

Environmental Process and Agricultural Economic Impact

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Introduction

Recent years have showered the agricultural industry with aggressively restrictive policies and laws. Environmental action groups in concert with the Environmental Protection Agency, news media, expensive lawyers, and opportunistic politicians have acted on bad science to gain control of public and private land policies by violating legal contracts, ignoring sound biological studies, and destroying many generational agricultural families' finances and way of life. This project was instigated to examine the philosophy, sentiments, methodology, and practices driving this phenomenon. The other intent of this project will be to help agriculturists and conservationists understand what they are up against and how to deal with this war on common sense.

Due to the enormity of the subject matter, the scope of this project will focus on:

1. A historical environmental overview of the Southwest based on archaeological studies;
2. A cultural overview of the economic dynamics derived by societal - environment interaction;
3. How current policies and societal activities reflect and continue these dynamics through the structure of imposed governmental regulations;
4. The interaction of New Mexico agriculturalists with environmental governmental policy decisions;
5. What behaviors can be altered to ensure that survival and future interactions will have positive support of both agriculturalists and conservationists.

Historical Environmental Overview

The history of agriculture in the Southwest stretches back several thousand years. The interaction between the environment and human groups has demonstrated that cultural behavior is primarily altered by environmental phenomena. To begin with, one must understand that the:

“Two main ways of relating cultural behavior to environmental phenomena may conveniently be distinguished: either showing that items of cultural behavior function as part of systems that also include environmental phenomena or else showing that the environmental phenomena are responsible in some manner for the origin or development of the cultural behavior under investigation.” (30:xi)

To further understate this concept, is to also assert that:

“...that on the one hand culture can be understood primarily only in terms of cultural factors, but that on the other hand no culture is wholly intelligible without reference to the noncultural or so-called environmental factors with which it is in relation and which condition it.” (30:350)

This structure of environmental relationship determines to what extent and type of cultural system flourished, as well as where. Homeostasis, the changing of a cultural system to obtain stability, is the term used to describe this reactionary driving force behind cultural change due to an environmental pressure whether real or perceived. As cultures flourished, perceived pressure also becomes a real pressure as a change agent in conjunction with environmental stress. This condition is well stated by Stuart, et. al. (27:10) in that,

“...unable technologically to stabilize the uncertainties of agriculture during its early stage, they stabilized its effects through social behavior.”

This is a dynamic survival mechanism in that it promotes survival of the population as a whole, not necessarily any one, or all particular individuals within it. This typically also resulted in a “...lowering of the mental capacity, physical dexterity and/or perceptual acuity of a certain number of individuals which meant the saving of the race”. (30:90) These individuals perished with the fragmenting cultures leaving the higher-end skilled portions of culture to survive with less pressure from population numbers and society structures. These survivors provided the gene pool from which later cultures were derived. In support of this concept, there is Archaeological documentation of the many occupational migrations and abandonment phases in relation with environmental fluctuations, changes in agricultural practices, enhanced warfare over real and perceived diminishing resources amongst **all** groups, and a return to the more economic, skillful hunter-gather society throughout the Southwest. (3:21, 306-309, 325) These survivors were and are the people “closest to the Earth”.

One only needs to visit any of our National Parks containing ancient ruins of early North American occupation to see first hand how each system developed, flourished, and eventually disappeared. In all cases, as the perceived envelope of environmental limits was approached (brought on by cyclical changes in the local environment compounded with agricultural demise); more religious structures were built to “appease the gods” (imposed, regulated behavior); ‘marginal’ groups considered to be part of the cause of the environmental stress were altered or moved out by induced societal demands (thus changing the support structure of the culture and site construction); and quite possibly placed on dependency roles within the society to the detriment of that society. The survivors of these collapsed cultures went on to become the basis for future agrarian cultures that later repeated the same detrimental mistakes of their ancestors, cultural reaction to perceived environmental stress. The in-ground evidence suggests this developmental occurrence for each cultural phase, regardless of local. The question arises as to what has religious construction have to do with environmental pressure?

