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## Looking Across the Canal: Reflections on Visions and Policies on Water Issues in the United States

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### INTRODUCTION

The All-American Canal (AAC), located in California's Imperial Valley and running parallel to the U.S.-Mexican border, recently attracted attention in the United States, having acquired the sad notoriety of a "high-risk" area for Mexicans emigrating into the United States (Bureau of Citizenship and Immigration Services 2001). A Border Patrol spokesman in Calexico, explaining why his agents were once found on Mexican soil, acknowledged there is no divider in the area where they were found and noted the border markers are several miles apart. The situation, in his opinion, is such that many Mexicans—and even Border Patrol officers themselves—sometimes confuse the AAC for the international limit line between the two countries (*The Washington Post* 2000).

But the AAC has been part of the U.S. domestic policy agenda, too. The U.S. government intends to have the currently porous canal lined with concrete by December 31, 2008; it claims this will prevent water "waste"—caused by seepage into the aquifer—of 67,700 acre-feet per year (AF/y) (Cortez Lara and García Acevedo 2000). This approach ignores the fact that, in terms of water flow,

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the Imperial and Mexicali Valleys are part of the same geographic area. The history of bilateral water arrangements has received little attention, as well. The problem is that, as mentioned in several chapters in this volume, lining the AAC will stop the flows that have historically fed the wells in the Mexicali Valley. This lining will have negative consequences on agriculture, the environment, and the overall quality of life of area residents.

In this chapter, the AAC situation will serve as a window through which to examine the different visions of water that have ruled in the United States since the end of the 19th century and the policies these visions have helped shape. This chapter supports the Blatter, Ingram, and Levesque thesis that the vision of and discourse on the development of the different meanings of water in the United States have inspired a broad variety of public policies, fostered opportunities, set limitations on the actions of participating political stakeholders, and created winners and losers on both sides of the border (Blatter, Ingram, and Levesque 2001). What also stands out is how the classic vision of a nation-state, where U.S. public policy would be designed exclusively for those living within its borders and would only have consequences within the country, has not always been applied to transboundary water resources, and in particular to the AAC. The specific questions addressed have to do with the effect of the current U.S. perception of water as a commodity, particularly water in the Lower Colorado Basin from which the AAC is supplied. The consequences of lining the AAC on the future water-flow permeability of the U.S.-Mexican border are also explored.

This chapter is divided into three parts. The first reviews the different visions of water and how they have affected policies for the Colorado River since the second half of the 19th century. Through these visions the origins and management changes of the AAC can be traced, and thus the evolving view of the political boundary separating the two countries. Water was originally seen as part of nature and attached to its natural environment. Later, water was seen as a product that engineering could convey from one place to another. At times, water was perceived as a security tool, critical to national survival and requiring the attention of policymakers at the highest level of government. The second part of the chapter focuses on the current water markets and how U.S. policymakers have inter-

puted issues related to the management of the Colorado River and its transboundary implications. From this point of view, water would be subject to market conditions, which would define its movement from one place to another and from one use to another (Blatter, Ingram, and Levesque 2001). New projects were implemented under this vision, including the AAC lining proposal. The third section closes with the current possibilities for and limitations to discussing the transboundary flows of Colorado River water through the lens of the AAC case study.

## HISTORICAL CONTEXT: FROM PLANNING TO OPERATION OF THE CANAL

When the water in the Imperial and Mexicali Valleys flowed in its natural environment, no need existed for canals to modify its course. The native populations, such as the Cucapa, moved from one place to another according to the agricultural cycle, following what the Colorado River dictated. Their culture revolved, literally and figuratively, around water. Even after the international border between the United States and Mexico had already been established as it exists today, these indigenous populations still moved freely across it (Álvarez de Williams 1975). The United States and Mexican governments played no part whatsoever in this movement.

Toward the end of the 19th century the mobility of the native populations, which had been associated with the free flow of Colorado River water, was fundamentally changed. A privately financed project for manipulating water by using a canal to transport it elsewhere was put in place—without taking into account the interests of this water's original users. The first American and Mexican explorers of the Imperial and Mexicali Valleys were inspired by this vision of water. In 1896, investor C. R. Rockwood proposed conveying the waters of the Colorado River all the way to the Imperial Valley, with the intent of promoting economic development. To that end, the same year he founded the California Development Company (Metz 1989).

