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Jack Ward Thomas

Chief, USDA Forest Service, Washington DC

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U.S.D.A. Forest Service Directions¹

Jack Ward Thomas, Chief

U.S.D.A. Forest Service
P.O. Box 96090
Washington, D.C. 20090-6090

Abstract

The Forest Service has evolved to a new land ethic: preservation of the function, health, and productivity of ecosystems, including the production of goods and services for people. This evolution is the result of several converging streams including advances in scientific technology, emerging political directions, and realization that problems need to be addressed at the outset.

A number of challenges are facing the move to ecosystem management (EM) including a number of statutory changes or clarifications, declining budgets and staff, and the need to work more closely with the other agencies.

The Forest Service intends to play a leadership role in EM. The decision space for any management approach is bounded by science, political acceptability, social consequences, and economic feasibility. Although the Service has sought public input in the past under the National Forest Management Act, the effort has not been satisfactory. EM requires more collaboration between other agencies, universities, organizations, and interest groups.

We must continue to advance our science. Land managers are being directed to understand the structure, function, and variability of systems to be managed, and their response to use. We have no option but to move forward with natural-resources exploitation.

As government is being reinvented, we are reinventing the Forest Service including implementation of ecosystem management. We need to get away from managing individual resources to focusing on whole systems. This will require more budgetary flexibility and effective monitoring to evaluate management. We need to strengthen the Service's research arm and upgrade the educational level of our personnel. We need to process and assimilate new information more efficiently, move it quickly into operations, and we will be hiring people who specialize in those functions.

We need to strengthen collaboration with our sister agencies and our many constituencies. We recognize the sensitivity of the property-rights issue and seek no additional authority over private property. Our objective is to provide technical assistance to federal and state land managers and nonindustrial private owners. Our goal is leadership into the 21st century in effective resource management.

INTRODUCTION

Since I have taken on this new job, I find that I don't have time to write my own speeches, and I just read the one they wrote for me, and I don't like it. So some of what I will say today will be my speech, and some of it will be saying what I want. In terms of ecosystem management, I look on this as the next step in an evolutionary process. Many people want to look at it as revolutionary. Actually I think it's quite evolutionary. It is an evolving concept. I don't think it has an exact definition nor does it have a set of rules. I hope it never emerges as a set of rules.

A LAND ETHIC FOR THE FOREST SERVICE

I feel that we have finally come to a point where, at least with the Forest Service, our next statement of how we operate and who we are will for the first time be a statement of a land ethic. And that land ethic will be the objective of our management, which is the preservation of function, health,

and productivity of ecosystems. That's been a long time in evolution, but I think now is the time that we have evolved to the point where we can state that, not only as an object, but as an ethic.

So is it that complex? Not to me. Ecosystem management merely says that first in our management we take care of the system so it will continue to be productive over much, much longer periods of time than we have conceived of in the past. The next is, "Well, what do you mean by that?" The reply will be "Well, we want to maintain it in a healthy condition." Well, what does that mean? That means being able to absorb insult or shock because we have preserved the parts of that system whereby it can return time after time to a productive state. Not overwhelmingly complicated.

Healthy systems are productive, and that includes production of goods and services for people. We need to be careful with the definition of health. A large part of the definition must include healthy for what? Healthy, in many cases, will require definition.

¹Editorial note: This is a transcription, slightly edited, from the recording of Dr. Thomas's presentation.

But somebody says, "Well, this is the latest buzzword." You see, I don't think that New Perspectives was a buzzword. I think that in its simplest context it was merely a permission to people in natural resources to think about it. Just take a new perspective. Is everything we are doing correct? Is it right? Are our paradigms right? Think about it. It wasn't a set of rules.

And in thinking about it we have come down to ecosystem management now. I think we have been forced to it by a number of streams that have come together at this point. One stream is that we've been talking about it, and if you go back and read you will find that we've done so for a very, very long time, perhaps centuries. Certainly we talked about it in those terms in the thirties.

It has almost been like "Goddard in the Rockets." Goddard had the mathematical equations to put somebody on the moon but he didn't have the technology to do it. He didn't have the boosters. Then when he got the boosters, he didn't have the computational capability to compute rapidly enough to make course changes. Well essentially the science in ecology and biology is now doubling at a much more rapid pace. Our ability in geographic information systems, in other mechanisms for storing and handling data, our ability to look at very large pieces of ground at the same time, and our ability to manipulate and project into the future, suddenly all are coming together at a point where we need to do this.

