



# P lan for Elk Watching and Nature Tourism in North Central Pennsylvania

**Prepared for:**


Lumber Heritage Region of Pennsylvania  
North Central Pennsylvania Regional  
Planning and Development Commission  
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Pennsylvania Game Commission

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*Photography by Ted Eubanks  
Jon Benner (cover elk)  
PA Game Commission Photo/Hal Korber  
(cover eagle)*

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## **INTRODUCTION**

Fermata, Inc. was engaged to develop a nature tourism strategy for the Elk Range of North Central Pennsylvania. The Plan for Elk Watching and Nature Tourism in North Central Pennsylvania fulfills the requirements of a contract between Fermata Inc. and the North Central Pennsylvania Regional Planning and Development Commission (NCPRPDC). Other program partners are the Department of Conservation and Natural Resources, the Lumber Heritage Region, and the Pennsylvania Game Commission.

The subject of this plan is visitor management, including elk viewing and nature tourism, not elk management, which is the responsibility of the Game Commission. The main objective of the project is to develop a five-year plan for elk viewing and other nature-related tourism that will:

- Provide recommendations to improve visitor services and guide the development of appropriate infrastructure.
- Support the long-term ecological needs of an expanded wild elk herd.
- Stimulate economic benefits for local communities and minimize conflicts with private landowners and other forest users.
- Educate tourist and residents about responsible stewardship of the elk herd and the region's other natural resources.
- Protect the natural integrity of the region.
- Promote elk watching and other nature tourism activities.

Fermata conducted on-site assessments of proposed elk-viewing destinations, including all the state parks and natural and wild areas in or near the elk range. The project also reviewed trend information on outdoor recreation, wildlife watching, nature tourism and visitation to north central Pennsylvania. Periodic public involvement activities took place during the plan's development, including approximately forty meetings held throughout the elk range with partner agencies, the public, and local and county government.

The participating agencies are expected to implement the plan as appropriate for their areas of responsibility. Key implementing agencies include NCPRPDC, Pennsylvania's Lumber Heritage Region, DCNR, the Game Commission, the Pennsylvania Department of Transportation, and the Pennsylvania State Police. The Rocky Mountain Elk Foundation, a longtime supporter of the state's elk, has committed funding to support several of the plan's recommendations. The study was funded with the support of DCNR, Appalachian Regional Commission, US Forest Service, and the Game Commission.

The purpose of this report is to present Fermata's findings on the six tasks described in the contract's work plan. Those tasks are described here along with Fermata's recommendations.

**Task 1.** Review and assess the existing and proposed elk-viewing opportunities in the context of the current and projected elk herd distribution, habitat improvement, and environmental education activities. *In an effort to control wildlife viewing within the Elk Range, we are recommending the development and enhancement of major elk-viewing destinations and the elimination of those minor sites (such as pull-outs along PA 555 and PA 120) that promote the unethical and unsafe behavior detailed below. We feel it is critical to signal to the public that viewing of elk is only appropriate at designated destinations equipped to handle such visitation. Case studies detailing how other parts of the country have dealt with elk-viewing management are included with this report in Appendix 3.*

**Task 2.** Review and assess the supply of other nature tourism assets in the elk range counties that could be promoted in conjunction with elk-viewing opportunities. *Tourism need not focus exclusively on elk. By broadening the range of activities that the Elk Range promotes, visitation can be increased without adding pressure to areas such as Winslow Hill. A broader range of activities will make the tourism season longer. This diffuses visitation, which avoids many of the quality of life issues associated with mass tourism, and it provides extended seasons that could stabilize visitation.*

**Task 3.** Review and analyze market and survey information to determine the size and key marketing characteristics of the potential market, estimate the potential to increase visitation to the region, and project the potential economic benefits for communities in the region from elk watching and other nature tourism activities. *Tying the Elk Range and the 15-county Lumber Heritage Region of Pennsylvania into the burgeoning national nature tourism market in a planned fashion could very well help to preserve the region's unique characteristics and is expected to be able to provide substantial economic benefit to the communities of north central Pennsylvania. Nature tourism can add a powerful and reliable beam to the superstructure of the economy. The difficulties currently faced by Elk Range residents – issues of traffic, littering, wildlife harassment, property damage, and a failure to significantly profit from elk-watching tourists – will be addressed by this plan and turned into opportunities.*

**Task 4.** Review and assess the availability of suitable visitor services to support elk watching and other nature tourism activities in the elk range, and recommend a development strategy to provide appropriate visitor services.

*The proposed development strategy seeks to:*

- *Address the current limiting factors and negative impacts while capitalizing on the exceptional natural resources.*
- *Establish a public education and enforcement program to address uncontrolled elk-viewing activities during the peak fall viewing season.*



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- *Organize waypoints into a logical, linear travel platform, the Elk Forest Scenic Corridor, which will help to manage the flow of visitation through the area and give visitors a simple “road map” to help them access the area’s assets.*
- *Identify the scenic corridor using signage, maps and trail guides, web-based and print information, nature interpretation at waypoint sites along the scenic corridor, audio tapes, direct broadcast radio, video, CD or DVD, and other products to facilitate these experiences.*
- *Develop a series of waypoints that are arrayed along the Elk Forest Scenic Corridor to serve as destinations for all strata of nature tourists in the region including the uninitiated.*
- *Develop an interpreted visitor center with a focus on elk and elk viewing located on State Gamelands 311 at Winslow Hill.*
- *Develop an interpreted visitor center for general nature tourism at Sinnemahoning State Park.*

**Task 5.** Review and assess existing and proposed transportation enhancements servicing elk-viewing opportunity areas and recommend appropriate improvements. *A systematic approach and the provision of appropriate signing for guiding visitors around the area is critical for accessing its many assets. A clearly marked scenic highway corridor can serve to both guide and educate tourists about the region's natural resources.*

**Task 6.** Develop a marketing plan for elk watching and related nature tourism. *The continued demographic shift of rural residents to urban areas, the pullout of traditional large-scale extractive industry, and the increasing marginalization of agriculture as a full-time occupation are phenomena that give particular importance to a planned, community-based approach towards nature tourism. A logical approach is to reach agreement on overall objectives, manage the tourism flow, and try to ensure that visitation does not continue to spiral ad hoc, but is instead channeled in a way that brings the greatest good to the greatest number of people and to the greatest diversity of wildlife.*

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## **BACKGROUND**

The original dominant vegetation of the region consisted of white pine and hemlock, with deciduous hardwoods accounting for only twenty percent of the total aboriginal forestlands. The early legacy of unsustainable timber extraction altered that forest, with pine and hemlocks being replaced by oaks, maples, and aspens. In recent times, there have been significant success stories of restoration within this vast ecosystem. Mature trees now shade the formerly denuded banks of the Clarion River. Strip mine reclamation projects are improving water quality in streams such as Dents Run.

Perhaps the greatest story of restoration, however, is the one that unfolded after the extirpation of the resident Pennsylvania elk. The introduction of a small Rocky Mountain elk herd in 1913 has given rise to a healthy and growing herd of more than six hundred animals. According to Ralph L. Harrison (undated), the efforts of both dedicated individuals and various agencies throughout the state have resulted in the successful restoration of the elk herd in Pennsylvania. There are, however, concerns about the attitudes of local residents in the new range areas and the impact of tourists that follow the elk herd. The increasing elk population brings with it an increasing number of visitors who come to see them. Preliminary results from a Pennsylvania State University study estimate 75,000 annual visitors to the elk range, most during September and October.

During the 1990s, the herd more than doubled to the approximately 600 elk that inhabited the areas of Cameron, Elk, Clinton, Clearfield, and Potter counties in 2001, in a range that covers about 835 square miles in north central Pennsylvania. If the herd continues to grow at this rate it will number nearly 1300 by 2005. Elk have been moved to Sproul State Forest, State Gamelands 321 (the former Kelly Estate), Hyner Run Branch of Kettle Creek, and to the headwaters of Cooks Run in northern Clinton County. In addition, a number of food plots, or permanent herbaceous openings, have been established in new range areas on publicly owned lands, which help to reduce the conflicts between elk and other land uses and deter habitat deterioration.

For purposes of strategic planning, the creation of an integrated elk and nature tourism project fits neatly within the existing platform of the Lumber Heritage Program. This cultural tourism umbrella embraces the history, culture, economics, and ecology of the central Pennsylvania forests, and seeks to unite a 14,000-square mile, 15-county area under a unified tourism theme. Elk viewing and other wildlife viewing qualify as activities compatible with the ecological and cultural history of the forests, and one important goal of this plan is to provide a working model that other counties can use to promote their own unique resources and destinations.

The north central region of Pennsylvania presents some of the finest wildlife viewing and outdoor recreation opportunities in the United States. Particularly given the region's location between the major population aggregations on the Eastern Seaboard and in the Midwest, the isolated, wild, remote, and lush nature of this mountainous region makes it a sparkling gem waiting to be discovered. Fermata believes that the opportunities presented by this breathtakingly beautiful region are among the most significant of any rural area east of the Mississippi; and meeting the challenges involved in this project will repay the effort.

The Elk Range has traditionally relied heavily on hunting and fishing as the primary forms of outdoor recreation. More recently, elk watching has joined hunting and fishing to become a major form of outdoor recreation, with concurrent increases in mountain biking, birding, hiking, and canoeing. Elk viewing has gradually grown so that it is now one of the most important forms of recreation (in terms of participant days) in the Elk Range. After viewing first-hand the environmental wealth and scenic beauty of the Elk Range, **Fermata believes that a regional strategic plan for nature tourism should be founded on a broad-based, diverse range of outdoor recreational activities, with elk viewing playing a significant, but by no means exclusive role in the plan.**

Elk viewing has the potential to draw uninitiated nature tourists into the region, and presents a tremendous marketing opportunity for north central Pennsylvania. Yet issues of crowding, herd management, crop and property damage, and traffic all argue convincingly for an approach that emphasizes the other nature tourism activities available in the region. A diversity of tourism options would help to create shoulder seasons that can sustain service providers before and after the peak viewing season in fall, that would relieve pressures felt at Winslow Hill, that would increase tourism revenue by providing other activities and keeping tourists in the area for longer, and that would spread revenue to communities and create potential gateways for tourism in the region.

## ASSESSMENT AND RECOMMENDATIONS

### Elk Range Travel Platform

There is a limitless set of potential destinations for nature tourists in the Elk Range. Fermata has evaluated state forests, state natural areas, state parks, state wild areas, and state gamelands, as well as a number of private holdings that were brought to our attention. Together, these sites offer a broad range of recreational opportunities. But most travelers, particularly those less experienced in the outdoors, simply do not have the skills or experience to piece together their own travel opportunities.

Travel into the Elk Range must be nurtured and facilitated to provide information that makes the trip easier for the casual traveler and appeals to a broad base of uninitiated wildlife viewers. These people demand significant assistance through signage, maps, web-based, and print information, audiotapes, CDs, DVDs, trail guides, as well as on-site nature interpretation.

The resources within the area will keep people there for a period of time. To make travel easier in a difficult area, the “dots need to be connected” within the wildlife experience by grouping sites within 30 minutes travel time of each other. This eliminates the chaos of jumping from site to site and leads people systematically from site to site.

Potential destinations should be organized into a logical, linear *travel platform*, which will serve to help manage the flow of visitation through the area and give visitors a simple roadmap to access the area’s assets. To that end, Fermata has assessed a broad selection of potential destinations in the Elk Range. Sites have been assessed for the intrinsic and extrinsic values. Constraints to their development as nature tourism destinations have been weighed. The result of the assessment is the organization of a series of waypoints into this travel platform.

The format for this Elk Range travel platform conforms to a traditional *hub and spoke structure*. The hub for the Elk Range extends from DuBois east to Snow Shoe. The spokes run northward toward Emporium, Sinnemahoning, Hammersley Fork, and Renovo. Refer to Appendix 1 for a map of all sites on the hub and spoke routes and the coordinates of all of these sites. Waypoint numbers, defined in the Appendix, have been assigned to all sites and are shown on the map.

The marketing brand for the hub and spoke route can be as simple and directly descriptive as the *Elk Forest Scenic Corridor*. Recommendations for signage and viewing improvements for the *Elk Forest Scenic Corridor* are made as part of Task 5. Funding for some of these enhancements will be sought through a TEA-21 grant application.

We recommend the development of two *portals* to serve nature tourists traveling in the region and to usher the uninitiated into the world of nature. Portals are interpreted welcome centers and are staffed by resource specialists.

1. Focusing on elk and elk viewing: Portal should be located on State Gamelands 311 at Winslow Hill.
2. Elk viewing, with the addition of more general nature interests: Portal should be situated at Sinnemahoning State Park.

Out of the entire universe of potential nature tourism destinations found in the Elk Range zone of influence, Fermata has selected choice sites to serve as the framework for the area's nature tourism marketing strategy. We select and type destinations through the Applied Site Assessment Protocol™. As in any case, and as with any methodology, choices must be made. Once these choices are made, these selected destinations are known as *waypoints*.

Fermata has selected a series of waypoints that are arrayed along the *Elk Forest Scenic Corridor* to serve as destinations for all strata of nature tourists in the region including the uninitiated. Waypoints that have been typed as elk-viewing destinations will be associated with the Winslow Hill elk portal. Those of a more general nature tourism appeal will be coupled with the Sinnemahoning State Park portal.

The arrangement of waypoints along the hub has also defined the beginnings of a number of *spokes* that will emanate out from the *Elk Forest Scenic Corridor*. Each spoke should be an independently branded and marketed portal designed to enrich the entire travel marketing platform. The spoke structure will ultimately connect with the Lumber Heritage region as a whole, and is the precise means by which the Elk Range will be incorporated into this overarching initiative.

Entrance to the *Elk Forest Scenic Corridor* hub would be gained through a visitor center facility that would serve as a *gateway* along I-80. The gateway should only be developed after signage, portals, and other recommended facilities on the corridor are in place. The specific location of the gateway should only be determined after completing detailed assessments of all potential sites as well as discussions with the affected communities – tasks which are outside of the scope of the current Fermata contract. However, we do recommend that particular attention be paid to the intersection of I-80 and PA 153. A gateway there, associated with Moshannon State Forest and S.B. Elliott State Park, would appear to be especially inviting. The gateway would be staffed by general tourism information specialists who would receive near real-time sightings and condition updates from site managers at portals.

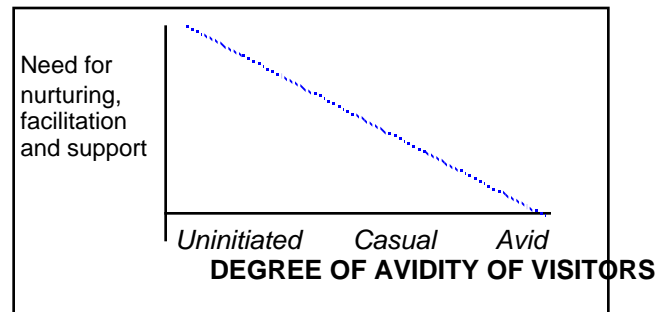
As part of the gateway concept, Fermata recommends that there should be a major visitor facility on I-80, and there should also be an eastern entrance to the corridor. Pennsylvania probably cannot build two visitor centers. However, “gateways” or “entrances” would facilitate access to the area. We believe that the gateway is critical to the future success of the larger *Lumber Heritage* initiative. The gateway, established along I-80, should promote the entire gamut of resources within the Lumber Heritage region, rather than be limited to the natural resources, which are the focus of this report. The same methodology that Fermata has adopted for designation of natural resources waypoints, portals, and icons in this report is also completely applicable to culture or history sites. Therefore, we recommend that gateway development be tied directly to the unfolding Lumber Heritage plan.

