



Pennsylvania WildsDarkSkies

AN EARLY

IMPLEMENTATION

CONCEPTUALIZATION

FOR CHERRY

SPRINGS

STATE PARK

DECEMBER 2004

FERMATA



Submitted by

FERMATA, Inc. as part

of their contract to

Pennsylvania DCNR for

Planning for Outdoor

Recreation in the

Pennsylvania Wilds Area.



Front cover photo: Dave Waymer, back cover photo: Jeff Ball

WildsSkies

Background

Early Implementation Projects allow DCNR to begin acting on exceptional recreational opportunities and bring new products and programs to the market before the completion of the overall DCNR Outdoor Recreation Plan. With this objective in mind, a FERMATA senior staff member visited Cherry Springs State Park on Aug. 27, 2004 and interviewed park manager Chip Harrison. Subsequent telephone conversations have also informed this project proposal.

In addition, FERMATA extensively researched data related to the skywatching and passive viewing markets, and developed an independent perspective of their potential and possibilities. Interviews were conducted with several astronomical facilities and parks in the U.S. to expand FERMATA's perspective of the market. Although DCNR park staff has been helpful in outlining this early implementation strategy, this document more importantly reflects independent thought by the consulting firm.

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Inventory & Assessment

Under ideal conditions, visitors can see over 6,000 stars, blanketing the sky from horizon-to-horizon.

Recreational Resources

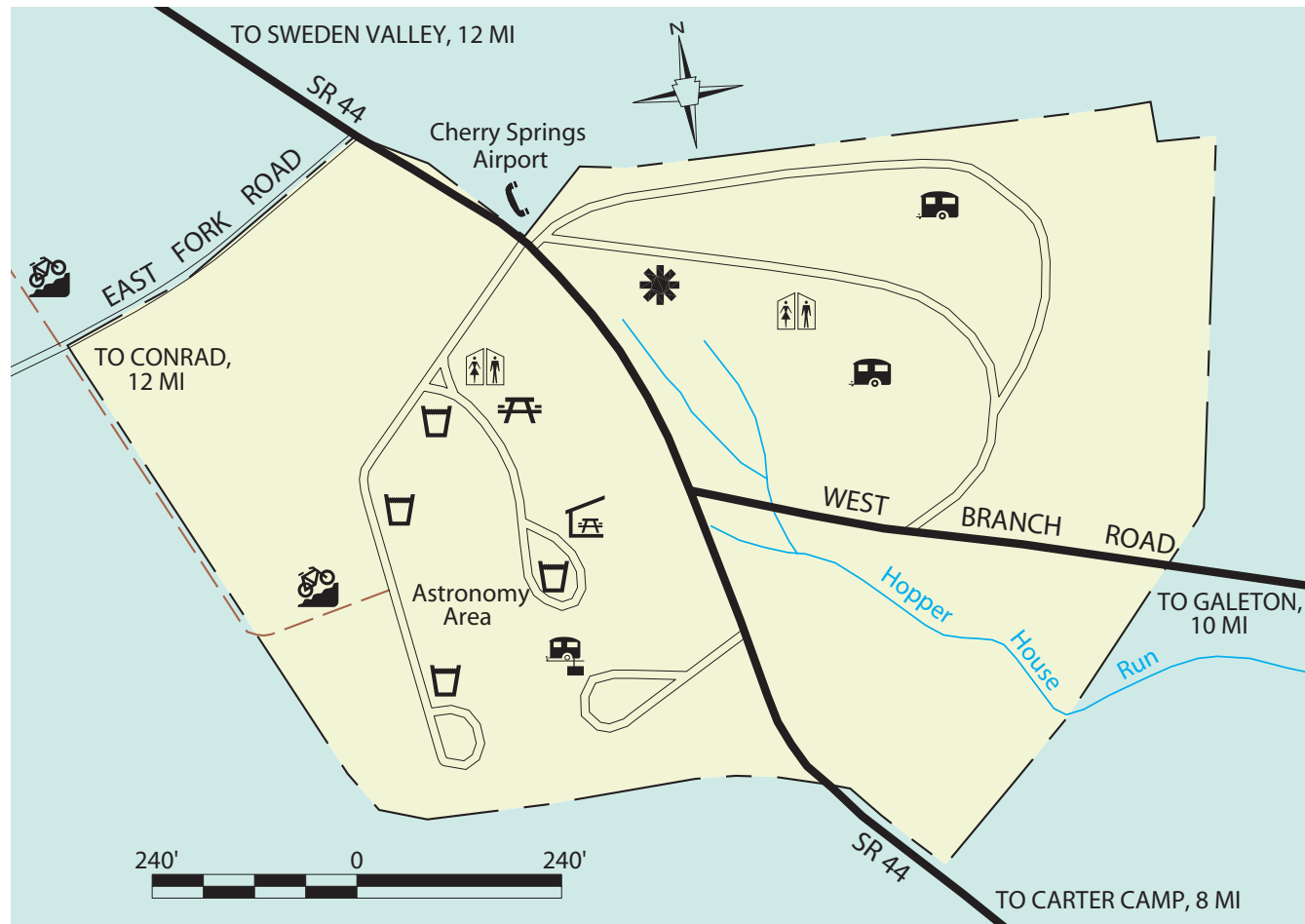
Cherry Springs State Park is a remote, largely undeveloped facility. Named for the large stands of black cherry trees, the 48-acre State Park is surrounded by the 262,000-acre Susquehannock State Forest. The park's isolation, both from users and the public in general, has (even if unintentionally) protected the darkness of its skies. Discovered in the early 1990s by amateur astronomers searching for dark sky sites in the east, Cherry Springs State Park evolved, *ad hoc*, as a well-recognized destination among a small cadre of skywatchers. In April 2000, DCNR recognized the importance of the dark night sky as a viable resource and designated Cherry

Springs as the first Dark Sky Province Park. DCNR park staff responded *post facto* to this increasing demand, and currently the park offers several organized skywatching events during the warm months of the year. However, the park remains largely undeveloped and its programmatic offerings are rudimentary. In Summer 2003, *USA Today* listed Cherry Springs as one of the top-ten skywatching locations in the U.S.

