The Anthropocene & The Forest Service

A Forest Service Vision During The Anthropocene[1]

Executive Summary. During the history of the Forest Service, human activity has been the dominant influence on climate and the environment; the time being called the *Anthropocene.* As we look ahead and strive to continue our mission of sustaining the health, diversity, and productivity of the Nation's forests and grasslands to meet our current and future needs, we must be more flexible to *focus* our actions to better meet the contemporary conservations challenges now and ahead. During this era of intense human activity, a changing climate; development and loss of open space; resource consumption; destructive invasive species; and diversity in core beliefs and values will test our *task relevant maturity* – ability and willingness to meet the growing demands for services. The Forest Service is now on a *transformative campaign* to improve our abilities and meet these challenges. There are several things we must do to ensure we are *brilliantly* competitive to address contemporary conservation needs along a complex rural to urban land gradient, now and ahead. The intent of this paper is to present one person's view of what this "campaign of our campaign" should include:

- Stay the course with both our current mission and statement, but adjust the slogan (to acknowledge our stewardship role on *all* lands). The foundations established by Pinchot and Leopold are timeless and the vision of many Forest Service Chiefs has added strength to that foundation.
- Create a culture of inclusion (that will become a magnet for a representative workforce).
- Be more responsive to the conservation issues along a complex rural to urban land gradient.
- Adjust the Mission Area structure (to enable *one* Forest Service to emerge).
- Create forest resiliency through restorative actions.
- Influence more, *play* less.

See page 16 for the Forest Service Core Beliefs and Values

Introduction. My good friend, Dr. Ariel Lugo, Director of the International Institute of Tropical Forestry asked me to give a presentation about the Forest Service vision during the *Anthropocene.* My first response was, "…what is the *Anthropocene*? This was quickly followed by a driving question. That is, "…why me?" I will tend to the definition in a moment. But the second question deserves some attention: "…why me?"

Over the years, Dr. Lugo and I have been together in countless events. I have come to know him as a voice of authority, careful to speak, seeming always to seek just the right time to capture a point. I, on the other hand, have not been so wise. I tend to wear my heart on my sleeve and speak – often times when I should probably be listening. Still,

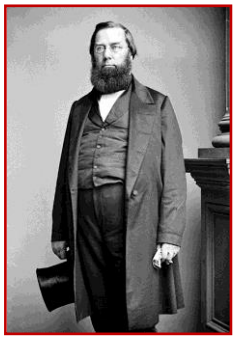
[1] Prepared by Michael T. Rains, Director, Northern Research Station and Forest Products Laboratory, USDA Forest Service for the Keynote Talk at the Institute's 75th Anniversary Symposium to be held at the Inés María Mendoza Park located on the grounds of the Luis Muñoz Marín Foundation in San Juan, on May 21, 2014 (revised 2.0).

Dr. Lugo accepts me and we share common ground on many points and positions. So, "…why me", honestly I am not sure. Probably because I have simply been with the Forest Service for a long time – about 45 years now – and that has indeed shaped some perspective. And, in the end I agreed, because he asked.

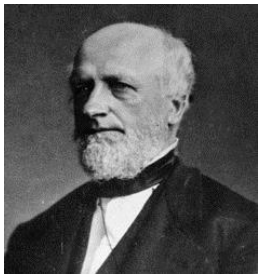
However, to be clear, there are many others who can speak to this subject – a Forest Service Vision – equally well or better. And, the views presented in this paper may not be *corporate*. That is, not shared by all. Never-the-less, I am happy to share my thoughts about the Forest Service that I love and how the agency can be most effective in "caring for the land and serving people, ***where they live***" during the *Anthropocene.*

Anthropocene. According to one source, the word *Anthropocene* (An·thro·po·cene) means, "relating to or denoting the current geological age, viewed as the period during which human activity has been the dominant influence on climate and the environment." So, when I talk about a Forest Service vision during the *Anthropocene*, it means to me "…a vision for the agency at our beginning; now; and, for a very long time into the future."

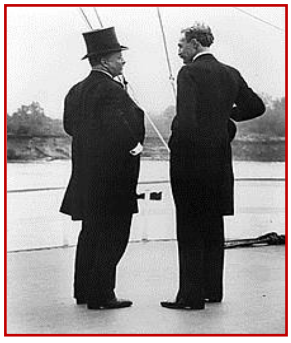
The Forest Service (In The Beginning). Following the Civil War, a dominant culture in acquiring land; money; material things; and, exploitation "…were the spirit of the times, with little regard for the ethics of conservation or the needs of the future."[2] Concerns by influential visionaries such as George Marsh[3], Wesley Powell, Bernard Fernow and John Muir – and others -- helped surface a call to action. Accordingly, in 1876, Congress created the office of Special Agent in the Department of Agriculture to assess the quality and conditions of forests in the United States. Franklin B. Hough was appointed the head of the office. In 1881, the office was expanded into the newly formed Division of Forestry. The Forest Reserve Act of 1891[4] authorized withdrawing land from the public domain as "forest reserves," managed by the Department of the Interior. In 1901, the Division of Forestry was renamed the Bureau of Forestry. The Transfer Act of 1905[5] transferred the management of "forest reserves" *from* the General Land Office of the Interior Department *to* the Bureau of Forestry, Department of Agriculture.



George P. Marsh (1801-1882)



Franklin B. Hough (1822-1885)

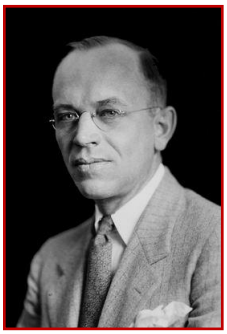


Theodore Roosevelt (L.) Gifford Pinchot (R.)

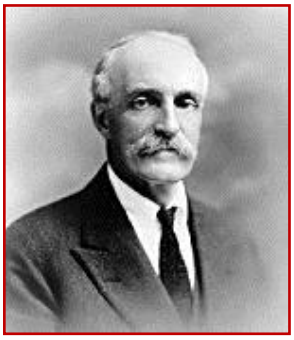
[2] Williams, Gerald W. The USDA Forest Service – The First Century, FS-650. July 2000.
[3] March, George P. The Earth As Modified By Human Action. 1874.
[4] President Benjamin Harrison signed the bill into law March 3, 1891.
[5] At Roosevelt's urging, Congress passed the act transferring the forest reserves from the Department of the Interior to the Department of Agriculture (33 Stat. 628). The same year the Bureau of Forestry became the Forest Service and Pinchot the Chief Forester.

This Bureau of Forestry became known as the United States Forest Service with Gifford Pinchot the first Chief Forester under the Administration of President Theodore Roosevelt; the forest reserves became known as the National Forests.