Politically, the time has come to do it. In this country, you know, we've always known everything is connected. There's no free lunch. Suddenly in our generation, now that's becoming very, very obvious. Probably in the United States because of our wealth, it's been forced on us in a strange way, through the application of the Endangered Species Act. Most people who think about it should read the first paragraph of the Endangered Species Act. "The purpose of this act is the preservation of the ecosystem upon which the threatened or endangered depends."

I think the experiences that we've been through in the Pacific Northwest have shown us. We initially set out after a great deal of reluctance to deal with the Northern Spotted Owl with a team that worked on what was called the "Interagency Scientific Committee Plan." We thoroughly believed at that time that we would do our job and either retire or spend the rest of our lives in Pago Pago. We said, "If we are going to do this, let's deal with the real question," which is the old-growth ecosystem or that aspect of the overall ecosystem. And they said, "No, no let's deal with exactly what the law prescribes, and that's the Northern Spotted Owl."

After we finished that approach, it became very clear, very quickly, at least to some people in Congress that it was a larger question. They brought back a group called, "the Gang of Four." Some people referred to us as the four horsemen of the apocalypse, but nonetheless, Congress began to say at that point, "Tell me about the system. We can't keep doing this, talk about the system." And as we started out the door congressmen said, "Oh, and by the way, don't let us get caught by some damned fish." Prophetic! Well, we came back with a number of options. But it still was not time to make a decision. Back to the courts. Back one more time. And the President of the United States—a new president gets elected—says, "OK, we are going to come to a conclusion." And now we do have an ecosystem strategy in place.

One thing to be learned out of that entire process is that problems ignored and responsibility delayed will always end up with a worse, tighter economic and social situation. If we have learned anything, it is that we should not delay in addressing tough questions, because the questions just get tougher.

We will see where we go with that one, but basically in the end we want to look at ecosystems in the most pragmatic sense. You could look at them if you were a pragmatist and you could say ecosystems are the geese that lay golden eggs. The first rule of continuing the production of golden eggs is keep the goose happy. Keep the goose alive. Keep the goose functioning and that's the pragmatic aspect of ecosystem management. If you view it from the idealistic, the spiritual, and the more inclusive side, you could say the goose has intrinsic value, in and of itself, and the golden eggs are nice. I don't care which way you go at it. It ends up in the same place.

MAJOR CHALLENGES CONFRONTING US

So given that as a preamble, we're looking at several areas where we need to change our current policies to implement ecosystem management. There's going to be a need to change our statutory framework. We know that we're going to have to change our regulations and we're streamlining those land-management practices. We have simply got ourselves bound up in bureaucratic process that is absolutely paralyzing, and we are essentially grinding to a halt in our own bureaucracy. The Forest Service will take care of its own regulations soon and we should present those changes in '94 sometime. We also operate under a number of natural-resource laws that are somewhat confusing and conflicting to say the very least, not only the legislation itself but the evolving case law. For example, we have a case you read about in the paper called the Sweethome Case, where in the East they said alteration of habitat on private land cannot result in a taking of a threatened species. That's interesting because there is an opinion in Ninth Circuit on the west coast. This says exactly the opposite. So not only do we have some conflicts in law, we certainly have some developing conflicts in case law. We are working with the Office of General Counsel looking at those existing laws to see if there is some way that we can implement ecosystem management more effectively.

One of the things I have found after stepping into a job like this is that I wanted to deal with the great natural-resources issues of our time. Instead I sometimes feel like I am being nibbled to death by ducks. I have found to my great shock that instead of spending most of my time with scientists, I spend most of my time with attorneys trying to make sure that we are in compliance with the law and moving forward effectively and efficiently. And our attorneys continue to tell me "Well, maybe we are going to make it, but you should realize that in trying ecosystem management, you are diligently pounding round pegs into square holes. The law wasn't designed for it exactly and as a result we have a lot of chances to stub our toes."

Now we will also require that all of our processes and activities will involve the public and other cooperators in implementing ecosystem management. But there is a problem. That problem is called the Federal Advisory Council Act, FACA. It really presents a challenge in how we are going

to deal with getting that pro-public participation. We have asked the General Counsel's office to help us to comply with the Act and still conduct our extensive public participation, and we are having real difficulty. For example, one problem is a number of the partnerships that we consider absolutely obvious due to legal obligation and long-standing methods of operation. Some of our attorneys even tell us we can no longer consult with the state game departments without a full-blown FACA committee operation of which they are only part. Same problem with state foresters and Indian tribes. Others say well maybe, maybe not. Well, the risk of making a mistake is an injunction, and we are diligently trying to escape injunctions. So we will continue along these lines fairly quickly, but it's a tough, tough situation.

