

Colorado River Basin: Greenism And Water Wars, or NAWAPA XXI

by Marcia Merry Baker

May 13—The Colorado River Basin, along with the critical few other major watersheds in the North American Southwest desert, is undergoing degradation in its land and water resources base, for lack of water augmentation, beginning in the 1960s with the blocking of the North American Water and Power Alliance (NAWAPA). There is an acute water shortage, and impossible trade-offs at many points throughout the region. This year's run-off flow is about a third of average, and near record-low.

The point has been reached, where the water supply for the seven basin states, and part of Mexico, is either absolutely insufficient, or intermittently unreliable. There are 30 million Americans and 6 million Mexicans resident within the basin boundaries or adjacent areas, whose municipal water supply depends on the Colorado River in part, or entirely (Figure 1). The shortage comes about, despite the fact that agro-industrial and supporting economic activity is very diminished in this region, and nationally, as a result of increased outsourcing of the means of existence of the U.S.—food, industrial, and commercial merchandise—which occurred over the very same time period in which NAWAPA and related endeavors were thwarted.

Add to this the impact of the recent arid weather patterns—connected to large-scale solar and galactic cycles—under which the net effect

FIGURE 1
The Colorado River Basin—Upper and Lower, and Adjacent Outliers, Which Receive Colorado River Water



Source: Bureau of Reclamation, Interim Report No. 1, Colorado River Basin Water Supply and Demand Study, June 2011

in the last 11 years, has been a much smaller run-off flow, and cumulative damage to the land and water base.

But instead of addressing this, with a policy re-set, to go back to the premises of the 1920s and 1930s, which allowed for intervention to improve the resources base—with the Hoover Dam and Colorado River basin management approach, the TVA, and in completion of post-war projects, such as the St. Lawrence Seaway, and the 1960s proposal to build NAWAPA itself—there is an attempted clamp-down against any such perspective.

Even the Bureau of Reclamation, founded in 1902 for the purpose of upgrading the resource base of the Western states, is currently doing a “Colorado River Basin Water Supply and Demand Study,” but only on the presumption that no large-scale new water diversion projects can be done to “create new water resources.” Instead, the Bureau’s Study is based on the premise of finding ways to better manage competing demands, given the “finite water resources,” an expression used by Reclamation Commissioner Michael L. Connor, in a press release on the study, June 6, 2011.

The LaRouchePAC-initiated drive for NAWAPA XXI is now confronting this alien outlook head on.¹ NAWAPA XXI is the only possible solution for the crisis, if the U.S. is to avoid devastating results in food production and living standards. LPAC is putting it on the agenda as a crucial national mission for urgent emergency action.

Colorado Basin Water Shortage

The Colorado Basin has the second-largest water flow of the four major southwestern basins—the Sacramento-San Joaquin Rivers in California (the largest Western watershed flow); the Great Basin—an endorheic formation, centered on Utah; and the Rio Grande (Rio Bravo) River Basin. On the Mexico side of

FIGURE 2
Colorado River Basin—Supply and Use* of Water, 10-Year Running Average (1923-2007)



Source: Bureau of Reclamation, Interim Report No. 1, Colorado River Basin Water Supply and Demand Study, June 2011

*Usage of water can be significantly lower than demand, especially during a drought, when supply is tight.

the Great American Desert, besides the Lower Colorado delta—now a salt flat—and the Rio Bravo Basin, there is only one basin of significance—the Rio Yaqui, which empties into the Gulf of California. A few lesser streams also drain this way, off the western slopes of the Sierra Madre, and also down from the eastern slopes, into the Gulf of Mexico. In the northern Mexico inland desert regions, there are several closed drainage basins, whose water volume is ephemeral, and right now are parched.

The dimensions of the crisis in the Colorado Basin are efficiently depicted in **Figure 2**, and explained in the Interim Report No. 1, by the Bureau of Reclamation, issued in early 2012, in the section on “Background and Need” (“Colorado River Basin Water Supply and Demand”):

“Today, more than 30 million people in the seven western states of Arizona, California, Nevada (Lower Division States) and Colorado, New Mexico, Utah and Wyoming (Upper Division States), collectively referred to as the Basin States, rely on the Colorado River and its tributaries to provide some, if not all, of their municipal water needs. That same water source irrigates nearly 4 million acres of land in the Basin—pro-

1. See <http://laroucepac.com/node/22355>



USGS/Alicia Burtner, 2011

Lake Mead, in the Black Canyon of the Colorado River, 35 miles southeast of Las Vegas, at the Nevada-Arizona line. The water level is falling, because of the 11-year dry spell. The concrete thick-arch dam, 726.4 feet high, 1,244 feet long, was constructed 1931-36.

