

Colorado_River_Compact.txt

Sharing Colorado River Water: History, Public Policy and the Colorado River Compact

Sharing Colorado River Water: History, Public Policy and the Colorado River Compact
by Joe Gelt

-
The year 1997 marks the 75th anniversary of the signing of the Colorado River Compact. Delegates from the seven Colorado River Basin states met on November 9, 1922 in New Mexico to discuss, negotiate and ultimately work out the compact. It was then signed in the Palace of the Governors, Santa Fe, on November 24. The compact apportioned Colorado River water between Upper and Lower Basin states and, as a result, is considered a defining document in Colorado River management. As a measure of its importance and stature, the compact became the keystone to the "Law of the River." The Law of the River is a composite some might say an "assortment" to better describe its piecemeal assemblage of state and federal laws and regulations, court decisions, and international treaties made over time for the purpose of managing the Colorado River. Concerned with one of the West's most important rivers, the compact clearly stands as a monument in U. S. western water law. As befits a monument, the signing of the compact is a notable event which western water interests remember and celebrate. Accordingly, during May 28-31, 1997 a Colorado River Compact Symposium was conducted at Bishops Lodge in Santa Fe the site where compact delegates met in 1922 to celebrate the 75th anniversary of the signing of the compact. The symposium topic was "

Using

History to Understand Current Water Problems."

Much of the following discussion relies on ideas and information coming from

the May 28-31 Santa Fe conference, from individual speakers, panel discussions and informal remarks and comments.

The Compact: History & Public Policy

The theme of the May 28-31 symposium, "Using History to Understand Current

Water Problems," broadly interpreted the significance of the compact. It

invited participants to view the compact both as an historical event and as public policy. Reviewing the compact's creation and legacy in this way

demonstrated that the boundary between history and public policy is not always clearly defined.

Occurring at a certain time and place, all laws and public policies have an

historical and cultural significance. This significance gets more attention,

however, when the Colorado River is involved, the "River of the West."

The West has always been a land of myth and legend, its symbolic importance at

times overlaying, and even eclipsing its physical reality of land, water and

people. And the Colorado River shares this grandeur and mystique.

Some of this rubs off on Colorado River public policy studies. What seems

called for is a broader, deeper and more varied approach to such studies.

Viewed accordingly the Colorado River Compact is revealed as a complex

historical, cultural and public policy document.

For those interested then in the development of western water, whether the

hydrology, history or current affairs, the Colorado River Compact and, more

broadly, the management of the Colorado River becomes a rich vein to mine.

More than just a water topic, the compact grandly represents a central theme

of western water; i.e., the allocation of scarce water resources among

competing interests to ensure present and future growth and development

ent. The

compact is this theme writ large.

The conference theme also has implications beyond the Colorado River . Its

broad and interdisciplinary view of water policy, an approach that comes

naturally to Colorado River studies, also is applicable in other situations of

lesser scale; e.g., when managing the San Pedro, Santa Cruz or the Verde

along rivers. History also can be used to understand current water issues

these rivers.

History of the Compact

By the early 1920s the Colorado Basin states were anxious about their share of

the Colorado River. Then, as now, California's growth was viewed with concern.

Burgeoning growth meant increased water demand, and the other Colorado Basin

states feared California would establish priority rights to Colorado River

water. That California contributed the least amount of runoff to the river

added gall to the situation.

(In her conference presentation, Pat Mulroy, general manager of the Southern

Nevada Water Authority, commented, "Things have changed, but what remains the

same is that California was the problem back then, and California is the

problem today.")

Concern was hardly allayed by a federal report recommending the construction

of a dam "at or near Boulder Canyon" which would increase California's access

to the Colorado River. Concern turned to alarm when the U.S. Supreme Court

ruled in June 1922 that the law of prior appropriation applied regardless of

state lines. A fast growing state, i.e. California, could then establish

priority use of Colorado River water to the extreme disadvantage of slower

growing states in the upper basin.

