

A  
Primer for  
Policy Makers

# Landscape Management

## The Key to Ending the Forestry War

The conflict over the use of our forest lands appears to be a zero sum game where either side can only win at the expense of the other. Unfortunately, the public wants both ecological protection and jobs. What do we do? We can call a cease fire in the environmental war. It's time for everyone at the local, state and federal levels to come to the table to negotiate a permanent solution to this environmental crisis. There are workable answers, if we can agree to implement them in time.

Washington State  
Governor's Timber Team  
August 1992

# Malthus was Wrong — and for Forestry — He Still Is

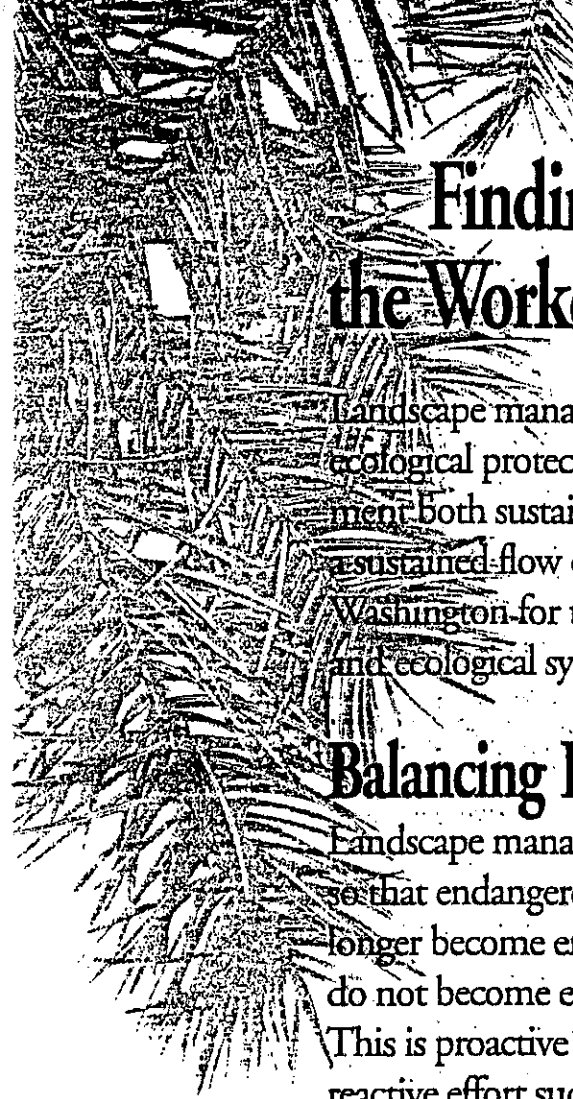
People tend to overlook it, but there is a free lunch in economic history — technological change. The nineteenth century economist, Malthus, projected massive starvation because the amount of agricultural land is fixed while the world's population is growing. Today, however, high-tech agriculture has increased productivity far beyond what Malthus could imagine. Not long ago, the auto industry said it was impossible to reduce auto emissions, increase gas mileage and still produce affordable cars. Again, innovation proved the nay sayers wrong.

The same scenario is possible in forestry. Landscape management is a new technology that could enable foresters to answer the public demand for both wildlife protection and wood products. We believe it is a system that can work if given a chance.

But first, environmentalists, the industry and the public must be willing to take risks and make investments. Environmentalists must allow innovation and recognize new ways of doing business rather than trying to stop industry from doing any business at all.

The forest industry must think in the long term and act in their own long-term economic interest rather than in the interest of quarterly profits.

And the public must recognize that their desire for both forest products and ecological protection demands a price to be paid for each.



# Finding Parity for the Land, the Workers, and the Industry

Landscape management seeks to manage forests both for both ecological protection and timber production. Landscape management both sustains a balance of all wildlife habitats while creating a sustained flow of forest products within each forest region of Washington for the dual purposes of creating stable communities and ecological systems.

## Balancing Habitats

Landscape management proactively creates a balance of habitats so that endangered species expand their populations and no longer become endangered; and, in the future, other species do not become endangered from a reduction of suitable habitat. This is proactive effort to protect ecosystems rather than a reactive effort such as the Endangered Species Act.

## Upgrading Forestry Techniques

By using active forest management techniques foresters attempt to create the stand structures needed for wildlife habitat and associated ecological systems. Techniques such as thinning, pruning, leaving green trees, downed logs, and snags, and lengthening rotations help create needed stand structures.

