

Arkansas Game and Fish Commission



Strategic Elk Management Plan

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Strategic Elk Management Plan

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In Consultation with
Strategic Elk Management Citizen Advisory Group

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The 2009 Strategic Elk Management Plan Mission Statement

The mission of this document is to provide strategic direction that will result in quality recreational opportunities by maintaining a healthy elk herd consistent with long-term habitat capabilities using sound wildlife management science and open public input.

History of Elk in Arkansas

Historically, the North American Elk (*Cervus elaphus*) was one of the most widely distributed animals on the North American continent. Elk habitat ranged across most of the continental United States extending northward to Manitoba and Saskatchewan. North American Elk were a staple for North American Indians, but due to European exploitation, elk populations were reduced to a few herds in the Rocky Mountains. The elk's ability to adapt to a changing environment prevented total extirpation.

The eastern elk (*Cervus elaphus canadensis*) was the subspecies adapted to the environmental conditions in the eastern boreal and hardwood forests and was native to Arkansas (Cartwright 2001). Archaeological and historical records indicate that elk occurred in 14 counties of Arkansas (Angelo, 2001) as late as 1834. Arkansas's native elk probably persisted no later than the 1840s, as no reliable historical record reports their occurrence after this date (Anonymous 1951, Sealander and Heidt 1990).

The U.S. Forest Service introduced three bull and eight cow Rocky Mountain Elk (*Cervus elaphus nelsoni*) in the Black Mountain Refuge in Franklin County in 1933. The 11 elk originated from the Wichita Mountains Wildlife Refuge in Oklahoma. An Arkansas Game and Fish Commission study conducted in 1943 indicated that an estimated population of 75 elk remained in and around Franklin County (Anonymous 1951). The population grew to an estimated 125 animals by 1948. It is estimated that the herd reached a total of 200 animals, then vanished. The cause for the disappearance is largely unknown, but illegal hunting, natural mortality and reduction of habitat are speculated as the most probable factors.

The AGFC, in cooperation with the private citizens of Newton County, initiated another elk restoration project in 1981. Between 1981 and 1985, a total of 112 Rocky Mountain Elk from Colorado (n=107) and Nebraska (n=5) were stocked at five release sites near the Buffalo National River in Newton County (Appendix I). Former AGFC Commissioner Hilary Jones was instrumental in the establishment and protection of the newly acquired elk herd. To honor his accomplishment, the herd was designated the Hilary Jones Elk Herd on June 16, 1986. County, state, federal and private interests (including the Rocky Mountain Elk Foundation) have formed partnerships to manage elk habitat and populations along the Buffalo National River.

Arkansas's first modern elk hunting season was conducted in 1998 with 17 elk harvested. To date, 254 elk (118 antlered bulls and 136 cows) have been legally harvested in Arkansas.

Review of 2001 Strategic Elk Management Plan

The 2001 Strategic Elk Management Plan was developed by a team of representatives of the AGFC, National Park Service and the Rocky Mountain Elk Foundation. The plan provided strategic, long-term guidance for the Commission's elk management program. However, no public input was considered during plan development. The plan was intended to be evaluated and updated on a 5-year cycle beginning in 2001.

Purpose of 2009 Strategic Elk Management Plan

The 2009 Strategic Elk Management Plan (hereafter referred to as The Plan) was developed to provide long-term, strategic goals using public input in conjunction with scientific wildlife management principles. The Plan will be evaluated and updated on a 5-year cycle.

Development of Plan

To better understand and address the overall desires related to public use of the elk resource, AGFC contracted an independent facilitator to assist developing an all-inclusive elk management plan for Arkansas.

During the development of this plan, a 35-member Elk Management Citizen Advisory Group (hereafter referred to as Advisory Group) was formed to assist with formulation of the management plan. Members were selected based on their ability to represent and provide perspectives of the many aspects of elk management in Arkansas. An Advisory Group Charter (Appendix III) was developed to help guide the work of the Advisory Group. Guiding principles in the Advisory Group Charter were:

- a. To represent and provide perspectives of all elk stakeholders.
- b. To assist in the completion of The Plan by providing input regarding elk management goals.
- c. To advise and assist with the implementation of The Plan by reviewing and providing input on various management scenarios developed by the AGFC.
- d. To help with the evaluation of elk management in Arkansas as the result of implementation of The Plan.
- e. To provide information and perspectives to help with needed modifications of The Plan.