The idea of permeable borders goes hand in hand with the characterization of water as a product. In that sense, as a possible solution to the technical problems associated with building a canal on

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U.S. soil (specifically the existence of a sandy plateau), the California Development Company opted to convey the waters of the Colorado by means of a binational canal. The argument was that it was cheaper and more feasible, due to the technology available at the time, to use the Alamo Canal, which had a 45-kilometer (km) (28-mile) stretch going through Mexico (in the Mexicali Valley), to irrigate the Imperial Valley (Fradkin 1981).

To create a binational endeavor and overcome the restrictions set forth in Mexico's laws, California Development Company and its successor, the Colorado River Land Company, supported the formation of the Sociedad de Irrigación y Terrenos de Baja California (in English, Baja California Irrigation and Land Company). Guillermo Andrade, a businessman and former Consul of Mexico in Los Angeles, headed the Sociedad de Irrigación. In the end, this agreement between private companies became the only legal framework for using the Alamo Canal and supplying an annual allocation of 3.63 million acre-feet (MAF) (4.478 billion cubic meters [m<sup>3</sup>]) of water from the Colorado River to the Mexicali Valley. This arrangement between non-government stakeholders—individuals and private companies—with the tacit approval of the governments, brought forth the possibility of agricultural development in the Imperial and Mexicali Valleys (Metz 1989).

During the first decade of the 20th century, the vision of water as a product overlapped with the vision of water as a security tool. The change took place as a result of the 1905–1907 floods that affected both the Imperial and Mexicali Valleys. An engineering failure was to blame for the disaster. These floods diverted water from the Colorado River to the Salton Depression, “artificially” creating the Salton Sea. For the first time, the U.S. federal government, and even President Theodore Roosevelt himself, considered the water of this area essential to national security and became involved in the flood issue. Roosevelt declared a state of emergency and granted the Southern Pacific Railroad Company \$3 million to wage a “battle against the Colorado” (Gottlieb and Fitzsimmons 1991).

Because water was perceived as essential to national survival in the United States, the crisis caused by the floods generated a wave of criticism against the permeability of the U.S.-Mexican border with regard to water flows. This marked the first time the possibility of

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using a canal built exclusively on U.S. soil, instead of the Alamo Canal through Mexican territory, was ever discussed. It was the association of Imperial Valley agricultural users who initially promoted this project. The project later won the support of the U.S. Department of the Interior's (DOI) Bureau of Reclamation (BOR), the Imperial Irrigation District (IID), and various members of the U.S. Congress. The greatest obstacle then became the high cost of a new canal project (Fradkin 1981).

The topic of building a canal on U.S. soil remained on the American agenda during the 1920s. In 1922, Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming signed the "Colorado River Compact." Citing political instability, Mexico was not invited to take part in the negotiations (Fradkin 1981). Per the provisions of this agreement, the Colorado River Basin was divided into upper and lower basins and water for each state was formally apportioned (Postel, Gleick, and Morrison 1996).

Finally, the plan to build a canal on American soil to convey Colorado River water to the Imperial Valley was set in motion by the approval of the Boulder Canyon Project Act of 1928 (Fradkin 1981). Successful lobbying in favor of the canal, together with the development of technology that would make this infrastructure project possible, led to its approval. The decision to build the new canal was linked, under the Boulder Canyon Project Act, to other important provisions on Colorado River water, including the construction of Hoover Dam and its adjacent Lake Mead. This act also established California's right to receive 4.4 MAF/y of Colorado River water. In Mexico, the act marked the beginning of the artificial regulation of the flow of the Colorado River, which at times had serious supply consequences (Henderson 1968, Ward 1999, Stapleton 2001).

The Great Depression, as well as other domestic factors in the United States, delayed construction of the AAC, and therefore it was not until 1942 that it was finished and began operating. The canal was given the symbolic name "All-American" to underscore the victory its construction represented to the United States in matters of security (Fradkin 1981). Since then, the canal has irrigated 1 million acres in Southern California and has been key in the develop-

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ment of the Imperial Valley, whose irrigation district (the IID) is the largest user not only in California, but in the entire Colorado River Basin system (Stapleton 2001).