### Access and Specialization

The Elk Range ushers visitors into more than two million acres of spectacular public lands, most of which is accessible only by foot or unpaved forest road. The Allegheny Mountains of central Pennsylvania are one of the largest public land holdings in the eastern United States, rivaling the Adirondacks of New York. Yet to most, this region is an amorphous mass - an obscure space sandwiched between population centers in the East and along the Great Lakes.

Fermata's site assessments in the Elk Range have exposed a contradiction. The Elk range is blessed with an abundance of public lands and resources. Yet, these remain largely out of the reach to all but the most dedicated recreationists who are willing to piece together their own itinerary and travel information. The Elk Range is unheralded and unannounced. Thousands of travelers each day pass near or through the region without a hint of acknowledgment or recognition.

Based upon our field work Fermata believes that it is access to the resources, more than the resources themselves, that defines the market segments attracted to the Elk Range. Visitation is arrayed along a *specialization curve* that is determined by access more so than resource. As ease in access goes up, the greater number of uninitiated visitors are able to gain access to the resources. Generally, we have found that the physical constraints of access tend to filter visitors, limiting visitation at sites with poor or inadequate access to only the most avid recreationists.



An example of this phenomenon has been captured in a quote from Rawley Cogan, when he stated:

*“Hiking trails in the areas would be acceptable for those who want to view elk in a more natural setting, but the average visitor shouldn’t be attracted to these areas.”*

This “average visitor” represents the bulk of the market; and, as Rawley has noted, will be deterred by poorly marked hiking trails and unpaved forest roads.

Most visitors already coming to the elk range are the uninitiated. The present lack of signing and interpretation has aggravated some of the problems that are occurring. The *Elk Forest Scenic Corridor* is precisely the mechanism for inviting the uninitiated to access the Elk Range, complete with its well-marked waypoints and all-weather transportation routes. We believe that the average visitor must be as welcome in the Elk Range as the specialized outdoor recreationist, and we view the *Elk Forest Scenic Corridor* as the mechanism for so doing.

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**TASK 1. Review and assess the existing and proposed elk-viewing opportunities in the context of the current and projected elk herd distribution, habitat improvement, and environmental education activities.**

*“Nestled in the heart of the Allegheny Mountain Plateau of north central Pennsylvania are the wooded forests and rich green meadows which are home to more than 600 wild elk. A combination of state gamelands, state forests, state parks, and private land comprise the 835 square miles of the Pennsylvania elk range.”*

*“In recent years, an ambitious cooperative program was undertaken by the Pennsylvania Game Commission, the Pennsylvania Department of Conservation and Natural Resources, and the Rocky Mountain Elk Foundation to expand the elk range and enhance the habitat. These efforts have been a boon to the health and survival of this magnificent elk herd, which has become a treasured natural resource to many Pennsylvania residents and visitors alike” (Mulvihill 2001).*

### **The Elk Range**

The Elk Range is in the middle of the 15-county Lumber Heritage Region of Pennsylvania with the largest concentration of public land in the Commonwealth. The Elk Range acts as a gateway to more than two million acres of spectacular public lands that include countless miles of waterways and wilderness trails. Public land assets total over 2.5 million acres. About 70% of the land in the 835-square mile Elk Range is publicly owned, with the large majority of the land being State Forest land administered by the Department of Conservation and Natural Resources (DCNR). The goal of DCNR and the Pennsylvania Game Commission has been to include a high concentration of public land in the elk range to minimize conflicts with private landowners.

The Game Commission has actively improved elk habitat in the Elk Range through the development of *herbaceous openings*, or food plots. The Game Commission and DCNR agree that the elk herd needs to expand beyond its current concentrated location at Winslow Hill. A comprehensive elk management plan, produced by the Game Commission in 1996, recommends distribution of the elk herd and a concentration of about 1.5 elk per square mile over the approximately 835-square mile range. The plan calls for an increase in the elk population, for habitat enhancement projects, and for land acquisition.

Recently DCNR and the Game Commission in partnership with the Rocky Mountain Elk Foundation announced a joint Habitat Challenge Initiative. The initiative would undertake a public-private challenge grant program to invest \$1.2 million in habitat improvements in the Elk Range. The purpose of the initiative is to support the elk herd and minimize conflicts with private landowners.

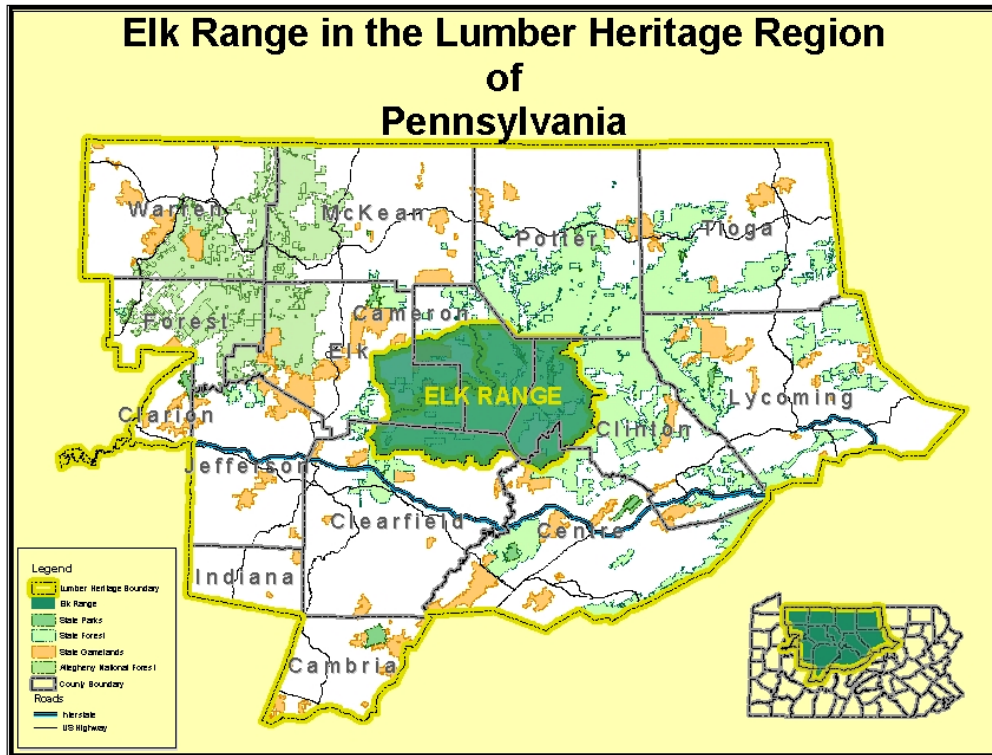


Figure 1: Pennsylvania's Lumber Heritage Region

**Public lands  
in the  
Lumber  
Heritage  
Region**

β 1.4 million acres of state forest managed for multiple uses including commercial timber management, recreation, water supply, and wildlife habitat. This represents about 64% of the state's 2.2 million acres of state forestland.

β 450,000 acres of state gamelands, managed primarily for wildlife and recreational hunting.

β 34 state parks providing many opportunities for camping, fishing, swimming, boating, hiking, and environmental education programs.

β 513,000-acre Allegheny National Forest, including Kinzua Dam and the Allegheny Reservoir that is a 27-mile lake with over 100 miles of shoreline.

### **The Elk Viewers**

According to a two-year Penn State study of the economic impact of Pennsylvania's elk herd (Strauss et al. 1999), tourists engaged in elk-viewing activities were predominantly Pennsylvania residents, with 10 percent from Elk and Cameron Counties and 82 percent from other primarily adjacent Pennsylvania counties. Non-resident elk watchers accounted for only 8 percent of the total, generally coming from southwest New York, northeast Ohio, northern Maryland, and New Jersey. The typical travel distance was 2-1/2 hours for a one-way trip. Elk viewing serves as family entertainment. Family groups represented about two-thirds of the study figures, with an average 3.1 persons per vehicle.

The study further identified that 71 percent of people interviewed considered elk watching the primary reason for their trip. Alternate activities included hiking, walking, camping, hunting, sightseeing, fishing, and horseback riding. It is estimated that elk tourists spend \$1.7 million for transportation, food, and lodging. Although many elk tourists are day travelers or have cabins and/or family in the area, others seek overnight accommodations in St. Marys, Dubois, Clearfield, and Emporium, or in Medix Run and Benezette where limited accommodations are also available.

Over the past decade, Pennsylvania's elk program has been confronted by many social issues arising from the increase in the elk population and the elk-viewing public. These issues include concerns for public safety, dust pollution, traffic congestion, trespassing on private lands, poaching, vehicle collisions, and generally overburdening the local infrastructure during peak seasons. While elk can become quickly acclimated to the presence of people and appear tame, they are wild and potentially dangerous animals. People's attempts to feed elk, now an illegal activity, or to lure them with artificial mating calls are disruptive to the elk's normal behavior and can put both animal and people in danger.

**Carrying capacity** Virtually all wildlife managers agree that *social carrying capacity* for animals such as elk is reached long before biological carrying capacity. Social carrying capacity means the number of elk that can be in a given area before their presence causes so much conflict with people that the presence of the elk themselves is called into question. In essence, when the elk begin to impact residents by obstructing roads, damaging property, or incurring high costs for maintenance, the herd starts to approach its social carrying capacity. Put differently, people begin to ask whether the elk are worth all the trouble.

Other indices of social carrying capacity are communicated by visitors who complain about the tourism experience. Crowds, poor or nonexistent visitor services, inadequate infrastructure, trash, and bad traffic are all signs that, whatever the condition of the habitat, there are too many elk to support the human activities associated with them. It is important to note that social carrying capacity is subject to relatively benign forms of redress, since in the case of the elk herd's popularity, costs to implement the changes that will be required to restore harmony are relatively low.

### **Fermata's Approach**

To assess the available elk tourism destinations in the Pennsylvania Elk Range, Fermata Inc. utilized its patented Applied Site Assessment Protocol™ (ASAP). This protocol weighs both intrinsic and extrinsic values of a specific site and adjusts these values with a final series of modifiers. Sites are valued relative to the market (international, national, and local) and relative to themselves.

People are swept with a disarranged set of sensations when first confronted by nature. Sounds, smells, feel – sensations that are at once pleasant, at times perplexing, or even repulsive. Perhaps the aesthetics of a location (the South Rim of the Grand Canyon) sucks the breath from one's chest. Perhaps the feeling of accomplishment colors the experience, such as when a birder finally identifies their first Connecticut Warbler skulking through the brush at Point Pelee. In each case the experience is distinctive, and in each case people react to the experience in an equally singular fashion.

Travelers enter nature to expand upon their life experience, and to extend these singular moments beyond the immediate. They gather or collect experiences through the act of travel, and as they gain a familiarity in nature, these once-jarring sensations become increasing orderly and logical. As each facet of nature is distinct, so are nature travelers equally diverse and practiced. Therefore when considering the value of any specific natural location as a nature tourism destination, any assessment must first consider how each tourist might react to its discrete set of resources.

Fermata has developed ASAP to frame such an assessment. ASAP should not be confused with a biological assessment, since the protocol is interested in weighing sites relative to their tourism, rather than ecological, value. If resources determine visitation, then the better these resources are understood relative to their distinct recreational or appreciative value, the better we can plan for tourism development.

Intrinsic values are those innate to the resource. Intrinsic values originate within the resource itself, and are considered independent of outside influences. Intrinsic values include the following:

- |                  |   |                 |
|------------------|---|-----------------|
| <b>Landscape</b> | β | Scale           |
|                  | β | Integrity       |
|                  | β | Aesthetics      |
| <b>Resource</b>  | β | Diversity       |
|                  | β | Specialty       |
|                  | β | Conspicuousness |
|                  | β | Appeal          |
|                  | β | Scope           |
|                  | β | Dynamics        |
|                  | β | Significance    |

In addition, extrinsic values were weighed as well. Extrinsic values are external to a resource. Although originating outside of the resource, these values do influence the assessment of the resource, as a whole. Extrinsic values are:

- β Social
- β Cultural
- β Historical
- β Recreational
- β Economic

The complete assessment is modified according to a set of constraints or *limiters*. For example, a destination may exhibit a high resource value that is limited by a regulatory constraint. ASAP modifiers or constraints are:

- β Ecological
- β Physical
- β Social
- β Cultural
- β Health and Safety
- β Regulatory
- β Political
- β Economic

Sites assessments were conducted, compared and then a threshold for acceptance determined. Sites chosen were then deemed to be *waypoints* for inclusion in the nature tourism strategy. Waypoints were then analyzed for specific capacities (ecological, educational, and recreational), and then selected for specific roles. These include waypoints chosen to be *icons* and *portals*.

To better evaluate destinations within the Elk Range, Fermata altered the ASAP to include elements unique to local conditions. Two issues related to elk viewing in the Elk Range demanded individual attention:

**Physical constraints**

The **physical constraints** related to elk viewing in the region are significant. Both PA 555 and PA 120, representing a significant percentage of the entire *Elk Forest Scenic Corridor* are narrow, circuitous, and therefore inappropriate for developed wildlife viewing. With the exception of one abandoned roadbed on PA 120 approximate 4.5 miles north of Driftwood, we found no sites where we would recommend the development of wildlife-viewing amenities (pullouts).

**Social  
constraints**

Overriding social constraints have modified our assessments in the region. Wildlife viewing in the Elk Range has developed ad hoc, and **the behavior of unmanaged wildlife viewers in the area has caused significant conflict with local residents**. In addition, we are concerned that the unethical wildlife-viewing practices that we witnessed represent direct harassment of the elk themselves. The unethical (and in certain cases illegal) wildlife-viewing practices recorded by our observers included:

- β Spotighting (spotighting of resting elk on private property, including the illuminating of private homes and buildings)
  - β Illegal parking (blocking lanes by parking along narrow shoulders, and by stopping within traffic lanes)
  - β Trespassing (walking across private lands to photograph elk)
- 

**Viewing Criteria**

Fermata developed a simple set of criteria by which to measure the appropriateness of proposed elk-viewing sites. These criteria were applied to sites before attempting any detailed assessments. In other words, those sites that did not meet these initial criteria were not included in the promotional recommendations nor considered for enhancement or expansion.

- β Absence/Presence of elk
- β Proximity to Elk Forest Scenic Corridor
- β Availability of off-road, surfaced parking
- β Availability (or appropriateness) of sheltered viewing (blinds)
- β Access limited to pedestrian traffic

These criteria were liberalized for general nature tourism sites as described in the following section, with the exception of considering the proximity of the destination to the *Elk Forest Scenic Corridor*. The goal is to direct traffic to a well-defined corridor, rather than to promote the random wandering that now prevails. Potential elk-viewing sites, however, were rigorously measured as to their compliance with the criteria.

**Definitions**

A **gateway** is a community or facility such as a Welcome Center that ushers the public into the natural world. Gateways stand on their own and don't necessarily have a resource base. Gateways are invariably situated near major transportation routes or junctures (interstate highways, airports), and need not be placed in or proximate to the resource (unlike a portal). A gateway should serve as the communication hub for the region in general, inter-linking with the region's waypoints in delivering real-time information to the traveling public.

**Waypoint** is a general title applied to all nature tourism destinations. However, waypoints are not generic. Waypoints are chosen and categorized through the process of site selection. Fermata, Inc. utilizes the company's proprietary Applied Site Assessment Protocol™ to identify and type waypoints. Waypoints may be specialized (such as portals or icons) or general (providing general conservation, educational, or recreational value).

Generic waypoints may exhibit unique capabilities and functions. For example, a waypoint may have exceptional conservation value, with limited educational or recreational capacity. On the other hand, a waypoint may be a nature center that offers a wide range of educational programs at a site that has limited ecological value. Within a specific site (such as a wildlife management area), there may be several waypoints.

