

History of the Public Lands of the U.S. and Conservation Policy

*Mike Dombeck
October 7, 2004
Class of 1960 Scholars Program
Williams College
Williamstown, Massachusetts*

Security....Since September 11, the term has become part of our daily lives. We have the new Homeland Security Act designed to protect the security of America and our borders. We initiated a war in Afghanistan to make us and the Afghans more secure by routing out the terrorist network that was behind the tragic attacks on the World Trade Center and the Pentagon. The United States and Britain attacked Iraq to make the world more secure.

Hearing the term over and over again has caused me to think a lot about security and what the term really means, especially as it relates to the land and natural resources management, the world in which I have spent much of my life. I've also thought about the facts that while we all want to be free and secure within our borders and we want the world to be a more secure place for all humanity, are we not making a mistake viewing threats to our security only in terms of terrorism, chemical weapons and weapons of mass destruction?

Yes, these threats are real, but they're not our only threats. There are other threats to our long-term security – threats to the air we breathe, the water we drink and threats to the land – that are as real and as potentially threatening to the well-being of American families as those associated with dictators and desperation.

To give you a sense of what I am talking about, let me talk for a minute about Iraq, the place that has dominated the world news the last several months. Iraq was once home to ancient civilizations centered along the Tigris and Euphrates rivers and home to Mesopotamia, one of the great cradles of civilization and the biblical location of the Garden of Eden. The region, also part of the Fertile Crescent, was lush agricultural land between 2,000 and 10,000 years ago. But today, as we have seen on the television newscasts, the region is anything but fertile or lush due in large part to environmental mismanagement, improper agricultural practices and the misuse of

water, soils, and vegetation over the millennia. Today, the once great civilizations that sprouted from this region are visible only through the ruins they left behind. Too many people pushed the land beyond the limits of sustainability for too many centuries

Unfortunately, the story of ancient Iraq is repeating itself today as the world faces a multitude of environmental threats: fertile soils are being washed away and becoming too salty to support agriculture, precipitation regimes are changing, water tables are falling, lakes and streams are drying up, and grasslands and former forests are slowly transforming into deserts. Even in the United States, as we work feverishly to secure American families from the threat of terrorism, we are facing unparalleled environmental threats to our long-term security.

So now, in the name of national security, let's consider the land and common-sense conservation. For the sake of simplicity, permit me to offer a list of challenges that must be addressed to assure long-term security of the sustainability of our land here at home. Because of the magnitude of the issues, I won't say much about the over-arching problems of human population growth and global warming. I must acknowledge their over-arching importance and they must be dealt with.

My list leans towards issues I faced at both the Forest Service and Bureau of Land Management. It is offered with sincerity, out of concern for how we as a nation act as stewards of our resources – for our own good and for the land that future generations will inherit.

1. Water

Let's start with water – an issue I believe is one of the greatest threats to human security. The United Nations Economic Commission recently has warned of a looming water crisis. The UN report stated two in three people will face water shortages by 2025. Mismanagement of existing water resources, population growth, and changing weather patterns are the primary causes.

Water is already a volatile issue in our country. In the arid Southwest, battles are brewing over the waters of the Colorado River, already badly depleted. The bottom line is there isn't enough to go around.

The Great Plains States, from the Dakotas to Texas, depend on the Ogallala Aquifer, the largest water tank in the U.S. It is being depleted much faster than it is being replenished, and is now 10 to 100 feet below earlier recorded levels.

As Forest Service Chief, I gave a speech I called "The Forest Service: The World's Largest Water Company." That followed my conviction that we should manage our national forests first as watersheds, and then for other uses. This was not always a popular view, even among some of my own colleagues, but it seemed like a reasoned approach to me and I had to draw the line somewhere.

The cleanest water in the country flows off our forests. One-third of the U.S. is covered by forest that produces two-thirds of the run-off. Collectively, our public lands are by far the largest and perhaps most important water providers in the United States. The 192 million acres of national forests and grasslands alone provide drinking water to more than 60 million Americans living in some 3,400 communities in 33 states.

A few years ago, we knew the value of a board-foot of timber, a barrel of oil, and a ton of coal, but we didn't know the value of the water. So a team of experts, led by Dr. Jim Sedell, went to work and found the marginal value of water from national forest lands to be more than \$3.7 billion per year. That does not include the savings to municipalities from reduced filtration costs.

