

Water: A Tragedy of Responsibility

Environmental problems place great constraint on all societies. The response of the society, its leaders in particular, determines the severity of the consequences of environmental degradation. Maybe nowhere is this more critical than with the protection of water, notably the groundwater resource. The cities of Atlanta and Albuquerque, San Antonio and Las Vegas are linked by the common bond of their water woes. They all have invited tremendous urban sprawl, fueled by massive population influx, and are now suffering from severe thirst. To further stratify these concerns, our intensifying demand for water occurs simultaneously with a critical need to protect endangered riparian species under ever increasing and more widespread drought conditions. This war between demography and ecology is exasperated as logging precedes mining and development in former wild areas, corporate agriculture replaces traditional, sustainable agriculture, and horticulture or silviculture are only to be replaced by more sprawl. As we become increasingly disconnected from the natural world intended to sustain our very existence, we seem to bargain a recipe for impending disaster.

Water, in short, is certain to be the critical issue of this century, and a matter of tremendous significance to our very existence. To stress the importance of political decision makers in the United States on the water policy, and in turn our lives, let us first ponder the following facts from the US Forest Service Foundation. These concern ONLY the National Forest lands in the US. The significance of these lands to clean water is overwhelming, as clean water for the public is a mandate for management, and political decision makers have tremendous influence in interpreting these management goals.

- Two thirds of all Wild and Scenic Rivers designations are on National Forest lands.
- Seventy-five percent of the nation's outdoor recreation areas are within a half mile of a stream or lake.
- Average annual value of timber harvested from National Forest lands in the past twenty years is \$330 million, while the average annual value of water coming from these lands exceeds \$3.7 BILLION.
- More than 900 cities rely on National Forest watersheds for their water, notably Denver, Portland, Little Rock, Helena, Oakland and Salt Lake City.
- Over sixty million Americans depend on National forests for their water.

Even with these facts in front of us, humans continue to promote Las Vegas for the contradiction it is the pursuit of growth and urban sprawl in the absence of water.

On another side of the country, but no wiser, was this author's experience in the central sands of Wisconsin nearly three decades ago, and more than one hundred miles from the protection of any National Forest. An area noted for its shallow groundwater and extremely porous soils, the very region that inspired Leopold to write his Sand County Almanac was being transformed from small,

relatively sustainable family farms and woodlots to corporate irrigated agriculture. Defying nature's laws, a soil void of nutrients and organic matter could grow crops profitably, the eager money waged, by amending with water, fertilizers and toxic agro chemicals. Irrigation wells were drilled deep into the aquifer, and immediately full-section clear cuts replaced the field, pasture, wood lot and brush and berry habitat that had become a trademark of the region.

Deeply imbedded in my memory is a class 1, highly toxic chemical called Aldicarb, marketed under the trade name Temik. A concoction many times more toxic than DDT and extremely lethal to birds, this anomaly was designed to be a systemic pesticide. It was applied by burying in the light soils in early spring with the planting of potato tubers, which for the most part were being grown in that region to supply a fast food industry experiencing unprecedented growth.

Union Carbide reasoned that this substance would stave off plant disease and kill invading rodents and nematodes for an agro industry unwilling to practice more sustainable and proven methods, such as integrated pest management. Armed with their own lab tests and a very receptive, almost blind, watch dog in our federal government, the promoters boasted of this "safe" product, which their results showed to break down quickly in aerobic, alkaline conditions at 78 degrees Fahrenheit. These conditions in the laboratory were in fact very distant from actual field conditions, where soil at potato planting time averaged less than 50 degrees and where the more acidic, light soil readily leached the chemical deep into an anaerobic zone and directly into the ground water.

State law allowed levels of this pesticide at 3 parts per billion in well water designated for human consumption. Tests in the central sands region revealed many wells with higher, unsafe levels of the pesticide, arousing anger and creating a controversy that was soon to evolve into conflict between neighbors and friends and cause a deep rift in communities. As a young landowner in the region, unknowingly ready to become embroiled in activism which I carry to this day, I was deeply troubled by the injustice of a practicing, sustainable farmer being unable to safely drink his well water because of the practices of the corporate giants he resides near. I called the office of my state representative, who later became famous for his 14 years as Governor of Wisconsin and four years as secretary of Health and Human Services in the second Bush White House. I was assured by Mr. Thompson's aide that he was concerned and knowledgeable of the matter and very eager to see the problem resolved. To me, being somewhat naïve and new to government and lobbyists, this indicated that Aldicarb would soon be banned or severely restricted.

It was only short weeks later when a follow up call to Rep. Thompson's office revealed to me that their approach to the issue was seriously flawed. Their proposal was to legislate a new, higher, safe allowable level of the chemical in groundwater. Science raised serious concerns over possible effects, but to my dismay legislation would trump science.

Amazingly this legislation was passed, compromising clean, healthy water but appeasing lobbyists and agro-industry spokespersons. Controversy and hearings on this matter proceeded for over a decade, and eventually the misguided approach failed, as the concentration of this chemical in the

groundwater increased to alarming levels. In the very late 1970's Aldicarb finally was severely restricted for cold soil application in potato fields in Long Island NY. Ten years later, the effects remained rampant as the chemical concentration continued to increase in the groundwater supply. In 1990 the manufacturers of Aldicarb announced a voluntary halt on the use of Temik (Aldicarb) on potatoes because of groundwater contamination. Today Aldicarb is still found at concentrations considered unsafe for consumption in at least 25 countries and 12 states.

For over a full decade I experienced first hand the controversy created by this issue. It divided communities down to elementary school class rooms, as some were convinced the chemical was necessary to their livelihood, and others expressed concern over environmental and health effects. If Aldicarb is the symptom, human's lack of connection to the natural world is the disease. This widespread and serious disease displays numerous symptoms beyond mention here.

As nature heals the wounds of irresponsible agro-business, new hope is found in the emergence of large scale organic farms, and, even more so, in local community farms. Organic agriculture is now a \$20 billion dollar business, and has grown from the demand of consumers communicated directly to farmers. Pesticide-free farming was once looked upon as primitive, but new awareness among consumers and food growers have renewed this sustainable, holistic approach to food production. As this method becomes increasingly profitable, environmentally, economically and health-wise, organic agriculture is encroaching upon the chemical-laden fields of the current farming paradigm. A shift toward organic farming is one of several ways to mitigate the damage to our ground and surface waters from short-sighted, uninformed past practices. Accompanied with renewed recognition of water's value to our very survival, as family gardeners have long realized, this approach has potential to set us on a path for conscientious sustainability.

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