



# Natural Resource News

1276

Vol. 2 No. 1

Blue Mountains Natural Resources Institute

Winter 1992

*Blue Mt. NRI Goal: To enhance the long-term economic and social benefits derived from the area's natural resources in a way that is ecologically sound*

## What's new about New Perspectives?

A popular phrase in Forest Service circles is New Perspectives. New Perspectives is a way of approaching the art of forestry using 'participation' of the public owners of the land, 'integration' of several disciplines into one plan of management, 'sustainability' of products being harvested, and 'adaptive management'. The Timber Management staff of the Washington Office of the Forest Service released a description of New Perspectives in July, 1991. It states "for the first time the Forest Service has explicitly stated that the sustained yield of values and uses is a function of the health of the ecosystem and that the latter is to take precedence in establishing the level of values and uses to be provided by the National Forests." Emphasis is placed on the landscape level in managing forest resources and on spatial relations between diverse stand structures and species composition. The report calls for reexamination of management practices; development, testing, and application of new and innovative management practices; choosing practices that will attain the desired future forest condition; scientific research to improve knowledge about the forest environment; and establishment of demonstration areas.

The report concludes "New Perspectives can be expected to result in adjustments in timber yields on a number of National Forests due to the increased emphasis on maintaining the health and integrity of the forest ecosystem." It requires that managers "recognize the dynamic nature of forest succession and the need for management flexibility on a broad geographic scale."

The participation aspect would include input of public as to conditions, products, or amenities they desire from the public lands, and even participation in formulating management plans for specific Forest Service sites.

Integration is evident in the

restructuring of many Forest Service staffs into interdisciplinary (ID) teams.

Sustainability brings the focus to the larger picture of ecosystem requirements and cycles rather than short-term extraction of products.

### Adaptive Management

While the other elements of New Perspectives are simply a broadening of the participants and the focus of management, the adaptive management element is a real change in management concept. Adaptive management really implies a cross between traditional

*"Adaptive management really implies a cross between traditional management and research..."*

management and research according to Kai Lee, Director of the Center for Environmental Studies at Williams College, Williamstown, MA. (His concepts of adaptive management were illuminated in an interview by Cindy Halbert published as "Implementing Adaptive Management", The Northwest Environmental Journal, 7:135-150. 1991. University of Washington, Seattle. The following was gleaned from that article.)

The idea of adaptive management is to gain as much useful knowledge as possible from management activities. Then management plans are adjusted accordingly for the next stage. In order to do so, management schemes must be designed to include control and replication, as does research, and careful monitoring (measurements before and after treatments). In this way, information may be gleaned that is much more useful than the case history

type of experiential knowledge managers have traditionally acquired.

There are several difficulties, of course, in such large-scale application of experimental methods. Finding areas for controls and replication is one difficulty. Maintaining a steady supply of funding to ensure continuity is another difficulty. A third difficulty is that the approach to testing management that may be logical may not be equitable. If, for instance, private landowners are involved in testing different management schemes that have different costs and payoffs, they must somehow be compensated for any inequities that result from their cooperation. Yet another difficulty is that the time frames involved in adaptive management may often exceed the tenure of the decision-makers. Adaptive management will, however, enable decision-makers to make use of the best available scientific information. The payoffs may well be worth overcoming the difficulties.

It appears that New Perspectives is an idea whose time has come. To quote Chris Maser, author of The Redesigned Forest, "Changing Perspectives," as he prefers to call it, "is the mechanism of transition from the original utilitarian vision, to the new ecological vision. It is the validation of the hearts of the people both inside and outside the Forest Service who know that change is necessary and who are so valiantly struggling to bring it about." (From, Changing Perspectives: Focusing on Inputs rather than Outputs, Forest Perspectives 1:3, a publication of the World Forestry Center, Portland, OR.)

Removal of some of the impediments to a new perspective on forest management may require new methods of funding activities for the stewardship of our national forests. Although Congressional funding methods and large organizations such as the Forest Service don't change readily, the Forest Service is committed to the course.