At present, Cherry Springs' dark skies make it a retreat for small numbers of amateur astronomers and a potential destination for general experiential and nature tourists. The absence of light pollution and the extreme darkness of the night sky, as well as a large



Dave Waymer



The park's picnic area includes a landmark historic log pavilion built by the Civilian Conservation Corps in 1939 featuring two large, covered dining areas with fireplaces, surrounded by log-and-chink walls.

hilltop observation field with a nearly 360-degree unobstructed view, have positioned Cherry Springs as a noteworthy destination in the northeastern U.S. for skywatching. Under ideal conditions, visitors can see over 6,000 stars, blanketing the sky from horizon-to-horizon, and see near-space objects like satellites, iridium flares, and the planets and moons of our solar system. Distant galaxies, nebulae, comets and other deep space objects are often seen and photographed at Cherry Springs. Viewing of periodic phenomena like meteor showers and Aurora Borealis (northern lights) also occurs. The Milky Way can be seen here with uncommon detail and clarity.

The Susquehannock Trail System, also known as the STS passes nearby the park and offers 85 miles of backpacking and hiking. This

loop trail travels through the Susquehannock State Forest following old Civilian Conservation Corps (CCC) fire trails, abandoned railroad grades, and old logging roads. The STS was created in 1967 by the Susquehannock Trail Club, which maintains the trail to this day. Camping is permitted on the trail.

There are 30 campsites and a sanitary dump station at Cherry Springs State Park. All sites include a picnic table, lantern hanger and fire ring. The campground opens the second Friday in April and closes in December. The park's picnic area includes a landmark historic log pavilion built by the CCC in 1939 featuring two large, covered dining areas with fireplaces, surrounded by log-and-chink walls. The areas are connected together by a covered breezeway that also contains picnic tables.



Mary Jeanne Packer/FERMATA, Inc.

Cultural and Historic Resources

A replica of the original Cherry Springs Hotel (log structure) stands at the same location where Jonathan Edgcomb first constructed the building in 1818. The structure was built along the historic Coudersport Jersey Shore Highway (now Route 44) that accesses and bisects the park.

The Cherry Springs Civilian Conservation Corps Camp was one of ten CCC camps constructed in the Susquehannock Forest District. Additionally, Camp Elliott was established at Cherry Springs under the supervision of the former Department of Forests

East of the park on Route 44 there are two outstanding scenic vistas:

Cherry Springs Vista - Located just before the old Cherry Springs Fire Tower, this vista looks towards the Hammersley Wilderness area of the Susquehannock State Forest, and showcases 90 years of forest regeneration in an area that was practically deforested in the 1920s due to extensive logging.

Water Tank Hollow Vista -

Located west of Carter Camp, this vista provides a good view of central Potter County.

The ridge itself was known in the railroad days as the



Lumber Heritage Region of Pennsylvania

“Hogback” and was the site of the Goodyear Lumber Company's railroad.

Remnants of the old railroad grade can still be seen at this site.

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Thom Bemus was honored as the 2002 DCNR Volunteer of the Year for his efforts to increase the public's awareness about light pollution and the night sky, through his Cherry Springs State Park Stars-n-Parks Educational Programs.

.....

and Waters. Unemployed college boys primarily stayed at this camp, and one of their accomplishments was to construct the 40-acre airfield at Cherry Springs during the summer of 1935.

Interpretation and Education

Cherry Springs State Park is served by a shared-services, seasonal naturalist based at nearby Leonard Harrison State Park. DCNR Bureau of State Parks is currently addressing the addition of a full-time interpretive staff person (although please see the concerns outlined below relative to the need for developing criteria for selecting interpretive personnel). A small outdoor amphitheater was recently constructed and is used for evening programs attended by campers and other visitors to the park.

In 1952, the first Woodsmen's Show at Cherry Springs State Park attracted a crowd of 4,000 people. Today, the annual Woodsmen's Show attracts thousands of spectators annually for the early August event. The show features lumberjack contests in tree felling, log rolling, springboard chopping, standing block chop, and chainsaw events.

A small wood frame bulletin board provides "Astronomy Information" including viewing etiquette and upcoming program details. The National Public Observatory offers free, monthly public skywatching programs called *Stars-N-Parks*. Weather permitting, these programs are offered during the dark of the moon weekend nights from April through October. Park staff estimates that about 50-100 people/night participate in *Stars-N-*

Parks. Volunteer educators from the National Public Observatory set up telescopes for public viewing and lecture on the night sky. The Black Forest Star Party is an annual skywatching weekend sponsored each September by the Central Pennsylvania Observers. There are guest lectures, public skywatching, and astronomy equipment vendors. Over 600 astronomers and casual experiential tourists attended this event in early September 2004. According to park staff, participants came from Pennsylvania, New Jersey, New York, Ohio, Maryland, Delaware, and Virginia. The park has just negotiated an arrangement with a

Harrisburg-based organization to host a similar event beginning in June 2005. The same approximate attendance is expected.