In February 2009, four public workshops and an online public/AGFC staff questionnaire were conducted. Participants were asked to answer the following two questions:

1. What are your issues, concerns or problems about elk and elk management in Arkansas?

2. What is your advice, recommendations or suggestions concerning actions that should be taken regarding elk management in Arkansas?

Participant responses were compiled and analyzed to provide direction for development of an initial outline of the plan goals and objectives (Appendix IV).

In May 2009, a second round of four public workshops was held at the same locations as in February. The purpose of these workshops was to determine if the AGFC had correctly interpreted the public's perceptions concerning the two questions. Participants were provided the opportunity to comment on the draft goals and objective statements. At each facilitated workshop, attendees were asked to answer the following three questions:

1. What is your assessment (score 1-10) of how well the draft plan identifies the required goals for improving elk management in Arkansas?
2. What is your identification of what you think are the most important strengths/weakness of the draft goals?
3. What are your suggestions, along with your rationale, for the changes you recommend concerning the goals?

An Elk Summit Workshop was held in late June 2009. Participants were asked to answer the following two questions:

1. What are your suggestions about how to achieve the goals and objectives in The Plan?
2. What are your suggestions about who needs to be involved in helping achieve your suggested actions?

Following the Elk Summit Workshop, the Elk Committee analyzed all public input and produced a working draft of The Plan.

Organization of the Plan

For organizational purposes, the plan is divided into the five major goals related to elk management in Arkansas:

Resource
Habitat
Sociological

Education/Communication
Enforcement

Implementation of the Plan

The implementation of the plan will involve the following:

Develop an annual list of action items derived from comments gathered from the public scoping workshops and recommendations from the Elk Committee and Advisory Group.

Submit recommendations/regulations/budget from the Elk Committee for review by the Advisory Group, AGFC staff and general public, with the final approval from AGFC Commissioners.

Implement, monitor and evaluate approved strategies

Provide annual status reports which will be included as appendices in this plan.

Long-term consistency in regulations will be needed to effectively monitor results.

Goals and Objectives

Resource Goal: Monitor and manage for a healthy elk herd.

Objective A: Determine, manage and monitor elk populations consistent with desired biological targets and herd conditions for each elk management zone

Strategy 1: Use available population and habitat data to update the current elk range.

Strategy 2: Evaluate current elk zone structure based on key factors, such as habitat conditions, elk population dynamics, documented nuisance elk complaints, ownership patterns and land use patterns. Boundaries should be well-defined by landmarks (i.e. roads, water ways, etc.) and easily identifiable.

Strategy 3: Develop a statistically sound late winter survey technique that will produce defensible data on bull-to-cow and cow-to-calf ratios, population estimates and distribution data.

Strategy 4: Develop elk harvest guidelines for revised elk zones.

Strategy 5: Manage and monitor herd to minimize impact of disease through continuation of surveillance of Chronic Wasting Disease (CWD) as well as Bovine Brucellosis, Leptospirosis, Bluetongue virus, Bovine Viral Diarrhea, Epizootic Hemorrhagic Disease, Infectious Bovine Rhinotracheitis and Parainfluenza-3.

Strategy 6: Maintain mandatory biological data collection on a statistically valid sample size. Data collected may include: body weight, antler measurements, age analysis, chest girth and reproductive tracts from adult females.

Strategy 7: Maintain regulations to minimize potential risk of disease transmission from captive cervids.

Strategy 8: Evaluate the possibility of expanding elk range. Elk range expansion would depend on public approval, suitable elk habitat and population goals.

Objective B: Conduct scientific research to support the mission, goals and objectives outlined in this strategic elk management plan.

Strategy 1: Conduct an all-inclusive review of available data to develop a baseline report on elk population status, movement, reproduction, natality, mortality, habitat use and food habits.

Strategy 2: Define and prioritize for implementation needed elk research that will provide quantitative results that will assist in managing the resource.

Habitat Goal: Enhance and improve habitat with an emphasis on elk.

Objective A: Increase and enhance elk habitat on Commission-managed lands within the elk range.

Strategy 1: Develop elk habitat management guidelines that will provide guidance in development of WMA master plans.

Objective B: Identify strategically important public lands on which to improve or enhance elk habitat.

Strategy 1: Assist with the implementation and future revisions of the Buffalo National River Terrestrial Habitat Management Plan and all other relevant plans.

