

Finding of No Significant Impact, Buffalo National River Elk Management Plan Environmental Assessment




National Park Service
U.S. Department of the Interior

Buffalo National River
Arkansas

FINDING OF NO SIGNIFICANT IMPACT
Elk Management Plan / Environmental Assessment

Recommended:



Mark A. Foust
Superintendent, Buffalo National River

9-25-19

Date

Approved:



Patricia S. Trap
Acting NPS Regional Director, DOI Unified Regions 3, 4, and 5

10.7.2019

Date

INTRODUCTION

The National Park Service (NPS) has prepared this Finding of No Significant Impact (FONSI) for the Elk Management Plan Environmental Assessment (EA) for Buffalo National River (the park). The statements and conclusions reached in this FONSI are based on documentation and analysis provided in the EA and associated decision file. To the extent necessary, relevant sections of the EA are hereby incorporated by reference into this FONSI and summarized below. Hunting within Buffalo National River was authorized by Congress when the park was created. Between 1981 and 1985, the Arkansas Game and Fish Commission (AGFC), in cooperation with private citizens of Newton County, released 112 Rocky Mountain Elk (*Cervus elaphus nelsoni*) in Newton County near Buffalo National River. Since then, the population has grown to more than 600 state-wide, with the core of the population residing within and near the park. While Arkansas Game and Fish Commission has established hunting seasons within and near the park (with the exception of the Boxley Valley, which is currently a no hunting zone), the elk population continues to climb. An elk management plan is needed in order to ensure protection of park resources and values by addressing high elk population density, reduce negative impacts from elk to private lands, reduce impacts to traffic flow resulting from elk viewing, reduce elk-landowner conflicts in the Boxley Valley area, and to reduce the prevalence of chronic wasting disease (CWD).

The EA analyzes two alternatives. Alternative A is the no action alternative. Under Alternative A, the no action alternative, current elk and deer management practices in the park would continue. Those practices and operations include allowing elk hunting in most of the park (with the exception of Boxley Valley) per state regulations. Animals exhibiting signs of sickness or disease may or may not be removed. No culling of elk would occur except for purposes of permitted research programs. Elk research and monitoring would continue to be allowed within the park by permit, but no systematic, long-term research program would be pursued by the park. Arkansas Game and Fish Commission would continue its long-term population monitoring program.

Alternative B, identified as the proposed action and preferred alternative in the EA, would allow existing hunting within the park to continue and also allow for the following (discussed in more detail below): elk hunting in Boxley Valley, removal of overabundant elk by the NPS and AGFC (culling), habitat enhancement outside of Boxley Valley, and removal of individual elk showing signs of CWD or other serious communicable elk diseases.

Three public meetings for residents, businesses, and stakeholder groups were held in August, 2016. An EA was published for a 30-day public review and comment period in March, 2019. During that public comment period, Buffalo National River hosted public meetings in Jasper, Arkansas and Ponca, Arkansas. Tribal consultation, Endangered Species Act Section 7 consultation, and National Historic Preservation Act Section 106 consultation have been completed. A summary of the public comments and the NPS responses to those comments are attached to this FONSI, in Attachment 1.

SELECTED ACTION

The NPS has selected Alternative B (hereinafter referred to as the “selected action”). The following actions will occur under the selected action:

Elk hunting in Boxley Valley. Elk will be managed in Boxley Valley, primarily through the use of hunting. Aerial survey data since 1991 indicate that the Boxley herd increases by approximately seven animals per year. The target population of elk in Boxley Valley is in the range of 70 to 100 elk, but the Boxley herd was near 180 elk in 2013. A drop in elk population occurred immediately following and during the CWD culling and testing in 2016. The current elk population is in the target population range of 70 to 100 animals. If numbers exceed the target population, annual take would occur to manage herd populations in the target population range. Park managers and officials from AGFC will establish a regulated elk hunting zone and season in Boxley Valley through the state of Arkansas’ regulatory process. Recreational hunters will individually harvest elk to maintain the elk population in Boxley Valley to a range that meets social carrying capacities (between 70 and 100 animals). Areas where no-hunting is permitted will be established to create safety buffers around private land and dwellings, as requested by landowners. No-hunting zones will also be established around congested areas and high visitor use areas such as the Ponca river access and the Lost Valley trailhead and hiking trail. AGFC and NPS will consider a range of hunting methods including the use of high powered rifles, muzzle loading rifles, and archery equipment. Hunting harvest also will continue to be managed throughout the park to reduce elk density in accordance with the 2009 Strategic Elk Management Plan (Appendix B in the EA).

Removal of overabundant elk. If hunting is not successful in maintaining current elk populations, NPS and AGFC officials will utilize sharpshooting to reduce numbers of elk to reach the target of 70 to 100 animals. Hunter success in reducing elk numbers will be evaluated annually; if after several years hunting alone does not keep elk numbers in the target range of 70 to 100 animals, sharpshooting will be employed. Animals may be baited and unique tools, including night vision scopes and muzzle suppressors, also could be used. Carcasses will be removed from the site and incinerated or disposed of in a landfill off-site. Meat may be donated to an appropriate food distribution center if it has been tested and determined to be safe for consumption.

Habitat enhancement in historic agricultural fields. Agriculture fields within the park and in proximity to (but outside) Boxley Valley may be enhanced by seeding with plants that are palatable and desirable to elk. Such enhancements would draw elk away from Boxley Valley and redistribute elk, thereby reducing their density in Boxley Valley.

Removal of individual sick elk. If animals are exhibiting clinical signs of illness indicating infection by CWD or other serious communicable elk diseases, NPS and AGFC officials will remove these individual elk through sharpshooting. Animals will be tested for disease and their carcasses will be incinerated and disposed of in a landfill off-site.

This alternative integrates an adaptive elk management framework. Monitoring results based upon a comparison of annual elk harvests from Boxley Valley and the surrounding ten miles, as well as annual aerial population surveys, will be analyzed to determine the effectiveness of the management actions. Monitoring for CWD, and other wildlife health issues, will also include animals taken in the Boxley Valley area. Information from monitoring will be used to determine if hunting is meeting the population and wildlife health management goals. If the management goals are not reached, sharpshooting may be employed to reduce elk numbers and reach the target population level.

RATIONALE FOR DECISION

The NPS has chosen to implement the selected action (Alternative B) for implementation because it best meets the purpose and need for taking action. The selected action will provide the NPS with sufficient tools to maintain the elk population within the ecological and social carrying capacity appropriate for the area. This, in turn, will result in healthier elk and a lower prevalence of disease than would be expected under the no action alternative, and will reduce traffic congestion related to elk viewing while leaving enough elk present to provide a quality elk viewing experience. The tools available under the selected action will also allow the NPS to disperse elk from Boxley Valley, resulting in less damage to ornamental vegetation and commercial crops than would occur under the no action alternative.

SIGNIFICANCE CRITERIA REVIEW

As defined by the Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Regulations (40 CFR 1508.27), significance is determined by examining context and intensity, with consideration of the following ten criteria.