Some form of concerted effort seemed called for. Delph Carpenter, a Colorado

attorney, rose to the occasion and proposed that the Colorado River

Colorado_River_Compact.txt

states

negotiate a compact to determine individual state's rights to the river water.

At the time interstate compacts to resolve water disputes was an untried,

untested strategy.

Carpenter's reasons for advocating an interstate compact strikes a familiar

note today. He was very wary some even say paranoid about federal involvement

in state affairs and feared if the states did not get their houses in order

the federal government would take charge, to the disadvantage of the states.

Also, he wanted to head off litigation that would be time-and-resource

consuming and believed an interstate compact would accomplish this end.

The compact's crowning accomplishment was the apportionment of Colorado River

water, between Upper and Lower Basin states. The delegates initially intended

to apportion river water directly to each state. A seemingly sensible

approach, this strategy had the potential to prevent future conflicts among

the states. The basis to determine each state's share was to be the amount of

irrigable land within a state. Determining such acreage, however, proved to be

a very contentious issue, one that threatened to undermine compact negotiations.

Further, as the discussions progressed it became clear to many of the

delegates that the major disagreements on the table were between the upper and

lower basins, not among the states within each basin. Also the data to

determine appropriations to individual states simply was not available. A

two-basin strategy was viewed as a means to resolve the difficulties, although

it was not to the liking of all the delegates. Arizona's delegate W. S.

Norviel complained, "It doesn't arrive at any conclusion, and ... it leaves

the two divisions to work out their own salvation."

Despite the objections the adopted strategy was to divide Colorado R

iver water

equally between Upper and Lower Basin states, with the demarcation line set at

Lee's Ferry, located in northern Arizona's canyon country close to the Utah

border. Wyoming, Colorado, Utah and New Mexico were designated Upper Basin

states and California, Arizona and Nevada Lower Basin states. Each basin was

to receive 7.5 million acre-feet (maf) per year. Along with their allocations,

the Lower Basin states could increase their apportionment by one maf. This

represented a bonus to ensure lower basin acceptance of the compact (Actually the Upper Basin states were obliged to deliver 75 maf at Lee's Ferry

during each ten-year period. The extended time frame allowed the required

delivery to be averaged over time to make up for years of low flow.

) The delegates figured allocations on hydrologic data from the Reclamation Bureau that indicated annual Colorado River flow at Lees Ferry to be

16.4 maf.

In truth, however, Colorado River flow is a good deal less than that. Data

from three centuries indicate an average flow of about 13.5 maf. Also, flows

are highly erratic, ranging from 4.4 maf to over 22 maf.

Built into the compact then, between what it promised and what the river was

prepared to deliver, was water scarcity. There is not enough water to go

around. As a result, water scarcity is the root of most of the disputes and

problems subsequently arising over the compact and the Law of the River. It is

a situation that links past and present Colorado River issues and will be an

abiding concern in the future.

When further examining the history of the compact and especially Arizona's

role in it, water scarcity is seen as a driving force behind many developments. An historical review also shows how subsequent events affected

the compact in ways that violated the political ideals of its framers.

Arizona, in seeking to protect its Colorado River interests, was a k

ey player

in some of these undermining events.

Arizona Stands Firm

In reviewing the give and take of compact negotiators, one figure stands out

as especially obstreperous and contrary, W. S. Norviel of Arizona. His

insistence that the Lower Basin states receive all the water of their

tributaries, plus half the river's flow at Lee's Ferry, almost wrecked the

negotiations. The extra one maf that was allowed to the Lower Basin states was

to placate Norviel, in a battle over whether tributary flow would be counted

as part of a state's Colorado River allocation.

(Although Norviel's feistiness complicated and prolonged the proceedings, he

was viewed as an effective fighter for his state's cause. Herbert Hoover, the

federal chairman of the commission, described Norviel as "the best fighter on

the Commission" and told him, "Arizona should erect a monument to you and

entitle it 'One million acre feet.' ")

Even after the signing of the compact, Arizona played a divisive role, still

acting "the dog in the manger," as described by Rita Pearson, director of the

Arizona Department of Water Resources, at the recent conference. Within five

months of the signing all states except Arizona ratified the compact

.

