DIVIDING THE PIE – DEALING WITH SURPLUS AND DROUGHT:
EXAMINING THE COLORADO RIVER COMPACT OF 1922

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I. INTRODUCTION

As the Southwest endures a sixth year of record drought, it should come as no surprise that many water managers, public officials and water use stakeholders alike are examining the Colorado River Compact of 1922, and asking the question, “Is it time for change?”

From my personal perspective—and from that of every Administration to serve from 1922 to the present, a span of eighty-five years—there is no compelling case to change the Compact. It’s long been my belief that the Compact was an inspired gift to future generations hammered out under extremely difficult circumstances. It represents the best of what happens when the seven Basin States and the Federal Government sit down to work for the common good.

Is the Compact perfect? Did everyone get an equal deal? Of course not. Is it flexible? Is there room for evolving issues and the various states’ needs to be met? Absolutely!

Here’s a terrific case-in-point. One year ago, on February 5, 2006, the headline in one of the West’s leading environmental publications, High Country News, was “Colorado River states reach landmark agreement.”

Matt Jenkins’s article began with this paragraph:

Water from the Colorado River keeps 30 million people alive, and it sustains a $1.2 trillion regional economy in cities like Los Angeles, Phoenix, Las Vegas and Denver, and throughout the rural West. In recent years, however, drought and competing urban growth have raised tensions among the seven states that depend on the river. Now, a groundbreaking agreement signals a new level of cooperation between those states, and clears the way for the West’s booming cities to buy water from farms—potentially even from farms in other states—to protect themselves in extreme drought.

Jenkins went on to report in the article that after “an intense final round of negotiations, the states announced an agreement” that would benefit all seven states.

‡ In keeping with the style of these remarks as they were delivered at the Stegner Symposium, this Essay has kept the footnotes to a minimum and does not follow the citation rules or conventions of The Bluebook: A Uniform System of Citation or the Journal of Land, Resources, and Environmental Law.

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Without the Compact, I believe the states’ negotiations and landmark decisions would not have been possible. Because of the Compact, we don’t have to go back to square one and fight every battle from scratch. Negotiations and decisions build upon each other. As issues, priorities, and public policy evolve, the Compact remains the foundation.

Think of what has happened over the past eighty-five years. The Boulder Canyon Act and the Colorado River Storage Project Act both passed, leading to construction of Hoover Dam, Glen Canyon Dam, Flaming Gorge Dam, Navajo Dam, and the three dams of the Aspinall Unit. In addition, we have seen Participating Projects that directly contribute to local and regional economies constructed in the Upper Basin. Among those projects is the Central Utah Project here in Utah.

We have also seen landmark environmental legislation enacted over the past 30-plus years including the National Environmental Policy Act, the Endangered Species Act, the Clean Water Act, and the Grand Canyon Protection Act, to name a few.

In addition to the Compact, in 1944 the United States and Mexico negotiated a treaty to bring resolution and the force of law to Mexico’s share of the river and the means to protect their water quality. Added to the management mix are several other “benchmark” items including: Colorado River Basin Projects Act of 1968, which forms the rules by which the Colorado River reservoir system is operated; the creation of the Criteria for Coordinated Long-Range Operations of Colorado River Reservoirs in 1970; and the development of Annual Operating Plans prepared each year by Reclamation with involvement by the States and the interested public.

Together, these Compacts, laws and rules by which the Colorado River reservoir system is operated, form what is commonly referred to as the “Law of the River” and provide a framework for the structured control of and rights to use the Colorado River.

II. DEALING WITH TODAY’S REALITIES

Striking an equitable balance among competing needs is the key to managing the waters of the Colorado River, but it has long been a difficult goal to achieve. Today water managers must deal with droughts, shortage and surplus decisions, and innovative management solutions necessitated by the long-expected and approaching arrival of full development of the Colorado River.

Though we hear from some contrary voices that the Compact is no longer viable and needs to be renegotiated or replace—that goodness that common sense and reason have prevailed. The Compact remains, solutions continue to be discovered, and sanity prevails on the river.

Up to the present time, Reclamation has always managed to meet the water allocations from the Colorado River that were established for the seven basin states and the Treaty with Mexico.
With a drought whose impacts continue to become more pronounced, all of us—the Federal government, the States, and those who depend upon the water supplies of the Colorado River—have undoubtedly entered an era of limitations.

