

THE COLORADO RIVER COMPACT AND THE SAN JUAN-CHAMA PROJECT

The Colorado River Compact was signed in 1922. This is an agreement for dividing the water in the Colorado River basin between the “Upper Basin states” of Wyoming, Colorado, Utah and New Mexico and the “Lower Basin states” of Arizona, California and Nevada. The demarcation line between the two basins was set at Lee’s Ferry in northern Arizona, close to the Utah border. The upper basin states are obliged to deliver 75 million acre-feet (maf) at Lee’s Ferry during each 10-year period, or an average of 7.5 maf per year. An additional 1.5 maf per year was allocated to Mexico in 1944, pursuant to a treaty relating to the use of waters of the Colorado and Tijuana Rivers and of the Rio Grande.

In 1948, the Upper Colorado River Compact distributed 51.75% of the Upper Basin’s share to Colorado, 23% to Utah, 14% to Wyoming and 11.25% to New Mexico. Using the average Upper Basin allocation of 7.5 million acre feet, this would provide an average of

about 840,000 acre-feet/year (afy) to New Mexico.

The San Juan-Chama Project was authorized by Congress in 1962 to allow some of New Mexico’s share to be transferred across the Continental Divide into the Rio Grande Basin. Construction began in 1964, and the tunnels were completed in 1970. The water flows from three Colorado tributaries of the San Juan River, itself a tributary of the Colorado. It is channeled through 26 miles of tunnels into creeks flowing into Heron Reservoir. From the reservoir the water is released into the Chama River.

The project is managed by the Bureau of Reclamation and provides an average diversion of about 110,000 afy, primarily for municipal, domestic, and industrial uses, but also for irrigation, recreation, and fish and wildlife. Allocations are shown in Table 1.

Table 1: Allocation of SJ/C water

Municipal, domestic, and industrial supplies	Acre-feet per year
City of Albuquerque	48,200
Jicarilla Apache	6,500
City and County of Santa Fe	5,605
County of Los Alamos	1,200
City of Espanola	1,000
Town of Belen	500
Village of Los Lunas	400
Village of Taos	400
Town of Bernalillo	400
Town of Red River	60
Twining Water & Sanitation District	15
Irrigation supplies	
Middle Rio Grande Conservancy District	20,900
Pojoaque Valley Irrigation District	1,030

The original estimate for average flow in the Colorado River is now in doubt. The delegates to the 1922 convention figured allocations based on hydrologic data from the Reclamation Bureau that indicated that the annual Colorado River flow at Lee's Ferry was 16.4 maf. Current estimates of average flow are 10-15% lower: about 13.5 maf on average, and highly variable (from 4.4 maf to over 22 maf.). Thus the original Compact over-allocated the actual amount of water available, even before the developments of the last decade. These developments include:

- (1) Between 1999 and 2004, the average flow volumes were only about 10 maf, and below average flows have continued except in 2005. Lake Mead and Lake Powell are at historic lows.
- (2) According to recent modeling predictions, global warming may further reduce available supplies.
- (3) The original compact negotiations paid no attention to in-stream environmental needs that have been written into more recent environmental law.

Estimated and projected use of Colorado River water by the four upper basin states is about 5 maf by 2020, with the projection for New Mexico being 743,000 afy in 2020, still short of its 840,000 afy allocation calculated at 11.25% of 7.5 maf. However, if the long-term average flow in the Colorado is closer to 10 maf per year, and the shortage is shared equally between upper and lower basin states, New Mexico's allocation could be reduced by 1/3 to 560,000 afy, roughly its current withdrawal. How this would affect the SJ/C Project has yet to be determined.

Since 1990, the lower basin states have been using their entire allocation. The system has worked up until now mainly because the upper basin states have been using less than their legal allocation. Foreseeing problems ahead, the seven Compact states signed an agreement in December 2007 that formalized shortage-sharing rules to cooperate during the ongoing drought. Under this agreement, the upper basin deliveries will drop as the surface of Lake Mead drops towards 1000 feet above sea level, with additional negotiations required as the level approaches 1,025 feet. (In October 2007 it stood at 1,111 feet, having dropped more than 100 feet in the last decade.) Some environmental groups say that the pact does not go far enough to encourage conservation and discourage growth in the water-starved lower basin states.