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**MUNICIPAL DEMANDS AS THE STIMULUS FOR INNOVATION:
TALES FROM THE LOWER COLORADO RIVER BASIN**

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**NATURAL RESOURCES LAW CENTER
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I. Water Supply and Demand in the Lower Colorado River Basin

There are three levels of water use “allocations” on the Colorado River System (mainstream and tributaries): (1) the interbasin “apportionments” made by the 1922 Colorado River Compact; (2) the interstate apportionments of lower Colorado River basin mainstream water to Arizona, California and Nevada by the Secretary of the Interior by contract under the Boulder Canyon Project Act of 1928 (“BCPA”), 43 U.S.C. §§617-617t, which authorized the construction of Hoover Dam and approved the Colorado River Compact; and (3) the federal contractual entitlements held by individual water agencies within those three states.

A. The Colorado River Compact Apportionments

The Colorado River Compact was entered into in 1922 by the seven Colorado River Basin States of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming and became effective in 1929 pursuant to the required Congressional consent provisions of the BCPA. The Compact made annual “apportionments” of the beneficial consumptive use of 7.5 and 8.5 million acre-feet (MAF) of system water to the Upper (Colorado, New Mexico, Utah, Wyoming and a small portion of Arizona) and Lower (Arizona, California, Nevada, and small portions of Utah and New Mexico) Basins, respectively. Time has shown that the water supply assumptions which formed the basis of the Compact apportionments significantly overestimated future supply. Although the Compact allocation of 16 MAF per annum to the Upper and Lower Basins was based on water supply data which provided a reasonable basis for predicting the long term availability of about 18 MAF annually at Lees Ferry, the mainstream dividing point between the Upper and Lower Basins, water supply data over the past 75 years has shown that a more realistic amount is about 15 MAF.

B. The Arizona, California and Nevada Apportionments

The next lower tier of “allocations” are those interstate “apportionments” of lower Colorado River mainstream water made by the Secretary of the Interior to Arizona, California and Nevada pursuant to the BCPA. Those apportionments were made by “master contracts” with the States of Arizona (1944) and Nevada (1942, 1944). The Secretary did not execute a master contract with the State of California, but the Supreme Court in Arizona v. California, 373 U.S.

546 (1963), held that the collective California contractual entitlements, infra, in conjunction with the California Limitation Act of March 4, 1929, effected such as apportionment.

A “normal year” apportionment of 7.5 MAF by the Secretary allocates 2.8 MAF to Arizona, 4.4 MAF to California, and 300,000 AF to Nevada, with increased deliveries in “surplus” years and reduced deliveries in “shortage” years. (It should be noted that the Supreme Court held in Arizona v. California that the 7.5 MAF normal year apportionment of Lower Basin mainstream water bears no relationship to the Compact’s apparent basic apportionment of 7.5 MAF to the entire Lower Basin, mainstream and tributaries). Here again, the predictions of future needs 70 years ago have not matched reality. Nevada’s requirements will exhaust its normal apportionment this year according to Bureau of Reclamation projections. Arizona’s apportionment did not envisage that a substantial portion of it would be dedicated by the Supreme Court to Indian tribes, or that its long planned Central Arizona Project, designed and authorized as a “rescue” project to restore seriously over-depleted groundwater basins and provide primarily agricultural water, would become essentially an urban and Indian water supply project. As to California, the other Basin States are seriously concerned about the extent of California’s use, which has ranged from 4.5 to 5.2 MAF over the past 10 years, and have urged California to find ways to live within its normal year 4.4 MAF apportionment when necessary. Fortunately, Article II(B)(6) of the Supreme Court’s decree in Arizona v. California, 376 U.S. 340, 342 (1964), provides that the Secretary may make a state’s unused apportionment temporarily available to another state on an annual basis, but with the express caveat that “no rights to the recurrent use of such water shall accrue by reason of [such] use.” California has long been meeting a portion of its requirements by use of Arizona’s and Nevada’s unused apportionments and, more recently, with its use of water which the Secretary has declared to be “surplus” under the 1964 decree. Those days will soon be gone, hence the development by California of its recently released “Colorado River Water Use Plan” to enable California to live within its 4.4 MAF normal year apportionment when required to do so.