The culture of America that shaped the beginning of the Forest Service is both different and in some ways the same as the culture today; perhaps now the differences are more acute due to the intensity of human activity. With populations across planet Earth continuing to rise, behaviors will continue to cause exploitative impacts, even if intentions are noble. So, as Dr. Lugo asks, "…should the Forest Service cruise on with our mission with the conservation paradigms that we inherited from Pinchot and Leopold[6] or is there a need for another leap or evolution in our relationship with forestlands?"[7] The answer to this driving question will of course depend on our corporate view of the future; the challenges we face; and the accuracy of forecasts on the demands for our services.



Aldo Leopold (1887-1948)



Gifford Pinchot (1865-1946)

Gifford Pinchot: 1st Chief of the Forest Service, 1905-1910

The Chief of the new Forest Service had a strong hand in guiding the fledgling organization toward the utilitarian philosophy of the "greatest good for the greatest number in the long run." Gifford Pinchot is generally regarded as the founder of American conservation because of his great and unrelenting concern for the protection of the American forests.

Significant federal legislation affecting the Forest Service includes the: Weeks Act of 1911; Multiple Use - Sustained Yield Act of 1960, P.L. 86-517; Wilderness Act, P.L. 88-577; National Forest Management Act, P.L. 94-588; National Environmental Policy Act, P.L. 91-190; Cooperative Forestry Assistance Act, P.L. 95-313; and, Forest and Rangelands Renewable Resources Planning Act, P.L. 95-307.

Thomas L. Tidwell

Thomas Tidwell: 17th Chief of the Forest Service, 2009-Present

Tom Tidwell, our current Chief, has spent about 33 years in the Forest Service. Under his leadership, the Forest Service – through an "all-lands" approach -- is helping restore healthy, resilient forest and grassland ecosystems along a complex urban to rural land gradient. Chief Tidwell is helping deploy a "transformational campaign" so the Forest Service can be more competitive in addressing the contemporary conservation challenges now and ahead.

[6] Aldo Leopold (1887 – 1948) was considered by many as the father of wildlife management and of the United States' wilderness system, Aldo Leopold was a conservationist, forester, philosopher, educator, writer, and outdoor enthusiast.

[7] Lugo, Ariel E. "Evolving Conservation Paradigms for the Anthropocene", USDA Forest Service International Institute of Tropical Forestry. October 15, 2013.

A quick summary of the history of the Forest Service to the turn of the century:

1876 The Office of Special Agent for forest research is created in the Department of Agriculture to assess the state of the forests in the United States.

1881 The Office of the Special Agent is expanded into the newly-formed Division of Forestry.

1891 The Forest Reserve Act of 1891 authorizes withdrawing land from the public domain as 'forest reserves,' managed by the Department of the Interior.

Forest Service scientist George B. Sudworth, author of the classic authority Checklist of Forest Trees of the United States, in the Sierra Forest Reserve, 1901.

1901 The Division of Forestry is renamed the Bureau of Forestry.

1905 The Transfer Act of 1905 transfers the management of forest reserves from the General Land Office of the Interior Department to the Bureau of Forestry (within the Department of Agriculture), henceforth known as the Forest Service.

1905 - 1945 National Forest management focuses on protecting lands against overgrazing, controlling and combating fire, protecting fish and game, and providing public recreation.

1944 The Forest Service begins a campaign stating 'Only YOU can prevent forest fires' using a fire-injured bear as a symbol to be careful. Today, "Smokey Bear" is one of the most widely recognized icons in America.

Dedication of Mather Memorial Parkway on the Snoqualmie National Forest, 1955.

1946 - 1960 National Forests experience increased demand on forest resources, especially timber and recreation.

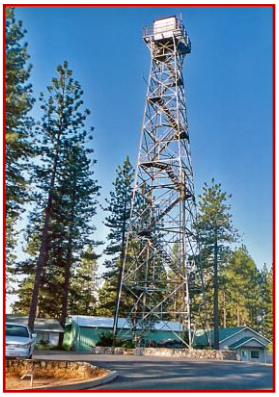
1960-1980 In response to shifting public values, the Forest Service shifts focus to managing land as integrated systems, instead of individual resources.

1989 The Chief's New Perspectives initiative stressed ecosystem management and sustainability and aimed to place timber management in line with other forest uses.

2001 The National Fire Plan was created to address the build-up of fuels unintentionally caused by decades of fire suppression.

See Appendix A.1, page 23, for the Forest Service Mission; Vision; and, Guiding Principles

A City Kid Joins the Forest Service. I was born in East Los Angeles; spending most of my early youth in California. We were poor, my parents being classic depression-era Americans. Eventually, we moved to Sacramento and then to a very rural area called Sly Park, just east of Placerville – another small town in northern California between Sacramento and Lake Tahoe. It was there where I became associated with the United State Forest Service.



Mt. Danaher Lookout
El Dorado County, CA

My mother, looking for a job, was offered a secretary position on the El Dorado National Forest. Her supervisor – the Forest Supervisor -- was a grand gentleman named Douglas Leisz. Mr. Leisz would be instrumental in getting me my first job in forestry, as a fire fighter[8] for the California Division of Forestry (CDF) at Mt. Danaher Fire Station, Camino, CA (just north of Placerville). I lived at the CDF Barracks and received a monthly salary of $255.15 for the summer before my senior year in high school.

Douglas R. Leisz

Following high school, I would get selected from a permanent Civil Service roster and became a GS-2 Biological Aid. I carried stakes for a "P-Line" crew laying out "cut and fill" points for logging roads on the El Dorado National Forest. Perhaps not glamorous, but it was a full-time, permanent job. That is all I wanted; a real, full-time job. As far as I was concerned, I was on my way.

I had no intention of going to college. I did not think I could afford it. Besides, I had a full-time job with the United States Forest Service and if I played my cards right, maybe someday I would be a "Survey Party Team Leader." At a GS-7 level, I would be set.

Just before my summer ended on the "P-Line" crew, my supervisor Mr. James Floyd pulled me aside. He told me that if I wanted to go to college, the Forest Service would offer me "educational leave without pay." Then, when next summer would come, I would be hired back and that time would count toward my career.

Honestly, I was not thinking about a career, really. I just wanted to get to that GS-7 level as quickly as possible. The idea seemed sound, but there was one significant problem. I still did not have enough money to pay my way to college -- unless maybe I went to a Community College. In this case, the savings from my GS-2 appointment just might be enough. So, that is just what I did for two years before transferring to a

SIERRA COLLEGE

HUMBOLDT STATE UNIVERSITY

[8] About once a week, each firefighter at Mt. Danaher Fire Station would staff the Lookout. On January 12, 2002, the Mt. Danaher Lookout was registered as a national historic site. It is still maintained and staffed during the fire season.

small forestry school near a town called Arcata, California – Humboldt State University. The Community College was called Sierra Junior College near Rocklin, CA. To this day, I owe most everything to that school. It allowed me to get started and just like Jim Floyd said to me earlier, right before each subsequent summer began, I received a letter telling me where to report for work with the Forest Service. Like Forrest Gump™ said, "…just one less thing to worry about." That was very nice.