These techniques not only produce better wildlife habitat, but also improve the quality of wood products. In fact, the industry runs the risk of losing its competitive edge if it fails to manage for high-quality timber. Also, landscape management techniques provide employment in timber dependent regions while producing quality wood for value-added wood processing.


# Applying Incentives for Change

Incentives are needed to induce private landowners to participate. These can include offering tax credits; as well as adjusting state forest practice regulations to be more flexible.

Landscape management can provide a partial alternative to preservation or set-asides on federal lands, especially where timberland is locked up to "protect" endangered species although the forest is not suitable habitat for survival of the species. By providing better wildlife habitat throughout the landscape, responsibilities for federal lands could be loosened.

## What is Landscape Management? Why Clear Cutting is Outmoded

Traditional forestry in the Northwest is based on clear cutting all of the trees from a given area, replanting the land with a single species - usually Douglas fir - and waiting 50 years or so to harvest the crop and repeat the cycle. This "even aged" forestry approach aims to maximize the volume of wood fiber produced on each acre, just like a wheat farmer tries to maximize yield. Many foresters believe that this high yield approach is producing wood of poor quality and low value, and less than ideal conditions for wildlife, water quality and other forest values.



We've come to believe that timber quality isn't important; that we can simply grind up the trees and extrude fiber that can be made into products. But, we've overlooked the role of forest ecosystems in the technological process, as well as the natural process. Both processes are ultimately interdependent and must be managed accordingly.

## Landscape Management Techniques Promote Biodiversity

We should be managing forests to develop a wide range of stand structures across the landscape. The objective is to simulate the biological diversity found in nature. Managing for biological diversity will require intensive silvicultural treatments including:

- Replanting with a mix of several native tree species.
- Pre-commercial and commercial thinning to produce more complex stand structures for wildlife, and fewer but larger trees on each acre.
- Pruning of thinned stands to produce knot free, higher quality timber.
- A variety of harvest methods including both clear cutting and partial cutting to maintain a balance of forest structures in each landscape planning unit.

# What Does Bio-Diversity Look Like?

Managing for bio-diversity starts with identifying landscape planning units such as a watershed or river basin - usually several thousand acres in size. Within each landscape unit, foresters try to create and maintain a wide range of forest stand structures including the following four broad stages:



## Stand Initiation Stage

Young stands up to 20 years of age. Good habitat for deer, rabbits, red tailed hawks and other open habitat species.



## Stem Exclusion Stage

Young to mature stands, 20 to 60 years of age with trees closely spaced and very little plant life on the forest floor. This stage is the least productive for wildlife.