C. The Individual Water Agencies' Federal Contractual Allocations

1. The Secretary's Unique Contractual Allocation Authority Under Section 5 of the BCPA

Section 5 of the BCPA provides that “no person shall have or be entitled to have the use for any purpose of the water stored [by the project] except by contract [with the Secretary].” The Secretary’s exclusive allocation authority under section 5 is unique in federal reclamation law, applicable to the eleven western states, which the Supreme Court has held requires the Secretary to comply with state law in the acquisition and administration of water rights for reclamation projects unless it conflicts with express provisions of the federal authorizing legislation, in which event the latter controls. (California v. United States, 438 U.S. 645 (1968)). The reclamation project water rights acquired by the United States are held in trust for the beneficiary project users, with the Secretary only a “storer and carrier” of water to the users, who acquire vested rights therein by its application to beneficial use, which section 7 provides is “the basis, the measure and the limit” of all rights under the Act. (Ickes v. Fox, 300 U.S. 82 (1937)). In Arizona v. California, however, the Supreme Court held that the Secretary’s role is substantially more than just a “storer and carrier” of the stored water on the lower Colorado River. Rather, he is the allocator of rights to BCPA water, just as state administrative agencies are throughout the West (except Colorado).

2. The California Allocations

(a) The Seven Party Agreement

The Secretary entered into the first water delivery contract under the BCPA with the Metropolitan Water District of Southern California (“MWD”) on April 24, 1930, an urban water district formed to contract with the Secretary for a water supply for the needs of the Southern California coastal plain. That action generated concern among the California agricultural agencies with claims to senior rights in the natural flow of the Colorado River under state law, who feared that MWD would obtain a senior federal contractual priority to their senior state appropriative rights. The dispute among the potential water contractors in California as to their entitlements to Colorado River water under the BCPA was resolved through the 1931 “Seven Party Agreement,” which provides as follows:

Priority No.	Agency and description	Annual quantity in acre-feet	
1	Palo Verde irrigation district-104,500 acres in and adjoining existing district-----		
2	Yuma project (California division)-not exceeding 25,000 acres-----		
3	(a) Imperial irrigation district and lands in Imperial and Coachella Valleys to be served by All-American Canal----- (b) Palo Verde irrigation district-16,000 acres of adjoining mesa-----	3,850,000	
4	Metropolitan Water District, city of Los Angeles and/or others on coastal Plain-----	<u>550,000</u>	[4.4 MAF]
5	(a) Metropolitan Water District, city of Los Angeles, and/or others on Coastal Plain----- (b) City and/or county of San Diego-----	550,000 112,000	
6	(a) Imperial irrigation district and lands in Imperial and Coachella Valleys to be served by All-American Canal----- (b) Palo Verde irrigation district-16,000 acres of adjoining mesa-----	300,000	
	Total-----	5,362,000	

A Seventh priority with respect to all remaining water available for use in California was apportioned for agricultural use in the Colorado River Basin in California as shown on map No. 23,000 of the Department of the Interior, Bureau of Reclamation.

The Secretary's allocation of 5,362,000 AF to the California agencies, even though California's normal year apportionment was 4.4 MAF, reflected future water supply estimates at the time which were expected to make substantial quantities of "surplus" water available, to which California was entitled to one-half. Those rosy estimates, coupled with the Agreement's grant to MWD of an exclusive right to "bank" its unused entitlement at Lake Mead (page 11 *infra*), persuaded MWD to accept a priority junior to the agricultural agencies. The Secretary incorporated the recommended entitlements into general regulations on September 28, 1931, and

later into the water delivery contracts with the California agencies. The fact that the Seven Party Agreement did not include (1) any proposed allocations for mainstream Indian reservations (except that the Fort Yuma (Quechan) Indian Reservation was to be served as part of the Reservation Division of the Yuma Reclamation Project) or (2) any specific quantities or priority dates for the individual agricultural agencies collectively sharing the first three priorities has produced several critical problems that have been the subject of intense negotiations in California over the past two years, which appear to have been resolved by the execution on October 19, 1999 of the "Key Terms for Quantification Settlement Among the State of California, Imperial Irrigation District ("IID"), Coachella Valley Water District ("CVWD") and MWD" (hereafter "Quantification Settlement").