In 2003, Cherry Springs State Park's busiest month (in terms of visitor numbers) was August, with over double the number of visitors compared to any other month. See sidebar for monthly and special event visitation data.



2004 Black Forest Star Party/Greg Granville

Cherry Springs State Park and Event Visitation (2003 data)

- **January - 3,010 includes Winterfest (200-300 visitors)**
- **February - 4,740**
- **March - 2,212**
- **April - 1,226***
- **May - 2,003***
- **June - 5,244* includes Cherry Springs Star Party (650 visitors Thurs - Sun)**
- **July - 5,634***
- **August - 11,795* includes Woodsmen's Show (500 Fri/1500 Sat/700 Sunday)**
- **September - 4,430* includes Black Forest Star Party (650 visitors Friday - Sunday)**
- **October - 3,993***
- **November - 3,949**
- **December - 3,993**

**includes Stars-N-Parks program participants*



Current Condition

The facilities available at Cherry Springs State Park are marginal, at best. Current use by the avid skywatching public is supportable, at its present levels, with the available infrastructure. However, future growth in this market segment will place increasing demands on the park. More importantly, expansion to more casual segments of the recreational market will be contingent upon improvements to this infrastructure.

Project Markets

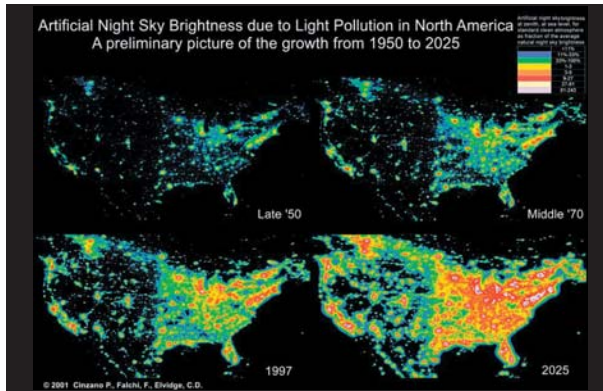
VISITOR TRENDS AND MOTIVATIONS

At present, amateur astronomers have generated most of the demand (and therefore the response of DCNR). There is certainly evidence that this market (skywatching, amateur astronomy) is expanding. For example, in urban centers such as Boston, local groups are overwhelmed with requests to hold “star parties,” where telescopes are set up in an open area for people to peer through as a host lectures about sights in the night sky. Astronomy publications are also seeing increased circulation. Cambridge-based *Sky & Telescope* Magazine sold 73,000 copies in 1987; now its monthly circulation is 126,000. Telescope makers and sellers say sales are booming, too. The Telescope Store / Earth Treasures in Keene, N.H., sold about 300 telescopes last

year; four years ago, it sold about 20. Although this remains a relatively small recreational market, there is ample evidence that, similar to most viewing activities, this market will continue to flourish. More importantly, the resource at Cherry Springs (dark skies, in which the limiting magnitude is usually in the 6.7 range and approaches magnitude 7 on very dark, transparent nights) as well as its geographical location near the major metropolitan areas of the eastern U.S. allow DCNR to significantly penetrate this admittedly small market.

This fragile resource, darkness, is not insignificant. A 2001 global satellite study conducted by scientists at the University of Padua, Italy, and the U.S. National Oceanic

In urban centers such as Boston, local groups are overwhelmed with requests to hold “star parties.”



and Atmospheric Administration (NOAA) measured for the first time how light degrades the view of stars in specific places around the globe. For example, “the rapid increase in light pollution is one of the most dramatic changes occurring in our natural environment,” noted



the Royal Astronomical Society, which published the study. The survey shows that truly dark, starry skies are unavailable to two-thirds of the world’s population, including 99 percent of people in the continental U.S. and Western Europe. The vast majority of the population east of the Mississippi, for example, cannot see the Milky Way, even on a moonless night. The report describes regions of the world

where true night never occurs because it is blocked by lights from cities and towns (such as Philadelphia and Pittsburgh). In night’s darkest places, far from city lights, about 2,000 stars are typically visible. In major cities, that number shrinks to a few dozen at most.

However impressive this dark sky resource may be, Cherry Springs offers opportunities that extend beyond the skywatching market. Rather than limiting this analysis to astronomy, FERMATA extended the reach of its market assessment to include all activities and recreations that are generally passive (watching, photographing) and are night or darkness dependent. In fact, FERMATA believes that the common thread that should bind the interests at Cherry Springs is night, rather than the stars that are a byproduct of that resource.

Market research data compiled for FERMATA by the National Survey of Recreation and the Environment (NSRE) shows that 75.3% of recreationists within the northern region of the U.S. (including Pennsylvania and adjacent states) who visit nature centers are “passives”; 70.2% of those who view or photograph natural scenery are similarly inclined. Given the scale of these markets (to be reported in the forthcoming market study for the DCNR Outdoor Recreation Plan), these passive viewers represent a significant opportunity for DCNR at its Cherry Springs facility.