**The richness of a nature tourism strategy is directly proportionate to the diversity of the waypoints.**

<b>Specialized Waypoints</b>	β Portals
	β Icons
<b>General Waypoints</b>	β Administration
	β Communications/Outreach
	β Conservation
	β Education
	β Recreation

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A *portal* offers the traveling public a destination, a door through which to enter nature. A portal site is an interpreted welcome center. It will be used in this strategy as a gateway that ushers the uninitiated traveler/general public into the natural world. Only select waypoints are capable of functioning as portals, of combining the tourism function of a welcome center with the educational and recreational capabilities of a nature center.

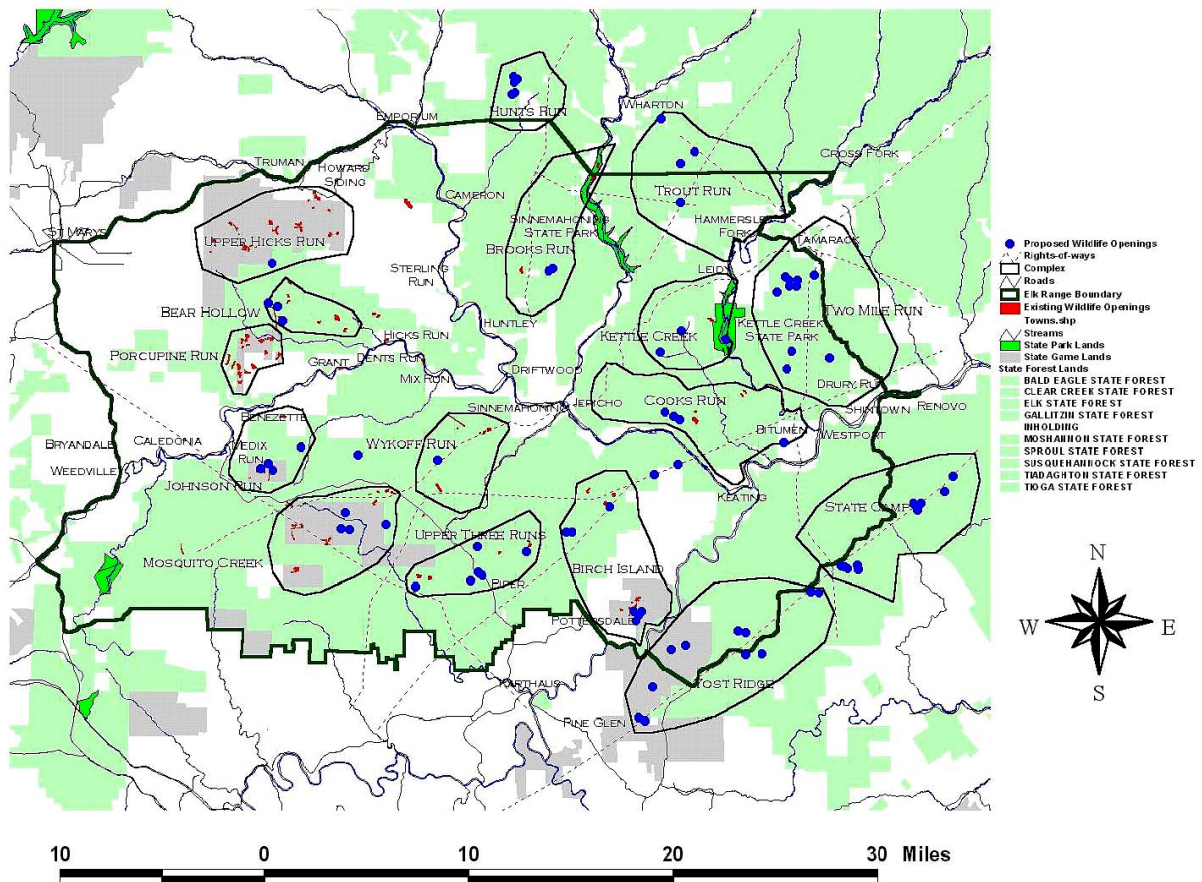
Species may function as portals as well. Mega-mammals such as elk, moose, bison, black bear, and whales are examples of mammals that are conspicuous and approachable. The traveler does not need be an experienced natural historian with expensive binoculars and a portable library of field guides to appreciate these magnificent creatures. Gatherings or massings of species function in a similar manner, as seen in the Sandhill Cranes along the Platte River in Nebraska, Mexican Free-tailed Bats in Bracken Cave, or Monarchs in Micheochan. In each case, the uninitiated are ushered into nature by these natural spectacles.

An *icon* epitomizes a specific habitat, and offers the public the opportunity **to experience nature in its most authentic and unaltered form**. An icon embodies the characteristics of the respective habitat, symbolizing nature in its most unadulterated or unmodified state. An icon transports the visitor back in time, offering a glimpse of the natural world in a primeval form.

## Elk-Viewing Sites

The cooperative effort of DCNR and the Game Commission has improved elk habitat on state gamelands, state parks, and state forests through the development of food plots. This presents the opportunity to enhance these same sites for wildlife viewing. Rocky Mountain Elk Foundation has been one of the biggest financial supporters of the habitat improvement program and has worked with the Game Commission to create herbaceous openings as a means for keeping elk off croplands. Native, cool season forage also helps draw elk to viewing areas.

Typical elk habitat contains about 40% herbaceous openings, whereas the Pennsylvania range has only about 5%. The expansion of these plantings for the benefit of the herd and to protect private land interests should be an important part of the management plan. Areas in which mining reclamation is underway can augment elk habitat by planting buckwheat the first season, as it benefits elk and other types of wildlife. The next season, cool season native grasses can be planted to replace the buckwheat.



**Figure 2: Pennsylvania's Elk Range showing existing (red) and proposed (blue) habitat improvement sites.**



The implication is that there are dozens of potential elk-viewing sites within the range (see map previous page). However, by applying the viewing criteria described above, and considering areas sensitive to human encroachment, **the list of potential elk-viewing sites is significantly reduced.**

The Game Commission and DCNR recommended sites as top priorities for consideration as elk-viewing facilities because infrastructure already exists in most of these areas and/or they are on public lands. Site recommendations included:

- β Winslow Hill (SGL 311)
- β Sinnemahoning State Park (George B. Stevenson Dam)
- β Kettle Creek State Park (Alvin Bush Dam Overlook)
- β Beaver Run Shallow Water Impound
- β Elk State Forest at Hicks Run Cemetery
- β Hoover Tract
- β Tunnel Hill (West of Driftwood on PA 120)
- β Millers Run (Food plots exist on south side of river. Public.)
- β Bucktail State Park (between Wayside Memorial and Golf Course. Public.)

The Game Commission also asked that Gamelands 321, the former Kelly Estate, be considered, but after consideration it was determined not to be a good elk-viewing site because of its remoteness and the overall look of previous strip-mining.

Other potential sites assessed for consideration were:

- PA 555**
- Power line between Caledonia and Medix Run- South of PA 555. (Private)
  - Riparian Area between Benezette and Grant- Both sides of Bennett's Branch. (Public and Private)
  - Weis's Upper Field - North of PA 555. (Private)
  - Rock Cut- Ralph Harrison's property, food plot already exist. (Private)
  - Hicks Run Cemetery- Food plots already exist. (Public)
  - Hicks Run to Stone Quarry Hollow- both sides of Road. (Public and Private)
  - Gaylord McIsaac - South of 555 to river. (Private)
- 

- PA 120**
- Old Farm Field - One mile north of Driftwood, hillside north of fenced grape orchard and west of Driftwood Branch of Sinnemahoning. (Private)
  - Grove Twp. Road – West of Driftwood Branch and Rt. 120, hillside and fields in bottom. (Private)
  - Mason Hill Road – Field on hillside west of road. (Private)
  - Sinnemahoning Sportsman Club- Parking at club and viewing across river to field on hillside, currently is being mowed privately. (Private)
  - Miles Sampson Property- East of Sinnemahoning. (Private)
  - Between Sampson's and County Line- south of river. (Private)
-

## Elk-Viewing Site Assessments and Recommendations

### Game Commission suggested and other priority sites

**Recommendations:** Fermata agrees with the Game Commission's first three top priority recommendations, **believing that Winslow Hill, Sinnemahoning State Park, and Kettle Creek State Park are the critical waypoints for the development of an expanded elk and wildlife-viewing program in the Elk Range.** In fact, Winslow Hill should be considered as the portal to elk in the region. Sinnemahoning State Park has seen such an increase in elk population that it can also serve as an elk-viewing portal with Kettle Creek considered a key waypoint for the development of expanded wildlife viewing in the region (see following sections assessing each site). Fermata has also identified two additional elk waypoints that should be included in the elk-viewing program – the Quehanna Wild Area and Medix Run.

Constraints associated with Tunnel Hill, Millers Run, and Bucktail State Park, however, eliminate them from consideration as waypoints. The concerns of private landowners as expressed to Fermata personnel leads us to shy away from recommending Tunnel Hill as a waypoint. The opportunities related to Millers Run and Bucktail State Park, and their potential for general nature tourism, are addressed in the following section.

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### PA 555 sites

**Assessment:** The elk herd range encompasses more than eight-hundred square miles, in which the Game Commission has created an abundance of improved elk habitat. In actual practice, two-thirds of the herd is loosely concentrated within a single venue that comprises ten percent of the total range. This area of concentration consists of a ten-mile wide corridor north along PA 555 from Caledonia to Benezette and Driftwood. Scattered over the remaining acreage are a small number of elk.

**Recommendations:** All of the PA 555 sites listed above were visited and assessed by Fermata personnel. With the exception of Hicks Run Cemetery and the McIsaac property, all were deemed inappropriate for further study using the criteria previously outlined – specifically due to the physical constraints (lack of appropriate parking along PA 555). While it is enticing to use these sites, particularly in winter when elk congregate in the valleys along the rivers, the precedent established by encouraging roadside viewing will only exacerbate the problems at Winslow Hill. Recognizing that people will continue to see elk and continue to stop along this route, a traffic patrol/educational outreach approach should be considered to minimize traffic and other problems associated with parking on the road. We do believe that development of appropriate winter viewing sites, such as at Medix Run, should be explored.

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**Gaylord McIsaac  
site**

**Assessment:** This landowner has expressed a willingness to have his pastureland converted to elk habitat, and is willing to discuss ways that a viewing site for the elk might be developed. Further discussions with him may make it possible to develop a viewing area on the property itself since parking space along PA 555 is unavailable.

**Recommendations:** Mr. McIsaac's property is situated along the Elk Forest Scenic Corridor, and should be considered for long-term development. Access to this location is one constraint noticed by Fermata personnel during site visits. The entrance road to the McIsaac property bisects the farm. There is no suitable parking space along PA 555, so parking would need to be developed within the farm itself. Given the limited habitat, we question the wisdom of encouraging landowners to introduce visitors into such restricted settings.

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**Hicks Run  
Cemetery**

**Assessment:** DCNR, with the help of Rocky Mountain Elk Foundation recently acquired 215 acres surrounding the cemetery and including 650 feet of frontage on both sides of Route 555 and the abandoned portion of Route 555, as well as the access road from Route 555 which also serves the cemetery. The property was acquired to provide a low-key opportunity for elk watching.

The main issue concerning this site is the fact that it abuts a cemetery and shares the narrow access road and primitive parking area across the road, forcing people to cross State 555 on foot. Visitors to the cemetery and elk viewers vie for positions on the same road and in the same parking lot. Elk viewers can walk into the opening where animals congregate completely exposed to animals and the elements. No interpretive signage is present and few barriers exist to keep elk and viewers separate.

**Recommendations:** We recommend that this site be developed as a model elk-viewing site, with particular attention being paid to it serving as an alternate to Winslow Hill. It could be an ideal viewing site with the suggested enhancements that include, at a minimum, surfaced parking, an access trail, and the installation of a viewing blind.

We recommend that the surfaced parking area should be constructed on the north side of State 555, allowing visitors to access Hick's Run without crossing the highway. There is an abandoned roadbed there that we believe can be used both for parking and for an entrance trail and PennDOT has indicated that this parking area could meet their requirements. So, there is no reason for not establishing this parking area on the north side of State 555 to replace the current lot that poses significant safety hazard to the public and potential liability to Pennsylvania DCNR.

We recommend that the access trail run east/west along the old roadbed. At the eastern end of the roadbed the trail would turn north and continue in a series of switchbacks to a road that accesses the elk-viewing opening. The trail would then turn to the west and continue back to the elk-viewing blind that we recommend constructing at the opening. Our reasons for this recommendation are threefold:

1. It will avoid entering the site in or around the cemetery and help to reduce conflicts with local residents rather than exacerbate the tensions.
2. It will buffer the contacts between elk and viewers rather than replicate the situation that exists at Winslow Hill.
3. The entrance trail would represent a bottleneck that would restrict access to the site. Most elk viewers would not take the time nor exert the energy to hike this trail.

We recommend the construction of a viewing platform (blind) adjacent to the elk opening. In order to maintain a near-wild environment at the site, a viewing blind is critical to keep elk and elk viewers separated. The blind would also offer shelter from the elements and serve as a destination for visitors and wildlife photographers who travel to the region to photograph the elk. This will aid in managing the traffic flow in and out of the property.

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**PA 120 sites**

***Recommendations:*** As noted previously with PA 555, PA 120 also lacks sufficient right-of-way for the development of roadside viewing opportunities. We also question the development of such viewing opportunities that overlook private lands without the cooperation and participation of local landowners.

The one site that appears suitable for the development of roadside viewing is located 4.5 miles north of the intersection of PA 555 and PA 120 in Driftwood. This location appears to be an old PennDOT right-of-way, and encompasses sufficient space for the development of parking and an interpretive kiosk. Discussions with PennDOT would be needed to establish ownership of this property, and its suitability for development as a wildlife viewing location. We recommend that such discussions be initiated.

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**Winslow Hill -  
General**

*Assessment:* A primary elk-viewing area is Winslow Hill on State Gameland 311 near the village of Benezette in Elk County. The Pennsylvania Game Commission purchased this 1600-acre plot with help from Western Pennsylvania Conservancy and DCNR. Elk State Forest abuts SGL 311 to the west and north and an abundance of habitat improvements on these lands provides high quality forage, which holds a large proportion of the herd in the vicinity.

Numerous private holdings and private homes border SGL 311 to the south and east and also Winslow Hill Road, which provides the main access to the viewing site. Like the tourists who come to view them, the elk seem habituated to the area, and although the large numbers of visitors during the peak fall viewing season put pressures on the herd, those pressures are not significant enough to drive the animals away.

An elk-viewing site was constructed that offers a small parking lot, an overlook, and a kiosk where visitors could find information and educational materials.

The best elk-viewing opportunities occur during the fall months, from Labor Day to Halloween, when the elk are rutting (Harrison). A two-year Penn State study of the economic impact of Pennsylvania's elk herd (Strauss et al. 1999) estimated attendance at Winslow Hill during this time at 33,348 visitor days in 1997 and 45,835 visitor days in 1998, with average daily weekend attendance at 1300. These figures, which represent 64 percent of total annual attendance, indicate an increase of 37 percent from one year to the next. In addition, the summer months have also shown increases ranging from 30 to 84 percent, suggesting that the elk-viewing season may be expanding (Strauss et al. 1999).

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The Pennsylvania Game Commission aggressively plants "herbaceous openings", or food plots, for the elk herd and for other game animals. The elk benefit from these plantings and there is no indication that the bulk of the herd will leave its familiar range at Winslow Hill of their own accord. Hence, the problems of elk damage to property, and of conflict between tourists and residents of Benezette, can be expected to continue. By the same token, the predictable appearance of these charismatic animals at a regular venue also guarantees that Benezette and the surrounding counties will have a significant tourism opportunity for years to come. Significantly, this concentration will continue to give rise to habituation, which in some respects is the greatest challenge that herd management faces.