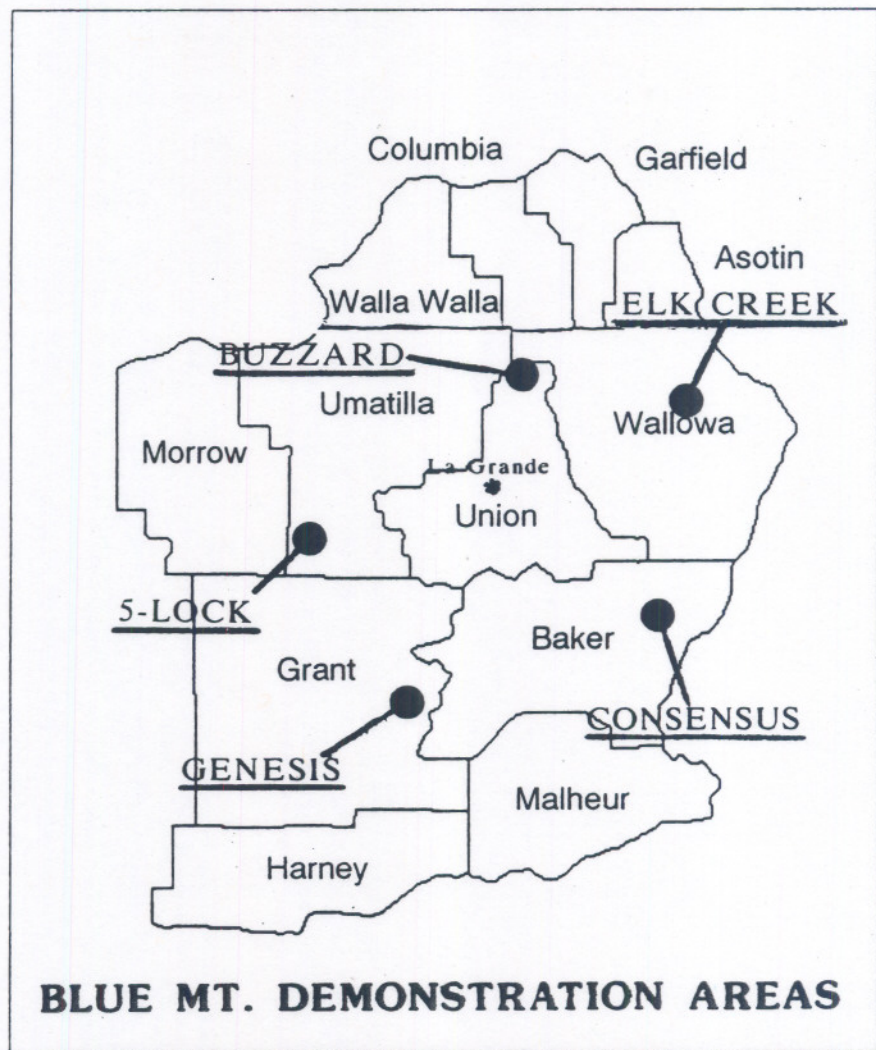
# Blue Mountains Learning Center

The Blue Mt. Natural Resources Institute has begun to design a "Learning Center" to showcase novel approaches to resource management. The Learning Center will serve as a focal point for interaction among scientists, resource managers, and the public, with transfer of information as its primary function. At its core will be a network of demonstration areas which will illustrate the interactive style of management currently evolving in the Forest Service and other agencies.

At present, five demonstration areas are being planned: two in the Wallowa-Whitman, one in the Malheur, and two in the Umatilla National Forests (see map). Other sites being considered for demonstration are on lands owned by Boise Cascade, and the Confederated Tribes of the Umatilla.

On the Pine District in the Wallowa-Whitman NF, a Citizens Action Group (the consensus group) has been involved in developing a management alternative that identifies sustainability of multiple resources as its primary target for the forests around Halfway. The involvement of the consensus group is much more extensive than the scoping typically undertaken by district personnel to engage the public in land management decisions. In this case, the public has been directly involved

*continued on page 3*



*photos by Duane Kloes*

Elk Creek Demonstration Area before exclosure (L) and after exclosure (R).



