pride did not trump effective management. The role of the state and its effectiveness in managing the Las Vegas metro-area’s water had become questionable. The River Commission’s comparatively simple mission – of protecting the Colorado River – was rapidly becoming outdated. Protecting the state’s interest on the river was not the



same as integrating this resource into the rapidly expanding Las Vegas metropolitan area. That task required a more comprehensive approach to water management, one that the SNWA provided, and the CRC lacked. Indeed, the CRC's inability to function effectively as an urban water provider formed the basis of the SNWA's central argument: that to properly address the rapidly growing population in the metro-area, a local agency needed to be in charge of water supplies.

The pivotal element in this situation was that the metro-area's central water source was an interstate river. For a metropolitan water agency to succeed it had to be focused on local and interstate issues. This was the direction the SNWA was headed in 1993. It had consolidated metropolitan water policy and was orienting toward the political forum of the Colorado River Basin. The CRC had been focused on the interstate dimension and had neglected the metro-area's water politics. As a result, in 1993 the SNWA possessed political legitimacy among metro-area water managers, whereas the CRC did not. This made the SNWA the logical choice as the agency to assume responsibility for the state's Colorado River allocation. It is possible that the CRC could have become the metropolitan area's water agency, but because it stayed out of metro-water politics for decades, it lacked legitimacy at this critical juncture.

Mulroy and Donnelly were the most visible supporters of A.B. 692 during the 1993 legislative session. They were not alone, however. Mulroy recruited members of the Las Vegas metro-area growth coalition to testify in support of the restructuring measure. Accompanying Mulroy were several members of the Las Vegas metropolitan growth machine, to include representatives from organized labor, the construction and casino industries, and other locally elected officials. Spokespeople for these groups represented some of the most powerful interests in the entire state.

The growth coalition had good reason to support Mulroy. The construction and gaming industries saw A.B. 692 as a means of continuing the expansion of their businesses; local government in turn supported the legislation because it would help expand the tax base. More people and houses meant additional sales and property tax revenue. And, as the Paradigm Shift campaign demonstrated, local governments were unable to levy new local taxes without legislative approval. Since property taxes were already legally permissible, local governments were eager to take advantage of one of the only public funding sources available to them.<sup>42</sup>

Representatives from each of these cross-sections of metropolitan Las Vegas's development sector took the opportunity to voice their support for the CRC restructuring initiative. Stan Jones, spokesperson for the Southern Nevada Homebuilder's Association, stated "the home building industry is a major employer in southern Nevada. These employees earn a living due to the area's high growth rate, spend their paychecks in the area, pay property taxes and vote." David Belding, Chairman of the Nevada Resort Association (NRA), pointed out that the NRA represents the number one industry in the State of Nevada and in Clark County, and that the association was vitally concerned with the long-term economic health of the Las Vegas metropolitan community. Dan Thompson, Lobbyist, Nevada State American Labor Federation and Congress of Industrial Organizations (AFL-CIO), said the AFL-CIO's interest in A.B. 692 was based upon continued growth in southern Nevada. Thompson stressed the importance of giving Nevada the chance to develop a unified voice when negotiating for additional water resources. Larry Scheffler, Councilman for the City of Henderson, testified "southern Nevada local governments

are in unison with the SNWA with regard to supporting passage of A.B. 692 ... the City of Henderson supports passage of A.B. 692.”<sup>43</sup>

This coalition and its support for A.B. 692 reflected several fundamental realities that the Las Vegas metro-area faced. The first was that metropolitan Las Vegas was almost wholly reliant upon outside capital in the form of tourist dollars and home sales to thousands of out-of-state newcomers. And second, since the 1970s local water sources were inadequate to support the urban population, prompting the construction of the SNWP to bring a distant water source to Las Vegas. Reliance upon distant capital and water resources made for a somewhat precarious economic situation, a fact not lost on proponents on A.B. 692. Their support was an attempt to gain control over the metro-area’s destiny and to reduce economic and resource uncertainty in southern Nevada.<sup>44</sup>

Once again Mulroy’s leadership came into play. The CRC restructuring initiative made sound economic sense for metropolitan Las Vegas. But it was Mulroy who marshaled representatives of the growth coalition and wielded them as political tools during the legislative session. The impact of their testimonies would not have occurred without Mulroy’s efforts. They were willing participants in the A.B. 692 campaign because Mulroy showed them she could lead. Her efforts to unify the metro-area’s water agencies had provided the construction and gaming industry 58,000 additional acre-feet of water to support their respective industries. At the time of the CRC restructuring initiative she was simultaneously engaged in bringing about the Paradigm Shift, which promised more water and infrastructure. Each of these was good for business. Lastly, Mulroy directly engaged the members of the business community to craft SNWA policy. The IRPAC was comprised almost entirely of

growth coalition representatives. Inclusion in IRPAC negotiations had given them a sense of empowerment and made them a part of a grand strategy for improving the metro-area. In short, Mulroy's efforts created strong allies for the SNWA. Mulroy showed developers and gaming representatives that she had confidence in them to make wise decisions, a flattering move and sign of respect. According to John Ritter, a Las Vegas developer, Mulroy simply inspired confidence, and developers were happy to support her as she found ways of bringing the community more water.<sup>45</sup>

In addition to the local political situation, there were larger, interstate ramifications of the CRC restructuring plan. Of particular concern to A.B. 692 supporters at this time was the image the SNWA was presenting to Nevada's neighboring Colorado River Basin states. SNWA officials did not want the Basin states to perceive Nevada as being unable to address its own internal issues over water management. Indeed, it was of special interest for SNWA officials to gain a timely resolution because the restructuring campaign was occurring at the same time that the other Basin states were engaged in separate negotiations over the Colorado River. Delegates from the seven Basin states were meeting to establish the guidelines specifying each state's rights to the Colorado River. The stakes in these negotiations were extremely high, with California and Nevada both seeking additional water from the Colorado River. The negotiations would ultimately last over ten years and significantly alter Colorado River management policy.<sup>46</sup>

The driving force behind these interstate negotiations was California's water use. Since the 1960s California had drawn more Colorado River water than its legal entitlement of 4.4 million acre-feet. This was permitted under the *Arizona v. California* decree, which specified that Lower Basin States were entitled to use any

surplus that other Basin states had not consumed. Because Upper Basin states had remained comparatively less developed, the Upper Basin never used its entire Colorado River allocation of 7.5 million acre-feet. California made use of that water for three decades. However, by the late 1980s and early 1990s, heavy growth in the Upper Basin caused states such as Colorado to increase their water use. Anticipating the Upper Basin's increased use of the Colorado River in the coming years, water managers in Colorado initiated legal proceedings to compel California to decrease its usage. An additional challenge was the fact that California had been in the grips of a drought since the mid 1980s. It was thus simultaneously facing both legally and environmentally imposed water shortages. By 1991 the crisis became so acute, in fact, that Interior Secretary Manuel Lujan suggested Colorado "donate" some of its unused water to California. Yielding to this pressure, Colorado Governor Roy Romer sent a letter to California Governor Pete Wilson offering to provide assistance to help it through its challenges. This was cautious generosity, however. Romer made it clear that it was a temporary measure.<sup>47</sup>

The apparent willingness of the Upper Basin states to help California, coupled with federal support for redistribution of the Colorado River prompted Nevada's water managers to act. In 1993 state officials took advantage of the Colorado River Basin political situation and petitioned the Secretary of Interior to also consider providing aid to Nevada. All of this was occurring in the midst of the CRC restructuring campaign. However, some observers, including U.S. Senator Harry Reid, worried that the political infighting between the SNWA and CRC had weakened the state's standing within the Basin State discussions.<sup>48</sup>

Senator Reid sent a representative (Larry Werner) to Carson City to testify on his behalf before the Natural Resources Committee on the issue of A.B. 692. Werner stated “Senator Reid is concerned that the state of Nevada act with one voice on water policies that have a far-reaching affect [sic] on our neighboring states. The Senator believes that A.B. 692 is an acceptable compromise that enhances the existing Colorado River Commission and its ability to fulfill its mission.” Werner noted that the SNWA had “already gained recognition” at the federal level for its recent accomplishment of uniting the Las Vegas metro-area’s water agencies, but despite this initial success, the current tension between the Authority and CRC was impeding Reid’s ability to propose water legislation with his congressional colleagues from the other Basin states. According to Reid, “the more unified the state is in presenting its proposals to the other Colorado River Basin states and to congress, the more effective Nevada will be in securing future water supplies,” concluding, “any additional delay would cause us to lose ground as the federal government moves ahead to refine the distribution of Colorado River water among thirsty Western states.” Werner closed by noting the favorable relationship Nevada and Las Vegas currently enjoyed with the Clinton Administration, and especially Interior Secretary Bruce Babbitt and warned that the state could lose this ally if Clinton was defeated in the 1996 election. It was therefore incumbent upon the legislature to pass A.B. 692 as quickly as possible.<sup>49</sup>

State Senator Smith pushed back, questioning Werner over the supposed level of divisiveness within Nevada. Smith asked Werner “to be more specific about exactly ‘whom’ in the State of Nevada is divided over water policy.” Werner explained that the federal government had “received mixed signals” and clarified that it was not so much about the actual level of divisiveness, but the way in which the

other basin states and federal government perceived southern Nevada's internal divisions.<sup>50</sup>

In June 1996 interstate political developments overshadowed the CRC restructuring campaign. That month Governor Romer publicly declared his unequivocal opposition to the CRC's Roan Creek Deal, a revelation that was clearly an embarrassment for the River Commission. While Galatz and Cahill continued to argue that the deal was not yet defeated, most people within the metropolitan water community, as well as local journalists, understood that opposition from the state of Colorado effectively killed the deal.<sup>51</sup>

Not only had the CRC failed to anticipate Colorado's reaction, but the CRC also failed to consider the wider regional political ramifications of its Roan Creek proposal. Governor Fyfe Symington of Arizona was incensed over Governor Miller and the CRC's campaign, stating:

It is disturbing that Nevada interests have gone outside the ongoing discussions and negotiated a solution without any mention of the solution to the other states participating in the discussion. Furthermore, it is extremely disquieting to find one Colorado River Basin state dealing with private interests in another state when the Seven Basin states had agreed that all negotiations should be on a state-to-state basis. The proposed project [Roan Creek] has a direct adverse impact on Arizona's water supply.<sup>52</sup>

After Governor Romer's and Symington's public declarations of opposition to Nevada's Roan Creek deal, Governor Miller became more openly supportive of the CRC restructuring initiative.

By this point in the legislative session it seemed that A.B. 692 was destined for passage. Nevada Governor Bob Miller himself came out in support of the measure reversing his earlier stance. Like Senator Reid, Miller had become concerned that the

division between the CRC and the SNWA was affecting interstate water negotiations, and saw passage of A.B. 692 as a way to put the controversy to rest and to move forward.<sup>53</sup>

In addition to wanting a strong position for the state in Colorado River negotiations, two more factors probably influenced Miller's decision. The first was that he was from southern Nevada. Having grown up in Las Vegas and served as Clark County District Attorney, the governor had long and deep ties to the southern part of the state. Secondly, the Governor was only losing the ability to appoint a single seat. Under the old system he appointed five members. Under the SNWA proposal this would only decrease by one.<sup>54</sup>

The legislature passed A.B. 692 on June 27, 1993; three days later the governor signed it into law, effective July 1. The new board was almost entirely southern Nevadans. Gone were Karen Galatz and Garth Winckler, the vocal critics of the SNWA. The new CRC board was predominantly comprised of members of the Las Vegas metropolitan growth coalition. The Governor appointed Janet Rogers, Chief Counsel and Executive of Sunbelt Broadcasting Company, a television station with affiliates in Reno and Las Vegas, and Richard Bunker, president of the Nevada Resorts Association.<sup>55</sup>

The SNWA appointees, Scott Higginson, Larry Scheffler, and Jay Bingham, also boasted growth coalition credentials. Las Vegas Councilman Higginson had worked for a host of Nevada's most powerful politicians, including Congressman James Santini, Governor Richard Bryan, and Senator Harry Reid. He also started an advertising firm and a political consultation business before serving on the Las Vegas City Council.<sup>56</sup> Henderson City Councilor Scheffler was involved in real estate in the



metro-area.<sup>57</sup> Bingham, a Clark County Commissioner, owned a local construction and development business. Two individuals from the previous board remained, both gubernatorial appointees: Bob Crowell of Carson City, and Tom Coward of Las Vegas. Crowell was a lifelong public servant who served in the military during Vietnam and later entered politics after leaving the army. Coward moved to Las Vegas in 1979, whereupon he opened a car dealership. According to one former CRC board member, Coward understood the need for water based on his business background.<sup>58</sup>

The CRC's new composition was oriented wholly toward southern Nevada. The SNWA had achieved its goal of absorbing state power to help administer water policy in the metro-area. One of the first acts of the restructured board was to jointly host a "water summit," a public forum in which the Water Authority and River Commission would hear proposals from a host of water interests throughout the Colorado River Basin on the issue of increasing the Las Vegas metropolitan area's water supply. The water summit led to further negotiations with the Colorado River Basin states.

The final act of SNWA consolidation came in 1995, when the River Commission transferred ownership and operation of the Southern Nevada Water System to the SNWA. Once again, this took legislative approval. However, this time the process lacked the drama that surrounded the 1993 session. During testimony before the Assembly Committee on Government Affairs, CRC Chairwoman Rogers stated that the River Commission "no longer wants to be in the plumbing business and instead will focus on acquiring additional regional water supply."<sup>59</sup> What is most telling about this is that during the 1995 session there was virtually no opposition to

this final bit of consolidation. The bill to transfer the Southern Nevada Water System to the Authority was an extremely important piece of legislation. It transferred the entire system of infrastructure that sustained Las Vegas to a local agency. From this point forward, power of administering and distributing Colorado River water resided with the SNWA. The SNWA had consolidated local control over all water sources and infrastructure. It had, essentially, vertically integrated the means of production of Las Vegas' water supply. In the eyes of the public, state level politicians, and Basin state water agencies, the SNWA had effectively become the primary water agency for southern Nevada.

The restructuring of the CRC was the final phase of the SNWA's consolidation of political control over local water resources and represents the end of the pre-SNWA water regime. The restructuring was also arguably the single greatest factor that contributed to the Water Authority's emergence as a potent political agency within the Colorado River Basin. The SNWA now possessed local, county, and state level political authority, a combination that enabled it to directly engage other state governments over Colorado River matters.

Prior to the legislative session SNWA staff declared it was its intention to work within the Colorado River Commission, stating the Authority did not want to threaten the River Commission's role as the agency responsible for interstate water negotiations. Whether the SNWA staff had intended to or not, however, the restructuring provided the SNWA with an enhanced level of political legitimacy. Since the SNWA was now a part of a state level organization, in theory, it possessed some measure of state level power. Assembly Bill 692 established the legal

mechanism that would enable a local agency to vault up to the elevated political plane upon which the states of the Colorado River Basin operated.

Without this change in the Nevada Revised Statutes, the SNWA would have remained a metropolitan water agency, one still entirely reliant upon a state or federal intermediary who may or may not have addressed the Las Vegas metro-area's needs. The CRC restructuring created a new type of agency, one that allowed Mulroy to sit with other Basin State negotiators as an equal. To be sure, A.B. 692 did not eliminate the CRC's official legal standing to negotiate for interstate water. However, with the backing of the state, the SNWA began to push the CRC out of the way and took the lead on interstate water acquisition efforts. These actions led to an increase in media attention and identification of the SNWA with Las Vegas and water.

The Authority could now use its reinforced power base as a foundation from which to engage the other Colorado River Basin states. The importance of the restructuring to the SNWA and the metro-area is significant since it has infused the city with quasi-state level standing within the Colorado River Basin—no other urban area in the region is represented with as much force and singular focus. To this point in the narrative, the SNWA has been focused on control of local politics and water resources. In its next phase the SNWA reoriented itself to seek water resources hundreds of miles from the metro-area. In the next chapter we will see how the SNWA used its newly acquired strength to negotiate two key interstate water treaties, both of which represented unprecedented changes to the Law of the River. As we shall see, the SNWA was eager to press its case to the other Basin States for an increase in its share of the Colorado River. It is to these political developments we now turn.

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## NOTES

- <sup>1</sup> M.W. Schofield, Assessor, “Clark County Population”; Nevada State Library and Archives, “Colorado River Commission” (Nevada State Library and Archives, September 18, 2013), Nevada State Library and Archive, file:///Users/christianharrison1/Desktop/Colorado%20River%20Commission.pdf.
- <sup>2</sup> Nevada State Library and Archives, “Colorado River Commission.”
- <sup>3</sup> Hundley, *Water and the West*, 308–309.
- <sup>4</sup> Nevada State Library and Archives, “Colorado River Commission.”
- <sup>5</sup> Jones, *Water*, n.d., 166–167.
- <sup>6</sup> Patricia Mulroy, December 12, 2013; David Donnelly, 2005; American Society of Civil Engineers, *From the Spanish Trail to the Monorail*.
- <sup>7</sup> Southern Nevada Water Authority, “Southern Nevada Water Authority 2009 Water Resource Plan,” 20.
- <sup>8</sup> Pat Mulroy, Colorado River Water Users Association--Nevada, Tape #8, Pat Mulroy (Tape #1), Oral History Interview, December 13, 2007.
- <sup>9</sup> Mary Hynes, “Local Officials Seek Voice on River Commission,” *Las Vegas Review - Journal*, February 10, 1993.
- <sup>10</sup> Mary Hynes, “Tensions Surface as Local Water Agencies Try to Define Their Roles,” *Las Vegas Review - Journal*, October 16, 1992.
- <sup>11</sup> Jon Ralston, “Local Plan to Abolish Colorado River Commission Losing Steam,” *Las Vegas Review - Journal*, February 7, 1993.
- <sup>12</sup> Hynes, “Tensions Surface as Local Water Agencies Try to Define Their Roles.”
- <sup>13</sup> Ibid.
- <sup>14</sup> Ibid.
- <sup>15</sup> “Hearings, AB 291, Assembly Committee on Infrastructure, April 26, 1997.” Legislative Counsel Bureau, Nevada State Legislature, accessed May 14, 2014, <http://www.leg.state.nv.us/Session/69th1997/97minutes/AM/IN/am4-26IN.htm>.
- <sup>16</sup> Ralston, “Local Plan to Abolish Colorado River Commission Losing Steam.”
- <sup>17</sup> Clark County, *Clark County Water Resource Strategy: A Plan of Action to Develop, Conserve, and Manage Clark County’s Limited Water Resources*.
- <sup>18</sup> American Society of Civil Engineers, *From the Spanish Trail to the Monorail*, 42; Clark County, *Clark County Water Resource Strategy: A Plan of Action to Develop, Conserve, and Manage Clark County’s Limited Water Resources*.
- <sup>19</sup> American Society of Civil Engineers, *From the Spanish Trail to the Monorail*, 42.
- <sup>20</sup> Jon Ralston, “CRC, County War on Water Control,” *Las Vegas Review - Journal*, November 22, 1992; Hearings on A.B. 692, Before Nevada State Senate Committee on Government Affairs, 3 June 1993. During these hearings Assemblyman James McGaughey (R, Clark County district 13) stated that since as early as 1985 there had been bills before the legislature calling for the dissolution of the Colorado River Commission of Nevada.
- <sup>21</sup> Mary Hynes, “State Seeks Colorado Water Deal,” *Las Vegas Review - Journal*, February 3, 1993.
- <sup>22</sup> Ibid.
- <sup>23</sup> Mary Hynes, “Reservoir Deal Angers Vegas Officials,” *Las Vegas Review - Journal*, February 7, 1993.

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<sup>24</sup> Reisner, *Cadillac Desert*; Worster, *Rivers of Empire*; Charles F. Wilkinson, *Crossing the Next Meridian: Land, Water, and the Future of the West*, 1 edition (New York: Island Press, 1993).

<sup>25</sup> “Las Vegas Wheels and Deals for Colorado River Water,” *High Country News*, accessed May 14, 2014, <http://www.hcn.org/issues/4/118>.

<sup>26</sup> “SNWA Board of Directors Meeting, May 6, 1993,” May 6, 1993, Las Vegas Valley Water District.

<sup>27</sup> Hynes, “Reservoir Deal Angers Vegas Officials.”

<sup>28</sup> A more detailed account of this episode can be found in Robert Gottlieb and Margaret Fitzimmons, *Thirst for Growth: Water Agencies as Hidden Government in California* (Tucson: University of Arizona Press 1991), 36-39, and also the edited collection by Ed Marston and High Country News, *Western Water Made Simple* (Washington D.C.: Island Press, 1987), 31-32.

<sup>29</sup> Mary Hynes, “Colorado Board Opposes Water Deal,” *Las Vegas Review - Journal*, March 10, 1993.

<sup>30</sup> Ralston, “Local Plan to Abolish Colorado River Commission Losing Steam.”

<sup>31</sup> “Hearings on AB 692, Before the Nevada State Senate Committee on Natural Resources, June 22, 1993,” n.d.; To be sure, while Smith’s assertion that the CRC was the only authorized agency to negotiate regionally was technically true, it was also the case that the legislature could alter that arrangement to allow the Water Authority to assume some of the responsibility for managing Colorado River.

<sup>32</sup> Patricia Mulroy, December 12, 2013.

<sup>33</sup> “Hearings on AB 692, Before the Nevada State Senate Committee on Natural Resources, June 22, 1993.”

<sup>34</sup> *Ibid.*

<sup>35</sup> Southern Nevada Water Authority, “Southern Nevada Water Authority: 1995 Amended Cooperative Agreement Among Big Bend Water District, City of Boulder City, City of Henderson, City of Las Vegas, City of North Las Vegas, Clark County Sanitation District, and Las Vegas Valley Water District.”

<sup>36</sup> “Hearings on AB 692, Before the Nevada State Senate Committee on Natural Resources, June 22, 1993.”

<sup>37</sup> *Ibid.*

<sup>38</sup> Lochhead, “Upper Basin Perspective on California’s Claims to Water from the Colorado River Part II.”

<sup>39</sup> Southern Nevada Water Authority, *1999 Water Resource Plan* (Las Vegas, Nev.: Southern Nevada Water Authority, 1999), 41.

<sup>40</sup> “Hearings on AB 692, Before the Nevada State Senate Committee on Natural Resources, June 22, 1993.”

<sup>41</sup> *Ibid.*

<sup>42</sup> Greene and Hynes, “Southern Nevada’s New Paradigm for Water Management Means Going Outside the Lines. The Politics of Water: [Final Edition].”

<sup>43</sup> “Hearings on AB 692, Before the Nevada State Senate Committee on Natural Resources, June 22, 1993.”

<sup>44</sup> Rothman, *Devil’s Bargains*, 287–292.

<sup>45</sup> John Ritter, interview by Author, September 25, 2013, Author’s Collection.

<sup>46</sup> Lochhead, “Upper Basin Perspective on California’s Claims to Water from the Colorado River Part II.”

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<sup>47</sup> Ibid.

<sup>48</sup> “Hearings on AB 692, Before the Nevada State Senate Committee on Natural Resources, June 22, 1993.”

<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

<sup>51</sup> Mary Hynes, “Gov. Romer Will Oppose Water Deal,” *Las Vegas Review - Journal*, June 6, 1993. While it is certainly true that SWNA policy was more comprehensive, encompassing both local and regional water resource considerations, it is also quite likely that the Water Authority itself would have pursued the Roan Creek proposal. The reason the Water Authority protested the CRC’s Roan Creek pursuit was probably in an attempt to exploit the political damage the CRC incurred when its Roan Creek Plan failed. Indeed, several months after the 1993 legislative session, the SNWA continued to entertain the notion of pursuing water marketing with the upper basin, until, once again, the Colorado Governor’s office officially opposed their efforts (transcripts for the CRC/SNWA Water Summit Meeting, Author’s Collection, obtained from Colorado River Commission, February 15, 2013.)

