



## *KENT'S LINK WITH THE LAND*

Jedidiah Morse, an early American geographer, described our part of Connecticut as “a high, hilly and in some parts mountainous country formed by nature.” He implied that such a place selectively attracted the sort of hardy race of free and independent souls needed to make it habitable. Morse was only observing a fundamental truth—that the shape of the land does indeed affect the course of human events played out in its midst. Kent’s expanse of rugged up and down terrain, naturally terraced flood plains, rock-strewn soils, and the roiling waters of the Housatonic River that cleave lengthwise through town prove the rule.

We now have the practical means—dynamite and motorized earth-moving equipment, for example—to alter the landscape in ways unimaginable a century ago. But there was a time here—not very long ago really—that our bond with the land was much closer and in many ways more respectful. Then it was that the majority of people in Kent and surrounding towns were farmers or men associated with industries that relied on local resources—chiefly iron, charcoal and waterpower. Today, we have to look a little deeper to be reminded of our link with the land, but the connections are still there. And it’s never been more important to Kent’s future that we keep that sense of connectedness to the land in our planning. Without a respect for the land and the fragile ecosystem that sustains it, we risk destroying forever what we love about Kent.

### **Geography**

The Town of Kent spreads across 49.6 square miles (31,800 acres) in Litchfield County, Connecticut. The town’s center lies at latitude/longitude 41°44’ North/73°27’ West. Geographically speaking, Kent is part of a region known variously as the Northwest Corner, the Northwest Highlands and the Housatonic Highlands Plateau. Our mountains connect on the western edge to New York’s Taconic Mountains and in the north to Massachusetts’ Berkshire Mountains. Technically, all these mountains belong to the larger Appalachian Mountain system that runs from Georgia to Maine. Kent’s location relative to large urban areas—approximately 78 miles north of New York City, 22 miles north of Danbury and 40 miles west of Hartford—has been important to its economic and physical development.

The Town of Kent is more or less rectangular in shape and is bordered by eight towns. To the north lies Sharon, to the northeast Cornwall; Warren forms the eastern border, with Washington fitting into a small notch to the southeast and New Milford and Sherman completing the southern flank. Kent’s western side is bordered by New York State and the two towns of Dover and Amenia. Kent currently ranks 150th among Connecticut’s 169 towns and cities in population size; Litchfield County with approximately 190,000 people is eighth in population density among the state’s eight counties.

Kent’s principal geographic features are a series of high hills and ridgelines and the Housatonic River. Kent’s highest elevations include Mauwee Peak at 1,425 feet; Bromica Mountain in Wyantenock State Forest at 1,425 feet; several peaks around Chapel Pond in the vicinity of 1,405 feet; Cobble Mountain, Kent Mountain and Flanders Mountain, all at about 1,385 feet; Treasure Hill at 1,370 feet; Caleb’s Peak and Pond Mountain both at 1,332 feet. Skiff Mountain plateau undulates from 1,300 to 1,400 feet.

The Housatonic River rises from three sources in Western Massachusetts and joins as a main stem in the vicinity of Pittsfield, MA. Between Lime Rock and Cornwall Bridge the Housatonic River Valley is steep and narrow as the river flows through resistant gneiss and schist bedrock. The river enters Kent in an area often referred to as Swift’s Bridge Rapids at a mean level of 395 feet above sea level. Eleven miles further downstream it leaves Kent at a spectacular gorge below Bull’s Bridge. Within Kent’s borders the river widens owing to the softer, more easily eroded bedrock of Kent’s

distinctive Marble Valley and descends about 130 feet in elevation to 265 feet at the junction below Bull's Bridge where Ten Mile River enters.

Altogether the journey from initial source to the mouth of the Housatonic is 149 miles. At no place in Kent is the Housatonic River navigable for craft other than canoes, kayaks and other shallow boats, but it does serve to generate power.

The river divides the town lengthwise on a NNE/SSW diagonal, etching a distinctive and scenic path that includes broad flood plains and mountainous setbacks. Before there were sturdy bridges to carry people and products across, the river was a real obstacle to commercial and social intercourse. Today Kent sits comfortably astride the river, and is served principally by U.S. Rte. 7, a major north-south corridor in western New England, and by Rte. 341, crossing at Memorial Bridge in the center of town.