One of Reclamation’s great Commissioners, Elwood Mead, once said, “The problems of Western irrigation grow largely out of the fact that there is more land than water. If every drop of water which falls on the mountains of the West could be made available, there would not be enough to supply one half of the land suited to irrigation.”

The settlement of the Southwest was no different than anywhere else as pioneers and developers followed the waterways. That’s been the case for centuries with the Colorado River. The Native Americans’ dependence upon the river is well documented, along with the spiritual significance of the great canyons and other landmarks of the area.

The Spanish explorers, including the Jesuit priests Dominguez and Escalante, traveled the region, crossing the Colorado River close to the Lee Ferry diving point between the Upper and Lower Basins.

Settlement of the west was compounded by severe winters which were followed by water shortages in the summer. Farmers from the water-rich eastern states were not prepared for the challenges of cultivating the west.

III. DEVELOPING A FRAMEWORK FOR MANAGING THE COLORADO RIVER

As the 1800s turned into the 1900s, development in the Colorado River Basin led to friction between the states and the era of contentious relationships was born.

It is important to note that out of necessity, a legal framework and management process was developed across the Colorado River Basin. The Colorado River Compact of 1922 established the right of the Upper Basin to develop and use up to 7.5 million acre-feet of water annually. In return, the Upper Basin agreed to deliver 75 million acre-feet in any rolling 10-year period to the Lower Basin.

During this same era we also saw what happens when the states can’t agree upon a compact between them for allocation and management. The Lower Basin was essentially federalized by Congress through the Boulder Canyon Project Act in 1928.

The Upper Basin succeeded in reaching consensus regarding the allocation of their Compact reserved entitlement in 1948, thus setting the stage for Congress to enact the Colorado River Storage Project Act in 1956. In addition to authorizing the Colorado River Storage Project, the Act also ratified the Upper Basin Compact.
IV. THE SIGNIFICANCE OF GLEN CANYON DAM

When examining the Colorado River from the Upper Basin perspective, it starts and ends with Glen Canyon Dam. Glen Canyon Dam and Lake Powell are the keys to the Upper Basin regardless if we are talking system shortages or surpluses.

Contrary to some viewpoints or positions you may have come across, Glen Canyon Dam is not going away. No less an environmental voice than former Interior Secretary Bruce Babbitt has stated that “[n]o Administration—Republican or Democratic—since the dam was built has considered such an action.”

Former Secretary Babbitt also said in a radio interview with KXAZ radio in Page, Arizona, on July 14, 2000, “. . . the bottom line is it’s not going to happen. I don’t support taking down Glen Canyon Dam. It’s in place, it’s there to stay, it’s an important asset, it’s an important part of the economic and the recreational life of Arizona, the Southwest . . . .”

Former Interior Secretary Babbitt went on to say:

The bedrock issue is the water. And that’s because the Colorado River Compact . . . makes a certain set of commitments that relate to the seven states . . . and it’s binding as a matter of compact and federal law and the Upper Basin States, have a certain delivery obligation that cannot be met without storage capacity and the Lower Basin States, Arizona and California in particular, and Nevada, have a certain drought protection that really can’t realistically be met in any other way. So, I guess the bottom line is that as long as the Colorado River Compact is in force there has to be the storage capacity that was guaranteed and promised by Glen Canyon Dam. People will say “well you can amend the compact,” yeah, right, pigs can jump over the moon too. The Compact, I think, is there to stay. It couldn’t be changed effectively without seven states and Congress and there just isn’t any . . . prospect of that happening.

Current Secretary of the Interior Dirk Kempthorne has several observations also worth noting. Speaking in December 2006 to the Colorado River Water Users Association annual meeting, the Secretary said he believes mankind’s relationship with the River has passed through three different eras in just the past century.

First, he said, was the era when the states signed the Colorado River Compact—which he called one of the most remarkable negotiated agreements in American history. Second was the “engineering” era when Reclamation built the dams, canals, and other infrastructure. That greatly expanded our capacity to put the river’s power and water to productive use. Now Secretary Kempthorne says we’ve entered a third era where progress will not come through Herculean feats of engineers, but through effective management of the river’s water.
To be successful, Kempthorne said there are four principles we must adhere to:

- Cooperation is better than litigation. The line between a negotiated solution that works for everyone and a costly battle in court is a thin one. The Secretary says we must stay on the right side of that line.