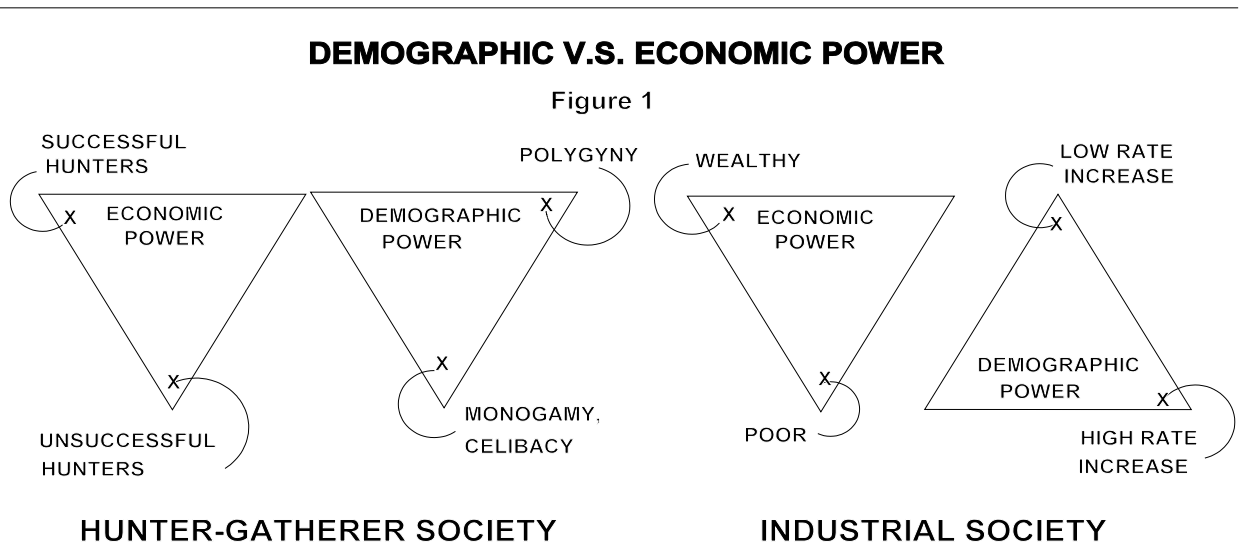
Cultural Economic Dynamic Overview

Homans (14:172) states very fairly the dominant basis of anthropological thought that:

“Ritual actions do not produce a practical result on the external world - that is one of the reasons why we call them ritual. But to make this statement is not to say that ritual has no function. Its function is not related to the world external to the society, but to the internal constitution of the society. It gives the members of the society confidence, it dispels their anxieties, it disciplines their social organization.”

This is to say ritual action is a social function for perceived external pressures. Therefore, ritual may be defined as the “...prescribed performance of conventionalized acts manifestly directed toward the involvement of nonempirical or supernatural agencies in the affairs of the actors”. (22:182) In the case of ritualism complexity arising from environmental stress perception, one can typify this activity as “Earth worship”, that is, sociologically imposed change in the belief that the ritual imposition will restore the environment. This is a key element in understanding today’s role of the environmental movement, as will be demonstrated later in this report.

Cultural evolution is also the dynamic consequence of the selective forces of power and efficiency, which are oppositional. A power drive is created by cultural systems under expansion, i.e. population increase, production increases, and/or energy expenditure increases. These systems pump up in size and complexity then disperse without clear evidence of corresponding changes in population size (burn out). (27:10) An efficiency drive is created when the opposite occurs, that is, decreasing rates of growth, production, and/or energy expenditure. Societal systems fluctuate between these extremes at any given moment, thus establishing balance (homeostasis) and stratification of culture. This is the goal and more usual state of living systems. (27:11) In the case of hunter-gatherer society, demographic with economic power commanded stability. In the case of agricultural-industrial society, the *economically* stable elements (lower demographic) are more homeostatic and efficient when compared to those of lesser economic stability and higher demographics (least efficient). This, in essence, is to say that the important evolutionary process of system **reversal** resulted in economic power coupled with biological efficiency as stable, leaving demographic power biologically inefficient as the unstable driving force of the bottom end. (Ibid, Fig. 1)