Farther to the south at Bull's Bridge a historic covered bridge links Kent with New York Rtes. 55 and 22. A



Route 7 at Bull's Bridge before being paved

smaller bridge once crossed the river at North Kent Rd. It was lost in the springtime flood of 1936. Altogether Kent is served by 27 miles of state roads, 53 miles of improved (paved) town roads, and 15 miles of unimproved or dirt roads, for a total of approximately 95 miles of public roads that link us to one another and the world around.

Kent's uplands are mostly very hilly, with thin soils and second growth forest, except for Skiff Mountain in the north where the grades are more moderate and the glacial till soils are deeper. The lowlands are flatter and have deep soils on glacial meltwater and riverine sediments, providing good places for human settlement and farming. (For more on these points see the chapters on Geology, Soils and Agricultural Resources.

### **Climate, Air Quality, Wind and More**

Like all communities, Kent's climate and air quality are affected by regional, national and increasingly, by global forces. What goes on in the Midwest, for example, affects the quality of our air and, on a far larger canvas, what goes on in the atmosphere in terms of carbon emissions and greenhouse gases impacts the atmospheric layer above Kent.

In this NCRI, however, we focus only on current local conditions. Kent enjoys a temperate climate with average temperature ranges recorded in recent years at Bull's Bridge Dam weather station of 14° to 35° F. in January; 35° to 59° in April; 60° to 84° in July, and 38° to 63° in October. Averages do not account for the yearly extremes, of course. The highest recorded temperature in Kent was 101° in 1995 and the lowest was -28° in 1961.

Average precipitation at Bull's Bridge weather station is recorded at 47.8 inches annually, with July generally recording the highest monthly rainfalls and October typically being the driest month, though the overall pattern is fairly uniform. There are strong indications, however, that our overall precipitation is climbing rather sharply, with some state authorities estimating that totals may be up as much as 20% annually over those of a century ago. Also notable has been the general decline in snowfall and snow accumulation on the ground in winter, the result of the general warming trend. Kent Falls is in the plant climate zone 5, based on average coldest winter temperatures between -10 and -20°F. The first frost occurs on average in early October, the last frost in early May, with considerable variation due to microclimatic conditions on the ground.

The State of Connecticut's Council on Environmental Quality began computerized monitoring of air quality at scattered stations around the state in the 1970s and has gradually increased the sophistication and breadth of the pollutants

it reports. In the year 2000 a monitoring station at an elevation of 1,656 feet was erected on Mohawk Mountain in Cornwall. The chief substance measured is ozone. Ozone is found at high levels in the atmosphere where it is beneficial in absorbing solar ultraviolet radiation; but it is also found at ground level where it is a poisonous, oxidizing agent, one that contributes to the majority of unhealthy air quality days in Connecticut, as measured by the state's Air Quality Index (AQI). Nitrogen dioxide, carbon dioxide, sulfur dioxide and particulate matter are also monitored.

Connecticut's air has been gradually improving since the passage of Federal and state laws to reduce automobile and factory emissions, but Litchfield County is still given a failing grade by the American Lung Association on the basis of its having as many as 14-20 "unhealthful air days" per year, chiefly in the hot summer months, much of it drifting east from the industrial Midwest. AQI data is currently reported at [www.epa.gov/air/data](http://www.epa.gov/air/data) and [www.ct.gov/cwp](http://www.ct.gov/cwp).

Prevailing winds in Kent are from the west and tend to be moderate. The higher elevations of Kent and the Northwest Corner in general are rated by the U.S. Department of Energy as having Class II wind resources (see [www.eere.energy.gov/windandhydro/windpoweringamerica](http://www.eere.energy.gov/windandhydro/windpoweringamerica)). These ratings, which are based on standard measurements taken at 50 meters, are considered insufficient for commercial power generation given the current technology but, as the cost of conventional energy resources continues to rise and as improvements in wind conversion and energy storage advance, it is possible that small scale wind turbines may make economic sense at some locations in Kent. A site within the Marvelwood School campus was briefly examined for this purpose but ultimately rejected by the school for aesthetic considerations. Another site nearby is currently under consideration.