## Consensus process at Pine RD:

# New Perspectives in action

Three years ago, differences of opinion about management of the Pine Ranger District at Halfway created a situation which had tempers at the boiling point. In response, Pine District Ranger, Mary Peterson, and Wallowa-Whitman Forest Supervisor, Bob Richmond, brought in a consultant in an attempt to improve the relationship between Forest Service managers and other members of the community. A working group composed of about ten people of differing viewpoints met weekly for a year and a half to come up with a management alternative acceptable to all. After 18 months of investing considerable time and energy, those

involved in the Citizens Action Group expressed mixed feelings about the effort.

"It has been a long, arduous ordeal, but it's been a good lesson for me," said Rob Ellingson of Ellingson Lumber Co. "Most of us have the same thing in mind for a goal, even tho there are many differences in how we want to achieve it." Ellingson expressed a good deal of frustration as well. "I'm disappointed. Ten of us spent a lot of time on an alternative we wanted. We were then told it would require an ammendment to the whole Forest Plan and include the public comment process, so it hasn't

happened." Even tho the working group reached consensus on a management alternative, the larger group and whole community hasn't yet seen the proposal. According to Ellingson, "It's frustrating bringing everyone up to speed if they weren't in on all the meetings." Even so, Ellingson said the process bore fruit. "The Forest Service has gained credibility in my estimation. Now people feel they can go in and talk and be heard."

Jon Vanderheyden, District Ranger at Pine Ranger District until recently, expressed optimism about the

*continued on page 4*

### Notes from the Manager

We are making progress in the various activities we have undertaken as an Institute. With the issue of forest health as the highest priority, the technical committees are planning research, development, demonstration, and education activities. Some of these will require funding from additional sources before they can begin and others we can initiate during 1992 with resources available. I have seen a considerable amount of energy put into these efforts from committee chairs and members. I think all our partners are being well served through these efforts.

We held what is probably the biggest single gathering yet assembled to address forest health-related goals and strategies for the Blue Mountains. This session proved valuable from the standpoint of hearing the diversity of goals and strategies that exist for addressing forest health and in discovering the many areas of agreement that exist among the multitude of interested groups and individuals. I am impressed that similar strategies seem to surface at many different meetings. I have confidence that the areas of agreement will point to ways that managers and

landowners can begin the process of restoring health to our forested ecosystems.

Interest in all Institute activities remains high. I think we really are embarking on a unique partnership in information exchange and use. I see resource managers and landowners actively seeking scientific information. I see the public engaging in discussions about natural resources from a much better-informed position. I see expanded opportunities for new

technologies, demonstration of existing technologies, and education experiences for all age groups. Even though the current condition of our resource base needs considerable attention, I think we have reasons to be optimistic about the future. Cooperation continues to be the key, and we in the Institute will continue to do our part.

*Thomas M. Quigley, Acting Manager*

## Learning Center cont.

*continued from page 2*  
in the formulation of prescriptions at the stand level, and this level of interaction is expected to be an ongoing process. The consensus process will be showcased by a video which will be available at the District and at the Learning Center, and by an interpretive sign system at the field sites.

The Learning Center will also showcase how research is used in management decisions. The demonstration area at Elk Creek (Wallowa-Whitman NF) for example, will incorporate a research program for assessing how riparian management activities influence water quality (see photos). PNW scientist Art Tiedemann will serve to coordinate the research activities at

Elk Creek, and facilitate the transfer of research information to managers and the public. The intent is to illustrate the importance of feedback, from scientists to managers and vice-versa, and to incorporate a more active public in land management decisions.

The demonstration areas will be augmented by an adaptive management team whose primary function will be to transmit specific information on each forest issue to the public through seminars, workshops and demonstration area tours. The network of people involved in the Center will work together to provide the public, scientists, and land managers with a tool for better management of our natural resources. *Jim McIver, Blue Mountains Natural Resources Institute, LaGrande, OR*



# Landscape Management—Cascade Center Approaches

The distribution and abundance of vegetation patches across a landscape plays a major role for many resources; e.g., wildlife habitat, watershed hydrology, and disturbance patterns. While land managers have been dealing with some aspects of landscape management for a long time, new concepts in the emerging discipline of landscape ecology, and the increasing magnitude of issues surrounding habitat needs for large home-range vertebrates have placed landscape management at the top of many managers' agendas.

