

Reconstructed Hope

By Robert H. Giles, Jr., PhD

Perceptive modern readers do not have to ... nor do they appreciate ... being retold about the converging fiery forces about to engulf the Central Appalachian region. There is no time to describe “flame” or calculate fuel moisture. There is only time to run or grab the hose.

Uninsured, we have little more than hope and hurry. Perhaps we can believe in a “technological fix,” one that in the immediate future fights 12 giant entangled sequenced problems (e.g., communication rockets to be launched without energy, nuclear waste disposal, and refilling grain bins for Africa and India). We can run, as many of us have and continue to do, but that leaves the problems for our kin and we must continue to pay “large” for those who remain, crippled. We can pray, but like ancient brave leaders, we perhaps should believe that God can do everything ... and work as if He or She can do nothing.

In a past period, I did not reason with my small daughters about the dangers of running out into the street. I taught them in politically incorrect ways not to do that. It was life saving. We now have a situation, a very bad one. There is not time or enough energy or money to teach everyone everything they need to know about the crisis now. There is no breathing room and we have “regional black lung” suffocating us within the big-five Es ... the economic, ecological, energetic, esthetic, and enforcement walls of society.

Surrounded by skeptics, prevaricators, game-players, gamblers, priests, the ignorant, and uninformed, the epistemological question is the tiresome same: How do I know? How do I know there is such an awful and awesome situation? I know based on criteria, and here are the ones I perceive. I ascribe to each a truthfulness and certainty of over 80 percent. Any one is sufficient for me. Of course I'd like to describe and discuss each but that denies my words above. We are on fire ... there is no more time. Any hose will do ... or just run somewhere! The sharp licking flames are:

- 1 The accessible coal in the region is almost gone.
- 2 Cost-effective remaining coal resources are known and dwindling, gone before the death of my grandchildren
- 3 People have left the region and continue to do so.
- 4 Petroleum energy discoveries have peaked; there is no more. We use it if there is no tomorrow ... and that seems to be the case.
- 5 Energy conservation is essential but not adequate to offset the rising uses and past demands
- 6 Natural gas supplies are also limited to a few human life-times of current-day use rates, but fewer than that with new uses
- 7 The major fertilizer need for food growth is nitrogen and much of that now comes from natural gas, known limited

- 8 The other major need for crops is phosphorus and that is in short supply and the supplies are in areas where wars will be fought to get and transport the stuff. We now use it wastefully.
- 9 Dams fill with sediment losing their energy generating capacities; costly nuclear power plants cannot be built rapidly and the waste problem is unsolved; the energy transmission is limited and costly.
- 10 Now a two-car nation, we will change drastically when the gasoline is rationed and priced beyond what average people can pay for it. Roads will deteriorate without tax or tax-payer support. Railroads will predominate. Cost of electricity for cars will limit their use. Scattered small communities will result.
- 11 Now a plastics-nation, plastics costs will increase as petroleum and coal resources decrease and become more costly. Wood and metals will regain competitive edge ... if there is manufacturing energy ... now doubtful.
- 12 Ground water, now in limited supplies, is polluted. Surface waters are polluted by foreign organic substances and there is little pressure for more costly cleanup.
- 13 Pollen from genetically-altered crop plants now pollutes our fields. (We see smoke but no flames so turn to let "someone" handle the problem.)
- 14 City areas expand, forests are lost, impermeable surfaces increase, runoff of rain increases, and flooding rampages takes on new shape and velocity where we live.
- 15 Climate (a topic of scale and time beyond average human comprehension) changes from combined human-causes and natural causes. Warming influences everything from the size of Virginia to the heating and cooling days of the year to the food and forage crops that can be produced. At bottom, it reduces confidence in every decision based on "the future will be like the past."
- 16 Stream channels deepen more rapidly than in the past, unprotected by forests and especially by their large old trees. They are scoured by water bearing abrasives eroded from the land surface. Deepened channels drain nearby forest, reducing their growth potentials. Few forests are managed by experts or logged by experts. All wonder about the future energy supplies needed to move trees to market ... the new one being the biomass-fuel generators.
- 17 The hope of "energy wood" or "diverse biomass" as replacements for the dwindling coal, oil, and hydropower potential is misplaced. Quantities and growth rates are misunderstood. Solar, wind, ocean tides, and nuclear will all be called into play. So will special pastures (switchgrass) but un-regulated tree harvests will turn steep hillsides into equivalents of the northern deserts of China.
- 18 As local crops become more costly, more important, pests become more costly. Coyotes, new to the East, now increase. Losses to deer in the family garden become intolerable. Crop and animal-feed losses and fishery losses to wild birds, now intolerable and requiring expenditures, will become major problems. Hunters decline now. Needs for animal damage management

increase. Pesticides (oil based) increase in price and uses will become less, financial losses to growers greater, and food quality diminished.