<sup>52</sup> Jon Ralston, “Arizona Governor Sends Stinging Letter to Miller on Water Plan,” *Las Vegas Review - Journal*, February 25, 1993.

<sup>53</sup> Ralston, “River Commission Bill Faces Opposition, but It’s Destined for Passage.”

<sup>54</sup> Ibid.

<sup>55</sup> Jon Ralston, “Colorado River Commission to Include TV Exec, Gaming Lobbyist,” *Las Vegas Review - Journal*, August 12, 1993; Emily Green, “Satiating a Booming City.”

<sup>56</sup> Four Square Group: Government and public affairs, Scott Higginson Resume, available from [http://www.foursquaregroup.com/Bio\\_Scott.htm](http://www.foursquaregroup.com/Bio_Scott.htm), accessed October 23, 2013.

<sup>57</sup> “Ethics Commission: Henderson Councilman Broke Rules,” *Las Vegas Sun*, May 8, 1996, <http://www.lasvegassun.com/news/1996/may/08/ethics-commission-henderson-councilman-broke-rules/>.

<sup>58</sup> Carson City, “Carson City, Capital of Nevada,” *Mayor Robert Crowell*, 2014, <http://www.carson.org/Index.aspx?page=591>; Las Vegas Sun, “Longtime Automobile Dealer, Civic Leader Coward Dies,” *Las Vegas Sun*, May 19, 2004, <http://www.lasvegassun.com/news/2004/may/19/longtime-automobile-dealer-civic-leader-coward-die/>.

<sup>59</sup> “Hearings, AB 519, Committee on Government Affairs,” May 10, 1995.

## CHAPTER 5 | BRINGING POWER TO BEAR: THE VIRGIN RIVER DEVELOPMENT PLAN AND THE ARIZONA GROUNDWATER BANKING AGREEMENT

Internal power consolidated, the SNWA launched a campaign in 1994 to change the Law of the River. Initially, the SNWA considered a strategy of pressing for an increase to Nevada's Colorado River allocation. However, a challenge of this sort had little chance of success. In the early 1990s the three most powerful Basin states—California, Colorado, and Arizona—were opposed to SNWA efforts to alter the status quo. Even though the SNWA had acquired an unprecedented level of political power for a Las Vegas metropolitan water agency, it was still unable to overcome the opposition if faced from these three states. Instead of assaulting the Law of the River directly then, SNWA technicians decided to find other means of obtaining additional water for metropolitan Las Vegas. They would approach the Law of the River obliquely and exploit options no one had yet considered.

Despite the fact that the Colorado River had entered an era of limits and seemed fully appropriated, Mulroy and her staff knew there were at least two ways of obtaining water from the Colorado River: wheeling tributary water through Lake Mead and storing surplus Colorado River water in aquifers. Ability to execute either of these options, however, required a change to the Law of the River. And changing the Law of the River required the support of the other Basin states. This support would be difficult to obtain.

In 1994, a tense political situation existed among the Colorado River Basin states that in some ways mirrored that of metropolitan Las Vegas in 1989—increased population, shrinking regional water supplies, and a resultant increase in political tensions among governments. Despite the charged atmosphere and absolute advantage

of the larger states' water agencies, the SNWA's political composition provided it with certain comparative advantages. The most important was its political consolidation of city, county, and state power. Unlike California, Colorado, and Arizona, the SNWA faced no internal threats. All of Nevada's Colorado River users were member agencies of the SNWA. It could therefore sustain a campaign to bring about a change to the Law of the River more efficiently than other states. The SNWA pursued this campaign for seven years, during which time intra-state disputes over the Colorado River occurred in both California and Colorado.<sup>1</sup>

By 2001, the SNWA concluded its campaign after receiving approval from the other Basin states for its wheeling and aquifer storage initiatives. These achievements also demonstrate the limitations of the SNWA's powers. Even with the SNWA's consolidated powers it was unable to bring about fundamental change to the Law of the River—the alteration of allocations. Even so, the SNWA's efforts represented the first time ever that Nevada had been able to alter the Law of the River to its advantage. While the SNWA campaign officially began in 1994, efforts to obtain exogenous water supplies began five years prior in the pivotal year of 1989.

### **The Virgin River Development Plan**

One of the main reasons southern Nevada's water purveyors came together to form the SNWA was to create an organization that could obtain more water for the Las Vegas metro-area from local and regional locations. The SNWA's predecessor agency, the LVVWD initiated this trend in 1989 when it applied for rights to groundwater in east-central Nevada and to the Virgin and Muddy Rivers northeast of Las Vegas. However, in 1991, the territory in which the SNWA could seek water was rather limited. In 1991, out-of-state water acquisition efforts were still the purview of



the Colorado River Commission. Because of this constraint, the SNWA pursued several in-state resources. The first source was Nevada's remaining 58,000 acre-feet of its Colorado River allocation (Chapter 2). The SNWA then purchased privately held water rights for 23,000 acre-feet from the Southern California Edison's coal-fired power plant in Laughlin, the emerging casino border town 100 miles south of Las Vegas. Finally, the Authority assumed responsibility for the LVVWD's Cooperative Water Project (CWP), an ambitious water project that would develop a pair of in-state water resources: the Virgin River, a small waterway fifty-five miles northeast of Las Vegas, as well as several large groundwater reserves from east-central Nevada.

The Virgin River begins in the high plateaus above Zion National Park where it carves deep chasms in the earth on its 162-mile journey to its confluence with the Colorado River in Nevada. Its annual flow is approximately 175,000 acre-feet, making it a relatively small river.<sup>2</sup> To put this in perspective, the Colorado River averages just under fifteen million acre-feet per year.<sup>3</sup> The Virgin possesses value well in excess of its size, however, since it is a rare water source in an arid region. For most of its length, the Virgin River flows through southwestern Utah. Though the Virgin River flows through Nevada for only twenty miles, this short distance provided the SNWA the legal basis to claim the waterway. In the 1963, Supreme Court case *Arizona v. California*, the court ruled that Colorado River tributaries located in a Lower Basin state could not be counted against that state's annual allocation.<sup>4</sup> In its ruling, the Supreme Court was referring to Arizona's claim to the Gila River, which flowed almost entirely within the Copper state. This ruling provided the LVVWD, and later SNWA, the legal precedent to claim the Virgin River.

There was one key difference between these two examples, however: the Gila River flowed directly through Arizona's population centers. The Virgin River, on the other hand, flowed northeast of Las Vegas, never getting closer than fifty-five miles to the metropolitan area.<sup>5</sup> In order to address this geographic challenge, the SNWA wanted to "wheel" the waters of the Virgin River through Lake Mead, that is, let the river enter Lake Mead and then withdraw a corresponding amount forty miles south from the SNWA's withdrawal pumps near Hoover Dam. In 1994, however, this was not allowed under the Law of the River.

While the Supreme Court gave Lower Basin states rights to in-state tributaries, there was a consequential stipulation: once tributaries intersect the main stem of the Colorado River, the water held in these streams become "system water." If a state used its tributary water before it touched the Colorado River, it had the right to both the tributary water and its Colorado River allocation. But if a state failed to use its tributary and the water ended up flowing into the Colorado River, then it became part of the state's overall allocation.

For those reasons the SNWA's "wheeling" plan was illegal, a fact that every state in the Colorado River basin soon pointed out. Each had its own reason for opposing the SNWA's plan. The Upper Basin states (Wyoming, Colorado, New Mexico, and Utah) were unified in their opposition based on the fact that they did not want the SNWA to initiate any type of action that could potentially alter the Law of the River. The Upper Basin had long been leery of the Lower Basin. States like Colorado and Wyoming routinely accused California of attempting to increase its share of the Colorado River at the expense of the Upper Basin.<sup>6</sup> Elected officials within the Upper Basin already felt that the federal government managed the river for

the Lower Basin's benefit, pointing to the inordinate number of federally sanctioned projects built along the stretch of river in the Lower Basin. What's more, Upper Basin states complained that the Environmental Species Act required them to send enough water downstream to ensure the health of the lower basin's ecology.

Additionally, critics pointed out that many of the projects built in the Upper Basin were constructed merely to ensure there was enough water to prevent a shortage in the Lower Basin. Indeed, this was one of the main reasons for the construction of the Glen Canyon Dam in 1966.<sup>7</sup> As a result of this long-standing suspicion, the Upper Basin viewed any attempt to change the Law of the River as a slippery slope that would lead to further changes. Arizona, on the other hand, had a different, more pragmatic reason for its opposition.

The Supreme Court's ruling in *Arizona v. California* was a pyrrhic victory for the Copper State. Even though the Supreme Court affirmed Arizona's right to 2.8 million acre-feet annually of the Colorado River, there was no physical way of moving that water to the more populous central part of the state. To do so would require an infrastructure of pumps, pipelines, aqueducts, dams, and reservoirs, not to mention the electrical power needed to convey water to the higher elevation population centers. This system eventually came about largely because of the efforts of Arizona Senator Carl Hayden, who in 1947 first proposed what came to be called the Central Arizona Project (CAP). However, despite broad based support for the project within Arizona, it languished in Congress for the next two decades due to opposition from California's delegation.

Still angry over the state's defeat in *Arizona v. California*, the Golden State's lawmakers blocked CAP legislation until they exacted a rather sizeable concession

from Arizona: the CAP allocation would receive the lowest priority among the Lower Basin states. In other words, if the Lower Basin stretch of the Colorado River experienced shortage of any kind, the CAP would be the first to absorb that shortage. Not only would Arizona be the first state to lose water, it would also have to bear the entirety of the shortage before California had to sacrifice any amount of its 4.4 million acre-foot allocation. In 1968, Arizona agreed to these unfavorable conditions and received funding for the CAP. From that point forward, Arizona's low CAP priority caused it to oppose almost any proposal to alter the Law of the River.

For its part, California was opposed to Nevada's efforts to tap the Virgin River because this action could potentially decrease the volume of Colorado River flows. The Golden State had grown accustomed to using a greater portion (5.2 million acre-feet) of the Colorado River than it was legally allowed (4.4 million acre-feet). California, therefore, was weary of any efforts that could threaten the surpluses it had become reliant upon.

Opposition to its wheeling proposal from the other Basin States put the SNWA in the absurd position of having to consider building a pipeline to convey Virgin River water fifty-five miles overland, merely so it would not run afoul of the Law of the River. The SNWA therefore found itself in a difficult position. In late 1994, Nevada State Engineer Michael Turnipseed granted the SNWA rights to 190,000 acre-feet annually of the Virgin River.<sup>8</sup> As a result of the ruling, the SNWA had legal title to a quasi-local resource that, according to the Nevada State Engineer, the Authority could develop if it chose to do so. Despite obtaining state sanction, the SNWA could not develop the Virgin River without either building a pipeline or establishing some type of sharing agreement with the other Basin States.<sup>9</sup> If the

SNWA pursued the project without an interstate agreement (building a pipeline to prevent the Virgin River from intersecting the Colorado River), the project would likely cost over a billion dollars.<sup>10</sup> This was a significant financial burden for a single water utility to assume. It was such a burden, in fact, that in 1994 the SNWA de-emphasized the Virgin River plan and began pursuing other, less expensive resource options.

During the winter of 1994 and 1995 the SNWA wound down its Virgin River campaign. It had done everything it could, short of withdrawing water. It held off on further development because the SNWA did not want to agitate the other Basin state governments. SNWA officials were confident they had done everything necessary to solidify the agency's claim to the Virgin River, at least within Nevada. SNWA engineers had designed the infrastructure needed to store and convey the water to the metro-area, conducted the necessary hydrological studies to assess the amount of water available for consumption, and applied to the Bureau of Land Management (BLM) for rights of way to build a pipeline over federally owned land.<sup>11</sup> In April 1993, the SNWA board concluded these preparatory measures by ratifying water rights filings on the Muddy and Virgin Rivers. The board's action represented a legal maneuver to strengthen the SNWA's claim to the Virgin River. Mulroy explained "that there had been a great deal of discussion between the various local, state, and federal agencies involved with the Colorado River concerning the 'wheeling' of water through the Colorado River System...this application puts into practical application that 'wheeling' concept."<sup>12</sup>

The State Engineer had provided the SNWA with a legal placeholder of sorts; one that allowed the Authority to put its Virgin River development plans on hold and

to reorient its focus toward the development of different potential water resources.<sup>13</sup> Within the state of Nevada, at least, the SNWA's claim to the Virgin River was now secure.

### **Emergence of a Regional Strategy**

For the first few years of its existence the SNWA pursued only in-state water resources.<sup>14</sup> However, in 1993, the same year the SNWA succeeded in its efforts to restructure the CRC, the Authority shifted its strategy. The SNWA realized early on that there was a limited amount of in-state water resources. The Authority also knew that additional resources could be found beyond the state's borders. Obtaining the legal authority to negotiate for these resources was, in fact, the driving motivation behind the CRC restructuring plan.

Just prior to the culmination of the CRC restructuring campaign, the SNWA held an internal discussion about the way in which the Authority would pursue non-local water resources. During this meeting Mulroy explained that "Ever since the inception of the Authority, the Board had never clearly given staff direction as to whether [it] wants to engage in discussions on acquiring water rights, whether those water rights are within the State of Nevada, or whether it even wants to participate in discussions with the Colorado River Commission outside the State of Nevada to buy water rights." Vice Chairman Brent Hardy (Councilman, North Las Vegas) replied, stating that his "perception all along had been to look at every place there might be a drop of water, [and] that we'd be remiss not to look at every opportunity." Director Scott Higginson (Councilman, Las Vegas) seconded this sentiment by recommending "that staff look at every alternative that comes along for future water supplies for this Valley, analyze them, and if staff feels it worthwhile, pursue it to a degree where it is

ready to come back to the Board for further direction. Any alternative that comes through the door that has some sort of viability to it ought to be explored until it is determined it has no use to the Valley.” Director Jay Bingham (Clark County Commission), one of the figures leading the charge for the restructuring of the Colorado River Commission at the legislature, weighed in as well: “the [SNWA] Board has matured enough in the last year, has gained stature and strength, and it’s time to put everything on the table and take a look at anything.” Bingham wanted “the Authority to be very aggressive, up-front, and open in the pursuit of water.” Hardy, Higginson, and Bingham were essentially outlining what would become Authority doctrine in regional water acquisition policy: pursue anything and everything (fig. 8).<sup>15</sup>

For the SNWA board, this any-and-all acquisition strategy was a necessity. The SNWA had to take a shotgun approach to water acquisition, because there was no one source that would fully satisfy its water shortage issues. The prime water resources in the Colorado River Basin had long been appropriated. By the time the SNWA was created in 1991, there were no more easily accessible sources available. The board therefore needed to pursue a wide range of options, in the hope that the broad spectrum of resources, when taken together, would provide a measure of stability with respect to southern Nevada’s water supply.

During this same meeting, Mulroy established an additional guiding principle: the SNWA would pursue resources that offered the least political resistance. Unclear as to what sources the SNWA should seek first, Bingham asked Mulroy if the Authority “was looking for a priority list to bring back to the Board.” Bingham was thinking in terms of the technical feasibility of a particular water source, essentially,

what water sources would require the least energy to obtain. Mulroy replied that it “was a political issue not a money issue nor a[n] engineering issue ... it was going to be a matter of where the politics break first, especially outside the State of Nevada.”<sup>16</sup> The SNWA board thus began establishing guidelines regarding non-local, intra and interstate water acquisition efforts using political considerations as the guiding factor. Two months after this meeting, the SNWA succeeded in its efforts to restructure the CRC. It had reconfigured itself in a way that would enable it to effectively take part in interstate water negotiations.

As the SNWA leadership discussed strategy they kept the larger historical context of western water conflicts in mind. Mulroy and the SNWA board understood that conflict proved financially costly, made political enemies, and limited future policy options. They also knew that previous contests over water revealed that western water sources were already in short supply. Long before the SNWA formed, virtually every source in the American West had already been appropriated. Historical water conflicts possessed another lesson: the SNWA would almost certainly face opposition in its quest to procure more water.

Two historical episodes that would have informed any western water manager’s view were San Francisco’s Hetch Hetchy plan of 1934, and Los Angeles’s 1913 Owens River development project. In San Francisco’s case, the city sought to dam the Tuolumne River at the head of the Hetch Hetchy Valley, a site located entirely within Yosemite National Park. The Sierra Club, led by John Muir, waged a bitter, and ultimately losing, campaign against development interests. This loss provided the catalyst to grow the ranks of individuals willing to advocate on behalf of the environment. As historian Robert Righter explains, in 1956 two of these



individuals, Michael Brower of the Sierra Club and Howard Zahniser of the Wilderness Society, successfully defeated government efforts to place a dam in Dinosaur National Monument in Colorado. In this manner, the damming of Hetch Hetchy helped launch the modern environmental movement, a constituency that could potentially oppose the efforts of other cities in their quest for water. San Francisco and Hetch Hetchy reinforced in the public mind the conception of the greedy imperial city, one that steals resources from its surroundings.<sup>17</sup>

San Francisco's legacy on this score pails, however, when compared to the earlier example of Los Angeles, a city widely associated with the most famous rural water development plan in the history of the American West. Between 1904 and 1913 the Los Angeles Department of Water and Power (LADWP) purchased water rights in the Owens Valley of California and built an aqueduct to transport its water to Los Angeles. The prevailing view of this event is that agents of the LADWP unfairly acquired this water and drove the Owens Valley's farmers off their land. This particular conception of the Owens Valley episode, though factually inaccurate, continues to be the predominant view to the present day. Historian Patricia Limerick accurately assessed the impact of these events when she asserted "the members of the Sierra Club and the residents of the Owens Valley succeeded in casting the cities of San Francisco and Los Angeles as imperial antagonists and shameless bullies and thus shaped the image of both cities for decades to come."<sup>18</sup>

Mulroy was acutely aware of this legacy as she appeared before the board on May 6th. Four years prior in 1989, Shortly after Mulroy became General Manager of the LVVWD, the District filed for rights to groundwater in east-central Nevada, some 250 miles north of the metro-area. The applications set off immediate protests, and

rural residents and newspapers began to accuse first the District, then the SNWA of attempting to perpetrate a repeat of the Owens Valley episode. Mulroy knew that the historical legacies of Hetch Hetchy and the Owens Valley would influence the political strategy the SNWA could adopt. She also knew that these legacies would combine with the Law of the River to make the prospect of obtaining water of any kind very difficult for the Authority.

The seventy-year history of legal disputes contained within the Law of the River also influenced Mulroy's strategy. The most significant event in the history of the LOR was the *Arizona v. California* lawsuit. In 1953, Arizona sued California for the fourth time in an attempt to secure 2.8 million acre-feet of Colorado River water per year. California, for its part, sought to increase its share from 4.4 million acre-feet, to 5.2 million acre-feet. Which, if successful, would have decreased Arizona's allocation by 800,000 acre-feet.

In what would turn out to be the longest and costliest Supreme Court case in history, the justices found for Arizona, affirming the Copper State's rights to 2.8 million acre-feet. However, as historian Norris Hundley pointed out, there was a more consequential element of the court's ruling. According to Hundley, the Supreme Court declared the federal government was the ultimate arbiter of the Colorado River, writing, "Congress, not state law, would determine priorities to Colorado River water within each Lower Basin state."<sup>19</sup>

This ruling accomplished two things. One, it affirmed Nevada's allocation at 300,000 acre-feet per year. Two, it showed that legal challenges at the level of the United States Supreme Court was costly and the outcome was unpredictable. Mulroy and the SNWA Board knew the SNWA could not sustain a long-term legal campaign,

and adopted the more pragmatic least possible resistance approach. The 1993 Nevada Water Summit was a direct reflection of the SNWA's understanding of this legal reality.

### **The Nevada Water Summit**

In November of 1993, shortly after the Colorado River Commission restructuring campaign, the SNWA and CRC held a joint convention, dubbed the Water Summit by local media, the purpose of which was ostensibly to solicit proposals from any individual or public or private entity that might help bring more water to southern Nevada.<sup>20</sup> The more subtle—and important—message, however, was to use the forum to publicize southern Nevada's inadequate Colorado River allocation to the other Basin States.

In the period leading up to the Water Summit, the SNWA and CRC solicited a wide range of water proposals from dozens of interests. The SNWA and CRC had twin goals for the summit: to find new sources of water for the metro-area, and to demonstrate to the rest of the Colorado River Basin states the desperate nature of southern Nevada's water supply. The SNWA and CRC had scheduled two days for various individuals and interests to present their proposals. Several proposals during the first day of discussions were at least technically feasible. One of these was the construction of a pipeline from Alaska to Southern California that would convey melted glacier water. Ross Cowan, a private citizen suggested that Nevada might find support for this project if it were to fund the construction of the pipeline. His proposal called for the construction of a pipeline made of PVC tubing from Alaska to Southern California (whereupon the water would be used, thus allowing for Nevada to withdraw a corresponding amount of water from Lake Mead), running submerged just

off the west coast of the continent. He said the pipeline could be built for one and a half billion dollars. This was an unrealistic proposal, however, considering that the SNWA groundwater pipeline—even in the early 1990s—was supposed to cost more than a billion dollars, and only extend for two hundred miles. Cowan’s proposal also seemed to elicit doubt among several of the panelists, some of whom noted that he had not considered many aspects such as interstate negotiations with Alaska over water rights, and with Canada for rights of way for a pipeline located along its shoreline.<sup>21</sup>

One final example involved a proposal by Ric Davidge representing Alaska-Water Exports, a private startup company. Davidge proposed the SNWA pay to have his company tow enormous bags of freshwater from Alaska to Southern California. Each of these bags could transport 225-acre feet of water, and would take twenty days to tow. Davidge presented a more detailed plan than either Spencer’s or Cowan’s; however, one must consider the resource expenditure to tow a bag of water over 2,000 miles from Alaska to Southern California and whether this was a useful endeavor for the SNWA to fund.<sup>22</sup>

On the second day of the Water Summit representatives from two oil companies—Chevron and Texaco—presented proposals describing their goal to lease water rights they possessed in Colorado (These are the same interests from the Roan Creek deal). Though Governor Roy Romer of Colorado officially opposed the deal the previous July, neither Chevron nor Texaco, nor the State of Nevada, had entirely given up hope that the deal might work out. Gary Bishop, chairman of Denver based Chevron Shale Oil Company, explained that both Companies would lease their water rights (for 175,000 acre-feet, enough to end southern Nevada’s water uncertainty) to

Nevada for thirty to fifty years. During this period, Nevada would uphold its end of the bargain by paying for the construction costs of Chevron and Texaco's oil shale water system. At the end of Nevada's lease, water rights would return to Chevron and Texaco. They would then use the water for their oil recovery operations. Chairman Bishop called it a "loan" to Nevada to give it "time to find a permanent, cost-effective source of supply."<sup>23</sup> The SNWA/CRC panel had high hopes for this potential source, but it was unclear from a legal standpoint whether Nevada would ever be able to access Chevron and Texaco's water. The Law of the River prohibited interstate transfers of water. It became apparent in the final phase of the Water Summit that Nevada would face significant opposition from the other Basin states if it pursued Chevron and Texaco water rights.

Present in the audience that day were representatives of California, Arizona, and Colorado. These individuals were not in attendance to propose methods of bringing water to southern Nevada; rather they were there to officially protest on behalf of their respective state governments. First to present was Jerry Zimmerman of the Colorado River Board of California. Zimmerman explained that Nevada's efforts to lease water were inconsistent with the Law of the River and that a solution must be accomplished by working with the other Basin states. Zimmerman, rather patronizingly, explained that certain principles should guide all negotiations with respect to the Colorado River, the most notable being that "Nevada's objectives cannot be accomplished at other states' expense," and less notably, that "all parties must recognize the need for accommodations."<sup>24</sup> There was a certain hypocrisy to Zimmerman's advice about state's working together, as California had a well-earned

reputation for using its economic and political muscle to craft regulations favorable to its own interests with little regard for the other Basin states.