Now we also face challenges — and it's not just us, but other federal agencies — with declining budgets and staff, and we are working on the development of techniques to support ecosystem management and agency-wide implementation. But it's going to require significant adjustments in the way we collect information, establish our analytical tools, our planning processes, our field actions, and our monitoring activities. And that takes adjustments in work-force skill and institutional process.

Now the first thing you teach in a management book is, "You're not going to be around long when you take over something like this. Pick one or two things you want to make work and concentrate on those." I wish I could do so. There are about seven things bearing down on us simultaneously that we have no option but to address.

Downsizing. Last week the U.S. Forest Service had 2,300 people retire. We lost 69,000 years of experience in one week. We anticipate losing another 30-40,000 years of experience next year. That's on top of what we have already done.

We have a team working called the Reinvention Team, part of Vice-President Gore's reinvention of government. They are looking at how we can best use the U.S. Forest Service, its organization, its people, and its operations to get into ecosystem management. That's going to require a significant staffing adjustment. We are going to have to retrain a number of people and we are going to emphasize ecosystem-management skills in the hiring of new employees.

Presently, we're sharing critical skills between the Forest Service units and other federal agencies. We will rather soon try to get the best balance across government that we can. One of the encouraging things was that we were recently told by the President that he wanted one government responding to our environmental questions and our management questions. No more of the BLM and the Forest Service having divergent management. No more Fish and Wildlife Service arguments from the outside. Those agencies are to combine forces to be more effective, more efficient to serve the American people. I think we can say that that's well underway.

Now, it would appear logical to anyone that if you were going to exercise a new type of management called "ecosystem management" you would then figure out what that is. You would then reinvent your organization in order to carry it out. Then you would downsize your organization, if necessary, to meet budget requirements along that line. Then you would execute it. Unfortunately, we had to downsize first,

reinvent second, and then cut to match and fit. We're going to do that, but it's not particularly easy.

GETTING ON WITH THE JOB

Now we fully intend to play a leadership role and I fully intend that we be the premier conservation agency in the world and fully develop an ecosystem-management approach. That also includes, very clearly, human interactions. Ecosystems do not exist independent of people. If we look at any management approach, the decision space is bounded by science, by political acceptability, by social consequences, by economic feasibility. Anything that is outside of that space won't stay there very long. It will erode. So in the past, we have had great direction under that National Forest Management Act for receiving and considering public input into our decision making. We have tried very hard. We are not at all satisfied that we have done that very well. What we have managed to do is produce a cacophony of sound that is so confusing that we can't determine what it is that we've heard except that it is very confusing and opinion is very, very split.

We need to make a new start with ecosystem management. We need to start to work on what we can agree on and work from there instead of concentrating so heavily on what we disagree about. This is going to require an ecosystem management involving a much more collaborative effort, with other agencies, with universities, with organizations, with interest groups. In the short term, we need to continue development of essential tools and techniques. I'm not worried about that. We are well on the way. Trying to learn how to use it is going to be the next thing. The technology is essentially there. We've been shifting very quickly toward consolidating the best available understanding and knowledge about resource management, values, and human interaction. We're moving ahead with that ecological approach that focuses on long-term sustainability of the system, of the environment, of the economy, and of communities. A lot of these issues are still very highly controversial, but I think ecosystem management might provide some better basis of tracking these problems and to view and understand the issue as we go towards a sustainable solution.

Now, to carry out ecosystem management, our land managers are being directed to understand the structure, function, and variability of systems to the extent they can, and to develop appropriate site-specific management activity. One of my favorite quotes that stuck in my mind from long ago though is "Remember that ecosystems are not only more complex than we think, they are more complex than we can think." But we can't let that paralyze us.

We have no option but to move ahead with natural-resources exploitation. That's not a question. We must exploit ecosystems to live. The question is how and under what set of rules. And it would behoove us to look at what's happened around the world where systems have been exploited for a very long time and have collapsed in the process. This would give us some clue as to how much restraint we should use to achieve sustainability, to leave a little slack for caution, for mistake. Through it all, we need to recognize that we don't know all we need to know. We must move ahead with it, but it behooves us to be more cautious than we have been in the past.

We've developed an ecological unit framework that will provide our scientific basis. That framework starts off as a classification and mapping system, stratifies areas into units of common biological and environmental conditions. Those include climate, physiography, water, soils, air, natural communities, and then the people communities, the cultural communities. We've been working closely with other federal agencies so that we can have a unified approach.