To further this argument, it must be understood that:

“... when a complex, stratified system collapses under stress, it fragments along lines of differential power and efficiency. In social theory this phenomenon has long been observed at one level as class struggle and the Marxist dialectic.” (27:12)

This is demonstrated by the arguments put forth by Cordell (3:305, 308) where the “...motives for intergroup aggression are capturing goods or capturing or killing individuals...” and “...factional disputes are unfortunately common in villages throughout the world...”. Exploration of this concept in detail is beyond the scope of this project and the reader is encouraged to pursue further inquiry at their leisure.

At this stage, the important points to understand are:

1. The dynamic survival mechanism that promotes survival for the whole is accompanied with a “...lowering of mental capacity, physical dexterity, and/or perceptual acuity of a certain number of individuals...” (30:90) that perished with the dissolution of the culture while leaving the higher-end skilled portions to survive;
2. Ritualistic religious construction behavior to “appease the gods” is linked to *perceived* environmental stress, is an **imposed** societal phenomena during this reactionary cultural phase of development, is cyclical, and can be defined as “Earth worship”;
3. The successively larger more complex forms of culture have a shorter duration than the long duration smaller cultural systems, that is demographic, high energy interdependency, non-mobile cultures require more social support and are more effectively impacted by environmental change and warfare than the economic, smaller, efficient, mobile groups;
4. **Everyone of us** is inside and part of the agricultural-industrial dynamic, i.e. if you eat, wear clothing, live in a constructed shelter, and/or rely on some form of transportation, you **are** the demand equation of economics and are the **major driving force** of agricultural industry economics and pressure on the environment as we know it.

Again, survival of the population at large requires a balance within this realm.

Let us now examine how current policies and societal activities interact and reflect these four points.

Environmental Tenets and Environmental Policy

History of Modern Environmental Thought

The history of the conservation movement has Theodore Roosevelt's administration at the very root of the beginning. Gifford Pinchot was enlisted as the first head of the U.S. Forest Service and his attitude laid the ground work from which early criteria for land use was developed. His three resource management principles are (19:6):

- “1. The first principle of conservation is development, the use of natural resources now existing on this continent for the benefit of the people who live here *now*;
2. Conservation stands for the prevention of waste their use is to be characterized by wise management and careful stewardship;
3. The natural resources must be developed and preserved for the benefit of the many, and not merely for the profit of a few.”

This last statement is in line with the antimonopoly sentiment of Roosevelt's administration of the time. Contemporary economists reflect Pinchot's view dealing with the efficient development of natural resources. This is to say that “...economists are trained to identify combinations of labor, natural resources, and other *factor inputs* that can be used to produce goods and services efficiently...the maximization of this combination is termed *productive efficiency objective*.” (Ibid) Economists have been concerned with this function of management and have developed specialties to reflect this. The recent decades have seen a development of *environmental economics*. This is basically an underlying assumption based on a tolerance of wastes from human activity as appropriate and unavoidable. Environmental economists use the concept of waste reduction, determined from the analysis of the costs and benefits, in relation to social activities and needs. This is consistent with Pinchot's principles of environmental usage.

Just after the early stages of this policy development were implemented, Aldo Leopold conducted ecological studies that led him to the following position:

“A harmonious relation to land is more intricate, and of more consequence to civilization, than the historians of its progress seem to realize. Civilization is not, as they often assume, the enslavement of a stable and constant earth. It is a state of mutual and interdependent cooperation between human animals, other animals, plants, and soils which may be disrupted at any moment by the failure of any of them. Land despoliation has evicted nations, and can on occasion do it again.” (19:7)