It seemed that Zimmerman was going to use the Water Summit as a forum to explain why California's needs were superior to those of the other Basin states. He began by stating that "California in fact has a larger and more immediate need for water above the basic apportionment than does the State of Nevada" and went on to justify his state's overuse of the Colorado River by attempting to differentiate between California's basic apportionment and its "entitlement." He justified this distinction by showing the state had contracts for 5.2 million acre-feet per year with the Bureau of Reclamation. In his view, contracts equated to entitlement. However, Zimmerman's most brazen statement came when he admonished Nevada for rejecting California's 1991 proposal to establish a water bank in Lake Mead. Under this plan, if Lower Basin states could use less than their annual allocation, they would be able to bank this water in Lake Mead. Legal scholar David Getches explained that it was not just Nevada that opposed this measure. Getches noted that the California proposal was universally condemned by all Basin states. The problem, from the other states' points of view, was that California's proposal included provisions that allowed the state to continue using an amount greater than its legal allocation for an additional twenty years. The other Basin states were not in favor of establishing a bank that would be used for a state (California) that was already using more than its adjudicated allocation. This key detail is something Zimmerman chose to omit during his presentation.<sup>25</sup>

California's habitual overuse increased the chance of a shortage in the Lower Basin. This was unacceptable to Nevada because it would increase the risks of

shortage, just when Nevada was attempting to get more out of the Colorado River.<sup>26</sup> Yet, during the 1993 Water Summit, Zimmerman acted as if his state had magnanimously presented a solution that would have solved Nevada's problems, thus precluding the need to market upper basin water. Zimmerman closed by stating, "the Colorado River Board [of California] is committed to working with Nevada in addressing its need for additional future water supplies."<sup>27</sup> With this statement, Zimmerman established the theme the following state representatives would also follow—that Nevada needed to work within the parameters of the Law of the River and that the Basin states wanted to help. This admonition to work within the Law of the River was empty rhetoric. It essentially allowed Basin states to avoid meaningful policy discussions and the hard choices this would entail.

The second state representative to present was Larry Linser, Deputy Director of Arizona Water Resources. Linser opened his presentation by stating that Arizona is "steadfast in its position in opposition to the marketing of waters from the Upper Basin to the Lower Basin." Arizona, like Nevada, occupied a unique position within the Lower Basin, but for different reasons. Arizona's opposition was based on its junior Colorado River priority. For Arizona, issues regarding water invariably came back to the Central Arizona Project's junior priority on the Colorado River. Linser explained, "for us to get the Central Arizona Project authorized in 1968 one of the things that we had to give in the compromise in Congress was that the Central Arizona Project priority was the last priority of use in the Lower Basin."<sup>28</sup>

Linser also explained that there was an economic aspect at play as well. He pointed out that if there was any surplus on the River, by law Lower Basin states could use it free of cost. Arizona therefore did not want Nevada to upset this

economically favorable situation. Linser noted “When we started talking about marketing of ... unused water from the Upper Basin to the Lower Basin we feel it is water that would probably go unused anyway and come to the Lower Basin and would be available to us.” Linser concluded that ultimately, the “marketing proposal in effect would be reducing the reliability of our water supply.”<sup>29</sup>

Arizona was also likely resisting interbasin marketing for events occurring within its own borders. Farmers along the lower Colorado River in Arizona had formed the Cibola Irrigation District and approached numerous in-state, and out-of-state interests about selling their water rights. Arizona officials viewed the Cibola District’s overtures as a potential threat to its Colorado River allocation. From Arizona’s point of view, California could theoretically exploit the fact that an internal organization was considering selling its water. California could then argue that if the Cibola District had water to sell, then Arizona possessed a surplus and was not in as dire need of its full allocation as it had earlier advertised. This was the same type of logic Colorado officials employed opposing the Roan Creak deal. They, like Arizona, did not want to present a possible legal opening for other states to exploit. Arizona had fought for its rights to the Colorado River for well over half a century and was not going to allow domestic interests to threaten its Colorado River allocation. As a result, Arizona was also reliant upon the legal protection the Law of the River provided.

Linser closed by presenting the standard pleasantries that had become customary during the proceedings: “We in Arizona fully recognize the situation that you’re in and realize that you need a water supply and will get a water supply in the future, and we want to cooperate and work with you in doing that.” Yet, there were limits to what Arizona was willing to do. In an exchange with SNWA Director Paul



Christensen following Linser's promise to cooperate with the Authority, the Arizonan demonstrated his agency's inherent hypocrisy:

Christensen: "I have one question. What portion of Arizona's population – how many people in Arizona . . . [receive their water] . . . from the Central Arizona Project?"

Linser: "I would say seventy and eighty percent of the population."

Christensen: "In round numbers?"

Linser: "Three, three and one half million people."

Christensen: "Would Arizona be satisfied if they had three times our [NV's] allocation out of the Colorado River?"

Linser: "900,000 acre feet? Hardly."<sup>30</sup>

The final Basin state envoy to speak was James Lochhead, an eminent water attorney representing the Colorado Governor's office. The SNWA and CRC panelists were interested in what Lochhead had to say because Colorado was the most politically influential state in the Upper Basin. Everyone in attendance knew that Colorado could make or break any private water-marketing plan in the Basin. Lochhead wasted little time dashing the panelist's hopes. In Lochhead's opening statements he asserted:

Some of the proposals before you are, in the opinion of the State of Colorado, illegal, or would undermine the interests of the Basin states and the tribes in promoting security of operations in the balanced use of the resources. Therefore, such proposals are not in the interests of the State of Colorado and we believe are not in the ultimate long-term interests of Nevada and other states in the Basin.<sup>31</sup>

Lochhead's implication was that Colorado was willing to wage a legal battle with Nevada if the latter were to go forward with its water marketing plans.

Lochhead argued that Nevada's strategy threatened the Upper Basin's allocation of the Colorado River. Losing the Upper Basin's water to the Lower Basin was a fear that shaped almost every aspect of Colorado's water policy, stretching back to before the creation of the Colorado River Compact. Lochhead was certainly opposed to Nevada's efforts to purchase private water, but for him and the state of Colorado, Nevada's efforts were really a sideshow. For Lochhead and his Upper Basin colleagues, the real issue was California. If Nevada was able to weaken the Law of the River, this might then provide California with the opportunity to seek additional changes to the existing legal regime.<sup>32</sup> From Lochhead's point of view, the only thing protecting Colorado's river allocation was the Law of the River. The State of Colorado was therefore extremely sensitive to any action that could potentially weaken the Law of the River. While Lochhead closed with the assurance that "Colorado recognizes the legitimate future needs of southern Nevada for additional long-term water supplies and desires to work cooperatively with Nevada to assure that need is satisfied," the fact of the matter was, Colorado was prepared to sacrifice Nevada to keep California's Colorado River ambitions at bay.<sup>33</sup>

Several years after the water summit Lochhead penned a two-part article titled "An Upper Basin Perspective on California's Claims to Water from the Colorado River." In it he argues in favor of the existing regime. Lochhead explains that Colorado's primary concern at the time of the Water Summit was California's potential to alter allocation levels under the Law of the River. Lochhead's fears were understandable given California's political power. California possessed more members of Congress than the rest of the Colorado River Basin states combined. This article provides some context to understand how Colorado official's suspicions over

California's ambitions negatively affected the SNWA's efforts to get more water for Las Vegas.

Lochhead's argument was not without its flaws. While Lochhead and the other representatives insisted they wanted to assist Nevada, they added the caveat that all parties involved adhere to the Law of the River in these efforts. Nevada's unique situation within the Colorado River Basin undermines the logical basis of Lochhead's assertions. Not only did Nevada possess the smallest allocation of any state, it also had no sizeable agricultural sector. Every other Colorado River Basin state possessed a significant agricultural sector, one that consumed a majority of the state's Colorado River allocation. This agricultural sector created what southern Nevada water managers called an agricultural buffer. In other states, especially California, Colorado, and Arizona, urban water managers could, in times of shortage, purchase water from agricultural interests. In the early 1990s the Colorado River Commission emphasized this condition during early regional negotiations for the Colorado River.<sup>34</sup>

It was, in fact, a bit of a sticking point for the Colorado River Commission, whose members asserted that Nevada would not accept a lower allocation during times of shortage "if other states in the basin continued to use water for agriculture."<sup>35</sup> Nevada's water managers knew that agriculture accounted for over eighty percent of the water consumed in the Colorado River Basin. Its economic return, however, could not compare with that of the region's urban areas. Given this wide inequity the CRC and SNWA have remained opposed to sharing in shortages with California and Arizona when regional agricultural interests remained flush with water.

In the period following the Water Summit, SNWA officials realized that if they hoped to make any progress in water acquisition efforts, it would have to craft

policy in accordance with the Law of the River. This meant the Authority would have to become a partner with water agencies in the other Basin states. The regional opposition to the SNWA's best hope – water marketing schemes in the Upper Basin – was simply insurmountable. Mulroy and the SNWA board realized that the Authority did not have the political and financial capital to wage a legal campaign against the Basin states. Especially since success was not guaranteed. There was speculation among various media that since the other Basin states seemed unwilling to help, the SNWA could initiate a lawsuit in the fashion of *Arizona v. California* in the hopes that the Supreme Court would reallocate a greater portion of the Colorado to Nevada.<sup>36</sup> This, however, was probably not something the SNWA was fully prepared to do. Doug Grant, an attorney who assisted the SNWA during Colorado River negotiations, explains that altering the terms of an interstate water compact are extremely difficult.<sup>37</sup> He states that even though Nevada had the option to seek redress for a Colorado River reallocation through Congress, California's congressional delegation alone (as of 2010, fifty-three representatives as opposed to Nevada's three) could prevent any movement on that front; therefore, the prospects for a congressionally sanctioned reallocation were "extremely poor."<sup>38</sup>

Nevada might have found a more sympathetic audience in the Supreme Court; however, seeking its assistance was not without risk. As the *Arizona vs. California* case shows, interstate legal conflicts could last decades. Arizona actually began suing California in the 1930s. It took until 1963 for the Supreme Court to finally settle the issue of Arizona's Colorado River allocation. It was unlikely that the Court would alter the existing arrangement unless the SNWA had "met its duty to take reasonable

steps to conserve and augment its existing water supply.”<sup>39</sup> In the early 1990s, the SNWA had not yet met this obligation.

Considering the SNWA’s political situation, Mulroy realized that the SNWA could not accept the financial risk of a drawn out legal battle, one with an uncertain outcome. It was not simply a matter of finances, however, that influenced Mulroy’s views on strategy. Mulroy considered the establishment of federal control over water rights in the Lower Basin the most consequential result of *Arizona v. California*. From Mulroy’s point of view, the Supreme Court seriously limited the Lower Basin state’s ability to address water resource challenges, and that turning to the federal government in the future would likely restrict them even further. These challenges compelled Mulroy to adopt a new strategy. As she later came to say, “the Compact allows seven states to do whatever seven states can agree to do.” Rather than work against the other Basin states, therefore, the SNWA would instead initiate interstate collaboration efforts to address Nevada’s water needs.<sup>40</sup>

The SNWA’s first step in this direction was to create a citizen’s advisory committee, the Integrated Resource Planning Advisory Committee (IRPAC). This was the same committee that also assisted the SNWA in establishing the sales tax initiative. The IRPAC met for two years to assist the SNWA in creating policy. The advisory committee’s initial task was to identify and recommend viable resource options, as well as finding a way to fund the Capital Improvement Project (CIP; Chapter 3). One of their primary recommendations was for the SNWA to shift focus away from the Virgin River and east-central Nevada groundwater and reorient its focus to the Colorado River.

The greatest concern to the committee was the financial and environmental cost of developing east-central Nevada's groundwater basins and the Virgin River. The committee realized it would be far less expensive if the SNWA could gain access to additional Colorado River water since most of the infrastructure for that resource was already in place. Despite the political difficulties already mentioned, the Colorado River remained the least expensive option for the SNWA. The advisory committee recommended that the SNWA "place top priority on development of Colorado River water to meet future water demands over development of a Virgin River pipeline or a Cooperative Water Project."<sup>41</sup> These recommendations paradoxically led the SNWA to pursue what initially seemed an unlikely source: a groundwater storage agreement with the state of Arizona.

Knowledge about the potential to store water underground had existed in southern Nevada since as early as the 1960s. That decade, geologists determined that the groundwater basins underlying the metro-area could be turned into natural storage structures. Interest in groundwater storage came about as a result of the strictures of the Law of the River and the desire to store Nevada's unused apportionment for lean times. In 1979 officials with the Desert Research Institute of Nevada stated that it would be ideal if the state could store unused portions of its allocation in Lake Mead. This was by far the easiest place to store unused water. These same officials, realizing the Law of the River prohibited such a plan, lamented that Nevada's "unused allotment in any year can not be carried over to a succeeding year and thus is lost forever to the State." They estimated that between 1980 and 2000 the state would lose in total between 1.5 and 2.85 million acre-feet of water because it could not store its unused allocation.<sup>42</sup>

Though there was sufficient groundwater to support Las Vegas's population growth into the 1970s, LVVWD officials realized at least two decades prior that they would need to begin using Colorado River water to support the city. Mass subsidence had occurred in many locations throughout the Las Vegas Valley during the 1950s and 1960s, as overdrawn groundwater basins began to collapse. This was a visual reminder that the metro-area was in need of a new water source, which it received when the SNWS was completed in 1971. That year the District shifted almost entirely from groundwater to Colorado River water. After the transfer to Colorado River water, local water planners were convinced they would have enough water for the next three decades.<sup>43</sup>

Despite the Colorado River's apparent plentitude, by the 1980s local agencies were once again looking to use groundwater. That decade the metro-area had grown by over 300,000 people, to the point that even Colorado River supplies were becoming stressed during the hot summer months. The LVVWD and North Las Vegas thus began to consider once again utilizing groundwater to meet this increased demand.<sup>44</sup> However, the groundwater basins were depleted and pumping from them could have led to further subsidence. To avoid this calamity, beginning in 1987 the LVVWD and the City of North Las Vegas began a program of artificially recharging the valley's aquifers with Nevada's unused Colorado River apportionment during the low-demand winter months, and then withdrawing this water in the summer.<sup>45</sup>

These early efforts served as precedents for Southern Nevada water managers who began to see increased potential for groundwater storage. Locally, however, this program had limitations. The Las Vegas Valley's geology, for one, presented challenges. Most of the area is underlain with caliche, a type of sedimentary rock

formed when particles of limestone fuse together into a naturally occurring cement. In order to access the groundwater basin underneath the Las Vegas Valley, engineers needed to drill through the caliche and then use pumps to inject water into the aquifer, a time consuming and laborious process.<sup>46</sup> There were also issues with the purity of the water once it was stored. District engineers intended to store Colorado River water in the underground aquifers. However, the PH balance of river water differed from existing groundwater. When LVVWD engineers began pumping Colorado River water into the aquifers the interaction of the two water sources caused minerals in the aquifer to dissolve, threatening the quality of the water.<sup>47</sup> These challenges, at least in part, inspired the SNWA to approach Arizona during the early 1990s about banking water in that state.

There were a number of additional factors compelling the SNWA to discuss groundwater banking with Arizona. The first had to do with the Copper State's geology. Within Arizona, geological conditions were more favorable for groundwater storage than in the Las Vegas Valley. Large aquifers existed throughout the south-central portion of the state, and were easily accessible. There was no need to pump water into these groundwater basins. Unlike in Las Vegas, a location that required pumps, engineers in Arizona merely had to let water flow into designated holding basins, and the water would simply percolate into the groundwater basins below.

The second reason was that the surplus water that the SNWA had hoped to access was in danger of disappearing. The Law of the River held that states in the Lower Basin could use another state's unused allocation. During the 1990s Arizona was only using about half of its Colorado River allocation. The SNWA (and California) thus began planning to use this water for its future water needs. Arizona



viewed this as a threat to its allocation. In order to protect this water, Arizona planned to bank its entire allocation each year in its aquifers.<sup>48</sup>

In 1996 the Arizona Legislature looked to increase the state's ability to store water. Of interest to the legislature was the fact that California and Nevada were becoming increasingly reliant upon Arizona's unused allocation.<sup>49</sup> Arizona lawmakers viewed this encroachment as the basis for a potential legal challenge from California to increase its Colorado River allocation. They had good reason for concern. Historical use of water has provided a compelling legal argument in water claims lawsuits. Indeed, historical use most often refers to the earliest user of a water source, which in turn forms the basis for the American West's predominant water law, the appropriation doctrine. In reaction to California's continued overuse, the Arizona Legislature created the Arizona Water Banking Authority (AWBA). This agency would pump the remainder of Arizona's allocation through the Central Arizona Project and into the vast network of underground storage basins located throughout the central part of the state. Protection of Arizona's Colorado River allocation was the primary goal of the groundwater storage project, but this protection would be costly. The CAP was going to cost Arizona at least 1.65 billion dollars.<sup>50</sup>

A second consideration for Arizona's lawmakers was the state of Arizona's agricultural economy. In the early 1990s, Arizona's agricultural sector, specifically in the area of cotton production, was in an economically depressed condition. Cotton growers faced increased global supply, costly increases in water rates, and competition for land by urban interests. This combination of factors contributed to declining rates of cotton production throughout the decade, which in turn decreased demand for water for agriculture.<sup>51</sup> This presented a problem to Arizona lawmakers,

since the CAP was built to bring water to farmers, and these farmers would in turn help pay for the CAP. In 1993, however, several Arizona irrigation districts were unable to pay for their water, risking default.<sup>52</sup> The threat of multiple irrigation districts facing bankruptcy compelled Arizona Governor Fife Symington to seek a way out of this predicament. The governor's advisory committee recommended that the state government begin seeking ways to market CAP water, and it was from this that lawmakers created AWBA. If Arizona could bank water for other states for a fee, this would in turn provide funds to subsidize farmers and ease them through the economic crisis. For Symington and others, ensuring enough water for agricultural usage was paramount. First, it would pay for the CAP; second, by keeping farmers in water, it would help justify the state's claim to the Colorado River. For Symington and his colleagues, the equation was simple: if the state could not pay for the CAP, then it could not protect its allocation from California. The creation of AWBA was therefore largely a defensive maneuver. Nevertheless, lawmakers, sensing opportunity, included a provision that would allow California and Nevada to bank water in Arizona in exchange for cash payment. The deal could potentially help Arizona repay one fifth of CAP costs.<sup>53</sup>

For the SNWA's part, it approached Arizona in order to solidify its resource options from a legal standpoint. The SNWA was initially incensed over the creation of AWBA. Clark County Commissioner and SNWA board member Christensen stated the Arizona Legislature was essentially "spilling their milk on the ground so nobody else drinks it."<sup>54</sup> Mulroy declared that Arizona's action dried "up the free water that [was] available to California and Nevada out of Arizona's share sooner than it would have during the normal course of water development in Arizona."

However, the SNWA's view changed dramatically over the next year. When Mulroy addressed the SNWA board in February 1997 she explained that the creation of AWBA would ultimately offer the SNWA a more secure resource: "The positive side of the bill is the rapid progression of discussions with Arizona on participation in the Banking Authority and the commitment from the secretary of Interior, Bruce Babbitt, to expedite the process so Nevada can bank water as soon as possible."<sup>55</sup>

News that Secretary Babbitt was going to specifically address Las Vegas's water needs in coming negotiations was a welcome development for SNWA officials. By 1997, regional discussions over the Colorado River had stalled because of internal political conflicts in California. The presence of a federal mediator in regional water negotiations could only strengthen the SNWA's case that it needed more water.<sup>56</sup>

Negotiations ensued between Arizona and Nevada following the board meeting. A key topic during these initial discussions was the length of time Nevada expected to be able to use the Arizona groundwater bank. Representatives of Arizona needed assurances from the SNWA that it would not become reliant upon banked water for the long term. They explicitly asked the SNWA "what are you going to do when this source [banked water] is gone?"<sup>57</sup> The reason for this was simple: Arizona wanted to avoid providing Nevada with a legal justification for altering the Lower Basin state's allocation levels. In reply, the SNWA pointed to its Cooperative Water Project, the water development plan that local water agencies had been working on since 1989. This provided the guarantee Arizona needed to begin groundwater-banking negotiations.

Interior Secretary Bruce Babbitt had grown increasingly supportive of Nevada's struggle to find more water. The previous year (1996), Babbitt publically

declared his support for Nevada and Arizona's efforts to establish an interstate groundwater banking agreement.<sup>58</sup> Since 1992, Babbitt had been involved in regional discussions over the Colorado River, discussions that by 1996 had ground to a halt. Since 1991, California had been trying to negotiate an internal political agreement among the state's four agricultural districts and two urban water utilities with contracts for Colorado River water.<sup>59</sup> Tensions between Southern California's agricultural and urban interests were high throughout the decade, which contributed to the defeat of several Colorado River management initiatives brought about by the other Basin states and federal government.<sup>60</sup> The other Basin states wanted California to decrease its use to its 4.4 million acre-foot allocation.

During the 1995 Colorado River Water Users Association meeting in Las Vegas, Babbitt stated he would approve a groundwater banking deal between Arizona and Nevada. Frustrated with California's lack of progress, Babbitt lent support for the agreement between Arizona and Nevada, in part, to spur California to resolve its internal political battles. Babbitt reasoned that when Arizona began banking its entire allocation, this would reduce the amount of water available to California. It was thus in California's best interest to reach a political agreement to decrease its use of the Colorado River as quickly as possible to avoid undue stress to the state's agricultural and urban areas.<sup>61</sup>

Babbitt's support for the SNWA marked a significant departure from his earlier stance. During the late 1980s and early 1990s, as a private citizen Babbitt represented Nevada rural interests in their fight against the CWP. His view shifted, however, five years into his tenure as Interior Secretary. Instead of attacking Las Vegas, he became a self-professed "advocate" for the metro-area and set about

finding a solution to its water shortage.<sup>62</sup> As Interior Secretary, Babbitt was beholden to a broad political constituency. He began to gain a deeper understanding of the interconnectedness of interests within the Colorado River Basin, and realized the SNWA pursued the CWP in part because it was unable to get more water from the Colorado River. He could no longer ignore the challenges Arizona and Nevada faced, nor could he ignore California's continued overuse of the river, a practice that, as far as Babbitt was concerned, occurred at the expense of the rest of the Basin states.

In 1989 Babbitt viewed SNWA efforts to obtain groundwater from east-central Nevada as a contest strictly between Las Vegas and the state's rural communities. His conception of the situation evolved after he became Secretary of the Interior. From his vantage point at the national level, Babbitt could see that Las Vegas faced a difficult situation. Babbitt knew the Law of the River placed unique challenges upon Las Vegas, and that it was unlikely the SNWA could succeed in obtaining more water for Las Vegas without the help of a federal intermediary. California's continued overuse of the Colorado would not stop unless an entity with greater political power forced it to do so. Explaining his rationale, Babbitt expressed that his "close-up view of Nevada's problems strengthened his commitment to loosening the restrictions that prevented flexible use of Colorado River water." He mentioned as much to Mulroy, stating that he would "solve southern Nevada's problem with Colorado River water." According to Mulroy, Babbitt "was always a firm believer that change needed to occur along the Colorado River."<sup>63</sup> With the blessing of the Secretary of the Interior, Arizona and Nevada began preliminary negotiations in 1996 over a groundwater storage agreement.