- Second, we must continue to seek creative solutions to the challenges we face. The productive problem solving of the last 10 years rings true the adage that “necessity is the mother of invention.” We have been inventive, thriving under the umbrella of order that the 1922 Compact provides.

- Third, we must continue to “hope for the best, but plan for the worst.”

- Finally, the Secretary uses a football analogy: “Don’t fumble in the Red Zone.” The Red Zone, as many of you know, if the last 20 yards of the football field that must be covered to score a touchdown. They are the hardest to get over, as the defense plays harder with their backs to the wall. The worst thing to do is drive all the way down the field, only to fumble just short of the goal line.

In addition, Reclamation Commissioner Robert Johnson recently pointed out that the collaboration and cooperation of water managers throughout the Basin, coupled with diligent work by Reclamation’s dedicated staff, has created a record of accomplishments and commitment to ongoing actions that all of us can be proud of.

Through completing agreements such as the Quantification Settlement, the Upper Colorado River Endangered Fish Recovery Program, and the Lower Colorado River Multi-Species Conservation Program, we are demonstrating that we can meet contemporary needs for agriculture, cities, and environmental requirements.

Over the past several years, we have made tremendous progress by taking the long view and figuring out how we can meet multiple demands on Colorado River water supplies. To continue that progress, we must keep pushing the boundaries of what we believe we can do in water management.

V. SHORTAGE GUIDELINES AND COORDINATED OPERATIONS

In looking at contemporary issues related to surplus and shortages, it is important to note that all management and infrastructure decisions are predicated upon the existing sixty million acre-feet of Colorado River system storage. The sixty million acre-feet of storage represents nearly four years of average flow,
providing the long-term carry-over storage necessary to the economic vitality and quality of life in the southwest United States.

As we continue to endure record drought, the development of guidelines for the operation and management of the Colorado under potential shortage conditions and coordinated operations of Lakes Powell and Mead, remains a key priority in the Department of the Interior. Though we have always met the water allocations from the Colorado River for the seven Basin States and Mexico and have never reduced deliveries to Mexico, it is crucial for us to prepare for that contingency.

In 2004, when Secretary Norton directed Reclamation to work with the seven Basin States to initiate shortage guidelines for the Lower Basin and coordinated reservoir management for Lakes Powell and Mead, Reclamation, the States, and public interests worked together to develop proposals to enhance supplies through augmentation and water exchanges, increased conservation and shortage-sharing agreements, and new operational guidelines to increase efficiency and effectiveness.

Reclamation’s Upper and Lower Colorado Regions are currently preparing an Environmental Impact Statement to analyze these proposals and make recommendations for eventual implementation by the Secretary. The proposed federal action considers four operational elements that collectively are designed to address the purpose and need for the proposed federal action.

Once approved, the interim guidelines would be used to determine those circumstances under which the Secretary could reduce the annual amount of water available for consumptive use from Lake Mead to the Colorado River Lower Division states (Arizona, California, and Nevada) below 7.5 million acre-feet (a “shortage”). The new guidelines would provide a framework that would:

- Define the coordinated operation of Lake Powell and Lake Mead to provide improved operation of these two reservoirs, particularly under low reservoir conditions;

- Allow for the storage and delivery, pursuant to applicable federal law, of conserved Colorado River system and non-system water in Lake Mead to increase the flexibility of meeting water use needs from Lake Mead, particularly under drought and low reservoir conditions; and

- Determine those conditions under which the Secretary may declare the availability of surplus water for use within the Lower Division states. The proposed federal action would modify the substance of the existing Interim Surplus Guidelines, published in the Federal Register on January 25, 2001 (66 FR 7772), and the term of the Interim Surplus Guidelines from 2016 to 2026.

In total, the proposed federal action is intended to improve management of the Colorado River by considering the trade-offs between the frequency and
magnitude of reductions of water deliveries, and considering the effects on water storage in Lake Powell and Lake Mead, water supply, power production, recreation, and other environmental resources.

The new guidelines would also provide mainstream United States users of Colorado River water, particularly those in the Lower Division states, a greater degree of predictability with respect to the amount of annual water deliveries in future years, particularly under drought and low reservoir conditions; and, provide additional mechanisms for the storage and delivery of water supplies in Lake Mead.

VI. STRETCHING PRECIOUS WATER SUPPLIES

One constant in the desert Southwest is that there is almost never enough water to go around. Increased depletions and drought continue to pose a significant challenge to water managers basin-wide. Inflow to Lake Powell has now been below average in six out of the past seven years, and in one of those years—2002—we had the lowest recorded inflow of the last 100 years.