Junior Forester. I can clearly recall the day, about 45 years ago, when I walked into the **S**upervisor's **O**ffice on the El Dorado National Forest in Placerville, California. Before the "SO" was moved to a new location at Forni Road, I had often visited the old building perched on top of the hill overlooking old "Hangtown."

"Old Hangtown" Placerville, CA

I was a freshly minted "JF" -- Junior Forester -- out of Humboldt State University. Today, we might take exception to being labeled with the letters "JF", but I was proud to be able to have the initials, while still looking forward to the end of the first year and being called a "Forester" for the Lake Valley Ranger District[9]. While not a "Survey Party Team Leader," I *was* a GS-7 and now a "forester" for the Forest Service. What could be better?

Meyers Ranger Station El Dorado County, CA

After a brief introduction, my Forest Supervisor Irwin Bosworth[10] directed me to "get to work" at my new position. The ride to Meyers – the District Office headquarters just a few miles from South Lake Tahoe – was exciting. I had taken the ride many times before, but never as a "JF" for the Forest Service. And, I recall as if it were yesterday, the admonishment by the District Ranger when I walked into his office. He said, "…listen up young fella. If you want to make it to the short-go around here, you will do whatever it takes." I quickly

[9] The Lake Valley Ranger District is now part of the Lake Tahoe Basin Management Unit. Part of my duties as a "JF", involved the management of the Desolation Wilderness.

[10] Irwin Bosworth was the father of our 15th Chief, Dale Bosworth (2001 – 2007).

said, "…yes sir", wondering what he meant by the "short-go." Later, I would find out the phrase was a rodeo term meaning the final go-around or the finals of a competition. I got the message. The expectations were very clear.

My mother, now a personnel clerk for the El Dorado National Forest, always told me I would like the Forest Service. She was right.

Over the last four decades I have watched and participated with the agency in almost a continual *transformational campaign*, striving to stay contemporary in addressing conservation issues. It has been a magnificent ride for me. The era of human domination has tested the Forest Service and will continue to do so as we move deeper into the 21st Century.

When asked about the agency, I provide the three brief statements: "…I like being employed. It is an honor to work for the Department of Agriculture. And, I work for the greatest organization in the world, the USDA Forest Service."

The Forest Service Mission. Since the beginning of the Forest Service, our mission has been remarkably clear – conservation of our forest and rangeland resources for most of the people for the long haul. Taken directly from our website, the mission statement of the Forest Service is "…to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations." The mission statement is characterized by the motto: "…caring for the land and serving people." Over the years, we have strengthened the mission statement with new words, but generally our mission has been remarkably stable and clear.

> "…To sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations."
>
> Mission Statement of the USDA Forest Service

What has changed is the way we carry out the mission to better address the contemporary conservation challenges that have evolved. Our scope has expanded along the rural to urban land gradient. We take more of an "all-lands" approach than before. We are trying to be more inclusive as we strive to attract a more representative workforce. And to be fair, our ability – actually, our *flexibility* – has been questioned. There are times when we seem to be just a bit stodgy in both our *influence* and *deployment* strategies. Oftentimes this gets cast as being confused about the mission. For me, this is not accurate. When we become confused, it is typically over implementation tactics and being too cautious; not program direction.

To help deploy our mission, we have a clear vision; guiding principles; and, several current points of focus. For example, our vision calls for us to be *the* recognized leader in land conservation and public service. We have a "Shared Intention Statement" for inclusivity. We desire a workforce that is representative of those we serve and excels in helping the Forest Service meet its contemporary conservation challenges.

"…To create a culture of inclusion that awakens and strengthens all people's connections to the land."

Shared Intention Statement for Diversity and Inclusion, Forest Service, February 27, 2013

Our mission has foundational guiding principles that include a science-based, ecological approach to stewardship across all lands along a complex rural to urban land gradient. We fully understand the power of partnerships; we cannot accomplish our mission alone.

When the "forest reserves" were first set aside, much of the land had been abused. In fact, for the eastern part of the country some called many of these landscapes "…the lands nobody wanted." After decades of management, protection and wise use, these lands have now become productive, healthy "…jewels of envy." This could not have happened without the Forest Service.

However, contemporary conservation issues continue to emerge and our ability and willingness to be optimally adaptive is challenged. In recent years, the issue of Urban Natural Resources Stewardship, for example, has surfaced as a dominant need for a stronger Forest Service role. Since the agency still has a dominant rural culture, I think it would be safe to say that our flexibility to emphasize the urban portion of the rural to urban land gradient is, well, not so flexible.

A New *Forestry*: Between 1989 and 2001, just twelve years, the Forest Service changed dramatically in the way it carried out its mission. In 1989, a concept of "new perspectives" or "new forestry" was launched following a critical meeting – it was deemed "…the walk in the woods" – with our 12th Chief, F. Dale Robertson and Senator David Pryor of Arkansas regarding the Ouachita National Forest. Simply put, many thought we were cutting too much wood on this and the other National Forests; clear-cutting. At the time the Forest Service was harvesting about 11 billion board feet annually, through "traditional forestry." In 1992, "New Perspectives" was launched – an approach that looked at "ecosystem management and sustainability" and placed timber management in line with other forest uses.

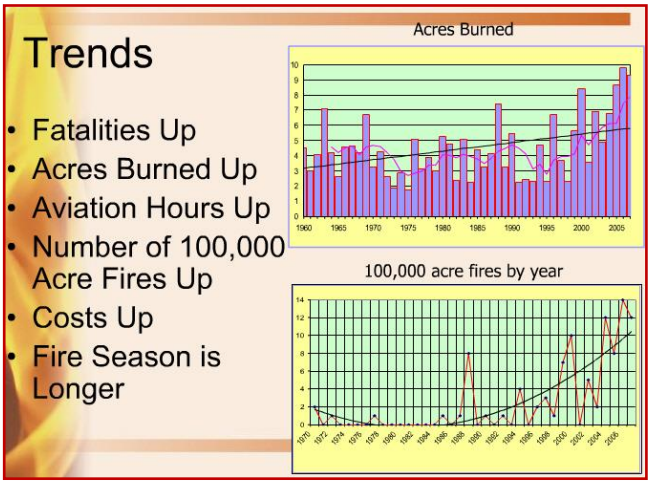
F. Dale Robertson
12th Chief (1987-1993)

Senator David Pryor
From Arkansas

> "…New Perspectives was about institutional change in the Forest Service. Through on-the-ground demonstrations, problem-focused research, and constituent engagement, New Perspectives was designed to stimulate imitative and innovation."
>
> Pinchot Institute for Conservation, Volume 11, No. 1, 1994

Also during this time, we were experiencing an unprecedented rate of "catastrophic wildfires" leading way to a report entitled, "Managing the Impacts of Wildfires On Communities and the Environment" -- the *National Fire Plan*.[11] A critical feature of the *National Fire Plan* was "hazardous fuels reduction." A cornerstone to a successful hazardous fuels reduction program was the expansion and new development of high value markets from this low value wood. We thought then (and now) that by creating cost-effective ways to enable enough hazardous fuels to be removed from America's forests, wildfires would remain smaller and begin again to be a tool for improved forest health as opposed to destructive behemoths that destroy lives, communities and landscapes.