3. The Arizona Allocations

In 1944 the Secretary and the State of Arizona entered into a master contract for the delivery to Arizona of a maximum of 2.8 MAF annually. Prior to and subsequent to that agreement the Secretary executed water delivery contracts with several Arizona mainstream federal reclamation projects. In 1968, Congress enacted the Colorado River Basin Project Act, 43 U.S.C. §§ 1501 et seq., which authorized the Secretary to construct the Central Arizona Project ("CAP") to enable Arizona to put to beneficial use that portion of Arizona's annual apportionment of mainstream Colorado River water not previously allocated. Although the 1964 decree in Arizona v. California had largely left to the Secretary's discretion the allocation of shortages among the three Lower Division States in years when 7.5 MAF was not available for apportionment, 376 U.S. at 342-43, the 1968 Act limited diversions by the CAP in such years to the extent necessary to assure the availability of 4.4 MAF for use in California. In 1972, the Secretary entered into a Master Repayment Contract with the Central Arizona Water Conservation District ("CAWCD"), a public entity created by the State of Arizona to contract with the United States for delivery of the CAP's water entitlement and to repay Arizona's share of the project costs. The CAWCD and the Secretary were then to enter into subcontracts with Arizona municipal and industrial (M&I) users and non-Indian agricultural users, while the Secretary would contract with Indian tribes.

In 1983, based on the State's recommendations and his own determination of tribal requirements, the Secretary established three categories of specific, individual allocations: 309,828 AF to twelve Indian tribes, 640,000 AF to eighty-five M&I users, and fixed percentages of "all remaining supplies" to twenty-two non-Indian agricultural users, whose priorities were junior to the Indian and M&I allocations. (48 Fed. Reg. 12447). He expressly retained the authority to further allocate any of the proposed allocations that were not contracted for, and he subsequently did so with respect to the non-Indian agricultural allocations. The Secretary also retained jurisdiction over any unused contractual entitlements until such time as they were needed by the contractors and stated that the amount of water that would be made available to the non-Indian agricultural users would include (1) the portion of the CAP supply not allocated to Indians and M&I users and (2) the unused portions of those senior allocations. The Secretary explained that under the second prong of that retained jurisdiction non-Indian agricultural water users were expected to contract for water available from the CAP which is not being utilized in the early years by the M&I and Indian contractors. Some of the non-Indian agricultural allocations are currently being reallocated to Indian tribes as part of the settlement of their claims in the Gila River stream adjudication.

4. The Nevada Allocations

Pursuant to the 1942 and 1944 master contracts, the Secretary entered into a number of water delivery contracts with private entities and public agencies. After the Southern Nevada Water Authority ("SNWA") was created in 1991 it subsequently entered into a contract with the Secretary which granted it the right to the unallocated remainder of Nevada's 300,000 AF apportionment and any Colorado River water made available due to reduction, expiration, or termination of any individual contractual entitlements, surplus water, and other states' unused apportionments. All of the demands within SNWA's service area are municipal.

In summary, urban municipal rights hold a very junior priority in California, are all at the top of the CAP's junior priority in Arizona, and are entitled to all of the Nevada allocation. Consequently, California and Nevada municipal users are currently at the forefront of efforts to find additional supplies, while Arizona remains concerned about its supply in "shortage" years because of California's 4.4 MAF priority under the 1968 Act.

