

NOR ANY DROP TO DRINK - William Ashworth  
and WATER - Fred Powledge

These books describe the vital need for water, to maintain human, animal, plant life and industry, and thus civilizations; our wasteful mining of largely irreplaceable aquifers, our pervasive and often irreversible poisoning, with incredible amounts of toxic industrial wastes, artificial fertilizers, herbicides, pesticides, of surface and underground waters, and thus the precarious situation of our drinking water, food supply, wildlife and nature balance, population centers and industrial base. The water emergency is global, but we work hardest to create it. There will be an early water shortage in 42 states. Both legal and a vast illegal disposal of industrial, all nuclear operation wastes, auto exhausts, street and household cleaning, feed lot and slaughter wastes are poisoning our earth, air, water, food, and inviting crime, terrorism and war. 4,000 water borne illnesses, viral or bacterial, are annually reported. Others, including chemical poisoning, could be 40,000. Buckminster Fuller said that wealth should be judged by its ability to maintain itself. The Great Plains mainly underground water supply will be exhausted in many areas by the year 2000, greatly reducing our crop base, and thus industry raw materials.

Long Island's underground water is an industrial sewer. The Colorado River, supplying many large areas, is turning to salt. U.S. average water use is 90 gallons per person daily - cities perhaps 2 or 3 times that - 3 times world use; 15 or 20 times Third World use; 4 times our use in 1900. 88% of water used west of the 100th meridian goes to irrigation. Adueeducts, to supply cities, rival our river systems. Irrigation canals travel up to hundreds of miles. Irrigated crops are up to 3 times as productive as others. Large irrigated farms are most cost effective - thus corporate agribusiness, cattle breeders, feeders. U.S. subsidizes water from dams, up to \$1,100 per acre, costing the public billions, and conflicting with various other water needs. Forest destruction - enormous - will raise summer, lower winter temperatures. Plants also moderate distribution of water, rainfall. Acid rains kill food chains, bees, which fertilize many crops, tens of thousands of lakes and rivers. Lower water table threatens native vegetation on 20% of U.S. land.

Rainfall in the South Coast Basin (Los Angeles and south) can support only 100,000. It contains 12 million. Bringing water there, up to hundreds of miles, from many sources, using half the states electricity, costs many billions. Water transfers affect evaporation, transpiration, aquifers, climate, water chemistry, plant life, fish, organisms. In some places, dead plants don't rot. Los Angeles water drain of Mono Lake makes it too salty for shrimp. Gulls starve. Their prey, mice, now seriously destroy crops. 50% of our drinking water - 25% for all purposes - comes from the ground, with little replacement. Water level down greatly, in most of the country, often causing ground to sink; several feet a year between Phoenix and Tucson. A great mix of industrial chemicals - many dangerous - goes into sewers, along with sewage and explosive gases. There is chemical erosion of pipes, and breakage from other causes - costly to replace - and accidental spills, in plants, on streets, and household chemicals, washed into sewers. Radioactive spills are prevalent.

There are 300 to 600 exotic chemicals in the Ohio River; large barge spills. Legal and illegal dumping have poisoned hundreds, perhaps thousands of aquifers for all time, countrywide. Our oceans, seas and countless lakes and river systems are dead or dying. Hundreds of wells have been closed. 39, supplying 13 cities and nearly half a million people, closed. 500 Long Island wells examined were all contaminated, 15 seriously. 36, supplying 2 million, closed. A report states serious contamination in 34 states. Probably 40. No treatment plants in New England. Those who can't afford to have waste trucked to N. Carolina hire one of growing network of "midnight dumpers." United Nations: One-third of the world's arable land will be gone in 20 years. Attempts at "energy independence," with coal, hydroelectric and nuclear power, vastly increase water usage and contamination. Excellent farm land has been flooded, by dams which don't control floods, produce little electricity, but enrich speculators, and perpetuate a vast government bureaucracy which must destroy nature to stay in business.