The objective is to keep water on the land longer. Put simply, watersheds catch, store and release water over time. Our challenge is to restore watershed function: the interaction of the soil, water, and vegetation.

Given the fundamental importance of water to all life, watershed health and water quality should be the basic measures of success for our public lands managers.

2. Land fragmentation and sprawl

Let's look at some rates of fragmentation:

An average of 3.2 million acres per year of forest, wetland, farmland, and open space were converted to more urban uses between 1992 and 1997—an area about twice the size of Delaware. That's about 8,700 acres a day, more than double the rate of development of the previous decade, while the population remained relatively constant.

Land fragmentation increases as tract size diminishes. From 1978-1994, the proportion of private forest ownership of less than 50 acres nearly doubled. Thousands of larger parcels of land have been carved up into millions of smaller parcels.

This brings real meaning to the familiar quote, “Buy land, they ain't making it anymore.”

The frontier is not what it was. Our parks are being loved to death. Recreation on all public lands is growing rapidly, as private land is increasingly posted with “no trespassing” signs, making it off-limits to all but those with specific permission from the land owner. Thank goodness that the public lands remain open to all, but we must not overuse or degrade them.

Decades ago, Aldo Leopold ventured a prediction: “Fifty years from now, the acquisition of public game lands may be recognized as a milestone in the evolution of democratic government.” That prophecy came true. Americans cherish their public wildlands and parks as a major achievement of the United States in the twentieth century.

We have 104 million acres of Congressionally-designated wilderness, much of it rock and ice. All major ecosystems are not represented. Bottom-land hardwoods and tall grass prairie, for example, are missing and should be added to the system.

Somehow the stark reality of the loss of big unfragmented tracts of land is lost on those that call themselves conservative. Consider the case of the National Forest roadless areas.

We have 386,000 miles of roads in our National Forests, with an \$8 billion taxpayer liability. We can't afford to take care of the road system that we have: more than 500,000 miles of roads on federally managed public lands, more than the distance to the Moon and back, enough road to go around the Earth 18 times; and all this on less than one-quarter of the land base of the United States.

Today, the question is: Should current and future Administrations and Congresses be relaxing our roadless policies when science and common sense tell us that these wildlands are the remaining habitats for many endangered, threatened, and rare species? They provide us with the cleanest water in the country. These areas are the scientific repositories of what undisturbed landscapes were like. Of what the frontier may have been like.

It seems the neo-conservatives' definition of a roadless area is "an area in need of roads."

3. Wildland fire

In the wake of sprawl and fragmentation comes concern about fire, especially at what is termed today the "urban-wildland interface," a fancy term that tells us people are living in places that are half-wild, half-Wal-Mart.

Fire has long been on our minds. The Smokey Bear campaign was perhaps the most successful public education campaign in our history. In 1968, more people in America knew whom Smokey was than could name the President. Smokey was the second most popular character in the United States. Santa Claus was number one.

Some consider it heresy to say this, but the challenge today is to help people understand that while fire is always dangerous, all fire is not bad. Like wind and water, fire is one of nature's cleansing agents.

Unhealthy forests today are due to a combination of past timber management practices, exotic and off-site species and the cumulative effects of 100 years of fire suppression. We are good at fighting fire. We have the best firefighters in the world. Our firefighters put out 98 percent of the fires during their initial attack. Last year the Forest Service alone spent over \$1.5 billion fighting fires.

Contrary to media reports, Oregon's half-million acre Biscuit Fire did not "destroy" the entire landscape. The fire burned at various intensities, leaving some patches of forest scorched but other areas completely untouched. The result was a classic mosaic pattern of burning on the landscape, which benefits many ecosystem functions and restores habitat diversity. According to Forest Service estimates, approximately 16% of the area burned at high severity, 23% at moderate, 41% at low severity, and 20% was unburned. The costs of such massive firefighting efforts are tremendous, over \$40 million on this fire in just one day. In the long run, fire will occur one way or another. How fire returns to fire-adapted ecosystems is the question.

The challenge is to put fire back on the land. And do it in a way that doesn't harm people. Forests evolved with fire and are adapted to withstand fire. If they weren't, there would be no forests. Our houses and communities adjacent to the forests are the new additions. The development and sprawl are occurring all over the country, and are especially problematic in high fire frequency areas.

