

Aspen Delineation Project

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Background

The Aspen Delineation Project is a cooperative interagency effort involving the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), and the California Department of Fish and Game to assess the extent, condition, history of treatment, and management options for quaking aspen (*Populus tremuloides*) in the Sierra Nevada and Warner Mountains. Aspen occurs in the montane zone of the Sierra Nevada–Cascade Range and is an important contributor to biodiversity in the region. There are concerns over an observed decline in the health and distribution of aspen stands throughout this area. Loss or potential loss of aspen can be attributed primarily to successional processes that occur in the absence of natural fire regimes and with excessive browsing by ungulates. These processes have occurred over the past 100 to 140 years. If unchecked, the probable result for most aspen stands is replacement by conifers. On the basis of current information, the long-term persistence of *P. tremuloides* is likely to require active management because of changes in fire regimes and browsing by livestock or wildlife.

The immediate objective of the Aspen Delineation Project is to promote the development and implementation of standardized aspen inventory and stand assessment protocols among cooperating land and resource management

agencies in California. The ultimate goal is to provide agency managers with the information and tools they need to achieve long-term conservation objectives for *P. tremuloides* in the Sierra Nevada and Warner Mountains. Tasks associated with achieving these objectives include (1) identifying which government agencies in California have aspen stands or jurisdictions related to aspen, (2) determining what information agency personnel have about their stands, (3) documenting what kind of stand restoration projects have been undertaken, (4) understanding what resources are needed to deal with aspen management issues, (5) identifying the principal agency contacts on aspen issues, and (6) determining what needs to be done to ensure the long-term persistence of this species in California.

Discussion

Since its inception in 2002, the Aspen Delineation Project has sponsored many events and activities designed to provide agency personnel with information and tools that will enhance their ability to manage *P. tremuloides*. The 2003 products and services include (1) sponsorship of a conference on Developing Tools for Aspen Management, which was held in Davis, California, in May 2003 and attended by more than 70 agency personnel and other interested parties; (2) production of a CD-ROM entitled “Protocol for Recording Aspen Location and Condition” (information available at <http://www.blm.gov/nstc/library/library.html>); (3) field crew training of BLM personnel in the Alturas, Eagle Lake, and Surprise Field Offices concerning implementation of the standardized aspen inventory and stand assessment

protocols and procedures for updating interagency data sets; (4) sponsorship of two field seminars (in Bishop and Alturas, California) to give BLM and USFS staff who are presently updating their land use plans an opportunity to discuss aspen management issues; and (5) production of an electronic aspen bibliographic database. The aspen bibliography that was developed in 2003 is a preliminary product that will be annotated and expanded to include library documents that are not readily available in electronic format.

The Aspen Delineation Project work plan for 2004 includes the following planned events and activities: (1) sponsoring additional field seminars similar to those offered in Alturas and Bishop in 2003; (2) developing recommended protocols for monitoring aspen regeneration on range allotments; (3) expanding and annotating the aspen bibliography; (4) cosponsoring an aspen symposium in conjunction with the February 2004 conference of the Western Section of the Wildlife Society (Rohnert Park, California); (5) reviewing protocol effectiveness over the last 2 years and revising the protocol as needed to improve its effectiveness; (6) developing a data dictionary linked to the protocol to improve crew efficiency; (7) cooperating with the California Department of Fish and Game on mapping known aspen locations; and (8) providing field crew training, on request, to enhance the ability of agency personnel to perform rapid assessments of aspen stand locations and condition.

The 2004 field seminars focus on aspen management issues in the Central Sierra Nevada. The

targeted audience includes wildlife biologists, botanists, hydrologists, silviculturists, fuels treatment specialists, archaeologists, local nongovernmental organizations, and County Agriculture Extension agents. The next stages of bibliography development include identification of published literature not available in electronic format (Phase 2); development and implementation of a strategy for annotating records when abstracts or annotations are not available (Phase 3); and development and implementation of a strategy for identifying and retrieving "gray literature" (Phase 4). The annotation and expansion of the aspen bibliography is being funded primarily by the Rocky Mountain Elk Foundation, which became an active participant in the Aspen Delineation Project after the May 2003 conference on Developing Tools for Aspen Management.

Conclusion

Managing aspen to ensure that it remains a significant component of

montane ecosystems in the Sierra Nevada and Warner Mountains will require that agency personnel have access to accurate data concerning the status and trends of *P. tremuloides* stands within their jurisdictions, as well as a good understanding of long-term ecological processes. The Aspen Delineation Project was initiated to provide agency personnel with some of the information and tools they need to achieve long-term aspen conservation objectives. Although the focus of this project has been on California aspen management issues, some of the knowledge and products developed in conjunction with the Aspen Delineation Project may be transferable to other States and regions. Selected deliverables for the Aspen Delineation Project—including the "Protocol for Recording Aspen Location and Condition," the preliminary Aspen Bibliography, 2002 Summary Report, 2003 Summary Report, and 2004 Work Plan—may be downloaded from the California-BLM Web site

(<http://www.ca.blm.gov/pal/biology/index.html>) or obtained by requesting such products from the contacts listed below.

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