There are few data that specifically relate to nighttime outdoor recreation other than those sport activities conducted under artificial lights. However, a profile can be constructed of this market based on peripheral and anecdotal information. First, NSRE data shows significant (and

National Survey of Recreation and the Environment data compiled for FERMATA specific to Pennsylvania and adjacent states

Recreation	1995 (millions)	2004 (millions)	% Change
Kayaking	0.52	1.40	169.23
View Wildlife	13.73	20.12	46.54
Bicycling	12.30	16.84	36.91
Day Hiking	9.74	13.32	36.76
Developed Camping	7.37	9.77	32.56
View Birds	11.69	14.87	27.20
Canoeing	3.26	4.04	23.93
Primitive Camping	4.45	5.23	17.53
Visit Nature Center	22.69	24.58	8.33

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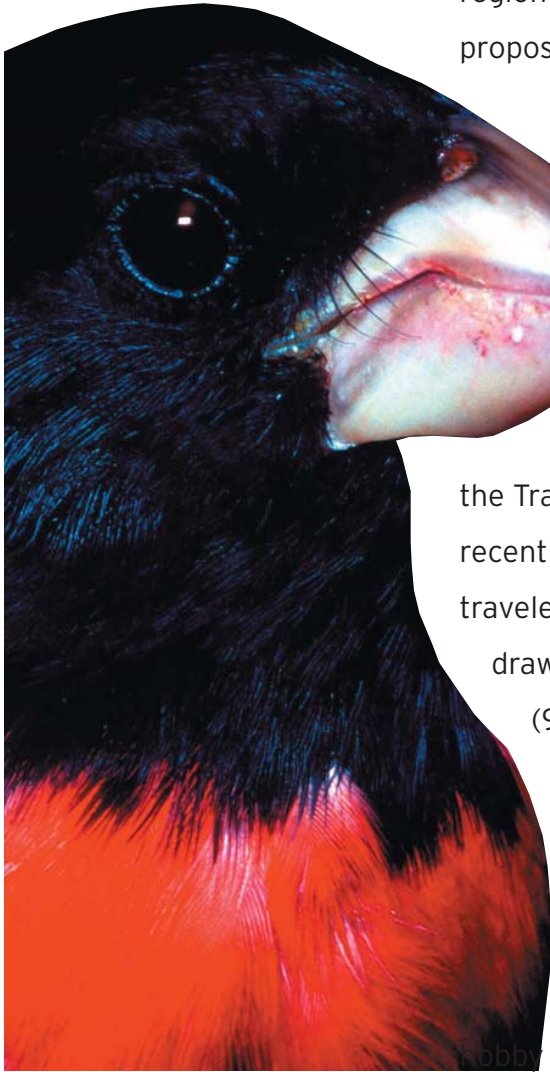
expanding) populations in the northern region engaged in the recreations being proposed for Cherry Springs.

FERMATA recognizes from their research as well as the research of others, that to experience and learn something new (educational benefit) is a major driver in experiential travel. For example, the Travel Industry Association of America (TIA) recently conducted research on U.S. National Park travelers. U.S. National Park travelers say they are drawn to National Parks to experience nature (92%) and for the educational benefit (90%). According to TIA, the learning aspect of travel is important to U.S. travelers, with about one-fifth (30.2 million) having taken an educational trip to learn or improve a skill, sport, or in the past three years. Eighteen percent

of travelers in the past year said that taking such a trip was the main purpose of their travel.

According to another TIA report, camping is the number one outdoor vacation activity in America. One third of all U.S. adult leisure travelers say they have gone on a camping vacation in the past five years. Only 6% of these people said that they didn't enjoy their camping experience. People who go camping also tend to enjoy hiking, biking, and canoeing (see recreations listed above).

There is growing anecdotal evidence of increased interest in nighttime outdoor recreational activities in the U.S. From twilight bicycle races in Georgia, to moonlit kayaking trips offered in the west, there appears to be a sizable demand for opportunities to experience the other half of our lives.



Ted Lee Eubanks/FERMATA, Inc.

Recommendations

ENHANCEMENT DEVELOPMENT AND RECREATIONAL PROGRAMMING OPPORTUNITIES

The recommendations offered by FERMATA are based both upon an analysis of the resources as well as an intimate understanding of the potential markets. A synthesis of the two (resource and recreation) underlies all the following recommendations.

Skywatching and amateur astronomy market

Skywatching and amateur astronomy is an important market, and the resources at Cherry Springs (dark skies) allow the park to compete well in the extended northern region. Minimal investments are needed to address the immediate needs of this niche market. Basic infrastructure improvements such as upgrading road surfaces and rest-

room facilities, developing basic interpretive programming (and requisite staff), and installing improved viewing facilities (low-level lighting, telescope pads, and all-weather domes) are sufficient to address the needs of this group. Telescope pads should have polar alignment, be laser-leveled, have recessed low-profile (red) lighting, and have electrical connections. FERMATA recommends that at least one all-weather dome be installed for winter viewing. Domes may be mounted on decks as well as directly on a pad (see http://www.astrohaven.com/observatories/NoFrame_prod_7ft.html), offering a slight gain in elevation and visibility, and raising the dome above winter snows. FERMATA recommends that DCNR mount the dome on concrete piers and then construct a deck to

The National Public Observatory's *Stars-N-Parks* program is already functioning at Cherry Springs, and the volunteer base available (for astronomy) is impressive. Volunteers at Cherry Springs now organize star parties open to the general public. The following are additional examples of how such events have become important for this segment of the outdoor recreation market:

Grand Canyon Star Party
<http://www.tucsonastronomy.org/gcsp.html>

Texas Star Party
<http://www.texasstarparty.org/>

Table Mountain (WA) Star Party
<http://www.tmspa.com/site.html>

Enchanted Skies Star Party (NM)
<http://www.socorro-nm.com/star-party/>

ICStars Star Party
<http://www.icstars.com/Ranch/starparty/>

Mt Bachelor Star Party
<http://www.mbsp.org/>

Examples of possible *WildsDarkSkies* products and programs:

- Fowl prowls
- Frog and amphibian monitoring (<http://www.nwf.org/frogwatchUSA/>)
- Black light nights for moths and beetles (<http://bughunter.tamu.edu/lights.htm>)
- Bioacoustical monitoring of bats (Penn State Altoona Bat Research) and migrant birds (Cornell and Penn State Institutes for the Environment)
- Nighttime orienteering
- Nighttime visioning (<http://www.ittnv.com/itt/Active/ConTopMenu/bringon?rs=0412144359>)
- Nighttime cycling (http://www.n-georgia.com/hist_hartland.htm)
- Camping skills
- Nighttime winter sports including cross-country skiing and snow-shoeing

independently surround the dome itself. This independence will dampen vibration from traffic on the deck.

General *WildsDarkSkies* Market

FERMATA believes that the potential for Cherry Springs State Park extends well beyond the limited skywatching and amateur astronomy market. To that end, FERMATA recommends that Cherry Springs become the host park for the *WildsDarkSkies* products and programs to be developed by the DCNR Pennsylvania Wilds initiative (presently being detailed in the DCNR Outdoor Recreation Plan). Cherry Springs should become Pennsylvania's first dusk-to-dawn interpretive park, emphasizing activities that are only possible (or are enhanced by) darkness.

Obviously, outdoor recreation does not exist in a virtual vacuum. As such, FERMATA recommends that in Summer 2005, the park should begin offering a select number of *WildsDarkSkies Weekends*, scheduled in such a way as to not interfere with the existing star parties. DCNR interpretive staff should work to package weekend experiences such as:

- Beetles and Moths - under the black light
- Camping in the Wilds - developing camping skills
- Dawn Chorus - the birds of the wilds as experienced through their morning songs
- Wet in the Wilds - amphibians of the Wilds (frog counts based on sound)
- Wilds Wings - an evening of bat listening and watching
- Twilight Traces - cycling the Wilds by moonlight

- Moonlight Meander - kayaking the Susquehannock State Forest by full moon
- Fowl Prowl - a search for owls, goatsuckers, and other birds of the night

Daytime activities need not be neglected. However FERMATA recommends focusing development efforts on a unique set of offerings based upon the park's resource base. Given the value of night at Cherry Springs, it is appropriate to develop a broad array of nighttime activities that may be unavailable elsewhere in the region. FERMATA also recommends introducing activities that are either compatible with skywatching or are appropriate on moonlit nights when night viewing is of poor quality (an example would be kayaking and canoeing under the full moon, an activity available in adjacent DCNR lands).

Interpretation

Currently there are no interpretive facilities at Cherry Springs State Park aside from the one small bulletin board. The passive segment of the market demands that their outdoor experience be facilitated and nurtured. Therefore, FERMATA recommends that an interpretive facility be developed at Cherry Springs in the near term. However, until the time when such development is feasible, the development of a "virtual" interpretive center, utilizing a dedicated website, is recommended. The on-line or virtual center would be a place where both products and services related to *WildsDarkSkies* could be developed and offered to the public. This website should be developed in the immediate future, and be structured in such a way as to allow for easy integration into the new interpretative facility once it is constructed. FERMATA suggests

The existing web offerings for the park are inadequate to function as a virtual interpretative center (or even to properly market the park). The existing websites are:

<http://www.upstateastro.org/stars/cssp.html>

<http://www.visitpa.com/visitpa/details.do?name=Cherry+Springs+State+Park>

<http://www.dcnr.state.pa.us/state-parks/parks/cherrysprings.aspx>



the McDonald Observatory Visitor's Center as an excellent example of such an approach (<http://www.mcdonaldobservatory.org/visitors/po/index.html>).

The organization and development of the Cherry Springs web-based virtual interpretative center should be given top priority by DCNR. The process of creating the center is expected to catalyze the development of a host of other new programs and products for the public. The website should offer current (near real time) information as to sky conditions, star charts, sunrise and sunset times, moon phases, weather conditions, etc (see <http://www.heavens-above.com/main.asp?Session=kebgcedofahdjdmfainknhmd> and <http://www.aurorawebcam.com/>).

The website should also provide on-line educational information (formal and infor-

mal) for amateur astronomers as well as for use by teachers in their classrooms. More importantly, the new virtual interpretive center should begin to introduce the public to the impressive array of other dusk-to-dawn activities that are available through the *WildsDarkSkies* program. The American Astronomical Society (<http://www.aas.org/education/resources.htm>) offers impressive educational resources, and DCNR should consider a establishing a partnership with this organization early in the development phase of the new virtual interpretative center.

