

The BIG TEN Public Land Conservation Challenges for a New Century: Where Do We Go From Here?

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The tragic events of September 11 are indelibly etched in our minds. We will never forget the images that were played back to us on TV time and time again. For many of us, it was the first time we felt threatened. Truly threatened that our very essence, as a nation and as a people, was being put in danger. And it has caused us to reflect very deeply on our lives, our country, and what the future may hold.

I have spent the better part of my life in the business of land management, conservation and research. I have had the great honor to lead the nation's two largest federal land management agencies. And have had more than one person's share of Congressional hearings and debates about the what, why, and how of public land management.

When I think about the people who live in the Middle East, whom we now believe are our enemies, I am saddened. Do they not share the same needs of us all? Surely they are good people, at least the great majority of them. And yet, at least a small group of them are willing to give their own lives to harm ours. What drives such fanaticism? Is it cultural differences? Lifestyle? Is it our insatiable thirst for oil? That is no excuse for killing innocent people.

I think about the land in the Middle East and how much of it is simply used up from countless centuries of human use, centuries of pushing the land beyond its limits. I have been there and have seen some of it. Today, what was referred to as the "fertile crescent" is anything but fertile and productive. Once-green valleys are brown and perennial streams are dry. Topsoil and water are scarce - the land is used up.

There is a lesson here for all of us. We can't all be sky marshals protecting travelers or microbiologists searching for the cure for anthrax or other biological warfare agents. But we can all be good stewards of the lands and waters that sustain us. Living within the ecological limits of the land and not allowing short-term economic gains to override the land legacy we bequeath to future generations is the strongest demonstration of patriotism that I know.

Famous Presidents like Thomas Jefferson and Theodore and Franklin Roosevelt were dedicated to the land. On July 1, 1864, in the heat of the Civil War, President Lincoln signed a bill granting Yosemite Valley and the Mariposa Grove of giant sequoias to California to be protected in their natural state. As the country was being torn apart by the Civil War, President Lincoln must have recognized the importance of preserving our natural wonders. Since Lincoln's time, numerous pieces of legislation and executive orders have protected millions of acres of our land.

President Kennedy, who like Lincoln is not well known for conservation policies, said this: "Conservation...can be defined as the wise use of our natural environment: it is, in the final analysis, the highest form of national thrift – the prevention of waste and despoilment while preserving, improving and renewing the quality and usefulness of all our resources." Kennedy and Lincoln, like Jefferson and the Roosevelts, understood that protecting this country and our way of life meant taking care of the land.

You and I, as citizens of the United States, together own hundreds of millions of acres of land. This is our birthright, a gift from our forbears, many of whom died securing the land and the freedoms we enjoy. One of the most patriotic things we can all do as citizens of the United States is care for the land.

Our public lands--over 500 million acres--are uniquely American. Other cultures have their great pyramids or works of art. England and Spain have their great sea captains, Rome and Athens their great temples, and the Far East its dynasties. We in the United States have our public lands, the remnants of our wild frontier. It was this frontier that shaped our character as a people and a nation. Our heroes are the likes of Davy Crockett, Tecumseh, Daniel Boone, Sacagawea, Lewis

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and Clark and Chief Joseph. We admire them for their endurance and skill, tested by the vast wild places of the American frontier.

At one time, we viewed our public land as a vast storehouse of inexhaustible resources. Whoever was capable of exploiting those resources for personal profit could do so, in the name of progress and civilization.

Too often, the result was environmental disaster. It was the tragedy of the commons, a tragic part of our history. Overgrazing the western rangelands and the cut-and-run era which ended a century ago that eliminated all but a few acres of old-growth forests in my home state of Wisconsin and throughout much of the East and upper Midwest are just a few examples. The fires, floods, and erosion that followed degraded our lands and waters, sometimes for generations to come. Quality of life in these areas declined because the land was abused.

The BIG TEN conservation challenges

Now I'd like to switch gears and talk about what I had planned to talk about before the events of September 11.

My intent is not to give a political speech or a technical lecture. I want to talk about the land – specifically common sense public land conservation. For the sake of simplicity, I'm calling these challenges the BIG TEN. My list is not all-inclusive. I won't say very much about the huge complex topics of global warming or overpopulation, for example. Besides, my area of experience and expertise is the public lands. These are simply ten of the issues that I faced at both the Forest Service and Bureau of Land Management and that I believe are relevant today.