- 1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.*

Impacts from implementation of the selected alternative will be primarily beneficial. The only adverse impact identified in the EA is to non-hunters who may be adversely impacted by the knowledge that increased hunting is occurring. However, this is not an environmental impact. As described in the EA, future reduction and redistribution of the herd will result in beneficial impacts to elk, because the herd will be healthier, with more forage available and a lesser risk of disease. Impacts to vegetation will also be beneficial compared to current conditions. Fewer numbers of elk and redistribution of elk that currently reside in Boxley Valley will reduce overgrazing, and will result in more forb and woody vegetation generation and less damage to ornamental vegetation and commercial crops. Impacts to visitor experience will be beneficial due to decreased traffic congestion from elk viewing and lower prevalence of CWD, which can be visible in affected elk. While fewer elk would be present, quality opportunities for viewing elk

would remain. Hunters will experience beneficial impacts due to increased hunting opportunities, a healthier herd, and the potential for CWD reduction.

2) *The degree to which the proposed action affects public health or safety.*

The selected action will have a beneficial impact on public health and safety. The potential to reduce CWD prevalence will positively affect public health, especially for hunters consuming elk and deer meat. Reducing the elk herd to a healthy level will also help abate traffic congestion that occurs due to elk viewing opportunities. The addition of hunting within Boxley Valley will be regulated to ensure safety, with areas established to create safety buffers around private land and dwellings, as requested by landowners, and no hunting zones around congested areas and high visitor use areas will be established.

3) *Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.*

No historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas will experience significant adverse impacts as a result of implementing the selected action. In consultation with the State Historic Preservation Officer, the NPS determined that there would be no meaningful adverse impacts to the cultural landscape, archeological resources, prehistoric and historic structures, or ethnographic resources. The NPS has determined that the proposed action will have no adverse effect on the cultural landscape or cultural resources of Boxley Valley. The NPS used the Soil Survey Geographic Database to identify areas mapped as Prime Farmland and Farmland of Statewide Importance. NPS identified 856 acres of prime farmland and 90 acres of farmland of statewide importance within the Boxley Valley project area. The historic uses of these areas has been pasture and hay meadow. The selected alternative does not propose to make any changes to the agricultural use of these areas. The project would have No Effect on Prime and Unique Farmlands. No changes to wetlands will be made as part of the selected alternative. The Buffalo River is on the Nationwide Rivers Inventory, though it is not designated as a Wild and Scenic River in the portion which flows through the national river. No changes to the free-flowing or scenic characteristics of the river are in the selected alternative. None of the actions in the selected alternative will have adverse impacts upon ecologically critical areas.

4) *The degree to which the effects on the quality of the human environment are likely to be highly controversial.*

There are no highly controversial impacts to the human environment. Impacts to the quality of the human environment are well-studied and well-understood.

- 5) *The degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks.*

Potential impacts from implementation of the selected action are not highly uncertain and do not involve unique or unknown risks. Impacts have been well-studied and are well-understood.

- 6) *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*

The selected action was chosen based upon an analysis of potential impacts to park resources and does not establish a precedent for future actions with significant effects.

- 7) *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

The NPS considered the selected action's contribution to cumulative effects when combined with other ongoing and future actions that could affect the resources of the park. No adverse cumulative impacts were identified. As described in the EA, cumulative impacts are expected to be beneficial under the selected action.

- 8) *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.*

In consultation with the State Historic Preservation Officer, the NPS determined that there are potentially minor effects upon the cultural landscape and negligible effects upon archeological resources, prehistoric and historic structures, and ethnographic resources.

- 9) *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.*

In consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, the NPS determined that the actions described in this EA will have No Effect on federally-listed or candidate species. The proposed action has no potential to disrupt the habitat these species depend on, or to directly affect the individuals of any species.

- 10) *Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.*

Finding of No Significant Impact, Buffalo National River Elk Management Plan Environmental Assessment

Applicable Federal, State, and local laws and requirements were considered in the development and analysis of actions for elk management under the selected action. The selected action will not violate any Federal, State, or local environmental protection laws.

FINDING OF NO SIGNIFICANT IMPACT

As described above, the selected action does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, in accordance with Section 102(2)(c) of NEPA and the CEQ regulations at 40 CFR 1508 *et seq.*, an environmental impact statement is not required and will not be prepared for implementation of the selected action.

-
- Attachment 1: Errata and Response to Comments
 - Attachment 2: Non-Impairment Determination

ERRATA AND RESPONSE TO PUBLIC COMMENTS

Buffalo National River, Arkansas

Elk Management Plan Environmental Assessment

The following errata and response to comments together with the Finding of No Significant Impact (FONSI) and the Environmental Assessment (EA) describes the final decision of the National Park Service for implementing the Buffalo National River Elk Management Plan.

ERRATA

These Errata describe edits made to the November 20, 2018 Draft Elk Management Plan Environmental Assessment that was released for public review from March 1, 2019 through April 1, 2019.

On page 9, the following was added:

Buffalo National River Fire Management Plan. The plan was developed in 2003 and is updated annually. The Fire Management Plan describes the management of fire within the boundary of the national river, including the use of prescribed fire for protection of natural and cultural resources and infrastructure.

On page 10, the following was added:

Boxley Valley Land Use Plan and Cultural Landscape Report. This plan, commonly referred to as “The Boxley Plan”, was completed in 1985 to guide management of the historic resources and pastoral settings in Boxley Valley. The Boxley Plan is germane to the Elk Plan as it provided for the land exchanges and provides limitations on park actions which may have an adverse impact on the visual integrity of the cultural landscape.

On page 12, **Impact Topics Dismissed from Further Analysis** the following statement was added:

Prime and Unique Farmland: The U.S. Department of Agriculture Natural Resources Conservation Service maintains a database of soil maps for the nation. A component of the database identifies suitability and limitations for use including four classifications for farmland: Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland. Approximately 856 acres of Boxley Valley is considered Prime Farmland, and 90 acres are considered Farmland of Statewide Importance (NRCS 2019a). The Soil Survey of Newton County, Arkansas 1987 (NRCS 2019b) indicates these soils have been cleared and are mainly used for pasture. Since the historic use of these prime farmlands has been pasture, and any improvements the NPS makes to these soils will keep them in pasture, the soil would remain Prime Farmland, or Farmland of Statewide Importance. The project would have No Effect on Prime and Unique Farmlands.

On page 14 the following change was made:

- **Habitat enhancement in historic agricultural fields.** Agriculture fields within the park and in proximity to (but outside) Boxley Valley may be enhanced by seeding with plants that are palatable and desirable to elk. Such enhancements would draw elk away from Boxley Valley and redistribute elk, thereby reducing their density in Boxley Valley.

Was changed to read:

- **Habitat enhancement in historic agricultural fields.** Agriculture fields within the park and in proximity to (but outside) Boxley Valley may be enhanced by seeding with plants that are palatable and desirable to elk. Enhanced fields and forest habitats may be maintained using prescribed fire. Such enhancements would draw elk away from Boxley Valley and redistribute elk, thereby reducing their density in Boxley Valley.

On Page 19, Figure 3 and its caption were updated to show the gap in survey data, and to place a best fit polynomial line on the data to show trends.