In this fashion, DCNR and Bureau of State Parks will begin to develop a clientele for these varied interests well in advance of construction of a new visitors center at the park. The website also represents a malleable and flexible platform where these new offerings can be introduced, reviewed, and then

tailored to fit the expectations of the appropriate audience. The virtual interpretive center will quickly begin to create a brand identity for DCNR and its *WildsDarkSkies* programs and products. The website will immediately stamp both Cherry Springs and Pennsylvania *WildsDarkSkies* as a DCNR effort, critical in a time when the Pennsylvania Wilds identity is being shared with so many other interests.

Visitor Services

FERMATA is well aware of the need for additional staff to address visitor needs and support these recommendations. While agreeing that manpower is necessary, it is important that DCNR develop criteria for how new interpretive staff will be selected. Given the recommendations above, new interpretive staff will need extensive exposure to a broad selection of interpretive and recreational venues and programs. FERMATA

recommends that their firm be involved in developing these criteria.

As the virtual center comes on-line, FERMATA recommends that DCNR develop an Internet hotspot at the park so that users are able to access the most current recreational information for the region. In fact, FERMATA recommends developing hotspots in all State Parks within the Wilds region.

In Summer 2004, Cherry Springs State Park partnered with the Tioga and Potter County Visitors Associations to offer weekend skywatching packages. Skywatching and the night sky was also the theme for the 2003 Potter County Visitors Association Visitors Guide. The text on the cover of Visitors Guide proclaims Potter County to be "Pennsylvania's Skywatching Capital". In the visitors guide welcoming

The new virtual interpretive center should begin to introduce the public to the impressive array of other dusk-to-dawn activities that are available through the Wilds-DarkSkies program.



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In September 2002, Cherry Springs State Park began a partnership with the Pennsylvania Parks and Forests Foundation. This partnership now allows interested park users and astronomers to donate money directly to a tax-exempt fund for use at Cherry Springs. These funds are used to enhance the astronomy and skywatching attributes of the park. Expenditures from the fund are on a project-by-project basis with projects being proposed and approved by a Board of Advisors who work directly with park management.

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letter the Potter County Commissioners wrote "Clear night skies - like fresh air, clean water and miles of forestland - are natural resource greatly valued by us - and people from more populated areas where such are in short supply."

Revenue Opportunities

Revenue, of course, is also a consideration when developing an early implementation plan for Cherry Springs State Park. FERMATA recommends that DCNR and the firm work closely together to develop a DCNR *WildsDarkSkies* brand, and present it to the Pennsylvania DCED Tourism Office and to the regional tourism promotion agencies. *WildsDarkSkies* branded products should be developed and then initially offered in a virtual gift shop (see <http://www.mcdonaldobservatory.org/giftshop/> for an excellent example). Ultimately these products should also be

offered in a physical gift shop to be housed in the new interpretive facility.

In addition, FERMATA recommends that DCNR develop a process by which lodging can be booked through the DCNR's website, even if the lodge is privately owned. This booking service should be offered for a fee.

Fees should be established for the use of the new facilities within the park including the proposed Internet hotspot, perhaps combined with an entrance fee. An example of a fee structure for skywatching may be found at <http://www.mcdonaldobservatory.org/visitors/programs/>.

At this time, FERMATA does not recommend that DCNR develop additional camping or cabin facilities within the park. Rather, DCNR should work with DCED and local economic

development agencies to promote private-sector development of additional food and lodging. An example of possible private sector lodging development that would be compatible with, and supportive of, Cherry Springs State Park is Star Hill Inn in New Mexico (<http://www.starhillinn.com/home.html>). Given that lodging represents a potential revenue source for DCNR at Cherry Springs, FERMATA recommends the preparation of a detailed lodging feasibility study for the park that considers primitive cabins, enhanced cabin facilities, and a small nature lodge.

FERMATA recommends immediate initiation of a dialogue with the appropriate outdoor recreation industry representatives (such as telescope manufacturers or camping equipment retailers) to gain their support for the enhancement

of this park. This dialogue should begin at the invitation of the DCNR Secretary. Financial and in-kind support is possible from the industries most directly impacted by this plan, and the discussion with these interests should begin early in the process.



Brenda Weyant-Adams/FERMATA, Inc.

Priorities

FOR IMPLEMENTATION



Ted Lee Eubanks/
FERMATA, Inc.

FERMATA prioritized its recommendations based upon:

1. the needs of the markets to be served;
2. the recreational opportunities to be addressed;
3. the cost of implementing the recommendations;
4. the ease of implementing the recommendations.

The opportunity of the moment is the skywatching and amateur astronomy market. Investments needed to serve this existing user segment are small, and a tradition of travel has already been established for the park. Even though the market segment is

relatively small, the current user base is avid. Therefore, FERMATA recommends a concurrent development of programs and products for the passive recreational markets (viewers and experiential travelers) that uses the *WildsDarkSkies* brand. Long-term investments should be made with this more significant public in mind. In truth, many of these passive recreationists may subsequently be attracted to astronomy or skywatching while at the park. However, a more robust set of offerings at the park will be necessary to attract this less-specialized user.