Landscape management refers to planning and management of areas and ecosystems at scales larger than the individual stand. Drainage basins or large habitat management areas of 10,000 to 40,000 acres are frequently used as landscape analysis units. Landscape elements of importance can include vegetation patch size, amount of interior habitat, spatial distribution of vegetation patches, range of successional stages present, edge length, and the connectivity of vegetation patches. Landscape management relates landscape elements and ecosystem processes to management objectives.

Early work in the mid-1980's focused on theoretical landscapes and used modeling. Alternative patterns of forest cuttings were contrasted and landscape elements analyzed. Significant differences in landscape elements between patterns resulted from these mechanistic examples.

The next step tested alternative patterns of forest cutting by modeling based on a real-world landscape. Two patterns, continuation of the traditional staggered harvest settings

approach and an aggregated harvest settings approach, were contrasted in the Cook/Quentin landscape on the Blue River Ranger District, Willamette National Forest. In the aggregated harvest method, an attempt was made to maintain unharvested forest in a contiguous area. Results showed that the aggregated settings approach (since dubbed "minimum fragmentation") could provide land managers with additional options in the short-term for maintenance of interior, late-successional forest habitat. Larger patch sizes, more interior habitat, and greater connectivity of patches were achieved through the 30-year analysis period with this approach.

Further testing of alternative forest cutting patterns occurred with the Upper Fall Creek landscape analysis on the Lowell Ranger District, Willamette National Forest. A process for identifying the more significant late-successional forest patches within the 22,000-acre area

was developed; these patches became the framework for design and comparison of alternative landscape-level cutting patterns through the rest of the first rotation. Results validated earlier conclusions that "minimum fragmentation" approaches could maintain some blocks of interior, late-successional habitat for 20 to 30 years. Beyond that time period, given the range of cutting levels considered to be consistent with implementing the Forest Plan, nearly all remaining interior habitat patches would become fragmented and converted.

*continued on page 7*

*"Landscape management refers to planning and management of areas and ecosystems at scales larger than the individual stand."*

## New Perspectives in action cont.

*continued from page 3*

consensus process. "We have been very successful in improving our communication with those who participated." Others who haven't been involved as closely with the process may not feel that the management plan proposed has their approval, and there still needs to be more outreach to that sector of the public. However, "the process has opened up some channels of communication between opposing groups who weren't talking to each other before," noted Vanderheyden. "It has been a tremendous success in that alone. What has been produced is cutting edge resource management and is the fruit of intense negotiations over the two years, and we are talking a very diverse group of participants—loggers, mill owner, and the full spectrum of environmental

interests."

Vanderheyden mentioned an avenue which may allow the group to reach their goal without a Forest Plan revision. As part of the thrust for New Perspectives in Forestry, the Chief of the Forest Service, Dale Robertson, has asked each Forest to set up areas to demonstrate principles of New Perspectives. It is proposed by the Wallowa-Whitman NF and Tom Quigley of the Blue Mt. NRI that the entire Pine Ranger District be a Demonstration Area, which would allow more flexible management options without a revision of the Forest Plan. Said Vanderheyden, "It [the proposed alternative] is not a dead issue by any means."

Jo Broadwell, member of Blue Mt. Native Forest Alliance and of Friends of Lake Fork, has also met with the Citizens Advisory work group. She

too has expressed frustration with the process. "Due to administrative obstacles, our ideas haven't borne fruit," said Broadwell. "But, we have been able to exchange points of view, and in that sense it has been really positive."

Any Forest Plan revision would likely be postponed until completion of an inventory now underway. If it is postponed until '95 or '96, environmental advocates are concerned about further damage to the area's biodiversity which might occur in the meantime. Broadwell is hopeful that the Demonstration Area may bring their plans to fruition. "There is an open door with the Institute as a facilitator," added Broadwell. "If this Demonstration Area happens, I can say that the Forest Service has responded very well to the environmental concerns."



## Blue Mt. NRI Member Profile:

# Dr. Frederick Gilbert

Dr. Frederick Gilbert is a Professor of Natural Resource Sciences at Washington State University, and a member of the Blue Mt. NRI Board of Directors. He has been with the University for ten years and just completed a three-year term as Interim Chair of the Department of Natural Resource Sciences. When asked about the value of his involvement with the Blue Mt. NRI he replied, "There is a real need for ecosystem management, and the Blue Mt. NRI has looked at the Blue Mountains as a series of ecosystems. An integrative approach is the key to long-term effective resource management in a sustainable way. You can't manage a site or a species in isolation from the complex of interactions."