Arizona's Governor Hunt faulted the compact for not allocating water directly

to the states, instead of to the basins. As per the compact, the law of prior

appropriations would not apply between the basins, but if enforced within

basins, Arizona would be competing with rapidly growing California.

The proposed Boulder Canyon project, which included construction of the

All-American Canal and a high dam on the lower river, intensified animosity

between Arizona and California. The project increased California's access to

the Colorado River, to Arizona's distinct disadvantage. The bill approving the

Colorado_River_Compact.txt

project passed despite Arizona's objections. Arizona then turned to the courts

in an effort to get satisfaction, but without success.

In the early 1940s, Arizona began to reassess its strategy. To effectively use

its Colorado River apportionment, the water would need to be delivered to the

growing population in the south-central part of the state. State leaders

realized that support for such a reclamation project would be contingent upon

Arizona's ratification of the compact. On February 3, 1944, Arizona unconditionally ratified the compact, 22 years after it was negotiated.

Negotiations for a Central Arizona Project commenced.

Formal approval for such a project, however, was not likely until California

and Arizona resolved their dispute over Colorado River use. Lingering

animosities prevented any agreement between the two states, and so in 1952,

Arizona asked the U.S. Supreme Court for a judicial apportionment.

After 11 years the mammoth and complicated case concluded. The decision in

Arizona v. California resulted in major power shifts, between the states and

between the states and the federal government. Colorado River water was

apportioned, with California receiving 4.4 maf, Arizona 2.8 maf and Nevada

300,000 af, with each state also awarded all the water in their tributaries.

Arizona was a big winner, gaining almost all the advantages it sought in the

1922 compact. A nagging water supply problem was resolved.

In its quest for a settlement, however, Arizona cut across the grain of the

original compact, and its victory is tinged with some sense of irony. The

labors of the compact negotiators were greatly motivated by a desire to avoid

costly and lengthy litigation. Yet, due to Arizona's efforts, the compact has

had not only its day, but literally years in court. One of the most complicated and hotly contested cases in U. S. Supreme Court history, lasting

11 years and costing almost \$5 million, Arizona v. California easily lived up

Colorado_River_Compact.txt

to the worst fears of the compact negotiators. Further, compact delegates distrusted, and in some cases actually feared federal involvement in Colorado River affairs. Arizona v. California opened the door to federal participation. The decision interpreted the Boulder Canyon Act as empowering the Secretary of Interior to act as water master of the Lower Colorado River, to apportion future surpluses and shortages among the states and even among users within the states. Arizona's actions greatly contributed to undermining some of the political ideals that motivated the making of the compact. Future application and interpretation of the compact must reckon with this legacy. Yet Arizona was merely acting to protect its interests. California was using its congressional clout to frustrate Arizona's claims. However, in turning to the courts which generally sided with Arizona the state brought on unintended consequences. Arizona's dispute with California might truly be described as "living history," having roots in the past but, at the same time, sounding a theme that remains very much in force today. Concern about California still stalks Colorado Basin states, especially, once again, Arizona, and greatly determines their Colorado River policies. Colorado River Use Today The compact "apportioned from the Colorado River in perpetuity to the Upper Basin and the Lower Basin" 7.5 maf each per year. The states within each basin were to work out each state's allocation. Unable to agree among themselves, the embattled Lower Basin states settled the matter in the courts. The Upper Basin states proved more amenable to a cooperative settlement. (By reaching accord among themselves they avoided the more intrusive federal role that their quarrelsome southern states brought upon themselves.) A contract was signed in 1948 assigning 51.75 percent to Colorado, 23 percent to