During the 1940s, the vision of water as a security tool resurfaced in the United States in another context—that of cultivating a close relationship with the countries of the Western hemisphere (including Mexico), in light of World War II. This began the first formal talks between the U.S. and Mexican governments on their border-region rivers, the Río Grande (Río Bravo in Mexico) and the Colorado River. These negotiations led to the signing of the Treaty for Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande in 1944, referred to as the 1944 Water Treaty. The U.S. president played a crucial role in ensuring this result. In supporting this treaty, Franklin D. Roosevelt offered guarantees to the Mexicans that their concerns would be heard along with those voiced by the Colorado River states. His support of the treaty was a decisive factor for its approval by Congress. Under this treaty, Mexico was assigned 1.5 MAF/y (the quality of water to be received was never discussed). It also stipulated that the International Boundary Commission, a bilateral institution founded in 1899, would become the International Boundary and Water Commission (IBWC), to be composed of a Mexican and a U.S. section. This commission was put in charge of all matters related to crossborder water resources (Metz 1989; Sánchez Ramírez 1990).

Years later, in 1973, the view of water as a security tool was successfully championed by Mexico before the United States, and this led to the amendment of the 1944 Water Treaty (Fradkin 1981). At the core of the new agreement, IBWC Minute 242 centered on solving the issue of Colorado River salinity, which had ravaged Mexicali Valley agriculture for more than a decade. Minute 242 also brought the issue of transboundary groundwater to the arena of the treaty. Both governments made a commitment to inform the other prior to any project involving groundwater, as the case of lining the AAC would later be. Moreover, Minute 242 also left open the possibility of coming to an agreement on the matter (Utton 1991, Mumme 2000).

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The different visions of water that have dominated in the United States since the second part of the 19th century have inspired a broad variety of policies on Colorado River water. The planning, construction, and operation of the AAC have been a significant part of them. Undoubtedly there have been opportunities, but there have also been limitations in the recognition of the transboundary nature of Colorado River water. The stakeholders involved have been from both government and the private sector. The latter, at times, played the most salient role.

### THE ERA OF WATER MARKETS AND THE CANAL-LINING PROJECT

In the United States, as in many other parts of the world, the argument that water markets can manage this vital resource more efficiently has gained strength (DiMento 2001). In the debate over Colorado River water, several topics have arisen and become intertwined, including rural-urban water transfers, conservation projects, compliance with environmental regulations, and the new arrangements among U.S. users of the Colorado River. The question of how the AAC has been immersed in the discourse and policies associated with these important topics will be discussed in this section.

#### *Rural-Urban Water Transfers*

The Imperial Valley, where the AAC is located, has become an ideal region for the transfer of water from rural to urban areas in Southern California because IID receives the largest amount of water from the Colorado River Basin (at a current rate of 13.85 MAF/y), mainly for agricultural uses (Brazil 2001). As well, the Imperial Valley is within the proximity of Southern California cities such as Los Angeles and San Diego, which are eager to be part of a stable water market, one that would allow them to meet the increasing needs of their growing populations (Rohrlich 1998). San Diego is particularly dependent on Colorado River water because it has virtually no groundwater or other supply sources (Perry 2003a).

It is a misconception that the sale of water does no harm; this notion ignores the fact that water sales create disparity. Their eventual negative impacts on the United States have not been discussed

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in-depth, much less have their crossborder impacts (Perry, Blatter, and Ingram 2001). For example, a water transfer will cause a social polarization in the Imperial Valley, where only the large landowners will profit from water transfers and the interests of small- and medium-sized agricultural producers will be ignored (Blatter, Ingram, and Levesque 2001; Gottlieb 1988; Perry 2003b).

Beginning in the 1980s, several U.S. government agencies actively became involved in the discussion of how water transfers from the Imperial Valley to urban areas in Southern California should be conducted. A prominent player has been the U.S. Secretary of the Interior, who has used the powers granted by the 1963 U.S. Supreme Court decision in *Arizona v. California*, which upheld the 4.4 MAF/y allocated to California under the Boulder Canyon Project Act of 1928 and granted Arizona 2.8 MAF/y and Nevada 300,000 AF/y. According to this ruling, the Secretary of the Interior has the legal mandate to determine, on an annual basis, the existence of a surplus, normal conditions, or drought in the Lower Colorado River Basin (Stapleton 2001, Sierra Club 2002). A year later, the Supreme Court authorized California to use surplus water taken from Lake Mead.

