Making Magic

CHAPTER NINE

Down the Boise, the Big Lost, the Blackfoot,
The Raft, the Rock, the Burnt, the Dry, the Silver, the Selway, the Salmon;
Down Henrys Fork and Jackson Hole;
Down rivulets that seep and vanish, inching through porous strata;
Down the Idaho face of the Rockies, surging with Yellowstone’s snowmelt;
Carrying half the Columbia and twice the volume of the Colorado;
Curving 1,078 miles through a basin larger than Utah;
Lighting subdivisions from Seattle to San Diego;
Irrigating four million acres;
Leading the nation (perhaps even the world) in per capita water consumption ... the Snake in a blistering August is a torrent severed in half. At Milner Dam above Twin Falls a child can hop the streambed. In drought, the only water that escapes irrigation is the seepage through cracks in the dam.

Granite torn from the cliffs bakes in the Milner streambed. Worldviews collide. "It makes me feel good," says a man who can channel the equivalent flow of 1,900 residential fire hydrants (3,800 cubic feet per second) into Milner's South Side Canal. Born in Wendell and raised in Jerome, Vince Alberdi manages the most concrete result of a 1903 handshake that joined banker Stanley Milner and farmer Ira Perrine in the legendary corporation that built the low rubble dam. Today the Milner-Perrine Twin Falls Canal Company back-floods the Snake about thirty-four miles from Murtaugh to the outskirts of Burley. Through 1,000 miles of coulees, ditches, and drains, the lifeblood of agribusiness pitchforks south and west into 204,000 acres of crop-land. About 3,000 headgates serve 4,000 shareholders. In six months at full capacity the system can deliver more than one million acre-feet. That's 325 billion gallons—enough water to flood Manhattan to the base of Miss Liberty's torch.

"We've been able to capture the river," Alberdi believes. "We not only provide the livelihood for several thousand people, but we provide the much needed food for our population as well." Benefits include the state's leading barley harvest plus wheat, corn, oats, sugar beets, dry beans, peas, sweet cherries, apricots, and alfalfa. To the north a sibling canal feeds 170,000 acres of mostly volcanic soils famous for Russet potatoes. Annually, 197,000 cows from 403 area dairies produce 4.2 billion gallons of milk.

Not bad for a leaky dam.

Sheri L. Chapman of the Idaho Water Users Association credits the system that Milner inspired with a farming bonanza worth $5.3 billion a year. "The development of Idaho's irrigation capacity is the single most significant activity in the history of our state," says Chapman, a farm lobbyist and good at his job. Rivals would surely agree that sweet deals for irrigators have been politically significant, even dominant. Chapman admits to tradeoffs: Milner Dam choked Shoshone Falls but opened 260,000 acres—a worthy sacrifice considering the "true miracle" of ditch irrigation, and doubly miraculous because "the vast majority of the system's been put in place in what is really a relatively short period of time compared to historical standards." In seventy-three years, 1902 to 1975, the nation's tenth-longest river lured twenty-five main-stem dams and fifty, maybe sixty, upland water projects. Too short a time, say critics. Too short for engineers to foresee the workings of a natural law immutably basic to river con-
struction: the revenge of technological systems through the law of unintended effects.

The revenge of the system continued in dank lagoons that trapped and settled agricultural runoff like a staircase of septic tanks. By 1976, when the collapse of Teton Dam ended the era of big reclamation, fully half of the thundering Snake (508 miles) had been flattened in storage lakes. In time that flatwater stewed with chemical toxins. Ditch water added topsoil. Nitrate fed algae blooms. Dams, ecologists said, devastated the Snake in ways too profound to calculate trade-offs. Dams killed the rapids and rills that cooled and cleansed the river. Dams quelled seasonal flooding, crashing the energy loop that replenished river plankton. Dams flooded out minks and marmots. Dams disoriented the migrating salmon, and dams muddied the sandy places that trout used for spawning grounds.

Most tragic of all, said ecologists in the 1980s, were the ninety-four effluent miles from Milner to King Hill. Here in the canyon heart of the Magic Valley, the Snake still harbored the continent’s largest freshwater fish, the white...
Perrine Bridge, 1927. The cantilever truss spanned the Snake with 98,750 steel parts weighing 2,900 tons. Left: Peter Kimberly (sitting) and Frank Buhl (standing right) at Rock Creek siphon, 1905.

