Management Perspective of the Symposium on Giant Sequoia

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Abstract: Management of the giant sequoia must recognize that our society has strong emotional support for protection of this species. However, future decisions must be based on the ecosystem rather than the species or individual trees. All agencies must work on a cooperative basis for development of research, management strategies, and education. Greater understanding of long-term effects of management programs is needed. Decisions must give greater emphasis to the significance of future generations of the species, of the giant sequoia ecosystem and of our society.

Giant Sequoias-Their Place in the Ecosystem and Society is a very appropriate title and theme for this symposium. This concept links two important components in the debate over the future of the giant sequoias: the ecosystem and people.

During the past two days, extensive and diverse information has been provided from each conference participant. Field trips have also been offered in order to inspect and observe several contrasting management strategies. An analysis of this information can be summarized by the following five concepts: giant sequoias-the objects of our affection, the value of the ecosystem, the role of science, and the preservation of the giant sequoias for future generations.

Objects of Our Affection

The giant sequoias are the objects of our affection. These trees are a unique resource to most people and this cannot and should not be ignored. The value of the sequoias has been verified by common ideas appearing in each presentation at this symposium: "Sacred Object, National Treasure, Cathedral, Shrine of the Sierra, Big Trees, Monarchs, Hero Tree, King Plant." Clearly this species has special status. We must recognize and accept that any discussion, any study, and any examination of the giant sequoia stimulates extensive emotion and inspiration. We must always recognize that the sequoia is not an ordinary species, regardless of the abundance or rarity of these trees. The history of human involvement with the sequoia consistently records strong emotional support. Our challenge is to remember that while emotions are strong, we must always make our decisions and base our actions upon scientific information and recommendations.

What is the Value of the Ecosystem?

With the strength of this emotion, it is easy to focus our attention upon the species and fail to base management decisions upon this important question: what is the value of the ecosystem? We all know that there are many significant components of an ecosystem and that each plant and animal species has an important function. We also know that soils, water, and air are critical to this ecosystem. As we debate the function and the future of the giant sequoia, we must never forget that basic ecologic principles govern and control our lives and the future of the giant sequoias. We may not agree on the role and the relative importance of each component, but we must agree that ecosystem analysis and management should dominate.

As we work together at this symposium to exchange information, we must work together each day, recognizing that each of us has a role. Bio-regional coordination and interagency cooperation are crucial to the success of the giant sequoia. Most of the participants at this symposium have reported that ecosystems do not know political boundaries. Effective use of limited funding and resources clearly depends upon cooperation. We know that the bio-regional boundaries will change depending upon the specific resource under consideration. Factors such as management of air resources and soil resources must be evaluated differently.

There has been extensive cooperation in the past, but this must become more intense and with stronger direction. Interagency cooperation and coordination must be improved and focused. This means that each agency must dedicate funds and staffing to support strong and active interagency collaborative programs.

The USDI National Park Service, the USDA Forest Service, the California Department of Forestry, and Universities must enhance these specific functions:

- information exchange,
- research design,
- ecosystem change monitoring,
- ecosystem impacts,
- management strategy development.

The relationship between agencies and all people in our society is the same as the relationship between all components of the sequoia ecosystem. We must interact with each other on a constant basis simply because we are dependent upon each other and cannot function alone. This is the basis and the fundamental requirement of cooperation. We have the choice to compete or to cooperate.

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Impacts affecting sequoia groves are accumulative and have a major effect upon the species. The effects are even more important upon the systems that support the giant sequoia. Some impacts are universal such as air pollution. Other impacts are localized and are generally related to agency activities and policies. These include fire suppression, controlled fire management, constructing communities within sequoia groves, mechanical disturbance and logging activities. To understand and exchange information about the effects of various disturbances, we must develop a comprehensive and coordinated program to expand research and to exchange scientific information. We must also design comprehensive programs to inventory and monitor changes to groves that are managed under various strategies and for different objectives.

This comprehensive program, founded upon interagency cooperation, will provide excellent guidance to resource managers in the future. However, we must be cautious not to assume that scientific information will provide clear and perfect information for all decisions. Scientific information must be combined with solid and logical decisions made by resource managers.

Who Needs Science?

This need for input from resource managers evokes a basic question that we need to examine: what is the value of research and who needs science? At Sequoia and Kings Canyon National Parks, the contributions of science to the decision-making process are impressive and a strong demonstration of the value of science. Some examples include a better understanding of fire effects upon the sequoia, understanding of the effects of human activities such as air pollution on the sequoia and development of communities, roads, and trails in the groves. This research has resulted in modification of the prescribed fire programs and has been the basis for removal of large campgrounds and visitor facilities in the Giant Forest area of Sequoia National Park.

Research is critical as a basis for management decisions. We must not wait for research to provide all the answers, but we must have adequate knowledge to make sound management decisions. It is important to remember that any management plan is not doctrine, but is a collection of hypotheses that managers must constantly test and examine. Strong and well designed research programs linked with consistent interagency management cooperation will improve the opportunities for protection of giant sequoia ecosystems.

Giant Sequoia and Future Generations

With these basic principles established, we must never forget the critical importance of future generations. The fundamental and most important guidance we must follow is that our decisions and actions must consider the future. Do we really think about the long-term? It is reasonable to think and to plan in terms of the life span of a giant sequoia, to make our decisions in terms of 2,000 years. If this is our time frame, then our decisions will vastly improve the future vitality of the sequoia as a resource and as a species.

The inclusion of future generations as a component of ecosystem management is not limited to issues involving the giant sequoia. We must also remember that the resource systems must be strong and vital in the future if they are to support the sequoia species. The future of the giant sequoia depends upon our emotions as we view this species as the object of our affection. We must always make decisions based upon the value of the ecosystem. To succeed in management of the sequoia, we must constantly cooperate because we are all in this together. We must have good data and solid recommendations founded upon scientific research. Our decisions and actions must consider future generations. These principles are essential to each of us and to the future generations who will inherit the giant sequoia.