Other key participants in the water transfers have been the public agencies in charge of water management in Southern California, such as the Los Angeles-based Metropolitan Water District (MWD), serving more than 17 million people through 26 local agencies; its subsidiary, the San Diego County Water Authority (SDCWA), serving nearly 3 million people; the Coachella Valley Water Authority (CVWA), serving the area adjacent to the Imperial Valley; and IID, the largest Colorado River water user and the location of the AAC.

Amidst difficult negotiations—labeled as water-control “wars”—and with the full support of DOI, SDCWA and IID signed an important agreement in April 1998 (SDCWA 1998a). Under the agreement, IID was to supply 200,000 AF/y of water to San Diego County for 75 years beginning in December 2002 (SDCWA 2001). DOI portrayed this agreement as an example of how water transactions brought nothing but positive results for all parties involved, as well as guaranteed supply stability. As will be discussed later, this agreement also became a key component of new arrangements for

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Colorado River water (specifically the Quantification Settlement Agreement, signed by Southern California water agencies) (Perry 1997, SDCWA 1997).

The aforementioned water-transfer agreement between Imperial Valley and San Diego was not put into place in December 2002 because of the complexity of its implementation, including the need to overcome obstacles regarding environmental protection of the area. The delay in the water transfer agreement affected the start date for the AAC lining project; it was not until October 2003 that all the pieces of the puzzle fell into place. In the face of intense negotiations among Southern California water agencies, the action of the federal and state governments was a decisive factor in overcoming the obstacles for water transfers, to the point that, according to some observers, this was not a water-sale transaction dictated by market forces but an exchange performed under intense pressure from the U.S. government (Leavenworth 2003).

### *Water Conservation Projects*

In the framework of water transfers, the United States has promoted water conservation policies that by themselves probably would not have had enough momentum to move forward. California, in particular, linked water conservation projects to rural areas under the assumption that water is wasted in agriculture. The Imperial Valley, because of the volumes of water it brings in, became an ideal place to implement water conservation policies.

U.S. policymakers presented the canal-lining projects in the Imperial Valley area, including the AAC, as necessary support for precisely these conservation efforts. In 1998, the U.S. House of Representatives held hearings about lining the AAC. The topic was presented as a simple “water-saving” effort that would allow California to reduce its consumption in the long term (to 4.4 MAF/y) and bring nothing but benefits to everyone. IID voiced its opposition from the outset. The agency feared that greater involvement by the federal government in the control of the AAC would limit the role of IID in the long run. This agency even suggested other means of increasing water savings, such as the lining of secondary canals (Public Law 100-675, House 73-81). In fact, during

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the 1980s, IID had received nearly \$200 million from MWD for conservation projects, with the stipulation that MWD would obtain whatever water was conserved (McClurg 1996, Rohrlich 1998, Sierra Club 2002).

In the end, with an astounding lack of technical data, the 1988 law authorized the Secretary of the Interior to reduce water seepage from the AAC to the aquifer by means of lining portions the canal (Mumme 2000). The lining project could not begin, though, because the 1998 law did not allocate money for that purpose. In the meantime, in 1994, BOR studied several options for the AAC, including building a parallel lined canal, drilling wells near the canal to recover water that had seeped through, lining 25 miles of the existing canal, and taking no action at all (Jones, Duncan, and Mumme 1997).

There were other efforts in the 1990s to move forward with the lining. In 1996, for example, MWD and the Southern Nevada Water Authority planned to line the canal, take the water “saved” through this process to Lake Mead, and later divide it equally between themselves. While the project, called Reliability Plus, never materialized, it does show how the argument for lining the AAC was used again in the context of conserving water in rural areas to increase urban-supply availability (*Los Angeles Daily News* 1996).

Funding for the lining project was finally obtained in September 1998. Under the framework of the conservation debate, the lining project reached the California Senate agenda (Rohrlich 1998). Senator Steven Peace (D-El Cajon) managed to negotiate the final agreement to fund the project by attaching it to an endangered forest area issue supported by Northern California legislators. The California Senate approved the measure by a 33–3 majority vote (SDCWA 1998b, Gardner 2001), appropriating \$200 million for the lining of portions of the AAC by December 2006, barring “extraordinary circumstances.” The same legislation appropriated \$35 million for necessary infrastructure to store the groundwater recovered as a result of the lining (California Senate 1998). MWD strongly supported this proposal, given that more water would flow into its distribution system. At the federal level, DOI also highlighted the advantages of the project (McKinnon 2000).