ducing some 14% of the nation's crops and about 13% of its livestock, which combined generate more than \$3 billion a year in agricultural benefits. The Colorado River is also the lifeblood for at least 15 Native American tribes and communities, 7 National Wildlife Refuges, 4 National Recreation Areas, and 11 National Parks. Hydropower facilities along the Colorado River provide more than 4,200 megawatts of capacity providing vitally important electricity to help meet the power needs of the West and offset the use of fossil fuels. The Colorado River is also vital to Mexico. The river supports a thriving agricultural industry in the Mexicali Valley and provides municipal water supplies for communities as far away as Tijuana.

“Based on the approximately 100-year historical record, the natural inflow into the Basin which represents the Basin-wide water supply has averaged about 16.4 million acre-feet (MAF). This value is comprised of approximately 15.0 MAF of natural flow into the Upper Basin and approximately 1.4 MAF of natural flow into the Lower Basin. Paleo reconstructions of streamflow indicate that the long-term average natural flow at Lees Ferry [Arizona] is likely lower, with the most recent study suggesting it may be closer to 14.7 MAF, or 2% lower. The period from 2000 through 2012 represents the lowest 11-year average natural flow at

Lees Ferry in recorded history, averaging 12.1 MAF per year, approximately 20% below the 103-year average. Although an 11-year drought of this magnitude is unprecedented in over 100 years, the same paleo reconstructions of streamflow studies show that droughts of this severity or greater have occurred in the past.

“Based on the inflows observed over the last century, the Colorado River is over-allocated. The Colorado River Compact of 1922 apportioned 7.5 MAF each to the Upper and Lower Division States, and the 1944 Treaty with Mexico allotted 1.5 MAF to Mexico. Total

Basin use for municipal, industrial, agricultural, tribal, recreational, and environmental purposes in the United States and the delivery to Mexico (including system losses such as reservoir evaporation) averaged 16.0 MAF in 1999, prior to the start of the recent drought.

“Figure [2] shows the historical annual Basin water supply (estimated using the natural flow record) and water use. This figure shows that there have been multiple years when use was greater than the supply. Due to the considerable amount of reservoir storage capacity in the system (approximately 60 MAF of storage, or roughly four times the average annual natural inflow), most water demands were met during those times. During droughts, however, significant use reductions routinely occur due to a lack of available supply, particularly in the headwater areas in the Upper Basin.”

Skirmishing for Water

The Colorado River Basin has the largest catchment area of all major watersheds in the desert Southwest, and at many locations, there are maneuvers and battles over increasingly scarce, or soon-to-be-scarce water.

In the Upper Basin, in the state of Colorado, an agreement was signed on May 15, between representatives of the city of Denver and other eastern slope water users, wanting to expand trans-mountain diversions of

westward-flowing River water, to their own needs, and on the “opposing” side, officials of the Colorado River District in the Basin proper, which forms on the western slope. (See Figure 1, for the Denver outlier, supplied by diverted western-slope water).

Gov. John Hickenlooper was present at the signing, and called the deal a “truce,” compared to the fights over water to date. However, the agreement is only to behave and cooperate, not to find ways to bring on “new” water sources.

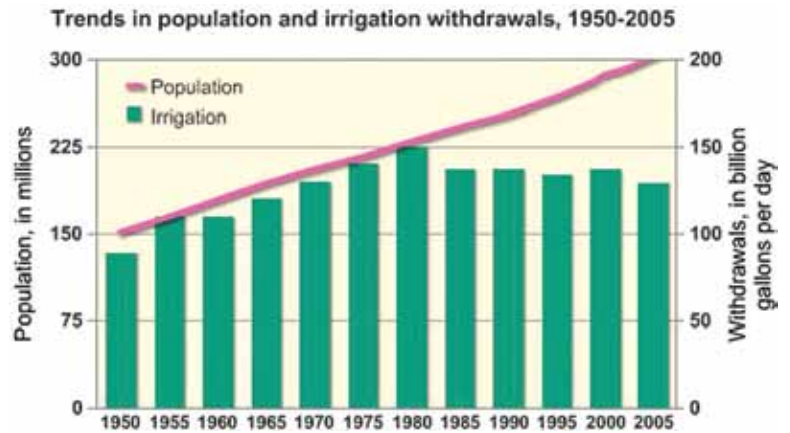
In Nevada, a new intake tunnel is being bored into Lake Mead, as a contingency to serve the 2 million residents within the Southern Nevada Water Authority (SNWA), in Las Vegas and elsewhere in Clark County, if Lake Mead drops below the two pre-existing intake tunnels. The new Lake Mead Intake No. 3 Project has a target of June 2014 for completion.