II. The Response of the Municipal Users

A. California

The predicament MWD found itself in the mid-1980's was that over half of its 1.2 MAF contract entitlement from the Colorado River was dependent on unused Arizona and Nevada apportionments and surplus flows that were not likely to be available for any extended period. Coupled with the shortfall in supplies available under its contract entitlement from the California State Water Project, its firm supply was woefully inadequate to meet the requirements of the 15 million people then living in its service area, a population that has since increased by about 350,000 annually. Consequently, it instituted a major incentives program to induce its member agencies to promote installation of water saving plumbing equipment by their customers, as well as other conservation efforts of its own and by those agencies. These efforts are estimated to have conserved 480,000 AF through 1998.

In addition MWD and, later, one of its member agencies, the San Diego County Water Authority (whose 112,000 AF allocation under the Seven Party Agreement had been assigned to MWD in 1946), took the initiative on a number of major water transfers from the California Colorado River agricultural contractors. This effort was complicated by the fact that the Secretary of the Interior had never promulgated any federal regulations or guidelines for the transfer of water entitlements among the BCPA contractors. Although the Secretary was given broad regulatory authority in Arizona v. California over use of lower Colorado River mainstream water, no comprehensive program for administration of those entitlements was initiated until 1991, when the Bureau of Reclamation circulated for comment the first in a series of draft regulations which dealt, inter alia, with (1) the transfer of contractual entitlements with the approval of the Regional Director after consideration of a variety of factors, (2) criteria for beneficial use of entitlements, (3) reduction in entitlements due to nonuse, and (4) water conservation. Action on the Bureau's last draft of regulations (May 5, 1994) was suspended while Arizona, California and Nevada sought to reach agreement on a "regional solution" to their water supply problems, an effort that was also subsequently put on hold.

1. The All-American Canal Lining Project (Act of Nov. 17, 1988, Title II, 102 Stat. 4000, 4005)

Federal construction of the All-American Canal ("AAC") was authorized by the BCPA to deliver Colorado River water to the Imperial and Coachella Valleys in California. Legislation was proposed by MWD in 1988 based on the United States' authority to conserve and reallocate extensive seepage losses from the AAC pursuant to his authority under the BCPA. The California contractors would pay for canal lining or a new canal (all assumed it would be MWD) and would receive the conserved water by operation of the BCPA water delivery contract priorities, but other contractors would pay a pro rata part of the cost if they used a portion of the conserved water. In January 1990, IID purported to exercise its option under the statute to carry out the project, but made no contractual or financial commitment to do so. The project later became stalemated after IID declined to extend the time for obtaining approval of an IID/MWD agreement relating to construction of a concrete canal parallel to the existing AAC beyond December 31, 1995. Recognizing their community of interests, MWD and SNWA entered into a Memorandum of Understanding to share in the costs of the project and the conserved water, but that interstate effort was opposed within California and not pursued. The project now appears to be back on track after California enacted legislation in 1998 funding the conservation work on both the AAC and its Coachella Branch. Under the 1999 Quantification Settlement MWD would receive 77,700 AF of the conserved water from both lining projects and 16,000 AF would be used to facilitate the San Luis Rey Indian water rights settlement in San Diego County.

Mexican farmers claim to have established rights to use of the historic seepage waters from the AAC reaching adjacent groundwater basins in Mexico. The United States maintains that such seepage is surface water to which the United States is entitled under the 1944 Mexican Water Treaty and that it has the right to conserve those waters. However, as a matter of international good will, the United States has encouraged Mexico to consider conveying a portion of its entitlement under the 1944 Treaty in a lined AAC which would result in a water quality benefit to Mexico, although the question of payment for necessary diversion facilities is currently unresolved.