- 19 Animal populations are still largely a function of their habitats and when habitats disappear or change rapidly, the populations will disappear. Major shifts and losses now occur in birds and amphibians in the region. It seems time to notice. These changing populations affect soils, forests, and other plants ... and future options.
- 20 People *have* noticed. The message had been writ large before my career began (the mid 50's). I studied those books. The message has persisted and has been sent by Cooperative Extension, agencies, and individuals. Notable changes *have* been made by a few notable people, texts, conferences, and TV programs offered. However, the scale has been too small. The message was: There will be a fire someday. And now there is one!
- 21 Diversity of interests within the public now trumps singularity of goal. There are no single decision makers. Anarchists rule where they have no responsibility and no claim to the future. Anomie prevails.
- 22 The social gap between rich and poor widens rapidly.
- 23 More knowledge is needed. Yes. But continued and expanded research denies the current emergency. Implicit in current research policy is that there is plenty of time for solutions, that researchers know the current and soon-emerging problems, that delivered published results will be discovered some day from the Google servers, and that willing tax-funded agencies will be available to implement the technique or practice grounded in the results. That's social gambling. There is no more time. We must use the *results* of millions of tax dollars already spent on studies; evaluate current progress; stabilize effective current studies, and develop new structures for studies. The current ones do not seem to be working for more than a few individuals; not for society.

The epistemologist will question my pragmatism in the claim that what we are doing is “not working”. If the structures were working, and working together well scheduled, then we in Central Appalachia (with parallels elsewhere) would have at least

- ✓ A stable human population in the region
- ✓ A high school graduation rate at the national level
- ✓ Infant mortality rates as low as in northern European countries
- ✓ Adult race-specific life expectancy at the national level
- ✓ Stable or declining theft and loss index rates
- ✓ Stable or declining obesity index rate
- ✓ Widely monitored groundwater, surface water, and air quality with compulsory adaptations as needed from discovery
- ✓ Declining flood-damage claims
- ✓ Relocalizing efforts underway for small communities
- ✓ Moderate employment diversity
- ✓ Local energy effectiveness – relative to use, capture, conservation, recycling, monitoring, movement, and embodiment policy,

“That’s a silly list of goals or objectives” I can hear from the far end of the table. Not asking the definition of “silly,” I claim that there is no way to achieve these objectives now in the present society. There are many problems or situations without solutions. There is only reasonable responsible continuing, exhausting human work to be done together. That’s all. I perceive it as the human condition ... without end.

I see work to be done. It seems to me to be responsive to the objectives checked and to the conditions of the situation in which we now live. We do live in a time in a fossil-energy-based society when there is still fossil energy with which we *can* do work ...before it is effectively all gone, while time to create structures and systems for the future. Continuing as in the past is to be consumed by “the fire” (of my metaphor) or living injured. I think the people of the new region (immediately, not “tomorrow”) have to engage a regional restructuring ... along with hope.

I’d like to suggest a grant program, a new agency, a new law ... but that courts disaster, delay, and confronts the evidence that these things have not and are not likely to work. Corporate greed is in control. There is not time enough to teach everyone within the region what they might like to know about the full details of each of the 23 criteria (above) describing our situation. The needs:

- 1 Lament it, describe it, sing about it, mourn its parts, do not deny it, but move on past the history of the region. Revenge will not carry us forward. The sordid past is over and the crisis is now and for the immediate future. The immediate future is the next 150 years ... the life length of lives of a mother and daughter and that of a seedling chestnut oak. At 76, my planning horizon is 96; time enough to “do good.”
- 2 Think “industrial revolution.” Major regional and later national change occurred following a new approach. There can be a **rural reformation**.
- 3 Think “pioneer.” Settlers came to America, some to this region, before coal. They survived; many did well. Now it is time to re-pioneer, to re-settle the region with a new concept of a reformation, as if arriving for the first time and allowed to think things through *now* for the immediate future. Admittedly pleasant to consider, the economics of subsistence living, bartering, and equal-exchange cannot move the people of the region out of its present situation suggested above.
- 4 While need for massive public “input” has grown as a business and as a mantra, public decisions have little effect on private land use decisions. The evidence is in: alternatives are valued more than commonalities; objectives arise and change in people from different backgrounds, residences, races, and ages. Anarchists, for example, have brought National Forest agency decision-making to please “the general public” to its knees. The inputs are typically self-serving and rarely broadly informed. There is need for an essential compelling vision and centralized strong leadership, at least for the next decade to set a course, and then adjustments can be made.
- 5 See the region as a general system, partially for general communication, partially to avoid mistakes, partially to use powerful computer tools now

available, partially to engage in evaluation and corrections, and partially to keep our eyes on the likely future that affects decisions today.