The erection of wind turbines on hilltops will, of course, raise other environmental and aesthetic considerations that need to be addressed by local regulations. The judicious selection of sites for wind turbines is already being discussed by organizations such as the National Audubon Society, which favors harnessing wind energy as one of several alternative energy strategies; protection of bird migratory routes and bat habitats are of special concern.

Noise pollution is not a concern that most Kent residents consider often, but depending upon decisions being reached this year by the Federal Aviation Administration regarding rerouting flight paths in the nation's busiest airspace, Kent may find its skies a good bit more crowded and noisy in the future. One flight path designated Victor 405 currently cuts directly through the Litchfield Hills as planes follow a "highway in the sky" linking navigational aids at Bradley Airport and Pawling, NY.

### **Wastewater, Solid Waste and the Environment**

Kent's environmental quality is also affected by the way it has managed its wastewater, trash, garbage and toxic materials in the past and how it plans for them in the future.

Kent handles wastewater in two ways. The Wastewater Treatment Facility on the west side of the Housatonic River just south of Kent School serves 250 households in the village as well as much of Kent School. The plant, which was built in 1969, succeeded an earlier, more primitive, system dating from 1886 which, in the custom of the time, emptied waste directly into the river, "an improvement not often found in a village no larger than Kent," as town historian Francis Atwater proudly proclaimed in 1897.

Today the facility reclaims by means of evaporation, aeration, percolation and clarification through deep sand pits, some 110,000 gallons of raw sewage daily. Its engineered capacity is certified by the state to be 142,000 gallons daily. The system, which includes wells sunk deep between the plant and the river to sample any unwanted discharges, is monitored monthly by the State Department of Environmental Protection's Permitting, Enforcement and Remediation Division, which reports few if any problems. The Wastewater Treatment Facility is reportedly functioning well for the present but is regarded by state engineers as requiring a significant upgrade in its technology in the near future.

A far larger share of wastewater disposal in Kent is handled by subsurface sewage disposal systems, or septic systems including individual leaching fields. Soil type is crucial to effective functioning of each field and systems are subject to approval from the Torrington Area Health District's sanitarian acting as an agent of the state. A properly



An early Sherman Chase wind turbine

designed and installed system can be expected to last 30-40 years assuming homeowners have them pumped out periodically. (Local waste extracted from septic tanks by commercial septic service operators is processed for a fee at the local wastewater facility.)

In 1989 the Connecticut DEP released research entitled “Report for the Blue Ribbon Commission on Housing on the Land Required to Support Residential Development in Connecticut”; it declared that the “maximum density ... in unsewered areas [should be] one dwelling for each 0.6 acres, under ideal conditions.” It added that “most host conditions ... require a density that is less than one house per two acres of ‘buildable,’ non-wetlands soils.” Nitrogen-loading is the primary concern.

Solid waste disposal in Kent continues to be a conservation and a management problem. The state closed Kent’s old-fashioned “town dump” on former Stanley lands in North Kent back in the late 1960s, and the subsequent land fill site off North Kent Road in the 1980s, at which time Kent residents went to a transfer station operation located next to the Town Garage. As part of further modernization and in response to changes in state law Kent joined the eleven-town Housatonic Resources Recovery Authority (HRRRA) in 1986. HRRRA (as well as commercial curbside haulers) truck Kent’s solid waste to an Intermediate Processing Center in Danbury from whence waste is taken for incineration at a waste to energy plant in Bridgeport operated by Wheelabrator Environmental Systems. Waste separated at the Transfer Station for recycling—paper, plastics, metal, rubber, glass—is also trucked to Danbury where it is further sorted and resold as reusable materials.

Kent is currently upgrading its transfer station and improving the handling of waste brought into the station each week, but residents fall far short of meeting the state’s recycling goals for towns, which is to recycle 40% under current conditions and to raise that level to 50% by 2024. In 2008 Kent reclaimed only 17% of its residents’ plastics, metals, paper and other listed items. By contrast, Cornwall, Sharon and Salisbury are achieving rates of 25% to 40% on a regular basis. Kent can and must do much better.