Colorado_River_Compact.txt

- o Utah, 14 percent to Wyoming and 11.25 percent to New Mexico. Percentages were given rather than actual amounts because by this time the Upper Basin states were unsure of the amount of water they would have for themselves, after complying with the Law of the River and delivering 7.5 maf per year to the Lower Basin states. The states vary to the extent they are currently using their Colorado River allocation. Development is occurring much slower in the Upper Basin states than in the Lower Basin and as result Utah, Wyoming, Colorado and New Mexico have not yet used their full allocation of Colorado River water. The rapidly growing Lower Basin states have a more immediate need of their Colorado River apportionments. Southern Nevada anticipates that the state's 300,000 af Colorado River allocation along with its groundwater resources will meet its needs only until about 2015. Officials are vigorously exploring options for obtaining more water, including dipping into Arizona's hitherto unused portion. The Central Arizona Project was to enable Arizona to more fully use its full 2.8 maf allocation of Colorado River water. Transported CAP water, however, has not sold as readily as expected. As a result, Arizona in recent years still used only part of its allocation, leaving from 300,000 to one maf in the river. With the establishment of a water bank, Arizona is expected to use almost its full allocation for the first time this year. Before the water bank, the state did not expect to use its full allocation until the mid-21st century. Meanwhile at the end of the line is thirsty southern California. California long has profited from other states not using their full allocations . Conveniently located downriver, California has been diverting unused water

apportioned to other states. Although allocated 4.4 maf of Colorado River

water, California is using about 5.2 maf in 1997.

(The table on page 6 shows projections of Colorado River use for each basin

state. Although the report is fairly recent, the 1990 figures still are

considered estimates since obtaining final information is a lengthy process.

Efforts are currently being made to facilitate the acquisition and tabulation

of data to ensure a more timely release. Also, these figures do not take into

consideration the effects of Arizona's new water bank. This recent development

is considered an "assessment buster. ")

In this manner Colorado River water is shared and used. The system has worked

up until now mainly because the states have not been using their full

allocations. As each state's supply is fully appropriated the system will

tighten. A milestone was reached in 1990 when Arizona, California, and Nevada

consumed for the first time the total Lower Basin's 7.5 maf allocation.

Meanwhile each of the Lower Basin states has somewhat different goals in

managing its Colorado River water. In response to a directive from the

Secretary of the Interior, California is working on a plan to limit its use of

Colorado River water to 4.4 maf per year, its legally apportioned amount.

Nevada is seeking to obtain additional Colorado River water for the rapidly

growing Las Vegas area, and Arizona is devising plans to use its entire

entitlement, by banking or recharging water not presently needed.

Along with working out their Colorado River plans and strategies the states

also must contend with various issues that compact delegates did not address

and that later arose to prominence. Some, like environmental concerns, were

not recognized as important at that time, while others, like Indian water

rights, were simply side-stepped by compact negotiators. The result

was that

Law of the River would be in the making for many years to come. Many of those neglected issues are among the most important facing westerners today.

Indian Water Rights

Drafters of the Colorado River Compact were not unduly concerned with Indian water rights. Article VII, the compact's token acknowledgement of Indian water

rights, was inserted at the insistence of Herbert Hoover. Article VI I simply

states, "Nothing in this compact shall be construed as affecting the

obligations of the United States of America to Indian Tribes."

It was not that Indian water rights was a nonissue at the time. The 1908

Supreme Court decision *Winters v. United States* recognized Indian water rights

regardless of whether a tribe had used the water or not, with rights

established at the time reservations were created. Further, the decision

stated that the state in which a reservation is located must fulfill the

tribal water right. Indian water rights then was a looming question, not one

to be left hanging.

The neglected issue was to return with a vengeance in the 1963 Supreme Court

decision *Arizona v. California*. Along with determining the Colorado River

rights of Arizona, Nevada and California, the decision also quantified federal

reserved rights of the five Indian reservations along the lower Colorado

River: Chemehuevi, Cocopah, Colorado River, Fort Mohave and Quechan (Fort Yuma).