This was later underscored by Rachel Carson (Silent Spring 1962) and other authors, bringing to humankind's attention the influence of industrial society's influence on the immediate and future environmental demise. (Ibid) This was the early philosophy driving what we now know as the ecological movement. These were tangible points and sound arguments, as spoiling one's nest will soon make it unfit for habitation. From this point, however, a contrasting, less tangible quality soon emerged in that religion and spiritual consequentials entered the philosophical arena and blurred the division between practical activity and ideological outcomes. The argument promoted for wilderness preservation arose that these less tangible qualities should dominate the issue of long-term planet habitability. (Ibid) These tenets were combined with the earlier writings of Ralph Waldo Emerson and Henry David Thoreau, to expand American Transcendental activism. Transcendentalists believe that “...one's chances of attaining moral perfection and knowing God were *maximized* by entering wilderness”. (19:8) Emerson's views in his work Nature claimed that spiritual values and communion with God were possible only in wilderness. (Ibid)

This was supported by the views of John Muir as quoted by Roderick Nash:

“At one point Muir described nature as ‘a window opening into heaven, a mirror reflecting the Creator.’ leaves, rocks, and bodies of water became ‘sparks of the Divine Soul.’ “ (19:9)

The theme that wilderness is *the source* of spiritual “re-creation” was further pressed by the work of Wallace Stegner when he wrote:

“The reminder and the reassurance that [wilderness] is still here is good for our spiritual health even if we never once in ten years set foot in it. It is good for us when we are young, because of the incomparable sanity it can bring briefly, as vacation and rest, into our insane lives. It is important to us when we are old simply because it is there - important, that is, simply as *idea*.” (19:9)

The combination of these ideologies are at the heart of the current environmental movement. In case it is not clear yet, this is in practice, “Earth worship”. It should also be noted that those that have been waging the war to preserve wilderness are “...principally individuals with sufficient income to spend their leisure time in the wilderness”. (Ibid) This is to say that those of economic power with a low rate of increase are the benefactors of this effort, not the poor, lower end of higher demographics.

It should also be pointed out that the other driving force of this movement is what is known as biocentrism. This is the view that all nonhuman species have intrinsic value.(Ibid:12) Aldo Leopold put forth that “...a thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise”.(Ibid:13) This became the basis for environmental ethics that developed in the 1970's as a field of study. Universities and institutions developed ethics programs as philosophical journals began arguing for moral rights for nonhuman species. It should be pointed out that the philosophers cannot agree amongst themselves as to what should and should not be given intrinsic value outside of human benefit issues. Even Aldo Leopold's ethics of land value are now under severe criticism as being “environmental fascism”.(Ibid:18) The significance is that only organisms or systems that entertain the status of being intrinsically valuable are considered in a theory of moral philosophy. (Ibid) This has created a four way split in the value argument: only humans have inherent value; all sentient beings (capable of feeling pain and suffering) have inherent value; all sentient beings and plants have inherent value; all sentient beings, plants and habitats have inherent value. From this morass of debate has arisen the concept of deep ecology. The eight tenets of deep ecology are (Ibid:14):

1. The well-being and flourishing of human and non-human life on Earth have value in themselves. These values are independent of the usefulness of the nonhuman world for human purposes.
2. Richness and diversity of life-forms contribute to the realization of these values and are also values in themselves.
3. Humans have no right to reduce this richness and diversity except to satisfy vital needs.
4. The flourishing of human life and cultures is compatible with a substantial decrease of the human population. The flourishing of nonhuman life requires such a decrease.
5. Present human interference with the nonhuman world is excessive, and the situation is rapidly worsening.
6. Policies must therefore be changed. These policies affect basic economic, technological, and ideological structures. The resulting state of affairs will be deeply different from the present.

7. The ideological change is mainly that of appreciating life quality (dwelling in situations of inherent value) rather than adhering to an increasingly higher standard of living. There will be a profound awareness of the difference between big and great.
8. Those who subscribe to the foregoing points have an obligation directly or indirectly to try to implement the necessary changes.

These tenets are diametrically opposed to Western moral philosophy as Passmore eloquently stated (as quoted by Ortolano, 19:14):

“If men were ever to decide that they ought to treat plants, animals, and landscapes precisely as if they were *persons*, if they were to think of them as forming with men a moral community in the strict sense, that would make it impossible to civilize the world - or, one might add, to act at all or even to continue living”.