By most standards, the results of the *National Fire Plan* have not materialized as planned; fires and suppression costs are higher than ever before. Part of the problem is, indeed a changing climate. When the original report was drafted, climate change was not considered as it should have been. Thus, long-term, severe weather patterns have made much of America's forests vulnerable to disturbances with longer, more intense fire seasons. And, the continued expansion of the "Wildland-Urban Interface", whereby development and fire prone forests come face to face, make protecting lives and property from wildfires a very dangerous and expensive proposition.



In 2001, the fire budget represented about 22 percent of the total Forest Service budget. It is now about one-half the total budget and increasing. More and more funds are being diverted from other uses to fight fires.[12] Fire management in this century has replaced timber management of the 1980's as the dominate focus of the agency.

[11] Prepared jointly by the Departments of Agriculture and Interior, March 2001. Michael T. Rains was the primary author for the USDA portion of the report.

[12] Additional provisions in the "Consolidated Appropriations Act of 2014" strive to reduce this transfer by creating an emergency fund. None-the-less, fire suppression today is a very costly enterprise often times exceeding $1 million per hour.

In the late 1990's, the General Accounting Office (GAO) concluded that "the most extensive and serious problem related to the health of forests in the interior West is the over-accumulation of vegetation, which has caused an increasing number of large, intense, uncontrollable, and catastrophically destructive wildfires." In developing the *National Fire Plan* in 2001, about $850 million annually was thought to be required to more effectively address the issue of hazardous fuels removal. More recently (2013), the GAO concluded it would take about $69 billion over a 16 year period -- $4.3 billion each year. Relying on taxpayer dollars, the Forest Service has only managed an average of about $300 million annually for hazardous fuels treatment.

The cost estimations for reducing hazardous fuels vary. What does not vary is the fact that fire suppression costs are increasing and the impacts are more severe. If we want a future where wildfires are not destructive behemoths, we must create new large scale, markets for forest biomass uses. In terms of the future, this has to be a "dominating common thread" of the Forest Service mission, lest we become the USDA *Fire* Service. Accelerated forest restoration could be the answer if we concentrate on high value, high volume markets from low value wood, while keeping an eye on the ultimate "brass ring": healthy, sustainable trees, forests and forest ecosystems that are more resilient to disturbances that are, in part, caused by intense human activity.

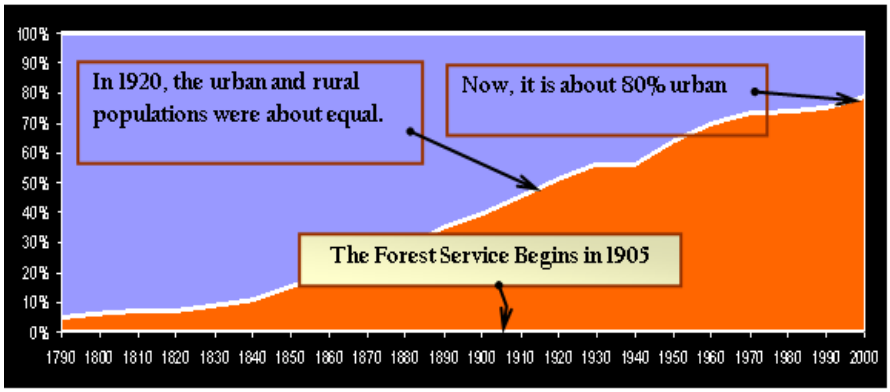
A Paradox Exists: Even with the understanding of some shortfalls, by most standards, the Forest Service is a premier conservation agency. We hold important keys to sustaining our planet Earth (clean air and water, conserving natural resources). Yet, according to a broad range of authors, "…our work (protecting the environment) generally does not directly challenge major economic or material concerns." We seem to lack relevancy in many minds to be truly competitive. While I do not agree with this, many who "decide" do agree. How could keeping our air clean, for example, *not be* completely relevant, I ask rhetorically? In simple terms, our work holds a key to America's economic and social vibrancy. Yet, much of what we do and who we are is not viewed as mainstream and essential.

The issue, it seems to me, is a profound lack of understanding by the general population about our environment, its condition, and what we as humans do to harm or help its condition. The situation (lack of awareness) may be more acute now than at any time I can recall. Author Jay Gould says, "…you do not fight for what you do not love." I think it is even more basic. That is, you do not fight for what you do not *know*. We could alter the paradox in our next 100 years (actually by the next decade) by reaching out more and improving the nation's environmental literacy. In other words, emphasize inclusion *and* education – the two gems that have surfaced repeatedly during most of my career in government and especially during our current *transformative campaign.*

Thus, when we think of a Forest Service future, we must include an aggressive component to help create an informed citizenry about our natural resources and the impact these resources have on our lives and how *we* affect the health and sustainability

of these natural resources. As Pinchot concluded, "…natural resources must be about us from our infancy or we cannot live at all."[13]

Conservation Along the Urban Land Gradient. The Forest Service has a direct and indirect role on about 80 percent of our nation's forests: 885 million acres, including 138 million acres[14] of urban forests where most Americans live.



Urban and Rural Population in the United States (1790 to 2000)

As "Chief Forester for America's Forests", the Chief of the Forest Service has a conservation and restoration responsibility for a complex rural-to-urban land gradient to help ensure that forested landscapes, including those in urban areas, are healthy, sustainable, and provide the required green infrastructure that effectively links environmental health with community resiliency and stability. Today, 83 percent of our population lives in cities and towns. Fully one-fourth of the nation's counties are urbanized. How federal, state, and local governments and a wide range of other partnerships band together to ensure the proper care of America's urban natural resources is a fundamental part of improving people's lives. The slogan that illustrates the mission of the Forest Service is: "caring for the land and serving people." As we face new conservation demands along the entire rural-to-urban land gradient, it may be more fitting now to think of this slogan as "caring for the land and serving people ***where they live***." As we look ahead, caring for America's urban natural resources – Urban Natural Resources Stewardship (UNRS) – must be a signature piece of our program direction. In simple terms, the Forest Service needs to be more attentive to the urban side of the rural to urban land gradient. The recent Forest Service Chiefs, perhaps especially, Tom Tidwell and Abigail "Gail" Kimbell, have become strong advocates of UNRS.

Abigail R. Kimbell
16th Chief (2007-2009)

[13] Pinchot, Gifford. *Breaking New Ground*. 1947.
[14] Information provided by David Nowak, Northern Research Station, USDA Forest Service, March 2014.