The court granted the reservations enough water to irrigate all practically

irrigable acreage within their boundaries. The water was to come from the

Lower Basin states' Colorado River apportionments. Under this standard, five

Indian reservations with a total population of about 10,000 were granted

approximately 900,000 af of water. The lower Colorado River reservation

ions

presently are using about 80 to 90 percent of their entitlement.

Because of this landmark case these tribes have the best water rights along

the Lower Colorado River. From neglected interests or parties, Indians became

major players.

Indians of the Upper Basin states do not have a comparable court case to

define their water rights. Through federal legislation and court cases,

however, the Upper Basin tribes have acquired about one maf.

Along with the above-mentioned tribes, other Arizona tribes have potential

claims to Colorado River water. Walapai and Havasupai claim to have rights,

although neither has taken any legal action. About 180 miles of the Havasupai

reservation borders on the Colorado River.

Still unquantified and conceded to be potentially huge, the Navajo Tribe's

water rights claim could cut into the Colorado River apportionment of four

states: Arizona in the Lower Basin and New Mexico, Colorado and Utah in the

Upper Basin, with the major burden on Arizona. The reservation is 25,000

square miles and is located entirely within the Colorado River basin. Its

western boundary is the mainstem of the Colorado River, and two tributaries,

the San Juan and the Little Colorado rivers, flow through tribal land.

Some officials have speculated on what the Navajo claim might be. Nothing two

such publicized figures, about two maf and five maf, Stanley Pollack, special

counsel for the Navajo Tribe, remarked at the conference that he is unable to

figure a claim under five maf. Pollack referred to the Navajo Tribe with its

unquantified water rights as a "sleeping giant" and viewed Indian water right

claims as possible "compact busters."

Quantification is not the only Indian water right to be settled. Lacking

sufficient development to put all their water to use, some tribes view

marketing as a means to earn needed income. Questions and controversies thus

arise. For example, should tribes be allowed to market water out-of-state?

States generally prefer limiting tribes to intra-state water marketing.

The legal status of tribes to market their water remains relatively undefined.

Various entities, including individual states, the U.S. Department of the

Interior and the tribes themselves, have expressed different opinions. Some

officials believe a court case, possibly at the U. S. Supreme Court level,

will be needed to settle the controversy.

In the matter of water transfers, tribes generally view themselves as

sovereign entities, not unlike states. Gary Hansen, attorney for the Colorado

River Indian Tribes, said that, under the Winter's Doctrine, tribes have

complete control of all beneficial uses of their land and water. Tribes

therefore have the right to lease their water to interested entities, without

the interference of the states in which their reservations are located. As

might be expected states contest this view.

Water Marketing

Water marketing is another issue to emerge to challenge the compact and the

Law of the River. Water marketing would enable water in this case, Colorado

River water to be transferred, leased, or sold, from one party to another.

Different transactions are possible, between entities within a single state or

different states, either states within the same basin or in different basins.

(The legal and political acceptability of these options vary.) Many view

water marketing as a suitable, even a preferred strategy to help Colorado

River states meet increasing and changing water demands. The Santa Fe

conference included a panel on water marketing.

Seemingly sensible in theory, such arrangements, however, are very complicated

to work out, especially when Colorado River water is at issue. Several factors

complicate the situation, but according to conference panelists the principle

constraint is politics.

Panelist Larry MacDonnell, a Colorado lawyer, called the Colorado River the

most political river in the West, a situation that greatly complicates its

management. He argued that the compact contributed to this situation in

various ways. By dividing river water between Upper and Lower Basin states,

the compact created competing interests, each maneuvering to achieve maximum

advantage. Further, whereas in the West individual water users traditionally

made allocation decisions for particular beneficial uses, the compact

empowered individual states to allocate their apportionment of Colorado River

waters. Decisions thus became more complicated and raised the political

stakes.

Tim Quinn, general manager of the Metropolitan Water District of Southern

California, described the perils of water marketing, at least in California

where political pitfalls prove to be especially ominous. He said, "The

institutions we are living with are not in alignment with the increased

acceptability of water marketing ... Any water transfers must run a gauntlet

at the local, regional, state levels. We have a long road to travel before we

have reform."

