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Allen Best/Aspen Journalism

Skimpy-clothed people splashing amid the red sandstone canyons of Utah define our images of Lake Powell.

But six months ago, engineers and water officials from the seven states of the Colorado River basin quietly met in Santa Fe to consider a more serious possibility: Continued drought could leave too little water in the reservoir for the eight giant turbines in Glen Canyon Dam to produce electricity.

The turbines can produce great amounts of electricity, 1,320 megawatts at full throttle, or roughly twice as much as the Cherokee power plants north of downtown Denver. In practice, the volume runs half that. Most rural electrical cooperatives in the Rocky Mountains states buy power from Glen Canyon through their wholesale supplier, Tri-State Generation and Transmission, as does Xcel Energy. Glen Canyon's eight turbines this year are generating power equivalent to what is used by 320,000 homes, according to the Western Area Power Administration.

The average $150 million in revenues from this power generation are a federal cash cow. The money paid for construction of Glen Canyon and other dams authorized by Congress in 1958, but also funds salinity control such as in the Paradox Valley west of Telluride and the endangered fish recovery program, including the 15-mile segment of the Colorado River from Palisade into Grand Junction.

What if the Colorado River basin has another bum year for snow? Inflows into Lake Powell during the last two years were 25 percent and then 47 percent as compared to the rolling 30-year average. If the years 2001-2003 were about as bad, here's the difference: in 1999, Lake Powell was full. In recent years, despite a few big snow years, the reservoir has often displayed big "bathtub rings." Right now, it's 43 percent of capacity. Drought has been our more steady companion of the 21st century.

This extended drought, in duration and depth, surpasses any since gauges were installed in the Colorado River basin in 1906. However, extensive study of tree rings in the basin suggest worse and even longer drought sequences have occurred in the Southwest, especially 900 years ago.

Whether this drought will also continue is anybody's guess, but Colorado and other states decided it best to plan in case it does. On Wednesday, December 4, at a meeting in Golden, officials shared some of their pending strategies.

John McClow of Gunnison, who is Colorado's representative on the Upper Basin Compact Commission, said if snow lags again this winter, reservoirs on two tributary rivers — Flaming Gorge Reservoir on the Green and Navajo on the San Juan — can be tapped to release more water and allow the Glen Canyon generators to produce additional electricity.

The trio of reservoirs near Gunnison — Blue Mesa, Curecanti and Morrow Point — are already too low to be of much value, he said. Other federal reservoirs — Ruedi near Basalt, Green Mountain near Kremmling, and Granby — are not part of the same system.

If the drought deepens, other small-gain strategies can be deployed: stepped-up cloud seeding and more aggressive efforts to remove water-gobbling salt cedar, i.e., tamarisk, an invasive species, from river banks. Still other strategies being weighed include idling of agriculture land — even crimping of some transmountain diversions, which normally divert 450,000 to 600,000 acre-feet of water each year in Colorado from the Colorado River Basin to the Front Range and eastern plains. But whatever strategies are adopted, McClow stressed, Colorado alone wouldn't bear the burden.

Why not just forgo the electricity? That remains an option, but it would invite the federal government to become a decision-maker in water matters. Almost fiercely, the states prefer to chart their own course.

This newest twist at Lake Powell is different from a curtailment under the 1922 Colorado River Water Compact. Colorado and other upper-basin states are in no imminent danger of failing to deliver the water specified for delivery at Lee's Ferry, at the head of the Grand Canyon, as required by the compact, said McClow, nor is that likely to occur at any time soon. For that matter, the prospect of a Lake Powell "dead pool"- too little water to generate power - isn't high probability next summer. Computer modeling suggets a 5 to 7 percent chance.

Yet this sharpening razor's edge at between water supply and demand may be instructive. At one level it represents the intersection of water and energy. In California, one-fifth of all energy is devoted to moving around water. In Colorado, it's lower. But everywhere, particularly the West, water is dependent on energy, and producing energy is dependent on water.

More immediately, this reminds us of risk. Some people think that Colorado's growing urban areas need to develop the state's remaining raw water supplies from the Colorado River Basin. The risk is that water may not be there some years. Or a lot of years. We just don't know.

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