Strategy 2: Assist with the implementation and future revisions of the Ozark/St. Francis National Forest Land and Resource Management Plan.

Strategy 3: Assist with the implementation of the Bearcat Hollow Cooperative Habitat Improvement Project.

Objective C: Maintain/strengthen existing cooperative partnerships with government and non-profit wildlife conservation organizations and actively pursue other partners.

Strategy 1: Encourage the use of Rocky Mountain Elk Foundation funding sources, including Project Advisory Committee funds and additional contributions, to improve elk habitat on public land.

Strategy 2: Maintain participation with conservation agencies through the AGFC Elk Committee and Annual AGFC/USFS Coop Meeting to promote habitat projects.

Objective D: Identify strategically important private lands within the elk range and provide technical assistance through habitat assessments and habitat improvement strategies.

Strategy 1: Evaluate the current Elk Priority Area under the Wildlife Habitat Incentive Program (WHIP) to ensure projects are in coordination with The Plan.

Strategy 2: Incorporate the development of an Elk Management Assistance Program (EMAP) in the revision of the Private Lands Elk Management Program.

Strategy 3: Assist private landowners interested in combining acreage for cooperative elk habitat improvement areas.

Sociological Goal: Be receptive to public comments regarding elk management.

Objective A: Address issues with regard to nuisance elk.

Strategy 1: Maintain elk zones that are functional for effectively addressing elk problems on private property.

Strategy 2: Develop zone specific population objectives and harvest guidelines for private land elk zones.

Strategy 3: Increase quality habitat management on public property as a known technique and distribution tool to reduce elk use of private property.

Strategy 4: Revise/implement the Private Lands Elk Management Plan.

Objective B: Maintain and increase public support level.

Strategy 1: Maintain open communication with the Advisory Group as a tool for gathering public opinions.

Strategy 2: Conduct stakeholder survey to provide quantitative results that will be comparable to the 2003 baseline stakeholder's opinion survey.

Strategy 3: Publish and distribute stakeholder's opinion survey information findings statewide.

Strategy 4: Maintain open line of communication with local groups and agencies (i.e. county quorum courts, county judges and state representatives).

Objective C: Explore opportunities of managing current elk-viewing location in Boxley Valley.

Strategy 1: Work with local residents and relevant authorities (i.e. Arkansas Highway Department) to better manage elk-viewing.

Objective D: Explore means to document and quantify nuisance elk impact.

Strategy 1: Continue to maintain log of nuisance elk complaints.

Strategy 2: Pursue documentation of forage consumption by elk on representative sites in public and private ownership.

Strategy 3: Strengthen requirements in private lands elk plan to allow crop appraisals to document forage loss.

Strategy 4: Use stakeholder's opinion survey responses to quantify perceived monetary damage.

Education/Communication Goal: Increase awareness and appreciation of Arkansas's elk herd.

Objective A: Provide information about Arkansas elk by using all media outlets.

Strategy 1: Establish an on-line, all-inclusive, elk information Web site.

Strategy 2: Publicize the \$5,000 elk poaching reward.

Strategy 3: Develop a recognizable sign for private landowners that will deter trespassing in elk-viewing areas.

Strategy 4: Develop an all-inclusive elk DVD.

Strategy 5: Publish elk program accomplishments (i.e. harvest summary, aerial elk counts and disease monitoring).

Objective B: Provide interpretive opportunities to teach about elk, their habitat and history.

Strategy 1: Maintain funding and support for the Ponca Elk Education Center and Hilary Jones Wildlife Museum in Jasper.

Strategy 2: Expand the use of interpretive signs; primarily on Commission-owned property.

Strategy 3: Increase elk information distribution using teacher in-service training.

Objective C: Provide information to private landowners concerning elk management.

Strategy 1: Conduct field day workshops for private landowners interested in elk management.

Strategy 2: Develop an EMAP newsletter.

Strategy 3: Promote conservation easements in the elk range.

Strategy 4: Develop fact sheet for private landowners who are interested in habitat management, food plot management and general elk management information.

Objective D: Promote the economic impacts of elk hunting and elk tourism to local communities.

Strategy 1: Develop promotional items to increase awareness of elk resource.

Strategy 2: Gather data related to the economic impact of the elk resource in Arkansas.

Strategy 3: Pursue the development of on-line elk-viewing opportunity.