Market: Amateur Astronomy/Skywatching

Market Scale: Low

Market Opportunity: High

High Priority Investments:



Fred Eapenak

- Restrooms
- Hardened surface for parking
- Low-level lighting and pads (with electrical connections) for telescopes
- Telescope for use by staff and volunteers
- Interpretive staff skilled in astronomy and skywatching (at least seasonally)
- Web site development related to astronomy and skywatching
- All-weather observatory dome for winter use

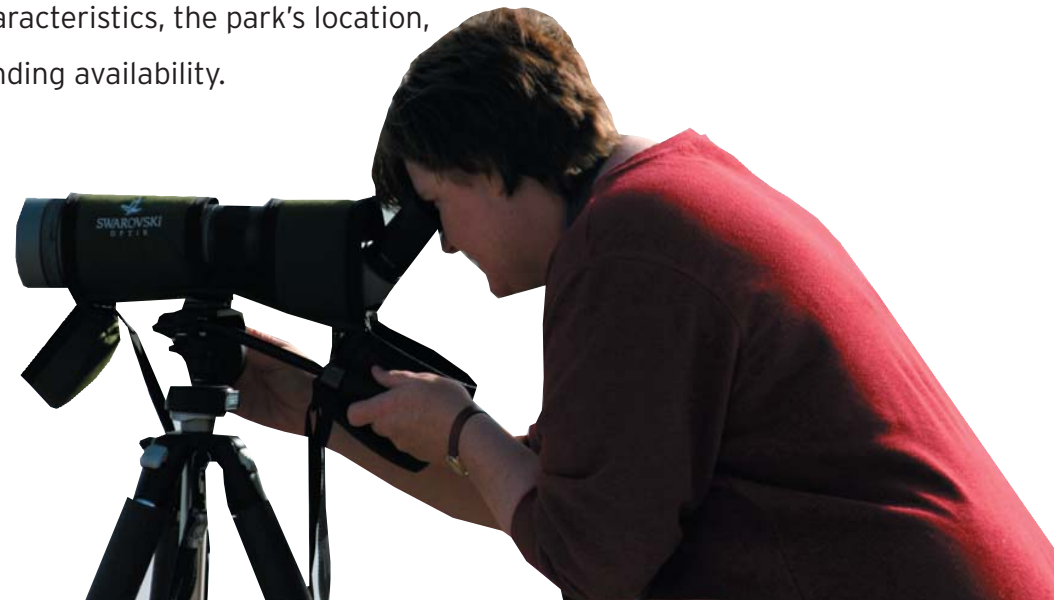
Medium Priority Investments:

- Astronomy facility and equipment in new visitors center

Low Priority Investments:

- Restroom and shower facility in campground

Justification: The market being served by these recommendations is limited to astronomy and skywatching. High priority recommendations are based on similar facilities in the U.S. Obviously there are those destinations (such as McDonald Observatory in Texas) where visitor facilities are far more extensive and elaborate, but these recommendations are realistic given Cherry Springs site characteristics, the park's location, and funding availability.



Rob Tizard/FERMATA, Inc.



Ted Lee Eubanks/FERMATA, Inc.

Market: Passive Recreational Public

Market Scale: High

Market Potential: High

High Priority Investments:

- Virtual interpretive center web development
- Interpretive Staff

Medium Priority Investments

- WildsDarkSkies Visitor Center
 - Amphitheatre
 - Integrate with Lumber Heritage thematic framework
 - Interpretive kiosks and signage

Low Priority Investments

- Cabins

Marketing Priorities

- Develop *WildsDarkSkies* brand;
- Develop *WildsDarkSkies Weekend* for Summer 2005, introducing the concept and the brand to the recreational public;
- Develop user and entrance fee strategy for the park reflective of the development being recommended above;
- In concert with DCED Tourism and local TPAs, develop collateral promotional materials promoting *WildsDarkSkies* and the park.

Estimated Costs

The following are preliminary estimates of general costs associated with the improvements and enhancements being recommended in this report. Estimates are based upon industry standards. Site-specific applications may significantly alter these estimates. Caution is urged when considering these numbers, as conditions and qualifications (such as the type, style, and size of a telescope) may significantly alter the end cost. However, these estimates should provide sufficient information as to allow DCNR to prioritize its investments.

Astronomy/Skywatching Budget

Item	Priority	Cost
Restrooms	High	\$300,000
Hardened Surface for Parking	High	\$40,000
Telescope Pads	High	\$100,000
State Park Telescope	High	\$10,000
Interpretive Staff	High	\$27,500
Web Site Development	High	\$20,000
Observatory Dome	High	\$100,000
Interpretive Center Astronomical Facility	Medium	\$150,000
Campground Restroom	Low	\$400,000

Passive Recreation Budget

Item	Priority	Cost
Interpretive Center Web Development	High	\$100,000
Interpretive Staff	High	\$27,500
<i>WildsDarkSkies</i> Interpretive Center	Medium	\$500,000
Amphitheatre	Medium	\$100,000
Lumber Heritage Integration	Medium	\$5,000
Interpretive kiosks and signage	Medium	\$25,000
Cabins	Low	\$100,000

Marketing Budget

Item	Priority	Cost
<i>WildsDarkSkies</i> Branding	High	\$25,000
<i>WildsDarkSkies</i> 2005 Weekends	High	\$10,000
Fee Strategy	High	\$15,000
Collateral Materials and Services	Medium	\$25,000

