

FORT COLLINS SCIENCE CENTER POLICY ANALYSIS AND SCIENCE ASSISTANCE

CAPABILITIES

Most resource management decisions involve the integrated use of biological, sociological, and economic information. Combining this information provides a more comprehensive basis for making effective land management and conservation decisions. Toward this end, scientists in the Policy Analysis and Science Assistance Program (PASA) of the Fort Collins Science Center (FORT) contribute expert knowledge for natural resources management by conducting biological, social, economic, and institutional analyses of conservation policies and management practices.



PASA's mission is to integrate biological, social, and economic research so that resource managers can use the resulting information to make informed decisions and resolve resource management conflicts. PASA scientists pursue and conduct scientific analyses that help agencies and Native American tribes to (1) identify impending policy controversies and areas where earth and biological science research is needed to address future policy questions; (2) develop methods and approaches to assist researchers in preparing scientific evidence; (3) assess habitat alteration in a manner consistent with policy needs; and (4) evaluate policy options. Program scientists also evaluate policy options (e.g., effects of different land treatments, fish and wildlife management practices, or visitor/recreation management practices) in response to specific questions faced by policy-makers and managers.

MANAGEMENT, PLANNING, AND POLICY EVALUATION PROJECT



Visitor and Citizen Perceptions. This research is designed to elicit information about what the public perceives to be the important elements for sustaining communities and landscapes. Are there certain elements that residents of a community or visitors to a protected area think should be preserved, maintained, or restored to attain desired future conditions? The unique approach employed in this study in a national park and two regions of the Colorado Plateau has generated data that has helped managers assess public perceptions and preferences regarding various management scenarios.



Socioeconomic Impacts of Elk and Bison Management in the Southern Greater Yellowstone Area. Elk and bison herds inhabiting Grand Teton National Park and the National Elk Refuge represent one of the largest concentrations of free-ranging bison and elk in the world. Federal managers are devising a long-term strategy for managing these animals, which migrate across several jurisdictional boundaries. In so doing, they must balance many competing interests and address the economic impact of each proposed management alternative. In support of this process, PASA scientists are conducting research

to quantify citizens' attitudes, knowledge, and preferences; determine economic values; and estimate the regional economic impacts, including local income and employment effects, related to these proposed management alternatives. Such information can yield valuable insights regarding the ramifications of each management option before it is proposed in an Environmental Impact Statement.

Natural Resource Negotiations. Since 1990, natural resource managers have seen a growing trend to include local stakeholders in the decision-making process. The Legal-Institutional Analysis Model (LIAM), developed by FORT social scientists as a tool for negotiation preparation, is designed to accomplish three goals: (1) plan for participation in a negotiation, (2) predict organizational behavior, and (3) examine likely negotiation strategies. LIAM has been used in collaborative decision-making efforts involving water, natural resource, and wildlife decisions throughout the United States and in Mexico. PASA scientists have also developed and continue to conduct courses in negotiations training in which participants learn and practice the principles, skills, and techniques used in successful natural resource negotiations. The courses are based on research that PASA scientists have conducted since the mid-1980's on multi-party natural resource negotiations. For information about upcoming course offerings, see www.fort.usgs.gov/products, or contact the U.S. Fish and Wildlife Service's National Conservation Training Center.

DEVELOPMENT OF ADAPTIVE LAND MANAGEMENT MODELS AND PRACTICES PROJECT



Support to the U.S. Department of Agriculture's (USDA) Conservation Reserve Program. The USDA Conservation Reserve Program (CRP) is the largest conservation program in U.S. history, affecting land in all 50 states. Over 28 million acres of private land are planted to grasses under the CRP. Benefits to wildlife have been well documented and account in large part for widespread acceptance and several renewals of the program. PASA scientists have been conducting a long-term study looking at changes in CRP grassland composition and how these changes influence habitat quality for different species of wildlife. In addition, PASA scientists surveyed landowners on their perceptions about wildlife issues, the quality of assistance provided by USDA, and long-term management of CRP lands. This helps policymakers understand how the CRP program is working "on the ground" for participating farmers and ranchers. These cooperative studies between the USDA

and the U.S. Geological Survey focus on identification of economically and socially acceptable management practices that achieve long-term wildlife management goals associated with agricultural practices. The resulting information improves the effectiveness of the CRP.

Support to the Comprehensive Conservation Planning Process.

The U.S. Fish and Wildlife Service is required by law to develop a Comprehensive Conservation Plan (CCP) for each unit of the National Wildlife Refuge System. A CCP guides management decisions and sets forth goals, objectives, and strategies for achieving refuge purposes. The CCP process offers a real opportunity to evaluate and improve habitat and wildlife management. In addition, each CCP must address the impacts of current and future social and economic conditions. FORT scientists are working with several



refuges that are developing CCPs to (1) provide technical assistance in developing high-quality habitat objectives, and (2) provide and interpret data on the likely social, economic, and institutional results of each CCP management option. Over the past several years, FORT scientists have been developing and conducting workshops to help refuges develop habitat-based goals and objectives for their CCPs. Over the past 20 years, FORT scientists have provided other forms of technical assistance (on-site management consultations, simulation modeling, information synthesis, software development, and handbook publication) to over 200 refuges.

STAFF

Science Director: Berton Lee Lamb

Ph.D. Supervisory Social Scientist: water resource policy, conflict resolution, institutional analysis, instream flow policy, natural resource negotiation.

Allen, Arthur, B.S. Project Leader: USDA conservation policies, agroforestry, habitat assessment, modeling.

Burkardt, Nina, M.A. Social Science Analyst: natural resource negotiation, water resource policy, institutional analysis.

Caughlan, Lynne, Ph.D. Economist: natural resource policy, regional economic analysis.

Gillette, Shana, Ph.D. Environmental Communication: natural resource negotiation, conflict resolution, human health and the environment.

Haire, Sandra, Ph.D. candidate. Ecologist: fire ecology, GIS/remote sensing.



Ponds, Phadrea, M.S. Wildlife Biologist: human dimensions of wildlife and natural resource management.

Schroeder, Richard, B.S. Wildlife Biologist: habitat modeling, community modeling, habitat assessment, landscape ecology, ornithology.

Sexton, Natalie, M.S. Project Leader: human dimensions of wildlife management, natural resource management.

Stotler, Julie, B.S. candidate. Recreation and Tourism Specialist: on detail from Bureau of Land Management, 2002-2003.

Taylor, Jonathan, Ph.D. Social Science Analyst: natural resource negotiation, human perceptions of natural resources.

Contractor staff provide expertise in the areas of conflict resolution, instream flow policy, economics, and analysis of critical habitat designations.



CONTACT INFORMATION

Berton Lee Lamb

U.S. Geological Survey
Fort Collins Science Center
2150 Centre Avenue, Building C
Fort Collins, CO 80526-8118
Tel. 970.226.9314
Fax 970.226.9230
lee_lamb@usgs.gov

FORT Online provides information about projects, FORT scientists, their publications and other products, science features, and much more.

Visit the FORT website at <http://www.fort.usgs.gov>

Learn more about the Policy Analysis and Science Assistance Program at <http://www.fort.usgs.gov/research/400/400.asp>