Strategy 4: Evaluate locations for development of additional elk-viewing areas in natural settings.

Strategy 5: Partner with relevant agencies and groups (i.e. chamber of commerce, Arkansas Department of Parks and Tourism) to promote elk tourism.

Enforcement Goal: Ensure compliance of elk regulations.

Objective A: Coordinate efforts within the AGFC and other Law Enforcement Agencies to address elk-resource violations.

Strategy 1: Maintain open communication with AGFC/NPS/USFS to ensure effective elk regulations.

Strategy 2: Develop an AGFC/NPS/USFS cooperative enforcement protocol on dealing with elk violations.

Strategy 3: Maintain a reward for elk poaching of \$5,000

Strategy 4: Maintain accurate reporting of elk mortality, disease issues, incidents and violations.

Strategy 5: Promote communication between wildlife officers and local sportsmen using community-oriented policing techniques and by presenting credible witness programs at elk management workshops.

Literature Cited

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- Cartwright, M.E., E. Linebarger, B. McAnally, J. Gallagher, S. Lail, M. Baron, C. Haralson, K. Thomas, B. White, P. Speer and K. Harper. 2001. Arkansas Game and Fish Commission Strategic Elk Management Plan. Arkansas Game and Fish Commission. Little Rock, Arkansas.
- Sealander, J.A. and G.A. Heidt. 1990. Arkansas mammals: their natural history, classification and distribution. The University of Arkansas Press. Fayetteville. 308 pp.

Appendix I

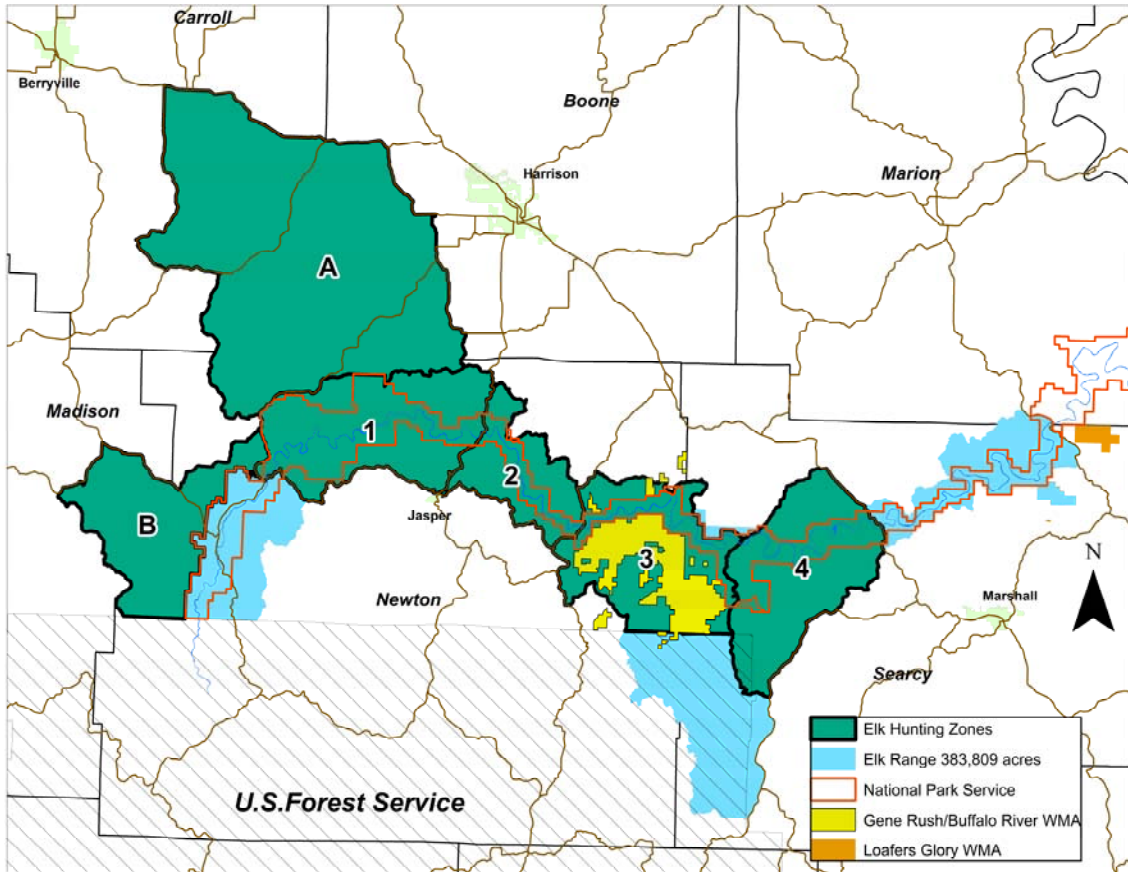
Elk Stocked in Arkansas between 1981 and 1985

