

It was a time of great plans and grand visions. The goal was to tame the Colorado River, to protect people from floods and put its waters to work irrigating cropland, supplying new industries and producing hydroelectric power for the West's booming cities. But before the dream of constructing large water works to further settle the region could become reality, the river's waters had to be divided. But how?

The Colorado already had been tapped by pioneer irrigators in the seven-state region. Each state wanted a share. Each state had its own needs. Each state viewed the others with suspicion and hostility. Yet without a multi-state agreement, the possibility of years of litigation stretched ahead. Too, there was fear among some that the federal government and its young Reclamation Service would usurp the states' rights, build its own projects and assume control of the water.

Against this backdrop, seven states' representatives joined then-Commerce Secretary Herbert Hoover at Bishop's Lodge in Santa Fe, N.M., on Nov. 9, 1922, for yet another series of negotiations about dividing the Colorado River's waters. After 17 sessions over the next 15 days, the Colorado River Commission emerged with the Colorado River Compact.

The compact was and remains a historic milestone. It was the first time more than three states negotiated an agreement among themselves to apportion the

The Colorado Compact: 75 Years Later

by Sue McClurg

waters of a stream. The compact provided for the "equitable division and apportionment" of the use of the waters of the Colorado River System by dividing it into two basins, the upper and lower basins. Other major purposes of the compact were "to establish the relative importance of different beneficial uses of water, to promote interstate comity, to remove causes of present and future controversies and to secure the expeditious agricultural and industrial development of the Colorado River Basin, the storage of its waters, and the protection of life and property from floods."

The compact attempted to look into the future and determine the water needs of the desert Southwest. But the signers could not foresee the immense urban growth, the technological advances and the interest in protecting the natural environment still to come 75 years later. Nor did they realize that the river's flow was insufficient to meet all the demand.

"We believed that the Colorado River carried sufficient water for present and future needs of the seven states and Mexico. The data from the experts were convincing," said Colorado State University Professor Dan Tyler, playing the part of Ward Bannister, a Denver attorney who closely observed the 1922 negotiations. "We were wrong. None of us anticipated the exponential development of industry and recreation, the growth of cities in the basin or the problems associated with irrigated agriculture in heavily salinated soils. What we truly concluded to be

sufficient water in the Colorado River for all needs for all time soon became a glaring shortage. The seeds of controversy for the Colorado River Compact were sown.”

The controversial issues of today – water for Mexico, American Indian water rights, endangered species, water quality and water transfers – and their relationship to the past were the focus of a special symposium organized by the Water Education Foundation. The May 28-31 event, *Using History to Understand Current Water Problems*, marked the pending 75th anniversary of the Colorado River Compact.

“The point of the compact was simply to make a fairly crude allocation of quantities of water for consumptive use. Ambiguities perhaps were inevitable. Certainly the lack of perfect vision into the future can be excused. So there are a lot of problems around that we have to solve today,” said David Getches, professor of natural resources law at the University of Colorado.

“The question is how to work within a framework of the compact and the rest of the law of the river to deal with the pressing issues that are on us,” Getches continued. “We’re dealing with questions of banking and marketing of water that were certainly not foreseen. The Mexican interest issues are going to get much larger as the future unfolds. ... We need to figure out how to work with the compact and get these problems solved. The compact was meant to be futuristic, and our concerns now ought to focus on the future of the Colorado River. ... To look at what we inherited to see how we can use it constructively for these wider needs in the future.”

If many modern-day issues were unforeseen when the compact was forged, others simply were not addressed. For the 1922 negotiators, it was a foregone conclusion that the federal government would continue its responsibility to the Americans Indians regardless of a Colorado River Compact. The commissioners intentionally chose to leave Mexico’s claims completely out of compact negotiations, and subsequently agreed unanimously to expunge from the record any debate on Mexico, leaving it to a later agreement.

It is these issues as well as the politics within the region that drive the debate today. At times, the rhetoric of 1997 parallels that of 1922 as the seven Colorado River basin states push for less federal government involvement when it comes to water use, water quality, transfers and instream flows, and water for American Indians tribes and Mexico.

The federal vs. states dynamic prompted one participant at the May symposium, attorney Jerome Muys, to wryly note that long-time water attorney Northcutt “Mike” Ely, who served in the Department of the Interior (Interior) during the Hoover administration, “was as much an ardent states’ righter as anyone I ever met. He used to say, in a very pragmatic way with a twinkle in his eye, ‘When you marry the U.S. Treasury, you get the federal government for a mother-in-law.’ So we recognize the reality of water resource development in the West.”

The desire for development is what prompted the states to meet with Hoover and negotiate a compact in 1922. As the U.S. Bureau of Reclamation (Bureau), which built the many dams and diversion facilities along the Colorado, follows its new mission of water resources management, the states, American Indian tribes, environmentalists and other interests must now address a new era.

This *Western Water* marks the 75th anniversary of the signing of the Colorado River Compact. The article includes a historical perspective on the compact negotiations, explores the law of the river, discusses current issues facing the upper and lower basins, and offers a glimpse of the future. Much of the content for this magazine came from the Foundation’s May symposium. The Foundation will publish the full proceedings of the symposium, which was tape-recorded, by the end of the year.

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History

It was 1922. In Washington, D.C., the Supreme Court unanimously upholds women's right to vote under the 19th Amendment, the U.S. Senate begins its first inquiries into what would become the Teapot Dome scandal and two California congressmen introduce the "Swing-Johnson Bill," better known as the Boulder Canyon Project Act. For the other six states within the Colorado River Basin, the latter development was another in the long



Then and now. Top, Commissioners at the 1922 signing of the Colorado River Compact. Seated is Herbert Hoover. Bottom, the seven states' representatives at the Foundation's 75th anniversary symposium.

list of southern California's dominance in population, water development and irrigated farmland. They, too, wanted large water projects for irrigation and hydroelectric power, and they feared that under the appropriative rights doctrine of water law that a dam at Boulder Canyon would give California prior right to the lion's share of the water.