Appendix One

BUDGET DETAIL

Infrastructure	Priority	Cost	Market
Complete upgrade of stand-alone restroom building by connecting to existing sewer line below campground (funding requests have been submitted previously, but this work is not included in the Commonwealth's current capital budget). This facility would be open 24 hours a day during the days of park operation, with dark sky friendly lighting to accommodate late night park users when the visitor center facilities are not open or during peak attendance at special events.	High	\$300,000	Astronomy
Harden driving routes in observation field utilized by Woodsmen's Show and stargazers by lifting sod, placing gravel or other drainage materials/structures, and revegetating.	High	\$40,000	Astronomy
Construct five to ten concrete telescope pads. Pads should be oriented to the pole (north), should be laser leveled, should have recessed low profile lighting, and have electrical connections imbedded in the pad. See http://www.rivastro.org/ras_gmars_activities.html for photos of such a construction.	High	\$100,000	Astronomy
Purchase telescope and accessories for use by state park interpretive staff as well as key volunteers. Fermata recommends a Schmidt-Cassegrain telescope such as the Celestron NexStar-8GPS.	High	\$10,000	Astronomy

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Infrastructure	Priority	Cost	Market
Full time interpreter (Environmental Education Specialist) to develop and support programming. Station as appropriate with other members of the regional DCNR Interpretive Services Team. See comments above reflecting Fermata's concerns about developing criteria for this position. Fermata has allocated 50% of this position's cost against the astronomy market.	High	\$27,500	Astronomy
Develop content appropriate to amateur astronomy/skywatching market for virtual interpretive center.	High	\$20,000	Astronomy
Install deck-mounted observatory dome to enable winter viewing. The deck should rise three to four feet, elevating the observatory above the average winter snow pack and gaining several degrees above the ground-level horizon. See http://theastropages.com/articles/articles012.htm for the case in support of the use of domes.	High	\$100,000	Astronomy
Polaris-15 observatory dome (15') fixed to the roof or side of the visitor center, containing appropriate telescope and projection equipment. A cylinder projector inside the dome is needed to show visitors the night sky devoid of any light pollution, and to show movies or other multi-media products at times when weather or sky conditions are such that there are no visible astronomic activities. This allows the park to offer predictable, year round, non-weather dependent programs in conjunction with marketing partners.	Medium	\$150,000	Astronomy

Infrastructure	Priority	Cost	Market
Campground restrooms and shower house	Low	\$400,000	Astronomy
Develop web-based virtual interpretive center for <i>Pennsylvania WildsDarkSkies</i> . Fermata urges that DCNR develop this component in concert with an overall plan for Pennsylvania Wilds web development.	High	\$100,000	Passive Recreation
Full time interpreter (Environmental Education Specialist) to develop and support programming. Station as appropriate with other members of the regional DCNR Interpretive Services Team. See comments above reflecting Fermata's concerns about developing criteria for this position. Fermata has allocated 50% of this position's cost against the passive recreation (<i>WildsDarkSkies</i>) market.	High	\$27,500	Passive Recreation
Design and construct new visitor center on west side of Route 44 along the northern boundary of the park. Center to include office space for naturalist, visitor contact and restroom facilities, large multi-purpose room to accommodate planetarium-style programs, and 12' wide deck on south side of building with permanent telescope mounting brackets. Needs to include high speed Internet access for real time reporting of night sky observations. Provides needed storage space for equipment. Possible starting point for design - Lackawanna State Park Visitor Center. Overall emphasis in the interpretive center should be the <i>WildsDarkSkies</i> , expanding interpretation well beyond amateur astronomy.	Medium	\$500,000	Passive Recreation

Infrastructure	Priority	Cost	Market
Complete construction of new amphitheater including installation of permanent seating and landscaping. This facility would allow the park naturalist to offer a wide variety of programming including that related to skywatching especially at times when weather or sky conditions are such that there is no visible astronomic activity.	Medium	\$100,000	Passive Recreation
Develop opportunities for utilizing key interpretive messages from Lumber Heritage Region and U.S. Route 6 Heritage Corridor in low profile, pedestal mount interpretive panels to be designed and installed near the replica Cherry Springs Hotel and CCC era picnic pavilion.	Medium	\$5,000	Passive Recreation
Three-sided kiosk with special dark sky-friendly down lighting to be designed and placed at edge of night sky parking area on east side of Route 44 to educate and inform visitors as to dark sky viewing etiquette and how to access observation area in night time. Also, install unlit low profile, pedestal mount interpretive panel near observation area on west side of Route 44 to provide information to daytime visitors to the area about WildsDarkSkies activities and resources.	Medium	\$25,000	Passive Recreation
Develop additional lodging capacity (cabins). See Fermata's comments above about cabin development in the park, and the need for an overall assessment of lodging requirements in the region.	Low	\$100,000	Passive Recreation

Infrastructure	Priority	Cost	Market
<i>WildsDarkSkies</i> Branding. This cost reflects DCNR staff time as well as contributions by consultant.	High	\$25,000	General Marketing
<i>WildsDarkSkies</i> 2005 Weekends. This cost reflects additional DCNR staff time above that contributed by park interpretive staff.	High	\$10,000	General Marketing
Fee Strategy. This cost reflects additional DCNR and consultant time devoted to developing an overarching fee (entrance, user, franchise) structure for the park.	High	\$15,000	General Marketing
Develop <i>WildsDarkSkies</i> collateral materials and services. Write, design, acquire images, and print four-color promotional brochure on astronomy opportunities in the park. The brochure should be distributed at travel shows, by local CVBs, and in response to information requests to visitPA.com. Investigate opportunities for partnering with Potter County Visitors Association and PA Route 6 Tourist Association in package development and booking (including on-line and real time on-site) that could include lodging in gateway communities or camping on-site and admission to Woodsmen's Show or skywatching events and equipment rental.	High	\$25,000	General Marketing



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