Meanwhile, the SNWA quietly continued to secure its Virgin River claim. The SNWA's larger goal on this front was to continue pushing the wheeling concept. The SNWA had to continue developing the Virgin River to maintain the threat that it would build a pipeline from the river to the metro-area. The SNWA Board's 1993 Virgin River claims were intended as a demonstration for Basin states and federal government that the Authority was serious about its plans.<sup>64</sup> From that point forward the Authority continued to methodically lay the groundwork needed to force the wheeling issue. Between 1997 and 2000 the SNWA purchased agricultural water rights on the Virgin River and then traded these rights with the Virgin Valley Water District (VVWD), the water utility that served the small town of Mesquite, located on the Virgin River. The SNWA was able to negotiate a deal in which it traded its more recently acquired rights to the Virgin River for those the VVWD possessed since before the 1929 Boulder Canyon Act. These older rights were not subject to the Law of the River, which gave the SNWA a stronger legal claim to the Virgin.<sup>65</sup> When the Supreme Court ruled that a state possessed rights to its tributaries, it stipulated that these rights were contingent upon the state having claims that predated the Boulder Canyon Act.<sup>66</sup> However, until the SNWA broke ground on a pipeline project, the Basin states could continue to call the Authority's bluff.

In 2001, the Federal Government established guidelines for interstate banking and in December of that year, Secretary Babbitt declared that Arizona and Nevada could begin official negotiations.<sup>67</sup> By this point, engineers from the two states had already worked out the logistical and technological aspects of the project. It was therefore only a matter of deciding how much water would be stored and how much money the service would cost. Under the terms of the agreement Nevada would pay

Arizona 170 million dollars to store 1.2 million acre-feet of water. Of this amount, Nevada could withdraw up to 100,000 acre-feet in one year.<sup>68</sup>

The onset of negotiations between Arizona and Nevada represented the first example of interstate water trading in the history of the Colorado River Basin. Reacting to news over the agreement's success, an elated Mulroy said, "This was a very good day for Nevada. For the next couple of decades, we're in very good shape."<sup>69</sup> Mulroy's good feelings would be short-lived. In what could only be considered the cruelest of ironies by Nevada and Arizona's water managers, the Colorado River Basin entered into the driest period on record. At first, the SNWA hoped this would be a temporary event. But it soon became apparent that the 2001 drought was not only the worst since record keeping began in the Basin, it was one of the worst in the past several centuries.<sup>70</sup> Paleo-data indicates that the Colorado River Basin has experienced numerous prolonged droughts that have lasted as long as several decades.<sup>71</sup> Archaeologists believe one of these droughts actually helped bring about the ultimate collapse of the Anasazi existed in the American Southwest during the eleventh to thirteenth centuries. The onset of drought was not something the SNWA, Arizona, or Secretary Babbitt anticipated. Indeed, these banking negotiations centered on Colorado River surpluses. The situation changed in less than a year, and instead of sharing surpluses, water mangers throughout the entire Colorado River basin began to wonder if they would have to share shortages.

A further irony for the SNWA was that ever since the 1993 Water Summit, the Authority had worked to obtain additional water in ways consistent with the Law of the River. When the SNWA finally gained the right to additional water from the Colorado River, this water disappeared. In Mulroy's words, "No sooner had the ink

dried on the river system's various surplus agreements than they became largely obsolete as a result of the drought.”<sup>72</sup>

While the Basin states and federal government engaged in a new round of negotiations, again to pressure California to use less Colorado River water, the SNWA simultaneously pursued its own strategy to deal with the drought. In the early 2000s the SNWA reinitiated its Virgin River development program and its Cooperative Water Project. Both programs had lain dormant as a result of the SNWA's success in achieving a groundwater banking agreement. However, as a result of the drought and the lack of surplus Colorado River water the SNWA had to find other options in a relatively short amount of time.

To help meet the challenge, in 2004 the SNWA commissioned a second citizens advisory committee to help the Authority decide upon a course of action. This time comprised of twenty-nine stakeholder representatives, which included civic leaders from the Las Vegas metro area as well as from outlying communities in Lincoln, Nye, and White Pine counties. The committee worked with the SNWA for over a year and in September 2005 finalized twenty-two recommendations.<sup>73</sup> The most important recommendation was that the SNWA “Pursue development of all the resource options considered in the IWPAC planning scenarios.”<sup>74</sup> In essence, the committee was urging the SNWA to pursue any and all water sources. For SNWA officials, the message was clear: the Authority had to re-initiate the Virgin River development plan.

Some observers thought the SNWA's Virgin River plan was a political ploy, meant to show the other Colorado River Basin states just how desperate the Authority was and the lengths to which it would go in order to get more water for the metro-



area.<sup>75</sup> Indeed, even within the Las Vegas water planning community there seemed to be an understanding that the Virgin River served as a bargaining chip to leverage a greater share of the Colorado River. A Colorado River Commission position paper from March, 1992 reads, “if it became obvious that Nevada was going to desalt and transport Virgin River water in southern Nevada the other states may back off because of the poor political position of forcing Nevada to spend huge amounts of money when they could take the water through Lake Mead and an addition to Southern Nevada Water System.” However, in a meeting later that year a CRC staff member indicated that southern Nevada needed to demonstrate that it would go forward with pipeline in order to ensure the threat’s effectiveness: “In spite of the fact that it doesn’t make economic or environmental sense, Nev. must demonstrate the willingness and ability to proceed with overland development of the Virgin (i.e., demonstrate additional depletion of the same order of magnitude will occur whether wheeling is permitted or not) before [we] can expect Calif. to agree to wheeling.”<sup>76</sup> In other words, Nevada had to prove that it was willing to build a pipeline before the other Basin states would allow Nevada to wheel water through Lake Mead. Mulroy herself implied that the attempt to procure the Virgin River and east-central Nevada groundwater was in an effort to compel the rest of the Colorado River Basin to examine ways of increasing Las Vegas’s share of the Colorado River, stating that the “Virgin is the linchpin to the rest of the Colorado River.”<sup>77</sup>

The SNWA hoped it would not come to that, but evidence suggests the Authority was willing to move forward with the project should its efforts fail. According to SNWA Deputy General Manager Kay Brothers, “if you had to have the water enough and that’s the only water around, you divert it, you treat it, and you

bring it to Las Vegas.”<sup>78</sup> Brothers further explained that the SNWA’s “preference was to wheel it, but if you get to the point where you have to do it [build a pipeline], you’ll do it.”<sup>79</sup> In 2005 the SNWA was still considering a pipeline because growth and an unyielding Law of the River were causing worry among SNWA staff that southern Nevada’s water supply would run out in a few years. During a presentation to the Department of Interior Mulroy indicated that she was fully prepared to go forward with the Virgin River development plan. She explained that the SNWA would either build a pipeline to convey water from the Virgin River fifty-five miles overland to Las Vegas, or that the Authority would wheel the water through Lake Mead. As she described it, she told the Department of Interior: “There are your options. You choose. I can go either way.”<sup>80</sup>

In 2005, the other Basin states remained opposed to the Authority’s Virgin River development plan. By that point in history, however, the SNWA had become more politically powerful and had a stronger legal claim to the Virgin River. The SNWA realized it was in a favorable negotiating position. According to one SNWA official, the Authority offered a trade to the Basin states: “since the SNWA was already going to spend money to get the Virgin River, it could also give the money to the Basin States to explore ways of getting 75,000 acre-feet to Vegas by other means. If the Basin agreed to get water to the SNWA, the SNWA would provide money for the study.”<sup>81</sup> A small caveat to this proposal was that the SNWA would gain access to a small amount of Virgin River water, which it could wheel through Lake Mead. The Basin states agreed to this proposal in 2007, and in 2008 the SNWA withdrew 10,000 acre-feet of Virgin River water from its Lake Mead intake, marking the first time ever

that Nevada had obtained water from the Colorado River above and separate from its basic allocation.<sup>82</sup>

While gaining access to the Virgin River was an important political achievement for the SNWA, the Basin states provided another, equally consequential concession: they agreed to allow the SNWA to use its in-state groundwater resources for return flow credits from the Colorado River. In other words, when the SNWA began to pump groundwater from east-central Nevada, the Authority could treat this water, send it to Lake Mead for return flow credits and increase the amount of water available to the Authority by a factor of 1.7.<sup>83</sup> Under this scenario, if the Authority obtained 30,000 acre-feet of groundwater, it would also obtain rights to 21,000 additional acre-feet per year through return flow credits. This greatly increased the viability of the SNWA groundwater development project, and it also held the prospect of introducing more water into the stressed Colorado River system.

It is unlikely that either the Virgin River Development Plan or the Arizona Groundwater Banking Agreement would have come to pass had the SNWA not engaged in an earlier process of power consolidation. Both efforts required interstate and federal interactions, and the SNWA simply would not have been a prominent player in the process had it not possessed local, county, and state level power. While this composition proved effective in an interstate context, it has also made the SNWA well suited for in-state water projects as well. In 1989 when the SNWA applied for Virgin River rights, it simultaneously applied for groundwater rights in east-central Nevada. Since that time, the SNWA has been methodically pursuing these groundwater stores. While many critics depict the SNWA's campaign as a contest between a large metropolitan area and in-state rural communities, the reality is that

this groundwater also has a Colorado River component. As noted above, the water the SNWA obtains from these aquifers will be pumped into the Colorado River, thus increasing the Authority's return flow credits. As we will see in the next chapter, even Great Basin groundwater is ultimately tied to the Law of the River.

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## NOTES

<sup>1</sup> Lochhead, "Upper Basin Perspective on California's Claims to Water from the Colorado River Part II."

<sup>2</sup> Arizona Department of Water Resources, "Arizona Water Atlas, Western Plateau, Volume 6" (Arizona Department of Water Resources, March 27, 2014), Arizona Department of Water Resources, [http://www.azwater.gov/AzDWR/StatewidePlanning/WaterAtlas/WesternPlateau/documents/Volume\\_6\\_VRG\\_final.pdf](http://www.azwater.gov/AzDWR/StatewidePlanning/WaterAtlas/WesternPlateau/documents/Volume_6_VRG_final.pdf).

<sup>3</sup> National Geographic Society P. O. Box 98199 Washington, Dc 20090-8199 Usa 38.90531943278526, and -77 0376992225647 800-647-5463, "Colorado River Map -- National Geographic," accessed June 16, 2014, <http://environment.nationalgeographic.com/environment/freshwater/change-the-course/colorado-river-map/>.

<sup>4</sup> Norris Hundley, *Water and the West: The Colorado River Compact and the Politics of Water in the American West* (Berkeley: University of California Press, 2009), 304.

<sup>5</sup> Southern Nevada Water Authority, *Concepts for Development of Additional in-State Water Resources* (Las Vegas, Nev: The Authority, 2004).

<sup>6</sup> Lochhead, "Upper Basin Perspective on California's Claims to Water from the Colorado River Part II."

<sup>7</sup> James S. Lochhead, "Upper Basin Perspective on California's Claims to Water from the Colorado River Part I: The Law of the River, An," *University of Denver Water Law Review* 4 (2001 2000): 290; Colorado River Commission of Nevada, *Colorado River Commission of Nevada Reference Library Collection*, 1922.

<sup>8</sup> "SNWA Board of Directors Meeting, December 16, 1993," December 16, 1993, Las Vegas Valley Water District; Michael Turnipseed, "Ruling #4151" (Nevada State Engineer, November 10, 1994), [http://water.nv.gov/hearings/past/dry/browseable/exhibits%5CSNWA%5CVolume\\_8/332.pdf](http://water.nv.gov/hearings/past/dry/browseable/exhibits%5CSNWA%5CVolume_8/332.pdf).

<sup>9</sup> Kay Brothers, interview by Author, March 2, 2013, Author's Collection; Jeff Johnson, interview by Author, March 13, 2013.

<sup>10</sup> Under this scenario a significant amount of water would also be lost to evaporation by constructing a dam.

<sup>11</sup> Jeff Johnson; Southern Nevada Water Authority, *Concepts for Development of Additional in-State Water Resources*.

<sup>12</sup> "SNWA Board of Directors Meeting, April 1, 1993," April 1, 1993, Las Vegas Valley Water District.

<sup>13</sup> Jeff Johnson.

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- <sup>14</sup> The SNWA was barred by law from pursuing out-of-state resources. Between 1991-1993, the Colorado River Commission of Nevada possessed the legal authority/mandate to pursue water sources located outside the state's boundaries.
- <sup>15</sup> "SNWA Board of Directors Meeting, May 6, 1993," May 6, 1993, Las Vegas Valley Water District.
- <sup>16</sup> Ibid.
- <sup>17</sup> Robert W. Righter, *The Battle over Hetch Hetchy: America's Most Controversial Dam and the Birth of Modern Environmentalism* (New York: Oxford University Press, 2006).
- <sup>18</sup> Limerick and Hanson, *A Ditch in Time*, 35.
- <sup>19</sup> Hundley, *Water and the West*, 309.
- <sup>20</sup> Lisa Johnson, "Nevada Water Summit: Concepts and Proposals," *Colorado River Commission of Nevada*, November 4, 1993, Colorado River Commission of Nevada, *Colorado River Commission of Nevada Reference Library Collection*.
- <sup>21</sup> Ibid.
- <sup>22</sup> Ibid.
- <sup>23</sup> Ibid.
- <sup>24</sup> Ibid.
- <sup>25</sup> David H. Getches, "Colorado River Governance: Sharing Federal Authority as an Incentive to Create a New Institution," *University of Colorado Law Review* 68 (1997): 573.
- <sup>26</sup> Lochhead, "Upper Basin Perspective on California's Claims to Water from the Colorado River Part II."
- <sup>27</sup> Johnson, "Water Summit," Colorado River Commission of Nevada, *Colorado River Commission of Nevada Reference Library Collection*.
- <sup>28</sup> Ibid.
- <sup>29</sup> Ibid.
- <sup>30</sup> Ibid.
- <sup>31</sup> Ibid.
- <sup>32</sup> Lochhead, "Upper Basin Perspective on California's Claims to Water from the Colorado River Part I"; Lochhead, "Upper Basin Perspective on California's Claims to Water from the Colorado River Part II."
- <sup>33</sup> Lochhead, "Upper Basin Perspective on California's Claims to Water from the Colorado River Part I"; Lochhead, "Upper Basin Perspective on California's Claims to Water from the Colorado River Part II."
- <sup>34</sup> Colorado River Commission Collection, Box 6, Folder 2.
- <sup>35</sup> Colorado River Commission Collection, Box 6, Folder 2.
- <sup>36</sup> Matt Jenkins, "'Tributary Issue' Could Force a Seven-State Showdown," accessed May 17, 2014, <http://www.hcn.org/issues/306/15789>; Patricia Mulroy, "Mulroy: Nevada Will Not Wilt on Water," *Las Vegas Sun*, August 29, 2005, <http://www.lasvegassun.com/news/2005/aug/29/mulroy-nevada-will-not-wilt-on-water/>; Author, "Email with Matt Jenkins," April 27, 2012.
- <sup>37</sup> Douglas L. Grant, "Interstate Water Allocation Compacts: When the Virtue of Permanence Becomes the Vice of Inflexibility," *University of Colorado Law Review* 74 (2003): 105.
- <sup>38</sup> Ibid.

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- <sup>39</sup> Ibid. This was actually a strategy that the SNWA had already embarked upon. Whether it will come to a Supreme Court challenge remains to be seen.
- <sup>40</sup> Patricia Mulroy, interview by Author, December 12, 2013, Author's Collection.
- <sup>41</sup> Southern Nevada Water Authority, "Southern Nevada Water Authority 2009 Water Resource Plan," 61.
- <sup>42</sup> Desert Research Institute, Water Resources Center, *Research Status Report on Banking Colorado River Nevada Allotment Waters in Las Vegas Valley, Nevada* (Desert Research Institute, 1979), 1, University of Nevada.
- <sup>43</sup> David Donnelly, interview by Hal Rothman, 2005, Author's Collection; Florence Jones, *Water: A History of Las Vegas (Volume II) Volume 2* (Las Vegas Valley Water District, n.d.).
- <sup>44</sup> Kay Brothers and Terry Katzer, "Water Banking through Artificial Recharge, Las Vegas Valley, Clark County, Nevada," *Journal of Hydrology* 115, no. 1-4 (July 1990): 77-103, doi:10.1016/0022-1694(90)90199-8.
- <sup>45</sup> Southern Nevada Water Authority, "Southern Nevada Water Authority 2009 Water Resource Plan," 27.
- <sup>46</sup> Jeff Johnson.
- <sup>47</sup> Brothers and Katzer, "Water Banking through Artificial Recharge, Las Vegas Valley, Clark County, Nevada."
- <sup>48</sup> Lochhead, "Upper Basin Perspective on California's Claims to Water from the Colorado River Part II."
- <sup>49</sup> Arizona Republic, "Arizona Water Reviewed for LV Use," *Las Vegas Review - Journal*, August 10, 1993.
- <sup>50</sup> Central Arizona Project, "Central Arizona Project: Your Water. Your Future.," *FAQ*, June 9, 2014, <http://www.cap-az.com/index.php/cap-faq>.
- <sup>51</sup> Gabe Judkins, "Declining Cotton Cultivation in Maricopa County, Arizona: An Examination of Macro-and Micro-Scale Driving Forces," *Yearbook of the Association of Pacific Coast Geographers* 70, no. 1 (2008): 70-95, doi:10.1353/pcg.0.0003.
- <sup>52</sup> Arizona Department of Water Resources, Report, "Governor's Central Arizona Project Advisory Committee," October 1993, from Colorado River Commission files, acquired from Colorado River Commission, February 22, 2013, copy on file with author.
- <sup>53</sup> Michael Weissenstein, "Deal Increases Life of Southern Nevada Water Supply: [Final Edition]," *Las Vegas Review - Journal*, June 13, 2001, sec. CITY; Jeff Johnson. Arizona, like Nevada, had realized the potential for storing water in natural underground storage basins. It initiated a pilot program in 1993 in which Arizona began banking a portion of its unused allocation for future use. A consequential aspect of this pilot program was that Arizona allowed Nevada and California to bank parts of their unused allocations as well. The Arizona demonstration project was rather modest, allowing Nevada to store only 50,000 acre-feet total. It was, however, an important precedent.
- <sup>54</sup> Susan Greene, "The Politics of Water - Law of the River Guides Water Talks: [Final Edition]," *Las Vegas Review - Journal*, October 13, 1996, sec. A.
- <sup>55</sup> "SNWA Board of Directors Meeting, February 20, 1997," February 20, 1997, Las Vegas Valley Water District.
- <sup>56</sup> Lochhead, "Upper Basin Perspective on California's Claims to Water from the Colorado River Part II."

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<sup>57</sup> Jeff Johnson.

<sup>58</sup> Susan Greene, "Babbitt Backs Water Banks: [Final Edition]," *Las Vegas Review - Journal*, December 20, 1996, sec. A.

<sup>59</sup> United States Bureau of Reclamation, "Boulder Canyon Agreement" (United States Department of the Interior, 1928),

<http://www.usbr.gov/lc/region/pao/pdfiles/ca7pty.pdf>; Lochhead, "Upper Basin Perspective on California's Claims to Water from the Colorado River Part II."

<sup>60</sup> Lochhead, "Upper Basin Perspective on California's Claims to Water from the Colorado River Part II."

<sup>61</sup> Greene, "Babbitt Backs Water Banks."

<sup>62</sup> Michael Weissenstein, "The Water Empress of Vegas," *High Country News*, April 9, 2001, <https://www.hcn.org/issues/200/10404>.

<sup>63</sup> *Ibid.* An additional influence upon Babbitt's view was his history as a governor of Arizona. This would almost certainly have influenced Babbitt to automatically oppose California's behavior in the Lower Basin. California did not make this difficult: the level of Colorado River California was using in 1996 was A) in an amount greater than it was legally granted, and B) more than three times that of the next largest user.

<sup>64</sup> "SNWA Board of Directors Meeting, April 1, 1993."

<sup>65</sup> Southern Nevada Water Authority, "Southern Nevada Water Authority 2009 Water Resource Plan," 36.

<sup>66</sup> "SNWA Board of Directors Meeting, April 1, 1993"; Southern Nevada Water Authority, "Southern Nevada Water Authority 2009 Water Resource Plan."

<sup>67</sup> United States Bureau of Reclamation, "Part 414—Offstream Storage of Colorado River Water and Development and Release of Intentionally Created Unused Apportionment in the Lower Division States" (Department of the Interior, November 1, 1999), <http://www.usbr.gov/lc/region/g4000/contracts/FinalRule43cfr414.pdf>; High Country News, "Bruce Babbitt Speech, December 14, 2000, Colorado River Water Users Association 2000 Annual Conference," *High Country News*, May 21, 2000, Vol. 33, Issue 9 edition,

[http://www.hcn.org/2001/babbitt\\_speeches/babbitt12142000.html](http://www.hcn.org/2001/babbitt_speeches/babbitt12142000.html).

<sup>68</sup> Michael Weissenstein, "Nevada-Arizona Water Compact Made Official: [Final Edition]," *Las Vegas Review - Journal*, July 4, 2001, sec. CITY; Southern Nevada Water Authority, *2002 Water Resource Plan* (Las Vegas, Nev.: Southern Nevada Water Authority, 2002).

<sup>69</sup> Staff, "Editorial: Water for the desert," *Las Vegas Review-Journal*, 13 June 2001.

<sup>70</sup> Matt Jenkins, "What's Worse than the Worst-Case Scenario? Real Life," *High Country News*, March 21, 2005, <http://www.hcn.org/issues/294/15374>.

<sup>71</sup> *Ibid.*

<sup>72</sup> Patricia Mulroy, "Beyond the Divisions: A Compact That Unites," *Utah Environmental Law Review* 28, no. 1 (February 24, 2009),

<http://epubs.utah.edu/index.php/jlrel/article/view/101>. Mulroy increasingly began to point to this environmentally induced shortage as justification for pursuing the Cooperative Water Project.

<sup>73</sup> Southern Nevada Water Authority, "Southern Nevada Water Authority 2009 Water Resource Plan," 16–17, 65.

<sup>74</sup> *Ibid.*

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<sup>75</sup> Jenkins, “‘Tributary Issue’ Could Force a Seven-State Showdown”; “Las Vegas Wheels and Deals for Colorado River Water”; Michael Weissenstein, “The Water Empress of Vegas.”

<sup>76</sup> Colorado River Commission of Nevada, *Colorado River Commission of Nevada Reference Library Collection*.

<sup>77</sup> “Las Vegas Wheels and Deals for Colorado River Water.”

<sup>78</sup> Kay Brothers, March 2, 2013.

<sup>79</sup> Ibid.

<sup>80</sup> Michael Weissenstein, “The Water Empress of Vegas.”

<sup>81</sup> Jeff Johnson.

<sup>82</sup> Southern Nevada Water Authority, “Southern Nevada Water Authority 2009 Water Resource Plan,” 30.

<sup>83</sup> Jeff Johnson.



## CHAPTER 6 | THE LAST, WORST OPTION: THE SNWA RURAL COUNTIES GROUNDWATER DEVELOPMENT PLAN.

As the previous chapters have shown, the SNWA spent the better part of the 1990s exploring political strategies for obtaining a greater share of the Colorado River. In 2004, Mulroy and other SNWA officials certainly continued to hold out hope. However, the drought was making this possibility increasingly unlikely. Indeed, it was becoming apparent to Mulroy that Secretary of Interior Gale Norton might even decrease Nevada's Colorado River consumption by as much as 18,000 acre-feet per year.<sup>1</sup> Under the Law of the River, if shortages occurred on the Colorado River, Arizona and Nevada would have to curtail their consumption, and California would be held to its 4.4 million acre-foot allocation. As local and regional demand for the Colorado River increased, the SNWA's chances to increase its allocation decreased.