The Mission Areas. The Forest Service has a comprehensive stewardship role -- in collaboration with others -- for the management, protection, and use on all forest and rangelands. We recognize that this role extends along a complex rural-to-urban land gradient, yet we struggle at times to efficiently fulfill this role. Earlier I used the term *stodgy*. If this is true – that the Agency is a bit stodgy -- then why? I think, in part, it is due to the Mission Areas designations; that is, the National Forest System; Research and Development; State and Private Forestry. Fundamentally, I think we may get in our own way. This has prompted me to conclude that the Mission Area designations may prove to be the demise of our ability to effectively address conservation issues now and ahead. I contend the Mission Areas block our way of being *Corporate*; being one cohesive organization with a common purpose. In my view, the designations of Mission Area perpetuate "turf guarding." At one time, the designations were helpful. Now, I am not so sure.

> "…the mission area designations may prove to be the demise of the Forest Service to effectively address the contemporary conservation issues of the 21st Century."
>
> Michael T. Rains

For example, the Forest Service is now establishing a network of urban field stations to bring forest stewardship capacity closer to where people live. From the iconic Baltimore Ecosystem Study, to a research work unit just outside of Chicago, to a laboratory at Ft. Totten (Queens, New York City), to the new Philadelphia Field Station, and other areas including San Juan, Los Angeles, and Seattle, we are bringing science-based information to city governments and other practitioners so they can effectively balance the health and sustainability of their urban forests with community needs. When city leaders, for example, see these field stations in action, they think only (and correctly so) of *one* Forest Service – not State and Private Forestry; Research and Development; or, the National Forest System.

Yet, at times when we try to be most creative in our deployment of this work, it is not uncommon for someone within the agency to pop up and say, "…hey, that's our job." Sometimes the stance from a particular Mission Area is so aggressive that assistance is halted altogether, apparently forgetting that our role is ultimately public service.

I have seen this happen from time to time over the years but much more often in the past decade. Often times, this issue gets embroiled in a "federal role" question. For example, should the core business of the Forest Service be limited to the management of the National Forests? This was discussed aggressively in 1995 and again in a less formal way in 2011, but I suspect the notion is always just below the surface.

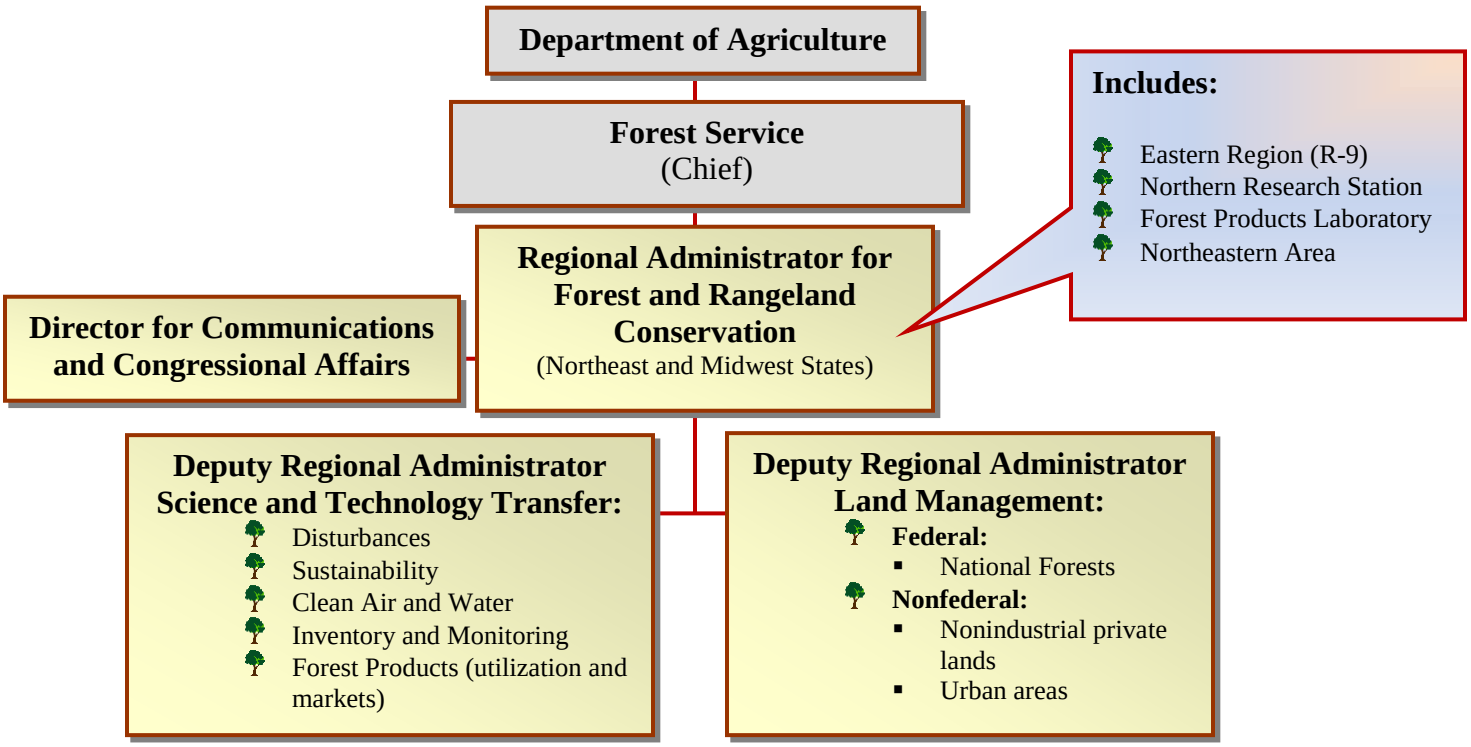
There is little doubt that we are a "National Forest System-Centric" organization. Yet, our role is clearly much broader. But, when constraints surface – often times around budgets -- it is not atypical (albeit somewhat counterintuitive) for the agency to group itself into the traditional Mission Areas *v*. a stronger *corporate* stance.

There is one clear point, however. At the end of the day, most people know us only as the "Forest Service," if they know us at all. Thus, if we want to be more competitive in addressing the contemporary conservation challenges ahead, like the challenges associated with Urban Natural Resources Stewardship and accelerated forest restoration, for example, we must improve our ability to act as *one* Forest Service *v.* a series of independent, inconsistent units.

Perhaps one more example of how the Mission Area designations may stand in the way of *corporate* behavior: the Forest Inventory and Analysis (FIA) program. Currently the FIA program is viewed as a Research and Development program for the states. Actually, it is the "forest census" program for America's Chief Forester – the Forest Service Chief. Accordingly, there is perhaps no other program that is more corporate in nature in terms of utility for forest managers than the FIA program. Yet, because of our more narrowly defined view of FIA, this long term forest census and its ultimate promise is never fully realized.

There are more examples, of course, about corporate behavior, or the lack thereof. The primary point is that in order to more optimally carry out the mission of the Forest Service, a cohesive, comprehensive approach works better than a series of solid, well-intended independent actions.