1872 Mining Law

I mention the 1872 Mining Law first 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.

Its 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 land for \$2.50 to \$5 per acre, sometimes to foreign or multinational mining companies.

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

Stewart Udall, Secretary of the Interior during the Kennedy & Johnson Administrations, left office in 1969 saying this was an archaic law badly in need of change. The last failed attempt to change the 1872 Mining Law was in the early 1990s, early in the Clinton Administration. It nearly succeeded, but Congress adjourned just before the job was complete. The Republican sweep of the House and Senate in 1994 sucked the momentum out of the reform of the 1872 Mining Law.

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 over the past couple of years.

Wildland fire

The Smokey Bear campaign was perhaps the most successful public education campaign in our history. In 1968, more people knew who Smokey was than could name the President. Smokey was the second most popular character in the United States. Santa Claus was number one. Today, the challenge is to help people understand that although 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 and the cumulative effects of 100 years of fire suppression. We are good at fighting fire. We have the

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best firefighters in the world. Our firefighters put out 98% of the fires during their initial attack. In the year 2000, the Forest Service alone spent over \$1 billion fighting fires.

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 sprawl of housing developments in rural areas, foothills and even up mountainsides is occurring all over the country. This is especially problematic in high fire frequency areas like much of California and the intermountain West.

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 fire fighting requires very different skills than fighting forest fires. If you live in a fire-prone area, the single most important thing you can do to prevent your house from burning because of a wildfire is to take precautionary measures within 200 feet of your house, including: take extreme care to keep flammable fuels, such as tall dry grass, dense evergreens or dry brush, away from buildings; keep stacks of firewood well away from structures and use fire resistant roofing and siding materials; and maintain a perimeter of non-flammable material around houses to serve as a firebreak.

Last year, the Forest Service received its largest budget increase ever, mostly to rebuild our fire fighting capability and reduce fire risk on the land. Careful prescribed fire, fuel treatments and 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 is working as hard 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." Unfortunately, that is the direction things appear to be headed.

Exotic species

A September 30, 2001 Associated Press story headline that ran in the Milwaukee Journal-Sentinel stated: "Invasive species threaten Great Lakes." The State of the Great Lakes 2001 Report suggests that biological pollution is a more substantial threat than chemical pollution. Some scientists believe that only deforestation during the lumbering 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. Leafy spurge has infested over 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 over 12 million acres in California alone. So many acres are infested with yellow star thistle in California that it had to be removed from that state's noxious weed list, because by law all noxious weeds on the State's official list must be treatable. Star thistle has long surpassed the treatable stage.

The exotic species problem is sometimes described as an explosion in slow motion. I'm usually an optimist. But when it comes to controlling exotic species, the picture is bleak. Dutch elm disease wiped out the majestic elms and changed the look of hundreds of cities and towns. 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 we do know it has made its way into North America via the ports of New York, Chicago and Los Angeles. We know its effects will be bad, we just don't know how bad.

One of the unintended by-products of our modern transportation systems and daily travel to every continent is that we are flying and shipping millions of organisms- bacteria, seeds, insects, and others- around the world on a daily basis, to places they have never been. We have recreated Pangeaea at least in the biological sense. This was the geologic era before the continents drifted apart. We have kicked the natural processes of evolution into high gear.

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A key reason that managing exotics is difficult is that many of them thrive in disturbed habitats. Our best defense against exotics is protecting remaining undisturbed native habitats and maintaining the natural biodiversity. And yes, we do need effective import inspections and standards. We also need a science-based approach that is proactive and predictive, versus our typical reactive approach of trying to corral the horse after it's out of the barn.

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,
- Or over 8,700 acres per day, more than double the rate of development of the previous decade, while human population remained relatively constant.
- From 1982-1992, the development rate was an average of 1.4 million acres per year or 3,800 acres per day. Land fragmentation increases as tract size diminishes.
- From 1978-1994, the proportion of private forest ownerships of less than 50 acres nearly doubled.

This brings real meaning to the familiar quote, "Buy land, they ain't making it any more."

Our parks are being loved to death. Recreation on all public land 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 landowner. Thank goodness the public lands remain open to all, but we must not overuse them 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 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. But all major ecosystems are not represented. Bottomland hardwoods and tall grass prairie, for example, are missing and should be added to the system.