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The approval of this 1998 legislation was a huge step for California's water market endeavors. In November 1998, the particulars of the pricing of Imperial Valley-San Diego water transfers were approved (Associated Press 1998). However, it was not until October 2003 that the final details of the historic IID-SDCWA water transfer agreement were finalized, including issues related to environmental conservation in the Salton Sea area.

### *Environmental Provisions*

Environmental conservation topics have been part of U.S. legislation since the 1970s. In the case of the AAC, from lining approval under the 1988 legislation to date, there have always been environmental legislation provisions with which to comply. Specifically, Public Law 100-675 states that the Secretary of the Interior must submit a report to the U.S. Congress on the project's effects on wildlife in the region (Public Law 100-765; La Rue 2001a). As noted by Mumme and Lybecker in their chapter, an environmental impact study was submitted in 1994.

AAC-related environmental issues were later linked to others in the same geographical area, particularly to those of the Salton Sea. SB 1765, approved by the California Senate in 1998, allocated \$300,000 to the Salton Sea Authority (created in 1993) for new studies on AAC seepage and surface flows to determine how much water would be lost to canal lining and the environmental impact of decreased inflow (once the canal were lined) to the Salton Sea on the species that inhabit the surrounding area. The authority was also given a mandate to formulate a plan to mitigate the effects of those environmental impacts (California Senate 1998).

In fact, compliance with environmental regulations in the Salton Sea area was a crucial element that stalled the IID-SDCWA water transfer agreement. Opposition focused on the argument that the water transfers would reduce the Salton Sea inflow and thus negatively impact area species (Brazil 2001). In addition, IID did not want to become legally liable for the environmental impact on these species if the water transfer to San Diego began, per the agreement signed in 1998.

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Toward that concern, DOI and the state government of California put pressure on California public water agencies to expedite the water transfer process. The problem was that California risked losing its right to use Colorado River surplus waters should the state fail to finalize the transfer of water agreement by December 2002 (Brazil 2001). To that end, several bills were introduced (Raley 2001). On a federal level, for example, HR 2764 in August 2001 allocated funding for a habitat conservation program to protect endangered species in the Salton Sea area (U.S. House of Representatives 2001). In addition, Public Law 100-675 provided funding for infrastructure and reservoir projects in the area surrounding the AAC that would mitigate the effects of reduced water flow on the region's habitat. Its aim was to avoid a substantial decrease in Salton Sea inflows as a consequence of lining the AAC (U.S. Senate 1988).

On the state level, in September 2003 California approved SB 654, which authorized the taking of species incidental to facilitating the water transfer (California Senate 2003c). Also, California legislators passed bills SB 277 and SB 317, appropriating \$300 million in funding to restore Salton Sea habitat (California Senate 2003a, California Senate 2003b). These actions contributed to finalizing the IID-SDCWA water transfer and expediting the announcement that SDCWA would be in charge of lining the AAC.

### *New Arrangements among U.S. Colorado River Users*

In the 1990s, while the debates about water transfers, conservation, and environmental protection were taking place, disputes arose among U.S. states along the Colorado River. Arizona and Nevada were reaching their 1963-assigned water allocation levels and sought increases to meet the needs of their growing populations (Sierra Club 2002). The precarious balance reached after the 1963 Supreme Court decision was about to come undone. As a solution to the challenge of meeting their new water needs, Arizona and Nevada pressured California to decrease its use of water from the Colorado and limit its use of surplus water from this source. In fact, surplus waters gave California a *de facto* increase in its allocation. California

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uses as much as 5.5 MAF/y, surpassing its 4.4-MAF/y allocation (Sierra Club 2001). In addition, Arizona and Nevada asked DOI to establish specific rules for the use of Colorado River surplus water, which until then had been used only by California (Snedeker 2000a).