When the bill was introduced, the states' representatives already were meeting with Hoover to negotiate an agreement among themselves. Those talks, which had begun in January 1922, had not been very fruitful to that point. By November, however, the mood had changed. Much of that was because Colorado representative Delph Carpenter had won support for an allocation of water between two basins rather than among the seven states.

"When all is said and done, it was Carpenter to whom all of them paid tribute for his steady hand in 1922,"

said Professor Tyler. "I know of no one who worked with 'the Silver Fox of the Rockies' who did not learn to admire the originality of his thinking, the exhaustive nature of his research, the courage of his convictions, and his insistence on what he called 'comity' – the need for courtesy and respect when negotiating among equals."

Today, it is generally accepted that the river is oversubscribed. One big reason for the disparity is the data upon which the compact and its supply yields were based. According to Tyler, the negotiators based their allocation and a plan to apportion the surplus in 40 years (Article III(9)(f)) on the mistaken belief that the river's yield was 20 million to 21 million acre-feet; actual annual flow is closer to 15 million acre-feet. There also is some evidence that the states exaggerated estimates of the amount of land that could be irrigated in order to gain more water.

Going into the negotiations, the upper basin states, Wyoming, Colorado, Utah and New Mexico, were fairly united in their main concern – to retain sufficient water upstream to allow for future development. "We wanted protection for our existing uses," said Tom Turney, state engineer of New Mexico. "But we also wanted protection of the water for future development, and we felt that the compact was the only way to secure that protection."

Each lower basin state, however, had its own goal.

California wanted a dam on the lower Colorado River for flood protection and hydropower production and an all-American Canal (that didn't go through Mexico) for the Imperial Valley. "It was apparent that the states recognized they had to make peace among themselves before Congress would go forward and authorize this huge federal project and allow these purposes to be met," said David Kennedy, director of the California Department of Water Resources.

Nevada also was interested in power production. It supported

construction of a dam by private interests, which would enable the state to tax the project and receive preferential power rates. In the end, the dam was built as a public facility.

As for water supply, Nevada state officials didn't believe a lot of crops would be grown, estimating a need for water for only 80,000 acres. "Any of you who have visited Las Vegas in the last few years know that we grow money there and we do not grow crops," said Richard Bunker, vice chair of the Colorado River Commission of Nevada, referring to Las Vegas' quest for more water.

Arizona was an early supporter of a compact, according to Rita Pearson, director of Arizona's Department of Water Resources, because it thought such an agreement would determine water allocations for each state and protect its tributaries from California. It didn't, and the state legislature refused to ratify the Santa Fe pact. "While Mr. Norviel did sign the compact in November on behalf of the state, by the time he got back home, there was a great deal of controversy as to whether or not the compact was, in fact, a good idea for Arizona," Pearson said. "And he had to live with the burden of being the signatory on that compact for many, many years to come."

The commissioners did not anticipate the criticism of their efforts. None of the states got everything it wanted during the negotiations and these absences attracted debate when the state legislatures discussed ratification of the compact. It was six years before a six-state Colorado River Compact took effect in 1929. Arizona didn't ratify the pact until 1944.

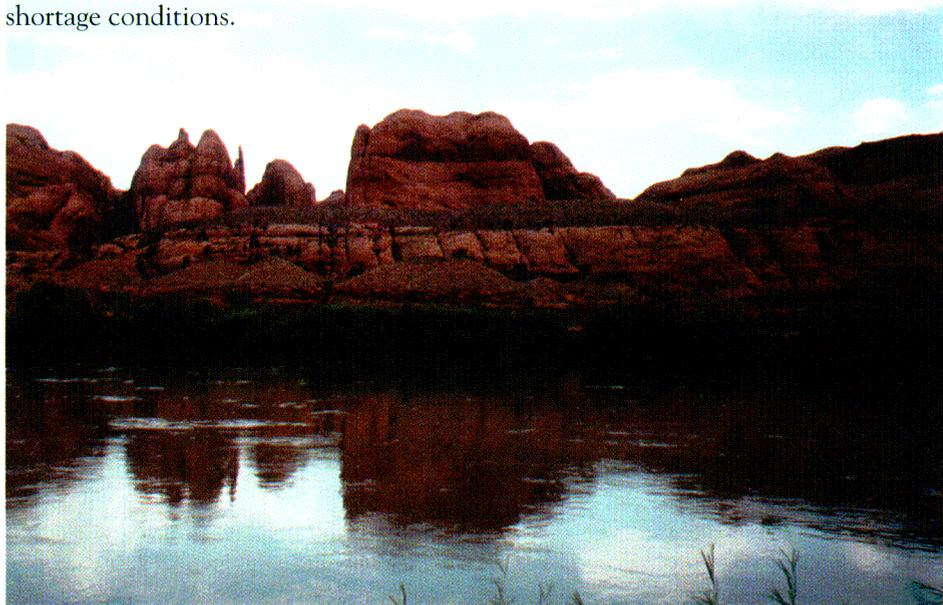
"The ratification looked like an opportunity to stop the compact," Pearson said. "It of course did occur, but I do not think the [later] limitation [on California] would have been imposed if Arizona had ratified the compact in its legislature back in the '20s. So there is definitely a blessing, to some extent, in our somewhat disagreeable nature historically."

The Law of the River

The Colorado River Compact is one component of what is commonly referred to as "the law of the river": the agreements, contracts, treaties, laws and court decisions that regulate use of Colorado River water among the seven basin states, American Indian tribes and Mexico.

In addition to the Colorado River Compact, the subsequent components of the law of the river include:

1. The Boulder Canyon Project Act of 1928, which authorized construction of Boulder Dam (later renamed Hoover Dam) and power plant and the All-American Canal.
2. The Mexican Water Treaty of 1944, in which the United States agreed to deliver 1.5 million acre-feet of Colorado River water to Mexico annually, except under surplus or shortage conditions.

