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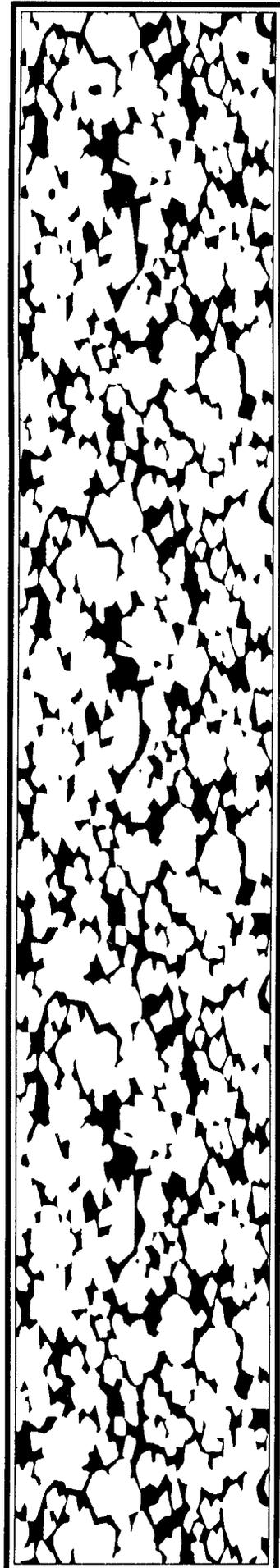
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PREFACE

By Dr. Frederick J. Deneke

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Our young people are our future. How they understand and relate to each other and to the earth's natural resources will determine the future of all those who follow in their footsteps.

With all of the focus on the consumption in our daily world, our youth and all of us are presented messages that say having an abundant life comes from getting material things. In reality, having is attained by being present in every moment and by extending ourselves and giving towards a greater good. The highest and most powerful motivation is in doing that which is not for ourselves only, but for the posterity of all.

We are now embarking upon a new way of looking at ourselves and our environment. The new dawn is one of a recognition of our interconnectedness with each other and with all things, living and non-living. It involves people uniting in spirit and working together toward a cause higher than individual material gain.

The term currently in use to describe this new way of looking at our earth and its natural resources is "ecosystem management." An ecosystem approach usually involves four parts:

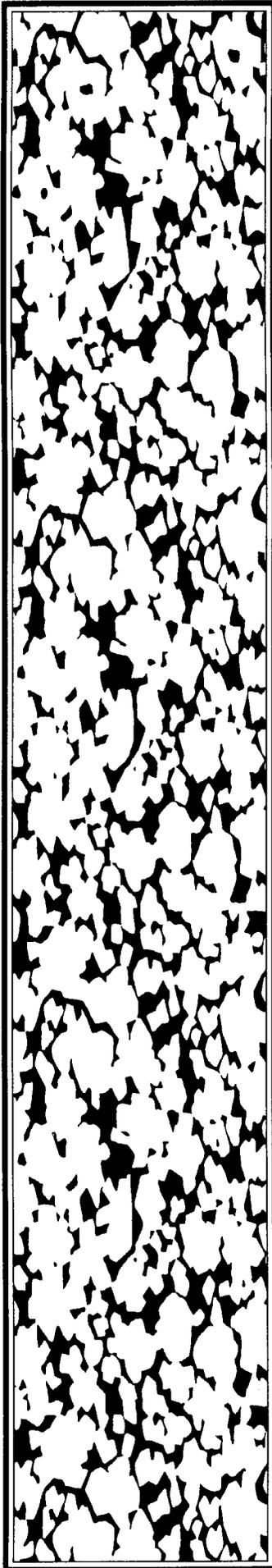
- 1. Adopting an holistic view of the natural world;*
- 2. Recognizing complexity and interconnections;*
- 3. Taking account of the dynamic nature and finite capacities of ecosystems; and*
- 4. Encouraging collaboration among all those whose activities affect ecosystems.*

In plain and simple terms, it involves taking an ecological approach to the protection, restoration, care, and use of natural resources. This ecological approach involves making conscious decisions each moment and each day which result in actions that responsibly contribute to the long-term stewardship of our resources. It involves an attitude of abundance rather than scarcity and a focus on contribution (giving) rather than exploitation (taking).