Amidst difficult negotiations in which DOI fully exercised its legal capacity to distribute flows from the Colorado River, California was persuaded to limit its long-term water consumption from this source to 4.4 MAF/y. In exchange, California received a 15-year grace period (until 2016) during which it would have access to surplus water. In this scenario, Southern California water agencies, including IID, MWD, and SDCWA, negotiated new rules amongst themselves for the distribution of water. In May 2000, California presented Plan 4.4, the Colorado River Water Use Plan, a complex document reflecting the consensus reached by all these agencies on the protection and optimization of water resources from the Colorado River. Both the implementation of the Imperial Valley-San Diego water transfer agreement and lining of the AAC were key parts of this plan (U.S. House of Representatives 2001, Stapleton 2001).

Plan 4.4 was a key prerequisite for the signing of a broader agreement by the riparian states of the Colorado River Basin. In January 2001, Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming signed the Record of Decision for Colorado River Interim Surplus Criteria (Raley 2001, Walters 2000). This agreement acknowledged California's effort to limit its water use, ratified the commitments made in Plan 4.4 before the other states, and included a schedule of specific measures (including the water transfers from IID to SDCWA) that would be taken to reduce California's water use starting in December 2002 and running through 2016 (Brazil 2001, Stapleton 2001). By adhering to this time table, California would be allowed to use the surplus water, which in 2002 amounted to 600,000 AF/y (Brazil 2001, Ritter 2001).

Lining the AAC was also a key piece of these interstate negotiations. According to sources from Arizona, California's "rival" in the negotiations, California proffered the argument for continuing to use the Colorado River water surplus (stored in Lake Mead) in exchange for its commitment to line the AAC, thus substantially

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moving water conservation policy forward (Pearson 1996). Moreover, in September 2003, once the implementation of the Quantification Settlement Agreement was formalized, MWD, SDCWA, and CVWA reached the historic agreement to begin the “largest and longest-lasting water transfer in history,” according to Jimenez (2003). Under these conditions, SDCWA assumed the commitment to line the AAC, at a cost of \$327 million (\$235 million from California state coffers, which had been authorized in 1998, plus \$90 million to be funded by SDCWA), stipulating that the “saved” water would flow to SDCWA. The agreement also postponed the deadline to line the AAC to December 2008 (Jimenez 2003, SDCWA 2003).

The era of water markets has brought many changes to the Lower Colorado River Basin, including the new arrangements among California public water agencies for water use and conservation and the Record of Decision for Colorado River Interim Surplus Criteria agreement between the riparian states of the Colorado River. Thus far, although negotiations have been difficult, agreements have indeed been reached. Lining the AAC became the cornerstone of these negotiations because it was attached to the most ambitious rural-urban water transfer in the history of the United States (signed between IID and SDCWA). In fact, the only limitation—the compliance with legal provisions regarding environmental protection—was overcome through the intervention of California policymakers that found a way to reduce environmental restrictions and grant funding to environmental restoration projects (Perry 2003b).

The issue of lining the AAC went beyond being of mere “local” interest or an isolated issue in the U.S. public policy agenda to a cornerstone of 21st century U.S. water policy. Such a turn of events certainly makes it more difficult to avoid the implementation of the lining project. However, questions remain as to whether there is room in this era of water markets for a debate about the trans-boundary consequences of the new arrangements related to the Colorado River, and more importantly, the possibility of introducing into the discussion on the AAC other visions of water more favorable to the idea of a permeable border.

## THE LINING OF THE CANAL AND THE ISSUE OF BORDER PERMEABILITY

In the U.S. debate on the lining of the AAC, there has been little consideration of its repercussions in Mexico. The U.S. obligation to formally consult Mexico on groundwater issues, as legally set forth in Minute 242, has been limited to “informing” Mexico, mainly through the Mexican section of IBWC. For example, when the first hearings on the issue of the AAC were held in the U.S. House of Representatives in 1998, DOI and BOR stated that the harm to Mexico, if the lining project were to take place, would be “insignificant.” Later, when U.S. agencies (specifically IID) finally acknowledged the potential damage to agriculture in the Mexicali Valley as a consequence of lining the AAC, they never recommended holding formal conversations with Mexico (U.S. House of Representatives 1988).