Over 50,000 users in West Orange, N.J. had to boil their drinking water, in Aug., 1980. 150 swimmers in Newark Bay, in 1980, had intestinal problems, from fecal matter. Many New Jersey residents used bottled water for up to 2 weeks. 5 inches of refined oil floated on the water table of Rio Grande, N.J., from nearby oil tank leakage. A chemical storage dump exploded, and burned out of control for half a day, in Elizabeth, N.J., in 1980. Idaho's Teton Dam, built on porous rock in an earthquake zone, burst in 1976, flooding 300 square miles, carrying nearby stored poisons on the way. Woburn, north of Boston, discovered almost every type of toxic waste in its water, and had an abnormal cancer rate. We produced less than a million lb. of synthetic organic chemicals in 1941; 172 trillion lb. in 1978 (obviously unneeded). Many must be handled with extreme care, and are not readily degradable. About 70,000 chemicals are currently produced in the U.S.; 50 in quantities greater than 1,300,000 lb. a year - 7% of our GNP. There is considerable ignorance about them. EPA estimated 35 million metric tons of hazardous waste each year in U.S.; only 10% safely disposed of; 19,192 lb. per square mile. Only a handful of 43,000 toxic items in commercially significant amounts are tested for carcinogenicity. 30% of New York State's waste improperly handled. EPA found 181,000 man-made lagoons containing liquid wastes. Of 8,200 studied, almost three-fourths were unlined. 50,000 active and inactive waste-disposal sites are potentially dangerous - in every state. One billion gals. leachate estimated from lagoons. No monitoring of underground contamination in 95% of cases.

30 square miles of aquifer around Rocky Mountain Arsenal, near Denver, contaminated. Many thousands - up to 100,000 - drums of unknown chemicals 15 miles south of Louisville ("Valley of the Drums"). Great variety, highly toxic. Sophisticated testing required, to identify. 100,000 bbl. industrial wastes annually, in Hawaii. Legitimate dumps account for only 20,000. Much ground water polluted. Acidified water leaches heavy metals from soil, which enter food chain, and build up toxic levels through biological magnification. Acidified water dissolves trace metals in water mains. Many vegetables suffer 50% growth loss from acid rain; there is a lower tree harvest. American Chemical Society: "death is a crude, uninformative, and often inappropriate indication of organic damage." EPA official, on groundwater: "the most grievous errors in judgment we as a nation have ever made." In 1975, Kepone, in James River, could have been cleaned up for \$250,000. Delays cost polluter \$13 million in damages. Cleanup now to cost \$2 billion - if at all possible. Michigan: "Chemical contamination may be so ... pervasive that we can't afford to clean it up."

Pesticides quickly breed immunity in pests (requiring ever greater use, until they don't pay. Normal, healthy soil, crop rotation, diversity, enemy insects should be used.) Heavily subsidized irrigation water encourages impractical developments. California's largest water use is to feed cattle shipped in from Texas, before being returned, while Midwest forage land lies fallow. Arizona taking Colorado River water, at horrendous government expense, to create subsidized, precarious land development, as did southern California. The massive overdraft of Arizona water causes irregular subsidence of ground, cracking water and sewer mains, electrical conduits. Boston is losing half its water supply, from leaking and broken pipes. New York City's losses are estimated between 70,800,000 and 200,000,000 gallons a day; Houston's about 70,000,000 gallons a day. Corruption is everywhere so great that much defective work is done; many city employees work only part of the time, if at all, and they are very lax about repairing any damage, shutting off any waste, such as open fire hydrants, or enforcing laws against pollution. Major polluters are fined only nominally, if at all. The Iron Triangle, of government bureaus, congressional delegations, and local economic interests keep dangerous, expensive boondoggles going. Pork Barrel politics forces congressmen to support unsound projects of others, so that their own unsound projects will be supported.

(Chemicals should be proven safe, or recycling or safe disposal assured, before marketing. All industrial and government projects should be activist monitored, and no one should use or work on anything unapproved by such agency specialists. Full ground rent assessment, ending land speculation, and assuring surplus jobs, would permit popular veto of the unsound - whether chemicals, dams, nuclear power or weapons, neocolonialism, racism, court, police or prison sadism. The need is urgent, for humanity today, survival tomorrow.)