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**Winslow Hill –  
Viewing Issues**

*Assessment:* The current concentration in the Winslow Hill area has led to significant issues for tourists, for residents, and for the elk. In its current formulation, elk tourism involves driving up the narrow paved road from Benezette, stopping in the middle of the road when elk appear, and continuing to the Gilbert Tract viewing area at the top of the hill where there is minimal parking, awkward egress, and no permanent toilets or permanent interpretation services. Residents have repeatedly stressed that although infrastructure and revenue-capture are important aspects to the elk-viewing strategy, the primary focus should be on education and a positive viewing experience.

In the mid-90s, Winslow Hill residents experienced great difficulty traveling to and from their homes in the fall viewing season. To reduce dust pollution, Penn DOT paved the road over Winslow Hill in September 1999. Other responses have focused on educating the public. Elk tours led by the Department of Conservation and Natural Resources and the Game Commission were educational, offering people much-needed information and insight. Guided tours of the elk range and workshops for area schoolteachers were held at the Sizerville State Park. Harrison concludes that more programs such as these are needed to educate the public on proper elk-watching ethics.

Current visitation trends indicate that social carrying capacity for the Winslow Hill area, in its present configuration, will reach its limit relatively soon. Our discussions with residents from Benezette lead us to believe that many residents support the herd and the activities associated with it, however, residents at some of the meetings we attended voiced their opposition to an increase in the current visitation load during peak season. Additionally, residents prefer that visitation at elk viewing sites be channeled to or clustered on public lands. Some residents fear that ever-increasing floods of visitation could ultimately ruin the solitude and quiet that characterize the region's ambiance.

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***Recommendations:*** The large amount of improved habitat and the high numbers of elk that remain in and around Winslow Hill ensure that it will remain an attraction that continues to draw tens of thousands of visitors. Fermata recommends an expanded elk-viewing program at Winslow Hill that should serve as the elk-viewing portal for the Pennsylvania Elk Forest Scenic Corridor. While habituation will continue, steps should be taken to minimize close encounters and harassment at this site. Rather than create additional habituation opportunities by extending Winslow Hill-styled wildlife viewing to other sites within the Elk Range, **we prefer to focus elk/human interactions toward one location where habituated elk already exist.**

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**Winslow Hill –  
An Elk Portal**

**Assessment:** The development of an expanded facility would serve to address concerns voiced by the community. While we understand the reluctance to attract additional visitors during the fall rut, we also recognize an opportunity to touch thousands upon thousands of visitors who have little experience with the outdoors, nature, or the risks to these resources. Winslow Hill is the ideal location for capturing these masses of the “uninitiated.” It is a destination that would attract people off Rte 555 and help to limit the problems of traffic in Benezette and Grant.

**Recommendations:** Improvements such as rest rooms, additional parking, interpreted viewing and photography trails, blinds and platforms, staff prepared to answer questions and direct visitors to local goods and service providers, as well as personnel to help manage visitation to the region, will improve the deleterious impacts of this activity and increase visitor satisfaction. Efforts to restrict illegal stopping, parking, and trespass along Winslow Hill Road would diminish the impacts on local residents.

The portal would involve the construction of an interpreted visitor center, complete with staff. We recognize that construction associated with an acid-mine remediation project in the region may offer additional opportunities regarding road construction and other infrastructure improvement. In addition, the land use inconsistencies around Winslow Hill may threaten the view shed for certain structural placements.

In our opinion, the traffic problem during peak visitation along Winslow Hill Road is one of traffic flow, not traffic volume. Combined with the establishment of a signed Elk Forest Scenic Corridor, the establishment of a Winslow Hill elk portal would go far in addressing the concerns of the local community.

**Sinnemahoning  
State Park: elk-  
viewing  
opportunities**

*Assessment:* Sinnemahoning State Park is situated approximately eight miles north of PA 120 on Route 872. The 1,910-acre Sinnemahoning State Park is in Cameron and Potter counties, and is surrounded by Elk State Forest. Sinnemahoning is on the first fork of the Sinnemahoning Creek and hosts an abundance of wildlife such as Black Bear and Bald Eagle.

Although we will address the opportunities for the development of a general nature tourism portal at this state park later in this report, we also would like to note the elk-viewing opportunities that should be developed here.

Elk were first sighted at Sinnemahoning in 1998 and have been regular visitors since 2000 when the Pennsylvania Game Commission created two food plots in the northern end of the park. According to Jon DeBerti, Wildlife Technician with the PA Game Commission, Sinnemahoning will soon be home to a permanent elk population. The seasonal movements now experienced are coming from a group of elk that inhabit the Driftwood Branch. The yearly calving, recent habitat enhancements, and documented movements in and out of the area indicate continued signs of growth for the herd.

Within the last two years, Sinnemahoning State park staff, area residents, and park visitors have noted an increased loyalty to the area from this local group of animals. This past spring saw a group of five cows and two bulls that utilized the food plots, one of the first areas to green up in the spring. Summer months indicated a steady movement in and out of the park by a small group of cows and calves. The cow that calved in the park two years ago was hit by a motor vehicle in 2001. The family group spotted is believed to have belonged to this particular cow. The fall rut was busy as a group of eleven cows, two spikes and 2-3 branched antler bulls put on a continuous show in the food plots from the second week of September to the early part of October. During the winter months, the elk are scattered but a small group continues to sporadically use the park for food and thermal cover provided by the ample supply of pine and hemlock located throughout the bottomlands.

With the elk have come the visitors. The fall of 2001 saw a significant increase in the number of elk sightseers, with many people parking or stopping along PA Route 872 to view the elk, creating unsafe and hazardous conditions along the highway. With only word-of-mouth and no advertising by the park or bureau, as many as twenty cars have been seen parked on a weekend.

As we have stated before, this is the perfect opportunity to develop a proper elk-viewing facility from the ground up at Sinnemahoning. Viewers

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are not yet habituated, and we would urge that the effort be made immediately to develop the parking and facilitation that will allow Sinnemahoning to evolve toward becoming a destination.

***Recommendations:***

1. Expand the habitat enhancement program at Sinnemahoning State Park. The park's expanse of public land would appear to be able to support a significant population of elk, and the river front habitat and associated valley should be attractive to a winter population.
  2. Develop wildlife-viewing enhancements simultaneous with the habitat improvements. Given the wish to avoid elk habituation, blinds, improved parking, appropriate signage on Rte 872, and an upgraded trail with vegetation and/or fencing intended to restrict elk/human interactions should be installed at the outset.
  3. Bolster the Sinnemahoning elk herd with translocations. We recognize the sensitive nature of such a recommendation, but we believe that such an effort is feasible with open public participation. The creation of additional elk habitat within the park will be critical to the public's perception that private land impacts will be minimized. The key to developing Sinnemahoning State Park as an elk-viewing waypoint, however, is ensuring that elk may be seen at the park. Increases in the Winslow Hill population will ensure that surplus elk will be available for translocation. Given an expressed need to restrict the habituated elk herd at Winslow Hill to its present number (in other words, not expand the number of habituated elk), opportunities for additional translocations will present themselves in the future. Sinnemahoning State Park (as well as Kettle Creek State Park) will, if developed properly, be a preferred destination for these excess elk.
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**Kettle Creek  
State Park**

*Assessment:* Kettle Creek State Park is located approximately 12 miles east of Sinnemahoning and 11 miles north of PA 120 on S.R. 4001. It consists of 1,793 acres along Kettle Creek in western Clinton County. The park is in a valley surrounded by mountainous terrain and wilderness. Of particular interest for elk-viewing purposes are the Alvin R. Bush Dam, and the Beaver Dam Run. The Alvin R. Bush Dam overlooks a sizable herbaceous opening on the east side of Kettle Creek. Parking is available on top of the dam, and viewers are separated from the habitat by the dam and Kettle Creek.

Elk habitat enhancements are planned in and around the park in the Sproul State Forest. Although elk are currently not regularly seen in the park, it is expected that they will begin to be seen more regularly as the herd expands and additional habitat improvement provides high quality forage.

*Recommendations:* We recommend an enhancement program similar to Sinnemahoning State Park.

1. expand elk habitat in the park;
2. develop wildlife viewing opportunities at the Alvin R. Bush Dam;
3. translocate elk to expand the Kettle Creek herd.

A 7-acre elk habitat improvement was constructed in 2000 in the northern part of the park near Beaver Dam Run and the equestrian trailhead. The elk population here appears to be peripheral to the main population in the rest of the Elk Range but translocations into the park will no doubt place elk in this area as well, offering visitors a less developed and therefore more authentic elk-viewing opportunity.

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**Quehanna Wild  
Area - Hoover  
Tract and Beaver  
Run Shallow  
Water  
Impoundment**

*Assessment:* The Quehanna Wild Area became Pennsylvania's first large forest area (48,186 acres) devoted to the pursuit of peace and solitude. The Quehanna lies just to the south of the major concentration of the elk herd along the Rte 555 corridor from Caledonia to Driftwood. Through the decade of the 90s, elk have expanded into this area in relative density with the concurrent establishment of habitat improvements established by both the Elk and Moshannon Forest Districts, in cooperation with the Game Commission.

Two sites inspected by Fermata within the Quehanna Wild Area appear appropriate for elk viewing consistent with the management of the wild area. Both sites have had substantial investments in improved habitat and are relatively near the Quehanna Highway, which serves as the main roadway crossing the Quehanna.

The Beaver Run Shallow Water Impoundment was constructed to provide excellent wildlife habitat and a quiet and tranquil viewing area. Located just a quarter-mile from the Quehanna Highway, it already has an access road leading to a stone parking area. A variety of wildlife frequents the area. While elk are occasionally seen at this location now, their numbers can be expected to increase as the herd in Quehanna grows.

The Hoover Tract is located about 1.7 miles from the Quehanna Highway at the terminus of Lincoln Road. A large habitat improvement has been constructed at this location on the footprint of an old airfield. Elk are seen here relatively frequently. The location is known to the local community and already attracts viewers. There is currently no parking area, no signage, and no other improvements to facilitate viewing or maintain a separation of viewers from the elk.

**Recommendations:** Quehanna should offer the intrepid observer the chance to see or photograph an elk in the wild. Quehanna is the area to earn an elk, rather than have one given, as at Winslow Hill. Quehanna, therefore, will **serve as the elk icon for the purposes of this strategy.**

Our recommendation is to restrict elk viewing within the Quehanna Wildlife Area to low impact activities. Viewing enhancements should be restricted to shelters, blinds, and signage.

Enhancements recommended for the Hoover Tract are limited to an observation blind and associated interpretive signs.

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### **Medix Run**

**Assessment:** Medix Run is a small community located approximately three miles west of Benezette along PA 555. Elk congregate here in the winter, offering the opportunity to photograph herds of the animals on a backdrop of fresh snow. The land at Medix Run is in private hands, however, and an effort to enlist the cooperation of local landowners would need to be initiated.

**Recommendations:** Medix Run offers an excellent opportunity to expand elk viewing into the shoulder season (winter), and the community itself would stand to benefit from such growth.

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**Travel platform for elk:** Summary of recommended portals, icons, and waypoints

<i>Site</i>	<i>Role</i>	<i>Management</i>
Winslow Hill	Portal	Game Commission
Sinnemahoning State Park	Portal	DCNR
Kettle Creek State Park	Developed waypoint	DCNR
Quehanna Wild Area (Hoover Tract)	Icon	DCNR
Quehanna Wild Area (Beaver Run Reservoir)	Icon	DCNR
Hicks Cemetery	Roadside waypoint	DCNR
PA 120 (PennDOT)	Roadside waypoint	PennDOT
Medix Run	Private land (potential future waypoint)	Private

**TASK 2. Review and assess the supply of other nature tourism assets in the elk range counties that could be promoted in conjunction with elk-viewing opportunities.**

*“The meadow on the right side of Dewey Road had been recently mowed, and the bunnies were hopping around looking for new cover. Chipmunks scooted across the road. Sparrows sang symphonies in the bushes, and an occasional red squirrel raced across the landscape. Critters abounded along the roadside that day... adding to the ambiance of elk country. Even the beautiful orange butterflies which like to pause on the flowering milkweed plants along Winslow Hill Road were a pleasure to behold, and were deserving of a couple of photographs! Wildlife and the good life abound here! It is unique and wonderful indeed!” (Mulvihill 2001).*

**General**

**Assessment:** After extensive review in and around the elk range counties, Fermata has determined that a vast set of resources exists upon which to establish year-round nature tourism in elk country. In essence, there are more than a million acres of public land, in addition to nearby Allegheny National Forest. While this resource base provides a virtually inexhaustible laundry list of places that are worthwhile to visit, **it also constitutes a resource base so great that the casual visitor cannot easily decide where to begin.**

Moreover, road access over this five-county area is indirect and potentially fatiguing due to the fact that roads are rarely straight, that they follow riverbeds, and that they are constantly ascending or descending. Sites distributed throughout the public lands are also disconnected, and the actual travel time from one site to the next can be considerable.

**Recommendations:** We believe that a sound nature tourism strategy must be built upon the visitation already occurring as a result of elk viewing. Other nature tourism sites should be easily accessed from current and planned elk-viewing sites in a way that visitors are required to do as little driving as possible, and so that, to the greatest extent possible, visitors should be able to stay on the major roads.

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**Nature tourism corridor**

**Recommendations:** We envision a nature tourism corridor that runs from Ridgway to Renovo, along the basic contours of 255 South, 555 East, and 120 East. This corridor will highlight state parks, state wild areas, and state forests. Fermata essentially envisions a wildlife-viewing corridor that roughly corresponds to the broad swath of land between St. Marys and Renovo, with SR 555, SR 120, and SR 144 acting as the main access points along the corridor. Some secondary roads and collateral viewing opportunities were included in order to present as representative a picture as possible for all the public lands in the region.

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## Seasonality

**Recommendations:** This nature tourism corridor should reflect the dynamic nature of the resources themselves in regard to seasonality. Current peak season elk viewing occurs in fall, and additional wildlife watching activities should seek to spread visitation out over the shoulder seasons of winter, late spring, and summer. For the casual tourist, the most dynamic time to view elk is during the fall rut.

Other resources exhibit similar peak seasons, and visitation that reflects peaks for other organisms that occur at different times of the year is a logical way to increase shoulder season visitation. For example, breeding bird activity is at its height during the last three weeks of May and the beginning of June. Butterfly activity is at its most intense in July and August. Late fall nature tourism activities such as foliage viewing, and elk viewing during winter, when the herd congregates in the warmer, lower altitude river bottoms, are examples of ways that other resources can be matched to seasons other than the peak.

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## Dynamics

**Recommendations:** Related to the issue of seasonality is the issue of *dynamics*, which essentially defines the conditions that need to occur before a given organism will appear at a location. Dynamics are particularly important for nature tourism in the elk range during summer, because activities of different species at different times of the day will define the type of activities available to visitors.

In concrete terms, most bird activity begins early in the morning, tapers off by late morning, and does not get going again until the early evening. The dynamics of butterflies and aquatic insects such as dragonflies, however, are the exact reverse. Requiring direct sunlight to raise their body temperatures high enough to permit motion, these organisms begin entering active mode just as bird activity starts to drop off. Consequently, we believe that a sound nature tourism strategy will reflect these species dynamics by putting together viewing sites and interpretive signage/materials that allow tourists to literally spend an entire day in the field, shifting from birds, then to butterflies, and then back to birds again. In addition, non-elk related activities exist during the peak fall season, when autumn foliage creates an irresistible attraction for urban dwellers. Therefore the site assessments for general tourism were organized according to this proposed structure.

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**Sinnemahoning  
State Park - Nature  
Tourism Portal**

**Assessment:** As we have recommended the development of an elk-viewing portal at Winslow Hill, we suggest the establishment of a general nature tourism portal at Sinnemahoning State Park. The state park should be an anchor destination along the corridor due to its location, the presence of infrastructure, a park manager enthusiastic about and interested in promoting wildlife viewing in the region, and excellent wildlife-watching habitat. Bird and insect life reflect the park's diversity of habitats, including a large impoundment, river, vernal pools, dense woodlands, meadows, elk food plots, meadows, and an old millpond. Elk frequent the park, as do large numbers of White-tailed Deer.