- 6 Immediately engage private land owners of the region in the question: “What do you plan to do with your property after the coal is gone?” As a home owner dependent upon employment in a thriving village, what of your future? As foreign and local corporate stock holders, do you see local options? What if you are unable to afford transportation to factory or city work? As Council-people budgeting for schools and school busses, where do you see a stable funding base? Hospital and clinic owners/investors with empty beds? There are practices for the now-and-soon private land owner.

We now only have hope and a concept, one of a **rural reformation**, one requiring changes and responses to the fire. The elements of the change:

- 1 Most farms and ownerships in the region are now too small for profitable forestry or agriculture. **Clusters** of such lands need to be developed. They need to be under contract for sophisticated modern profitable farming (all types) and as the base of many new businesses. A unifying for-profit business is needed for owner profit, employment for a field staff, business services, diverse small business development, and citizen opportunities.
- 2 Citizen networking by many electronic means is needed ... for education, information, instructions, opportunities, evaluations, etc.
- 3 Many villages and small towns of the region need to be refreshed or expanded but only if they are energetic-efficiency centers of populations of people needing services and housing. People will be unable to drive anywhere whenever they wish. Fuel will be rationed by government or the family budget. Distance learning technology will be essential. There will be no energy for moving youths or adults to and from schools.
- 4 Computer models are needed to unify knowledge of the ecosystems of the region with economics for the populations or the area and their socio-economy. Results from these can be brought to the field and to new facilities within the region.
- 5 New labor forces, efficient private teams of experts under contract, are needed for the new “farming” of clusters to overcome old ownership dis-economies.
- 6 Strategic location of trauma treatment centers will be needed as part of village building.
- 7 Agricultural, fishery, and forestry systems will be developed on private lands with financial gains for land owners, employees, village tax-bases, investors, and others. GIS and GPS technology is essential to produce well-marketed high quality products and services in the right place at the right time to avoid losses and wastes... over the long run.
- 8 Not diversified by farm but by product, single crop or livestock systems (e.g., one for grass-fed beef) need to be diversified on many ownerships throughout the region in well-selected areas.

- 9 New intensive procedures are needed to restore soil fertility and topography to enable precise, cost effective applications to the land of nitrogen and phosphorus (and other selected essential nutrients).
- 10 Biomass production areas need to be created and intensively managed for fuel for electricity generators. Separate related areas need to be protected for beauty, ecosystem health, education, recreation, and potential new opportunities from them.
- 11 Pooled marketing of products must occur from farm clusters – regional, state, and international.
- 12 Clear significant monetary incentives must be built throughout the system and with them dis-incentives and exclusions. With them there must be new emphases on safety, reduced losses, health, and security. There is little security in the coming situation, but at least it must be strong and evident for those building for the future of the region.
- 13 Many small business fail but the reasons why are well known and when they are reduced or removed, successes are likely. The rural reformation includes improved “farming” and forestry but also adding 20 to 50 small businesses. They too are of a type that might fail if started alone but that will succeed with central administrative help, trained staff, land clustering, computer optimization, value adding-strategies, significant financial incentives, intensive marketing, ample security, and regional enthusiasm.

Perhaps “bread and circuses” are needed for the general population. *Ranging* might be that. It is a simultaneous strategy that can be started in the Central Appalachians and become a center of a world wide activity. “Ranging” means engaging in one or more of a diverse set of extended, dispersed outdoor or rural activities for health, recreation, study, appreciation, and adventure. It may also mean the enterprises that are related and that **promote, support, and supply these activities and the areas and resources used.** Not secret, it is the total system that produces and manages the natural resources of a region for their improvement, for employment, and for community stability. It’s a beautiful, well-functioning region that is necessary for a superior all-encompassing outdoor recreation environment. It includes (but is not limited to) hiking, tramping, camping, trekking, climbing, biking, trail riding, hunting, fishing, boating, touring, sightseeing, studying nature, and wildlife watching. It might include triathlon events and their observation and support. Ranging is also the condition of the lands and waters where modern, sophisticated rural resource management takes place ... as in “When you cross the bridge, you’ll notice *ranging*.” Such land use is essential for the people and communities of the region. From one perspective, ranging is that total system of activities that manages the land for people for the long run ... the region where superior living can take place.

There is not one problem, one bad condition. We have a “total situation” needing a total system of private actions, some public, but unlikely and dangerous to depend upon. There

has to be continuing work toward a set of human objectives, themselves ever-changing, slightly.

I have a sketch of objectives above and elsewhere (http://fwie.fw.vt.edu/rhgiles/AirportAcres_Plan/Objectives.htm), the criteria framing the situation, and a beginning list of macro tactics or micro strategies. There's work to be done and it must start soon. Otherwise, all of the songs, poems, and prayers of the people of the region, their love of it and its beauty, will exist only in computer servers, short of electricity, and in the minds of old people. The region will be a wasteland of vagabonds, squatters, people preparing to leave, and others bewildered and begging for assistance ... sustainable but un-sustained. A few will remain, hopeful.