A Californian may well be disenchanted with the present water marketing

arrangements since the state now is embroiled in an involved and embittered

intrastate effort to market water. The parties in the transfer are the

Imperial Irrigation District, the Metropolitan Water District and the San

Diego County Water Authority. The proposed deal is a complicated, highly

contested proposition; at stake are vast amounts of money and the co

ontrol of

Colorado River water. The situation has attracted national attention, most

recently in a front-page story in the July 11 Wall Street Journal. The article

is subheaded: "Why Markets Seem Inevitable."

Meanwhile the federal government supports the transfer and marketing of

Colorado River water. The Wall Street Journal article noted above quotes

Interior Secretary Bruce Babbitt as saying, "Without water markets we can't

solve the problem of meeting the future water needs of the West."

In its role as manager of the Colorado River, the U. S. Bureau of Reclamation

(BuRec) released draft regulations in 1994 with provision for intrastate and

interstate transfers of certain types of water: unused entitlements or water

conserved in the Lower Basin. Controversy arose, with states objecting,

Arizona the most vigorously, to what was perceived as a federal infringement

on state Colorado River rights. BuRec subsequently stepped back, allowing the

states and tribes an opportunity to devise their own water banking and

marketing plans. Meanwhile BuRec is revising its regulations which when

released will again support transfers and marketing.

Prompted by the federal action the Arizona Legislature in 1995 created a state

water bank. The bank serves several purposes. For one, it is a strategy for

Arizona to secure the unused portion of its 2.8 million acre-foot Colorado

River allocation.

Arizona feels very protective about its unused Colorado River allocation,

aware that thirsty California and Nevada have designs on it. Up until CAP came

on line in 1985, the state was able to use only about 1.5 maf of its 2.8

million allocation. As noted earlier even with CAP on-line Arizona still was

not using its full allocation.

Arizona's water bank is to save some of that water for use in the state. Plans

call for 260,000 af of Colorado River water to be delivered via the CAP aqueduct to central and southern Arizona, for underground storage in existing aquifers or to be exchanged with water districts that pump groundwater. Mainly because of the bank's activities, BuRec is predicting that Arizona will use its full entitlement for the first time in 1997. Along with storing the state's unused Colorado River allocation, the Arizona water bank also provides water storage services to California and Nevada. These states can pay Arizona to store any of their unused Colorado River water and then receive credits depending upon how much water is stored. Pursuant to rules to be adopted by the Interior Secretary, Arizona would restore the water to the states in the future. Arizona would do this by using their stored groundwater instead of its Colorado River apportionment. The states could then pump water directly from the river up to the credited amount they stored in Arizona. The Arizona water bank is not a marketing strategy. Instead, it provides an interstate service through its conjunctive use of Colorado River surface water and Arizona groundwater reserves. In this way it encourages greater flexibility in Colorado River management. Despite present difficulties some officials view water marketing as the future of Colorado River management. MacDonnell claims water marketing represents the "third generation of the division of the waters of the river." The first generation occurred when the compact apportioned water between the Upper and Lower Basins. The second generation extends from 1922 to the present and is characterized by development determining water division. A strong presence during generations one and two, politics according to MacDonnell is expected to play a less heavy-handed role during the anticipated third generation.