2. The MWD-IID Water Conservation Agreement (1989)

After a Bureau of Reclamation study estimated that 354,000 acre-feet could be conserved by IID through various improvements in IID's distribution facilities and water management programs, MWD offered to fund those improvements in return for the conserved water. An impasse in negotiations was finally broken by a decision by the State Water Resources Control Board that the "beneficial use" requirements of California law imposed a duty on IID to implement programs to conserve at least 100,000 AF annually. (Imperial Irr. Dist. v. State Water Resources Control Board, 225 Cal. App. 3d 548 (1990), cert. denied, 502 U.S. 857 (1991)). The SWRCB order triggered an agreement between MWD and IID, an approval agreement between MWD, IID, CVWD, and Palo Verde Irrigation District ("PVID"), and a supplemental agreement between MWD and CVWD under which MWD agreed to bear the capital costs, the indirect costs and the annual direct costs of fifteen conservation projects to be constructed by IID. In return, MWD would be entitled to divert from the Colorado River the resulting conserved water, estimated at approximately 106,000 acre-feet annually. The conservation projects were completed in 1998. Capital costs totaled approximately \$112 million, indirect costs totaled \$23 million, and annual direct costs for 2000 are estimated at \$5.4 million. However, although the amount of water conserved was carefully verified, IID's annual net diversions increased over that same period to the highest levels reported since 1964, which caused some consternation at MWD, among the other Colorado Basin States, and, for awhile at least, at the Interior Department.

3. The MWD-Palo Verde Irrigation District Land Fallowing Agreement (1992)

In 1992 MWD and PVID entered into a two-year trial program for MWD to pay participating PVID farmers located in the Palo Verde Valley along the Colorado River in California to take their lands out of agricultural production with MWD entitled to store the conserved water at Lake Mead. MWD paid about \$26 million for 186,000 AF of water saved under the program. However, the Bureau insisted that the conserved water be "top banked," which meant that it would be discharged with any flood releases from Lake Mead, and in 1997 it

was released and flowed to Mexico. Whether the Bureau will insist on that kind of banking arrangement with respect to anticipated land following programs in the future remains to be seen.

4. Water Banking at Lake Mead

In 1992 California proposed that the other Basin states permit MWD to receive its full contractual entitlement of 1,212,000 AF until 2010 while California gradually reduced its annual diversions of about 5.2 MAF to 4.4 MAF. In any year in which the sum of MWD's share of California's basic 4.4 MAF apportionment, and the quantity of unused Nevada and Arizona apportionments and surplus water could not permit MWD to divert its full entitlement, MWD would place into an escrow account, operated by the seven Basin states, money for each acre-foot of Colorado River water that it used in excess of the described sum. Those funds would be apportioned to each state to offset any impacts associated with MWD's excess use. In addition, building on California's successful experience with its Drought Water Bank in 1991, California proposed an Interstate Water Bank at Lake Mead operated by a forum created by the seven Basin states, which would store up to 6.8 MAF of unused Upper Basin water to help the states meet their individual and collective water supply needs during critical or emergency water supply periods. The responses of the other Basin states to the proposal were cool, expressing concern as to the amount California proposed to pay for surplus water and, most importantly, that the proposal could not be implemented within the existing "Law of the River." Consequently, the California proposal was not implemented.

Section 8 of the California Seven Party Agreement, incorporated in the Secretary's 1931 General Regulations and all of the California water delivery contracts, provides as follows:

Sec. 8. So far as the rights of the allottees named above are concerned, the Metropolitan Water District of Southern California and/or the City of Los Angeles shall have the exclusive right to withdraw and divert into its aqueduct any water in Boulder Canyon Reservoir accumulated to the individual credit of said district and/or said city (not exceeding at any one time 4,750,000 acre-feet in the aggregate) by reason of reduced diversions by said district and/or said city; provided, that accumulations shall be subject to such conditions as to accumulation, retention, release, and withdrawal as the Secretary of the Interior may from time to time prescribe in his discretion, and his determination thereof shall be final; provided further, that the United States of America reserves

the right to make similar arrangements with users in other States without distinction in priority, and to determine the correlative relations between said district and/or said city and such users resulting therefrom.