Provisional calculations of natural flow for the Colorado River at Lees Ferry, Arizona, show that the average flow over the last seven water years is the lowest seven-year average in 100 years of record keeping.

From October 1999 to October 2004, total system storage decreased from ninety-five percent of capacity to forty-six percent. We regained some storage in 2005, but had a net loss in total system storage again in 2006. Water year 2007 is shaping up to be another year of below average inflow into the storage system. Projected inflow to Lake Powell for the entire water year is seventy percent of average.

To combat the effects of the ongoing drought and increased demand for usable supplies from municipalities and agricultural users alike, Reclamation is engaged in a number of additional efforts to conserve water and develop innovations to meet both current and future water needs.

One major strategy being implemented in the Lower Basin to save water is to update facilities. In December 2006, Reclamation joined in celebrating the Coachella Valley Water District’s completion of the Coachella Canal lining project. The District finished lining the last 33-mile section of the waterway.

This project will conserve about 26,000 acre-feet of water a year. That water will be used by the Metropolitan Water District and for San Luis Rey Indian Water Rights Settlement Act obligations. The All-American Canal lining project essential to management of the River, was stopped by a judicial order, but Congress has now directed the Secretary to complete it.

There are three suits pending. In the first, the federal district court in Las Vegas ruled that Reclamation complied with all federal laws on the project, but the decision is now under appeal and the 9th Circuit federal appeals court has stopped the project while the appeal is pending. Reclamation expects to have a decision from the Ninth Circuit in the spring.
The other two lawsuits were filed in late 2006 in Sacramento federal court and California state court. Rest assured, Reclamation fully supports the completion of this canal lining project and, through the State Department, is working on diplomatic and legal fronts to ensure its timely construction.

VII. WATER CONSERVATION AND REUSE PROJECTS OCCURRING IN THE BASIN

Seeing the need to address emerging water supply problems before conflicts or controversy push states, communities, or agricultural users toward divisiveness, Reclamation is also actively involved in the planning and construction of water reclamation, reuse and desalination projects in the Basin.

For instance, Reclamation is currently participating in twelve Title XVI projects in southern California, two in Nevada (one of which is complete), and have three under study in Arizona. In fiscal year 2005, the projects in southern California put to beneficial use more than 98,000 acre-feet of water. In fiscal year 2006, the output climbed above 100,000 acre-feet. The projects in Nevada are planned to generate an additional 175,000 acre-feet of reclaimed water.

In Arizona, Reclamation is involved in the Phoenix Metropolitan Area and Tucson Area water reclamation studies, as well as the Tres Rios Wetlands Demonstration Project. These projects are providing a critical new water supply for the state, helping reduce the demand on imported water supplies from both the Colorado River and the Sacramento Bay-Delta.

In March 2007, Reclamation reinitiated operation of the Yuma Desalting Plant for a ninety-day demonstration period, at one-tenth capacity. Officials anticipate that this demonstration run will provide the necessary data on the potential costs of operating the plant at different capacities, and help the agency determine whether the design deficiencies revealed during the 1992–93 test have been resolved. In addition, the University of Arizona will monitor water quality in the Ciénega during the test run to help assess potential environmental impacts of operating the plant.

Because of anticipated high operation and maintenance costs and potential impacts to the Ciénega brought on by operating the Desalting Plant, Reclamation is also studying other bypass flow replacement and recovery options as well.

Two demonstration programs are under way in the Lower Basin to evaluate tools that could improve the long-term coordinated operation and management of the river.

During the summer of 2006, Reclamation signed an agreement with the Metropolitan Water District of Southern California for the creation of “Intentionally Created Surplus”—or ICS—water in Lake Mead, water that has been conserved through an extraordinary conservation measure, such as land fallowing. The District plans to create 50,000 acre-feet of ICS water in 2007 by foregoing the use of Colorado River water that was conserved through their existing land management, crop rotation, and water supply programs, such as that with the Palo Verde Irrigation District. Instead of taking this conserved water, MWD will leave it in Lake Mead, resulting in an “intentionally created surplus.”
Reclamation also entered into an agreement with the Imperial Irrigation District, which intends to create 1,000 acre-feet of ICS water in 2007 from its on-farm fallowing program.