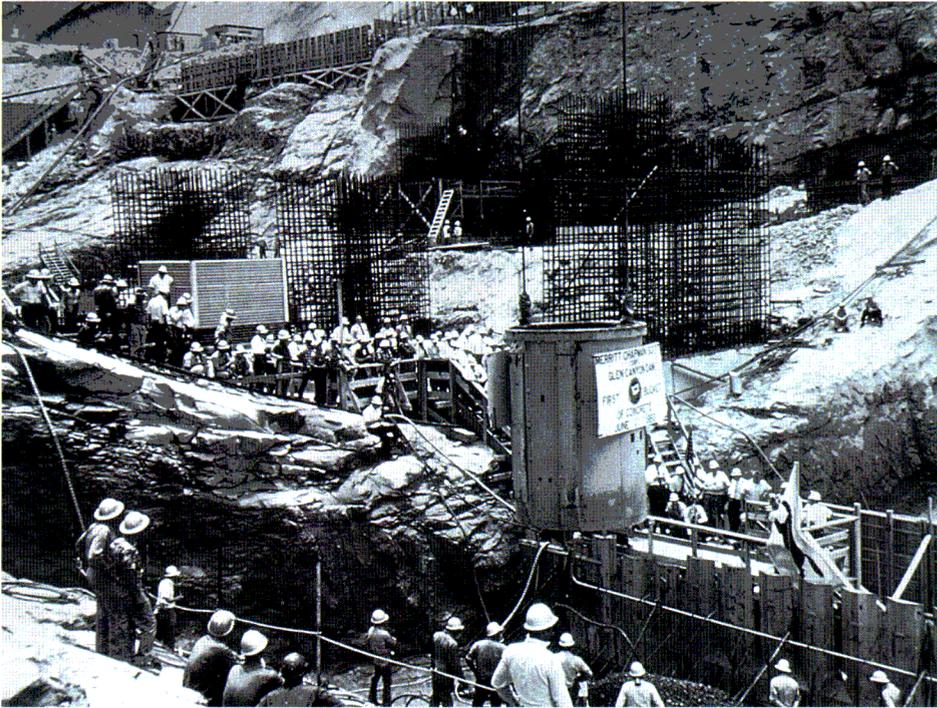


The Colorado River near Moab, Utah.

3. The Upper Colorado River Basin Compact of 1948, which apportioned the water among the upper basin states.

4. The Colorado River Storage Project Act of 1956, which authorized several storage reservoirs and dams in the upper basin and on tributary rivers.

5. The 1963 *Arizona v. California* U.S. Supreme Court decision, which resolved the lower basin apportionment among Arizona, California and Nevada.



First bucket of concrete at Glen Canyon Dam, which forms Lake Powell, just upstream of the Grand Canyon. The dam was completed and its gates closed in 1963; the reservoir did not fill until 1980.

6. The Colorado River Basin Project Act of 1968, which authorized the Central Arizona Project and limited its diversions during shortages to better assure California its annual 4.4 million acre-feet apportionment.

7. The “Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs” of 1970, which provided for the coordinated operation of reservoirs in the upper and lower basins and set conditions for water storage and releases from Lake Powell and Lake Mead.

8. Code of Federal Regulations, Title 43, Part 417, 1972, which requires that use of Colorado River water in the lower basin by an entitlement holder must not exceed the amount reasonably required for the beneficial uses authorized by the entitlement.

9. Minute 242 of the International Boundary and Water Commission, United States and Mexico, negotiated in 1973, requiring actions to reduce the salinity of water delivered to Mexico at Morelos Dam.

10. The Colorado River Basin Salinity Control Act of 1974, which authorized desalting and salinity control projects to improve Colorado River water quality.

The compact divided the river’s waters between the upper and lower basins, requiring the four upper basin states to send 75 million acre-feet of water over each successive 10-year period to the lower basin, equivalent to 7.5 million acre-feet each annually of “beneficial, consumptive use.”

“I think it’s useful to think of the compact as a kind of a constitution,” said John Leshy, Interior solicitor. “It’s a very broad framework of principles that, like constitutions, evolve over time and get fleshed out here and there. It’s a work in progress.”

Nevertheless, Leshy observed, “There are some notable silences in the compact, probably some intentional, some not. The compact is silent on marketing, for example, and interstate or interbasin transfers. We now argue about that issue in terms of the compact’s definition of ‘beneficial consumptive use,’ which, by the way, is not defined in the compact. It’s silent on water quality, which also has some modern reverberations. It’s silent on groundwater which, in particular parts of the basin, is an emerging issue.”

As the Southwest works to address today’s issues, debate centers on whether the law of the river is flexible enough to handle these issues, such as the question of marketing. The environment, rafting and other recreational concerns also play a bigger role in the watershed than they did 75 years ago.

While some would argue that the compact is too rigid to handle these issues, others contend the components of the law of the river are proof that flexibility does exist where it is needed. “Many unexpected events have happened over a relatively short time span,” said Gary Weatherford of the law firm Weatherford and Taaffe. “It’s been incremental change, but it’s been really very dramatic when you look at it in a cumulative sense, and it’s all occurred at the foot of that statutory, the law of the river. So somehow we’ve been able to change in spite of that monolith.”

Current Issues

The current debates among the basin states, American Indians, Mexico and environmental interests center on one point – the demand for more water in a basin that already is oversubscribed. As in 1922, it is the lower basin that drives the debate.

The three states, California, Arizona and Nevada, came close to using their full 7.5 million acre-feet apportionment for the first time in 1990 and subsequently in 1996. They are expected to again consume close to 7.5 million acre-feet in 1997.

With Las Vegas' current and projected growth rate, California's obligation to reduce its reliance on unused Colorado River water and Arizona's need to repay the costs of the federal Central Arizona Project (CAP), pressure is increasing. For the upper basin states, the atmosphere is similar to that of 75 years ago when they feared the rapidly developing lower basin would usurp the water before they had developed to the point of using their share.

"Development will largely occur if the economic circumstances are there in the upper basin and there's going to be a point at which there is a shortage., The question is going to be at that point, 'How is that shortage going to be allocated?'" said David Lindgren, attorney at Downey, Brand, Seymour and Rohwer.