The park is also a summer nesting site and year-round residence for Bald Eagles, which can be viewed from the parking lot at the main boat access. The park has established an eagle-watching program that attracts visitors during season, including guided boat trips. Other bird species of interest include Common Merganser and Wood Duck, as well as a few wintering geese. The woodland edge attracts Least Flycatcher, Willow Flycatcher, Black-capped Chickadee, Baltimore Oriole, Blue-gray Gnatcatcher, Hairy Woodpecker, and Purple Finch.

The park's wetlands offer a large diversity of dragonflies and damselflies, including attractive species such as Twelve-spotted Skimmer, Common Whitetail, Eastern Pondhawk, White-faced Meadowhawk, and Eastern Forktail. Turtle nesting platforms have been placed at various places on the lake, and softshell turtles have recently been seen in the park. The elk food plot area at the northern end of the park attracts butterflies, since the road edge is lined with milkweed.

**Recommendations:** The importance of Sinnemahoning as a site for interpreted wildlife viewing, as a site that is geared to handle large numbers of people, and as a key link in the drive from Renovo to St. Marys cannot be overemphasized.

To best utilize Sinnemahoning State Park as a nature tourism portal, we suggest the following:

1. Interpretive Center - As noted earlier, a portal is, in effect, an interpreted welcome center. At the present, interpretation at the park is limited to a temporary building that also functions as an administrative office. To operate as a portal, Sinnemahoning will require the development of a self-contained interpretive center, complete with staff. Fermata is aware that discussions concerning an interpretative center at Sinnemahoning are on-going, and we recommend that planning for this center incorporate our suggestions related to its functioning as a portal.

2. Expanded Interpretive Staffing - Interpretive staffing will be critical to the operation of Sinnemahoning as a general nature tourism portal. This state park must be known as the site that will provide answers for the visitors' questions and that facilitates the visits of even the most novice nature watcher. Staff at Sinnemahoning must also be able to coordinate the general nature tourism activities throughout the Elk Range, and insure that information is reported in near-real time to the outside world.

**Nature Tourism Opportunities at Sinnemahoning State Park**

The National Survey on Recreation and the Environment (2000) provides data on the participation of Americans over 16 in outdoor recreation activities. The following table compares the categories of activities available at Sinnemahoning State Park with the responses from the NSRE survey. From these data it is obvious that Sinnemahoning State Park has an abundance of nature-related activities to offer the outdoor recreationist. A complete list of nature tourism portal opportunities at Sinnemahoning State Park and detail about each is included as Appendix 4.

<b>Activity</b>	<b>% of population over 16</b>	<b>Number in millions</b>
Bird watching	33.5	69.4
Wildlife watching	45.9	95.2
Viewing natural scenery	60.9	126.2
Viewing and learning activities (wetland walk, butterfly & damsel fly hike)	69.4	143.9
Viewing wildflowers and other natural vegetation	45.4	94.1
Fishing	34.1	70.7
Wildlife and nature photography	69.4	143.9
Hunting	11.3	23.4
Camping	24.9	51.6
Backpack camping	15.2	31.5
Hiking	33.6	69.7
Horseback riding	10.2	21.1
Mountain biking	21.0	43.5
Canoeing	9.4	19.5
Kayaking	3.0	6.2
Tubing (rafting)	9.7	20.1

## Additional General Nature Tourism Waypoints and Definitions

The following itinerary outlines the general nature tourism waypoints that should be included in this marketing platform, followed by discussions of additional sites that will flesh out the configuration. We have chosen to array the general nature tourism waypoints along a wildlife corridor, the Elk Forest Scenic Corridor.

Not all waypoints, however, are neatly displayed along the corridor, and therefore demand separate attention. **Most important of these are the state natural and wildlife areas, many of which are icons for specific habitats within the Elk Range.**

According to the Pennsylvania Bureau of Forestry:

*“Pennsylvania’s State Forest system includes 61 designated natural areas and 13 wild areas. Many of these areas support unique or unusual biologic, geologic, scenic, and historic features. Other sites represent outstanding examples of Pennsylvania’s major forest communities.”*

### Natural area definition

“An area of unique scenic, geologic, or ecological value which will be maintained in a natural condition by allowing physical and biological processes to operate, usually without direct human intervention. These areas are set aside to provide locations for scientific observation of natural systems, to protect examples of typical and unique plant and animal communities, and to protect outstanding examples of natural interest and beauty.”

### Wild area definition

“An extensive area which the general public will be permitted to see, use, and enjoy for such activities as hiking, hunting, fishing, and the pursuit of peace and solitude. No development of a permanent nature will be permitted to retain the undeveloped character of the area.”

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Among the restrictions that apply to both natural areas and wild areas, we note that:

*“Buildings and other improvements will be restricted to the minimum required for public health, safety, and **interpretive aids** (emphasis added).”*

### Pennsylvania’s Important Bird Area (IBA) Program

Pennsylvania’s Important Bird Area (IBA) Program is part of a worldwide effort to identify and protect outstanding habitats for birds and all wildlife. First developed in Europe by BirdLife International, the program’s success in the Old World quickly spread to North America where it is administered by the National Audubon Society. The IBA Program has become pivotal to a continent-wide bird conservation strategy.

Pennsylvania was the first state to develop an IBA program in the United States. Based on strict scientific criteria, a group of scientific advisors

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(known as the *Ornithological Technical Committee*) selected 73 IBA sites encompassing over one million acres of public and private lands. Three sites within the Elk Range have been designated as IBAs:

- β Quehanna Wild Area
- β South Sproul State Forest
- β Tamarack Swamp State Natural Area

**Recommendation:** Fermata's site assessment took into account this special designation, and future programming should take advantage of the unique birding opportunities afforded by these waypoints.

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Within the Elk Range, there are three state forest districts: Moshannon, Elk, and Sproul. One additional state forest district, Susquehannock, lies partially within the range. Within these forests, nine natural areas and three wild areas have been designated (with one additional wild area proposed).

**Marion Brooks  
State Natural Area**  
(Moshannon State  
Forest)

**Assessment:** Located off Quehanna Highway in the Quehanna Wild Area, Marion Brooks is a striking area almost completely comprised of white birch. During late spring and early summer, the forest is alive with vocalizing songbirds, and provides a premier example of the wildlife appeal of these deciduous forests as breeding grounds for neotropical migrants. The Quehanna Trail skirts the edge of the natural area, and provides access to many characteristic birds of the area, including Chestnut-sided Warbler, American Redstart, Black-and-white Warbler, Black-throated Green Warbler, Hermit Thrush, Common Raven, Chipping Sparrow, and Dark-eyed Junco. By car, a small parking area accommodates visitors who want to simply walk a few yards into the forest to scan for birds, and on foot, trailheads for the Quehanna Trail provide miles of walking within the wild area itself.

**Recommendations:** We recommend that this site be interpreted for the visitor with appropriate signage but that site access be coordinated through local naturalist tours.

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**Beaver Run  
Shallow Water  
Impoundment**  
(Moshannon State  
Forest)

**Assessment:** The Beaver Run Shallow Water Impoundment, also accessed from Quehanna Highway and part of the Quehanna Wild Area, is a shallow water impoundment on Beaver Creek that provides walk-in access to an excellent pond habitat with good numbers of Eastern Bluebirds and swarms of Tree Swallow, Common Loon, and Great Blue Heron. Food plots adjacent to Beaver Run also attract small numbers of elk in the summer, and the trails near Beaver Run provide an excellent venue for visitors who want to see elk away from the traditionally congested viewing sites (as noted previously in our report on elk-viewing opportunities).

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**Recommendations:** We recommend that this site be interpreted for the visitor with appropriate signage but that site access be coordinated through local naturalist tours.

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**Cranberry Swamp  
State Natural Area**  
(Sproul State Forest)

**Assessment:** Access here is similar to Swamp Branch of Beech Creek. The trail provides access to a wetland and pine/maple/oak woodlands surrounding an old railroad grade. Both bird and insect life are rich here, reflecting the diversity of habitats. The wetland between Benjamin Run and Cranberry Run provides clear flowing water over boggy sedge.

Habitat here is good for dragonflies and damselflies not found in other aquatic habitats, including several darners, emeralds, and skimmers. Butterflies included Clouded Sulphur, White Admiral, Eastern Tiger Swallowtail, Great Spangled Fritillary, Peck's Skipper, and abundant Appalachian Brown. Birds were also abundant, including Wild Turkey, Red-shouldered Hawk, Downy Woodpecker, Eastern Wood Pewee, White-breasted Nuthatch, Blackburnian Warbler, Black-throated Green Warbler, and Rose-breasted Grosbeak. The road leading out of the swamp is also a good place to look for Timber Rattler, a beautiful and dynamic snake that can be found sunning in the roadway. These snakes are poisonous and should be approached with caution, but will almost always flee rather than attack.

**Recommendations:** We recommend that this site be interpreted for the visitor with appropriate signage but that site access be coordinated through local naturalist tours.

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**Swamp Branch of  
Beech Creek**  
(Sproul State Forest)

**Assessment:** Access to this site requires four-wheel drive and a local guide. The entrance road passes through dense forest, where Ruffed Grouse and Wild Turkey can be seen in summer. The road finally emerges along a sunny creek, surrounded by a wetland that has nesting Chestnut-sided Warbler, Blackburnian Warbler, and countless Red-eyed Vireos. Butterflies throng in the sunny wetland, and include Northern Pearly-eye, Appalachian Brown, Common Wood Nymph, and White Admiral. The metallic green and black Ebony Jewelwing, one of the area's larger damselflies, is also common here.

**Recommendations:** We recommend that this site be interpreted for the visitor with appropriate signage but that site access be coordinated through local naturalist tours.

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**Tamarack Swamp  
State Natural Area**  
(Sproul State Forest)

**Assessment:** This site easily ties in with Kettle Creek State Park, and acts as a drainage sink for the surrounding slopes. The vegetation breaks down in this depression and becomes acidic. These boggy conditions produce various sedges and tamarack trees. Its makeup in this regard is unique among the sites we visited, and the boggy habitat likely has interesting vegetation such as orchids during the spring. Easily accessible off SR 144, the swamp is less than a hundred yards from the highway, and a small dirt area provides adequate parking.

The acidic waters of Tamarack Swamp provide habitat for a number of interesting aquatic insects. Vegetation along the roadside and the surface of the dirt roads also attract butterflies. Along the creek, watch for the tiny but unusually attractive Sedge Sprite, whose glittering, emerald green and turquoise body is truly worth the effort it takes to locate and identify this damselfly. Habitat-specific emeralds that we were unable to identify also indicate that this site is a rich one for further investigation and discovery. The milkweed along the road hosted large numbers of butterflies, including Aphrodite Fritillary. Peck's Skipper, Monarch, and swallowtails were also present.

DCNR is currently working with the Western Pennsylvania Conservancy to acquire additional lands on the perimeter of the swamp that would provide better protection of and access to the natural area.

**Recommendations:** We recommend that this site be interpreted for the visitor with appropriate signage but that site access be coordinated through local naturalist tours.

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**Johnson Run State  
Natural Area,  
Lower Jerry Run  
State Natural Area,  
and Pine Tree Trail  
State Natural Area**  
(Sproul and Elk  
State Forests)

**Assessment:** Access to many of the state natural areas is difficult, often limited to foot traffic. From the standpoint of nature tourism development, this restricts visitation to more avid enthusiasts. However, with facilitated sites such as Sinnemahoning available for the casual recreationists, remote waypoints serve to enrich the nature tourism offering.

**Recommendations:** These three natural areas should be treated as limited access waypoints that function as spurs off of the Elk Forest Scenic Corridor. In each case, however, the effort to hike these sites and trails is well rewarded. As information for the Elk Highway/Scenic Corridor is developed, we recommend that undeveloped sites such as these be advertised as limited entry destinations.

**M.K. Goddard  
State Natural Area  
/Wykoff Run  
Scenic Road**

**Assessment:** Although the Goddard SNA is similar to the above in restricted entry, the Wykoff Run Scenic Road allows vehicular entry to this spectacular area. Wykoff Run Road extends from SR 2001 in the Quehanna Wild Area to PA 120 in Driftwood. Wykoff Run is only second to the Renovo to Snow Shoe drive for fall color, and the entire area is a favored haunt of Black Bear.

**Recommendations:** For nearly ten miles the road winds its way along Wykoff Run, with frequent opportunities to park along the road and enjoy one of dozens of waterfalls that line the road. There is a need to add approach and directional signs for these existing pull-offs and upgrade surfacing of some pull-offs.

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**Forrest H.  
Dutlinger State  
Natural Area and  
Hammersley Wild  
Area (proposed)  
(Susquehannock  
State Forest)**

**Assessment:** The proposed Hammersley Wild Area, as well as the Dutlinger SNA, is situated well north of the Elk Highway. In addition, access is restricted. However, these sites fit well with the Kettle Creek spoke that extends north along SR 4001 to Hammersley Fork, then south along PA 144 to Renovo and the main Elk Highway.

**Recommendations:** We suggest that these sites be included as peripheral wilderness sites that can be coordinated through the Sinnemahoning State Park portal.

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**S.B. Elliott State  
Park**

**Assessment:** Located along I-80 at PA 153, S.B. Elliott State Park is the first public facility (along with the Moshannon State Forest headquarters) that welcomes visitors into the Elk Range.

**Recommendations:** Recommendations concerning the creation of a welcome center (a gateway) at this location will be detailed in the marketing section of this project. However, S.B. Elliott offers general nature tourists an introduction to the Pennsylvania Alleghenies. Interpretive facilities and staff are limited, and we would recommend an expanded interpretive program to coincide with the gateway development. The state forest headquarters might also be an appropriate location for an interpretive welcome center. There is also a stockpile area that could be considered as well.

Within S.B. Elliott itself, the sphagnum bog provides a special habitat for interpretation.

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**Parker Dam State  
Park**

*Assessment:* The 968-acre Parker Dam State Park is a multi-use park that includes lakes, a quaint campground, and access (via trail) to the Quehanna Wild Area.

A CCC Interpretive Center interprets the many Civilian Conservation Corps sites in the region. Although wildlife viewing at Parker Dam is limited, the park does provide a convenient base camp for exploring the Elk Range.

*Recommendations:* Wildlife viewing at the state park could be improved through the planting of butterfly and hummingbird gardens and the establishment of feeding stations.

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**Sizerville State  
Park**

*Assessment:* Sizerville provides a gateway to Elk State Forest and is a trailhead for the Bucktail Trail, a popular backpacking trail of north central Pennsylvania. The park is surrounded by 460,617 acres of Elk and Susquehannock State Forest that offer recreational opportunities for all outdoor enthusiasts. Sizerville State Park is near the terminus of the PA 120 spoke that extends north of the Elk Highway. However, future development of this spoke and the inclusion of additional Susquehannock State Forest lands into the Elk Range marketing strategy enhance the park's role in Elk Range nature tourism. Unlike many of the state parks in the range, Sizerville does offer extensive environmental education and outreach through an on-site environmental center. Sizerville stands to serve as the portal to the magnificent Susquehannock State Forest.

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**Wayside Memorial  
Roadside Park**

*Assessment:* Of additional interest is the Wayside Memorial Roadside Park along PA 120 south of Sizerville State Park. Although diminutive, this park offers a refreshing respite from the circuitous drive north along PA 120.

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**Hyner View State  
Park and Hyner  
Run State Park**

*Assessment:* Hyner View State Park is located near Renovo off Hyner Mountain Road (PA 1014). Hyner View State Park overlooks the West Branch of the Susquehanna River, and provides a spectacular scenic view of the eastern Elk Range. Hyner Run State Park is adjacent to the View itself, and offers camping facilities.

*Recommendations:* Hyner View should be included with PA 144 between Renovo and Snow Shoe as one of the most impressive scenic drives in Pennsylvania, particularly during fall color.