A mistake of the past he sees has been too-narrow a focus when managing natural resources. "The problems we have are a result of that myopia. The Institute is a breath of fresh air because it takes an integrative approach to forest

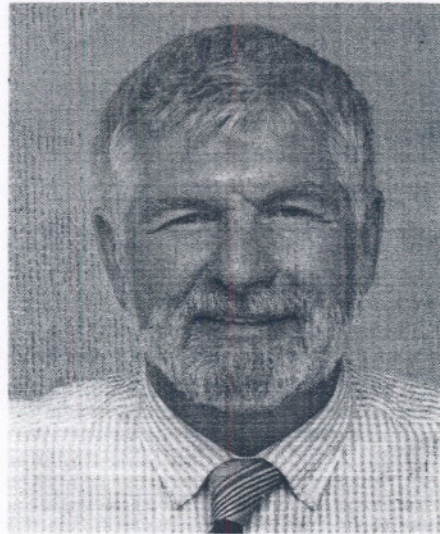


photo by WSU, College of Agriculture & Home Economics Information

Dr. Fredrick Gilbert

and range resources and also integrates researchers, managers, and interested

public in the decision-making process."

The Institute goal fits with the mission of the WSU Department of Natural Resource Sciences to focus its research activities on the eastern part of Washington. The Institute is investigating the same ecological types, so the work with the Institute he sees as an extension of their research mandate.

"The Institute parallels changes in our department as well," he pointed out. "We now have integrated curricula for those training in forestry, wildlife, range, and recreation." They share the first two years' curriculum in common, and share some courses in common through the senior year in social sciences, resource planning, and integrated field work.

Says, Gilbert, "A number of models have been successful in integrating forestry, fish, and wildlife in Washington, but none on the scale of the Blue Mt. Natural Resources Institute. The potential it has is exciting."

## Landscape Management cont.

*continued from page 4*

Additional results showed that the scale at which cutting unit decisions are made influences landscape elements. Cutting pattern strategies developed at the 22,000-acre scale would result in retention of patches with different landscape characteristics than cutting strategies developed at the 3,000- to 5,000-acre small drainage basin level. Maps drawn of successional stages projected out into a second rotation showed that the effects of alternative cutting strategies in the first rotation would continue to influence landscape characteristics, such as patch size and interior habitat, for long periods of time.

These landscape analyses focused on maintaining options and minimizing impacts to interior, late-successional forests in the relatively near term. Current efforts are attempting to turn a corner and focus on defining desired future landscapes. For example, what is the mix of successional stages, stand

structures, vegetation patch sizes, and geographic distributions that we are looking for in this landscape? How do we achieve and sustain the desired mix? One benchmark for constructing this view is an understanding of historic ecosystem disturbance patterns. Ecosystem processes, habitats, and species in today's forest developed concurrently with these disturbance patterns.

A current landscape analysis effort in the Augusta Creek area (Blue River Ranger District, Willamette National Forest) is using a fire history study to help build scenarios that reflect historic disturbance patterns. Goals for desired future landscape elements, such as the mix of successional stages and stand structures, are being derived from the fire history study to build management scenarios. A long-term scheduling model and a geographic information system (GIS) are used to build and evaluate these scenarios over several rotations. For example, the fire history study may

show that historically 30% of the area was in late-successional forest patches 200 to 500 acres in size. A scenario that could have achieved and sustained those landscape characteristics over time will be developed. Additional scenarios incorporating resource management objectives with the historic disturbance patterns will then build on this benchmark.

Landscape management is still in the early stages of development. One of the challenges for resource managers in the 1990's will be to pull lessons from various landscape views together and synthesize an approach that fits the question at hand. Increasingly, resource management problems and questions are being seen as landscape level management needs.

*John Cissel, Research/Management Liason, Blue River Ranger Dist., Cascade Center for Ecosystem Mgmt. — A Research/Mgmt. Partnership of USDA Forest Service (PNW Research Station and Willamette Nat'l. Forest) and OSU.*