The current No. 1 intake valve shuts down if the lake drops to an elevation of 1,050 feet, which cuts 40% of the water supply to SNWA. If the lake drops another 50 feet, then No. 2 intake shuts down, and 90% of the water to the Las Vegas Metropolitan area is stopped. The elevation of Lake Mead as of April this year, is 1,124 feet, which is significantly down from 1,209, where it was in 2000. By 2010, it had dropped to 1,098, and was helped by the wet 2011, but the trend is down.

The Intake No. 3 Project is three miles underneath Lake Mead, with a tap about three miles out. “It is probably the most technically complex tunnel being built,” says Vice President of Operations Jim McDonald of Vegas Tunnel Constructors (a joint venture between S.A. Healy Co. and an owner firm, Impregilo S.p.A., the Italian construction giant).

In northern Nevada, a court battle is underway over rights to pump groundwater, between the SNWA and Utah groundwater users. The SNWA wants to drill and pipe out groundwater for Las Vegas, but Utah interests—ranchers, counties, American Indian tribes, and the Mormon Church—have contested the SNWA groundwater applications, saying that the springs and underground water deposits are continuous, and Utah users will have reduced supplies if Nevada siphons off water.

FIGURE 3
Trends in U.S. Population and Irrigation Withdrawals, 1950-2005*



Source: U.S. Geological Survey, five-year series of “Estimated Use of Water in the United States”

*Withdrawals of water refer to the removal of water from some type of source (surface or groundwater) for some type of consumption (domestic, industrial, irrigation, cooling of power plants, etc.)

Destroying Agriculture

In the two states of the Lower Basin, Arizona and (southern) California, and the area of northern Baja California/Sonora in Mexico, the lack of water is extreme.

In California, farmers in the famed Imperial Irrigation District (IID)—the largest in the United States—with 3,000 miles of canals and drains—are now selling water transfers for municipal use in the San Diego region. In 2011, rules were laid out in the IID document, “Organizing Principles of Agricultural-to-Urban Water Transfers.”

In Arizona, the irrigated acreage has declined, down to 862,000 acres in 2008, from over 1.5 million in the 1970s, due to tight water supplies, as well as conversion of farmland to suburban use. Vast food production potential is being lost and unrealized, for crops ranging from grains and fodder, to vegetables, fruits, and citrus. In 2011, the last major citrus packing house in central Arizona shut down, after 78 years of operation. The seven-member Mesa Citrus Growers Association (MCGA)—producing oranges, lemons, tangerines, and grapefruits—voted in 2010 to close it because of the fall in fruit production. Arizona statewide citrus acreage fell from 35,000 acres in 1990, to about 15,000 acres in 2010. The same story goes for other specialty crops.

FIGURE 4
NAWAPA XXI: Continental Water Conveyance Routes



Source: “NAWAPA XXI,” LaRouchePAC Special Report, March 2012

Meantime, the import-share in U.S. consumption of citrus and all other fruits and vegetables is skyrocketing, as Wal-Mart and other multinationals switch to outsourcing supply chains.

A snapshot of the national picture of declining irrigation in the United States is shown in **Figure 3**. The yearly withdrawals of water (from the availability of water from surface and groundwater both) used for irrigation rose from 1950 to 1980, but then fell back, and as of 2005, there is less water going into irrigation than in 1970. As of 2010, the figure would be even less, but the U.S. Geological Service (USGS) has delayed compiling it.

At the same time, irrigation withdrawals have come to rely more on wells than on surface supplies. The USGS reports: “During 1950, 77% of all irrigation withdrawals were surface water, most of which was used in the western States. By 2005, surface-water

withdrawals comprised only 59 percent of the total. Groundwater withdrawals for irrigation during 2005 were more than three times larger than during 1950. Most of this increase occurred from 1965 through 1980.”

The recourse to pumping more groundwater in the Western states, has led to depleting aquifers, land surface subsidence, and high expense from having to pump from ever-deeper wells for agriculture and municipal use. The vulnerability to wildfires is another feature of the degradation process. The Summer forecast from the National Oceanographic and Atmospheric Administration is that the fire incidence—already extensive in central Arizona in mid-May—may be worse than the 2011 disaster.