Substantially identical language in Section 9 of the Agreement also grants 250,000 acre-feet of accumulative storage rights to the City and/or County of San Diego, which were transferred to Metropolitan in 1946. MWD has never formally petitioned the Secretary to exercise its banking right, so its scope and any conditions the Secretary might impose on its exercise are uncertain.

5. The MWD, Southern Nevada Water Authority and Central Arizona Water Conservation District Agreement (1992)

In addition to MWD's situation, by 1992 it was recognized by the SNWA that the urban water requirements for the rapidly expanding Clark County/Las Vegas area would soon exhaust Nevada's 300,000 AF "normal year" apportionment. Consequently, MWD entered into an agreement with CAWCD providing for a demonstration project, in which SNWA later participated, by which MWD and SNWA would pay the CAWCD to store unused CAP water underground in Arizona and later make it available to the two agencies on specified conditions. CAWCD received a cash payment for each acre-foot of water stored and 10 percent of the stored water for retention in the groundwater basin. MWD and SNWA would exercise their rights by exchange, *i.e.*, CAWCD would reduce its diversions from the mainstream into the CAP aqueduct and MWD and SNWA would increase their authorized diversions by a like amount. MWD and SNWA have not had a need to exercise their rights to the water stored to date.

6. The IID-San Diego County Water Authority Transfer (1998)

In the mid-1990's San Diego County Water Authority (SDCWA), a member agency of MWD and its largest customer, determined that it wanted to acquire its own block of Colorado River water to meet its burgeoning demands. Since the mainstream water available to California was already overallocated, SDCWA negotiated an agreement with IID in late 1997 to purchase up to 300,000 AF of water annually from IID that would be made available as the result of conservation investments by IID and its farmers financed by the SDCWA payments. (The subsequent Quantification Settlement caps SDCWA's entitlement at 200,000 and provides for MWD to receive the next 100,000 AF of conserved water.) The effectiveness of the agreement

was contingent upon satisfaction of a number of conditions, principal of which was agreement by MWD to transport the conserved water to SDCWA through MWD's 242 mile long Colorado River Aqueduct ("CRA"). There was serious disagreement between MWD and SDCWA over appropriate transportation charges during the course of the negotiations, but the parties finally reached an agreement in November 1998. Under that agreement MWD will receive from SDCWA up to 200,000 AF annually of the water made available to SDCWA by IID pursuant to the SDCWA/IID conservation agreement. That water will be made part of MWD's common supply and MWD will deliver an equivalent amount of water to SDCWA from various MWD sources.

The exchange agreement is subject to a number of important conditions, including (1) California's enactment of legislation providing \$235 million to fund the lining of the AAC and its Coachella Branch, as well as conjunctive use storage programs necessary to implement California's recently released Colorado River Water Use Plan, (2) separate "quantification" of each of the first three collective agricultural priorities under the Seven Party Agreement, and (3) implementation by the Secretary of revised Lake Mead operating criteria that would make more "surplus" water available for allocation to California, Arizona, and Nevada under the decree in *Arizona v. California* to keep MWD's CRA full at least through 2015. As to those conditions, (1) the California legislation has been enacted, (2) the 1999 Quantification Settlement has, inter alia, established individual entitlement "caps" for IID and CVWD and allocated the burden of the 50,000 AF of Indian present perfected rights that were not addressed in the Seven Party Agreement, and (3) the Basin states seem close to agreement on revised surplus criteria.

B. Nevada

The SNWA's initial response to the prospect of Nevada's exhausting its basic Colorado River apportionment has been to maximize its access to internal Nevada supplies. One such effort involved filing appropriation applications on the Virgin River (a tributary to the Colorado River) and on groundwater in northern Nevada. While the groundwater applications are technically alive, they are (and probably will remain) on the deep back burner. SNWA has also acquired rights to an existing productive groundwater well and option rights to Muddy River water (another Colorado River tributary) currently being used for irrigation purposes.