"One element of that question is, 'What are the respective rights between the two basins?' Still, you must now figure out how to allocate insufficient supplies across the entire basin. And that's a point where we haven't been yet," he continued. "Comments on the compact working so well are very well taken, but it is only now at the point where it is becoming stressed. Now is going to be the interesting time when we find out whether it really does provide the framework so that we can all go forward when there are insufficient supplies."

Water for Mexico

In its natural state, the Colorado River's 1,440-mile journey from its headwaters northwest of Denver ended at the Gulf of California in Mexico. With all the dams, reservoirs and diversion facilities within the basin, the river's flow is fully controlled and appropriated. Most years, the river ends long before the gulf.

When the Colorado River Commission drafted the compact, its members chose not to address the issue of water for Mexico. Carpenter, for one, felt that he could not consistently argue the doctrine of equitable apportionment for part of the river without applying the same principles to the entire basin along its journey, including water for Mexico. Perhaps knowing that such a task would condemn the 1922 negotiations to failure, the commission chose to save that topic for another day. That day was planned for, however, in Article III(c):

"If, as a matter of international comity, the United States of America shall hereafter recognize in the United States of Mexico any right to the use of any waters of the Colorado River System, such waters shall be supplied first from the waters which are surplus over and above the aggregate of [the basin division]; and if such surplus shall prove insufficient for this purpose, then the burden of such deficiency shall be equally borne by the

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attorney**

Surplus and Shortage

Over the years, California has relied on unused Colorado River water to augment its annual 4.4 million acre-foot apportionment. Under the *Arizona v. California* Supreme Court decree, the secretary of the Interior has the authority to declare annual, normal shortage or surplus conditions in the lower basin and determine the disposition of the basin's water. Until mid-1996 the extra water California was using was solely from the unused apportionments of Nevada and Arizona.

In July 1996, Secretary Babbitt declared the first formal surplus under the Annual Operating Plan, allowing California to take 5.2 million acre-feet.

If there is not enough main-stream water to meet the basin's normal annual 7.5 million acre-foot apportionment, the secretary can declare a shortage, in which case California would receive no more than 4.4 million acre-feet. To date, no secretary has ever declared a shortage.



upper basin and lower basin and wherever necessary the states of the upper [basin] shall deliver at Lee Ferry water to supply one-half of the deficiency so recognized.”

In 1944, the U.S. and Republic of Mexico signed the Mexican Water Treaty in which the United States agreed to deliver 1.5 million acre-feet of Colorado River water to Mexico annually except under surplus or shortage conditions. Today, according to Mike Clinton, general manager of the Imperial Irrigation District (IID), the Mexicali Valley is using somewhere between 2.25 million acre-feet and 2.5 million acre-feet, the difference coming from groundwater.

Among the seven basin states, the overriding issue is interpretation of the delivery obligation contained within Article III(c), and whether the upper basin is responsible for any evaporation and conveyance losses between Lee's Ferry and the Mexican border.

“The compact guarantees the lower basin 75 million acre-feet of water in any rolling 10-year period. To make these deliveries, we release a minimum of 8.23 million acre-feet per year,” said Charley Calhoun, regional director of the Bureau's Colorado River upper basin division. “The upper basin states may tell you they are not responsible for making water available to Mexico.

“Over the years there has been plenty of water in the system and the states, other than California, have not taken their full share,” Calhoun continued. “However, as California wrestles with its fellow lower basin states and as California interests wrestle even among themselves concerning what [Interior] Secretary Bruce Babbitt calls ‘serious unresolved controversies between agricultural agencies and among the urban water suppliers,’ the upper basin states may be rethinking their views.”

To date, water for Mexico has come, in part, from unused upper basin flows. Upper basin states, however, maintain that their goal is to fully develop to use their full entitlement,

perhaps lessening the amount they contribute to Mexico.

“The discussions in Utah have always been along the lines that the upper basin's obligation is no more than 75 million acre-feet every 10 years, and that the lower basin tributaries are included in the Mexican treaty obligation,” said Dallin Jensen, former solicitor general of Utah. “I am not convinced that the upper basin states will concur that [they] have the obligation to supply half of the conveyance losses to the border. I think there's an argument under the compact that the obligation of the upper basin is to deliver its share at Lee Ferry.”

Another major concern on Mexico's part is the salinity of its supply. “Mexico said that the water treaty was a treaty concluded for the utilization of the waters of this river, and therefore the waters delivered to Mexico should be usable waters,” said Robert Ybarra, U.S. foreign affairs officer for the International Boundary and Water Commission (IBWC), the two-country commission that ensures terms of these agreements are met. “The United States recognized that there was only so much water available when the negotiations took place – this is after the compact – and knew that a large part of the contribution to Mexico would be made out of drainage waters. Therefore, the clause ‘any and all sources.’”

While salinity was addressed in a later agreement, groundwater use was not. Groundwater use is a concern because as the United States pursues efforts to line the All-American Canal to prevent seepage and conserve water, it will reduce the amount of groundwater within the aquifer along the U.S.-Mexico border upon which many Mexicans rely.

“We have challenges with Mexico that I don't think we have begun to recognize,” Clinton said. “So as we look at this transition from the dream of the compact coming true to where we go from here – that's one of the challenges we in this nation need to address and consider.”

Salinity

The Colorado River carries 9 million tons of salts annually. Salts leach into its waters from the natural landscape. Return flows from agriculture and other uses contribute more salt. Extreme salinity can damage soil and crops and corrode pumps, household plumbing and machinery. Highly saline water is not suitable for municipal water, industrial or agricultural uses without extra – and more expensive – treatment to remove minerals. Yet the compact did not address water quality.

According to Jack Barnett, executive director of the Colorado River Basin Salinity Control Program, there are two possible reasons for its absence in the compact. “One, they didn’t think about it. Another, they knew so little about it that they couldn’t talk intelligently about it. I tend to believe that they knew there was this water quality problem, but that would really be the straw that would break the camel’s back so they left it for some of us to come to later.”

That time came 50 years later when water quality moved to the national agenda through passage of the 1972 Clean Water Act. The U.S. Environmental Protection Agency (EPA) called for Colorado River salinity standards to be imposed at the state line boundaries. The states objected and instead lobbied for a basin-wide program.