The SNWA needed a backup plan. As a result, the SNWA decided to revitalize a groundwater-pumping project that had its roots back in 1989 (fig. 1). That year, the Las Vegas Valley Water District applied for groundwater rights in thirty desert valleys located in east-central Nevada, most of which lay in Lincoln and White Pine Counties. The amount of water the LVVWD applied for alarmed many rural residents—nearly 850,000 acre feet, an amount equivalent to nearly three times the state's yearly Colorado River allocation.<sup>2</sup> Originally called the Cooperative Water Project (CWP), by 2006 the SNWA had renamed the project the Clark, Lincoln, and White Pine Counties Groundwater Development Project (GDWP). However, most observers simply refer to the project as the SNWA pipeline. Additionally, the amount the Authority was seeking had dropped to 137,000 acre-feet per year.<sup>3</sup> This decreased amount did not elicit a corresponding decrease in the protests, however. Rural

residents, as well as lawmakers in the neighboring state of Utah began to wage a coordinated legal and public relations campaign against the SNWA pipeline.

Opponents of the GWDP have routinely portrayed the project as a contest strictly between residents of rural Nevada and Las Vegas. This David versus Goliath depiction has given the rural residents outsized influence in their struggle to resist the GWDP. They have solicited the public's sympathy by shrewdly utilizing western ranching iconography, presenting the rural residents of east-central Nevada as rugged individualists resisting an immoral conqueror in the form of Las Vegas. Despite the rather skillful manipulation of this imagery, it is unclear whether the ranching communities of east-central Nevada will ultimately be able to withstand the SNWA's ambitions. For the Colorado River remains the central factor in the GWDP.

Despite the opposition's insistence that the GWDP is a contest between ranchers and Las Vegas, the reality of the situation is that the SNWA is pursuing groundwater in east-central Nevada because it cannot get more water from the Colorado River. And the reason it cannot get more is because over twenty-five million people in the American Southwest rely on the Colorado River.<sup>4</sup> The more people who rely on the Colorado, the less likely it is that Nevada will receive additional water from the river. This number sharply contrasts with the number of people reliant upon groundwater in east-central Nevada: less than five hundred.<sup>5</sup> Given this striking disparity, it is almost inevitable that the GWDP will eventually move forward.

Opponents often portray Las Vegas as a city that should not exist, by virtue of its location in a harsh desert environment. This characterization, however, ignores examples, both past and present, of cities that exist in challenging environmental

settings. Indeed, the first cities on earth emerged from the desert landscape of Mesopotamia ten thousand years ago. For just as long societies have extended water infrastructure into their hinterlands. Historical examples include Rome, Jerusalem, Baghdad, Mecca, as well as dozens of other settlements throughout the ancient Middle East and the Indus Valley of India.<sup>6</sup> Furthermore, desert cities are not the only cities that tap distant water sources; Boston, Massachusetts; Portland, Oregon; Seattle, Washington; and Atlanta, Georgia also obtain their drinking water from regional, non-local resources. The fact is, virtually every city in every era and in every environment has built an urban water conveyance system that brings water into the urbanized area from some other location. Las Vegas is merely one of the latest to do so.

As of 2014, however, the GWDP exists only as a concept. The SNWA has built very little in the way of physical infrastructure into the affected counties. The GWDP campaign has instead been one largely of a legal nature. Since 1989 the SNWA has been laying the legal groundwork – securing rights-of-way over federal land, purchasing water rights, and waging court battles against pipeline opponents – in anticipation of the day it is able to begin building its pipeline. This chapter is about that story.

### **Dusting off the Old Plan: the “re” Initiation of the Pipeline**

In 2004, the SNWA re-initiated a decade-long dormant plan to pump groundwater from valleys in east-central Nevada, some 250 miles north of the Las Vegas metro-area. The project was estimated to cost nearly four billion dollars, had the potential to destroy vital fish habitat, and it was not clear how long the water supply would last once pumping began. In addition to these issues, the SNWA faced significant opposition from in-state constituencies, as well as from the state of Utah.

At the time of writing, the SNWA is vigorously pursuing the pipeline project. Why is the SNWA willing to pursue this politically difficult pipeline project? As with almost every aspect of SNWA water policy, the answer lies in the Colorado River.

By 2004 the SNWA had obtained as much as it possibly could from the Colorado River. Despite Mulroy's and Babbitt's grand rhetoric over how the Arizona Groundwater Banking Agreement represented a malleable and responsive Law of the River, it must be remembered that it took the SNWA over a decade to obtain a comparatively small, and temporary, increase in Colorado River water. The same can be said about the ability to wheel Virgin River water through Lake Mead in 2007; these agreements represented minor alterations that did not threaten the fundamental tenets of the Law of the River.

During the course of the 1990s, pressure on the Colorado River steadily increased, especially within the Lower Basin. Agriculture continued to use seventy-five percent of the river, and the urban populations of Southern California, the Las Vegas metro-area, and Arizona grew by nearly four million people.<sup>7</sup> In the Las Vegas metro-area, developers built almost thirty resort casinos between 1990 and 2004, and the local population grew by over a million residents.<sup>8</sup> Arizona had completed its Central Arizona Project (CAP) and began pumping the final 1.3 million of its 2.8-million acre-foot Colorado River allocation, and California's urban population and agricultural industry continued to consume water in excess of its yearly allocation. While these developments presented enormous challenges to water managers throughout the Colorado River Basin, they were not unexpected. The CAP had been under construction since 1973 and the American West's population had grown consistently since World War Two. One contingency that nobody, from the federal

down to the local level, had expected was drought. The last year of the decade marked the onset of a drought that by 2014 had not abated and that some climatologists are beginning to think could be one of the worst in the Colorado River Basin for the last eight centuries.<sup>9</sup> In short, not only were more people withdrawing water from the Colorado River, but also less water was coming in.

By 2004, each Basin state had become more reliant upon the Colorado River, and guarded their rights to it even more zealously.<sup>10</sup> Arizona had, only ten years prior, completed the CAP, a massive investment of time as well as political and financial capital. To protect the state's water and the CAP, in the midst of a drought, Arizona paradoxically had to use more water. If it did not withdraw its full allocation, CAP officials feared the state's rights would come under threat.

Additional pressure came as a result of California's continued overuse. The other Basin states had pressured the federal government to decrease the amount available to the Golden State.<sup>11</sup> In 2002, Secretary Norton declared there was no surplus on the Colorado River that year. California thus had to make do with its 4.4 million acre-foot allotment. This caused significant problems within Southern California, in part the result of the 1931 Seven Part Agreement.

This agreement apportioned California's Colorado River allocation among in-state users, to include agricultural districts in the Imperial Valley and coastal urban water districts. It stipulated that Imperial Valley agriculture interests had senior rights and were entitled to 3.85 million acre-feet of water, with the remainder (550,000 acre-feet) going to urban areas between Los Angeles and San Diego.<sup>12</sup> This amount was never enough for the urban areas; however, in 1931 it did not present a problem since urban centers were entitled to use any surpluses from the Colorado River, surpluses

that persisted every year until 2002. When Secretary Norton declared there was no surplus water left, Southern California's agricultural interests chose not to share in the shortages – as was their right – leaving southern California's cities to figure out how they were going to get by on the drastically reduced water supply.<sup>13</sup> This combination of regional and state fights over Colorado River water further increased regional political tensions and served as a reminder to the SNWA that the acquisition of any additional Colorado River water was unlikely.

### **The Beginning: The Las Vegas Valley Water District's 1989 Filings**

In 1989, the mood could be said to be one of near panic among the metro-area's water officials. The urban area was clearly growing at a rate that was impossible to keep up with. Housing tracts leapfrogged over one another, expanding across the Las Vegas Valley. Agencies like the LVVWD simply could not build the necessary infrastructure fast enough to keep pace with construction. In fact, it fell to the housing developers to put pipes in the ground and to build various components of urban water infrastructure. Out of necessity the LVVWD told developers to build their own water infrastructure, after which the District would reimburse them for their efforts and capital expenditure.<sup>14</sup> With no way to acquire any additional water out of the Colorado River, LVVWD officials proposed a bold plan: to build a pipeline into the rural counties north of Las Vegas and tap the massive groundwater reserves known to be in the area.

The idea for tapping Great Basin groundwater actually has a history stretching back as early as the 1960s. At that time, the Nevada State Engineer began conducting statewide water assessments, in part to plan for the water needs of the burgeoning Las Vegas metropolitan area. The State Engineer identified several areas around Las

Vegas that possessed significant groundwater stores including the Pahrump Valley and Amargosa Desert seventy miles to the city's west, and the Pahrnagat and Railroad Valleys fifty and seventy miles north respectively. While these locations possessed water, the State Engineer questioned their suitability as a viable urban water source, stating that the groundwater stores were finite and could not be mined indefinitely.<sup>15</sup>

Between 1960 and 1989, various defense related studies indicated large sources of groundwater in Nye, Lincoln, and White Pine Counties, north of Las Vegas.<sup>16</sup> Following the 1963 Aerial Test Ban Treaty the federal government began testing nuclear weapons underground at the Nevada Test Site, located some ninety miles northwest of Las Vegas. In preparation for these tests the Atomic Energy Commission conducted extensive surveys of the area, surveys that revealed significant sources of groundwater.<sup>17</sup> Then, during the 1970s, the government began considering a strategy of placing nuclear ballistic missiles at various sites throughout the Great Basin Desert of Nevada and Utah. The reconnaissance of suitable sites yielded further evidence of large-scale groundwater stores in the east-central parts of Nevada.<sup>18</sup>

In 1979, President Jimmy Carter initiated a plan to deploy a new type of nuclear weapon – the MX or “Missile Experimental” – in the Great Basin. The plan called for the construction of 4,600 individual launch sites, between which trucks and trains would shuttle missiles. The strategic principle behind this “race track” system was already in use with the United States’ nuclear missile submarine fleet, in which Carter had served as a nuclear weapons officer. The mobility and secret location of these submarines decreased the likelihood that they would all be eliminated in a

Soviet first response. Carter hoped to emulate the strategic characteristics of America's nuclear submarine fleet with the MX system. In preparation for the project, the United States Air Force funded extensive geological tests throughout the affected region, in part to ascertain groundwater resources. Each of the MX missile installations would require water, initially for construction, and later for maintenance and staffing.<sup>19</sup>

The Nevada State Engineer insisted upon being part of the process based on concerns over potential contamination of a water resource belonging to the state, and also the relationship between ground and surface water. Great Basin ranchers often relied on artesian springs to support their cattle operations. The state engineer suspected that Air Force use of water at MX sites had the potential to decrease, or even eliminate, water flow to springs.

The surveys revealed a significant amount of groundwater in the region – certainly enough to support many MX sites. However, in 1981, President Ronald Reagan withdrew funding for the MX missile, which effectively killed the program. Reagan asserted the costs of the project were too high, and the “race track” system unlikely to withstand a nuclear attack.

Air Force studies revealed an enormous groundwater reserve in east central Nevada, information that became part of the public domain and helped provide the technical foundation upon which the LVVWD based its 1989 groundwater applications. By that point, the Las Vegas metro area had become large enough to require an additional source of water. And so, on October 17, 1989, the LVVWD applied for groundwater rights in White Pine and Lincoln Counties for 800,000 acre-feet per year.<sup>20</sup> When this happened, Las Vegas took its place alongside countless



other cities, both contemporary and historical, who looked beyond their immediate surroundings for water to provide to their citizenry.

### **The SNWA's Colorado River Phase**

Between the LVVWD's 1989 applications and 2004, the SNWA focused mainly on various Colorado River issues, such as establishing the groundwater banking agreement with Arizona and lobbying the other Basin states to allow for Virgin River wheeling. SNWA officials also began the process of building the necessary infrastructure in the Las Vegas Valley to handle the additional water it expected from the groundwater bank and Virgin River. Throughout all of this, the Authority was steadily solidifying its political power through the Paradigm Shift and CRC restructuring campaign. These successes prompted Mulroy – a one-time fierce opponent of the Law of the River – to reverse her position and instead emphasize the latitude the LOR afforded the SNWA. “My experiences on the Colorado River and in southern Nevada,” Mulroy declared, “have taught me that many of our most difficult water issues can be resolved if everyone is willing to work together, take the time to understand one another's point of view, and share in the occasional tradeoffs necessary to achieve meaningful, long-lasting outcomes.”<sup>21</sup>

The fact remained, however, that the Law of the River remained resistant to fundamental change. Groundwater banking reserves and Virgin River water were temporary measures at best. The SNWA, therefore, continued to develop the pipeline project because ultimately the Basin states were not going to provide Las Vegas any more Colorado River water. Arizona was unwilling to allow the SNWA to use its groundwater basins as anything more than temporary resources, and Colorado resisted any attempt to market water from the Upper Basin to the lower.

The GWDP actually represents the inability of the SNWA to increase its Colorado River allocation and the rigidity of the Law of the River. If the LOR were more malleable, then the SNWA would not have had to pursue in-state groundwater. Proponents of the various Colorado River agreements extoll the accomplishments of the states involved, and effusively praise the “latitude” the LOR provides. This latitude is a mirage, however. The malleability only occurs because Nevada is introducing new water into the Colorado River system. And the permission the other Basin states gave the SNWA is not much of a concession in the first place. They allowed the SNWA to use Nevada’s own groundwater for return flow credits. These credits do not actually decrease the amount of water from the river system; on the contrary, they actually increase the amount of water available to the other Lower Basin states. The Basin states essentially granted permission to the SNWA to increase the amount of water for everyone else. This concession was not that significant, and it actually demonstrated the continued rigidity of the LOR. Despite the potential influx of water from east-central Nevada groundwater, the LOR remained fundamentally unchanged.

As noted in the previous chapter, the Colorado River Basin entered a drought in 1999. This was a wakeup call for the SNWA, which had spent the past decade attempting to obtain a greater share of a river that, according to the most recent science, was only going to get smaller. In 2004, SNWA officials realized they would need to reconsider using in-state groundwater resources. The SNWA’s first step was to establish a strategy for the GWDP, and for this it once again turned to local citizens to aid in the process. The SNWA comprised a second advisory committee, the Integrated Water Planning Advisory Committee (IWPAC), to “assess alternatives and

develop general recommendations for the SNWA Board of Directors concerning the integration of in-state water resources into the water planning and management activities of southern Nevada.”<sup>22</sup> Briefing the advisory committee, SNWA personnel explained that the region was experiencing an unprecedented drought that threatened not only southern Nevada’s, but also the entire region’s Colorado River supply.<sup>23</sup> It was clear to both SNWA staff and the advisory committee that it would be nearly impossible to obtain any more Colorado River water. The SNWA reiterated the twin difficulties southern Nevada faced: that the metro-area was limited by the Law of the River to a small amount of Colorado River water, and that climate change further threatened the region’s water supply. SNWA staff explained that the committee was to consider all available resource options, but given the history of Colorado River politics, participants knew that east-central Nevada groundwater was going to be the primary focus. Authority staff instructed the Advisory Committee to create a comprehensive plan that used this groundwater along with conservation policies, and utilization of other sources such as the Colorado River and the Virgin River.

The advisory committee comprised a cross-section of individuals from the metro-area representing a number of interests, including the gaming and housing industries, southern Nevada unions, environmental non-profits, senior citizen’s organizations, banking, the Las Vegas Paiute tribe, small business, as well as rural representatives from Lincoln, White Pine, and Nye County. Also included were a Las Vegas legislator, a representative of the governor, and a member of the Colorado River Commission.<sup>24</sup> The committee took as their premise for the meetings that the Colorado River would remain the metro-area’s primary water supply, but that alternatives had to be found to augment that source. Indeed, it was the committee’s

concern that the Colorado was so threatened by climatological conditions that drove much of the discussion over the viability of various resource options. In 2004 the SNWA had in its possession, or had the potential to develop, groundwater in the Las Vegas Valley, the Virgin River, and the Arizona Groundwater Bank. But these sources would not provide enough of a resource base for long-term planning. Therefore, by necessity, SNWA officials also had to begin considering the use of groundwater from east-central Nevada.

Southern Nevada water engineers had long been aware of several groundwater sources within Clark County. The two most prominent were located northeast of the metropolitan area in Coyote Springs, discovered during MX missile surveys in the 1970s, and northwest of Las Vegas in the Three Lakes groundwater basin at the base of the Sheep Mountains. These two locations represented the closest groundwater sources for the SNWA to exploit; however, these basins were not rich sources of water. Both fell under the SNWA's any-and-all strategy of resource acquisition. The Coyote Springs groundwater basin possessed 27,500 acre-feet of water and Three Lakes an additional 10,605, both modest amounts compared against the annual needs of the metro-area. The SNWA promptly acquired rights to these groundwater sources, but these initial sources served more as a stepping off point for the larger groundwater basins located north in Lincoln and White Pine Counties.

The SNWA's campaign to tap groundwater in Lincoln and White Pine counties occupied the greatest amount of time and elicited the most debate during the 2004 IWPAC meetings. Under the parameters set forth by the SNWA, the advisory committee would examine the process of developing groundwater in either five or six valleys in east-central Nevada: Coyote Springs, Delamar, Dry Lake, Cave, Spring

Valleys, and possibly Snake Valley (fig.10). It was the SNWA's intention to build a pipeline through Coyote Springs, Delamar, Dry Lake, and Cave Valleys, culminating in the Spring and Snake Valleys of White Pine County. These two valleys contained the greatest amount of groundwater of those under consideration.

The reason the advisory committee had to examine both a five and six basin approach was because of political complications with Utah.<sup>25</sup> The Snake Valley, the sixth under consideration, lay in both Utah and Nevada. Competing claims by the SNWA and Utah over the Snake Valley initiated a political dispute that has yet to be resolved. (I will return to the issue of this political dispute below.) First, let's examine the geographical aspects of the GWDP located entirely within Nevada.

While the IWPAC proceedings allowed the SNWA to create a more comprehensive strategy for overall water resource development, it also provided a forum for opponents of the GWDP to voice their concerns. These individuals consisted of ranchers, residents, and one elected official from east-central Nevada. At root, these people feared that the GWDP would bring about an end to their livelihood and way of life. As a result, they sought to derail the SNWA campaign by attacking it on a number of fronts. One theme that quickly emerged during IWPAC meetings was that opponents thought the SNWA was seeking to develop groundwater without first trying other options. Though the SNWA had in fact been seeking alternatives like Colorado River re-allocation, ocean desalination, and purchasing agricultural water rights in the Imperial Valley for at least ten years prior to turning its attention to east-central Nevada groundwater, these efforts went largely unnoticed by GWDP opponents.

An additional argument was that the SNWA should work to renegotiate the Colorado River Compact. Glen Zelch, representative from Lincoln County, asked why “a reallocation of the Colorado River had not been included on the resource list.” And Peter Ford, a rural resident wrote to the IWPAC asking it to “please state your (SNWA’s) policy re: renegotiating the Colorado River compact. I heard, in Baker, many excuses, but excuses do not make a policy.”<sup>26</sup> These comments from Zelch and Ford demonstrate the centrality of the Colorado River to the overall SNWA water policy. From their residences in White Pine and Lincoln Counties, Zelch and Ford could look at a map and see that the obvious choice for the SNWA would be to take a greater amount of water from the Colorado River. The Las Vegas metro-area was, after all, virtually sited on the banks of the Colorado River. However, as we have seen in previous chapters, the SNWA, and CRC before it, had expended significant political capital trying to renegotiate a greater allocation of the Colorado River for Nevada, efforts that resulted in little reward. Indeed, the failure of the SNWA to obtain a greater Colorado River share directly led to the Authority’s GWDP campaign.

Because of its experience in Colorado River negotiations during the previous thirteen years, by 2004, the SNWA had finally decided to take a different stance with respect to the Law of the River. The SNWA was no longer making public statements to the effect that the Law of the River should be renegotiated or that Nevada would seek redress with the Supreme Court over its Colorado River allocation.<sup>27</sup> In reply to Zelch’s query, Kay Brothers, SNWA Deputy General Manager explained, “changes would take years to negotiate and may have extensive legal ramifications. Before any changes could occur, all of the seven basin states would have to agree.” She

continued, “reopening the Compact could have serious consequences. For example, it might induce states to focus more on protecting their allocations, rather than working together on flexible solutions to ongoing problems, as is currently the case.”<sup>28</sup>

For their part, the other Basin states had begun to press Nevada to develop in-state resources before asking them for more Colorado River water.<sup>29</sup> IWPAC member and Colorado River Commissioner Richard Bunker added to Brother’s explanation stating, “the state of Nevada and SNWA have pursued Colorado River resources and aggressively negotiated for flexibility on the River. While the SNWA and Colorado River Commission have been innovative and pushed the envelope over the course of the last ten years... there is little room for additional negotiations at this point without development of in-state resources.” Bunker concluded, “that Nevada was only successful in recent water banking negotiations because of the progress demonstrated by SNWA in its action to develop in-state resources.”<sup>30</sup>

One of the obvious questions surrounding the GWDP was what happens if there is not enough water in the groundwater basins to support the GWDP? In 2005, scientific assessments of groundwater levels in east-central Nevada varied greatly. Opponents presented scientific viewpoints that indicated the levels of groundwater were not sufficient to support both the GWDP and ranching. The SNWA’s scientific reports, not surprisingly, indicated just the opposite.<sup>31</sup> The lack of certainty was not lost on Zelch who asked the committee whether there was a “contingency plan” in place should there be insufficient water in east-central Nevada to justify the GWDP. In a revealing statement, demonstrating how deeply the GWDP factored into the regional political milieu, Bunker replied, “if the groundwater system is tested and found to be insufficient, then Nevada would be in a better position to ask the seven

states for more flexibility on the Colorado River.” He continued, stating, “after demonstrating a good faith attempt to develop in-state resources, Nevada would be in a better position to negotiate such options with the other basin states.”<sup>32</sup>

Indeed, many critics and political insiders speculated that the pipeline project was ultimately a bluff meant to force the Basin states and federal government to give more Colorado River water to Las Vegas.<sup>33</sup> If it proved there was not enough water in the groundwater basins to comprise a viable resource option for Las Vegas, the SNWA would most likely have gone back to the Basin States and insisted on a renegotiation of the allocations. Bunker’s argument was essentially that the SNWA was doing its due diligence, that it was exhausting all options before once again turning to the Colorado River for its salvation. The SNWA had achieved a greater, albeit temporary, increase in Colorado River water with the Arizona Groundwater Bank, but this was all that the Basin States were willing to concede until the SNWA looked to in-state water resources.<sup>34</sup>

Zelch indicated that perhaps it was time to turn to the courts to assist Nevada in attaining an increased share of the Colorado River. This, however, further illustrated the rural opposition’s lack of understanding of the historical context on the matter. Nevada had actually attempted to increase its share using this method during the 1960s in the *Arizona v. California* court case. But at that time sufficient population in southern Nevada did not exist to sway the Supreme Court. Despite the steady population increase in southern Nevada during the next four decades, SNWA water mangers were still hesitant to turn to this method. According to Brothers the “SNWA has no intent to file a lawsuit to reopen the Colorado River Compact,” noting, “that doing so would halt negotiations on the Colorado River for twenty years



or so while a lawsuit was underway and with no reassurance of a positive outcome.”<sup>35</sup> It took Arizona forty years to settle its legal differences with California; and even after the court ruled in 1963, Arizona had to accept a junior right to the Colorado River in order to obtain federal funds for the Central Arizona Project. As far as Arizona was concerned, its victory against California came with some major drawbacks.