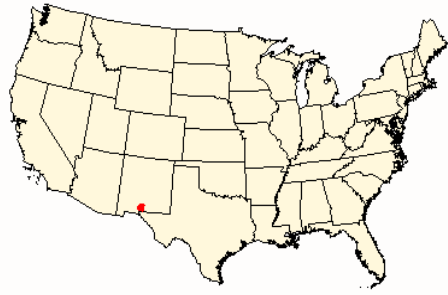
Yet the 8 tenets have been the basis for legislative environmental decision making since the 1970's. The argument was successfully put forth that endangered species legislation should be passed on the basis of the "...legal idea that a listed nonhuman resident of the United States is guaranteed, in a special sense, life and liberty...". Biocentric ideology is at the core of environmental groups such as Greenpeace, PETA, and others. It has also been showing up, in practice, amongst government agencies implementing the policies under laws establishing legal jurisdiction over private and foreign properties. This has caused disruption of human lives and economic activities - the effects have been devastating. Let us now examine a few of these situations.

Biocentric Transcendental Occurrences

One of the earliest and largest American occurrences of human displacements, for the sake of intrinsic value, on record is the creation of Shenandoah National Park.(67) Congress removed an estimated 4,000 people, during the Franklin Roosevelt presidency, for the sake of "preserving" a natural treasure. The survivors of this black mark on the National Park service (now in their 70's and 80's) are currently recalling their childhood memories to historians so their side of the story is not lost. The recurrent theme being told is the pain and suffering their parents and 204 impoverished, marginal, mountain families experienced as the Park service moved in and "...erased the human imprint..." for the sake of "outsiders". (Ibid) They were given no choice or court hearings, they were simply given a check, moved into the flatlands, and given jobs in the Civilian Conservation Corps destroying the very homes they were moved out of. Many were torched as they were leaving the premises. As Randolph Shifflett, 8 at the time when agents of the Park Service burn his family's farm, puts it, "Money didn't buy Shenandoah Park, it was bought with tears, heartaches, grief and hardship." (Ibid) These people were considered marginal and displaced so that economically affluent outsiders could enjoy the scenic beauty.

This theme was to be played over and over again across the nation, sacrificing human lives for the sake of intrinsic value, only now the more biocentric view is driving these displacements at a more fevered pitch. That is to say, nonhuman life is being valued higher than human life. Agencies to drive this phenomenon were created and were given power over the public property and property rights of private citizens. The biggest agencies are known as the Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service, Bureau of Land Management (BLM), and the National Forest Service. States have their own agencies aside from the federal agencies. Many nonprofit groups such as the Sierra Club, The Nature Conservancy, Forest Guardians, and other groups **packed** with willing volunteers, have jumped in to encourage this gross abuse of power. How far does the jurisdiction of power extend? There are separate BLM lands, National Parks, and wilderness recreation areas. The EPA has several "provinces" of watersheds with separate jurisdictions by which any environmentally related law can be applied. They extend from and into Canada, across the United States, and into Mexico. (Fig. 2; 9; 10; 28; 73; 74; 75; 76; 77; 78; 79; 81; 83; 90; 93) What cannot be changed by a bird or snail can be stopped with a cow.

Figure 2: EPA Watersheds

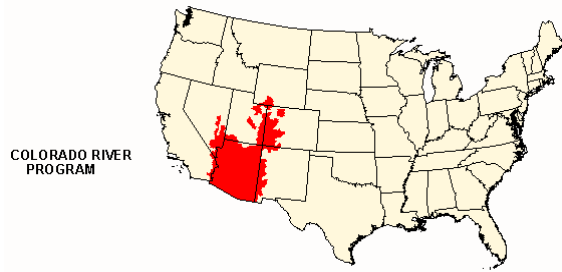
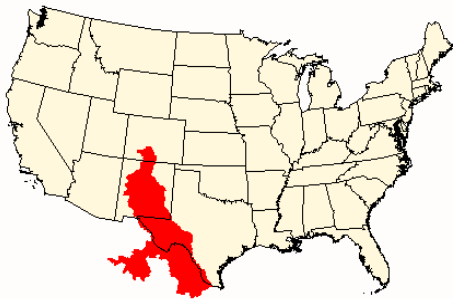