The urban-wildland interface is now spread over millions of acres. The millions of dollars that we pour into wildland fire fighting may not save your house. Structural firefighting requires very different skills than fighting forest fires. The most important things you can do to prevent your house from burning as a result of a forest fire are within 200 feet of your house: clear away flammable fuels that carry fire close to your buildings, keep stacks of firewood well away from

structures, use fire-resistant roofing and siding materials, and maintain a perimeter of non-flammable material around the house to serve as a firebreak.

In 2001, the Forest Service received its largest budget increase ever, mostly to rebuild our firefighting capability and reduce fire risk on the land. Careful, prescribed fire and fuel treatments and careful thinning of fuels are part of the solution. And yes, it makes sense to utilize the wood fiber to meet our growing needs.

I hope the Bush Administration's 'Healthy Forests Initiative' is as intent on implementing an ecologically-balanced fire management plan as it is on rolling back mining regulations, water quality standards and roadless policies. If the wildland fire plan turns into little more than an accelerated commercial logging program, it will quickly become a controversial "black hat" program, just like the infamous "salvage rider" did after the bad 1994 fire season when it was dubbed "logging without laws."

4. Loss of biodiversity

High biodiversity enhances ecosystem stability, resistance to invasion by non-native species, and resilience. If you haven't read the book, The Future of Life, I recommend it. It is an easy read written by E. O. Wilson, the world-renowned expert on biodiversity.

In a spot overlooking the place where the Wisconsin and Mississippi rivers meet, Leopold spoke with eloquence and sadness to the planners of a passenger pigeon monument. He said, "There will always be pigeons in books and in museums, but these are effigies and images, dead to all hardships and to all delights. Book-pigeons cannot dive out of a cloud to make a deer run for cover, nor clap their wings in thunderous applause of mast-laden woods. ... They know no urge of seasons; they feel no kiss of sun, no lash of wind and weather. They live by not living at all." To me, this quote says it all when it comes to preserving all life forms on Earth.

5. Exotic species

We've not only managed to diminish our ecological heritage, we've also rearranged it. The exotic species problem is an explosion in slow motion. I'm usually an optimist, but when it comes to controlling exotic species the picture is bleak. I must cite some examples.

The State of the Great Lakes 2001 Report by the EPA suggests that biological pollution is a more substantial threat than chemical pollution. Some scientists believe that only deforestation during the cut-and-run timber harvest era was as ecologically damaging as the spread of invasive species.

In the West, the spread of noxious weeds is estimated to be over 4,600 acres per day. One such weed, leafy spurge, has infested more than five million acres in 23 states, causing economic losses of some \$100 million annually. Yellow star thistle has spread to eight states and has infested more than 12 million acres in California alone. Yellow star had to be removed from California's noxious weed list because, by law, all noxious weeds on the state's official list must be treatable. Star thistle is just too far out of hand.

Dutch elm disease wiped out the majestic elms and changed the look of hundreds of cities and towns as it whipsawed across much the country. Chestnut blight killed that tree and changed the great eastern hardwood forest ecosystems forever. There is white pine blister rust, kudzu, melaleuca in The Everglades, and the long and growing list of species displacing native rangeland plants. The impacts of the recently discovered Asian longhorn beetle remain unknown, but the insect's arrival has frightened foresters and anyone else who has paid attention. We do know it has already made its way into North America via the ports of New York and Chicago and that its effects will be bad—we just don't know how bad.

Here are a few other invasive species; Norway maple, garlic mustard, Japanese barberry, Oriental bittersweet, spotted knapweed, Eurasian water milfoil, buckthorn, black locust, purple loosestrife, ornamental olives, shrub honeysuckles, and purple loose strife, only to mention a few.

An unintended byproduct of our modern transportation systems and daily travel to every continent is that we are flying and shipping millions of organisms – bacteria, seeds, insects, plants, animals, name the life form – around the world on a daily basis to places they have never been. We have unknowingly fashioned a Pangeaea, the ancient super-continent that included all of the Earth's major landmasses. At least in the biological sense, the natural processes of evolution have been tossed up in the air.

A key reason that managing exotics is difficult is that many of them thrive in disturbed habitats. Our best defense against exotics is to protect remaining undisturbed native habitats and maintain the natural biodiversity. And, yes, we do need effective import inspections and standards. We also need a science-based approach to exotics that helps us to look ahead and act accordingly, rather than try to corral the horse after it's out of the barn.

6. Old growth forests

The humorous timber baron's lexicon defined old growth as "senile trees that belong in a home, preferably as 2-by-4's or 2-by-6's."