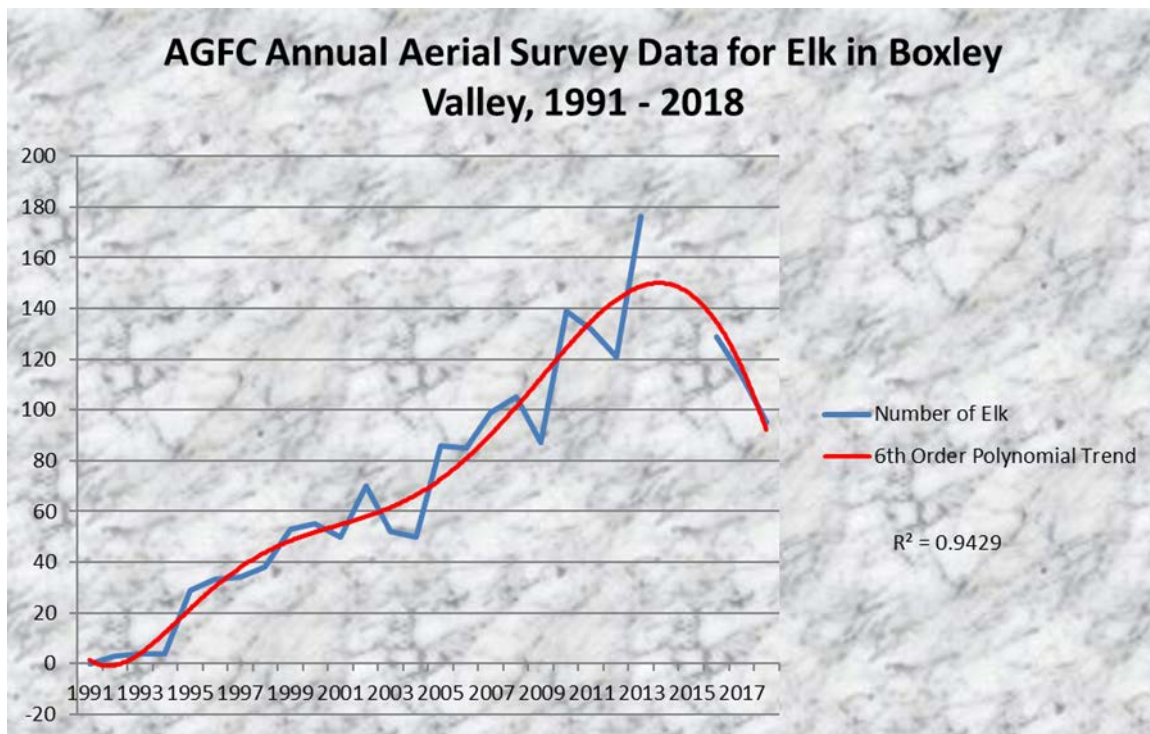


Figure 3: Data from aerial surveys of elk in Boxley Valley, 1991 - 2018. No surveys were conducted in 2014 and 2015. The large drop on the right indicates the period immediately following and during the CWD culling and testing. Without intervention, the population is expected to begin increasing at rates previously recorded.

On page 22, under the heading **Elk - Alternative A**, the following text was added:

Habitat management actions including prescribed fire use outside of Boxley Valley will continue much as they have over the past 15 to 20 years.

On page 22, under the heading **Elk - Alternative A, Cumulative Impacts**, the following text was changed from:

Vegetation management will also continue to have some beneficial impacts to the landscape.

To this:

Vegetation management and prescribed fire will also continue to have some beneficial impacts to the landscape.

On page 23 under the heading **Elk – Alternative B**, the text was changed from:

Effects of Alternative B – Elk Population Management Alternative

Under this alternative Arkansas Game and Fish Commission would establish recreational elk hunting on private lands within Boxley Valley consistent with other locations within the park (Figure 6 shows the extent of private lands within Boxley Valley). Allowing hunting would remove the refuge from hunting pressure that elk enjoy in Boxley Valley, the result of which would be a direct reduction in the number of animals by about 20 animals per year. Remaining animals likely would be redistributed more evenly elsewhere in and around the park, thereby reducing the number of resident animals in Boxley Valley further. Surveys identified 161 elk in Boxley Valley in 2017; if 20 animals were removed by hunting each year, and an additional 20 to 40 animals were displaced elsewhere in and around the park by hunting pressure, this alternative would reach the upper threshold of the social carrying capacity (70 to 100 animals) within five years of initiation of the action. This would result in a healthier elk herd with more forage available and a lesser risk of disease. If hunting alone does not reduce the number of elk in Boxley Valley, sharp shooters would kill and remove enough animals to reach the carrying capacity. Engaging a team of sharpshooters to remove elk from the Boxley Valley area would have impacts similar to hunting, only it would require more coordination from the park and result in a more immediate reduction in elk. Under this alternative, the park-wide herd size is expected to decrease and have a more diverse spatial distribution. CWD prevalence is often associated with high animal density, this alternative should benefit, or ease the prevalence of CWD in the area because of the lower number of elk in Boxley Valley.

To this:

Effects of Alternative B – Elk Population Management Alternative

Under this alternative Arkansas Game and Fish Commission would establish recreational elk hunting on private lands within Boxley Valley consistent with other locations within the park (Figure 6 shows the extent of private lands within Boxley Valley). Allowing hunting when the social carrying capacity (70 to 100 animals) is exceeded will remove the refuge from hunting pressure that elk enjoy in Boxley Valley, the result of which would be a direct reduction in the number of animals by about 20 animals per year. Remaining animals likely would be redistributed more evenly elsewhere in and around the park, thereby reducing the number of resident animals in Boxley Valley further. Surveys identified 95 elk in Boxley Valley in 2018. This value is within the desired social carrying capacity. This would result in a healthier elk herd with more forage available and a lesser risk of disease. If hunting alone does not reduce the number of elk in Boxley Valley, sharp shooters would kill and remove enough animals to reach the carrying capacity. Engaging a team of sharpshooters to remove elk from the Boxley Valley area would have impacts similar to hunting, only it would require more coordination from the park and result in a more immediate reduction in elk. Under this alternative, the park-wide herd size is expected to decrease

Attachment 1: Errata and Response to Public Comments
Buffalo National River Elk Management Plan EA

and have a more diverse spatial distribution. CWD prevalence is often associated with high animal density; this alternative should benefit, or ease the prevalence of CWD in the area because of the lower number of elk in Boxley Valley. Habitat management actions including prescribed fire use outside of Boxley Valley will continue much as they have over the past 15 to 20 years. The effects of these actions will not be measurable when compared to the No Action baseline.

On page 26, two bullets under the heading “Cane Communities” were changed from:

- Areas maintained through burning will be primarily aimed toward maintenance of a mosaic vegetation pattern for visual variety and improvement of wildlife habitat.
- A riparian corridor will be maintained or re-established to reduce stream bank erosion, and to enhance habitat.

To this:

- Areas maintained through prescribed burning will be primarily aimed toward maintenance of a mosaic vegetation pattern for visual variety and improvement of wildlife habitat.
- A riparian corridor will be maintained or re-established to reduce stream bank erosion, nutrient and sediment runoff, and to enhance habitat.

On page 28, under **Visitor Use and Experience – Affected Environment**, the following text was added:

Prescribed burning for resource objectives in areas outside of Boxley is a cultural practice utilized by the park. This creates several days of each year where smoke can be seen in the river valley, and may be trapped in the river corridor at night. Smoke management guidelines are used to reduce impact of the smoke on visitors and park neighbors.

On page 29, Figure 8 was updated to reflect Buffalo National River 2018 visitation data.