Colorado_River_Compact.txt

Market forces are likely to gain greater influence. Before more transferring and marketing of Colorado River water occurs, basic questions about the interstate and intrastate movement of water must be answered. According to panelist Robert Johnson, Lower Basin States regional director, whatever breakthroughs occur in the near future regarding water marketing and transfer likely will apply only to intrabasin transfers. He said that at present the legal and political obstacles are sufficiently formidable to prevent exchanges between the Upper and Lower Basin states. Colorado River Environmental Concerns That the Colorado River Compact did not include provisions to protect the environment is no more surprising than that Model T's did not have seat belts. Ideas mature, ripen and have seasons. 1922 was not the season for environmental protection. Environmental issues, however, are very prominent on the Colorado River today. Patricia Beneke, Assistant Secretary for Water and Science, U. S. Department of the Interior, stated at the conference that environmental concerns will be the next generation of issues on the Colorado River. An environmental ethic arises as a force in contemporary life through a somewhat different historical process than, say, water marketing and to some extent Indian water rights. Espousing an environmental ethic involves a shift in thinking, a reorientation of values, away from the human-centered and toward acknowledging an obligation to the natural world. Development, however, was the overriding concern of the 1922 compact. Its intent was "to secure the expeditious agricultural and industrial development of the Colorado Basin, the storage of its waters, and the protection of life and property from floods." Establishing Colorado River rights was a prerequisite to building flood control and storage projects, to better manage the river to serve human needs. This boosted states' potential to grow and

develop.

Such a strategy, however was undertaken at a great cost to the environment,

and a range of environmental concerns now beset the Colorado River, both in

the United States and Mexico. For example, dams and diversions, with water

used and reused, created conditions very unfavorable to native fish species.

Not only do dams block fish passage, they also reduce spring flows, trap silt,

and alter water temperatures, all to the disadvantage of native species.

Further, regulated flow destroys inner canyon beaches and is detrimental to

spawning habits of native fish. The introduction of exotic fish posed a

further threat to native fish. Four species of native fish are endangered in

the Colorado River Basin.

A history of environmental neglect on the river and in many other areas

throughout the United States signaled the need for protective measures. One

such measure, the 1973 Endangered Species Act (ESA), greatly complicated

Colorado River management. New criteria now were to be met. Harnessing

turbines and irrigate crops, the river now was viewed as part of an ecosystem,

its flora and fauna to be protected and preserved. Controversy thus arose

whether valuing a river as a vital part of an ecosystem would interfere if not

actually conflict with using its waters for strictly utilitarian purposes.

This controversy lingers today to fuel environmental debates about the river.

Who is to bear the cost of environmental protection is an unresolved issue. In

a panel devoted to environmental concerns, John Leshy, solicitor, U. S.

Department of the Interior, expressed concern that the costs of ESA environmental remedies is being unfairly borne by some water users.

For

example, Indians have been late in using their water due to a lack of capital

to develop projects. The Upper Basin states also have been late in d

developing

their water. They now must contend with ESA provisions that those who

developed their water earlier avoided. Leshy questions whether it is fair that

those who developed their water uses after the passage of the ESA should

shoulder the major environmental cost for overall basin recovery.

Not to be ignored are environmental problems in Mexico resulting from this

country's management of the Colorado River. Located in Mexico, the Colorado

River delta once was lush with vegetation and wildlife. But the construction

of 29 dams and numerous up-river diversion projects during the past 60 years

has deprived the delta of natural water flow, with its vital supply of silt

and nutrients. As a result, the delta fell victim to Colorado River development. Delta wetlands now persist only where fed by agricultural

drainage water or from groundwater seepage.

Arizona's Wellton-Mohawk Irrigation District's drainage flows now make up the

primary source of water for the Cienega de Santa Clara, the delta's largest

estuary. The district began channeling its highly saline drainage into the

delta in 1977 to keep flows from draining into the mainstem of the Colorado

River and adding to the river's water quality problems. If the Yuma desalting

plant were to come fully on-line, Wellton-Mohawk's drainage would be treated

for release into the mainstem of the river. The Cienega de Santa Clara would

then be deprived of its vital water source.

The minimal Colorado River flow allocated to Mexico by the Law of the River is

not sufficient to protect and preserve the delta. As a result, any preservation efforts must involve maintaining or increasing inflows,

especially on a long-term basis. Officials note that this will require a

cooperative bi-national effort, with basin states agreeing to an appropriate

strategy, possibly involving a reduction of their Colorado River supplies.

Colorado_River_Compact.txt

Reviewing the compact and its effect on the environment broadens the study of history. Along with showing a connection between past, present and future, a study of the Colorado River Compact also demonstrates ho