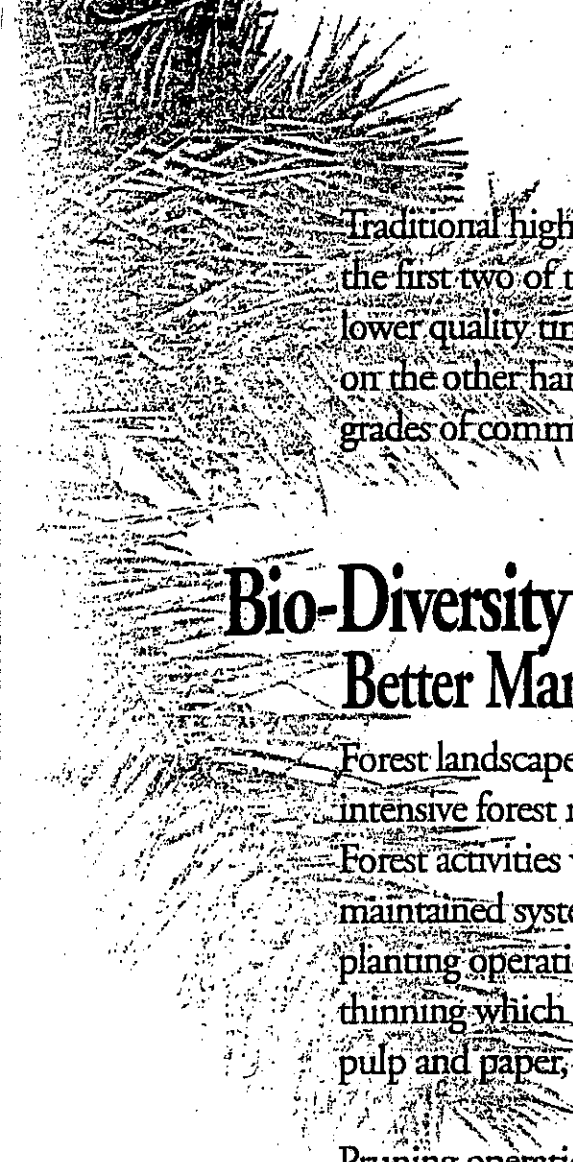
## Understory Re-initiation Stage

Mature stands with trees of many sizes and numerous openings in the forest canopy. This stage is achieved by thinning and pruning stands that are 30 to 40 years of age, allowing sunlight to reach the forest floor and stimulating growth of understory trees and brush. Good habitat for deer, elk, owls and other species that favor mature forest cover.



## Old Growth/Late Successional Forest

Largely undisturbed by the hand of man, these forests contain trees that are hundreds of years old. This stage can not be duplicated within a reasonable time frame and may have to be preserved in many areas where it still exists. Old growth forests are primary habitat for cavity nesting birds, black bears and other species dependent on a diversity of tree species and sizes, a multilayered forest canopy, and an abundance of defective trees and rotting logs.



Traditional high-yield forestry tends to recycle the forest only through the first two of these stages which limit wildlife habitat and produce lower quality timber. Maintaining a full range of stand structures, on the other hand, creates many kinds of habitat as well as many grades of commercially valuable timber products.

## **Bio-Diversity for Jobs and Wood Products Better Management Creates Jobs**

Forest landscapes that are managed for biological diversity will require intensive forest management and steady inputs of labor and technology. Forest activities will occur throughout the landscape and require a well maintained system of roads. In addition to the common harvesting and planting operations, young "stem exclusion" stands will need periodic thinning which in turn will produce low grade logs for conversion into pulp and paper, chip board and other fiber based products.

Pruning operations will improve stand structure for wildlife and produce high-grade logs for high-quality wood products in the future. In some areas, fertilization will be needed to speed the transition to new stand structures and improve timber quality. All of these activities will require a stable, skilled workforce.

## **Recreational Quality Goes Up**

In addition, management for biologically diverse forest landscapes will make forests more attractive for recreational activities such as hunting, fishing, hiking, cross country skiing, and camping. Such activities will offer employment in construction of trails, campgrounds and other recreational facilities as well as business opportunities in tourism and recreation.

## **Sustainable Prosperity Becomes Possible**

If properly implemented, landscape planning for biological diversity will minimize the “boom and bust” cycles characteristic of timber management over the past fifty years. With intensive management activities taking place throughout the region, stable business and employment opportunities will be created to support those activities. Forest biodiversity could be the key to sustainable prosperity for timber communities.

## **What are the Benefits of Landscape Management? Habitat for Wildlife**

By creating and maintaining stand structures naturally found in our forests preserves wildlife habitat without locking up land from economic activities. The objective is not just to preserve endangered species; it is to create a diverse, balance of habitats so that presently endangered species are no longer endangered and other species do not ever become endangered.

## **High Quality Wood Products**

The same thinning, pruning, rotation activities required to produce wildlife habitat also produce higher quality clear wood which will continue to make the Northwest the world's premier high-quality wood products producer.

Without such activities we run the risk of losing our competitive advantage. Many private landowners have not invested adequately in management and the consequence is that the quality of the wood will be lower.

This lower cost management strategy made some sense in the past. Foresters thought the future of wood products was in production of large volumes of fibre in short rotations. The trees could be converted to pulp and fibre board.



# If Landscape Management Is Such A Good Idea, Why Hasn't It Been Adopted Already?

Landscape Management would require greater investments by Landowners. Landowners would have to spend more money pruning and thinning and would lose revenues from increasing the rotation and leaving trees behind. Even though the industry may actually come out ahead in the long run due to the increased value of the timber, many landowners simply cannot afford to take the risk in the short run.

Furthermore, many companies are simply not thinking of the long run. They are thinking in terms of quarterly profits, low quality timber for low value products and little employment or "liquidating" their timber assets in the Pacific Northwest and investing them in other regions of the United States or world.

Despite these factors, incentives can be provided to induce landowners to engage in landscape management practices.