Jornada long-term ecosystem research project



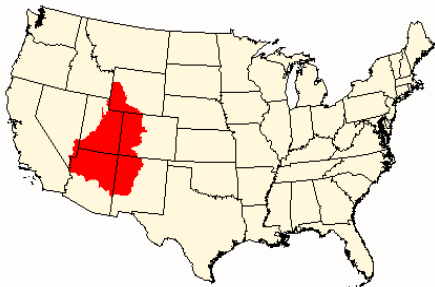
RIO GRANDE/RIO BRAVO
WATERSHED PROJECT

EMAP Rio Grande Basin Landscape-Scale Assessment

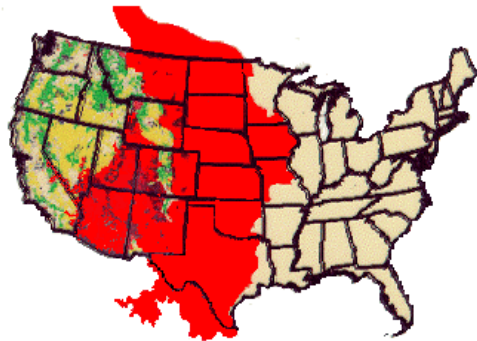
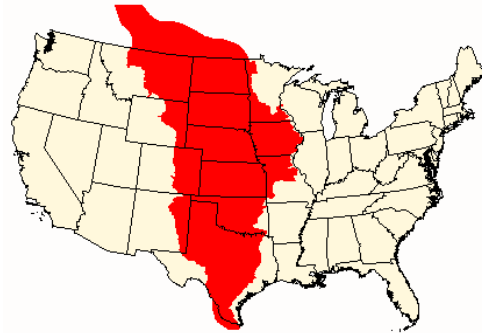


COLORADO RIVER
PROGRAM

Colorado Plateau Ecosystem Partnership Project



Great Plains Program

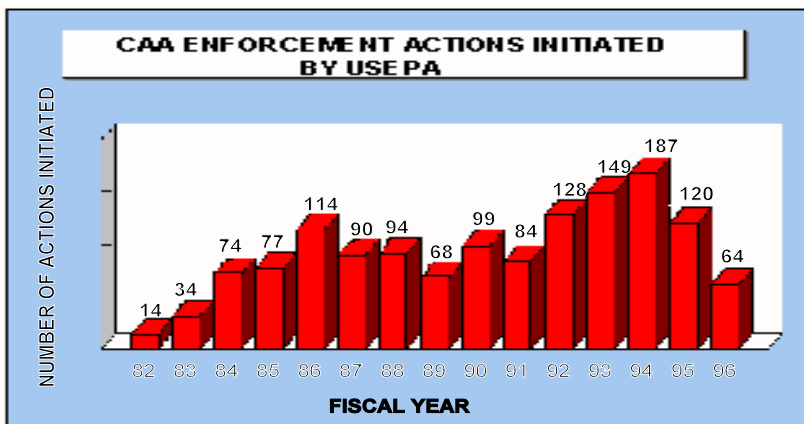


Total EPA coverage with BLM and Forest Park system added

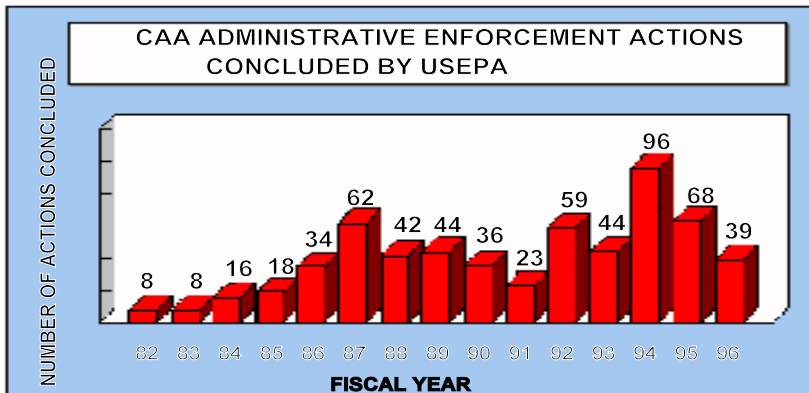
One more facet was added to this web of jurisdiction in 1990. The EPA signed a Memorandum of Understanding with the Occupational Health and Safety Administration (OSHA). This is an agreement where,