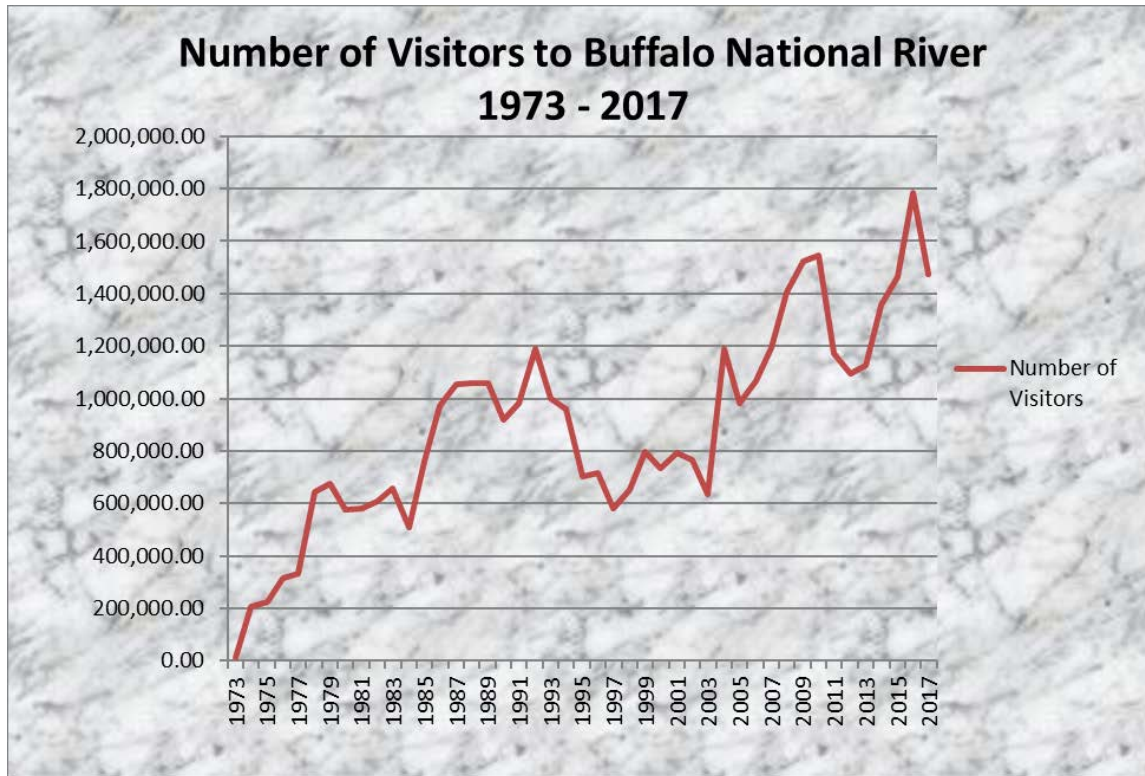


Figure 8: Number of Visitors to Buffalo National River from 1973 through 2017

It is changed to this to show the cyclical trend in visitation data:

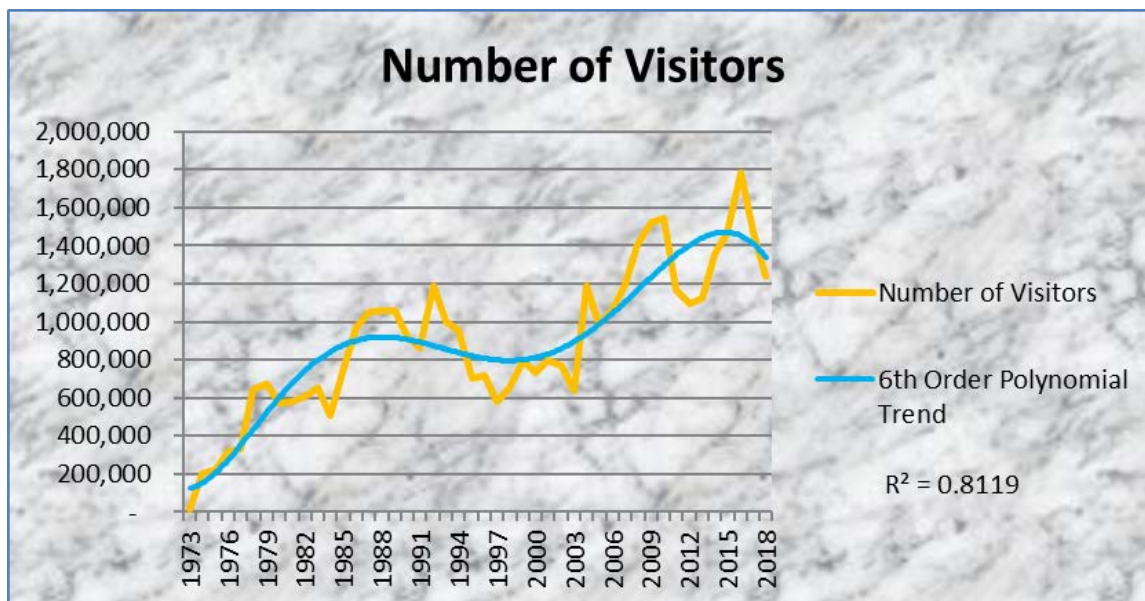


Figure 8: Number of Visitors to Buffalo National River from 1973 through 2017. The polynomial trend line is intended to highlight the cyclic nature of visitation increases.

On page 30, Figure 9 was updated to show monthly visitation to Buffalo National River during 2018. The following chart and caption:

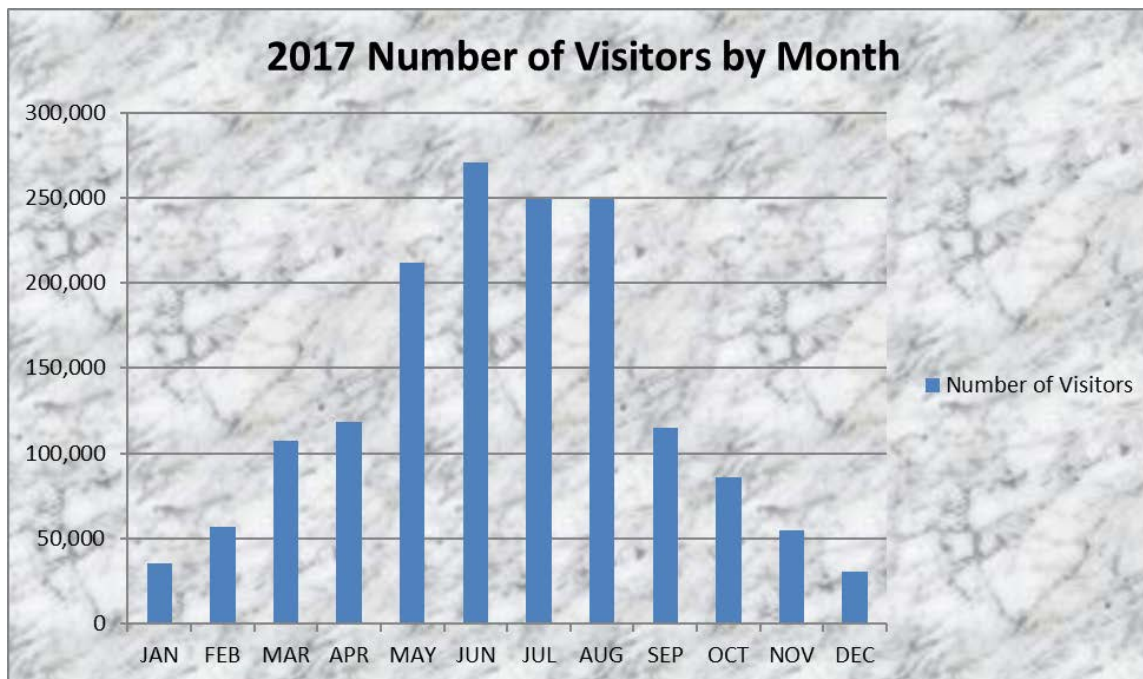


Figure 9: Number of visitors to Buffalo National River by month in 2017

Were replaced with this chart and caption:

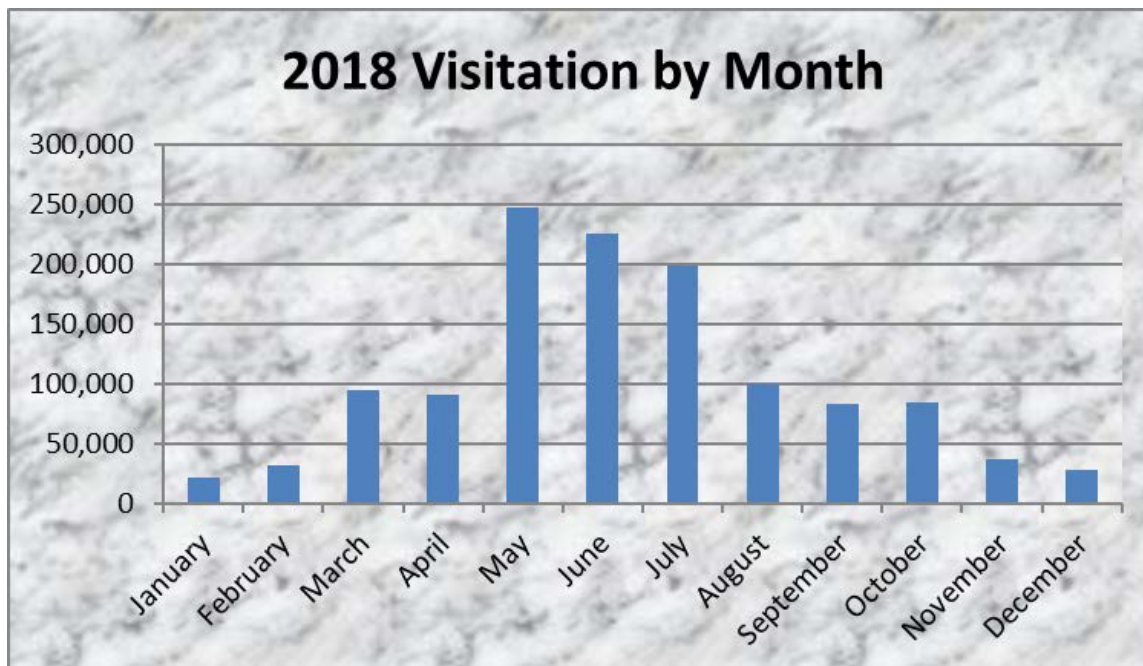


Figure 9: Number of visitors to Buffalo National River by month in 2018

On page 30, Figure 10 was updated to reflect visitor data at the AGFC Ponca Elk Education Center through 2018. The old figure 10 chart:

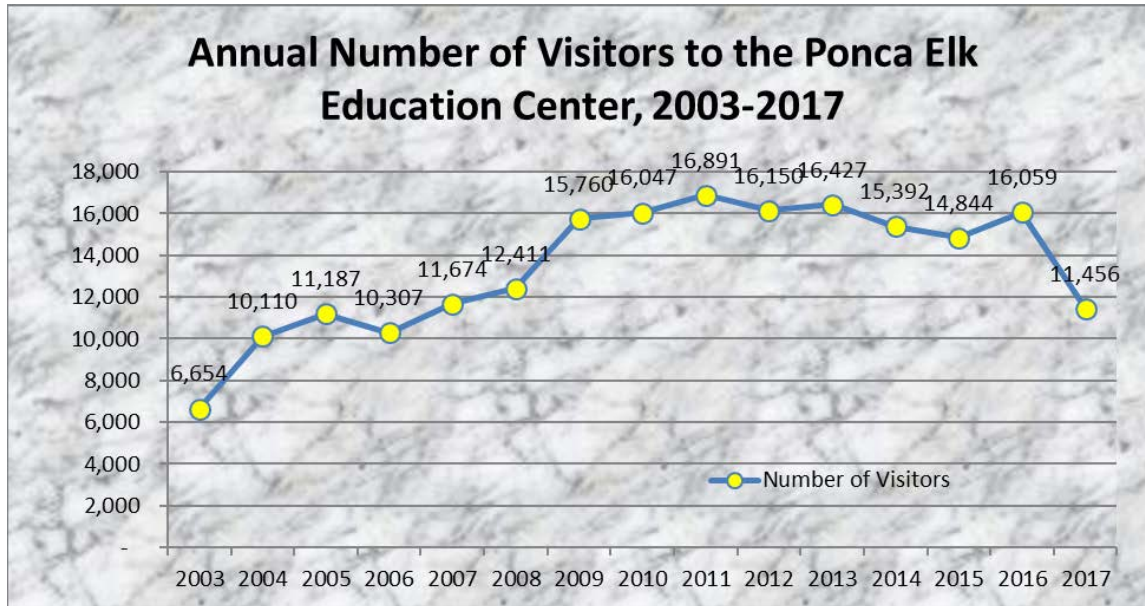


Figure 10. Annual number of visitors at the Ponca Elk Center, 2003-2017.

Was replaced with this:

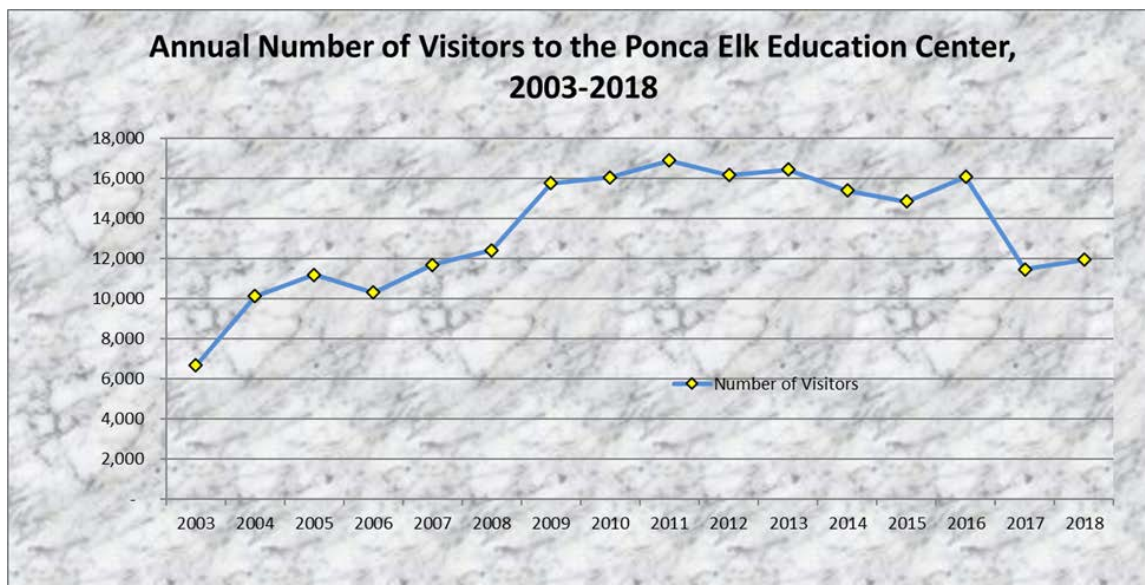


Figure 10. Annual number of visitors at the Ponca Elk Center, 2003-2018.