The SNWA realized this as well and was not interested in pursuing a legal option. Bunker explained, “that it is not in Nevada’s best interest to enter a lengthy legal process. The preferred approach is to pursue continued negotiations with the other basin states for flexibility.”<sup>36</sup> Brothers added, “that under current conditions, opening the Compact may result in a lower water allocation for Nevada.” Though Zelch felt that “the state couldn’t lose resources, since the allocations were unfair,” this was an untested theory. Since the time of the Compact negotiations, congress had enacted a number of environmental regulations, many of which had direct bearing on Colorado River management. It was entirely possible that if the courts reopened the allocation process, not only Nevada, but each state in the Colorado Basin would lose water as the federal government reallocated water to environmental preservation efforts.<sup>37</sup>

Pipeline opponents also pressed the SNWA to consider pursuing interstate transfers of Colorado River water. William Kogan, a resident of Lund, a small town in Lincoln County wrote to the SNWA stating, “the farmers in Imperial Valley, California have tried to sell to MWD and southern California a big surplus of water. They were turned down but were offered ten dollars per acre-foot to keep this offer open. Why can’t SNWA and MWD-Southern California work together to switch

sources and utilize this water supply, so SNWA can take what is going to California and store in dam system as MWD did?”<sup>38</sup> As it turned out, the SNWA already tried to do this in 1998. Mulroy and her staff attempted to establish a partnership with the MWD to share water between Nevada and California. Her actions, however, incited a potentially disastrous reaction from Arizona. Ever cautious about guarding its Colorado River allocation, the Governor of Arizona accused the SNWA and MWD of negotiating behind Arizona’s back and threatened to leave the multi-state negotiations occurring at that time. These were the negotiations that, among other things, helped lead to the Arizona Groundwater Banking Deal between Arizona and Nevada. It was paramount, therefore, that the SNWA avoid this type of unilateral deal-making in the future. Kogan failed to grasp the larger implications of his request, as well as the SNWA’s past efforts to establish just such an arrangement as he had proposed in his letter.

The prospect of ocean desalination came up on several occasions during the course of the IWPAC process. Residents of White Pine and Lincoln County asked the SNWA what its position was on ocean desalination, and why the Authority was not doing more to pursue this option. In a written statement to the advisory committee, Jim Schlinkman, resident of Baker stated, “The facilitator threw out desalinization option too soon. So what if it is more expensive? Higher costs are a better option than ruining the resources and lifeways in Spring and Snake Valleys. Use ocean water!”<sup>39</sup>

Ocean desalination has always been seen as a panacea for water short regions.<sup>40</sup> Ocean water could conceivably serve as an inexhaustible resource, if only the technology were available to make it so. Las Vegas water managers had long

entertained the idea that at some point, technology would indeed make ocean water a viable resource option for the desert metropolis. It remains an illusory goal, though its promise proves irresistible.<sup>41</sup> The SNWA's argument against desalination centered on the fact that the process was energy intensive, suitable sites for desalination were either in California or Mexico – both over 250 miles away – had significant environmental downsides, and was more expensive than any other option under consideration. Mulroy and others within the SNWA were not optimistic about the chances for desalination in California. Given the environmental regulations in place, the SNWA would face considerable challenges building a desalination plant on the California coast.<sup>42</sup> Mulroy also had concerns that desalination would actually do very little to alleviate southern Nevada's water shortage. In the event that the two states could even establish an agreement, California would use water from desalination, which would enable Nevada to take a greater amount of water from the Colorado River. However, as far as Mulroy was concerned this defeated the purpose of an agreement since the Colorado River was already under threat. Even if there were a desalination plant, Las Vegas would still rely upon the Colorado River for its water, and the Colorado was in a drought. Desalination would provide no guarantee that Lake Mead would remain full, which is why the agency placed less emphasis on developing the desalination option.<sup>43</sup>

Failure to recognize the need for an exchange agreement with California is common. But this is not the only example of ignorance. One individual wrote to the committee stating, "ocean water should be available to SNWA for desalination. Instead of building a facility in California, why couldn't you pipe salt water to Las Vegas and have the desalination facility where the water will be used?"<sup>44</sup> This

comment reveals a misunderstanding of the logistics of transporting water. To take water from the coast would entail pumping it to an elevation of approximately 2,000 feet, and over a distance of 250 miles, not to mention over or around the numerous and significant mountain ranges that lie between Las Vegas and Southern California. It becomes easier to understand the power requirements involved in transporting water when one considers that an acre-foot is over 300,000 gallons, and each gallon of water weighs nearly nine pounds. To help understand the magnitude of moving water from coastal California to Las Vegas, consider the Edmonston Pumping Plant in the San Joaquin Valley, which pumps water from the California Aqueduct 1,926 feet up and over the Tehachapi Mountains. This is a comparable elevation change to that between the Pacific Ocean and Las Vegas. The Edmonston pumps require over six billion kilowatts of electricity per year to accomplish the task.<sup>45</sup> By way of comparison, Hoover Dam generates four billion kilowatts per year.<sup>46</sup>

In 2004 various entities in California were paying anywhere from 800 to 2,000 dollars per acre-foot for desalinated water.<sup>47</sup> These costs compare favorably with the cost of the GWDP estimate; however, the quotes above were what coastal communities paid for desalination. This cost would likely compound to transport water to the Las Vegas metro-area.

A final point on desalination. There is a rather striking irony to GWDP opponents' argument that the SNWA should use desalinated water before it looks to White Pine and Lincoln Counties. One of the main arguments of pipeline opponents is that the GWDP would have a catastrophic effect on east-central Nevada's environment. This thinking, however, never seemed to enter into the equation when arguing the merits of ocean desalination. The desalination process creates greenhouse

gases, and increases the level of salinity in the ocean water surrounding the plant, often creating a biological dead zone. Viewpoints, such as Abby Johnson's, are striking in that they argue for the preservation of one area by sacrificing another.<sup>48</sup>

The issue of growth came up on numerous occasions throughout the course of the IWPAC meetings. The main criticism opponents leveled during the proceedings was that Las Vegas needed to control its growth and to live within its means. In a way, the SNWA's and ranchers' position on this matter were both reasonable. Ranchers were indeed threatened by Las Vegas's growth. Many of the small ranching communities in White Pine and Lincoln Counties have existed since the nineteenth century, preceding Las Vegas's urban development by a half-century or more. When cattle ranchers first moved into the high desert valleys of White Pine and Lincoln Counties, Las Vegas as a city did not exist, and was itself the cite of a handful of ranchers. Ranchers were merely trying to protect what they had considered their own water for many decades.

On the other hand, SNWA Deputy General Manager Kay Brothers pointed out that the agency was not technically granted authority over growth policy. This is perhaps somewhat disingenuous, given that at the root of the SNWA's groundwater project was a desire to protect the metro-area's ability to grow and develop economically. There is also the historic example in 1991 of when the LVVWD ceased granting "will-serve" letters to new construction because it was out of water. This was a rather blunt instrument in growth control policy, however, but it did prove that the SNWA did at least have one method of controlling Las Vegas's urban expansion. Brothers repeatedly argued that the advisory committee needed to decouple the concept of growth from its task of creating water policy, insisting "growth was

principally a land-use issue and that Clark County is not the sole land-use entity in the Las Vegas Valley.” She also pointed out that the “SNWA is not a land-use agency and therefore it was not appropriate for SNWA to take a land-use position.”<sup>49</sup> The stated mission of the SNWA was that it was merely present to facilitate urban development in southern Nevada into the foreseeable future.

Rancher Dean Baker, a vocal critic of the pipeline, explained that rural “residents see some irony in their circumstances.”<sup>50</sup> Baker argued that it was ironic that the SNWA should justify the GWDP as a way to protect the future of the southern Nevada economy, when the project would threaten the future of the rural economy. Ranchers like Baker wanted to be sure they had enough water to support their agricultural operations and residents of the town of Baker (named after an earlier ranching family with the same last name, no relation to Dean) wanted to retain enough water to support their small, but steady tourist economy, one supported by nearby Great Basin National Park. Baker told SNWA staff that the local improvement district in the town of Baker had already begun to experience difficulties providing certain basic services to residents.<sup>51</sup> These were all valid concerns. Many of the people living in rural east-central Nevada were longtime residents and had devoted several decades of their lives improving the land to raise cattle. However, long-term population and economic trends did not indicate that the rural economy would ever expand.

During the course of the twentieth century, Lincoln and White Pine county steadily lost residents, and economic development decreased after various mines in the region ceased operations. In Ely, the largest town in White Pine County, the Kennecott Mining Company fully closed its operations in 1983, an act that drove the

local unemployment rate to twenty five percent.<sup>52</sup> The decline of mining in the region was significant, since it was the only private industry capable of large-scale employment. Though ranching persisted in east-central Nevada since the nineteenth century, this was a marginal exercise at best. Nevada was, and is, one of the least productive agricultural states in the nation as a result of the harsh environment.<sup>53</sup> Indeed, Nevada out produces only six other states.<sup>54</sup> Most of the land in White Pine County, for instance, sits at an elevation of over 6,000 feet, and receives less than ten inches of precipitation per year. Ranchers there are able to produce hay and raise cattle, but their production pales when compared to similarly based economies in California, Nebraska, and Texas. Furthermore, the number of people employed in the agriculture sector in Nevada comprises less than five percent of the state's workforce.<sup>55</sup> It was therefore unlikely that the SNWA's pipeline would have a significant effect on east-central Nevada's future economic development. As a word of caution, however, despite east-central Nevada's lack of economic prospects, it was also true that no one foresaw the development of the Las Vegas metro-area back in the 1920s when lawmakers negotiated the state's Colorado River allocation.

Perhaps the most oft-repeated recommendation from GWDP opponents was that Las Vegas should simply conserve more water. This was an entirely logical suggestion, but it was also one born from the greatest degree of misunderstanding over southern Nevada's water resource situation. Critics pointed to the fact that Las Vegas used more water than citizens of any other desert city in the region. While southern Nevadans averaged 265 gallons per day in 2003, their counterparts in Tucson used less than half that amount.<sup>56</sup> This disparity, however, fails to account for one of the quirks of Colorado River water usage unique to southern Nevada. The

metro-area was entitled to 300,000 acre-feet of water per year, but was able to increase this total to nearly 500,000 acre-feet through return flow credits. No other significant population center in the Colorado River basin used, or was dependent upon, return flow credits. The problem, for the SNWA, was that the metro-area was reliant upon 500,000 acre-feet per year, not 300,000. The catch, in this case, was that the SNWA had to withdraw as much as it could in order to get enough return flow credits to maintain its annual supply. If the authority began conserving water, it would not be able to withdraw the additional return flow credits it needed. In fact, the more water southern Nevadans used indoors, the more the metro-area got out of the Colorado River.

This is not to say that the SNWA was unwilling to conserve. The Authority actually instituted a major policy initiative during the 1990s to drastically reduce the amount of outdoor water usage. The water that people used on their lawns did not flow back into the metro-area's water pipelines. It evaporated and was lost to the system. The SNWA could therefore not use water used outdoors for return flow credits. To remedy this, the SNWA instituted an incentive program in 1995 that paid customers to replace grass with desert tolerant plants.<sup>57</sup> Through this program the SNWA reduced urban water consumption by over nine billion gallons, or nearly 28,000 acre-feet, per year.<sup>58</sup> Given the SNWA's utter reliance on return flow credits, the agency did not require a corresponding decrease in indoor water consumption. From the SNWA's standpoint, this would only shrink the metro-area's water supply.

### **Image is Everything: The Rancher Mystique and the Specter of Owens Valley**

Western iconography and cultural perceptions of American ranchers is a major part of the GWDP narrative. Pre-conceived notions, and an internalized understanding



of western iconography is a significant factor in the GWDP political campaign. Ranchers have long held a place in western American mythology. In popular portrayals they have consistently represented the themes of rugged individualism and struggling against long odds. This mythic representation is, in fact, the way in which many Americans like to view themselves. Indeed, this imagery frequently emerged during many of President George W. Bush's speeches following the bombings of September 11, 2001, and during the subsequent wars in Afghanistan and Iraq. And soldiers serving in those theaters routinely presented their situation as one akin to the western cavalry facing down hordes of Indian attackers.<sup>59</sup>

Ranchers in east-central Nevada exploited the public's sentimental view of this iconography, and have used it to great effect.<sup>60</sup> In a series of articles by *Las Vegas Sun* reporter Emily Green, ranchers are portrayed as underdogs standing up to an abusive, unsympathetic aggressor in the form of Las Vegas. In doing so, pipeline opponents have evoked some of the same heroic iconography present in any number of western movies, television shows, or novels. Opponents contrast this view of the virtuous rancher with the iconic, Sin City image of Las Vegas. The public perception of Las Vegas is essentially that of a debauched Sodom and Gomorra rolled into a single unit, a place where vacationing adults can do whatever they want, because "what happens in Vegas, stays in Vegas."<sup>61</sup>

Rural opponents willingly seized upon the "Sin City" appellation, because the public's perception of Las Vegas so effectively contrasted against the supposedly more virtuous character of western ranchers. When NPR decided to interview rural residents in east-central Nevada as part of their coverage of the GWDP, rancher Cecil Garland took the opportunity to emphasize the differences between his community

and Las Vegas. During his interview he asserted “What Las Vegas has got to learn is that there are limits to its growth...Gluttony, glitter, girls, and gambling are what [Las Vegas] is all about...What it’s all about here [in rural Nevada] is children, cattle, country, and church...Would it be crops or craps that we use our water for?”<sup>62</sup>

Pipeline opponents then joined these two mythological views to a third: the Owens Valley, without question one of the most emotionally laden episodes in western American history. Given the high frequency with which GWDP opponents invoke the Owens Valley, it is necessary to first examine the history of the Owens Valley water transfer before progressing any further with the GWDP.

### **The Owens Valley Water Transfer**

The history of the Owens Valley water transfer, when used by GWDP opposition, is a historically distorted version of actual events and for this reason it is useful to examine the manner in which others have portrayed the Owens Valley history. Most historical, literary, and dramatic portrayals depict the event as that of an imperialistic Los Angeles bullying the virtuous farmers of the Owens Valley into selling their water and property to the city. These accounts typically assert Los Angeles conducted transactions in secret so as to sow suspicion among farmers in order to drive down water and land values. In nearly every one of these treatments, Los Angeles is portrayed as a faceless and malicious entity, and farmers as virtuous stewards of the land. Common to all of these works is the central theme that the Owens Valley water transfer was an un-mitigated disaster.<sup>63</sup>

By portraying the Owens Valley water transfer in this manner, many historians, authors, and screenwriters have presented historical events in black and white terms. These portrayals of Los Angeles depict the city as a monolithic and

malicious entity. Using this trope, writers are able to strip Los Angeles of its humanity. Rarely, if ever, did Owens Valley critics present Los Angeles as a collection of two million individuals, people who were churchgoers, students, family members, moms, and dads.

The omission of Los Angeles' human side is also problematic because an overwhelming majority of Angelenos supported the Los Angeles Department of Water and Power's (LADWP) efforts to procure more water from the Owens Valley.<sup>64</sup> Common people who were concerned about their southern California community gave their blessing to the infrastructural expansion that would ensure they and subsequent generations would possess water. Owens Valley critics have largely ignored the human side of Los Angeles, and in doing so, are complicit in a simplification process that ultimately distilled the entire history of the Owens Valley water transfer to the oft-used phrase "Remember the Owens Valley." Critics of the water transfer have used this battle cry since the 1920s and its use requires a simplistic, un-nuanced understanding of the event's history.

Beginning in the early 1990s, scholars started to reexamine this history. Historians including Steven Erie, Patricia Limerick, Carl Abbott, Norris Hundley, and Gary Libecap, among others, have questioned the conventional wisdom surrounding the Owens Valley and have offered new appraisals.<sup>65</sup> Two common aspects of older Owens Valley works is that the LADWP coerced farmers to sell their water and land, and that the transactions were conducted in secret. Erie dispels this version of events, pointing out that no land was ever taken either through the threat, or actual use, of eminent domain.<sup>66</sup> Additionally, transactions between farmers and LADWP officials were conducted in full view of the public and were financially beneficial to many

farmers. Indeed, the public nature of these transactions served to drive up land and water values, a development that enabled Owens Valley farmers to receive substantially greater sums for their property and water rights than their counterparts in other locations in the Great Basin.<sup>67</sup>

Gary Libecap echoes Erie's findings, explaining that many of the farmers who sold their water were glad to do so. The entire county was experiencing an agricultural depression during the first decades of the twentieth century, and farmers nationwide were leaving their farms for other opportunities. It was no different in the Owens Valley. Unlike in other parts of the nation, however, Owens Valley farmers had an eager buyer in the LADWP.

Later works take a more balanced approach and include analysis of the issue of tradeoffs. Most early Owens Valley treatments in many ways place the event into a historical vacuum. Absent are accounts of a resurgent Owens Valley economy, one based on recreational tourism, or the effect of Owens Valley water on Los Angeles and the city's larger importance to the nation as a whole. Roger Lotchin wrote in *The Bad City in the Good War*:

The impossibility of mounting a war effort in a desert like Los Angeles ... without a well-developed water supply is clear. Los Angeles [has] been perennially denounced for the manner in which [it] acquired [its] long-distant supplies of water, but without the public aqueducts of ... the Owens Valley ... the war simply could not have been fought out of [that] geographic [site].

In addition, both the Los Angeles and San Francisco aqueducts generated power in their fall from the mountains to the sea ... This windfall of plentiful, cheap power aided the arsenals of democracy, especially the aircraft industry.<sup>68</sup>

This is not to say that Los Angeles water officials had the clairvoyance to predict the rise of the Nazi Party and a militaristic, imperial Japan, but merely to point out that

other works of Owens Valley history present the event as a contest strictly between city and farmers, and fail to acknowledge larger historical context and subsequent developments.

Further utility can be gained by comparing Los Angeles during World War II to the Los Angeles portrayed in Owens Valley critiques. In numerous historical accounts of the era, the Los Angeles of World War II is shown to be the site of dozens of aircraft manufacturing plants, military training facilities, and a major port that served as a naval base and debarkation point for men and materiel.<sup>69</sup> These treatments present a city that played a pivotal role in contributing to the nation's survival during the Second World War. It is difficult to reconcile this version of Los Angeles with the rapacious monster that destroyed farmers' lives in many of the older Owens Valley histories. However, as historians such as Erie, Limerick, and Libecap point out, mythic understandings of the Owens Valley are culturally deeply entrenched.

The purpose of this analysis is neither to assert the Owens Valley water transfer did not have a social and environmental impact, nor to justify the LADWP's actions. Rather, the intention is to highlight some consequential aspects of the Owens Valley history and how they are absent from the "Remember the Owens Valley" distillation of events, and to point out that past assessments of the Owens Valley as an unmitigated disaster overstate the impact.

As shown above, the conception of the Owens Valley water transfer is based on a distorted view of history. However, opponents of the GWDP relied on the "Remember the Owens Valley" distillation of the event, and assume the larger public would not understand the nuances of the actual events. While use of the Owens

Valley myth has proven an effective political tool for GWDP opponents, it is a flawed comparison.

The attempt to present the Owens Valley and GWDP as analogous events assumes that the same environmental conditions exist in both locations. Indeed, the comparison requires it. One of the main themes in literature about the Owens Valley is how the Los Angeles Aqueduct dried up the Owens Lake, which led to severe dust storms. Critics of the GWDP argue that a similar situation would arise in east-central Nevada. They assert that if the SNWA gets its way, harmful dust storms will result affecting population centers as far away as Salt Lake City. There is a major problem with this comparison: there is no lake in east-central Nevada. In fact, there is virtually no surface water at all in the region.

To address this inconsistency opponents over-emphasized the role of phreatophytes. Phreatophytes are plants that rely on groundwater for survival, plants like greasewood. Opponents argue that the GWDP will draw down groundwater thus killing the region's phreatophytes. They then assert that without these phreatophytes, there will be no plant cover to hold the desert soil in place. While harm to phreatophytes is a distinct possibility, it is entirely likely that the cause of windborne dust can actually be laid at the feet of the ranchers themselves. Cows were a far greater threat to air quality in east-central Nevada than the SNWA's pipeline.

Dust storms were not as common in the west prior to the advent of cattle ranching. Though dry, in its natural state western soils were held together by various types of plants and algae-like organisms. Known as crypto-biotic soils, they can withstand significant wind speeds without dispersing any particulates.<sup>70</sup> Furthermore,

much of the region's soil evolved completely independent of ground water levels. In other words, these desert soils naturally form whether there was groundwater or not.

The range of crypto-biotic soils in the American West has been greatly reduced as a result of livestock grazing. Ranchers throughout the region have released hundreds of thousands of invasive ungulates to graze on western rangeland. As these animals foraged, their hooves destroyed the soils that held dust in place. It is now not uncommon to have severe dust storms, such as the one described in this 2008 Salt Lake City newspaper article:

The last stragglers in April's Salt Lake City Marathon were limping to the finish line when the air-warning alarm went off. State air-quality officials issued a health-advisory urging residents on the Wasatch Front not to exercise outside. The Skyline vanished. Utah's Department of Environmental Quality declared a 'red' air day for Salt Lake, Weber and Davis counties. It was the second such warning in a week ... the dust has literally brought close to home what is at stake in a fight between Las Vegas and west desert Utah ranchers over water.<sup>71</sup>

Note, the article describes a "severe" dust storm before *any* component of the GWDP had been built.

Scientific evidence supports the causal relationship between livestock grazing and dust storms; however, GWDP opponents counter that dust storms are actually caused by the elimination of phreatophytes.<sup>72</sup> These plants, they argue, rely on groundwater, and it is their deep root systems that hold desert soil in place. *Las Vegas Sun* reporter Emily Green, an opponent of the GWDP, asserted that "Phreatophytes prevent dust storms ... Without a high water table saturating the valley floor and the long roots of phreatophytes anchoring the soil, Spring Valley could become the kind of dust bowl created by Los Angeles after William Mulholland began pumping Owens Lake in 1913."<sup>73</sup> Other regional papers have echoed this argument, thus giving

outlet to what became GWDP opponent's signature assertion: the destruction of phreatophytes will cause dust storms that will blanket the Salt Lake metro-area.

Pipeline opponents' use of the phreatophyte theme to evoke images of a dustbowl has been politically effective. It taps into the extant myth of Owens Valley dust storms and has produced a significant level of public pressure in Utah to compel political leaders to oppose the GWDP. But while phreatophyte destruction may be effective politically, the science behind the claim is lacking. In fact, the science lacks on three counts. As indicated above, significant evidence shows that dust storms are caused by soil surface disturbance. Secondly, it is unclear what effect pumping, if any, will have on the phreatophytes. According to Dr. Dale Devitt, professor of geosciences at the University of Nevada, Las Vegas, while phreatophytes do in fact use groundwater, it is not their sole source of sustenance. He points out that during times of stress phreatophytes will use shallow roots to access near surface water, as well as absorbing atmospheric moisture. He is reluctant to say with certainty that the drawdown of the aquifer would kill off the phreatophytes in the GWDP region.<sup>74</sup>

Thirdly, and perhaps most significantly, the dominant plant species in the valleys in which the GWDP is planned are giant sagebrush and cheatgrass. These two species do not rely upon groundwater and would be unaffected by a drawdown. It is on this point that the opposition's argument fully breaks down. Opponents argue that plants are needed to prevent dust storms. This argument then holds the dominant plants are phreatophytes and that if they are killed through lack of groundwater, then dust storms will arise. According to Devitt, even if the phreatophytes die, sagebrush and cheat grass will colonize the areas.<sup>75</sup> In other words, the valleys of east-central Nevada will likely not lack for plant cover should the GWDP go forward.<sup>76</sup>



In 2005 the IWPAC concluded its meetings and issued its official recommendations. Chief among these were to “Pursue development of all the resource options considered in the IWPAC planning scenarios.” This was essentially the advisory committee telling the SNWA that it needed to pursue in-state groundwater henceforth as part of its water resource policy. The advisory committee also recommended that the SNWA continue to work with the other Basin states to establish an agreement for Nevada to use in-state groundwater for return flow credits, and to be able to wheel the Authority’s Virgin River water rights through Lake Mead. The advisory committee’s recommendations served as tacit approval of the SNWA’s Groundwater Development Project.

