

State view: Wet America faces growing demand from Dry America

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By: **Rolf E. Westgard**, Duluth News Tribune

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The Earth's lines of meridian run from pole to pole, and they mark westward progress in degrees of longitude from the prime meridian at the Royal Observatory, Greenwich, England. The 100th meridian emerges from central Canada. It bisects the Dakotas, Nebraska, Kansas, Oklahoma and Texas and enters Mexico at Laredo. To the east of the 100th is Wet America, with its corn and soybeans. To the west, except for a wet part in the Pacific Northwest, is Dry America, of wheat, cattle ranches and irrigation.

The primary water sources for Dry America are the snow packs of its mountain ranges which feed the rivers during dry seasons. The West's major river is the Colorado. It brings life to hundreds of cities, an increasingly thirsty 21 million people, and more than 2 million acres of irrigated farmland in seven states and two countries. The Colorado's dams and diversions were planned and built at time when the river's annual flow ranged from 16 million acre feet to more than 20 million. In the drier 21st century, the flow is averaging 14 million to 15 million acre feet. The river's two major reservoirs are Lake Powell, behind Glen Canyon Dam, and Lake Mead, behind Hoover Dam. Those reservoirs are in slow decline, and they are about half full.

Many climate scientists believe that one of the early effects of global warming will be a drier American Southwest, placing the future of cities like Phoenix, Las Vegas and Los Angeles in jeopardy. Lake Mead's level has dropped from 1,229 feet to 1,112 today. Below 1,000 feet, both water channels to Las Vegas are dry. As James Lawrence Powell of the University of Southern California put it in his recent study of the Colorado's flow rates: "We can save either Lake Powell or Lake Mead, but not both."

The thirsty cities of the West are even starting to look north at the Columbia River, and to the east at the Great Lakes and the Mississippi for water.

An enduring Minnesota nightmare is the vision of a great pipeline that begins in Lake Superior. Like a giant flexible straw, it snakes its way west to irrigate Kansas and Oklahoma, finally ending with branches at parched Arizona golf courses and thousands of Los Angeles swimming pools.

Although the pipeline is not practical, the bad dream persists, concluding with Lake Superior as a huge replica of those empty mine pits on the Iron Range.

Before the white man, Minnesota was a natural-resource treasure with vast forests of virgin white pine and the world's greatest deposits of rich iron ore. Deep layers of our glacially deposited soil were nourished by the ample waters of our lakes, streams and aquifers. Now those forests are clear cut, their lumber exported to the world. Most of the iron ore has gone everywhere, leaving behind those empty pits. We need to protect our remaining soil and the waters which nourish it.

The Earth's fresh water is a renewable resource from nature's great distillery. But its supply is fixed, and the world's population is not.

The obvious answer is conservation, and in not subsidizing ineffective uses with cheap water, like growing thirsty-low value crops in arid regions. Alfalfa takes 20 percent of California's agriculture water and provides 4 percent of its food crop revenue.

We've worried about wars over future oil supplies.

Water wars could make those conflicts seem like skirmishes.

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