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**Bucktail State Park  
and State Natural  
Area**

*Assessment:* Bucktail State Park is an enigma, a state park that is more scenic drive than recreational area. The “park” follows PA Route 120 as it winds from Lock Haven to Emporium along the West Branch of the Susquehanna River and the Sinnemahoning Creek. This 75-mile corridor wanders through riparian woodlands of sycamore, black walnut, and red maple. Although it provides a typical assortment of wildlife resources available in the region, there are no specifically signed access points.

At Keating, on SR 120, a dirt road provides parking and access to an open area with views of the river and the surrounding slopes, including dense river edge thickets and summer wildflowers. Birds include the rather local Northern Parula, Black-and-white Warbler, American Redstart, American Goldfinch, and Belted Kingfisher. During summer, butterflies are abundant around the parking area, and include Pipevine Swallowtail, Eastern Tiger Swallowtail, Silver-spotted Skipper, Red-spotted Purple, American Painted Lady, and Monarch.

*Recommendations:* We recommend pullouts, parking areas, and directional and interpretive signage at one or two points along this corridor, particularly since the natural area is an access point for both the Bucktail Trail and the longer Donut Hole Trail.

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**PA 144 from  
Renovo to Snow  
Shoe (Sproul State  
Forest)**

*Assessment:* This 34-mile stretch of highway traverses 450-square miles of uninhabited forest land and state gamelands. In addition to some of the finest scenic overlooks in Pennsylvania, there are a number of sites along the highway that offer significant potential for nature tourism. Primitive trails such as Chuck Keiper provide access to natural areas including Cranberry Swamp SNA, East Branch Swamp SNA, Fish Dam Wild Area (see below), Burns Run Wild Area, and Two Rock Run. Where the western Elk Range is developed, and offers nurturing for the most inexperienced of visitors, this eastern edge is still wild and undeveloped.

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In late June, spectacular blooms of Mountain Laurel paint the roadsides and vistas all along the 27-mile stretch through Sproul State Forest and SGL 100.

By mid–July, broods of young turkeys crisscross the highway, and the roadsides are ablaze in wildflowers. Blossoming milkweed attracts hordes of Great Spangled Fritillaries, one of the most attractive butterflies in the east, Monarchs, Silver–spotted Skippers, Dun Skippers, and a variety of other species as well. A recent forest fire devastated much of the area along the roadside, and the early succession currently taking place there provides excellent habitat for Prairie Warbler. A roadside trail along Denison could illustrate the habitat, and the importance of fire in the healthy maintenance of the ecosystem, as well as interpretive signage that demonstrates the reliance on fire of edge feeders and birds that nest in early succession growth. This could include information about early succession berry bushes that provide forage for larger animals such as deer and bear. The lower part of SR 144 has a number of giant ant mounds that should be signed and interpreted.

**Recommendations:** To better interpret the natural resources of this area, and to facilitate travel along PA 144, we recommend interpretive signage. Virtually no interpretive or informational signage exists along PA 144. Even the signage that does exist (for example, for the Two Rock Run) is positioned well off of the highway. The natural resources of the region are often quite obvious (such as Fish Dam Run), and interpretive signage will enhance the travelers experience. In addition, many of the most important trailheads are difficult to find. We recommend a comprehensive signage program to better inform the public of the recreational opportunities along this route.

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**Fish Dam Run  
Scenic View**

**Assessment:** Fermata has identified a location where a formal scenic viewing site might be located. This site is situated 10.5 miles south of Renovo on PA 144, and offers an expansive overlook of Fish Dam Run. Arguably this area, and particularly this site, is among the most scenic in the state, and as of now this resource is largely untapped.

**Recommendations:** We recommend the development of a formal viewing site at this location, including parking, a viewing platform, and interpretive signage.

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## **Pete's Run Road**

**Assessment:** Pete's Run Road is a dirt road providing access to the interior of Sproul State Forest. It is accessed off PA Route 144 just south of Renovo and climbs from the floodplain of the West Branch, through steep terrain, to the top of the plateau where it rejoins PA Route 144. The unpaved road provides access to a number of habitats and wildlife viewing venues, but access is highly dependent on weather. Narrow forest roads with steep drop-offs mean that much of this area should be recommended only for those with four-wheel drive, particularly after rain.

Sites in this part of the Sproul are appealing and have significant value for wildlife viewing, but require more walking than other sites with more developed infrastructure. Many of these access roads were cut during the late 1800s, when the area was largely covered by conifers. Changing forest practices now select hardwoods such as oaks and red maple. Large stumps of American Chestnut and hemlock recall the original composition of this forest.

There are 400 active gas wells in the area, and each of these wells creates edge habitat, which means that the formerly uniform forest cover is now interspersed with hundreds of "edge pockets" that attract Indigo Bunting, White-tailed Deer, and Common Yellowthroat. Just after entering Pete's Run Road, a pullout allows you to stop and scan the slopes for local specialties such as Mourning Warbler. The wild raspberry on the slopes occurs in numerous places throughout the elk range, and is a good indicator for the presence of Mourning Warbler. Canada Warbler and Scarlet Tanager also occur here.

After a short distance, the road crosses a power line cut, which creates some of the same edge effects associated with the gas wells. Power line cuts are used as hunting corridors for Red-tailed Hawk, Broad-winged Hawk, Cooper's Hawk, and American Kestrel. Dense growths of high bush blueberry, sweet fern, bracken fern, and mountain laurel all occur here. These cuts attract an appealing diversity of birds, butterflies, and mammals, because in a short distance they combine weedy fields, forest edge, and more dense forest habitats. A walk along these areas will almost always be rewarded. Expected birds include Pileated Woodpecker, Eastern Towhee, and Common Yellowthroat.

**Recommendations:** We recommend some type of signage and perhaps a mowed walking trail to enhance recognition of and access to this site.

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### **Additional Nature Tourism Sites in the Elk Range**

The mass of public land contained within state forests in the region overwhelms any attempt to identify all nature tourism and outdoor recreation opportunities and destinations. In truth, any one of hundreds of thousands of acres of these public lands is suitable for the activities we are assessing. Additionally, there are other areas where private land may well offer special opportunities for developing nature tourism. Following are two examples that we have identified.

#### **Medix Run**

**Assessment:** Located on Sinnemahoning Creek, the bridge here intersects PA 555 on the way to Benezette. The bridge crossing has a pullout for parking, and the area along the creek provides typical riparian habitat for the area. Nesting birds include Yellow Warbler, Gray Catbird, Wood Thrush, Belted Kingfisher, Rose-breasted Grosbeak, Indigo Bunting, and Tree Swallow (along the creek). A roadside pond between Medix Run and Caledonia has a pullout and a shady trail that offers additional species such as Ovenbird, Red-eyed Vireo, Northern Flicker, and a variety of dragonflies. On the pond, watch for Widow Skimmer, Eastern Pondhawk, and Blue Dasher. In the shady understory, Ebony Jewelwing, Eastern Forktail, and Slender Spreadwing are also present.

**Recommendations:** The key to Medix Run, as with Benezette, is in engaging the participation of local landowners and residents. Nature tourism is a significant business opportunity for local residents, yet local recognition appears low.

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**Ridgway and the  
Clarion River**

**Assessment:** Ridgway is accessed off of the Elk Highway via PA 255 and PA 120, and by continuing west along PA 120 visitors enter the Allegheny National Forest.

The Clarion-Little Toby Creek Trail provides a 20-mile path along rich riparian woodlands with attractive riverside views of the Clarion Wild and Scenic River. The presence of a canoe outfitter and bike rental shop at the trailhead makes this site one of the easiest to include as a nature tourism venue; an additional advantage to this site is its proximity to accommodations and food providers in the town of Ridgway. This is an excellent site to begin developing an appreciation of the area's birds, and the presence of the bike trail allows visitors to access a much longer stretch of habitat than they otherwise would on foot. During spring migration, particularly during inclement weather, neotropical migrants could pile up in these riparian woodlands. The breeding season here is also of premier interest to birders who enjoy the vocalization and territorial antics of nesting songbirds.

The trail straddles riparian woodlands, and includes birds from the forested slopes across the highway as well as those that associate with the river. In the dense thickets along the trail watch for Common Yellowthroat, Cerulean Warbler, Song Sparrow, and Least Flycatcher. Taller trees along the path are the home of White-breasted Nuthatch, Black-capped Chickadee, Tufted Titmouse, Scarlet Tanager, Cedar Waxwing, Red-eyed Vireo, American Crow, Red-tailed Hawk, and American Goldfinch. Over the river, watch for Chimney Swift, Eastern Kingbird, Barn Swallow, and Turkey Vulture. Sunny trailsides attract a variety of butterflies; watch for species such as Eastern Comma, Northern Pearly-eye, Eastern Tiger Swallowtail, Red Admiral, and Dun Skipper. An obscure but particularly beautiful insect to watch for is the Phantom Cranefly. This black-and-white striped Cranefly glides through the understory, alternately visible and invisible as its partially transparent wings glint off the sunbeams.

**Recommendations:** Future development in this region should include the organization of a Clarion Spoke on the scenic highway corridor.

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**Travel platform for general nature tourism:** Summary of recommended portal, icons, and waypoints

<i>Site</i>	<i>Role</i>	<i>Management</i>
Sinnemahoning State Park	Portal	DCNR
	Icon	
Cranberry Swamp SNA	Limited access waypoint	DCNR
Swamp Branch of Beech Creek	Limited access waypoint	DCNR
Tamarack Swamp SNA	Important Bird Area waypoint	DCNR
Lower Jerry Run SNA	Limited access waypoint	DCNR
Pinetree Trail SNA	Limited access waypoint	DCNR
Johnson Run SNA	Limited access waypoint	DCNR
Wykoff Run Scenic Road	Road corridor waypoint	PennDOT
M.K. Goddard State Natural Area /	Limited access waypoint	DCNR
Dutlinger SNA	Wilderness waypoint	DCNR
Hammersley Wild Area	Wilderness waypoint	DCNR
SB Elliott State Park Sphagnum Bog	Special habitat waypoint	DCNR
Parker Dam State Park	General purpose waypoint	DCNR
Sizerville State Park	Environmental education waypoint	DCNR
Bucktail State Park	Road corridor waypoint	PennDOT/DCNR
PA 144 (Renovo to Snow Shoe)	Road corridor waypoint	PennDOT
Fish Dam Run Scenic View	Developed waypoint	DCNR
Pete's Run	Nature trail waypoint	DCNR

**TASK 3. Review and analyze market and survey information to determine the size and key marketing characteristics of the potential market, estimate the potential to increase visitation to the region, and project the potential economic benefits for communities in the region from elk watching and other nature tourism activities.**

*“I stopped in to say hello to Pat and Ken Rowe, the owners of the Elk Country Store in Medix Run since March 2001. I excitedly told them about the big bulls we’d been seeing just up the road, the great blue heron, and the stomping, snorting, kicking fawn and doe. Pat told me about the bull elk in their yard, the rattlesnake killed on Rt. 555, and the black bear. It was hard to believe that this conversation was about things that were happening in Pennsylvania, right in the yard, or just up the road!” (Mulvihill 2001).*

Based on Fermata’s proprietary research and that done on the local and national level, we believe that the region has tremendous potential to increase visitation. The resources are world-class and appeal to a wide cross-section of tourists from both the local and national market. The survey findings presented in this task will support this assertion. On the local level, our studies have determined that north central Pennsylvania sits within major population centers that are a day’s drive (6 hours) away. This information leads us to the following conclusions:

1. The region is missing a major opportunity to attract nature tourists who, according to surveys, are willing to spend significantly more money than other tourists. For example, elk viewers at Winslow Hill are primarily day travelers and low spenders (\$15/day) compared to outdoor recreation travelers (\$40/day) to the area and to the nature tourists surveyed in Fermata’s four areas who represent a similar demographic and spend \$138/day.
2. The Elk Range and Lumber Heritage Region have the potential to tap into these markets. National trends indicate that nature tourism is growing rapidly and that nature tourists are looking for the kind of resources and setting found in this region. A great advantage for the region is its location just off Interstate 80, a major route that connects large population centers.
3. The potential economic benefits are great based on projecting a marketing effort that, over time, will attract higher paying visitors.

## **Tourism Trends**

### Rural tourism

Who is the rural tourist and what attracts them to small towns? Rural tourism appeals to many Americans, with 62 percent of all US adults taking a trip to a small town or village in the country within the past three years, according to a special Travel Poll by the Travel Industry Association of America (TIA, 2001). This translates to 86.8 million adults.

A majority of these trips were for leisure purposes (86%). Popular activities included:

- going to a beach, lake, or river (44%)

- visiting historical sites (41%)
- fishing, hunting, or boating (32%)
- bike riding or hiking (24%),
- camping (21%)
- visiting farms, orchards, or wineries (15%), and
- visiting Native American communities (11%).

The TIA Poll also showed that Generations X and Y and Baby Boomers are more likely to go to a beach/lake/river or go fishing/hunting/boating while visiting a small town or village (TIA, 2001). They are also more inclined to participate in outdoor activities, such as biking, hiking, camping, or attending a sporting event. Outdoor recreation ranked second in the top ten activities for domestic travelers, surpassed only by shopping. Retail spending rose to \$39.7 billion in 2000, up more than 6.6 percent from 1997.

### Nature tourism

The activities of nature tourism are comparatively concrete. Nature tourism encompasses a broad range of travel interests and activities that elevate and enhance the individual experiences of the traveler. These interests are disparate, and bound together solely by the shared goal of each traveler to expand personal horizons. Personal enrichment, enlightenment, stimulation, and engagement are among the primary motivators for these travelers. All of these motivators drive visitors to natural sites and protected areas.

The distinctive social aspects of special-interest travel include opportunities for personal bonding with other people who share common interests (adventure, personal growth, and physical fitness) with a small group setting. Baby boomers are the active and vigorous generation, which started the fitness craze in earlier years. Now they also want a vacation that fits into their active, health-conscious lifestyle. Relaxation and stress reduction are also important aims, but they are achieved indirectly through the experiences from the primary travel motivations (Kutay 1992).

Nature travel is estimated to be increasing at an annual rate between ten and thirty percent (Reingold, 1993). Between forty and sixty percent of international visitors travel to enjoy and appreciate nature (Filion et al. 1992). More specifically, wildlife-associated recreation, as opposed to outdoor recreation in general, now involves millions of Americans in hunting, fishing, and a variety of non-consumptive activities such as birding, bird feeding, and wildlife photography.

It is also likely that nature tourism trends will remain largely unaffected by the tourism crisis precipitated by the recent terrorist attacks. According to a recent article by CNN, national parks remain full, providers for outdoor activities such as fall foliage viewing along the Appalachian Trail continue to operate at full capacity, and visitors emphatically state their preference for travel to outdoor destinations. Nature tourism, in fact, demonstrates exceptional adaptability to most economic cycles. During booms, international and long-haul markets can be targeted, and during recessions the focus can be geared down to regional, auto travel. No such flexibility exists for artificial, attraction-based venues, which depend exclusively on long-haul markets.



Since September 11<sup>th</sup>, travel patterns have changed dramatically; however, travel itself has not. Pennsylvania can look to the tourism products it offers to sustain the changing patterns — specifically, nature and use of public lands for outdoor recreation travelers. Americans, now more than ever, need the solace that nature offers. In a MSNBC.com article, Craig Tufts states, “As Americans look for spiritual renewal, emotional healing, or time to reflect on how our country will rebound from tragedy, many are turning to Mother Nature. Wildlife and wild places are part of our strength as a nation, an indomitable part of our American heritage...that continue, undeterred by the havoc around them.” Air travel has plummeted since September 11<sup>th</sup> while visits to parks and refuge areas have experienced an increase in average daily attendance. It would appear that nature-based tourism is ultimately one of the products that could help the tourism community recover from recent events.