By 1974 the Colorado River Basin Salinity Control Act had passed and the seven states had formed the Colorado River Basin Salinity Control Forum. Numeric criteria require that the salinity not increase over 1972 levels at three downstream measurement points. Salts must be reduced by about 1.6 million tons to maintain the numeric criteria as the river gets further developed.

About \$400 million has been spent on salinity reduction programs. Barnett said the salt load has been reduced by about 60 parts per million. These programs are operated by the Bureau, Department of Agriculture and Bureau of Land Management

(BLM) to a tune of \$20 million annually.

The most controversial salinity control feature is the costly desalination plant that was constructed near Yuma, Ariz. The plant was built to desalt some Colorado River water after its use in two nearby irrigation districts prior to the water reaching Mexico. The plant has never operated as it was designed.



Environmental Issues

The mindset of the '20s was to develop the river, develop the land. It was not until the 1960s and '70s that society’s values shifted toward environmental protection. But if the past decades were focused mostly on water development in the Colorado River Basin, the next generation of issues are environmental issues. An increasing number of these issues relate to recreation – beach destruction and rebuilding in the Grand Canyon, fishing, and the issue of flows for river rafting vs. flows for power generation. On the horizon is talk of restoring the Colorado River Delta.

“These issues are representative of a change in social values toward more protection for the environment. It’s broad-based, and it’s not going to go away,” said Tom Moody of the Grand

Beaches in the Grand Canyon were restored during the 1996 spring spike in which 360,000 acre-feet in seven days poured out of Glen Canyon Dam to simulate natural flooding.

Canyon Trust. “It doesn’t mean that there’ll be no change and no pain. Change is going to come no matter what. ... It’s in our best interest as managers and users, it’s in everybody’s best interest, to work from that point.”

The foremost topic, however, is the Endangered Species Act (ESA) and efforts to restore populations of four Colorado River fish, the humpback chub, bonytail chub, razorback sucker and the Colorado squawfish. Cooperative efforts are underway to address protection for the four endangered fish. In 1988 the upper basin states and federal officials signed the Upper Basin Recovery Program to implement the ESA. Earlier this year, the lower basin states joined with Interior to develop a comprehensive 50-year basin-wide approach to species conservation on the lower Colorado River.

Despite these programs, some believe the real solution is more instream flows – a thorny issue when one considers the fact that the river already is oversubscribed.

“What rivers need, more than anything else, is water,” Moody said. “That’s the key. I don’t know the present mechanism or the fair way to do it, but some water needs to be allocated to the river. The least painful and the most flexible means of doing so should be the one that we adopt. But that water needs to come from those people – entities – that are currently using the water out of the river.”

Since the upper basin states have not fully developed their share of the water, any required increase in flows to restore the fish could make it more difficult for them to further develop their water supply.

“If you’re in a state where the water has not been developed and you’re still looking for projects, you are facing a different situation,” Jensen said. “While these laws obviously don’t

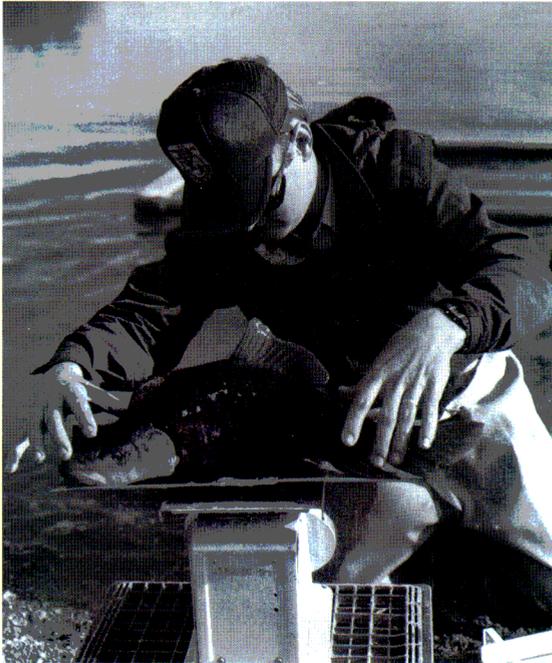
purport to do anything to the compact, there may be a de facto reapportionment. I think the states, the water districts and the users are doing some innovative things to try to address these issues to allow the use of additional water. But the real question is, in the end, ‘Will a state be able to use all of its compact allocation?’”

How ESA required flows fit with the other components of the law of the river was a matter of great debate at the May symposium.

“Does the law of the river trump the Endangered Species Act or vice versa?” asked Bill Swan, former field solicitor for Interior. Referring to a BLM case in which a right of way predated the ESA, Swan noted that the Ninth Circuit Court in *Sierra Club v. Babbitt* ruled that the ESA was not meant to be retroactive. “That’s a very important decision, and I don’t think we have fully analyzed the impact of that decision,” he said. Noting that the lower basin’s water projects and contracts predate the ESA, Swan said he did not believe a judge would have the authority to order significant changes in water project operations, based on the *Sierra Club* decision.

Based on that argument, endangered species demands appear to have greater impacts in the upper basin, which is still awaiting full development. Another possible party to be affected are American Indian tribes within the basin because they have not fully developed their water or seen promised water projects completed.

“The way the ESA has been administered and operates, it essentially affects most greatly the realization of Indian water claims. These claims are legally the most senior in most cases so you have this odd and ironic situation that the senior water right holders suffer the most from efforts to comply with the ESA” Leshy said. “From the standpoint of equity, the tribes have a really good case to make that they’re being asked, in effect ... to bear the greatest burden in these situations. I’m not sure that that’s fair.”



Efforts to save four endangered fish, including the razorback sucker, above, have prompted the formation of upper and lower basin multi-party, multi-species recovery plans.

Indian Water Rights

Negotiations on the Colorado River Compact began 14 years after the U.S. Supreme Court decision in *Winters v. U.S.*, which established the Winters Doctrine. The Winters Doctrine holds that all federal American Indian reservations carry an implied and unquantified right to water sufficient for the reasons for which the reservation was created. (Subsequent decisions declare that the implied right is not lost by nonuse, is not subject to diligence and beneficial use requirements, and assumes the date of creation of the reservation as its date of priority.)