Our remaining wildlands and roadless areas will be increasingly important as years go by, simply because "they ain't making it any more." There are more and more people who must share the same number of acres.

Somehow the stark reality of the loss of big unfragmented tracts of land is lost on those that call themselves "conservative." Consider the road system we have on our public lands today. We have:

- 386,000 miles of roads in our National Forests, with an \$8.4 billion maintenance backlog – in other words, we can't afford to take care of the road system that we have, and
- more than 500,000 miles of roads on federally-managed land.

On less than ¼ of the total land base we have enough roads to go around the Earth sixteen times, or more than the distance to the Moon and back.

Should the Bush Administration be relaxing our roadless policies when the science tells us that these wildlands are the remaining habitats for many endangered, threatened, or rare species? They provide us with the cleanest water in the country. These areas are the scientific repositories of what undisturbed landscapes were like.

Will future generations thank us for the wildlands that we opened up or the oil fields that we developed? Or will they thank us more for oil that we saved for them and the wild places that we left wild? Which is the truly conservative approach?

Several years ago, a forestry professor handed me a copy of the humorous timber baron's lexicon. It said a "roadless area was an area in need of roads."

Old growth forests

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 Administration and the Clinton Administration struggled with the spotted owl debate. But the issue is really about old growth with the owl as 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 and some powerful politicians backed them up.
- Judge Dwyer shut down all federal timber harvest in that area.
- The President, Vice President, 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; it was completed in 11 months and stood the test of the courts.
- It was based on the best use of science of any large-scale land plan.
- It was the first and best large-scale land use plan.
- It required adaptive management and watershed scale analysis.
- It allowed for a timber harvest level of about 1 billion board feet.
- It established a "jobs in the woods program" to assist displaced timber workers.
- It provided a 10-year "safety net" of funding to assist counties dependent on the payments from timber receipts to pay for local schools and roads.

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.

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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? Finally, one last question: what in the world are we doing cutting old growth forests on public lands? It's time, past time, that we recognize the ecological and social values of these forests and leave them intact.

The same timber baron's lexicon I mentioned earlier defined old growth as "senile trees that belong in a home, preferably as a 2x4 or 2x6."

Loss of biodiversity

We are losing species at an alarming rate and the trend must be reversed. Preserving the genetic library of life is the right thing to do. Aldo Leopold put it this way: "To keep every cog and wheel is the first precaution of intelligent tinkering."

Many wildlands serve as a biological refuge for native species, often their last refuge. Our national forests and grasslands, for example, contain 181 of the 327 watersheds identified by The Nature Conservancy as critical for the conservation of biodiversity in the United States. The National Forest System supports 366 species of plants and animals listed as threatened or endangered under the Endangered Species Act, plus another 2,800 sensitive species and numerous imperiled plant communities. High biodiversity enhances ecosystem stability, resistance to invasion by nonnative species, and resilience.

In a less familiar quote, Leopold spoke with great 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 the 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 forever by not living at all." This quote says it all when it comes to

preserving all life forms on Earth.

Off-road vehicles

I believe off-road vehicle or all-terrain vehicle use will be the public land issue of the decade. It will be much more difficult to resolve than the spotted owl in the Pacific Northwest simply because it is more complex with very entrenched opinions on all sides of the debate. Off-road vehicle use on public land is an unusual mixture of keeping activities within the ecological limits of the land and what people perceive as their individual rights.

We have more people going more places on public land 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. During my tenure as head of both Forest Service and Bureau of Land Management, I had more field managers say this was their most difficult challenge.

I recall a conversation with a conservative Western senator who didn't want me to elevate or 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 land 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? It would be a great test of the mettle of the Bush Administration.

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

Private land conservation

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Few areas offer more promise for conservation and watershed restoration than the millions and 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 over 9 million woodland owners who own tracts of land of less than 100 acres.

According to a 1996 National Research Council report, we have over 20 million acres of forest classified as urban and community forests and over 60 million acres of cities and towns sprawling over what once was forestland. Of these, only a small percentage have professional science-based plans. The opportunities are tremendous.

For example, research done by Dr. Greg McPherson and his colleagues here 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 costs. 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 MW power plants.

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 or more nuclear power plants? This is a no-brainer. Urban and suburban reforestation should be at the forefront of international policies and treaties. Trees produce oxygen we breathe, sequester carbon reducing global warming, reduce storm water run-off saving money and improving water quality, and improve the looks and livability of our urban communities.