At their 2001 conference, the Travel Industry Association of America projected that post-September 11 losses would be less in rural areas and that auto travel would recover more quickly than other segments. This projection was based on the current shift from air travel, a decrease in gasoline prices, a greater interest in family travel, and a desire to stay closer to home. Although some leisure travelers are worried about finances, job futures, safety, security, and inconvenience, 62 percent plan a leisure trip in the next six months. TIA also noted that core consumer values were already shifting and predicted that the shift may accelerate. The core consumer values are:

- family
- community
- integrity
- balance
- authenticity
- security

A New York Times article, *This Year, The Action Is Just off The Highway*, published on June 30, 2002 would seem to support TIA's projections. According to the author, many Americans planning summer vacations will be staying closer to home and visiting destinations reachable by car. The perception that the nation's airports are either not safe or have been transformed into armed camps with tightened security is a motivating factor for people to choose destinations within driving distance. In addition to proximity, many travelers are looking for vacations that offer relaxation and a sense of escape to nature where outdoor activities are available. In the Northeast Kingdom of Vermont, visits to the tourism Web site have more than doubled since last year and some bed-and-breakfast owners are reporting increases of up to thirty percent. The National Park Service said it expected full campgrounds at most major parks. They noted, however, that those parks tending to be destinations for foreign travel had shown a decrease in visitors while the number had risen at parks easy to reach by car from major populations centers.

#### Wildlife-associated recreation

A study by the U.S. Fish and Wildlife Service (1996) indicated that almost eighty million Americans participated in some form of wildlife-associated recreation activity. During that year more than sixty million Americans enjoyed primary wildlife-watching activities such as observing, feeding, or photographing wildlife. The NSRE has issued preliminary results from the

2000 survey, and the most current data indicated that viewing and photographic activities such as birding, watching bear, deer, moose, and viewing wildflowers and natural vegetation or scenery continued as popular activities in the United States.

According to this newest NSRE, “an estimated 129 million people took the time to stop and observe the natural scenery around them” during the most recent survey year (1999). In addition, “an estimated 96 million people also took the time to view wildlife or wildflowers, while 71.2 million people viewed birds.” Wildlife-associated recreation, as opposed to outdoor recreation in general, now involves millions of Americans in non-consumptive activities such as birding, bird feeding, and wildlife photography.

**Profile of a Nature Tourist**

Primary research conducted by Fermata, Inc. from 1998 to 2000 in four regions of the US resulted in the following profile of a nature tourist (*n=2787 respondents*). Data collected by HLA and ARA Consulting Firms of North America in 1994, shown in the second column, provides a similar profile (Wight 1996). A third column contrasts the current travel profile of overnight leisure travelers to the Allegheny National Forest tourism region as characterized by the 1999 PA Travel Profile (Shifflet 2000).

**Table 1. Comparison of nature tourist profile**

	<b>Fermata research – four US regions aggregate</b>	<b>1999 PA Travel Profile – Allegheny National Forest tourism region</b>	<b>1994 HLA and ARA Consulting Firms data</b>
Age	52.1 years	41.3 years	35-54 years
Gender	Male - 48.3%, Female - 51.7%		Male - 50%, Female - 50%
Annual income	\$61,962 (2000 dollars) ( <i>n=1266</i> )	\$46,453 (2000 dollars)	
Household size/group size	2.45 persons	2.7 persons	
Education	16.36 years (four years of college plus some graduate school)		16 years – 82%
Tourist's origin	<ul style="list-style-type: none"> <li>• Urban - 28.9%</li> <li>• Suburban - 47.6%</li> <li>• Rural (farm) - 4.3%</li> <li>• Rural (non farm) - 19.1%.</li> </ul>	•	•
Distance to reach destination from home residence	160.4 miles (one-way)		

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Average length of stay	2.33 days	4.2 days	11 days
Average daily expenditures	\$138.45/person	\$48.70/person	\$91.36/person
Party composition	Travel as couple or family: 78.5% Travel alone: 21.5%	Travel as couple: 34% Travel as family: 35%	Travel as couple: 61% Travel as family: 15% Travel as singles: 13%

The National Survey of Recreation and the Environment (NSRE 94-95) identified nature lovers as a group of about 26.6 million Americans (or 13.3 percent of the people) over age fifteen. Most nature lovers are from 25 to 54 years of age, nearly two-thirds female, and almost thirteen percent from minority groups. Forty-five percent have completed college and another thirty percent have attended or are attending college. Household incomes of members of this group are above average. Nature lovers participate in walking, birdwatching, wildlife and fish viewing, nature study, sightseeing, and going to visitor centers.

What are the relevant national trends?

On the national level, no single agency collects statistics on nature tourism and outdoor recreation. However, The Ecotourism Society has compiled data from several agencies, presented in the USA Ecotourism Statistical Factsheet (1999). A 1998 survey of 3,342 households representing a sample of 47 mainland states (excluding Florida), showed that vacationers had an even chance (48.1%) of participating in nature-based activities during their trip (Bruskin Goldring 1998). Results are shown in Table 2.

**Table 2. Participation in nature-based activities (Bruskin Goldring)**

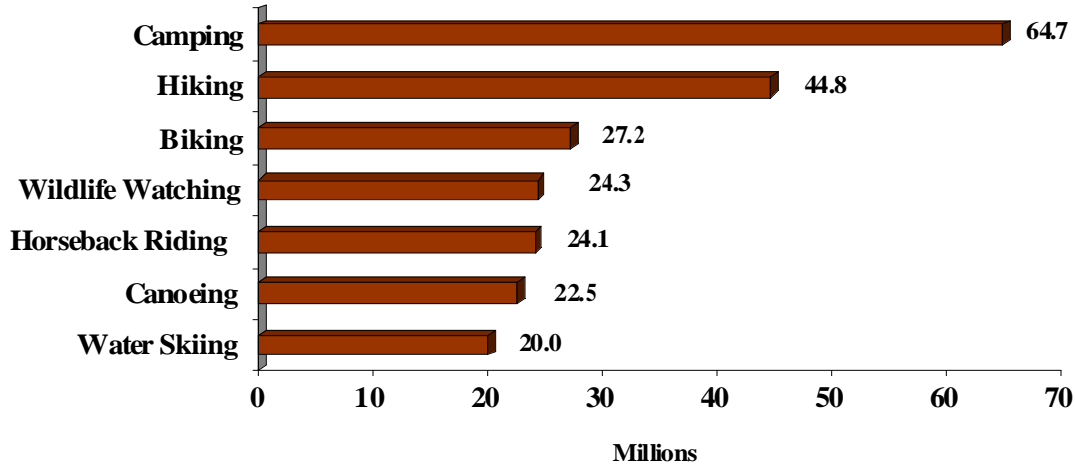
<b>Response option</b>	<b>Percentage</b>
Trip was planned so that nature-based activities such as hiking, biking, animal watching, canoeing, and going to parks would account for the majority of time on vacation.	14.5%
Trip was planned so that nature-based activities would account for some of the time on vacation.	15.8%
Some nature-based activities were enjoyed on the vacation, although they were not planned before the trip.	17.8%
Net sub-total	48.1%
No nature-based activities were part of last vacation	47.7%

The Travel Industry Association of America has released the findings of a national survey (*The Adventure Travel Report, 1997*) of 1,200 U.S. adults, which found that one-half of Americans (98 million adults) have taken an adventure vacation in the past five years. According to TIA's CEO, America's quest for challenge has driven the adventure travel market but the trend is also about camaraderie among friends and spending quality time with family.

The report classified adventure in two categories: soft adventure and hard adventure. The most prominent soft adventure activities were camping, hiking, and biking. Soft adventure enthusiasts more often travel with spouses (60%), or children and grandchildren (41%). One half (or 44 million U.S. adults) report that the adventure activity itself prompted the trip. Figure 2 shows the

most rapidly growing types of soft adventure travel, according to the Travel Industry of America (1998).

**Figure 3: Most rapidly growing soft adventure travel markets (TIA)**



The DCNR study (Shifflet 1999) reported that 58 percent of all outdoor recreation vacations were nature-based, with nature sightseeing, wildlife watching, and camping accounting for more than 40 percent of the total. The findings in the 1998 Bruskin Goldring survey regarding activity preferences corresponded to the DCNR study results, with the highest percentages of respondents interested in similar activities:

- Visiting parks (55.8%)
- Hiking (55%)
- Exploring preserved areas (47.8%)
- Wildlife viewing (45.8%)
- Nature trails in ecosystems (37.1%)
- Visiting unique natural places (27.5%)
- Environmental education (20.3%)
- Bird watching (19.5%)
- Biking (18.7%)

HLA and ARA Consulting Firms of North America (Wight 1996) identified the most important elements of a nature tourism trip and the motivations for the next trip:

<b>Most important elements of trip</b>	<b>Motivations for next trip</b>
<ul style="list-style-type: none"> <li>• wilderness setting</li> <li>• wildlife viewing</li> <li>• hiking/trekking</li> </ul>	<ul style="list-style-type: none"> <li>• enjoy scenery/nature</li> <li>• new experiences/places</li> </ul>

**Research Findings on Market Size and Characteristics**

How many people are viewing elk or participating in other outdoor activities?

Based on a two-year Pennsylvania State University (Penn State) study of the economic impact of Pennsylvania's elk herd (Strauss et al. 1999), elk tourism averaged 62,000 visitor days per year. The Penn State study focused only on the Benezette/Winslow Hill area of Elk County and did not provide data for areas such as Sinnemahoning State Park, which has become an active focal point for elk tourism as the herd has moved into an expanded range.

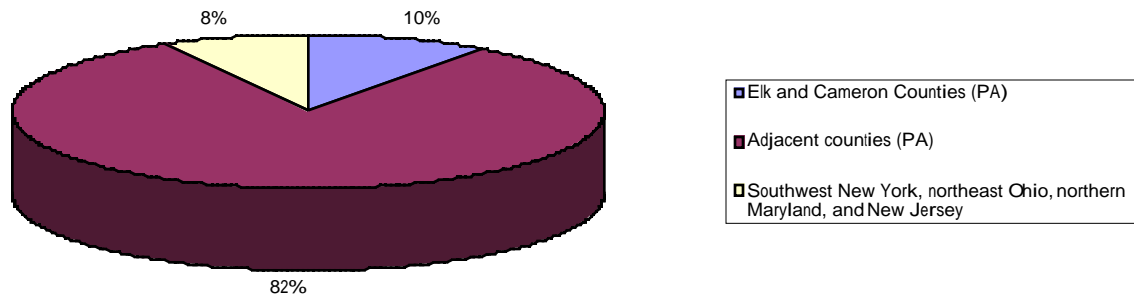
The Penn State study identified that 71 percent of people interviewed considered elk watching the primary reason for their trip. Alternate activities included hiking, walking, camping, hunting, sightseeing, fishing, and horseback riding. The D.K. Shifflet 1999 Profile Report (2000) found that the most popular activities of overnight leisure travelers in the Allegheny National Forest tourism region were hiking, biking, sightseeing, and visiting state parks. This is in contrast to the state as a whole where shopping, dining, and entertainment were found to be the most popular activities. The Allegheny National Forest tourism region includes Cameron, Clarion, Clearfield, Elk, Forest, Jefferson, McKean, Potter, Tioga, and Warren Counties.

Statewide travel trends in the outdoor-traveler market showed consistent growth from 1995 to 1997, increasing by 19 percent (Shifflet 1999). This percentage accounts for 15.9 million outdoor travelers in 1997 who visited Pennsylvania primarily for an outdoor recreation vacation. However, the market size in the elk region (found in the Allegheny National Forest tourism region) accounted for only about 10 percent of the state total – or 1.6 million outdoor travelers.

Where do visitors come from?

According to the Penn State study (Strauss et al. 1999), tourists engaged in elk-viewing activities were predominantly Pennsylvania residents, with 10 percent from Elk and Cameron Counties and 82 percent from other primarily adjacent Pennsylvania counties. Non-resident elk watchers accounted for only 8 percent of the total, generally coming from southwest New York, northeast Ohio, northern Maryland, and New Jersey. (See figure 1.)

Figure 4: Percent of all viewers by region of origin



Origin market analysis in a statewide study of outdoor recreation vacation travel conducted by D.K. Shifflet (1999) for the Pennsylvania DCNR provided similar data for elk-viewing areas, showing about 60 percent of travelers from Pennsylvania and another 30 percent from the same feeder states as above. The typical travel distance was 2-1/2 hours for a one-way trip.

What is the composition and size of the typical travel group?

Elk viewing serves as family entertainment. The Penn State study (Strauss et al. 1999) indicated that among both resident and non-resident visitors, more than two-thirds traveled as a family and that average vehicle occupancy was 3.1 persons per vehicle. About 35 percent of the travelers to the Allegheny National Forest tourism region in 1999 traveled as a family with the average travel party size of 2.7 persons (Shifflet 2000).

How many visitors stay overnight in commercial lodging?

Only about 50 percent of visitors stayed overnight within or near the Benezette elk-viewing region. Since more than 20 percent of this group own cabins or have friends in or near the area, less than 30 percent used commercial lodging (Strauss et.al. 1999).

In another D.K. Shifflet study (2000), the volume of overnight leisure travel in 1999 for the Allegheny National Forest tourism region was estimated at only 1.6 million person-trips. This is about 4.3 percent of the state total and is the lowest market share for overnight trips of any of the states' eight tourism regions.

### Potential to Increase Visitation

According to ORCA, the trade association for the outdoor industry, demographic indices strongly favor a further increase in nature-based tourism. Improved health, longer lifespans, retiring Baby Boomers, and a wealthier traveling public all support past trends that indicate growth rates in nature-based tourism activities of at least ten percent annually. Growth in wildlife watching has increased annually at rates far in excess of this, according to the most recent NSRE.

In addition, the baby boomers now number 76 million and researchers agree that they will have a powerful impact on travel, due in large part to their sheer numbers. Between 1992 and the end of the decade, the number of individuals in the 45-64 age group grew by 30 percent, while the younger 25-44 set increased 5 percent. The 45-plus age group has more time and money for travel than their younger counterparts. Discretionary income is about 28 percent higher than the younger age group.

**The types of activities that will be available in the elk region once the development envisioned in Task 4 has occurred are precisely the ones that appeal to this aging, wealthier segment of the travel market.** Elk viewing, birding, fall-foliage viewing, and walking should easily be able to sustain an annual growth rate of ten percent given proper marketing and infrastructure. We expect that the region should be able to achieve this rate after the long-term infrastructure and promotional work is complete.

In the short term, growth could be estimated at a more modest five percent, and eight percent in the mid term. By 2005, we expect that the number of elk and nature tourism visitors could grow by over twenty percent to around 76,000 visitors per year. And by 2012, we expect visitation to double from current rates to around 129,000 visitors per year.

Fermata believes that this is a very conservative estimate, since Pennsylvania travel trends as documented by D.K. Shiflet and Associates indicated a nineteen percent growth rate from 1995-1997. Still, given the other tourism trends described above, we believe that it is better to provide a conservative outlook in these projections. Table 3 shows the assumptions made for each year of the development scenario.

**Table 3. Adjusted annual visitor rate given current growth rates and the expected impacts of infrastructure and marketing improvements**

Year	Annual elk visitors	Adjustments	Basis	Term
2000	62,000			
2001	63,860	3%	based on current growth	
2002	65,776	3%		
2003	69,065	5%	current growth plus new marketing activities and new amenities	Short term
2004	72,518	5%		
2005	76,144	5%		
2006	79,951	5%		
2007	86,347	8%	current growth plus additional new marketing activities and new amenities	Mid term
2008	93,255	8%		
2009	100,715	8%		
2010	108,772	8%		
2011	117,474	8%		
2012	129,222	10%		Long term

Although the elk region was not analyzed as a discrete geographic unit in the D.K. Shifflet survey for the DCNR (1999), the areas that share the Elk Range only receive about ten percent of the state's outdoor recreation-based tourism presently. This indicates significant potential to increase the region's share of this tourism market.