More Optimal Organization. Not too long ago, I was informally asked in my role as Station Director about a more *optimal* organizational structure for the Forest Service in the Northeast and Midwest. I immediately recited my concern about the Mission Area designations and the lack of conservation decision-making flexibility and came up with an option: A "Regional Administrator for Forest and Rangeland Conservation." Candidly, I was thinking of the model from the Environmental Protection Agency that I become familiar with while involved in the Urban Waters Federal Partnership. The organization might look like the following, using the twenty-state area of the northeast and Midwest as the example:



The benefits of such an organization seem apparent to me; exciting and full of promise. The dominant feature is a *corporate* Forest Service that will emerge bolstered by a consistent, powerful voice of one overall leader *v.* separate administrative units. Program direction immediately becomes more cohesive, consistent and comprehensive (C^3); let me call this the C^3 Model. You do not need to close down units with the C^3 Model. However, combining some functions does become easier and the promise of immediate and future savings while sustaining *and* improving services becomes very real.

The current Forest Service organization, largely unchanged since the early part of the 20th Century, is quite frankly, outdated. In order to be *brilliantly* competitive for the next century, we do need to make a significant adjustment. I understand the C^3 Model may be too dramatic an adjustment for the agency. But I am pretty sure that we will not fulfill the promise of being the optimal conservation leader for our country's 21st Century if we

function as we currently do. I am not sure that individual will (*v.* structural change) can be enough of an adjustment.

Actually, if we think about it, we may not be too far from this organizational configuration right now. In the west, for example, the National Forest System and State and Private Forestry are under one "Regional Administrator" – the Regional Forester. In the northeast and Midwest, all the science activities are under one leader. With some modest adjustments, a "Regional Administrator for Conservation" could be pilot tested to ensure effective program delivery. It seems sensible that the current "Regional Forester" configuration would become the *Administrator*. Perhaps someday, maybe taking advantage of a vacancy, two Regions could be administered by one executive (read, a "Regional Administrator"). Again, you do not have to close offices; no need. The promise of success is quite high. Public service should be better. Savings will be real. *One*, stronger Forest Service will emerge. The promise of this could be fun to envision.

Adjusting Is Nothing New. Earlier, I stated that during my time with the Forest Service, I have watched and participated with the agency in almost a continual *transformational campaign.* To be clear, adjusting is nothing new. In the early 1990's, for example, we had "Reinvention." In 2002 we were creating "efficiency plans" within the notion of "workforce restructuring." Over the last two years or so the Forest Service has been involved in "Cultural Transformation." My key point is that the Forest Service is always adjusting. That's good. Now, however, I think we may need something much more *transformative* to enable us to go from "good to great." We have a population makeup like never before and their demands for services are equally diverse. We have a changing climate and forest species are changing and moving. While our mission can be the same, the way we address the mission needs to be transformative. Perhaps the "Regional Administrator" might be one of those "transformative" actions. Emphasizing Urban Natural Resources Management could be another. *Reinventing* our approach to working with people who "decide" (*v.* people who "play") could be another. Let me explain the latter.

Working More With Those That *Decide*. Early in my Forest Service career, I took a class from Dr. Paul Hersey, who along with Dr. Ken Blanchard developed the theory of "situational leadership."[15] During that time, Dr. Hersey talked about the effectiveness of working *more* with people who decide your fate as opposed to those who do not. He used the phrase "…people who "decide" *v.* people who "play." It is my opinion, especially during more recent times, the Forest Service has tended to work more with those that "play." Why? Because it is easier; more comfortable. I have to be careful here because people can become easily offended by the phrase and words.

[15] Hersey, P. and Blanchard, K. H. *Management of Organizational Behavior – Utilizing Human Resources.* 1969.

The word "decide" tends to be linked with "influence" or "leadership." The word "play" can be linked with "follow" or "deploy." We all like to be with people that are like us. And, we tend to "talk to each other"; we *play*. More difficult work comes with *influencing* and working with critics who can make or break us with their support, or lack thereof. Constantly working or being associated with those that do not "decide" still takes time and the gains are only marginal. People who "decide" can also be your friends. So this is not a proposition of ignoring your friends; of course not. This is a proposition about balance – maximizing your time wisely by making real, significant differences.

To be more effective in the 21st Century, the Forest Service needs to embrace the notion of working *more* with people who can shape its future.

Our Core Beliefs and Values. Within the overall framework of "Cultural Transformation," the Forest Service embarked on several "Field Leadership Forums" as we develop a new, more robust "Community of Leaders." Part of this effort is attempting to address "mission clarity," albeit I personally believe our mission is quite clear. Our problem seems to be the inability – as one leader so aptly said – "…to hit the refresh button." This is very consistent with my beliefs. We know what to do, but sometimes our tentative or cautious behavior makes us appear to be *stodgy*.

Perhaps we need to keep our set of core beliefs and values in front of all the employees so we can remain more contemporary. For example, as an expression of our relationship with the land; communities we serve; and, the people we employ:

- We exist to serve
- We cannot succeed alone

Land

- Sustaining our land comes first
- Global connections matter

Communities

- Our people make us great.
- Safety and well-being is a shared responsibility.
- Learning and improving are essential.
- Good conduct and professional behavior is always expected.
- Informed choices make better choices.

Our People

The Chief's Prerogative. Even with core values and beliefs and a clear mission statement, the horizon can become hazy when a Chief exercises his or her prerogative to *augment* the current program direction to achieve the basic mission. To be clear, the Chief's right to place his or her imprimatur on the basic agency mission is altogether fitting. We simply need to recognize that the mission is not changing. What is changing is the work *focus* that the Chief deems appropriate to help advance the mission. **Simply put:** the Chief's prerogative does not *change* the mission.

For example, the 15th Chief, Dale Bosworth declared that the Forest Service under his leadership should concentrate on areas that significantly threaten achieving long-term outcomes. Chief Bosworth termed these the "…four threats."

Dale N. Bosworth
15th Chief (2001-2007)

1. Uncontrolled fires.
2. Destructive invasive species.
3. Irresponsible Use of the National Forests (with an immediate emphasis of controlling the use of off-highway vehicles).
4. Loss of open space.

Chief Tom Tidwell targeted "…five focus points for the future."

Thomas Tidwell
17th Chief (2009 - Present)

1. Enhanced safety.
2. Creating a culture of inclusion.
3. Forest restoration.
4. Fire management.
5. Community engagement.

Additionally, some may recall the "…natural resources agenda" from our 14th Chief, Mike Dombeck and his focus:

Michael P. Dombeck
14th Chief (1997-2001)

1. Watershed Health and Restoration.
2. Development of a Long-Term Forest Roads Policy.
3. Sustainable Forest Management.
4. Recreation.

The key point is that our mission is timeless and all the Forest Service Chiefs strive to target work that they believe will enable the agency to stay more contemporary; sometimes they succeed, sometimes they do not.