During the discussions of HR 2764, the effects on Mexico of lining the AAC were only superficially included. This bill authorized DOI to “increase Mexico’s ability to more effectively use its water allocation under the Treaty of 1944.” Also, it instructed DOI to prepare a report in December 2003 about consultation with Mexico on any water management issues. Finally, the text of this bill proposed coordination between DOI and the U.S. commissioner of IBWC on possible consultation with Mexico, leaving the possibility open that public water agencies in California (MWD and SDCWA) might participate. However, the justification for these actions was presented as a “courtesy” to Mexico and not as an acknowledgement of the legal requirement for such consultation (U.S. House of Representatives 2001).

Another obstacle to holding fruitful negotiations with Mexico on the AAC lining project was the fact that IBWC has not historically shown particular interest in groundwater issues (Jones, Duncan, and Mumme 1997). Yet, IBWC has taken some token actions. In May 2000, in response to Mexican border region senators, IBWC officials raised the possibility of asking the United States to compensate Mexico for the water losses caused by the lining project. They even proposed alternatives, such as having Mexico receive a larger water allocation from the Colorado River by having the AAC deliver 500

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more cubic feet per second to the Mexicali Valley (Hume 2000, Restrepo 2000). IBWC also studied other means of mitigating the impacts of lining the AAC through water conservation programs in Mexico (Dibble 2004).

However, when the California state laws in 1998 and 2003 authorized funding and gave the green light for lining the AAC, there was no longer any mention of possible repercussions on the other side of the border. This could lead to the conclusion that in the water market era, water-flow permeability across the border no longer exists. Yet, in contrast, the United States and Mexico have celebrated formal consultations on the possible construction of a new binational aqueduct that would provide potable water distribution services to the metropolitan areas of San Diego and Tijuana-Rosarito. This canal would be built parallel to the Colorado River Aqueduct and would run through Mexican territory

It has been precisely SDCWA, the same agency in charge of lining the AAC, that has expressed interest in exploring the crossborder aqueduct project. In fact, SDCWA funded a study that focuses on the feasibility of this project. SDCWA's interest is twofold: First, it would allow this agency to become almost completely independent from MWD because it would stop using the latter's aqueduct to convey "its water" southbound through California. Also, SDCWA would have an estimated cost-savings of \$2 billion if this aqueduct were built in Mexico instead of in the United States (Conaughton 2001, LaRue 2001b). SDCWA's interest in a crossborder project suggests that even in this era, and when it fits their interests, some U.S. water agencies may consider negotiating on issues that go beyond their own and their country's borders. So then, the issue of lining the AAC, or at least of its modalities, could be subject to negotiation in a broader spectrum that included other transboundary issues, such as the binational aqueduct. SDCWA, in any case, could become an interesting counterpart in negotiations with Mexico.

On the other hand, the issue of lining the AAC could be examined through other visions of water that overlap with the dominant one of water markets. This could lead to different scenarios—water could be considered a security tool and a tool to create bonds between communities. The federal government in Mexico (during

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the administrations of Alvaro Obregon, Manuel Avila Camacho, and Luis Echeverria) considered the waters of the Colorado River a matter of security that should be included in the bilateral agenda between the two countries. Getting the attention of their U.S. counterpart proved difficult, but historical precedents, such as the signing of the 1944 Water Treaty and Minute 242, suggest that success can be achieved.

A recent example of statements about water as a security tool took place during a meeting between Mexican president Vicente Fox and U.S. president George W. Bush in February 2001. Fox proposed comprehensive negotiation on transboundary waters. He declared that “we are working on the whole issue of water in the border region, both rivers, the Colorado and the Río Grande, and we are working on them together” (Office of the Presidency of the Republic 2001). However, Mexico’s decision to deal with Mexico’s Rio Grande “water debt” in 2004 as a separate issue was a step backward in the potential joint high-level negotiations regarding both border-region rivers.

Another scenario would be related to envisioning water as a tool for creating bonds between Mexican communities and perhaps binational bonds as well. Using this lens, water would be linked to regional development and a true preservation of the habitat, placing these values above those related to water markets. In this case, as Alfonso Cortez Lara points out in his chapter, the main stakeholders would be Mexican non-governmental organizations in possible partnership with their counterparts in the United States. The Sierra Club, for example, has called the AAC lining project a “simple plan” that will exacerbate other problems in the area. The Sierra Club focuses on the problems water loss would cause in the Imperial Valley, the fact that the environmental impact assessments stop at the border, and also acknowledges that Mexico could lose more water than what the United States has considered thus far (Sierra Club 2001 and 2002).