Critical for predicting future trends, a majority of visitors chose Pennsylvania as an outdoor recreation-based destination because of proximity. This argues strongly that visitation in the elk country will continue to increase. As evidence that a coordinated, planned nature tourism strategy will ultimately benefit the region, the D.K. Shifflet study (1999) showed that the single largest activity among outdoor recreation-based tourists was nature viewing.



### **Potential Economic Benefits**

According to the D.K. Shifflet study for DCNR, expenditures for outdoor recreation-based travel statewide accounted for \$4 billion in 1997, or a full one-third of all Pennsylvania leisure spending. The figure includes spending on travel-related goods and services, including transportation, lodging, food and beverage, recreation and entertainment, shopping, and other spending. Pennsylvania travel statistics (Shifflet 1999) document that in general, outdoor recreation-based travelers spent about 35 percent more than regular leisure travelers, due in part to longer average length of stay. Of the total spending by outdoor recreation travelers, 34.6 percent of expenditures were by tourists who participated in activities on state or public forests, parks, or gamelands.

In the Allegheny National Forest tourism region, average daily expenditures of **all** overnight leisure travelers was \$48.70 per person per day. The total 1999 visitor spending in the Allegheny National Forest tourism region was \$608.6 million (Shifflet 2000). The previous DCNR study (Shifflet 1999) viewed outdoor recreation vacation travelers as a discrete segment of leisure travelers and estimated their spending in the region at \$99.3 million, with average expenditures of \$40 per person per day for all recreation activities. The Penn State study (Strauss 1999) estimated that elk tourists in the Benezette/Winslow Hill area contributed approximately \$1.0 million (about \$16/person/day) to the region, primarily for food and lodging services, a figure that Fermata believes represents a significant under-valuation of the potential. Averaging this figure with the Allegheny National Forest (Shifflet 1999) figures yields an estimate of \$28 per person per day. Considering that the elk-viewing region extends beyond the two-county scope of the Penn State study and includes portions of the Allegheny National Forest, it seems reasonable to estimate the contributions of elk viewers at \$1.7 million for the expanded area.

Based on the implementation of the steps we are recommending, the average visitor expenditure in ten years could be equal to that of the typical nature tourist surveyed by Fermata and characterized previously. A span of ten years has been chosen as a development period since the type of visitor who spends \$138.45/person/day requires more in the way of infrastructure and interpretation than is presently available in the elk region. We believe that it is reasonable to expect that by 2012 the developments we recommend in Task 4 will be completed. The more distant, more affluent visitors also require an integrated marketing communications campaign to raise their awareness of the region and entice them to visit. However, even the short-term and mid-term improvements of addressing safety concerns, establishing visitor centers, waypoints, and the Elk Forest Scenic Corridor will encourage an overnight visitor to spend in excess of the current regional average of \$48.70 per person per day. We project figures of \$75.95 per person per day by 2005 and \$197.40 per person per day in 2012. The 2012 figure is simply the current daily expenditure rate of \$138.45 adjusted for inflation.

Given that many elk region visitors do not stay in the region overnight (or do so in private camps), the current effective daily direct expenditure is \$27.42/person/day. We expect that as developments take place and promotional campaigns begin in distant markets, we will see a greater number of overnight visitors. We also expect their visitation growth rate to be faster than the growth rate of day-trip visitors.

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Given the development assumptions described above, we expect that nature tourists spending in the elk region will double from \$1.7 million annually for transportation, food, and lodging to about \$3.4 million by 2005. And by 2012, we expect an increase of spending to \$18.6 million.

Table 4 is a detailed account of the above assumptions and conclusions.

**Table 4. Anticipated revenue generated from average daily expenditures per person per overnight trip.**

	Daily visitor spending	Adjustments to daily visitor spending to reflect improved infrastructure and marketing		Revenue projection if all visitors were overnight travelers	More likely revenue projection based on some portion of the travelers not staying overnight or staying in private accommodations	Overnight/local visitor ratio	Increase in revenue over current levels
2000	\$48.70			\$3,019,400	\$1,700,000	0.56	\$0
2001	\$50.16	Inflation only - 3%		\$3,203,281	\$1,803,530	0.56	\$103,530
2002	\$51.67	Inflation only - 3%		\$3,398,361	\$1,913,365	0.56	\$213,365
2003	\$59.76		Short term	\$4,127,437	\$2,352,639	0.57	\$652,639
2004	\$67.86			\$4,920,924	\$2,854,136	0.58	\$1,154,136
2005	\$75.95			\$5,783,442	\$3,412,231	0.59	\$1,712,231
2006	\$84.05			\$6,719,908	\$4,031,945	0.6	\$2,331,945
2007	\$100.24	Spending can be expected to grow twice as quickly in the mid-term as it did in the short-term	Mid term	\$8,655,658	\$5,366,508	0.62	\$3,666,508
2008	\$116.44			\$10,858,119	\$6,949,196	0.64	\$5,249,196
2009	\$132.63			\$13,357,579	\$8,816,002	0.66	\$7,116,002
2010	\$148.82			\$16,187,460	\$11,007,473	0.68	\$9,307,473
2011	\$165.01			\$19,384,633	\$13,569,243	0.7	\$11,869,243
2012	\$197.40	\$138.45	Long term	\$25,507,885	\$18,620,756	0.73	\$16,920,756
		Adjusted for inflation					

### Markets and Opportunity Matrix

Increased visitation comes primarily from creating new markets or expanding existing markets. The Penn State study indicates that over 90 percent of the elk tourists live within Pennsylvania. Therefore, it would appear that visitation could be increased most easily by efforts to **grow the number of out-of-state visitors originating in New York, New Jersey, Ohio, and Maryland – all markets from which the region’s out-of-state visitors currently originate.** Possible new markets include the metropolitan Detroit and Chicago areas as well as the southern portion of the Canadian province of Ontario – all areas within a day’s drive of the elk region, and all urban or suburban areas from which our research shows that most (76.5%) nature travelers originate.

Research of the geographic area within a six-hour drive of Benezette produced some astounding results. There are at least 46 million Americans, or 16 percent of the nation’s 281,421,906 people, who reside within a day’s drive of the Elk Region. Using the NSRE figures from 1999 that 71.2 million people (or 25% of all Americans) viewed birds, we can theorize that the same proportion of people within a six-hour drive would share this interest. That amounts to a potential market size of 11,688,883 people who may be unaware of the region's offerings or who have yet to make a decision to try a visit to the area. In 1997, 15.9 million visitors traveled to Pennsylvania to take part in some form of outdoor recreation. This shows that the potential primary market size of 11.7 million people is certainly realistic.

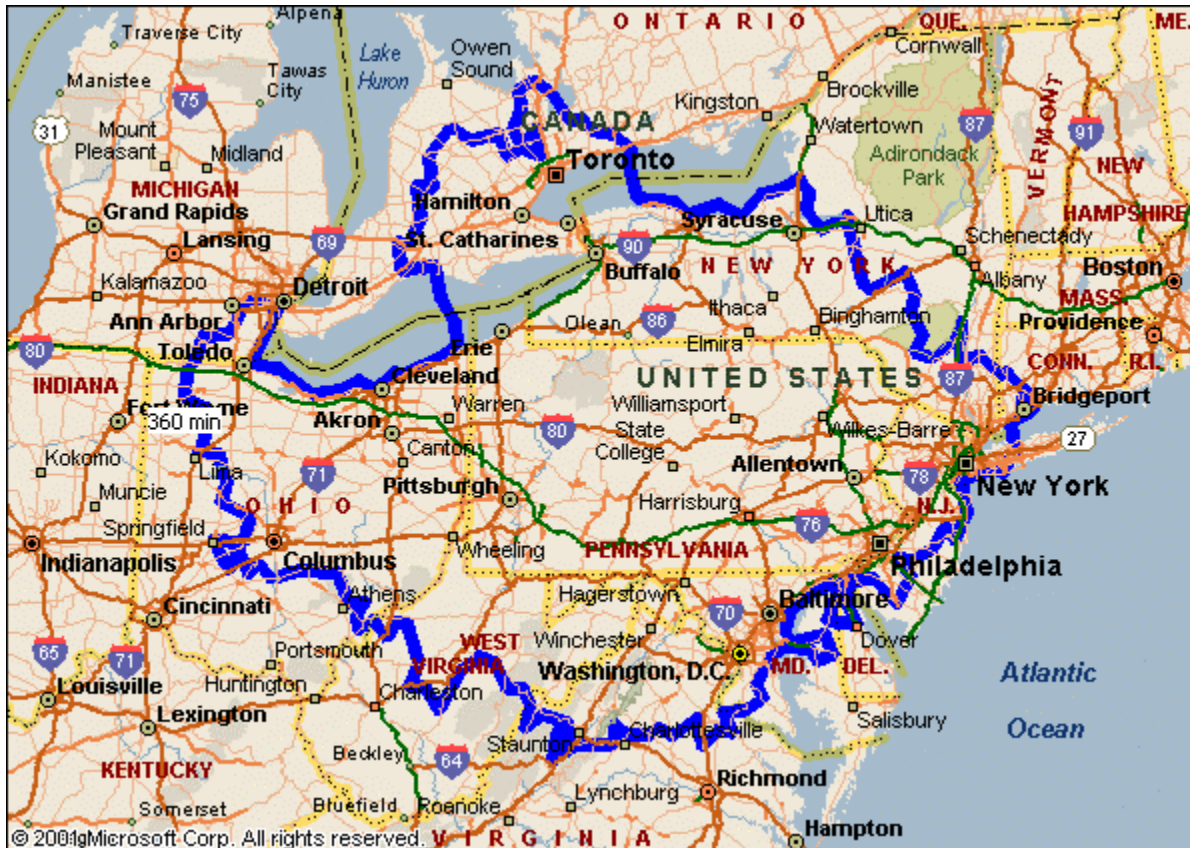


Figure 5: Major urban and suburban population centers within a six-hour drive of the Elk Region.

The NSRE (1994-1995) indicated that 85 percent of nature lovers traveled by auto to locations more than 5 hours distant. Since distance visitors typically spend more than those who live close by, this market could greatly increase the economic potential. The NSRE survey further identified Pennsylvania as the third-ranking destination for nature lovers' vacations (5.7%), surpassed only by California and New York. Of all nature lovers, 20.35 million people (76.36%) participate in wildlife-viewing activities.

Shifting demographics have also greatly expanded the opportunities to increase visitation among groups that have not traditionally been targeted by tourism marketing organizations. The single-parent family is the fastest growing family unit, and a current shortage exists of travel destinations that can accommodate the needs of these families. **Focusing on child-friendly, value-added services, and marketing directly to these groups is another way to increase visitation.**

Changes in societal norms, the stress on physical fitness, and product lines that cater to women have all contributed to the increased participation of women in outdoor activities. **The elk region should target this growing segment of the market as a logical customer for its outdoor products.**

Visitation in the region can also be increased by fine tuning the information currently provided by tourism promotion agencies and bureaus. NSRE survey results indicated that travelers are sometimes constrained by inadequate information, crowding of activity areas, concerns about personal safety, and perceived pollution problems. The Northwest Pennsylvania Great Outdoors Visitors Bureau heavily emphasizes the outdoor recreation activities of the region. The elk herd has been used for the last two years as an entrée for group tours. Fall foliage driving tours are also promoted, with annual route updates and fall foliage maps every year. Additional integrated marketing communications recommendations will be made in Task 6.

Based on our review of existing facilities and the makeup of the elk region's current and projected visitors, we believe that future visitation to the region should create a series of nature tourism experiences that meet the demands of diverse segments of the nature tourism market. **Developing the elk region as a nature tourism destination should be done according to a gradient of improvements that range from the simplest, least expensive investments to those that are more complex and capital intensive.**

Each of these steps answers the question, "What does the nature tourist want?" from the perspective of a different market segment. It is fundamentally different from a sales-based approach, and seeks to provide visitors with the experiences, services, and amenities that they want. In making these recommendations we have used our own proprietary survey data that show explicitly what nature tourists seek.

These consumer demands are:

- to be outdoors
- to experience the sights, smells, and sounds of nature
- to see something new
- to learn new skills

- to escape the ordinary demands of life.

Although nature tourists seek these same elements regardless of their level of experience, skill, or commitment, the activities through which these demands are satisfied differ markedly depending on experience and skill levels. In addition, the need for facilitation and nurturing increases as skill and experience decrease. Consequently, the recommendations are geared toward three different market segments and reflect the specific tactics that we believe will satisfy and exceed the demands of these differing groups of tourists, specifically:

- avid nature tourists
- less experienced nature tourists (from active to casual)
- uninitiated nature tourists.

According to Wight (1996), both the more generally interested consumers and the experienced nature tourists enjoy multiple activities. General consumers tend to prefer more passive activities and cultural experiences while experienced nature tourists are more active and prefer modest, intimate-type accommodations. Wight also notes that parks and protected areas were identified as both a reason for taking a nature-based vacation and an activity while on vacation. Table 5 compares the most important elements of a nature-based vacation for both experienced and general consumers.

**Table 5. Elements of a nature-based vacation by market segment**

Market segment	Important element/feature for trip
Experienced nature tourist	<ol style="list-style-type: none"> <li>1. Wilderness setting</li> <li>2. Wildlife viewing</li> <li>3. Walking/hiking/trekking</li> <li>4. Visiting national park/other protected area</li> </ol>
General consumer	<ol style="list-style-type: none"> <li>1. Casual walking</li> <li>2. Wildlife viewing</li> <li>3. Learning about other cultures</li> <li>4. Visiting national park/other protected area</li> <li>5. Wilderness setting</li> </ol>

The key to a successful opportunity matrix is that it allows communities and agencies in the elk country to “ratchet up” tourism offerings in tandem with the goods and service providers in surrounding communities.

Avid nature tourists

The first group of recommendations focuses on avid nature tourists. It allows the development of tourism in the elk country to begin at a modest pace and to concentrate on the major viewing seasons of fall, summer, and late spring. Minimal personnel are required to facilitate avid nature tourists, and surrounding communities can provide visitor services with minimal investment or adjustment.

A “hands-off” approach, which caters to people who already know the region, excludes nature tourists who require higher levels of facilitation. **As more people discover public lands and the wealth of recreational activities they offer, an approach that caters only to avid recreationists will ultimately intensify nascent problems with visitation in the region.**

Although these are important first steps, limiting development to this segment of the market will result in a failed nature tourism strategy for the elk country. The minimal development step will perpetuate current conflicts between residents and visitors. It will undermine any attempt to develop a meaningful nature tourism strategy for the region. Finally, it will not address what can be expected in the not-too-distant future: intensified urban demands for access to rural public land and rural demands for a voice in the planning process.

Less experienced tourists, both active and casual

Therefore, a second set of steps is designed to attract the larger segment of less experienced tourists. This group, due to its inexperience, will require a more hands-on level of facilitation. The features and enhancements that will facilitate and nurture travel among the less experienced group will involve a matrix of:

- walking trails,
- elk observation areas,
- designated sites and itineraries for other forms of watchable wildlife, and
- a defined “corridor of activity” that will serve as a spine for visitors to travel along.

Therefore the trails and venues should cross a broad array of microhabitats and offer more detailed interpretation of the region’s ecology.

Uninitiated tourists

The next group of tourists to whom additional services could be offered requires additional levels of interpretation, particularly for children, single-parent families, and others who have not traditionally been targeted. We refer to this group as the “uninitiated.” This group has an interest in nature but its members do not formally consider themselves nature tourists.

All market segments

The final phase for this activity gradient cuts across all market segments and focuses on extended stays in the elk country by using lodging and other tourism services in the surrounding communities. This phase ties in the wider region and ultimately the state as a whole in the nature tourism framework.







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and Development Commission (NCPRPDC)**

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