Future use of this water by MWD and IID is dependent on Interior’s adoption of guidelines for recovery of the stored water; proposed as part of the shortage guidelines for the Lower Basin and coordinated reservoir management for Lakes Powell and Mead that were discussed previously.

Reclamation also initiated a system-wide conservation demonstration program in 2006. This program allows entitlement holders in the Lower Basin to participate in a voluntary program to conserve a portion of their approved annual consumptive use of Colorado River water in exchange for appropriate compensation provided by Reclamation.

The water conserved would be stored and retained in Lake Mead to help provide an interim, supplemental source of water to replace the drainage water from the Wellton-Mohawk Irrigation and Drainage District that bypasses the Yuma Desalting Plant, which is not currently operational, and flows directly to the Ciénega de Santa Clara in Mexico.

The United States does not get treaty credit for this bypassed water, which amounts to about 108,000 acre-feet annually, and must take system water from Lake Mead to replace the bypassed amount in order to meet the 1.5 MAF delivery obligation to Mexico.

This program is intended to reduce the impact that releasing water from Lake Mead to replace the bypassed flow has on system storage—that is, this conserved water will be kept in Lake Mead instead of being released to Mexico. It also will help determine whether voluntary conservation of water by land fallowing could be used as an interim or supplemental measure to replace the bypass flow until a permanent measure is decided upon.

VIII. ADDITIONAL SYSTEM STORAGE AND DELIVERY CAPABILITIES UNDER CONSIDERATION

In 2005, Reclamation completed a study to identify potential alternatives for replacing lost storage capacity at Senator Wash Dam, reduce excess deliveries to Mexico, improve operational control on the lower river, and avoid mismatches in water orders and diversion from the river below Parker Dam.

In December 2006, Congress passed legislation that directs Reclamation to construct the Drop 2 Reservoir. As a result of the study it was determined that building a small reservoir near the All-American Canal was the best alternative to meet these objectives.

The reservoir will have a storage capacity of 8,000 acre-feet of Colorado River water. Construction is scheduled to begin in summer of 2008, with completion scheduled summer 2010. The reservoir will provide water users a way to re-capture Colorado River water requested by Arizona and California users but not used.
The financing of this project is a testament to the collaborative efforts to meet current and future water needs on the river. The Southern Nevada Water Authority has expressed interest in paying for the project. In turn, they would be able to use the saved water for a period of time.

In the Upper Basin, Reclamation is starting to look at non-traditional and innovative proposals that will be underpinned by the strength of the Colorado River Compact.

For example, there is a proposal to market water from Flaming Gorge Reservoir via pipeline across Wyoming and then down into Denver on the east slope of the Rockies. Reclamation is only one of the players in this proposal and views the states and the Upper Colorado River Commission as the other key participants.

There is another proposal to move water from Lake Powell via a pipeline to the St. George, Utah area. This project is being driven by the State of Utah, with Reclamation and a host of other agencies being part of the process. Again, the Colorado River Compact and all the succeeding elements that form the Law of the River make this orderly process possible and provide the underpinning for what amounts to an Upper Basin diversion to the Lower Basin, all taking place within the State of Utah.

IX. KEYS TO SUCCESS IN MANAGING THE COLORADO RIVER IN THE 21ST CENTURY

Solving the problems of the Colorado River requires a clear understanding of the history of the river’s management and the role of the Colorado River Compact. It requires that the interests of the Basin States, who are responsible for their own decisions related to how they use their resources and where they encourage their economic development, be recognized and honored.

All parties including the States, Tribal governments, public interests, and the Federal government, must be brought into the decision-making process. Progress is slow, resolving issues sometimes takes years to work out, but as we have seen over the past decade, it is possible.

The Federal government, through the Bureau of Reclamation, provides the over-arching support, much of the infrastructure, and serves as the Water Master in the Lower Basin.

To my knowledge, nobody has ever fully calculated the total value of the Federal investment in the Colorado River. Consider that it includes the units of the Colorado River Storage Project, all the CRSP Participating Projects, Hoover Dam, along with Parker, Davis, and Imperial Dam. Add in the All American Canal. Now factor in all the hundreds of millions of dollars spent in environmental and endangered species work. Obviously, we are talking billions of dollars in present-day economic investment and value.

As you can see, nothing about managing the Colorado River or equitably distributing its precious supplies is easy, but as long as people choose to live in the
River’s path, we must continue to make crucial decisions in how best to divide the pie.

At the foundation of all our collective investment and management actions is the Colorado River Compact—and thank goodness for that.