People who live in healthy ecosystems are healthier. People who view themselves as part of that ecosystem, and are actively involved in its protection, care and restoration, develop a sense of empowerment and ownership over their lives. This translate into socially, culturally and economically stronger communities, neighborhoods, cities, and society as a whole.

To have stewardship, we must teach it to learn it. That is what this guide is all about. It is about teaching, learning and co-creating. It is about becoming involved in making informed and heart-felt choices and decisions. And it is about taking personal action to help address the environmental issues of today's world for a better tomorrow.

As educators you know that as you teach you reinforce your own learning. In using this new guide, I encourage you to work with your students and, as a part of their work, have them teach each other about the principles they find in the lessons. Through teaching their learning will deepen along with yours. In the process, all will gain, especially our future generations.



ECOSYSTEM MATTERS INTRODUCTION

On June 4th, 1992, ecosystem management was adopted by the USDA Forest Service as the new framework for using and caring for our National Forests and Grasslands. What is ecosystem management? How is ecosystem management different from past management practices? Why is ecosystem management important and how will it impact your life and the lives of your students? *Ecosystem Matters* is a kindergarten through 12th grade, user-friendly, hands-on and interdisciplinary curriculum guide designed to help answer these questions. This guide provides the knowledge base and creates the understanding which enables students to participate in the ecosystem management process.

WHAT ARE ECOSYSTEMS?

Ecosystems are interacting systems of groups of species and their non-living physical environment. The word ecosystem is also used to describe the place where these interactions occur. The living organisms make up the biological components of the ecosystem. The variety and complexity of species present and interacting in an ecosystem are known as biological diversity or biodiversity. The physical components of the environment include such things as topography, moisture and temperature.

The physical and biological components of an ecosystem are mutually sustaining and interdependent. The loss of one species or the change in one physical factor could affect the sustainability of the entire ecosystem. When an ecosystem has "integrity," the native biodiversity is intact and the ecological patterns and processes that maintain that diversity are supported.

WHAT IS ECOSYSTEM MANAGEMENT?

Ecosystem management is the integrated management of natural landscapes, ecological processes, physical and biological ecosystem components and human activities in a manner which maintains or enhances the integrity of an ecosystem. For the Forest Service this means that ecosystem management blends the needs of people and environmental values in such a way that the National Forest and Grasslands will represent diverse, healthy, productive and sustainable ecosystems. Ecosystem management is a means to achieve sustainable conditions. This will provide wildlife and fish habitat, outdoor recreation, wilderness, water, wood, mineral resources and forage for domestic animals while retaining the esthetic, historic and spiritual qualities of the land. Ecosystem management recognizes that people are an integral part of ecosystems. The cultural identities, family heritage lifestyles, and livelihoods of people are linked with the ecosystems that support them. Ecosystem management requires blending social and economic factors into the equation along with ecological factors. This ensures that those who have an interest in the many natural resources concerns have an opportunity to participate in the decision-making process.

In the past, forest and grassland management often focused on certain species, certain sites or certain components within an ecosystem. Management became more difficult as managers recognized that ecosystems are quite large and usually cross jurisdictional lines. Resource managers want to base their decisions on an ecological approach using the best possible scientific information available at the time. While seeking to find the connections between different parts, patterns and processes in ecosystems, all managers find that managing ecosystem requires cooperation across disciplines and jurisdictions. Ecosystem management encourages forging partnerships among public interest, land managers, land users, biologists, foresters, hydrologists, economists, engineers, sociologists, botanist, geologists and other scientists.

As educators, we have a lasting effect on future generations. We have the opportunity to teach our students to view the world as one interconnected whole of which we are an integral part.

Perhaps the most lasting lesson your students can learn from *Ecosystem Matters* is that they have the power to make a difference. By taking action, whether it's changing personal behaviors or constructing a nature area on their school grounds, they can feel good about themselves and more hopeful about the future.