The negotiators were aware of the 1908 decision as is evident by Article VII of the Colorado River Compact which reads, "Nothing in this compact shall be construed as affecting the federal obligations of the United States of America to Indian tribes."

But the water rights were unquantified and in a basin that will eventually be water short, the need to quantify water for American Indians is a controversial issue.

"The compact was notable because it was the first time, and perhaps the last time, water was apportioned by mutual agreement between the basin states, but it was not an agreement that included the federal government or the Indian tribes," said Daniel Eddy Jr., tribal chairman for the Colorado River Indian Tribes. "It did not factor in the tribes in any way. The most important issue to be addressed after the compact was 'how much water do the tribes get.'"

It is a question that remains unresolved in 1997. Even in the lower basin where the 1964 Supreme Court decree *Arizona v. California* addressed the water rights of the tribes along the main stream of the lower Colorado River (allocating them about 900,000 acre-feet annually), issues still are outstanding regarding that case. In the upper basin, the Navajo Nation remains "the sleeping giant" as it contemplates filing suit to claim a water right some have estimated as

great as 5 million acre-feet annually. (In the 1950s and '60s, the Navajos waived priority rights to San Juan River water in exchange for a federally funded irrigation project and agreed to limit their share of Colorado River water in exchange for construction of a power plant on their reservation, but have since hired attorneys to prepare a water rights case.)

"The Navajo Nation has often been referred to as sort of the sleeping giant in the Colorado River Basin. We have these very, very large, yet unquantified claims," said Stanley Pollack, who represents the Navajo Nation. "We're cognizant of that.

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Colorado River
Indian Tribes**

We're also cognizant of the fact that we need to work with our non-Indian neighbors ... to get tribal water development. We're very interested in trying to not only complete the promises that were made in terms of the Navajo Indian Irrigation Project, but also trying to bring tribal water development to tribal members throughout the reservation where half of the people still haul water."

Tribal water development is a key issue. Over the years the tribes have had difficulty in developing their full share of water for farming because of economic limitations. This is an issue not only because of the need to develop jobs on reservations, but also because of what is perhaps the most

controversial issue regarding American Indian water rights – the marketing of that water to other users.

"Water marketing is a tool to extract the greatest benefit from a portion of the tribe's water rights and return that benefit back to the tribes and the surrounding non-Indian communities," said Gary Hansen, water resources director for the Colorado River Indian Tribes. "Marketing to the tribes is a highly effective business practice. It is not a diabolical scheme, and it is not some trick to somehow take what is not already the tribe's property. It is an effective business practice that could be very beneficial to the tribes."

Other users within the basin, however, question whether American Indians legally can move water across state lines. "We do not believe that Winters rights water can move across state lines," said Arizona's Pearson. "The Supreme Court ruled that when Congress created reservations they necessarily and implicitly reserved sufficient water to fulfill the purpose of the lands. Therein lies the bugaboo – what is the purpose of the lands? Many would argue that the purpose of the lands means putting the water to use on the reservations. An equally legitimate argument can be raised that if you can develop an economic benefit from the use of that water

off the reservation, that it fulfills the purpose of the reservation. To my knowledge there are no court cases that definitively answer that, so it's up in the air. But in *Arizona v. California*, the court did quantify the rights under the Winters Doctrine with a PIA standard, Practicably Irrigable Acreage."

Others suggest that that lawsuit is still to come. "I think the day will come when we will have a transfer between a tribe and another entity," said Bob Johnson, regional director of the Bureau's lower Colorado region. "I think it will be hotly debated then, and I think in fact there will be a court process that will ultimately resolve the issue."

“Water is a unique commodity. I think it’s dangerous to talk about it in economic



terms without acknowledging that there’s no substitute good out there.”

**– Rita Pearson
Arizona DWR**

Water Marketing

Transfers – moving water from one user to another – are seen as one solution to meet future demands in the Colorado River Basin. The 1922 negotiators did not include language about transfers in the compact, and 75 years later, it is water marketing that generates the most debate about revisiting and possibly revising the compact and the law of the river.

“The decision to utilize a compact for making the first cut at dividing the water of the basin has had a number of major consequences,” said Larry MacDonnell, former director of the Natural Resources Law Center at the University of Colorado School of Law. “One of the more obvious is that it’s created a dynamic of upper vs. lower basin. The other dynamic it created is it put the states themselves in a particularly important role with respect to the allocation of the river. I think the effect has been that the states have viewed the water of the river basin as ... kind of a patrimony. That the states carry a special burden, or a special mandate to wisely use that patrimony for the best interests of its own residents.”

Although transfers between upper and lower basin states have been suggested, debate today centers on two more likely transfers in the lower basin – California’s IID-San Diego County Water Authority (SDCWA) proposal and the Arizona Groundwater Bank. Politically, these proposals have won some support from other basin states, but they await changes in current Colorado River operations. Arizona designed its proposal to require a federal rule authorizing the transfers. California officials are expected to work out their own agreement over water entitlements, but may come to the federal government for approval. If they don’t work out their differences, it is possible Babbitt could order a change in California’s water use.

Because the secretary serves as the watermaster of the lower basin (the upper basin states established the Upper Colorado River Commission

in 1948 to oversee water use), the federal government has more authority over interstate transfers. “We think it’s pretty clear that the secretary can make binding commitments to deliver transferred water to the transferee as unused apportionment pursuant to an agreement between two states,” Johnson said.

This will, however, require the development of new regulations. A draft of lower basin regulations developed by the Bureau in 1994 concerning, among other things, interstate transfers, was never adopted. This year the Bureau is drafting a narrower proposal to allow for Arizona’s groundwater banking program (see page 16), and they are expected to be adopted next year.

So far, the California intrastate transfer and the Arizona groundwater banking plan have generated political support. However, only time will tell whether these proposals win ultimate approval and if the politics of the basin will allow for other water marketing plans to proceed.