The SNWA has also acquired additional Colorado River water from Southern California Edison Company (1993) and BMI (1994), holders of early priority contract rights to Colorado River water. In each case, the existing contract right was either terminated (Edison) or reduced (BMI), with SNWA then being able to divert such water under the provision of its existing section 5 contract entitling it to “any amount of Colorado River water becoming available by reason of the reduction, expiration, or termination” of any other Nevada entitlement to Colorado River water.

The transactions, however, were not sales of water in the classic sense. Edison’s contract, for example, was for cooling water for its Mohave Generating Station, a contract with a 2006 expiration date. Under its deal with SNWA, Edison agreed to the immediate termination of its contract in exchange for a commitment by SNWA’s retail purveyor members to deliver a lesser amount to the Mohave Station through 2026 (Edison also agreed to certain conservation measures). The purveyors’ commitments were backed by an agreement with the Las Vegas Water District (SNWA’s largest member) to store sufficient unused Nevada apportionment in the Las Vegas Valley groundwater basin to ensure the availability of water to meet the commitment to Edison for the extension period 2006 through 2026. The BMI agreement obligated SNWA members to deliver water to a BMI affiliate’s development in a quantity substantially lower than the quantity surrendered by BMI.

Both the Edison and the BMI transactions had an immediate benefit to SNWA beyond the eventual availability of additional water to SNWA (the Edison water would not become available until 2006). In each case, SNWA’s portfolio of water entitlements increased immediately upon execution of the agreements, thereby enabling SNWA purveyors to make delivery commitments extending significantly into the future.

SNWA has also had discussions with the AWBA about storing unused Arizona apportionment in Central Arizona, and SNWA expects to begin negotiations for such contracts as soon as AWBA receives negotiation authority from its board.

III. Arizona

In 1996 the State of Arizona created the Arizona Water Banking Authority (“AWBA”) to implement a program by which Arizona’s unused annual Colorado River apportionment from

the Secretary could be stored and later withdrawn for use in Arizona. It was also authorized to carry out a program for interstate banking patterned after the MWD/SNWA/CAWCD pilot program implemented in cooperation with the Secretary of the Interior.

In December 1997, largely at the initiative of SNWA, the Bureau published proposed regulations designed to permit Arizona to store its unused annual apportionment from the Secretary and later make it available pursuant to interstate agreements between authorized storing entities in Arizona, i.e., the AWBA, and authorized consuming entities in California or Nevada. After extensive comments on the proposal, a final rule was promulgated on November 1, 1999 entitled "Offstream Storage of Colorado River Water and Development and Release of Intentionally Created Unused Apportionment in the Lower Division States." 64 Fed. Reg. 58985. The regulations establish a framework for the Secretary's consideration, participation in, and administration of "storage and interstate release agreements" which would permit State authorized entities to store Colorado River water offstream, develop "intentionally created unused apportionment" (ICUA), and make it available to the Secretary for release for use in another Lower Division State pursuant to his authority under Article II(B)(6) of the 1964 decree in Arizona v. California. The AWBA has recently concluded that the Bureau's regulations adequately protect Arizona's interests and has initiated preliminary discussions with SNWA and MWD regarding implementation of the program.

IV. Possible Future Initiatives

A. Transfers of Indian Water Rights

In Arizona v. California the Supreme Court awarded impliedly reserved water rights under Winters v. United States, 207 U.S. 564 (1908), to five mainstream reservations in Arizona, California and Nevada (Chemehuevi, Cocopah, Colorado River, Fort Mojave and Fort Yuma) totaling over 900,000 AF of diversions for all of the "practicably irrigable acreage" on the reservations, even though historic usage was only a fraction of that amount. The Court did not address the issue of whether such tribal rights could lawfully be "marketed" off the reservations, nor has any court addressed that general issue since then. Non-Indian users contend that such rights may not be used off the reservations except pursuant to agreement of all affected parties.

A number of settlement agreements permitting off reservation use of tribal water rights have been approved by Congress on the Gila River System in Arizona.