Water

I believe water is the issue of the century and will be the issue of the millennium. Last March, the International Herald Tribune cited a report that indicated that two-thirds of the World's population would be dealing with water shortages within the next 25 years.

In California, water is a volatile issue. In the arid Southwest, battles are brewing over the waters

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of the Colorado River, already badly depleted. The Great Plains states, from the Dakotas to Texas, depend on the Ogallala Aquifer. It is rapidly being depleted much faster than it is being replenished, and is now 10 to 100 feet below original levels.

The cleanest water in the country flows off of our forests. Collectively, our public lands are by far the largest and perhaps most important water provider in the United States. As Forest Service Chief, I had a speech I called "The Forest Service: The World's Largest Water Company."

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. We knew the exact value of a board foot of timber and a ton of coal, but we didn't know the value of the water. So a team of experts went to work and found the marginal value of water from national forestlands to be more than \$3.7 billion per year. That does not include the savings to municipalities from reduced filtration costs.

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

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

Education

I mention education last because I feel it is the most important of the ten issues. We need to help all citizens and landowners understand and appreciate the full spectrum of what the land does for us as a nation and a society. Today a greater proportion of humans than ever before is living further 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.

As resource managers and scientists, we spend too much time talking to each other and too little

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time helping people understand the very basics of what healthy functioning watersheds do for us. We must learn to communicate in a way that connects 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.

One reason I believe we are not doing a good enough job of communicating is this: a recent study by notable conservation policy analyst, Neil Sampson, showed that the proportion of the federal budget allocated for natural resources is 50% of what it was in 1962. In the corporate world, that would most likely be a fatal loss in market share. 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

The last decade or so, as I was thrust into big controversial national conservation issues, I spent more and more time reading and reflecting about the history of conservation. I'd like to close with a story about a tragedy that was very different from the tragedies of September 11, 2001, but is in some ways similar. It thrust the nation into shock and changed the course of history.

A little over one hundred years ago, on September 6, 1901, a shot was fired that that 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. Upon hearing the news, the Vice President rushed to Buffalo to monitor the president's precarious condition.

In a few days, President McKinley had recovered sufficiently that Roosevelt was able to leave Buffalo for a short vacation in the nearby Adirondack Mountains in his home state of New York. Vice President Roosevelt met his family at Camp Tahawus at the base of Mount Marcy, the highest peak in the Adirondacks. They spent the evening of September 11 at a cabin upslope from the camp. The next morning Roosevelt, his wife Edith, two of their children, and several

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other members of a climbing party started up the mountain. They spent the second night in cabins about halfway up.

The following morning the climbing party split, with Edith and the children headed back down and Roosevelt and the others reaching the peak by late morning. Descending then to the shore of Lake Tear of the Clouds, the highest source of the Hudson River, they paused for lunch. A guide emerged from the trees with a yellow telegram with news that President McKinley's condition had deteriorated and instructing the Vice President to return to Buffalo at once. After an arduous journey out of the mountains, Roosevelt boarded a night train to Buffalo, arriving there at dawn on September 14. The President had died. That evening, Theodore Roosevelt took the oath that made him 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 tendency for the protection of natural resources and the reining 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, "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.

This fascinating story was taken from an essay by Dr. Curt Meine which appeared in the most recent issue of *Conservation Biology*.

What are our policy-makers' views on conservation today? The Wilderness Act passed the U.S. House of Representatives in 1964 with a vote of 373 to 1. How would that vote turn out today? Most of our progressive conservation and environmental legislation was signed by Republican Presidents such as Theodore Roosevelt, Richard Nixon, and Gerald Ford. Today, political

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conservatives seem more often than not to be anti-conservation and anti-environment. Often the perception is economy versus the environment, rural West versus the urban East.

There are important lessons to be learned from the past, especially in land management where we must always take the long view. Perhaps the most important lesson is, don't use the land up for short-term gain, or for any reason. Humans may not control climate change or desertification, but we do influence it. We need only to look to parts of the Middle East to see the stark result.

The Bush Administration would do well to follow the example of what Teddy Roosevelt did one hundred years ago. The Bush Administration should provide a conservation vision for this new century, a vision that has as its premise "the greatest good for the greatest number, in the long run."