The citizen committee’s recommendation provided the SNWA with some much-needed political cover, given the controversy the GWDP had thus far elicited. It was, after all, not simply the SNWA recommending the use of groundwater, but a broad cross section of concerned citizens as well. With the advisory committee’s recommendations in hand, the SNWA moved forward on two immediate goals: shortly after the conclusion of the IWPAC meetings the SNWA filed for rights of way over federal land with the Bureau of Land Management and began negotiating with Utah for the groundwater of Snake Valley.<sup>77</sup>

### **Powell’s Prescience: Political Geography vs. Physical Geography**

In the 1890s, long after his exploits rafting through the Grand Canyon, noted western explorer John Wesley Powell wrote a series of articles outlining his vision for the political future of the western United States. In the West water simply was not widely dispersed – it rained infrequently, and water concentrated in rivers and lakes. Consequently, western residents were more reliant upon these scarce water sources,

and were concentrated more densely, than their counterparts in the more humid regions of the eastern United States. Because of this condition, Powell understood there was increased potential for conflict over these rare western water sources. He therefore argued that political boundaries should adhere to physical geography and be established according to natural drainage. This way, political entities would not have the legal standing to compete with one another over water sources. Alas, Congress and western politicians ignored Powell's counsel, as the long and contentious political history of the Colorado River shows.<sup>78</sup>

The latest conflict to arise as a result of rational political boundaries (i.e., straight line political divisions that do not adhere to physical geography) is that which began in the early 2000s between Utah and Nevada over the groundwater of the Snake Valley. While the conflict is over groundwater, it is ultimately linked to the Colorado River. The Snake Valley – the sixth valley in the IWPAAC's "Six-Basin approach" – is an interstate valley, part of which lies in both Nevada and Utah. Both states have begun to contest the groundwater of the Snake Valley, evoking Powell's warning against rational political boundaries.

While Utah's elected officials has been interested in the SNWA's plans ever since 1989, it was not until 2004 that they began to take formal steps to protect their state's interests in the Snake Valley. The first significant example occurred that year when congress passed the Lincoln County Conservation, Recreation, and Development Act. The Lands Act was an omnibus bill that set aside acreage in Nevada for wilderness protection and transferred some acreage from the federal government to local government. The bill also included a provision that set aside federal land for rights of way for the SNWA pipeline. Senator William Bennett (R)

Utah, recognized that the bill would increase the likelihood of groundwater pumping in the Snake Valley. He therefore inserted a clause into the bill that required a bi-state agreement between Utah and Nevada prior to construction of the GWDP into the Snake Valley.<sup>79</sup>

Mulroy was not pleased with Bennett's position and expressed her displeasure in an interview with the *Salt Lake Tribune*.<sup>80</sup> Mulroy declared that the clause Bennett inserted into the bill "effectively equated to a veto" of the GWDP.<sup>81</sup> Mulroy rhetorically asked, "Would Utah . . . allow Nevada to veto a water project being developed in Utah?"<sup>82</sup> In what some critics have interpreted as a veiled threat, Mulroy continued, "Utah is in a precarious position. When one state tries to stop [internal] development of another state's water supply, things can get dicey."<sup>83</sup> Nonetheless, the Lincoln County legislation did serve as an impetus for representatives of the SNWA and Utah to enter negotiations over dividing the Snake Valley's groundwater. After several years of negotiations, in 2009 the SNWA and Utah's representatives, including Utah Governor Gary Herbert, agreed to equally split the 132,000 acre feet of groundwater beneath the Snake Valley.<sup>84</sup>

News that Governor Herbert was prepared to support the agreement with the SNWA set off a wave of protests in Utah and east-central Nevada. The *Salt Lake Tribune* began running editorials and opinion pieces lambasting the agreement, and ranchers in Snake Valley renewed their attacks against the Las Vegas "water grab."<sup>85</sup> Susan Lynn, spokesperson for the anti-pipeline lobbying group Great Basin Water Network condemned the deal stating that that the estimates were incorrect and that there was not enough to water for each state to withdraw 66,000 acre-feet per year.<sup>86</sup> Objections such as these became so fierce that in 2013, after years of federally

mandated negotiations, Herbert reversed his stance and rejected the agreement. Herbert's decision won him immediate praise from GWDP opponents, but it is unclear what effect his actions may have in the long term.

Some legal experts predicted the two states will eventually re-enter negotiations, but the next time around Utah might possess the stronger legal position and be able to increase its Snake Valley entitlement.<sup>87</sup> Evidence supporting this came in 2012 when Steve Erikson of the Great Basin Water Network revealed that the SNWA had sent threatening emails to the Utah negotiating team to pressure them into signing the interstate agreement. These emails suggest that both the SNWA's and Utah's negotiators may have recognized a disparity in the agreement to split Snake Valley's groundwater equally. Utah's contention was that the majority of the water and residents lay on its side of the border, and that it should therefore receive at least sixty percent of the groundwater. The SNWA countered, stating that mountain ranges in Nevada produced nearly 100 percent of Snake Valley's groundwater. If history is any guide, however, Utah does indeed possess the stronger claim. Utah employed a "historical use" argument, which almost always trumped the "basin of origin" argument the SNWA used.<sup>88</sup> Ironically, the SNWA itself argued against the "basin of origin" position for the five valleys entirely within Nevada. Ranchers in these Nevada valleys argued water should not be taken out of the basin of origin, which the SNWA refuted. Nevertheless, perhaps sensing that Utah possessed the stronger legal argument, the SNWA attempted to bluff their way into a larger Snake Valley groundwater entitlement.<sup>89</sup>

At the time of writing, legal theorists are still speculating over what Governor Herbert's actions mean for the future of the GWDP.<sup>90</sup> Ultimately, however, Herbert's

actions do not change the fact that the Las Vegas metro-area occupies a subservient political position within the Colorado River Basin. The GWDP represents a conundrum for the Water Authority. The Authority first turned to east-central Nevada groundwater because it was unable to obtain a greater share of the Colorado River, in part, because of opposition from Utah. After working for over two decades to obtain in-state water, Utah once again began to resist the Authority's efforts to obtain water for the Las Vegas metro-area. Ultimately, if the SNWA is unable to obtain east-central Nevada groundwater it must necessarily turn back to the Colorado River. And if it has to do so, then its disproportionately small Colorado River allocation will once again come to the fore, thus shattering any illusion that the Law of the River is a malleable system of laws.

In the spring of 2012, Nevada State Engineer John King issued his highly anticipated ruling on the SNWA's groundwater applications for east-central Nevada. King declared that the SNWA was entitled to 83,988 acre-feet of water from Lincoln and White Pine Counties. He did not, however, grant the SNWA any rights to water in the Snake Valley, since political negotiations between the SNWA and Utah were ongoing. Though the amount was less than the SNWA had originally applied for, Authority staff voiced satisfaction with the ruling, given the struggle involved. King reaffirmed many of the points that the SNWA had made during its testimony. He acknowledged that southern Nevada is "almost entirely dependent on the Colorado to meet its water needs" and that "the Colorado River is [already] over-appropriated," a reality that necessitated an independent water supply. King also demonstrated an awareness of the regional political complexities the SNWA had to deal with stating:

Colorado River issues are necessarily involved in almost every water-management decision made by the Applicant [the SNWA]. The severity of the current drought has taught the basin states and southern Nevada that the Colorado River is a highly dynamic system with the potential for enormous fluctuations in the amount of water available. In light of that fact, southern Nevada's almost total reliance on the Colorado River has injected a high degree of uncertainty into southern Nevada's water-resource portfolio.

The State Engineer finds southern Nevada needs a water resource that is independent of the Colorado River and that it would not be advisable for the Applicant to continue to rely upon the Colorado River for ninety percent of southern Nevada's water when that source is over-appropriated, highly susceptible to drought and shortage, and almost certain to provide significantly less water to southern Nevada in the future.<sup>91</sup>

While Mulroy was no doubt thrilled, the Authority provided a measured, though satisfied, response. According to SNWA spokesperson Scott Huntley, King's ruling was both "reasonable and conservative" and that it was "driven by science and law and we're pleased with that."<sup>92</sup> SNWA Deputy General Manager John Entsminger added to this air of satisfaction saying, "While the Nevada State Engineer's ruling did not grant the SNWA the full amount requested through our applications, it did increase the amount we received by approximately 5,000 acre-feet, which is not insubstantial."<sup>93</sup>

GWDP opponents were less restrained in their reactions to King's ruling. Rob Mrowka, an ecologist with the Tucson based Center for Biological Diversity stated, "The winner in today's ruling is mindless Las Vegas growth, while biodiversity, rural residents and future generations are the clear losers."<sup>94</sup> Susan Lynn of the Great Basin Water Network challenged the science upon which King based his conclusion asserting, "We believe that the State Engineer has ignored or dismissed compelling hydrological evidence that we and other protestants submitted – evidence that clearly showed that there is no unappropriated water available in Cave, Dry Lake and

Delamar Valleys. Pumping the granted water rights from Spring Valley would be unsustainable, environmentally destructive and illegal groundwater mining. We will consider our options carefully but this ruling will not go without challenge.”<sup>95</sup> Anne Brauer of Indian Springs, northwest of Las Vegas, noted the social, environmental, and capital cost of the GWDP: “It is especially heart-breaking that we learned of this decision on World Water Day, a day that is supposed to be about human needs and the environment. Instead, this decision, if it stands, gives a green light to SNWA to defoliate the Great Basin, destroy Native American communities, dismantle conservation programs, plant water-hungry turf, encourage unneeded development and stick the ratepayers of Clark County with a fifteen billion dollar bill.”<sup>96</sup> Launce Rake, a former *Las Vegas Sun* reporter and longtime opponent of the GWDP noted that the state engineer issued his ruling largely using language the SNWA itself had written.<sup>97</sup> This did not surprise Rake, who had argued that local and state government had long ago allied themselves with the SNWA.<sup>98</sup>

Five months after the State Engineer ruled, the Bureau of Land Management (BLM) completed its final environmental impact statement for the GWDP. In its report, the BLM stated that the GWDP would not have an adverse affect on the region, and that the SNWA could move forward with its project, save for the Snake Valley component. Given that the political situation between the SNWA and Utah had not yet been resolved, the BLM was reluctant to provide a ruling on the Snake Valley component of the GWDP. Despite only covering five of the six basins the SNWA wanted, news of the BLM’s approval seemed to take on the air that one of the last pieces of the GWDP puzzle had fallen into place. Mulroy voiced pleasure at the thought of having federal backing for her project. Speaking to the *Las Vegas Review-*

*Journal*, she couched her satisfaction with the BLM's decision in the context of Las Vegas's dwindling Colorado River supply: "The project is now sitting out there as a safety net if the (Colorado) river really goes south. We now have the necessary water resources and the rights of way to protect southern Nevada."<sup>99</sup> The SNWA once again took a reserved tone with respect to the BLM's decision. Although Mulroy would like the BLM to have included the Snake Valley in its decision, she stated that since the science and political negotiations over the Snake Valley had not yet been resolved, it was understandable that the BLM was unable to include it in its report.<sup>100</sup>

The GWDP continues to be largely conceptual. Aside from rights of way and various underground monitoring facilities, the GWDP remains unbuilt. It is unclear when construction will begin, but it is likely that the SNWA is waiting for a final agreement with Utah. In April of 2013, Governor Herbert walked away from a deal between the SNWA and Utah.<sup>101</sup> While a popular decision among his constituents, it is not likely that the negotiating parties will remain estranged for too long. The SNWA represents an increasingly prominent population center, and Nevada's senator Harry Reid also happened to be one of the most influential members of congress. In short, there is a tremendous amount of pressure on the SNWA and Utah to return to the negotiating table.

While negotiations are likely to resume, it is unclear what the future of the GWDP is, or, for that matter, the Colorado River Basin as a whole. For at its root, the GWDP is a manifestation of the inequitable nature of water distribution among the states that share the Colorado River. Looking at the GWDP and the contest between the SNWA and Utah from a broader regional perspective, one sees a fight over the region's last, and least attractive water source. The water contained within east-central



Nevada's aquifers is a pittance compared to the amount of water available regionally. The passion with which the SNWA pursues east-central Nevada groundwater and opponents defend it is testament to how desperate the situation is in Nevada. There is no water available to the SNWA through the Colorado River, so it must turn to a highly problematic, in-state water resource. And while the other Basin States argue that they too are experiencing water shortages, none of them are dealing with the combined effects of a legally and environmentally created shortage.

Utah's opposition illustrates the SNWA's conundrum. The SNWA had been unsuccessful in obtaining long-term increases of water from the Colorado River, so the agency turned north to the groundwater basins of east-central Nevada. After it did so, however, one of the states that prevented it from getting additional water from the Colorado River began to oppose the GWDP. The question, not only for the SNWA, but the Colorado River Basin as a whole is: If the Las Vegas metropolitan area cannot get water from the Colorado, nor from in-state water resources, what options are left for Las Vegas?

### **It's the Colorado River, Stupid.**

Most observers argue that the GWDP campaign began in 1989 when the Las Vegas Valley Water District applied for groundwater rights in east-central Nevada. It could more accurately be said to have begun on November 5, 1993. That day, representatives of California, Arizona, and Colorado stated unequivocally that they would oppose any effort by the SNWA to obtain an increase in Nevada's Colorado River allocation. From that point forward, SNWA officials knew pursuing a change in allocation levels was futile, and instead directed their attention to in-state groundwater resources.

As events have shown, the GWDP is intimately tied to Colorado River politics. According to SNWA officials, shortages on the Colorado River would prompt the initiation of GWDP construction. These shortages are not simply environmental in nature. In 2007, the Lower Basin States established a Colorado River shortage sharing agreement, in which Arizona and Nevada would be required to forgo a portion of their annual Colorado River allocation.<sup>102</sup> Given the severity of conditions, Nevada could be expected to give up anywhere from 13,000 to 20,000 acre-feet of its allotment. According to Mulroy:

The agreement we signed with the (Interior) secretary in 2007 along with the other Lower Basin states, at elevation 1,075 the secretary declares the first shortage and Nevada gets cut back. At elevation 1,050 he declares the second shortage, and we get cut back more. At elevation 1,025 he declares the third shortage, and we get cut back even further. Well, at 1,025 in Lake Mead you have less water than what the annual demand is. If we get to an elevation less than 1,000 we have less than 500,000 acre-feet left in Lake Mead.

The possibility of that happening puts this community in a horrible position of risk. You cannot conserve ninety percent of your water supply, it is physically impossible. You won't have enough fire pressure in the hydrants to put out a fire. For that reason, to protect the community, we started developing the in-state project, because you have to bring water in from a place that is geologically separate from the Colorado River. You can't depend on the river anymore.<sup>103</sup>

The GWDP and the politics surrounding the campaign together serve as an effective illustration of the inequity built into the Law of the River. The GWDP is the end result of a major metropolitan area being held to a set of laws largely created during the early twentieth century, at a time when the economic, political, and demographic conditions in the Colorado River Basin were radically different. The small allocation set aside for Nevada and the resistance to allocation redistribution not only reflects the inequity among the Basin states, but has also contributed to intra-

state conflict within Nevada. Ranchers in east-central Nevada now face the prospect of losing much of the water to which they have grown accustomed, and are understandably opposed to the SNWA pipeline. It is unlikely that their livelihoods will remain unaffected. This is perhaps the biggest lesson of the GWDP – that henceforth, in this era of limits in which water is clearly a finite resource – there will be winners and losers. The reality of this new era is that groups with greater political power will likely come away with the region’s water. In this case, the other Colorado River Basin states have historically retained greater political power than Nevada, resulting in larger Colorado River allocations. Now, Las Vegas, by virtue of its larger population, has greater political power than rural east-central Nevada, and will likely gain access to a major portion of that region’s groundwater. Unless states agree to radically reassess where water goes within the Colorado River Basin, it is likely that regional contests such as that between Las Vegas and rural east-central Nevada will increase in number and intensity.

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## NOTES

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<sup>2</sup> Matt Jenkins, “Squeezing Water from a Stone,” *High Country News*, September 19, 2005, <http://www.hcn.org/issues/306/15778>.

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<sup>11</sup> Ibid.

<sup>12</sup> United States Bureau of Reclamation, "Boulder Canyon Project Agreement Requesting Apportionment of California's Share of the Waters of the Colorado River Among the Applicants in the State" (Department of the Interior, April 18, 1931), <http://www.usbr.gov/lc/region/pao/pdfiles/ca7pty.pdf>.

<sup>13</sup> "California's Water Binge Skids to a Halt," accessed June 10, 2014, <http://www.hcn.org/issues/242/13660>.

<sup>14</sup> John Ritter, interview by Author, September 25, 2013, Author's Collection; to Author, "John Ritter," September 26, 2012.

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<sup>72</sup> C. Hoffmann et al., "Effects of Grazing and Topography on Dust Flux and Deposition in the Xilingele Grassland, Inner Mongolia," *Journal of Arid Environments* 72, no. 5 (May 2008): 792–807, doi:10.1016/j.jaridenv.2007.09.004; Belnap and Gillette, "Vulnerability of Desert Biological Soil Crusts to Wind Erosion"; Dale Devitt, "Phreatophyte Succession," March 20, 2012.

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<sup>74</sup> D. A. Devitt et al., "Evapotranspiration of Mixed Shrub Communities in Phreatophytic Zones of the Great Basin Region of Nevada (USA)," *Ecohydrology* 4, no. 6 (November 1, 2011): 807–22, doi:10.1002/eco.169.

<sup>75</sup> Ibid.

<sup>76</sup> Southern Nevada Water Authority, "Potential Effects of Change in Depth to Water on Vegetation in Spring Valley, Nevada" (Carson City, NV, June 17, 2011).

<sup>77</sup> "Groundwater Development Projects," February 25, 2014, [http://www.blm.gov/nv/st/en/prog/planning/groundwater\\_projects.html](http://www.blm.gov/nv/st/en/prog/planning/groundwater_projects.html).

<sup>78</sup> Worster, *Rivers of Empire*, 138–139.

<sup>79</sup> This only affected the Snake Valley portion of the GWDP. The other five basins were contained entirely within the state of Nevada and were therefore the purview of the state engineer.

<sup>80</sup> Green and Sun, "Not This Water."

<sup>81</sup> Joe Baird, "Nevada Official Says Water Deal Will Help Utah," *Salt Lake Tribune*, July 14, 2006, Salt Lake Tribune, <http://archive.sltrib.com/printfriendly.php?id=4049627&ity>.

<sup>82</sup> Ibid.

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- <sup>86</sup> Cy Ryan and Stephanie Tavares, "Utah, Nevada Draft Water Agreement," *Las Vegas Sun*, August 13, 2009, <http://www.lasvegassun.com/news/2009/aug/13/utah-nevada-draft-agreement-on-snake-valley-water/>.
- <sup>87</sup> Robert Gehrke, "Utah's Rejection of Water Deal Leaves Nevada with Few Good Options," *Salt Lake Tribune*, April 5, 2013, Salt Lake Tribune, <http://www.sltrib.com/sltrib/politics/56108808-90/nevada-utah-agreement-snake.html.csp>.
- <sup>88</sup> David H. Getches, *Water Law in a Nutshell*, 4 edition (St. Paul, MN: West, 2008), 5. 5; The whole reason for the Colorado River Compact was because states recognized the supremacy of historical use, i.e., prior appropriation.
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- <sup>90</sup> Robert Gehrke, "Utah's Rejection of Water Deal Leaves Nevada with Few Good Options."
- <sup>91</sup> Jason King, "Spring Valley Ruling 6164" (Nevada State Division of Water Resources, March 22, 2012), [http://www.snwa.com/assets/pdf/ws\\_gdp\\_spring\\_ruling\\_2012.pdf](http://www.snwa.com/assets/pdf/ws_gdp_spring_ruling_2012.pdf).
- <sup>92</sup> Cy Ryan, "Water Authority Gets OK to Pump Rural Water to Las Vegas," *Las Vegas Sun*, March 22, 2012, Las Vegas Sun, <http://www.lasvegassun.com/news/2012/mar/22/water-authority-gets-ok-pump-rural-water-las-vegas/>.
- <sup>93</sup> Southern Nevada Water Authority, "Nevada State Engineer Grants Water Rights to Southern Nevada," *Southern Nevada Water Authority*, March 22, 2012, [http://www.snwa.com/about/news\\_groundwater\\_project.html](http://www.snwa.com/about/news_groundwater_project.html).
- <sup>94</sup> Henry Brean, "Ruling Opens Rural Tap," *Las Vegas Review - Journal*, March 23, 2012, sec. News, <http://search.proquest.com.ezproxy.library.unlv.edu/docview/940826388>.
- <sup>95</sup> Lukas Eggen, "Ruling Could Allow Pumping of SNWA Pipeline Project," *Ely Times*, March 23, 2012, Ely Times, [http://www.elynews.com/news/article\\_f5a27f4c-74f8-11e1...](http://www.elynews.com/news/article_f5a27f4c-74f8-11e1...)
- <sup>96</sup> Ibid.
- <sup>97</sup> Launce Rake, "Spring Valley Ruling," April 5, 2012.
- <sup>98</sup> Ironically, each of these opponents lives in either an urban or exurban location in Nevada, Mrowka in Las Vegas, Lynn in Reno, and Brauer in the bedroom community of Indian Springs. This provides some picture to the breadth of opposition.
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- <sup>100</sup> Ibid.
- <sup>101</sup> Christopher Smart, Judy Fahys, and Brian Maffly, "Herbert Rejects Snake Valley Water Pact with Nevada."
- <sup>102</sup> Dirk Kempthorne, "Record of Decision: Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake

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Mead” (United States Department of the Interior, December 2007),  
<http://www.usbr.gov/lc/region/programs/strategies/RecordofDecision.pdf>.  
<sup>103</sup> Stephanie Tavares, “Pat Mulroy,” *Las Vegas Sun*, May 1, 2009,  
<http://www.lasvegassun.com/news/2009/may/01/pat-mulroy/>.

## CHAPTER 7 | PROSPECTS: IT IS TIME FOR A NEW LAW OF THE RIVER

Local water managers created the SNWA specifically to address the challenges presented by the Law of the River. The administrative composition of the SNWA has served it well during its two-decade history. The combination of local, county, and state level authority helped the SNWA increase efficiency locally and procure additional water resources regionally. There is the new challenge, however, of global climate change. Scientists predict it will affect precipitation levels in the Colorado River Basin especially. According to a 2008 Scripps Oceanographic Report, there is a fifty percent chance that Lake Mead could reach dead pool (the point at which power generation ceases) by 2021.<sup>1</sup> These conclusions were not restricted to small scientific circles either. In August 2013, anticipating decreased levels of snowfall in the Rocky Mountains, the Secretary of Interior issued, for the first time ever, a shortage declaration for the Colorado River. This meant that Arizona and Nevada would be forced to curtail their use below their normal Colorado River allocations.<sup>2</sup> Federal policies are beginning to reflect the reality that the Colorado River Basin is facing the worst drought since record keeping began over a century ago. Some estimates suggest it is the worst drought in the past eight centuries.<sup>3</sup>

At the beginning of the twenty-first century, approximately twenty-five million people depended on the Colorado River, taxing both the legal and physical infrastructure in place to manage hundreds of competing interests. Las Vegas figures prominently in media accounts covering environmental challenges in the Colorado River Basin. Quite often, visual accounts depict the fountains in front of the Bellagio Casino Resort, a practice that implies Las Vegas will be the first to feel the effects of the impending water shortage.<sup>4</sup> While this may be true, it also perpetuates a simplistic

presentation of the social and economic composition of the Colorado River Basin. Accounts that point to Las Vegas as the bellwether of effects of climate change fail to account for the role of the Law of the River in the Colorado River Basin or the entities that use the greatest amount of Colorado River water. There is no doubt that climate change presents a major challenge to the states sharing the Colorado River. However, when considering these challenges one must first understand where the vast majority of Colorado River water is used. Approximately eighty-five percent of the Colorado's water presently goes to agriculture. And much of this amount is used to irrigate alfalfa, a crop not for human consumption, but for livestock. According to the Pacific Institute, "ninety [percent] of pasture and cropland in the 256,000-mile Colorado River Basin requires irrigation, with about sixty [percent] of the irrigated acreage devoted to pasture, alfalfa, and other forage crops used to feed cattle and horses. These forage crops consume about five million acre-feet per year, equivalent to a third of the river's annual flow."<sup>5</sup> Both livestock and its feed are produced more efficiently outside the Colorado River Basin in places such as Nebraska and Texas.<sup>6</sup> Cities in the Basin States split the remaining fifteen percent of the river. Of the nation's fifty largest cities, ten rely on the Colorado River for all or part of their water supply. These cities alone combine for a total urban population of over ten million people, a total that does not include the hundreds of small to medium sized suburban enclaves surrounding the previously mentioned larger cities.