On page 30, under the heading **Visitor Use and Experience – Effects of Alternative A – No Action Alternative**, the following sentence was added to the end of the paragraph:

Prescribed burning will continue to occur.

On page 31 under the heading **Visitor Use and Experience – Effects of Alternative A – No Action Alternative – Cumulative Effects**, the following text was added to the end of the paragraph:

The effects of prescribed burning on the landscape will continue to maintain a diverse vegetation structure and population throughout the national river. As the USFS continues to conduct large scale prescribed burns, the number of smoky days may gradually increase. These increases in the spring burning season may offset some of the impacts from smoke in the fall wildfire season.

On page 32, Figure 11 and its caption were updated from:

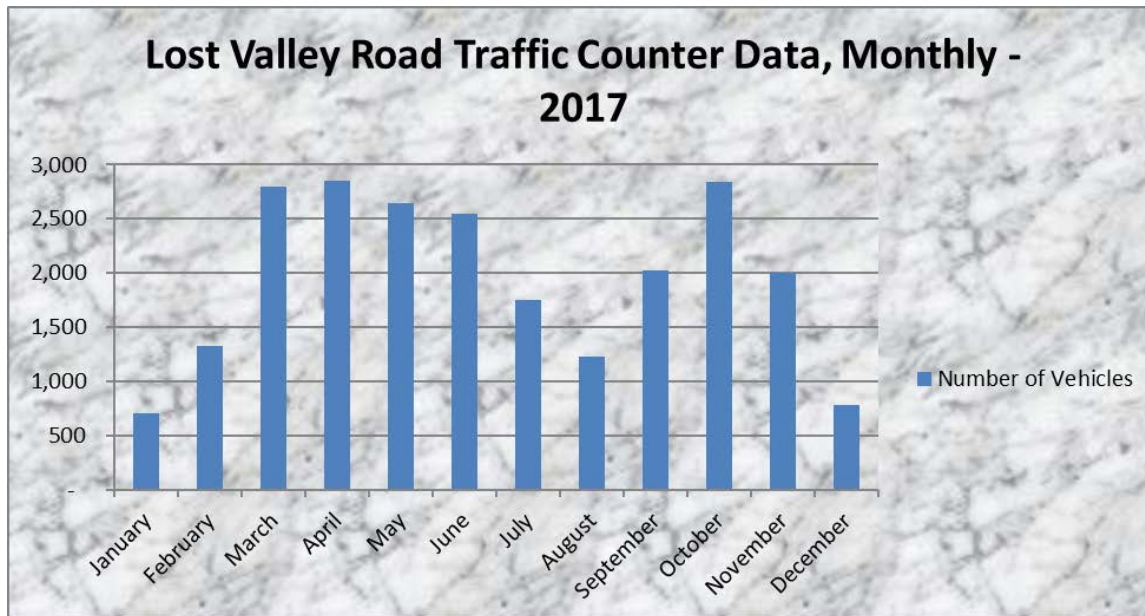


Figure 11: Monthly Traffic Counts at Lost Valley Road in 2017. Surrogate data to estimate elk viewing traffic.

To:

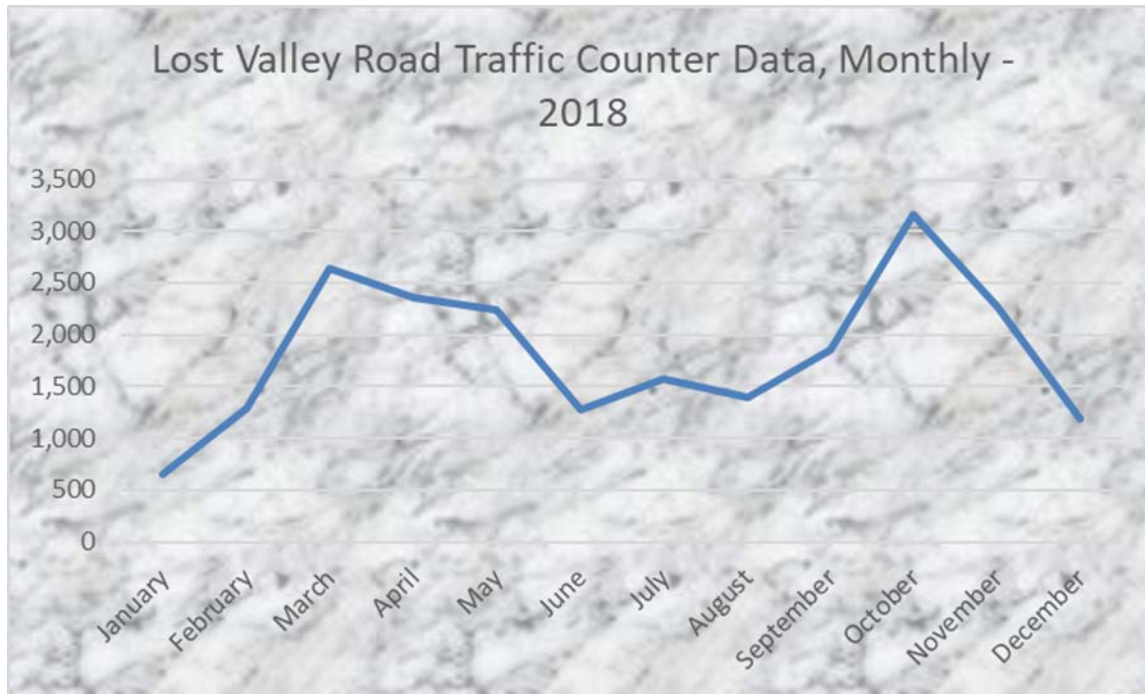


Figure 11: Monthly Traffic Counts at Lost Valley Road in 2018. Surrogate data to estimate elk viewing traffic. The peak in March through May is during the spring canoeing and wildflower season. The peak in October is when the leaves on beech and maple trees turn golden, and the peak of the elk rut.

On page 32, Figure 12 and its caption were updated to show data through 2018. The chart and caption were changed from:

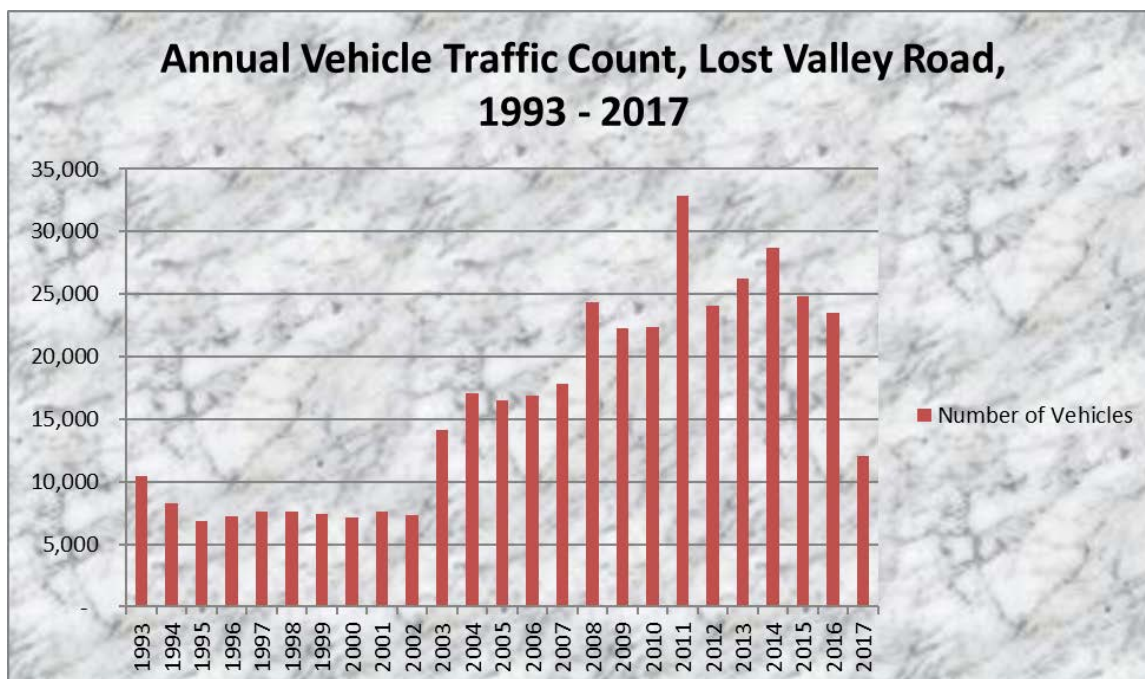


Figure 12. Summary of annual traffic counts at Lost Valley Road, 1993-2017

To:

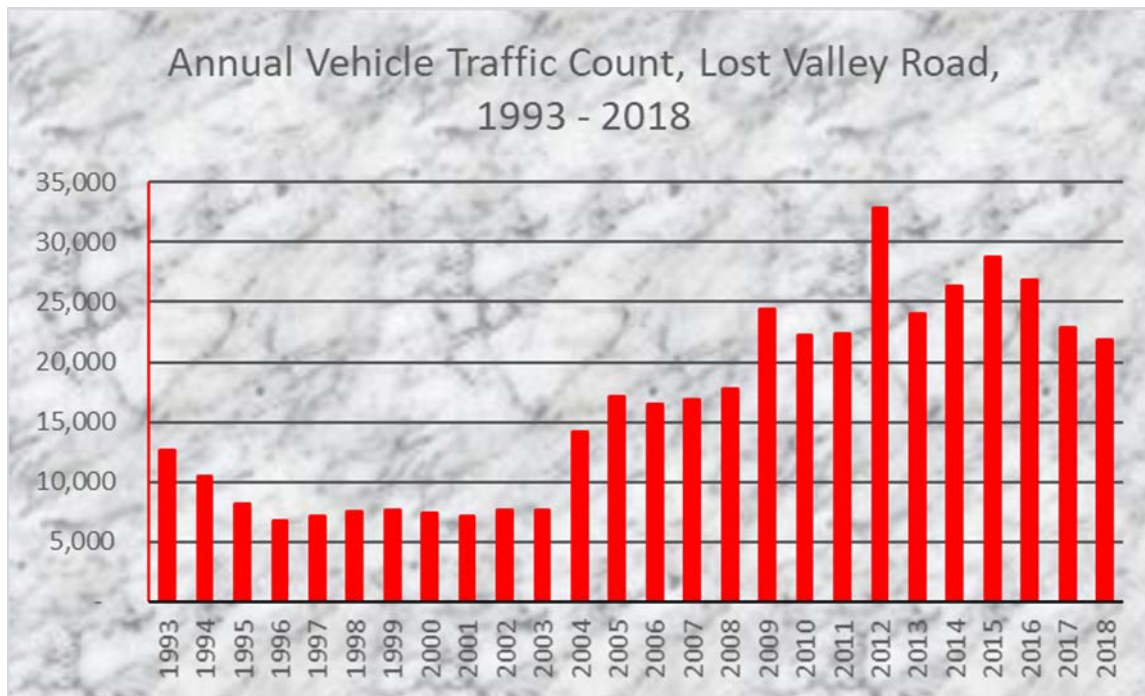


Figure 12. Summary of annual traffic counts at Lost Valley Road, 1993-2018

On page 33, under the heading **Visitor Use and Experience – Effects of Alternative B – Comprehensive Elk Management**, in recognition of the current Boxley elk herd size, and the importance of prescribed fire, the paragraph was changed from:

This alternative would decrease the number of elk in Boxley Valley to a level consistent with a biological and social carrying capacity determined by state and park biologists to be between 70 and 100 animals. The target range would leave enough animals present (70 to 100) to provide a quality elk viewing experience, while at the same time reducing traffic jams due to an over-abundance of elk. Adult bulls that are often most sought by the viewing public would still be present in sufficient numbers. A reduced number of elk would also decrease conflicts with local land owners over damage to pasture, ornamental vegetation, and commercial crops. There are a consistent number of complaints received at park headquarters and the Ponca Elk Education Center regarding damage to private landowners' botanical landscapes and commercial crops. A lower population density of elk in the area would likely suppress the prevalence of Chronic Wasting Disease. As its name implies, the impacts of the disease can be quite visible in the deteriorating condition of the elk—visitors to the area would not respond favorably to seeing animals dying on the landscape. There would be an increase in hunting opportunities in the Boxley Valley area, which would be a positive effect for the hunting public, but may be viewed as a negative experience for non-hunters.

To this:

Attachment 1: Errata and Response to Public Comments
Buffalo National River Elk Management Plan EA

This alternative would maintain the number of elk in Boxley Valley to a level consistent with a biological and social carrying capacity determined by state and park biologists to be between 70 and 100 animals. The target range would leave enough animals present to provide a quality elk viewing experience, while at the same time reducing traffic jams due to an over-abundance of elk. Adult bulls that are often most sought by the viewing public would still be present in sufficient numbers. A reduced number of elk would also decrease conflicts with local landowners over damage to pasture, ornamental vegetation, and commercial crops. There are a consistent number of complaints received at park headquarters and the Ponca Elk Education Center regarding damage to private landowners' botanical landscapes and commercial crops. A lower population density of elk in the area would likely suppress the prevalence of Chronic Wasting Disease. As its name implies, the impacts of the disease can be quite visible in the deteriorating condition of the elk—visitors to the area would not respond favorably to seeing animals dying on the landscape. There would be an increase in hunting opportunities in the Boxley Valley area, which would be a positive effect for the hunting public, but may be viewed as a negative experience for non-hunters. Prescribed burning will continue at its current rate within the national river. The use of fire to manage vegetation is not expected to increase under this alternative.

On page 33, under the heading **Visitor Use and Experience – Effects of Alternative B – Comprehensive Elk Management – Cumulative Effects**, the following text was added to the end of the paragraph:

The effects of prescribed burning on the landscape will continue to maintain a diverse vegetation structure and population throughout the national river. As the USFS continues to conduct large scale prescribed burns, the number of smoky days may gradually increase. These increases in the spring burning season may offset some of the impacts from smoke in the fall wildfire season.

On page 34, under **Chapter 4 - Consultation and Coordination – State of Arkansas**, the following text was added:

The NPS and AGFC have continued to discuss elk management issues, particularly after the discovery of CWD in the Arkansas elk and deer herds.

On page 34, under the heading Tribal Partners, the text was changed from this:

We have received a request for the EA from the Osage Nation of Oklahoma. We will send each of these Tribes a copy of the EA to review and comment on.

To this:

Buffalo National River invited tribal partners to review and comment on this Environmental Assessment. There were no concerns presented by partners who responded.

On page 35, under the heading **United States Fish and Wildlife Service**, the following was added:

National Park Service determined that the actions described in this environmental assessment will have No Effect on federally listed or candidate species. On July 15, 2019 the USFWS agreed with our determination of no effect.

