

## Executive Summary

### A Sustainable Source Of Water for the Western United States Revised September, 2008

Since the days of the Forty-niners, the Western U.S. has suffered from a chronic shortage of water. The Colorado River currently runs approximately 12 to 14,000,000 acre-feet (AF) annually although when the Colorado River Compact was negotiated, runoff was based on annual flows of over 16,000,000 AF. With intense population pressure throughout the entire Colorado River drainage, the river does not produce enough water to fill demand.

Local, regional, and state water agencies in the Southwest and Southern Plains states are struggling to develop plans to provide adequate water supplies for current and future environmental needs, growth, energy development, and to sustain agriculture. The Colorado Statewide Water Supply Initiative (SWSI) has identified water supply "gaps" in all areas of the state.

The Mississippi River at Hickman, KY, 30 miles south of Cairo, IL, where the Ohio joins the Mississippi, flows more than 2,000,000 AF per day during spring run-off which lasts about two weeks each year. This totals more than the entire annual flow of the Colorado. The Mississippi has average annual flows exceeding 240,000,000 AF at the Hickman gauging station based on over 110 years of Army Corps of Engineers (COE) records. Mississippi River water is governed by the Law of Riparian Rights and is administered by the COE.

A "Central Plains Compact" of states and interested parties can be formed to build a pipeline from the Mississippi River in the Hickman, KY area to pump an initial 1,000,000 AF of water to Colorado annually. The pipeline would generally follow the divide between the South Platte and Arkansas River drainages with the western terminus between Denver and Colorado Springs on the Eastern Slope of the Continental Divide. Water diverted from the Mississippi would amount to less than 1/2 of 1% of average annual flows and is within the margin of error of flow metering on the river.

The project is estimated to cost \$ 23 billion (2008 dollars) for the initial 1,000,000 AF per year. The project can be financed, without Federal money, by the "Compact" states that would benefit from increased flows in the South Platte and Arkansas Rivers.

The construction cost is estimated be \$ 23,000 per AF. Debt service, assuming 30 years at 5 % would cost \$ 1,500 per AF per year. Operations and maintenance costs for the project are estimated to be \$ 1,450 per AF per year. Total annual cost would be \$ 2,950 per AF. Finance and operating costs would be distributed and paid for by water users in all areas that receive benefit.

The initial pipeline\canal\reservoir system would be sized to accommodate water users in states that the system passes through. Laterals could be built at additional cost into the Colorado and Rio Grande River drainages.

There would be great benefits throughout the Southwest and Southern Plains for the environment, endangered species, energy development, agriculture, and metropolitan areas from increased flows in the regions' rivers including the South Platte and Arkansas initially with possible later benefits to the Colorado and Rio Grande.

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