An Engineer's Creation
Summer flows at Milner Dam plummeted from 2,000 cubic feet per second in 1911 to near zero in the 1920s. Severed by dams, drained for irrigation, replenished by tributaries and literally thousands of springs, the Snake, writes conservationist Tim Palmer, "may be our foremost example of a river that is repeatedly killed off but repeatedly returns to life."
sturgeon—some older than Idaho statehood and longer than a fisherman’s skiff. Here the hackberry thickets clattered with thousands of songbirds. Mallards nested the tules. Blue-gray herons, hooked-necked and dangle-footed, cruised the backwater low as if skimming under radar. And here, according to a 1988 report from the Idaho Department of Health and Welfare, the Snake was an open sewer. Outboards fouled in floating mats of rope-like filament algae. Toxins layered the streambed—enough herbicide, pesticide, ammonia, mercury, copper, and organic matter to contaminate the Snake River aquifer and threaten drinking supplies. In 1998 the Nature Conservancy called the Milner-to-King Hill reach “the most polluted and degraded in Idaho.” State officials conceded that “a water-quality-limited segment” had suffered “aquatic ecosystem degradation.” Greens found stronger words: “Blow the dams. Let the river run and re-learn how to live like a river instead of like a barren canal for barges and a source of cheap electricity,” raged an editorial in the Idaho Mountain Express, as if the Snake were Love Canal.

“We set out to tame the rivers,” wrote Marc Reisner in Cadillac Desert. “We set out to make the future of the American West secure, what we really did was make ourselves rich and our descendants insecure.”

Nowhere is that future harder to read than on the torrent of great expectations the trappers called “savage” and “mad.” Shrouded in myth and romance, the Snake begs simplification. Farmers marvel at concrete wonders that cultivated a wasteland. Greens see paradise lost. Either way, the discourse
is narrowly framed on the impact of infrastructure, as if technology drove history, as if construction overrode human judgment or brought life to a lifeless place. A beast, a benefactor, the rubble colossus of the Magic Valley poses difficult questions about the worth of the predammed desert in Idaho’s primordial state. From where in Idaho’s past do we measure technology’s progress? Progress from where to what?

Below Milner’s spillway any measure of technology’s progress must contend with movement and flux. Authors in these pages have probed secrets of a mobile landscape. Flattened by lava and blasted into angular chasms by Lake Bonneville’s swirling deluge, the magical valley poses a challenge to Darwinian notions of linear progress with its deep and remarkable records of cataclysmic change. Because the region also holds some of the continent’s oldest-known records of Stone Age civilization, the valley tells hopeful stories: a history of coping and adaptation through ice and drought and global warming, a 13,000-year epic of the human encounter with catastrophic events. Idaho in that time has thawed into arid grasslands. Horses have returned. Storms have tossed boulders larger than bison. Cliffs have broken off in an instant. Since the evidence of the human response mostly predates the written record, history, like the story of Equus, suggests a number of possible patterns too fleeting and incomplete for
science to carefully draw. "The ecosystem," said ecologist Frank Egler, a critic of Darwinian sequence, "is not more complex than we think; it is more complex than we can think." Likewise the patterns of human progress are harder to know than we think—than we can think—on the lava steppe of the Snake.

About the most the historian can hope to know about the Magic Valley’s pattern of progress is how people from different places perceived their migrating world. How it was, for example, that the geologist King stumbled upon the sublime at the brink of a lava canyon. How it was that an Oregon-bound Missouri farm boy imagined the Devil’s Backbone. How boosters discovered Richfield, Goshen, Bliss, Paradise Valley, and Eden. How publicists for the Union Pacific framed industrial farming. How Basques found a shepherd’s kingdom. How Latter-day Saints from Utah found in Cassia County a New World province of Zion.

Nature is perception. Nature in the magical valley is also a story passionately told about engineering sensations—about the steel and concrete that ravaged or rescued the primordial Canaan of wondrous terrain. Said a contributor to Atlantic Monthly in the year the first wagons of saints unloaded in Cassia County: "We have grown accustomed to finding whatever we please in the landscape, and read in it what we have in our own hearts."