“...the two agencies have agreed to conduct joint inspections, refer to each other any possible violations of occupational or environmental statutes discovered during separate inspections, exchange data and conduct joint training program for inspectors and coordinate compliance and enforcement activities.” (7:529)

Now what could not be changed by a bird or snail or stopped by a cow can be fined for the mere lack of proper safety signs and Materials Safety Data Sheet (MSDS) in the workplace at up to \$10,000 to \$25,000 per violation per day. Once either organization gets involved, it is expensive and blunt. This is best illustrated by the graphs in Fig 3. One graph shows the number of actions initiated by the EPA in region 5. The other shows how many were successful. Approximately 30-35% of these are in agriculture.



**EPA REGION 5
ILLINOIS
MICHIGAN
MINNESOTA
OHIO
WISCONSIN**



On top of this blend are the Cultural Resources Preservation Act for archaeological sites and the Wetlands Act. The EPA, BLM, and Forest Service also have open contracts with The Nature Conservancy for conducting the biological impact statements. The other interesting note is how peaks and valleys correspond with election cycles.

These processes are costly. Contemporary examples of those affected by these economically impactful regulatory powers are abundant and can be found in daily newspapers across the country. There is the case in Owyhee County, Idaho where a microscopic snail, uniquely identified by its penis size, was arbitrarily placed listed as endangered by the U.S. Fish and Wildlife Service, even though their own scientific studies, paid for with tax payer dollars, demonstrated a lack of support for even considering the snail as threatened. The people of the county pulled together, "...spent in excess of \$100,000 to litigate the issue...proved the agency's action ignored procedural due process of law..." and the justice system ordered the de-listing of the snail. (11:130-131) The reason for this abuse of power was that "...the 'non-use' activist organizations demanded action aimed at ending cattle grazing and supportive agricultural activities in the valley. Even though calling themselves 'environmentalists', they attempted to force their personal agenda on the people of Owyhee County through federal bureaucrats paid with tax dollars taken from those same people of Owyhee County." (Ibid)

There is the recent case in coastal California where fires devastated hundreds of homes and lives all because bureaucrats of the U.S. Government would not allow the controlled removal of brush for fire prevention. This was due to the government's classification of the area as habitat of a so called endangered kangaroo rat. (Ibid)

There is the recent case in Catron county, New Mexico, where the Diamond Bar Ranch has been in litigation over the revocation of legal grazing permits dating back two generations. They were recently ordered to remove 800 cattle off permitted federal land and pay a \$55,000 penalty.(56; 57; 64)

Then there is the case in Forkland, Alabama, where a \$6.5 million state-of-the-art recycling feedlot, operated by Pete Reynolds and his son, Pete Jr., was permanently shut down, without compensation, by one phone call to the EPA by a downstream neighbor. There was no contact by this neighbor prior to the phone call to work out problems of occasional overflow when the electrical company lost power to the feedlot. This last case could have been prevented, as the owners never really knew the downstream neighbor. Quite possibly if some small effort to maintain a relationship with these neighbors had been made, the operation would still be in business today. Somehow, the fabric with these neighbors was never woven.(Personal experience)

How did these agencies gain such power and influence over the lives and lands of these people? It has been a gradual process that, in part, may be on the shoulders of the people affected by this gross abuse of power to the detriment of society. It is definitely a sign of pressure in a society exhibiting stress of perceived environmental strain - An imposed removal of marginal groups believed to be causing the environmental change ("to appease the gods") through the construction of rituals in the courts.