Attachment 1: Errata and Response to Public Comments
Buffalo National River Elk Management Plan EA

On page 35, under the heading **State Historic Preservation Officer**, the following was added:

The Department of Arkansas Heritage concurred with the parks determination of No Adverse Effect on August 28, 2019.

On page 35, under the heading **Reviewers and Preparers – Buffalo National River**, the following was added:

Melissa Trenchik, Chief of Resource Stewardship, Science, Interpretation, and Education

On page 39, **Literature Cited**, the following citations were added:

Natural Resources Conservation Service 2019a. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for Newton County, Arkansas. Available online. Accessed 04/29/2019.

Natural Resources Conservation Service 2019b. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online. Accessed 04/26/2019.

RESPONSE TO COMMENTS

Response to public comments addresses substantive comments that were received during the public review period. Substantive comments are those that: “1) question, with reasonable basis, the accuracy of the information in the NEPA document; 2) question, with reasonable basis, the adequacy of the environmental analysis; 3) present reasonable alternatives other than those presented in the NEPA document; or 4) cause changes or revisions in the proposal.

Buffalo National River received 38 pieces of correspondence from individuals and agencies during the public comment period of March 1 through April 1, 2019. Of this total, eleven (11) were non-substantive. Twenty-seven (27) correspondences provided substantive comments not covered in the EA. These comments were grouped into seven (7) categories. Below is a review of those comments, and responses to them.

Comment 1. The elk are to blame for CWD reaching Arkansas. They have created an epidemic, and NPS and AGFC have not taken drastic enough steps to stem the spread of CWD.

- There is no evidence the elk were infected with CWD when they were translocated to Newton County, or that they have caused an epidemic of CWD. Once CWD gets into a population of wild cervids, it is extremely difficult to eradicate, and requires a significant amount of culling to contain. Because CWD prevalence is significantly higher in whitetail deer than elk, culling of deer would be more effective than culling elk. This comment is beyond the scope of the Elk Management Plan.

Comment 2. Hunting elk in Boxley Valley will eliminate elk viewing in Arkansas by scaring the elk away, or extirpating them from the area.

- The preferred alternative will not allow hunting when the elk population in Boxley is within the range of 70-100 animals. So long as good grazing exists in Boxley, the elk will return, even after hunting begins.

Comment 3. Hunting elk in Boxley Valley will endanger the public.

- There are numerous methods available to AGFC to manage a safe and effective elk hunt in Boxley Valley.

Comment 4. Hunting elk will hurt the local economy.

- The preferred alternative will not reduce the elk population in Boxley Valley below current levels. The preferred alternative is unlikely to have adverse impacts upon the local economy.

Comment 5. To ensure that only the old, weak, or sick elk are removed, AGFC and/or NPS should utilize sharp shooting, or direct hunters to take only old or weak elk during hunting.

- Sharp shooting will target animals to accomplish population reduction and resource protection goals. Animals may be selected, as appropriate for culling based on their age and health.

Comment 6. NPS Rangers should be present during elk viewing times and should write tickets for unsafe acts.

- The NPS law enforcement rangers patrol in Boxley Valley to manage traffic flow on a routine basis.

Comment 7. The elk population data shown in Figure 3 is misleading because of two years of missing data.

- The graph in Figure 3 has been updated to show population trends, taking into account the two years of missing data.

Attachment 2: Non-Impairment Determination

By enacting the NPS Organic Act of 1916 (Organic Act), Congress directed the U.S. Department of the Interior and the National Park Service (NPS) to manage units "to conserve the scenery, natural and historic objects, and wild life in the System units and to provide for the enjoyment of the scenery, natural and historic objects, and wild life in such manner and by such means as will leave them unimpaired for the enjoyment of future generations" (54 U.S.C. 100101). NPS *Management Policies 2006*, Section 1.4.4, explains the prohibition on impairment of park resources and values:

"While Congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the National Park Service. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them."

An action constitutes impairment when its impacts "harm the integrity of park resources or values, including the opportunities that otherwise will be present for the enjoyment of those resources or values" (NPS 2006, Section 1.4.5). To determine impairment, the NPS must evaluate the "particular resources and values that will be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. An impact on any park resource or value may constitute impairment, but an impact would be more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance (NPS 2006, Section 1.4.5).

Fundamental resources and values for Buffalo National River are identified in the enabling legislation for the park and the Buffalo National River Foundation Document. Based on a review of these documents, the fundamental resources and values that are subject to the no-impairment standard include:

- the park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural

soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;

- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system;
- any additional attributes encompassed by the specific values and purposes for which the park was established to include: Clean, Free-Flowing River, Physical and Biological Processes, Aquatic and Riparian Habitat, Geologic Resources, Cultural and Historic Resources, Wilderness Character

This non-impairment determination has been prepared for the selected alternative, as described in the Finding of No Significant Impact for the Elk Management Plan Environmental Assessment, Buffalo National River.

Elk:

Elk can become overpopulated in areas where they have adequate forage, no natural predators, and are not hunted. In such areas, their populations can increase rapidly resulting in overgrazing and disease. The ecological carrying capacity for elk within Boxley Valley, where their competition with livestock for forage grasses becomes significant is estimated to be many more animals than currently are found there. The social carrying capacity, on the other hand, is estimated to be approximately 70 to 100 animals. Populations above this level are considered overabundant and are likely to cause adverse impacts to agricultural operations, resident privacy, and traffic within Boxley Valley.

During implementation of the plan, the elk population would be maintained at a number within the ecological and social carrying capacity appropriate for the area (70 to 100 animals). Individual animals and the population as a whole would be expected to be healthier.

It is expected that the selected alternative will result in benefits to the elk population.

Visitor Experience/Safety:

Boxley Valley is the primary area for actions recommended for implementation of the plan. There are a growing number of visitors, especially during the fall rut. Visitors line the roadsides, park in the highway blocking traffic, cross into privately-owned fields, and overwhelm the limited park infrastructure causing potential risks to themselves, local residents, and to resources at large. Arkansas Highway and Transportation Department constructed pull-outs for elk viewing at several locations, but their narrow design has proven inadequate to address the issues.

The alternative would have a mixture of positive and negative impacts to visitor use and experience. The decrease in the number of elk present would still leave enough animals present (70 to 100) to provide a quality elk viewing experience, while at the same time reducing traffic jams due to an over-abundance of elk. Adult bulls that are often most sought by the viewing public would still be present. Lower elk numbers should decrease the number of vehicle accidents and elk jams.

It is expected that the selected alternative will increase visitor safety and maintain visitor experience related to elk viewing.

Vegetation:

The impacts on vegetation resources from elk vegetation consumption due to implementation of the plan would likely be localized within the park, specifically in the Boxley Valley area. As the elk population continues to rise, negative impacts on vegetation would be observed, managing elk populations and enhancing pastures with the tools described in the plan are expected to mitigate and enhance the current vegetation conditions.

It is expected that the selected alternative will have no measurable impacts to vegetation.

Conclusion

In conclusion, as guided by this analysis, good science and scholarship, advice from subject matter experts and others who have relevant knowledge and experience, and the results of public involvement activities, it is the Superintendent's professional judgment that there will be no impairment of park resources and values from implementation of the selected alternative. The NPS has determined that implementation of the selected alternative will not constitute an impairment of the resources or values of Buffalo National River. This conclusion is based on consideration of the park's purpose and significance, a thorough analysis of the environmental impacts described in the EA, comments provided by the public and others, and the professional judgment of the decision maker guided by the direction of NPS *Management Policies 2006*.