Year	Source	Bulls	Cows	Calves	Unknowns	Total	Release County
1981	Colorado	1	3	3	0	7	Newton
1983	Colorado	0	0	0	24	24	Newton
1984	Nebraska	0	7	0	0	7	Newton
1985	Colorado	5	44	25	0	74	Newton
Totals		6	54	28	24	112	

Appendix II

Map

Map 1: Map of current elk range and elk hunting zones.



Appendix III

Elk Management Advisory Group Charter

Purpose:

1. The purpose of the Elk Plan Advisory Group is to assist the Arkansas Game and Fish Commission in updating and improving the Strategic Elk Management Plan by representing a particular segment of stakeholders and providing the Elk Team with constructive input relevant to the interests, concerns and expectations of similar stakeholders.

Authority:

1. The people of Arkansas have vested authority and responsibility for control, management, restoration, conservation and regulation of birds, fish, game and wildlife resources in the Arkansas Game and Fish Commission. This broad stewardship mission requires the application of sound biological principles and knowledge of the values, uses and attitudes people have for their wildlife. The Commission invites and facilitates public involvement early in the decision process and strives to incorporate public opinion in plans and programs.
2. The Commission retains final decision authority over all plans and programs.

Advisory Group Objectives:

1. To represent the various users and clarify stakeholder interests in the elk resource.
2. To assist in evaluation and revision of the Strategic Elk Management Plan.
3. To continue communication and participation during implementation and evaluation of the new plan.

Expectations:

1. The Wildlife Division Elk Team has nominated a group of individuals thought to be representative of substantially all elk resource stakeholders. They will receive a written invitation to participate.
2. An initial meeting will be conducted with the Advisor Group members to obtain commitments from individuals nominated by the Wildlife Management Elk Team to, clarify mutual expectations, improve contact information and explain the whole planning process and schedule.
3. Advisory Group membership should remain stable unless unforeseen individual circumstances develop or the Group recognizes the need for additional stakeholder representation.
4. Meetings will be conducted by an outside facilitator and will follow a planning process-driven agenda.
5. While Advisory Group members are free to attend public scoping workshops they will have no official workshop function except as indicated in advisory group communications and/or scheduled advisory group meetings.

6. AGFC internet and email will be used by the Elk Team Coordinator to document Advisory Group work and keep members informed of planning progress between meetings.

Advisory Group Roles and Responsibilities:

1. Read and retain information provided by the Elk Team Coordinator or facilitator.
2. Keep current on Web site updates and participate in all Group e-mail communications and scheduled meetings.
3. Respond to requests for reviews, critiques and information.
4. Articulate your stakeholder interest(s) and recognize legitimacy of other stakeholders.
5. Use collaboration and teamwork to identify issues and structure advisory recommendations with substantial informed consent.
6. Identify with the overall planning process and continue your involvement during implementation and evaluation.
7. Know the Arkansas Game and Fish Commission is very much appreciative of your voluntary efforts and expertise.

AGFC Wildlife Management Division Responsibilities:

1. Coordinate with facilitator on Advisory Group charter and agenda development.
2. Assist facilitator with Advisory Group meetings.
3. Provide the best available scientific information on elk management in Arkansas.
4. Provide historical perspective and AGFC policy advice to the Advisory Group.
5. Notify Advisory Group of changing circumstances, new information, etc.
6. Use all appropriate communication techniques to provide direction and communication essential to Advisory Group roles described above.
7. Use the AGFC Web site for public information and updates on Advisory Group progress.

Funding and Support:

1. Advisory Group expenses for meeting facilities and supplies will be funded from the Wildlife Management Division budget.