Is it becoming clear what is possibly going on? Is this society following in the footsteps of the Anasazi, Hohokam, and other ancient peoples of the west? Reacting to perceived environmental limitations? In structure, practice, and theory, the case is made for such an argument. We, as individuals and as a people need to recognize the phenomenon of perceived environmental stress as the primary driving force we see yesterday and today.

It can be argued that the lessons of the archaeological past show that if we don't recognize this phenomenon, the entire fabric of our society will be torn asunder, leaving the more economic, higher-end skillful hunter gather societies to return to the western landscape, the people "closest to the earth".

It can also be argued that individuals and groups at the driving end of the environmental movement are exhibiting the behavior as earlier put forth by Stott (30:90):

**"...a lowering of mental capacity, physical dexterity, and perceptual acuity...
who will perish with the fragmenting culture..."**

Wilderness Impact Assessment and New Mexico Agriculturalists

Let us now step back for a moment and briefly examine New Mexico's public involvement in wilderness decisions. In an attempt to limit the volumes of material encountered, 5 of the areas targeted in New Mexico for wilderness or riparian designation, by The Nature Conservancy, were selected for review. (93) This required processing 8 inches of wilderness impact studies and final reports of 17 studies to arrive at these figures.(2; 6; 15; 17; 18; 23; 24; 32) In this study, involvement was determined by the number of letters and protests filed with the survey committee. The basic content for or against recommendation designation was then compiled for the overview. The overall result (table 1) was rather surprising and possibly warrants further investigation as to just how much effort was put out by the governing agency to get input for the decisions affecting the study areas. The other observation was the extreme lack of public input. This aspect also warrants further investigation as to why so little input.

Table 1

Total Acreage	Total Letters	% For Designation	% Against Designation	Letter Mean per Study	Total High	Total Low
451,154	650	58.44	41.56	38	91	17

Considering New Mexico has just over 9,000 ranches alone, the lack of input suggests poor communication by the agencies involved, misinformation or lack of it in the agricultural sector, and/or apathy in some, possibly feeling their words won't count. On the other hand, given that the environmental organizations in New Mexico boast several thousand volunteer members, their passion and strength in numbers were not reflected in this survey either. (93) This issue warrants further investigation.

Beneficial Changes in Interactions

As one can see, the issues of environmental process have taken time to get where they are today. It will take a good amount of time to change what is not working. However, rest assure that nothing will be as it was. Regulation of the environment is here to stay. The EPA, BLM, Forest Service, OSHA, nature groups and Ted turner are here to stay. These forces will continue to shape the direction of the lives of many, especially those in agriculture. We must get involved with the forces that are shaping the future of our children and grandchildren - as my Native American friends say, " to the seventh generation"! It is up to us to use the common sense we were given to stand and defend the heritage of our grandfathers and parents. This is our legacy, our history will be written in accordance to the direction we allow others to take us or by the direction we take ourselves and others.

There are many ways to benefit economically if we seek and find alternative niches to fill in this changing economy. It could be as visible as a paid archaeological dig on your land, a hay ride for your church or school group, or as demur as raising medicinal plants for the holistic audience.(4; 23;26; 31; 42;58; 65; 66; 88-92) The government requests your input for wilderness impact surveys, and based on this study, it sure could use it. What ever direction you take, make it positive, make it visible, and make sure your community and media know what **YOU** are doing to be a part of the solution, not part of the problem. Remember, information dissemination is the key.

Humankind's interaction and reaction with the changing environment will not change, but our interaction with each other can. We must become involved in the education of others and of the children. We need to use the media and make them our ally, not our antagonists. It serves no purpose to become our own worst enemy. It serves no purpose to stand apart from the folks that are moving into our communities as they flee the chaos of the cities. They are people seeking shelter from the storm caused by perceived environmental stress. Change occurs one person at a time, one mind at a time.

My grand uncle, Pete Reynolds, left us with his boots on two years ago at the age of 86. This rancher left me this parting advice that I now leave with you:

"A handshake is the stitch in the fabric of society, so make and keep good neighbors!"

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