In looking at the broad directions and programs that you can expect to see in the agency, one major initiative stands out. It is what we call the Forest Service Reinvention Team. This is a project to reinvent the Forest Service, how it looks, how it's organized, what key functions ought to be addressed by the Washington Office, how the agency will prepare for the next century, and how the Forest Service develops and implements ecosystem management. All of these will evolve in some degree from this effort. I expect a final report this fall; however, I expect a report that we can start to operate on by June. Based on what we've learned and done today, the thinking is currently going on.

Some of the changes that can be expected as a result are: As an agency we have to move quickly now to successfully implement ecosystem management. Successful implementation will affect more than how we manage national forests and grasslands. It will also change how the Forest Service interacts with other land owners, how we are organized, and how we request and allocate resources. This will not be an easy thing to do. In essence we have to move out of functionalism: i.e., managing specifically for wildlife, fish, range, forestry, and watershed. This disciplinary approach has achieved some success, but too often those entities have come into conflict in ways that could be avoided with the cooperative effort that ecosystem management consists of. We have been trained in the disciplinary specialties. The universities trained us to do that. We organized the Forest Service in order to emphasize those disciplines and that was very useful, but now we have to evolve into another way of thinking. It will be difficult. It will be difficult to retrain our people to think in broader terms. It may be somewhat difficult to get the universities to let go and begin to train in a broader fashion. It will be difficult for our constituencies.

We will have to budget differently. We in the Forest Service, like the other federal agencies, have line items. We get so much money to do this, and so much money to do this, and so much money to do this, with very restricted ability to shift money between these pockets. In order to do ecosystem management, we need more budgetary flexibility and fewer line items. Our constituency groups, due to distrust which sometimes has been well deserved, insist that we need more line items. How Congress will fit into this, I don't know, but the line item is the mechanism whereby you can micro-manage a very large federal agency. I think we're making progress, but I don't think our problem is going to be in Congress. I think our problem is going to be with our constituency groups to cut us some slack and to give us a little more trust and support. Well, ecosystem management is a term that is in vogue but too little understood. Systems that exist in our environments are very complex. It's unlikely that we will ever completely understand how these systems work. Probably we never will, but we've learned a great deal.

We've got to move quickly now to develop tools to measure health and vigor of forest and rangelands, and to develop and implement strategies that truly conserve biological diversity, maintain aesthetic values, and produce needed commodities.

We've already employed ecosystem-management principles in a number of situations. One is the northern spotted owl, which has evolved into the old-growth ecosystem question of the Northwest. Another is the ongoing Eastside Ecosystem Health assessment which for the first time will throw BLM and Forest Service planning across an entire eco-region simultaneously. That is a big move toward ecosystem management, and this kind of collaboration turned up some shocking insights about ourselves. As far as we had come in land management, we suddenly realized, under the pressure of having to plan together in the Northwest, that we couldn't even make our maps fit together between national forests, much less the maps between BLM and the Forest Service. So we've made great progress there.

Now, a key element of ecosystem management is consistent monitoring and evaluation of that management and its outcome. "Did we perform what we said we would do?" Where necessary this evaluation is used to adapt management to incorporate new information. Monitoring cannot continue being treated as an appendage that may or may not be done depending on future funding. In the past, frankly, we have proposed mitigation for risky courses of action by promising rigorous monitoring and mid-course corrections if our assumptions were wrong. We have not always carried out the required and promised monitoring, nor have we been funded to do so. That has to change.

The underpinning of good resource management always has been, and will continue to be, science. But in implementing ecosystem management, we've got to enhance the use of science in the decision making process. This contribution of science to better decisions will require continued and strengthened independence of the Forest Service research arm, development of guides for collaboration between scientists and the decision makers, and the continuous upgrading of technical skill in our work force. We are quickly moving beyond the point where a bachelor's degree is sufficient background for the complex job of ecosystem management. The people sitting in ranger district or regional offices will need to continually upgrade skills.

We are also coming to realize that our practitioners on the ground simply do not each have the time to synthesize the incredible amounts of information that are beginning to emerge. I look for the evolution of a new specialty. Some of us have done a lot of it but it hasn't been highly regarded as science. I think that will change. I think we will have people in the constant process of synthesizing scientific information into useful packages and then the upgrading that information. I think that will become a recognized and highly valued sub-specialty in science. Equally important, is the technical aspect and the changes that we have to make in order to do our job.

More than ever we recognize that collaboration is required. We've got a rich tradition of using partnerships. For example, we've developed more than 12,000 ongoing relationships with a host of outside interests. They include sister agencies at all levels, universities, colleges, rural communities, organizations like the Nature Conservancy, and others, but we have to

do more because those relationships are like my fingers. But again, they are related to the sub-specialties within the Forest Service.