More than any other issue, old growth symbolizes the National Forest management conflict and controversy for the past 30 years. The basic question is: How many acres of our old growth forests do we want to keep?

The first Bush and Clinton Administrations struggled with the spotted owl debate. But the issue was really about old growth. The owl was the legal hook. Here are some of the facts:

- In the late 1980s, timber harvest in the Pacific Northwest on federal land was at an all-time high, some 5 billion board feet per year. Even as many said this was unsustainable, the timber industry wouldn't compromise at 3 or 2 billion board feet per year. Some powerful politicians backed them up.

- U.S. District Judge William Dwyer shut down all federal timber harvest in that area in 1991. This is just one example of how political and tenacious the old growth forest debate can be, especially when the “conflict industry” and lobbyists square off.
- In 1993, President Clinton, Vice President Gore, several Cabinet members and several agency heads went to Portland, Oregon to try to resolve the issue. Outside of waging war, this amount of Executive-level attention on any issue is rare. The result was the development of the Northwest Forest Plan for 24 million acres.

In my home state of Wisconsin, we revere the tree that built America, *Pinus strobus*, the white pine. The white pine forests were leveled by the turn of the last century in the cut-and-run era. I wonder if we will ever have old growth white pine forest in Wisconsin again. Is there public support? Where? And how long will it take? Surely none of us living today will ever see the majestic white pine forests. I wonder if our great-grandchildren will.

I must also ask one last question: what in the world are we doing cutting old growth forests on public lands or anyplace? It's time, past time, that we recognize the ecological and social values of these forests and leave them intact. The Bush Administration should immediately halt all harvest of old growth forests on public lands. That would be a lasting legacy.

7. Off-road vehicles

Off-road or all-terrain vehicle use is a huge challenge for public lands managers. We have more people going more places on public lands more often, with more kinds of all-terrain vehicles than ever before. Many people want to go anywhere anytime with anything, regardless of the impact on the land, water, vegetation or wildlife. As both Forest Service Chief and Bureau of Land Management Director, I had many field managers say this was their most difficult challenge.

I recall a conversation with a conservative Western senator who didn't want me to take on the issue. I asked him if he knew any ranchers or private landowners who let anybody who wanted to go anywhere, anytime, with anything? The answer was no.

Bringing support, order, and agreement to the use of all-terrain vehicles on public lands will be exceedingly difficult and controversial. It will make the spotted owl issue look easy. But if the agencies and community of interests do not take it on, it will likely be thrown to the courts. Isn't leadership all about not shying away from difficult issues?

But whatever mechanisms we use to resolve the off-road vehicle use issue, most important is this: all of our activities must take place within the ecological limits of the land.

8. 1872 Mining Law

I mention the 1872 Mining Law because it is perhaps the most vexing and outdated natural resources law in the U.S. This statute is a product of an era when women and most minorities could not vote. The nation was struggling through Civil War reconstruction and St. Louis represented the western frontier to most citizens.

The law's antiquated royalty provisions are well known and simple: none exist. It is a blatant giveaway of public resources. In addition, it allows privatization of public lands for \$2.50 to \$5 per acre, sometimes to foreign or multinational mining companies.

Every other natural resource use – timber, grazing, oil and gas, recreation – is subject to approval or rejection by field managers for environmental or safety reasons, all but hard rock mining.

Updating the 1872 Mining Law should be at the top of the list of conservation priorities for Congressional and Administration action. Instead, the Bush Administration has chosen to relax the conservation provisions of the mining regulations developed by the Bureau of Land Management in the 1990's.

9. Private land conservation

Private land conservation as a component of public lands conservation? The two are inextricably linked, and few areas offer more promise for conservation and watershed restoration than the many millions of acres of privately owned land in the United States.

For example, about two thirds of the forests in the United States – some 490 million acres – are in non-federal ownership. This includes more than 9 million woodland owners who own tracts of land less than 100 acres. Of these, only about 5% have professionally-developed science-based management plans.

According to a 1996 National Research Council report, we have more than 20 million acres of forest classified as urban and community forests and more than 60 million acres of cities and towns sprawling over what once was forestland. The opportunities are tremendous.

Research done by Dr. Greg McPherson and his colleagues in California at the Center for Urban Forest Research reported that there are some 177 million trees in energy conserving locations. This saves California utilities \$500 million annually in wholesale electricity purchase and generation costs. These trees save consumers about \$1 billion in air conditioning. McPherson's models predict that if Californians planted 50 million more shade trees in strategic locations the energy saved would be equivalent to seven 100-megawatt power plants.