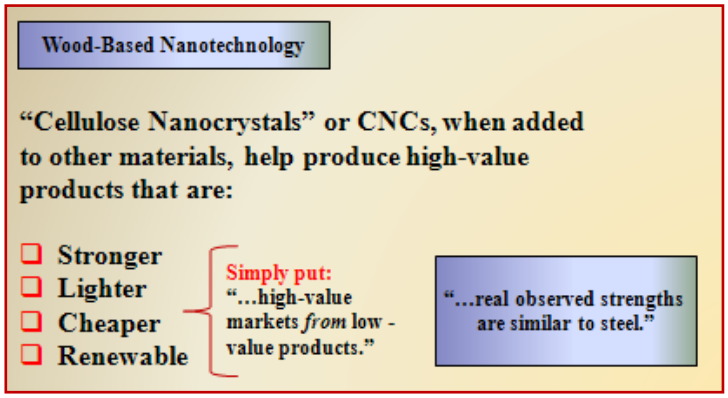
A Common Thread. As we look ahead, perhaps it is prudent to look back. The three Chiefs of the Forest Service mentioned above have all mentioned forest restoration in their prerogatives. Chief Bosworth linked his forest restoration concern primarily to "uncontrolled fires."

Today, we grow about twice as much wood as we use from America's forests. Our forests are getting over-crowded with hazardous fuels. Hazardous fuels lead to catastrophic fires. We have seen the devastating impacts of these fires again this summer with lives lost; homes destroyed; and, millions of acres blackened. The cost of fighting these catastrophic wildfires is enormous -- sometimes exceeding $1 million per hour. We

approached $3 billion in fire suppression costs for the 2013 fire season alone; expenditures in 2014 are projected to be as high; perhaps higher. Finding high value, high-volume economically-viable uses for forest biomass from hazardous fuels reduction and forest restoration activities has been identified by Forest Service land managers as one of the most important barriers that must be overcome as well as the need for a diverse array of strategies for promoting the use of woody biomass.[16]

Dr. Alan Rudie, FPL, showing USDA Secretary Tom Vilsack nanocellulose crystals produced at the pilot plant in Madison, WI

Wood-based nanotechnology, for example, offers a market-based solution to this wide-spread catastrophic fire loss. Wood-based nanomaterials, when used as an additive to a wide-range of commercial products (car bodies; concrete; laptops; body armor; containers; etc.), makes these products lighter and stronger. It is estimated that a strong, *well-established* program in wood-based nanotechnology could create high value markets from low value wood (hazardous fuels) that could help reasonably restore 5-7 million forested-acres annually, although a "moderate to high" rate of forest restoration up to 12 million acres annually from all ownerships could be attained thereby reducing future fire suppression costs by as much as 12-15 percent. In some measured ways, woody biomass for energy also offers some higher value market opportunities. The initial work in Green Building Construction is another example that could help create a market-based incentive to remove "crummy, rotten wood" into higher value market economic streams. Enhanced skills in wood-based market expansion and development are needed within the agency to make the "formula for success" (low value wood being processed and sold for higher value products that create new jobs and enhance the economy) a reality.



In 1979, the Forest Service began a major initiative in the "improved utilization of wood." This included advancing some of the items described above, especially "wood for energy" and creating new markets and expanding others. The emphasis did not last.

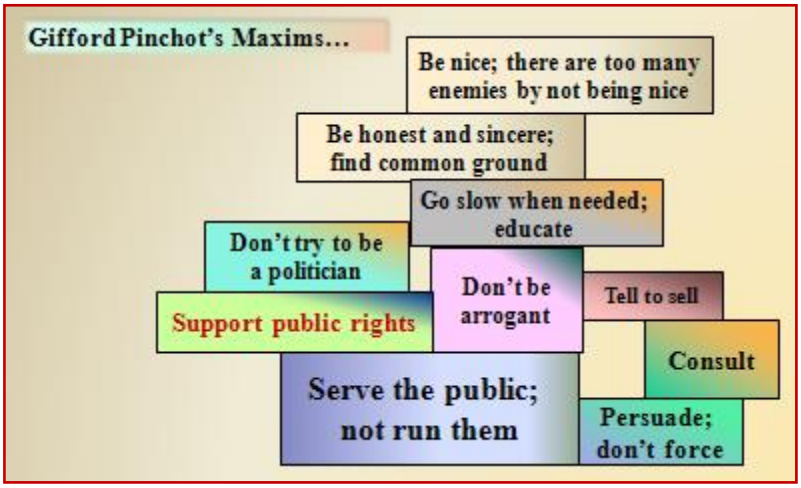
"…Wood-based nanotechnology -- by creating high value, high-volume uses -- could create cost-effective ways to enable enough hazardous fuels to be removed from America's forests so wildfires remain smaller and begin again to be a tool for improved forest health as opposed to destructive behemoths that destroy lives, communities and landscapes."

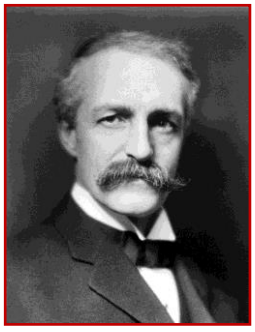
[16] Sundstrom, Shiloh; Nielsen-Pincus, Max; Moseley, Cassandra; and McCaffery, Sarah; "Woody Biomass Use Trends, Barriers, and Strategies: Perspectives of US Forest Service Mangers"; Journal of Forestry, January/February 2012; p. 16 – 24.

In the mid-1990's the agency advanced "rural development through forestry" – another way to address the conundrum of reducing low value wood from our forests. Except for a small provision whereby limited funds from hazardous fuels treatment are directed to grants for "woody biomass for energy", this effort has also fizzled.

It seems we cannot make this type of essential work – reducing low value wood from our forests at a pace that makes a real difference to accelerate forest restoration – a "campaign of our campaign."[17] Simply put, we tend to be impatient and perhaps give up too easily. Never-the-less, we need again to make accelerated forest restoration through the reduction of low value wood a "campaign of our campaign" for the future. New efforts from the old "improved utilization of wood" program would be so relevant during the *Anthropocene* and provide strength to a common thread. In simple terms: we need to emphasize a wide-range of "biomass uses."

Gifford's Maxims. The first "Chief Forester for America's Forests", Gifford Pinchot, continues today to be a mythical figure. Chief Pinchot instinctively understood the role of the Forest Service and landscape scale conservation. He developed maxims on how a *forester* should behave. Today, these maxims, summarized in my own words, are basic for all our employees and should be part of our contemporary thinking.





Gifford Pinchot
1st Chief (1905-1910)

As we look ahead, holding onto these types of core values and beliefs will be fundamental to our continued success as we go from "good to great."