The big challenge is going to be how we will coalesce around those things to get the collaboration that we need. We've got to institutionalize collaboration. We've got to have forums where reasonable people, environmentalists, industry reps, recreationists, other government officials can come together to discuss issues, learn from one another, work toward a consensus. We have to bypass the gladiators who get paid to fight the fights. They do not get paid to collaborate. They do not get paid to compromise. They get paid to win. I think the people who will institutionalize this collaboration are those people who are slightly inside of those gladiators.

We have begun to see some examples. We have worked with communities that were so split at the beginning that they knew something had to be done: "My God, we've destroyed ourselves. My God, we have destroyed ourselves." And then they began to come back together and say, "We must do something. Not the government. We must do something." And to our credit, we said, "Try. We'll help. Work it out. We'll help. If it looks good, we'll help. What we tried to do in the past didn't work very well. Maybe there is another way to do this. We'll help. We'll listen." In that I find great encouragement, because we stand on shaky ground where we simply cannot continue to stand.

Now an example of the type of changes is a recent direction to eliminate traditional targets in our budgeting. For example, in the 1994 budget allocation there are no traditional timber targets. Rather than assigning and funding timber targets, the foresters are asked to meet timber goals that are appropriate and attainable, given the land-stewardship objectives. They have also been told that the standards and guidelines that apply will be given first attention, then they will strive to meet some level of timber objectives.

We expect to continue to accelerate our emphasis on quality wilderness management. We expect increases in our fish, wildlife, recreation, and watershed-protection operations. We are going to look at our fire management in light of broader ecological objectives and to design incentives to achieve stewardship on non-public ownership. In all cases, we have to evaluate these component programs carefully to assure that they are realistic to implement and provide gains toward the desired outcome. Finally, the program has got to be designed to incorporate new knowledge more rapidly than we have in the past. New knowledge must be moved into implementation and proactive changes made rapidly if ecosystem management of natural forests is to meet the needs of the future. Gone are the days when we can absolutely sit down and believe that we can do a forest plan that would stand for 15 years. I would expect any forest plan that we finish in the future and I hope we can do them short of two years of effort to be readjusted again within two years, and again within two years. As we try things that work and don't work we have to adjust.

We're participating in a coordinating committee with BLM, Fish and Wildlife Service, National Park Service, Defense, and Nature Conservancy to promote the use of research natural areas. We are working with BLM to develop parallel

land-planning operations. In the past, we have led ourselves into disastrous consequences by BLM and the Forest Service splitting the blanket and running in two different directions when we had a tough management problem to look at. It essentially spun us into chaos. I think those days are over and I think that will greatly improve the coordination of our plans on both the national forest system and the other public lands. Ecosystem management includes a commitment to working with even more partners than we have in the past. Because ecosystems cross boundaries, many federal, state, and county agencies, tribal governments, private land owners, community leaders, and corporate foresters are interested in ecosystem management.

We recognize, however, the sensitivity of the private property rights question and the questions about how ecosystem management can be implemented across boundary lines. Please hear me clearly. We seek no additional authority over private lands. Let me repeat that. We seek no additional authority. Our objective is to provide technical and financial assistance to federal and state land managers and nonindustrial private owners. We've been doing that for years through state and private forestry. I think our job is to develop the technology, the approaches, the information, the synthesis of how we do ecosystem management and then make these available to those of our neighbors who wish to join with us. I think there will be many.

Our long-standing partnerships with federal land managers, state foresters, nongovernment organizations, local officials, and land owners in many cases have developed very strong and successful working relationships. Those relationships foster ecosystem approaches at every level to achieve sustainable forests as well as sustainable communities. The state foresters work independently of the national association and are major partners in delivering programs at the field level. But there is ongoing coordination with the national associations that represent local community groups, like the National Association of Counties, and the National Association of Conservation Districts.

To end, I think we have come to a moment in natural resources management, particularly in forest management and public-land management, that has not existed since the early 1900s. The stars are aligned, the technical ability exists. I think a new understanding exists. A political situation exists. A condition of economic gridlock exists that opens up a window which we can step through into the 21st century with the most exciting moves since in the early 1900s. However, I do not believe that window will remain open for long. There are people who are pounding at the boundaries of that window now to shut that gap, to close it. There are always those who are afraid of the future. There are always those who have investment in the past. But if you look at the world situation, our population, our knowledge, we simply cannot stay where we are. We have to move through that gap, and if I can do one thing during my tenure as Chief of the Forest Service, it will be to help go through that gap and put the Forest Service in the leadership role I want it to achieve as we go into the 21st century.