The Forest Service estimates that we can plant another 700 million trees in our cities and towns across this country. In energy terms, combined with existing trees, this is equivalent to 30% of the estimated annual oil production of ANWR averaged over 50 years.

Shouldn't a national energy strategy put greening our cities and towns with tree planting ahead of or at least on par with drilling for oil on sensitive lands? Urban and suburban reforestation should be at the forefront of international policies and treaties. Trees produce oxygen we breathe, sequester carbon, which reduces global warming, and reduce storm water runoff, which saves money and improves water quality. Trees improve the looks and livability of our urban

communities and help connect people to nature in the places where nature is needed most, the places where people live. Any national energy policy that doesn't have tree planting front and center is incomplete.

10. Ecological Literacy

I mention education last because it serves as the most important tool in achieving any good in the areas we've reviewed. We need to help all citizens and landowners understand and appreciate the full spectrum of what the land does for us as a component of our own national security and for the good of the world.

Today, a greater proportion of humans than ever before is living farther removed from the land. Eighty percent of the U.S. population is urban or living in cities and towns. Our challenge is reconnecting people with nature.

We must connect peoples' hearts and minds with the land and the outdoors. And that doesn't mean that they have to live in the woods or out on the prairie. They just need to understand and appreciate the land that sustains us.

A recent study by conservation policy analyst Neil Sampson showed that the proportion of the federal budget allocated for natural resources is 50 percent of what it was in 1962. In the corporate world, that would be a near-fatal loss in market share. It is most surely an indictment of public education efforts, or the lack of them, on behalf of our precious natural resources.

We must make investments in the land for the long haul. We must build support for good land management. It's the patriotic thing to do. Not one of us wants future generations to look back at our time and ask, "Why did they use the land up?" Education is key to maintaining our quality of life over the long haul.

Reflections on the past and politics of conservation

A little over one hundred years ago, on September 6, 1901, a shot fired by an assassin seriously wounded U.S. President William McKinley as he attended the Pan American Exhibition in Buffalo, New York. Vice President Theodore Roosevelt was visiting members of the Vermont Fish and Game League at a luncheon on Lake Champlain.

In eight days, Theodore Roosevelt was sworn in as the nation's 26th President. Roosevelt's rise appalled many of the political leaders of his own Republican Party.

As Governor of New York, Roosevelt had shown the troublesome tendencies for the protection of natural resources and the reigning in of corporate power. Roosevelt's initiatives in New York flummoxed the high, mighty, and influential. They found a convenient solution to get this bull out of their china shop: draft Roosevelt for the Vice Presidency. Six months later, as Republican Party Chairman Senator Mark Hanna said, "that damned cowboy" was President.

Roosevelt's White House tenure from 1901 to 1909 defined modern conservation. He understood and believed in science. Not since Jefferson had someone so well-versed in the sciences occupied the White House. His conservation legacy is immense: more than 250 million acres of national forests, national monuments, national parks and refuges.

Another Roosevelt—Franklin Roosevelt—who, as President, successfully led the struggle against Hitler, Mussolini and Hirohito as threats to world security in the 1930's and 40's, once said, "True individual freedom cannot exist without economic security." I think if he were alive today he would probably amend that remark to "True individual freedom cannot exist without economic and environmental security."

If we truly want a future free from threats to our security, we must think seriously about what constitutes a threat to our freedom and quality of life. We also need to ask ourselves as we spend billions of dollars and incalculable hours addressing the threats from the likes of Saddam Hussein and Osama Bin Laden, are we not making a mistake by ignoring threats to our land, air,

food and water...threats that historically have toppled more civilizations than either of these two men could ever dream of? Without environmental security, basic sustainability of the land, the other pursuits are irrelevant.

We should not ignore the threats of terrorists and dictators. But on the other hand, will we be truly secure when our borders have been sealed tight from terrorists, but the water our children drink is growing scarce, the air we breathe is dirty and the lands we live on and need to survive are sick? I think the answer to that question lies in the whisper of the sand that blows through the ancient ruins of Iraq.

(Mike Dombeck is Pioneer Professor of Global Environmental Management at the University of Wisconsin – Stevens Point and UW System Fellow of Global Conservation. He served as the Acting Director of the Bureau of Land Management and Chief of the U.S. Forest Service.)