Possibilities include:

- Assuring landowners that, if they take these risks, their land will not be tied up in endangered species protection or other unpredictable forest regulation.
- Providing relief from practices regulations.
- Offering tax and other financial incentives.
- Potentially lowering the cost of landscape management techniques by actively engaging government in these activities on public lands and thus creating the infrastructure needed to provide low cost thinning, pruning and other management activities on private lands.
- Issuing forest management bonds which allow firms to benefit from investments now which would otherwise take 30 years to realize.

## Scaling the "Value Added" Pyramid

Unfortunately, high-volume, low-quality wood production makes little sense today. We simply are not competitive in markets for lower quality wood products due to the high prices induced by supply shortages. Our only hope is to compete in markets where we have the advantage of higher quality.

Industry needs to act in their long-term interest of maintaining a stable, high quality forest industry in the region, rather than in the interest of quarterly profits, in "cut and get out" policies which shift investment to other regions of the U.S. and world, or in low-value products made from low-quality wood.

Landscape management offers the possibility of moving the industry up the value-added pyramid into production of higher quality products where we can compete and benefit from skilled labor and efficient technology. In general, American manufacturing has the greatest future when we produce higher quality, higher value products.

## Employment

More intensive management will provide more jobs in the woods at a time when loggers are losing their jobs. The many silvicultural operations of thinning, pruning, harvesting and regenerating forests will require steady, skilled labor.

More intensive management creates a sustained balance of timber flows and forestry employment to each local community, rather than a "boom and bust" approach of harvesting all merchantable timber in one area and moving on to another area.

## Context for Compromise on Old Growth Debate

If more habitat for wildlife is provided on private and state lands, the responsibilities on federal lands can be reduced; and the burden for ecological protection can be shared across the entire industry.

This is the third in a series of  
Primers for Policy Makers  
on timber issues.  
Copies of the other primers  
are available through the  
Governor's Timber team,  
206 586-4802.

## A Workshop

Sponsored by the University of Washington College of Forest Resources, and the Center for International Trade in Forest Productions.

### **Managing Landscapes for Biodiversity, Forest Health, and Sustained Timber Production:** Incentives, Regulations, Organization and Management of Non-Federal Forest Lands

September 15, 1992 Executive Inn, Fife, Washington

#### Program Highlights

##### Introduction

Integrating Many Values Across a Landscape

Chadwick Oliver, UW College of Forest Resources

##### Session One

Conflict Between Public and Private Rights and Benefits

Moderator: Chadwick Oliver

##### Session Two

Achieving Biodiversity, Forest Health, and Sustained Production

##### Panel Discussions

The Perspective of Land Managers

The Legal/Political Perspective of Landscape Management  
of Non-Federal Forest Lands

##### Location

Executive Inn in Fife 1-800-938-8500

The Executive Inn is five minutes north of Tacoma,  
20 minutes south of Sea-Tac Airport.

Free airport shuttle and parking.

Rooms are available at: \$49 government rate,  
\$59 single occupancy; \$64 double occupancy plus 9.8% sales tax.

#### For Workshop Arrangements/Information Contact

Conference Coordinator: 206-543-0867 or FAX 206-685-0790

Continuing Education, College of Forest Resources

University of Washington AR-10

Seattle, Washington 98195

Chadwick Oliver 206 685-0875

Betty Johanna 206 543-0867

#### Registration

Early registration is advised, participation is on a first come first served basis. Fee includes conference materials, lunch, dinner, refreshment breaks and a no-host reception on September 15. All participants registered by September 1 will receive a confirmation notice.

Registration postmarked by September 8 \$135

After September 8 \$160

Make checks payable, in US funds, to University of Washington.

Refunds, less \$30 will be made if written notification is received by September 8. No refunds are available after September 8. Substitute participants are welcome at any time. If the workshop is cancelled due to low registration, the registration fee will be refunded.

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# How Do We Make Landscape Management A Reality?

## **Bring Everyone to the Table, Regardless of Land Ownership**

Segmenting the debate into federal, state or private land raises costs for everyone.

## **Allow Greater Flexibility for Ecosystem Management on Federal Lands**

Moving away from an entirely preservation-based approach to a landscape approach on federal lands will facilitate broader solutions.

## **Provide Incentives for Private Landowners to Manage Their Lands**

**Allow Private Landowners to Exchange Existing Regulations and Penalties for Landscape Management**

**Educate the Public and Landowners on the Economic, Social and Biological Benefits of Landscape Management**