Urban areas form the basis for the region's economy, and dwarf agriculture's economic contribution. In 2011, the Imperial Valley, the most valuable agricultural area to use Colorado River water, generated just under two billion dollars in agricultural output.<sup>7</sup> During the same period, the Los Angeles-Long Beach-Santa Ana

standard metropolitan statistical area generated nearly 750 billion dollars.<sup>8</sup> In fairness, Los Angeles does have a number of water sources it utilizes in addition to the Colorado River: the Owens River, the Central California Aqueduct, and the Los Angeles River. However, Las Vegas, like the Imperial Valley, uses only Colorado River water, and the southern Nevada metropolis generated over ninety billion dollars during the same period.<sup>9</sup>

Furthermore, western American agriculture receives government subsidized water. As James Powell points out, “Imperial Valley farmers recently paid less than fifteen dollars per acre-foot, one twentieth the price of water in nearby San Diego.”<sup>10</sup> It should be noted, both Imperial Valley and San Diego rely on Colorado River water. Essentially, urban taxpayers are subsidizing water for farmers to grow crops that are either unneeded, or could be grown more efficiently outside the Colorado River Basin. And while some supporters argue that these farms are growing the crops that feed the cities of the basin, this is in fact not true, as significant portions of the Colorado River Basin’s agricultural production is exported out of the region.<sup>11</sup>

This has been the situation facing the Colorado River Basin for many decades. However, in the twenty-first century, draught and climate change became a part of the geo-political context, which before had only included economic and demographic factors. As the drought continues, the economic and demographic composition of the Colorado River Basin will become increasingly apparent. The contrast between places that generate money and places that do not, and places that use Colorado River water, and places that use less will become increasingly stark. As the relief between these two areas increases, political pressure to change this arrangement will mount. Given the increasing number of voters in urban areas, lawmakers will inevitably be forced to

shift water to the highest and best use—which means to cities—as drought reduces the region’s water supply. Given that eighty-five percent of the Colorado River goes to the region’s agricultural sector, there is a significant buffer against catastrophe. Likely, there will be a difficult political process in which state governments appropriate agricultural water rights (with proper compensation for farmers, in the same fashion as imminent domain seizures) and then redistribute the water to the region’s urban areas. It is therefore unlikely that Las Vegas will experience the negative effects of the drought to the extent some prognosticators assert.

As the process of water redistribution in the Colorado River Basin progresses, the lessons of the SNWA can serve as a guide. The Las Vegas metro-area’s water agencies worked at cross-purposes for several decades. However, as a result of environmental and legal pressure, they relinquished a significant amount of their autonomy and joined the SNWA. While there are a substantially greater number of political interests in the Colorado River Basin, the SNWA example can serve as a starting point. If nothing else, the SNWA example demonstrates that conflict is not the only option when negotiating for water.

It would be ironic if the Las Vegas metro-area were able to export the SNWA model to its regional neighbors if it were not also accompanied by a change to the Law of the River. If, in the coming decades, neighboring states and internal political entities proceeded with a plan of agricultural to urban water rights transfers, this would mark the most significant political development in the history of the Colorado River Basin. However, in order to be of benefit to southern Nevada, the Law of the River itself will need serious revision, for as long as it prevents the interstate transfer of water, it will not matter that other states shift agricultural water to their cities. This

may help Denver and Salt Lake City, but it will do nothing for the Las Vegas metro-area. Unlike the other states, which have multiple users of Colorado River water, the SNWA possesses rights to the entirety of Nevada's allocation. As a result, there is no agricultural water within Nevada to transfer to the metro-area.

As part of the regional water rights shakeup, it would be reasonable then to propose the creation of a Colorado River Basin Water Authority, comprised of member agencies. Again, the SNWA model serves as a guide. One of the main reasons for the SNWA's success was that under the Authority's cooperative agreement, smaller agencies had the same political standing as the larger ones. This simple facet created a shared destiny for the water agencies of the Las Vegas metro-area. They were all in their struggle together. It is time for the SNWA model to expand to the scale of the Colorado River basin. Climate change threatens every state in the Basin. Each state, like each one of the Las Vegas metro-area's water agencies in 1989, faces a water shortage crisis. It is reasonable to suggest that the seven Basin states begin "thinking like a river basin" and accept their shared destiny and create an administrative agency that can manage the Colorado River as a single unit.<sup>12</sup>

It is necessary, then, to throw out the Law of the River as it is now written. Thus far, the various agreements among states have been a series of half measures. None of them fundamentally alter the structure of the Law of the River. Even with the 2007 sharing agreements in place, agriculture retains a favored position within the Colorado River Basin, courtesy of the Law of the River. A new Law of the River is needed if the urban centers of the Colorado River Basin states are to survive. These cities have proven to be the economic powerhouses of the Colorado River Basin, a status they will need to maintain if the regional prosperity is to continue. Agriculture,

on the other hand, has been in decline for decades. It is now time to accept this reality and adopt a legal regime to suit. This trend is well underway, in no small part because of the efforts of the SNWA.

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## NOTES

<sup>1</sup> Phoebe Sweet, "Lake's ghost town seen as a warning," *Las Vegas Sun*, 12 March 2008; James L. Powell, *Dead Pool: Lake Powell, Global Warming, and the Future of Water in the West* (Berkeley: University of California Press, 2008), 183.

<sup>2</sup> The Associated Press, "Feds begin Colorado River water drought measures," *Las Vegas Sun*, 12 August 2013.

<sup>3</sup> Matt Jenkins, "What's worse than the worst-case scenario? Real life," *High Country News*, 21 March 2005; Debuys, *The Great Aridness*, 88.

<sup>4</sup> Alisa Barber, "Struggling over water: A series overview," *National Public Radio*, 11 June 2007, available from <http://www.npr.org/templates/story/story.php?storyId=10893762>, Internet, accessed 21 August 2013.

<sup>5</sup> Pacific Institute, "Water to Supply the Land: Irrigated Agriculture in the Colorado River Basin," 9 May 2013, Internet, available from [http://www.pacinst.org/reports/co\\_river\\_ag\\_2013/](http://www.pacinst.org/reports/co_river_ag_2013/), accessed 18 August 2013.

<sup>6</sup> James L. Powell, *Dead Pool: Lake Powell, Global Warming, and the Future of Water in the West* (Berkeley: University of California Press, 2008), 242-243; Powell draws a similar conclusion in his book. He calls into question the immutability of the Law of the River and argues that it was a politically created set of laws, and that it can, and must, be undone politically.

<sup>7</sup> California Agricultural Statistics Review, 2012-2013, Internet, available from [www.cdfa.ca.gov/statistics/pdfs/2013/FinalDraft2012-2013.pdf](http://www.cdfa.ca.gov/statistics/pdfs/2013/FinalDraft2012-2013.pdf), accessed 21 August 2013.

<sup>8</sup> Bureau of Economic Analysis, available from <http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrnd=2#reqid=70&step=10&isuri=1&7007=2011&7093=Levels&7090=70&7035=-1&7036=-1&7001=2200&7002=2&7003=200&7004=NAICS&7005=-1&7006=31100>, Internet, accessed 18 August 2013.

<sup>9</sup> Bureau of Economic Analysis, available from <http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrnd=2#reqid=70&step=10&isuri=1&7007=2011&7036=-1&7090=70&7035=-1&7006=29820&7001=2200&7002=2&7003=200&7004=NAICS&7005=-1&7093=Levels>, Internet, accessed 18 August 2013; Hal Rothman, "It's time for a new law of the river" in *River Basins of the American West: a High Country News Reader*. ed. Char Miller (Corvallis: Oregon State University Press, 2009); Charles Wilkinson, *Crossing the Next Meridian: Land, Water, and the Future of the West* (Washington, D.C.: Island Press, 1992); both authors call for a radical reorientation of natural resource policy in the American West. Rothman and Wilkinson point out that environmental and demographic realities are significantly different than when most



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natural resource policies were established. It is therefore time to craft policy to fit this new reality.

<sup>10</sup> James Lawrence Powell, *Dead Pool: Lake Powell, Global Warming, and the Future of Water in the West* (Berkeley, University of California Press, 2008), 83.

<sup>11</sup> Imperial Valley's own website describes how the area exports produce throughout the nation. Imperial Valley Agriculture, available from <http://www.icfb.net/countyag.html>, Internet, accessed 22 August 2013.

<sup>12</sup> Center for Natural Resources & Environmental Policy, The University of Montana, "Thinking Like a River Basin: Leaders' Perspectives on Options and Opportunities in Colorado River Management," Internet, available from <http://www.carpediemwest.org/colorado-report>, accessed 2 November 2013; It is from this report that I borrowed the phrase "thinking like a river basin."

## APPENDIX A | ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AWBA	Arizona Water Banking Authority
BLM	Bureau of Land Management
CAP	Central Arizona Project
CIP	Capital Improvements Program
CRC	Colorado River Commission of Nevada
CWP	Cooperative Water Project
GWDP	Clark, Lincoln, and White Pine Counties Groundwater Development Project
IRPAC	Integrated Resource Planning Advisory Committee
IWPAC	Integrated Water Planning Advisory Committee
LADWP	Los Angeles Department of Water and Power
LBS	Lower Colorado River Basin States
LOR	Law of the River
LVVWD	Las Vegas Valley Water District
MET	Metropolitan Water District of Southern California
MWD	Metropolitan Water District of Southern California
MX	Missile Experimental
SDCWA	San Diego County Water Authority
SNPLMA	Southern Nevada Public Lands Management Act
SNWA	Southern Nevada Water Authority
SNWP	Southern Nevada Water Project
SOI	Secretary of the Interior
UBS	Upper Colorado River Basin States
USBR	United States Bureau of Reclamation
VVWD	Virgin Valley Water District
WRMI	Water Resources Management, Incorporated.

APPENDIX B | GRAPHICS



Figure 1. SNWA Pipeline and Colorado River Basin (adapted from SNWA map, created by Andrew G. Harrison)

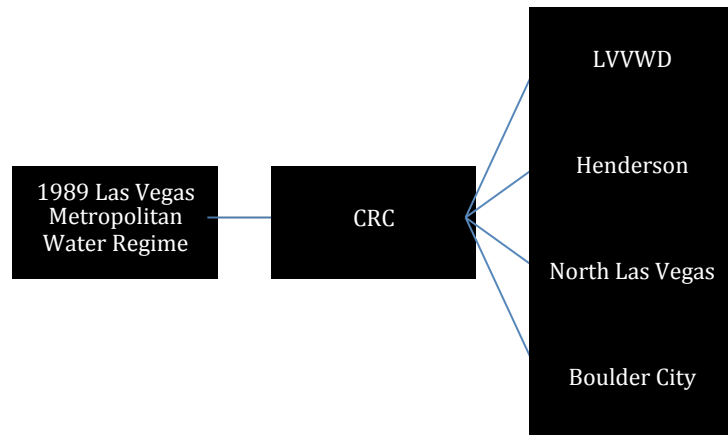


Figure 2. 1989 Las Vegas Metropolitan Area Water Regime

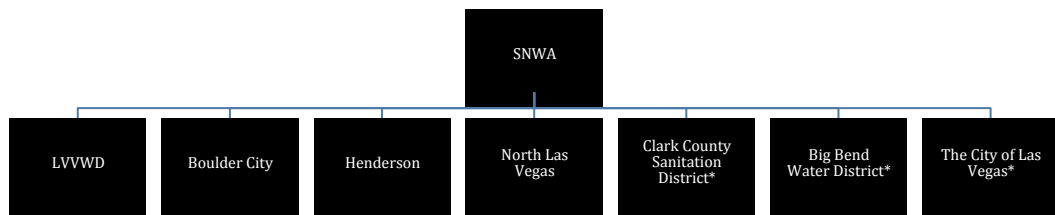


Figure 3. SNWA Member Agencies

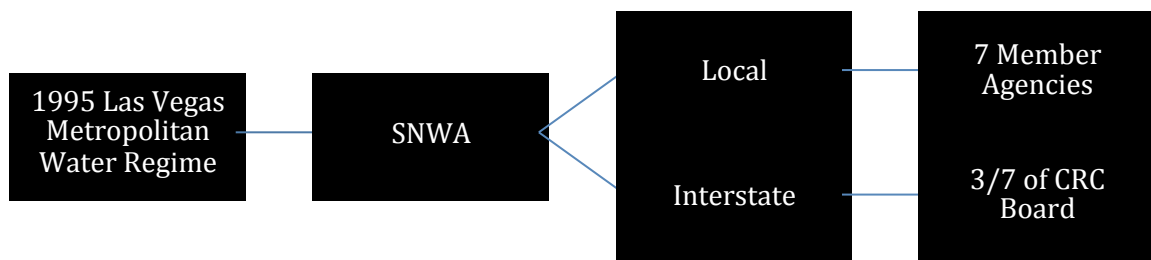


Figure 4. 1995 Las Vegas Metropolitan Water Regime

Member Agency	Annual Allotment (acre-feet per year)
Boulder City	8,918
Henderson	27,021
LVVWD	232,426
North Las Vegas	26,635

Figure 5 Pre-SNWA water allocations

Allocation of New Water Supplies	The First 58,000 acre-feet
Big Bend	5.52%
Boulder City	5.17%
Henderson	20.79%
LVVWD	55.17%
North Las Vegas	13.35%
The Next 50,000 acre-feet (For any water obtained after the initial 58,000 acre-feet was obtained and distributed, 1993 forward)	
Big Bend	3.5%
Boulder City	1.5%
Henderson	12.0%
LVVWD	72.0%
North Las Vegas	11.0%

Figure 6. Post SNWA member agency allocations<sup>1</sup>

<sup>1</sup> Southern Nevada Water Authority, "Southern Nevada Water Authority: 1995 Amended Cooperative Agreement Among Big Bend Water District, City of Boulder City, City of Henderson, City of Las Vegas, City of North Las Vegas, Clark County Sanitation District, and Las Vegas Valley Water District" (Southern Nevada Water Authority, January 1, 1996), Nevada Division of Water Resources, [http://water.nv.gov/hearings/past/springetal/browseabledocs/Exhibits%5CSNWA%20Exhibits/SNWA\\_Exh\\_197\\_Amended%20Cooperative%20Agreement.pdf](http://water.nv.gov/hearings/past/springetal/browseabledocs/Exhibits%5CSNWA%20Exhibits/SNWA_Exh_197_Amended%20Cooperative%20Agreement.pdf); Southern

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Nevada Water Authority, “Southern Nevada Cooperative Agreement” (Southern Nevada Water Authority, June 27, 1991), Author’s Collection/Las Vegas Valley Water District.

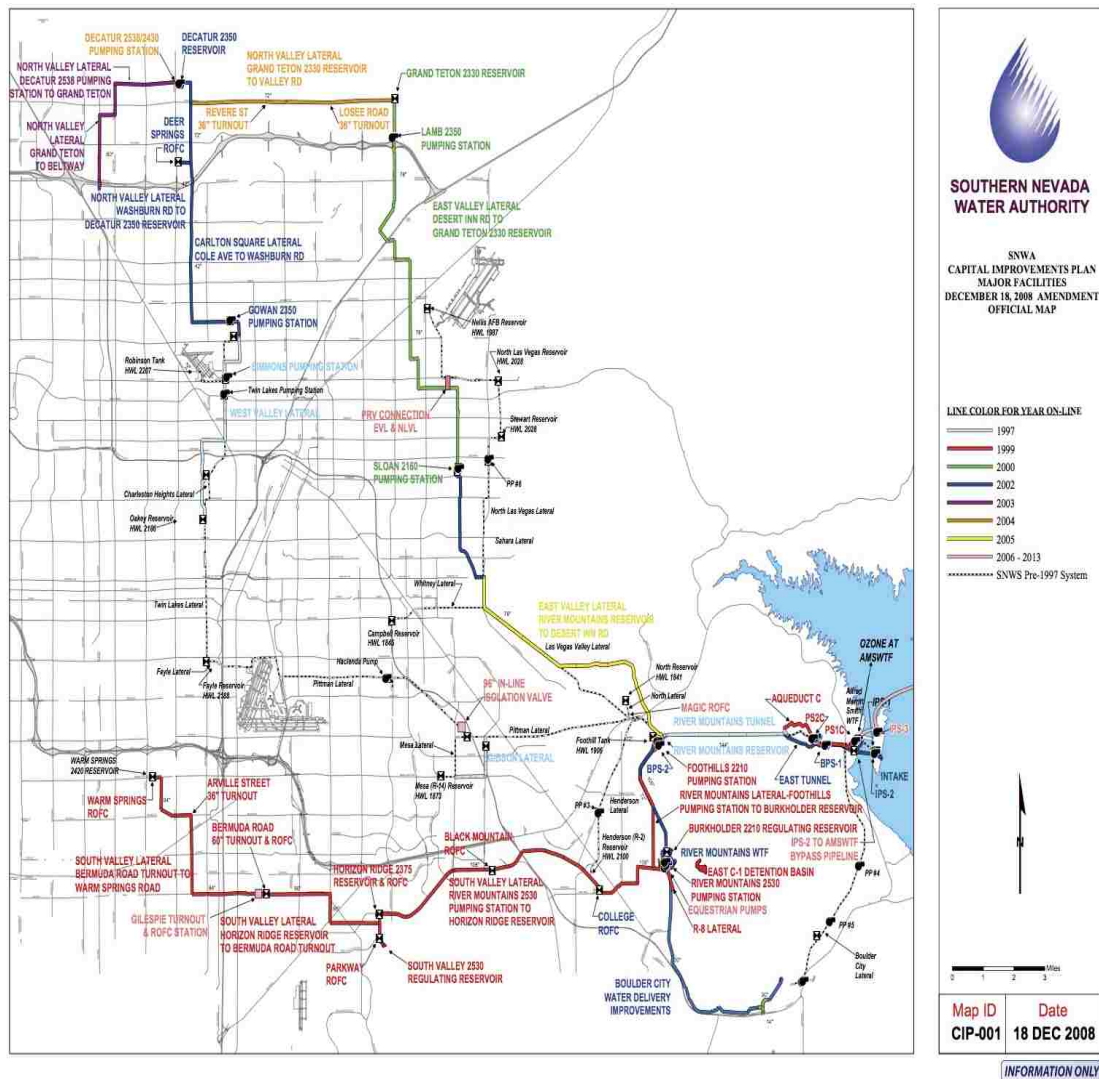


Figure 7. SNWA Laterals Map (SNWA.com).

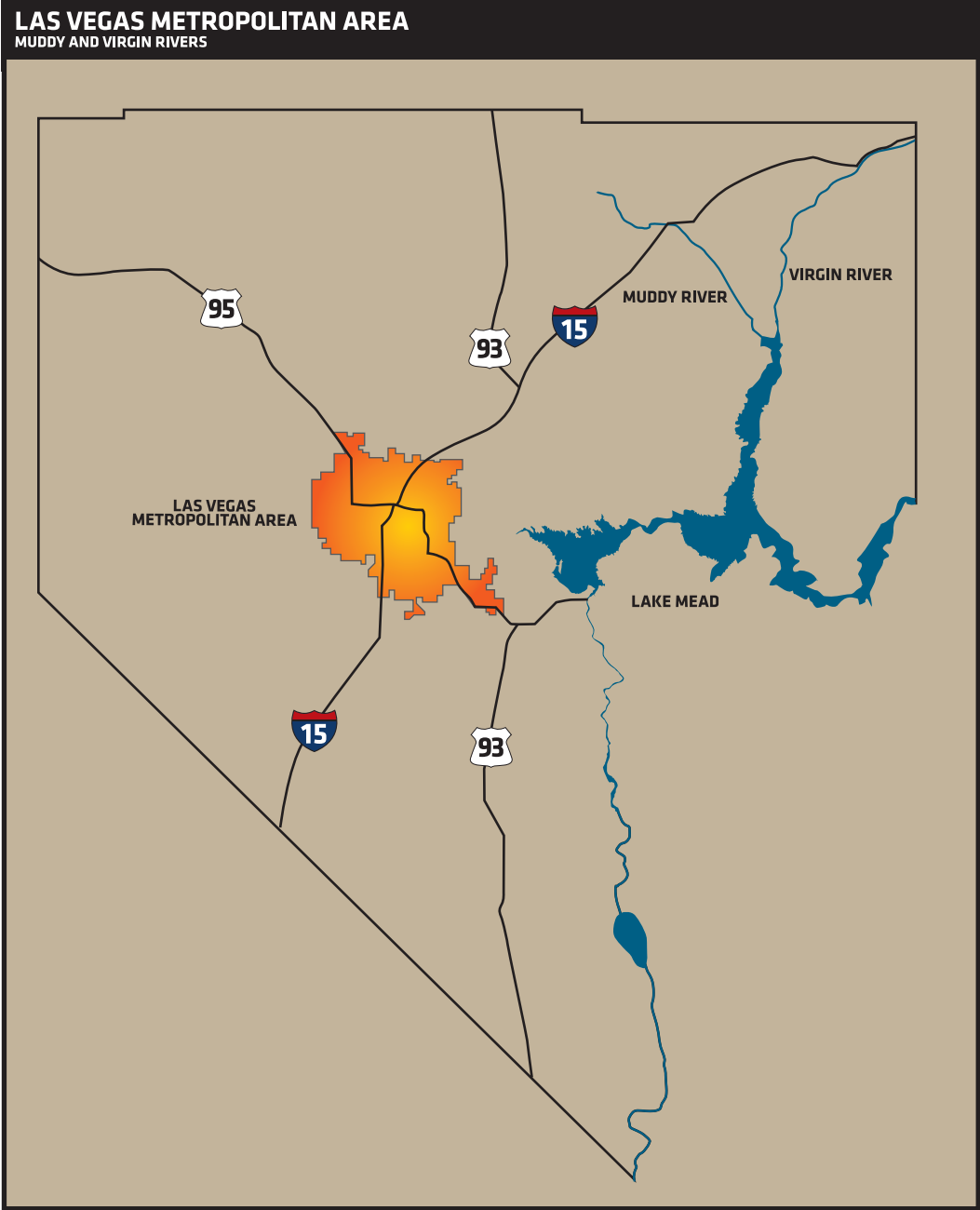


Figure 8 Las Vegas Metropolitan Area (adapted from SNWA map, created by Andrew G. Harrison).





Figure 9 The Colorado River Basin: the SNWA's Political Region (adapted from SNWA map, created by Andrew G. Harrison).



Figure 10 SNWA Pipeline, Five Basins (adapted from SNWA map, created by Andrew G. Harrison)

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