During discussions among Arizona, California and Nevada in the mid-1990's seeking a "regional solution" to the Lower Basin's water supply situation, the Ten Tribe Partnership expressed an interest in marketing a reasonable portion of water that had historically been put to beneficial use on their reservations to off reservation users. The Ten Tribes are the Chemehuevi, Cocopah, Colorado River, Fort Mojave, Jicarilla Apache, Navajo, Northern Ute, Quechan, Southern Ute, and Ute Mountain Ute. The state negotiators did not reject that proposal, but the regional negotiations were later suspended. In early 1998, the Chemehuevi Indian Tribe, which had received a decreed water right in Arizona v. California for about 11,500 AF of diversions for its reservation in California, entered into an agreement to lease a land development company 5,000 AF of water annually for 25 years. The lessee purportedly hoped to sublease the water to MWD or one of its member agencies. The proposal lacked some important background information and raised a host of legal and policy issues, all of which the Colorado River Board of California and the Arizona Department of Water Resources emphasized in submitting comments in opposition to the proposal. MWD's separate comments characterized the timing of the proposal as "premature and counterproductive" in light of the critical negotiations on the California 4.4 Plan that were underway, but suggested that the Tribe seek to obtain agreement of the affected parties by demonstrating that none of them would be injured by the transfer of the relatively modest amount of water involved. No further action has been taken by the Tribe or the Secretary on the proposal.

When the Bureau proposed its offstream storage and exchange regulations in late 1997, the Ten Tribe Partnership opposed them because they did not afford tribes an opportunity to participate in the program. In its final rule the Bureau acknowledged that it did not expressly provide for tribal participation, but commented that "we fully expect the Lower Division States to enact measures that will allow the tribes to participate in opportunities covered by this rule." It further noted that "this rule does not specifically address or preclude independent actions by the Secretary regarding tribal storage and water transfer activities under other authorities." 64 Fed. Reg. 58990. While there may be valid reasons for not including the tribes at this time in the

Bureau's creative new program, it seems highly likely, if not certain, that they will ultimately become active players one way or another.

B. Leases of Upper Basin Water to the Lower Basin

As California and Nevada have struggled to meet their growing urban requirements over the past 15 years, at least three proposals for transfers of Upper Basin water to the Lower Basin for a defined term and subject to recapture on certain conditions have publicly surfaced: Galloway (1984), Resource Conservation Group (1989), and Roan Creek (1993). All have been opposed by most of the Upper Basin States and by some Lower Basin States as violating in one way or another the so-called "Law of the River," the array of interstate compacts, Supreme Court decisions, federal and state statutes, and the Mexican Water Treaty that govern the acquisition of rights in the waters of the Colorado River System. However, in my opinion the Law of the River is flexible enough to permit such transfers if the political will exists to do so. Moreover, it seems inevitable that such transfers will be part of the future mix of water supply sources needed to meet the municipal demands of California and Nevada. Thus, on some basis, through interim leases from Upper Basin water rights holders to Lower Basin users — not permanent partial allocations of Upper Basin apportionments under the Colorado River Compact and the Upper Colorado River Basin Compact — the Upper Basin will see the wisdom of getting paid for water that is now being released downstream, ends up in Lake Mead, and then becomes the subject of dispute over whether it is "surplus" or not, which the Lower Division States get for nothing. Utah has recently broken ranks with her sister Upper Basin States and expressed a willingness to discuss such arrangements and, indeed, has had such discussions with SNWA. I would expect other Upper Basin States to eventually follow suit.

V. Conclusion

"Necessity is the mother of invention," and necessity has certainly driven the initiatives undertaken by the municipal water users in Southern California and Nevada discussed in this paper (admittedly helped along by their relative ability to pay for needed projects). Any future arrangements for the transfer of Indian and/or Upper Basin water rights to the Lower Basin will require creative thinking to protect all affected Basin interests, just as the initiatives taken thus far have required, but I am confident that the Basin will be up to the challenge.