Federal, state and local zoning regulations all regulate the disposal of materials designated “toxic” to the environment, but Kent also has some problems in this area. Before strict regulations came into being and were enforced the Berkshire Transformer Company located at the Junction of Rte. 341 and South Kent Rd. disposed of large quantities of materials including PCBs and heavy metals on its property close to an existing aquifer. These residual toxins continue to bring this 5.1 acre property the unwelcome designation of Superfund Site; it awaits expensive and extensive remediation before it can be used again for most human activities.

Storm water—the runoff from roads, driveways, gutters, hillsides, construction sites and other areas especially after heavy downpours and spring melts—converges via storm drains and culverts into Kent’s streams, rivers and ponds. Local efforts to educate residents as to the proper disposal and application of garden and farm chemicals, to use semi-pervious materials rather than impervious materials in constructing driveways and parking areas, and to follow best practices in reducing storm water erosion are just beginning. The state has recently initiated an aggressive program to promote low impact development (LID) approaches through organizations such as the University of Connecticut’s Center for Land Use Education and Research (CLEAR), which provides extensive information and training.

Several towns, led by the example of Tolland, have already introduced a number of regulations aimed at

minimizing, treating, preventing and/or reducing degradation of water quality and flooding potential due to storm water runoff. By micromanaging collection at the source and disposing of it on site in natural and manmade systems such as wetlands, swales, rain gardens, vegetated filter strips, and bioretention ponds, it is possible to reduce or even eliminate this common source of environmental pollution.

### **Energy Resources**

Non-renewable resources—the fossil fuels natural gas, oil, and coal, together with nuclear power—currently generate 97% of the electricity in Kent houses and businesses. The



State of Connecticut has launched a campaign to get all 169 towns in Connecticut committed to using a combination of conservation technology and alternative energy sources to combat greenhouse gas emissions and global climate change on the local level. The state asks that each town reach the state goal of 20% dependence on renewable energy from wind, solar, biofuels, hydropower and geothermal sources by 2010. Kent's Board of Selectmen passed a resolution to this effect in June 2008 and an Energy Task Force has since formed to promote these concepts through presentations and programs designed to inform various community groups.

A key element of the 20% by 2010 program is participation in CT Clean Energy Options™ through Connecticut Light & Power. Each household or business agrees to pay a small premium monthly to have the utility purchase the modestly more expensive energy from clean technologies such as wind, hydroelectric, and landfill gas. To date only 2.8% of Kent's CL&P customers have signed up for the alternative energy program, so much needs to be done to promote greater awareness and substantive changes in energy use. (Cornwall, by contrast, has already achieved nearly 30% participation.)

What is known at present is that Kent's electrical usage is on the rise. In 1995, Kent residential and commercial customers used a total of just under 28,000,000 kilowatt hours annually. In 2007, the latest year for which figures are available, their combined usage had increased to 33,500,000 Kwh annually. Another factor in considering electrical usage is the cost of kilowatt hours; Connecticut is currently second only to Hawaii in the high cost charged customers by its utilities. In 2009 CL&P's rates for standard residential (Rate#1) consumers rose to 20.35 cents per Kwh.

## RECOMMENDATIONS

1. Develop effective programs to promote Reduce, Reuse, and Recycle as a town-wide goal; more immediately improve citizen compliance with residential waste recycling at the Transfer Station.
2. Adopt Low Impact Development (LID) principles into P&Z and IW codes following the Tolland, CT model or the Best Practices of the national Low Impact Development Center, starting with revisions that promote semi-pervious driveway materials on new driveways and parking areas.
3. Encourage water conservation to reduce the amount of wastewater effluent to be treated and ultimately to protect water quality and supply throughout the region.
4. Inventory septic systems that predate the Torrington Area Health District septic codes (1967) and bring them up to code.
5. Work with the CT DEP's engineers in the Municipal Facilities Section to plan for an orderly upgrade of the Sewage Treatment Plant.
6. Encourage periodic septic tank cleaning as the single most important step to extend the life of a system. Upgrade the current local septic codes to reflect Best Practices (grease traps and lint traps) that extend the life of residential systems.
7. Review P&Z regulations to anticipate alternative energy installations including wind and solar.
8. Use town government and other resources to educate the public on transition to sustainable clean energy. Accelerate efforts to commit individuals and businesses to the 20% by 2010 Clean Energy Campaign, a program launched by the Connecticut Legislature in 2000, to invest in and develop clean energy sources.

## REFERENCES

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