“I don’t think full-blown marketing is acceptable today. I doubt seriously it’ll be acceptable in the future,” said Arizona’s Pearson. “I think there is always going to be some need for a regulatory framework within which water can move. ... Water is a unique commodity. I think it’s dangerous to talk about it in economic terms without acknowledging that there’s no substitute good out there. You cannot simply exchange one good for another.”

Others disagree. For the future, Debra Man, chief of planning and resources at the Metropolitan Water District of Southern California (MWD), predicts the establishment of a viable water market. “Water transfers are not an item addressed in the compact, and yet they will probably be the single most important driving force that will redefine our thinking in how the compact, how the seven-party agreement and how the decree between Arizona and California will apply to the future,” she said.

California Update

In 1931 California's seven Colorado River parties – IID, Palo Verde Irrigation District (PVID), Coachella Valley Water District (CVWD), MWD, the Los Angeles Department of Water and Power, and the city and county of San Diego – developed their own agreement to apportion the state's share of the water. They included an apportionment to the Yuma reservation division in that agreement. Today, the city and county of San Diego are represented by one entity – the SDCWA.

Sixty-six years later, California is again facing the challenge of determining how it will administer its annual apportionment. Today, however, the focus centers on how those users can better manage their Colorado River supplies. The key is twofold: water conservation in the agricultural sector and water transfers to the urban sector.

That solution will require changes in water allocation to establish some sort of "quantification" of the irrigation districts' water entitlements. Currently, the districts, PVID, the Yuma reservation division, IID and CVWD, have rights to 3.85 million acre-feet of California's 4.4 million acre-feet allocation. However, there is no set allocation for each district. This has generated controversy over IID's 1989 agreement with MWD to conserve 106,000 acre-feet of water annually, which, in turn, goes to MWD. Despite the conservation measures, IID's water use has increased. In order for any future transfers to proceed, IID must be able to measure its water use to determine how much has been conserved and how much is available for transfer.

"I don't think anybody contests that conservation is happening," Clinton said. "However, IID's farmers, who are businessmen, make their livelihood on beneficially using their water. Because of the commodity market, because of the situation where they can make money growing crops, they're farming their land more

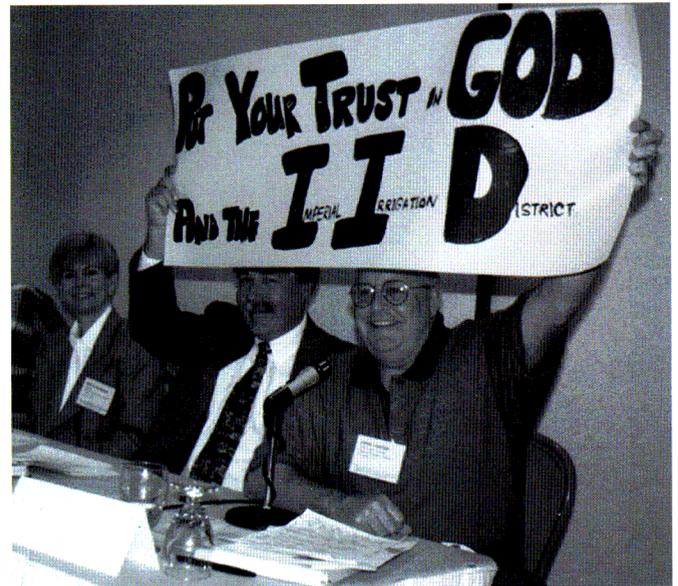
intensively than they were five, 10 years ago ... [and] our water use has gone up quite significantly."

The pieces of the puzzle are complicated. IID wants to conserve some water and sell it to SDCWA. Coachella claims first rights to the conserved water and wants a specific guaranteed amount. SDCWA wants to transport the conserved IID water through MWD's Colorado River Aqueduct. MWD wants to ensure that it retains sufficient financing for its system.

The controversies in the state have been increased by pressure from outside forces. Interior Secretary Babbitt has called upon the state to develop a plan to live within its 4.4 million acre-feet entitlement (currently the state uses about 5.1 million acre-feet) before he proceeds with criteria governing future long-term use of surplus water in the lower basin.

"California must work out among its own water agencies a plan that will allow it to live within its entitlement," said Patricia Beneke, assistant Interior secretary for water and science. "Interior is playing a significant role in this effort, and we are hopeful some consensus-based solution will be forthcoming soon. Failure is just not in our mindset on this, and we're prepared to take appropriate action to achieve an acceptable plan."

California DWR Director Kennedy has been called in to mediate and help develop a California plan supported by the state's Colorado River users. At the May symposium, Kennedy released a draft water budget in which the group identified 750,000 acre-feet to 900,000 acre-feet of potential water savings through conservation, dry-year following



Playing off the historic saying "Put your trust in God and U.S. Reclamation," IID's John Penn Carter, right, unveiled the modern equivalent at the 75th anniversary symposium. Helping to hold the sign – albeit a bit reluctantly – is the Bureau's Robert Johnson. Looking on is Rita Pearson, Arizona DWR.

agreements, canal seepage recovery, conjunctive use and desalination of drainage water.

“There’s going to be quite a few drafts of this, but we’re looking for feedback,” Kennedy said. “We’re sharing it with our friends from the other states to get feedback to try and put some meat on the bones here. While our discussions have been private discussions in one sense, we’re trying to make this as open as we can. We know there’s a lot of people with an interest in what we’re doing, both within the state and in the other states.”

“Five years ago if I would have wanted to talk about an Arizona banking proposal, I would have been run out of the room with rifles and shotguns.”

**– Pat Mulroy
Southern Nevada Water Authority**

Although the budget identified potential sources of conserved water, it did not reveal who would benefit from this transferred water, what the price would be for the water or how the water would be relocated from the agricultural entities to the urban users. These are all questions being discussed in the regular meetings.

“In these discussions, it is recognized that the rights of the individual agencies must be protected and that the transfer of water from the agricultural areas to the urban areas must be accomplished in concert with maintaining a strong and viable agricultural economy within southern California,” said Jerry Zimmerman, executive director of the Colorado River Board of California.