The seeds of this view of water also exist in Mexico. Its historical precedent is a grassroots movement that made the Mexican federal government recognize the seriousness of the Colorado River salinity problem in the 1970s. Today, according to data collected by a COLEF-Mexicali survey in 1998, 67% of Mexicali Valley water

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users are aware of the damage that lining the AAC will cause them in terms of income, crops, and production costs (Cortez Lara and García Acevedo 2000). Although protests against the lining project have not been as visible as in the past, one cannot rule out that this might change, particularly once its effects are felt in the Mexicali Valley. In December 2004, for example, Mexicali Valley farmers, along with state legislators and business group representatives, raised their voices against the “submissive attitude” of Mexican federal authorities toward the United States on AAC-related matters (Dibble 2004).

An example of efforts to create binational bonds between U.S. and Mexican environmental groups over the Colorado River is the Santa Clara Marsh. Successful social mobilizations were taken as far as Washington, D.C. Their impact was reflected in the Record of Decision for Colorado River Interim Surplus Criteria agreement. The agreement notes the need for special measures to protect the Santa Clara Marsh and opens the door for subsequent negotiations to grant more water to Mexico to preserve the habitat of the Colorado River Delta (Snedeker 2000a and 2000b).

## LOOKING ACROSS THE CANAL: FINAL THOUGHTS

The All-American Canal is sometimes confused with the U.S.-Mexican border. This is not mere coincidence—its geographical location and history are woven together with binational events and policies. However, with regard to water flow, there have been times when the AAC has been seen in the United States as exclusively a domestic policy issue. Nowadays, for example, its fate is intimately linked to the “largest and longest-lasting water transfer agreement in history” (Stapleton 2001). Moreover, as a result of lining the AAC, SDCWA could supply water to more than 150,000 homes per year (*San Diego Union-Tribune* 2004). In this era, where such powerful interests are at play, the transboundary nature of the Colorado River has been ignored, as have the negative consequences of lining the AAC, not only for Mexico, but also for the habitat of the area.

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However, it seems that the current vision of water markets in and of itself would not impede the acknowledgement of transboundary bonds. In their discussion of water, Blatter, Ingram, and Levesque state that negotiations between the political stakeholders—including crossborder ones—involved are possible, although they acknowledge the advantage held by stakeholders who have imposed their vision, and therefore limitations, on the others (Blatter, Ingram, and Levesque 2001). SDCWA consultations with Mexico on the possible construction of a binational aqueduct exemplifies the possibilities of transboundary negotiations. Interestingly, SDCWA is the agency in charge of actually lining the AAC. This leaves open the possibility of a linkage negotiation, at least as far as the modalities of the lining and/or the nature of compensation to Mexico for water losses caused by this lining project are concerned.

On the other hand, other visions of water could feed a new discourse and new actions. Looking into the canal, one can see how the perception of water has been associated with security and has involved the participation of high-ranking officials in the United States and Mexico. The Fox Administration made mention of water as a security tool in connection to both the Río Grande and the Colorado River. With regard to the United States, even in the age of water markets, the U.S. government can surely get involved to modify decisions, especially dealing with the modalities of lining the AAC and/or compensation to Mexico as a result of the implementation of this project. The U.S. government (at the state and federal levels) did not hesitate to delve into the “free market” to achieve the desired IID-SDCWA water transfer agreement, which is considered an important precedent for water-related public policies. In addition, one cannot dismiss the possibility of other water visions coming forth. To that end, it would be worthwhile for non-governmental organizations in both countries to raise their voices against the effects that lining the AAC will undoubtedly have, and demand action be taken by both governments.

In summary, the complex history of the Colorado River in U.S.-Mexican bilateral relations and the role played by a wide variety of governmental and non-governmental agents on both sides, suggest that the AAC is not exclusively a matter of U.S. public policy. The change would require, however, a new discourse and new actions by

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governmental and non-governmental stakeholders in Mexico and the United States. The purpose would be to rescue the principle of permeability of water flows between California and Baja California, and in any event set a precedent for the many pending debates on transboundary water resources.

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