Appendix IV

Primary Issues of Concern Identified by Public Scoping Workshops

Elk Population	Ponca	Jasper	Marshall	Little Rock
Explore elk stocking opportunities in the Ouachita National Forest				*
Reduce elk population in Boxley Valley	*			
Maintain elk population below habitat carrying capacity			*	
Elk not equally distributed throughout elk range	*			
Habitat	Ponca	Jasper	Marshall	Little Rock
Maximize elk habitat by utilizing all available tools and methods				*
Concerns about habitat management on public lands		*		
Overgrazing habitat in Boxley Valley	*			
Manage the forest to promote elk habitat		*		
Reduce amount of forest manipulation to create elk habitat		*		
Communication	Ponca	Jasper	Marshall	Little Rock
Increase communication with AGFC, AHTD, NPS and residents in elk range	*	*		
Education	Ponca	Jasper	Marshall	Little Rock
Increase education and awareness about elk resource	*			*
Education on marketing elk for private landowners		*		
Private Lands	Ponca	Jasper	Marshall	Little Rock
Compensate landowners for damage caused by elk	*		*	
Elk damage property (ex: fences, eat cow minerals, gardens and orchards)	*		*	
Public Lands	Ponca	Jasper	Marshall	Little Rock
Limited access of Richland Valley			*	
Regulations	Ponca	Jasper	Marshall	Little Rock
Re-evaluate current permit system	*	*	*	
Eliminate high fence operations				*
Increase elk hunting opportunities for handicap and youth hunters			*	
Evaluate current elk zone structure			*	
Safety	Ponca	Jasper	Marshall	Little Rock
Traffic issues in Boxley Valley		*	*	
Economic Impact	Ponca	Jasper	Marshall	Little Rock
Evaluate the economic impact of elk resource			*	
Loss of tax base and revenue for counties			*	
Tourism	Ponca	Jasper	Marshall	Little Rock
Improve viewing areas in Boxley Valley		*		
Increase viewing opportunities throughout elk range		*	*	*

Appendix V

Action Items for 2009-10

Throughout the development of the 2009 Strategic Elk Management Plan it became obvious some of the issues identified were more important to the public than others. Some of the issues included: current elk zone structure, conflict with elk on private property and Boxley Valley viewing area. The AGFC thought these issues would serve as a starting point for plan implementation.

The following is a list of action items to be considered for initiation during 2009-10. It is clear that some of the items can be addressed simultaneously because they share common data requirements, or actions.

Resource Goal

- Objective A
 - Strategy 1: Use available population and habitat data to update the current elk range.
 - Strategy 2: Evaluate current elk zone structure based on key factors, such as habitat conditions, elk population dynamics, documented nuisance elk complaints, ownership patterns and land use patterns. Boundaries should be well-defined by landmarks (i.e. roads, waterways, etc...) and easily identifiable for the public.
 - Strategy 3: Develop a statistically sound late winter survey technique that will produce defensible data on bull-to-cow and cow-to-calf ratios, population estimate and distribution data.
 - Strategy 4: Develop elk harvest guidelines for revised elk zones.

Habitat Goal

- Objective A
 - Strategy 1: Develop elk habitat management guidelines to provide guidance in the development of WMA master plans.
- Objective B
 - Strategy 3: Assist with the implementation of the Bearcat Hollow Cooperative Habitat Improvement Project.
- Objective D
 - Strategy 2: Incorporate the development of an Elk Management Assistance Program (EMAP) in the revision of the Private Lands Elk Management Program.

Sociological Goal

- Objective A
 - Strategy 4: Revise/implement the Private Lands Elk Management Plan.
- Objective B
 - Strategy 2: Conduct stakeholder survey to provide quantitative results that will be compared to the 2003 baseline stakeholder's opinion survey.
 - Strategy 3: Publish and distribute stakeholder's opinion survey information findings statewide.
 - Strategy 4: Maintain open line of communication with local groups and agencies (i.e. county quorum courts, county judges and state representatives).
- Objective C
 - Strategy 1: Work with local residents and relevant authorities (i.e. Arkansas Highway Department) to better manage elk-viewing.

Education/Communication Goal

- Objective A
 - Strategy 1: Establish an on-line, all-inclusive, elk information Web site.
- Objective C
 - Strategy 1: Conduct field day workshops for private landowners interested in elk management.
 - Strategy 2: Develop an EMAP newsletter.
- Objective D
 - Strategy 3: Pursue the development of on-line elk-viewing opportunity.

Enforcement Goal

- Objective A
 - Strategy 5: Promote communication between wildlife officers and local sportsmen using community-oriented policing techniques and by presenting credible witness programs at elk management workshops.