NAWAPA XXI Brings ‘New’ Water

The only solution is to bring in “new water” as proposed in NAWAPA XXI. What this will mean for the Colorado River Basin, and throughout the Southwest, is given in detail in the March 2012 Special Report,

NAWAPA XXI.²

Figure 4 shows the NAWAPA XXI continental-scale water-conveyance routes. As the report states:

“As of 1984, the annual renewable water supply in the Lower Colorado Basin was 6.1 million acre feet a year (MAFY). NAWAPA XXI would bring a continual supply of 18 MAFY to the basin, increasing the renewable supply by 157%. These newly delivered waters will be available for irrigation without the pumping costs, and will be sufficient to irrigate up to 2.11 million acres, increasing the total by about 223%.”

The same scale of increases in water supply—as indicated in **Figure 4**—are in order for the Upper Colorado Division of the Basin, and the other major watersheds—the Sacramento-San Joaquin in California; the

2. See http://larouchepac.com/files/20120409-nawapa-press-release_0.pdf

Rio Grande (Rio Bravo) River Basin; and the Great Basin Water Resources Region, as well as portions of Mexico in the Lower Colorado Basin.

The total of increased water in these Southwestern drylands is 52 MAFY added to the annual supply. Considered on a state-by-state basis, these are the additions, in MAFY: Colorado—2; Utah—2; Nevada—4; California—12; New Mexico—8; Texas—12.

Renewable water supply in northern Mexico will be nearly tripled from its current level of less than 7.7 MAFY, by receiving 20 MAFY from NAWAPA XXI, divided by state in the following way, in MAFY: Baja California—4.3; Sonora—9.5; Chihuahua—3.6; Coahuila—1.1; Nuevo Leon—0.8; and Tamaulipas—0.7.

Only this scale of augmentation of water allows for an upgrading of the land and water resources base for vastly higher production, and beneficial impact on the biosphere in the process.

Killer-Green Opposition

In opposition to this obviously sane approach, a green propaganda barrage is underway. Two Hollywood movies about water scarcity have been released in recent weeks—“Watershed” and “Last Stop at the Oasis”—in both of which, water scarcity in Nevada and the Colorado River Basin figure. The lead time of producing these films places them firstly, in the countdown to the June Rio+20 Earth Summit; and secondly, as salvos against the LPAC drive now putting NAWAPA XXI on the agenda in the United States, especially in the West.

The movies’ message is that of Rio+20, and its British empire genocidalists: We are at the end of the line of finite water resources. Humans are bad; they pollute. The subliminal message is that you should self-dehydrate and die.

“Last Stop at the Oasis” was released this month by Participant Media/ATO Pictures, which made the infamous “An Inconvenient Truth,” featuring Al Gore. “Last Stop” portrays water crises—e.g., diminution of Lake Mead—as inevitable scarcity, made worse by dirty, proliferating humans.

“Watershed,” billed as a documentary, was released in Washington, D.C. in March, at the world environmental film festival. It focuses on the lack of water in the Colorado River Basin, and calls for a “new water ethic” for the whole world, to conserve scarce supplies by shriveling up and doing less. Hollywood

movie star and environmental activist Robert Redford (resident of Utah) and son Jamie Redford (California) are the stars.

But worse than lowlife Hollywood, is the fact that the Federal intelligence institutions issued their National Intelligence Estimate in February, “World Water Security,” which omitted even the consideration of large-scale water diversion and nuclear-powered desalination programs, except in China.

When the question of NAWAPA XXI was posed at a Washington D.C. event May 9, discussing the NIE water security report, with one of its authors present, Richard Engel, U.S. Air Force (ret.), of the National Intelligence Council, a panelist became unhinged, saying, “We can’t knock down the Rocky Mountains” to move water around! Ellen Laipson, director of the Stimson Center, said that, sure, in the past, as a “20th-Century-style” program, there were large water projects. But that’s gone. It’s not appropriate, nor desired, today. She said that “some people will just have to move away from water-short areas....”

marciabaker@larouchepub.com



NAWAPA 1964

Released on Thanksgiving 2011, the LPAC-TV documentary “NAWAPA 1964” is the true story of the fight for the North American Water and Power Alliance. Spanning the 1960s and early ‘70s, it is told through the words of Utah Senator Frank Moss. The 56-minute video, using extensive original film footage and documents, presents the astonishing mobilization for NAWAPA, which came near to being realized, until the assassination of President Kennedy, the Vietnam War, and the 1968 Jacobin reaction, killed it

... until now.

<http://larouchepac.com/nawapa1964>