The Next 100 Years. It is 2014 and the Forest Service has existed for 109 years (1905 – 2014). The agency is recognized as a leader in the world of conservation, but we

[17] The language we use is so important. The goal is "…Through restorative actions, we will help create sustainable, productive and resilient forests so the linkage between environmental health and community stability can be more fully realized ."

may not be that *recognizable*, overall. We have a very stable mission that still can be contemporary if we can be just a little less *stodgy* in our tactics and think more in terms of connected work along complex rural to urban land gradient. Our footprint is and should continue to be planet Earth. So, what do we need to do during the *Anthropocene* to be *brilliantly* competitive in addressing the contemporary conservation challenges now and ahead? I would like to focus on "…a solid seven."

"…Look to the vision and follow the mission. We know what to do. We feel pretty good. Sometimes we just need to know how we look. The Chief Forester for America's Forests can be a great mirror."

1. **Stay the course with both our current mission and statement.** We do have a clear, timeless mission and mission statement. We should leave it alone: *To sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations*. What we do need to do, however, is become less concerned about hitting the "refresh button"[18] to remain contemporary. Part of this "refreshing" is the ability and willingness to more easily adapt to the "Chief's Prerogatives", whereby the Chief places his or her imprimatur on the basic agency mission to augment, not to change the mission direction. We have a tendency of late to be too cautious, creating a somewhat *stodgy* appearance, if not an actual reputation. We need to be able to "hit the refresh button" without being so tentative.

2. **Adjust the slogan.** We *do* love our current slogan of "…caring for the land and serving people." However, as the role of urban stewardship continues to grow, I enjoy adding "*where they live*" to the end of the existing slogan: "…caring for the land and serving people, ***where they live***." I doubt we will make this change because we are such traditionalists, but the adjustment does react to a more contemporary time. It is fun to think about and it would show a wider range of people about the Forest Service intentions to help improve their lives.

3. **Create a culture of inclusion.** Inclusion is a belief system shared by all within the agency whereby all employees feel welcome, valued and their contributions are fully utilized to advance the mission of the organization. The agency is working hard to "create a culture of inclusion" and this is just the right thing to do. Advancing our *Shared Intention Statement* ("…to create a culture of inclusion that awakens and strengthens all people's connections to the land") will be fundamental to our success. An inclusive culture will become a magnet for a more representative workforce that will enhance our abilities within a wide-range of diverse landscapes.

[18] During the Field Leadership Forum for the Eastern Region; Northeastern Area; Northern Research Station; and, the Forest Products Laboratory on May 6-8, 2013 in Madison, WI, the term "refresh" button" was used often during discussions about "mission clarity" and our ability and willingness to stay contemporary in the deployment of our mission.

4. **Be more responsive to the complex rural to urban land gradient.** In the early part of our history, we were "rural oriented." When the Forest Service was created in 1905, only 13 cities worldwide had populations of one million people or more. Eighty years later, 230 cities had one million plus populations. In the new millennium, it is projected there will be over 400 cities with a population of one million people and 26 mega-cities with populations of over 10 million. Looking nationally, our population was about 50 percent urban in 1920; today 83 percent of our people live in cities and towns. Simply put, this is the first century in our history that the majority of humans live in urban areas. This fact is particularly significant, where the demand for natural resources and green space is high. If we take better care of what we have across all landscapes, the benefits from our natural resources will extend to everyone across a broad spectrum of physical, social and economic conditions. This approach embodies the notion of *"All Lands, All People"* and represents an important venue to create an informed citizenry about natural resources. Accordingly, in order for the Forest Service to be more mainstream, working more on the urban side of the "rural to urban land gradient" in an enhanced, cohesive way will be important.

> "..Urban trees are the hardest working trees in America."
>
> Tom Tidwell, Chief, USDA Forest Service

5. **Adjust the Mission Area structure.** A more cohesive, consistent, and comprehensive Forest Service would be better able to meet 21st century challenges. Currently, we may not be too far from achieving this. With some measured adjustments, we could make significant strides in creating an organizational configuration that better enables a "one Forest Service" to emerge. Oftentimes, the Mission Areas block our way of being *Corporate*; that is, being one cohesive organization with a common purpose. Creating a field organization with a "Regional Administrator for Forest and Rangeland Conservation" would enable program direction to immediately become more cohesive, consistent and comprehensive (C^3); let me call this the C^3 Model. You do not need to close down units with the C^3 Model. However, combining appropriate activities does become much easier and the promise of immediate and future savings while sustaining *and* improving services becomes very real.

6. **Create resilient forests through restorative actions.** Recent Chiefs of the Forest Service have all mentioned forest restoration in their prerogatives. With the current rate of growth and impacts such as a changing climate, our forests along the rural to urban land gradient are getting distressed and less healthy. This creates conditions prone to disturbances like catastrophic wildfires. By creating high value, high-volume uses, we can create cost-effective ways to enable enough hazardous fuels to be removed from America's forests so wildfires remain smaller and begin again to be a tool for improved forest health as opposed to destructive behemoths that destroy lives, communities and landscapes. We need to make

> "…Through restorative actions, we will help create sustainable, productive and resilient forests so the linkage between environmental health and community stability can be more fully realized ."

creating more resilient forests through a wide range of restorative actions -- like the reduction of low value wood -- a "campaign of our campaign" for the future. To make the "formula for success" (low value wood being processed and sold for higher value products that create new jobs and enhance the economy) a reality will require enhanced skills in wood-based market expansion and development and targeted resources in science-based technology development and transfer. Of course, restorative actions include more than improving the condition of fire prone areas. We have to view our work in terms of the entire ecosystem so entire landscapes become more productive *and* resilient to disturbances so the linkage between environmental health and community stability is assured.

7. ***Influence* more, play less.** To be more effective in the 21st Century, the Forest Service needs to work *more* with those who can shape our future; "…people who "decide" *v.* people who "play." It is my opinion, especially during more recent times, the Forest Service has tended to work more with those that "play." This is a proposition about balance – maximizing time wisely by making real, significant differences.

Appendix A.1. The Mission, Vision and Guiding Principles of the USDA Forest Service

The Mission Statement. **"…**To sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations."

The Mission Slogan. "…Caring for the land and serving people."

The Mission Includes. The mission of the USDA Forest Service includes:

- Advocating a conservation ethic.
- Listening to people and being responsive.
- Embracing the multiple-use concept.
- Assisting states to help them in the stewardship of nonfederal forestlands.
- Assisting cities and towns to improve their natural resources.
- Providing international assistance and technical exchanges.
- Strengthening local economic conditions.
- Developing and using good science.
- Helping those in need.

Vision. The USDA Forest Service will strive to be:

- Recognized worldwide as a conservation leader.
- Multicultural and diverse.
- Efficient and productive.

Guiding Principles. To realize its mission and vision, the USDA Forest Service is guided by the following principles:

1. Use ecological approaches to land stewardship.
2. Use the best science available in helping make decisions.
3. Be good neighbors; respect private property rights.
4. Strive for quality and excellence, always.
5. Build partnerships.
6. Collaborate.
7. Build trust and share.
8. Value a representative organization.
9. Maintain high professional and ethical standards.
10. Be responsible and accountable.
11. Accept conflict; deal with it professionally.