Arizona Groundwater Bank

In 1996, Arizona began storing up to 400,000 acre-feet of its unused CAP entitlement in underground aquifers. The bank emerged as MWD and the Southern Nevada Water Authority discussed a controversial plan to use the state’s unused water. Today Arizona is inviting Nevada and California to participate in the bank in a limited fashion.

“I think five years ago if I would have wanted to talk about an Arizona banking proposal, I would have been run out of the room with rifles and shotguns,” said Patricia Mulroy, general manager of the Southern Nevada Water Authority. “Today there are open discussions about the state of Nevada participating in a water bank in Arizona – actually banking water for Nevada’s future use in the state of Arizona. That is the kind of relationship and interdependency that is going to shape the future in the lower basin, at least the way we view it.”

According to Pearson, Arizona developed a three-prong approach in creating the bank. First, it passed a state law to allow an interstate bank to use its Colorado River entitlement. Second, it created a state authority that has contracting power to sign long-term water supply contracts with Nevada and California. Third, it approached the federal government to create a set of federal regulations endorsing the water bank so that water could be delivered to the other states.

Interior supports the plan and is now preparing draft regulations to allow for the bank and the sharing of water in the lower basin.

“The Arizona Water Banking Authority is a classic example of flexibility,” Swan said. “They have created something and the secretary’s saying, ‘I will help you work on the regulations to make that work for interstate transfers.’ Now that’s going to be a bit of an argument among the three states there, but at least the secretary is moving in the direction of ‘yeah, I think I’ve got the flexibility.’”

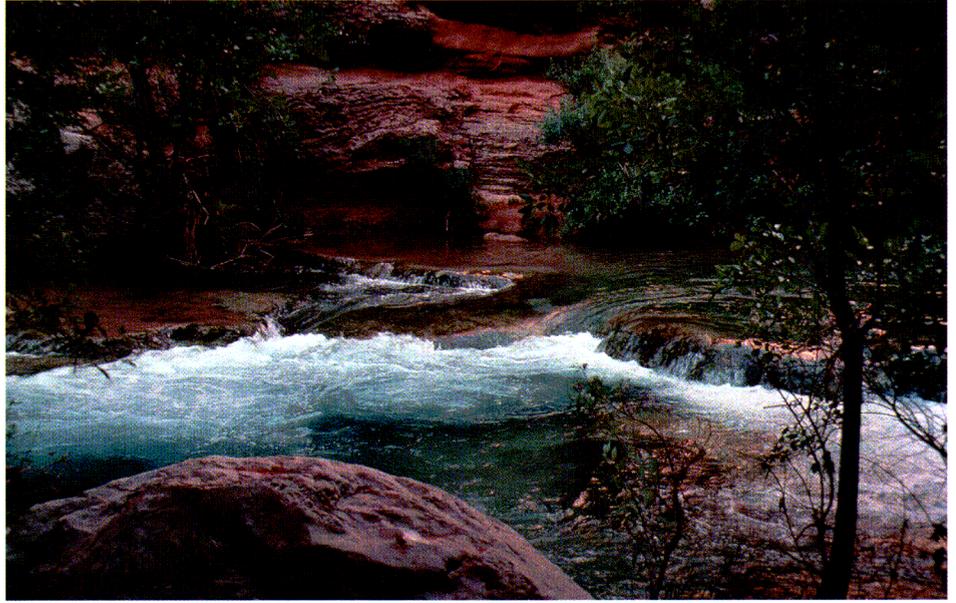
The Future

Controversy has always been part of the Colorado River story. Seventy-five years ago, conflict gave way to cooperation as the seven states forged the Colorado River Compact. Continued controversy is no doubt in the future. Whether it will lead to conflict or cooperation remains to be seen, but those who attended the symposium at Bishop's Lodge stressed the need for collaboration to address the increasingly complex issues.

Major questions remain to be solved regarding Mexico's water allocation; salinity control; rafting flows and endangered species protection; American Indian water rights and transfers; and whether users, states and basins should be able to freely move water from one user to another. In the past, the approach to issues within the basin has been a mix of negotiation, litigation and legislation. Today, partnerships have been formed to address some issues and negotiators are discussing water marketing. Lawsuits, however, remain a potent tool for the competing interests to get what they want.

"In the environmental issues and in working out the Indian water rights issues it is imperative that we stay with the process, that we not turn over the decision-making process to courts who tend to take all-or-nothing views," said Tom Hine, an attorney for the Arizona Power Authority. "The history of the river, the development of the river is an evolving process. We are faced with different problems this year than we were five, 10, 15, 20 years ago. We need to handle them as they come up."

Whether these events will require actual change to the compact and the other components of the law of the river remains to be seen. "The compact set into this rigid pattern that these state lines would be terribly important and that states would be apportioned and you all had to live with it," said former Interior Secretary Stewart Udall. "And I'm not here to suggest we change it. I'm just saying, let's be realistic. That's a very rigid system.



And we've somehow made it work, and that's where we are."

Another key issue is the relationship between the states and the federal government. The fear of federal control over water was one element that led to the compact even as its drafters pursued dollars from the U.S. Treasury to build the projects that would allow the use of that water.

While all these issues will play critical roles in shaping how the river's management evolves over the next 75 years, it is the availability of water in this arid region that remains the critical question.

"How is the surplus water to be apportioned among the basin states?" Zimmerman asked. "In 1922, the original apportionments were based on irrigated agriculture. But today the challenge is to meet the growing municipal and industrial needs while we continue to maintain a viable economy based on historic use."

New innovative programs and partnerships will assist the region as it enters this next phase.

"The difference is that scarcity was a speculated subject of debate in 1922," Weatherford said. "It is an imminent fact of life in 1997. Management of shortage will have become the end game by the 100th anniversary in 2002." ❖

The scenic beauty of the Colorado River and the Grand Canyon.

"It is imperative that we stay with the process, that we not turn over the decision-making process to the courts."

- Tom Hine

Arizona Power Authority