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Newport State Park, Door County, WI

International Dark Sky Park Application Package

March 15, 2016

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State of Wisconsin

DEPARTMENT OF NATURAL RESOURCES

Newport State Park
475 County Road NP
920-854-2500
Ellison Bay WI 54210

Scott Walker, Governor
Cathy Stepp, Secretary



August 10, 2015

International Dark Sky Association
3223 N. First Ave.
Tuscon AZ 85719

Subject:IDA Dark Sky Park Application Summary

To whom it my concern:

Along a rugged shoreline near the tip of Wisconsin’s Door Peninsula is a place of exceptional beauty where people walk softly upon the land: Newport State Park.

Though Newport was once the site of a thriving fishing village, nature has reclaimed the land and now several distinct forest, wetland and meadow communities are established in the 2,373 acre park. Newport’s 11 miles of undeveloped shoreline are noted for sandy shorelines, hidden coves, rocky headlands, and dark skies.

In 1974, Newport State Park was designated a Wilderness Area by the Wisconsin Department of Natural Resources. To preserve the wild quality of the park, motor vehicles are restricted to roads, campers must backpack and future development will be minimal.

Newport is within a day’s drive of the entire state of Wisconsin, as well as parts of Michigan, northern Illinois and southeastern Minnesota, putting the park within easy reach of several million people.

The public can access the park 365 days of the year. Posted hours are 6am to 11pm, however the park is not gated to allow campers access to their sites. Individuals or groups can gain permission from the Park Manager to access the park outside of the posted hours. Wisconsin Administrative Code also states that we may waive, or change established hours for special events and programs such as research, educational programs, and astronomical viewings.

Our purpose is to preserve and interpret a large area of natural beauty for this and future generations to enjoy, and to provide recreational opportunities within the preservation of this resource. Protection of our dark sky is of utmost importance.

Summary of included documents:

- Maps
- Letter of Nomination
- Letters of Support
- Management Documents
- Sky Quality Measurements
- Lightscape Management Plan
- Lighting Inventory
- Restoration Project
- Educational, Interpretive Programs
- Photos

Thank you for your consideration.

Michelle Hefty

Park Manager

Newport State Park

Newport State Park
Dark Sky Park Committee

David Udell (primary contact)

President, Door Peninsula Astronomical Society

dudell918@gmail.com

920-823-2262

Michelle Hefty (park contact)

Park Manager, Newport State Park

michelle.hefty@wisconsin.gov

920-854-2500

Beth Bartoli

Naturalist, Newport State Park

newportnaturalist@gmail.com

Dan Fetterley

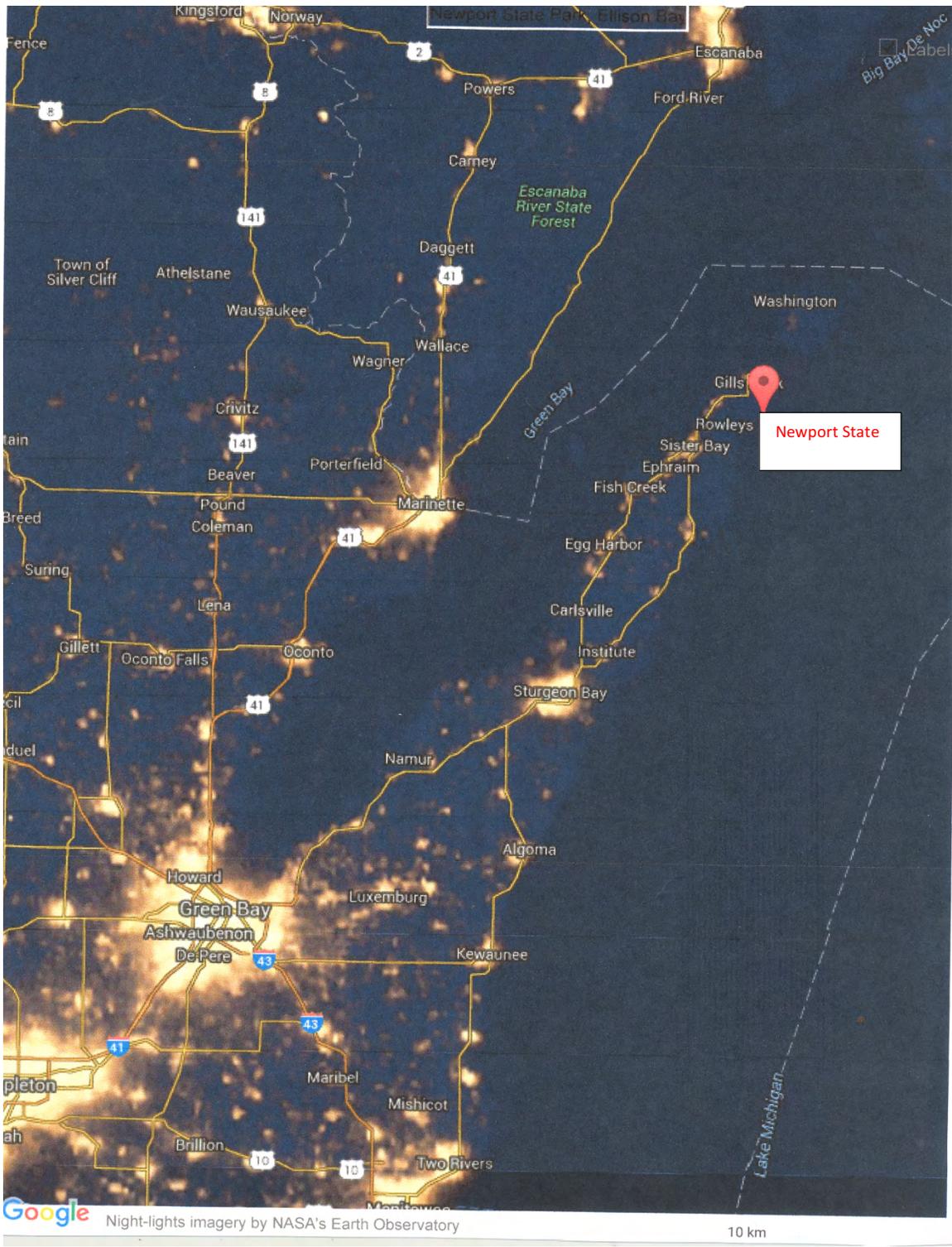
Secretary, Newport Wilderness Society

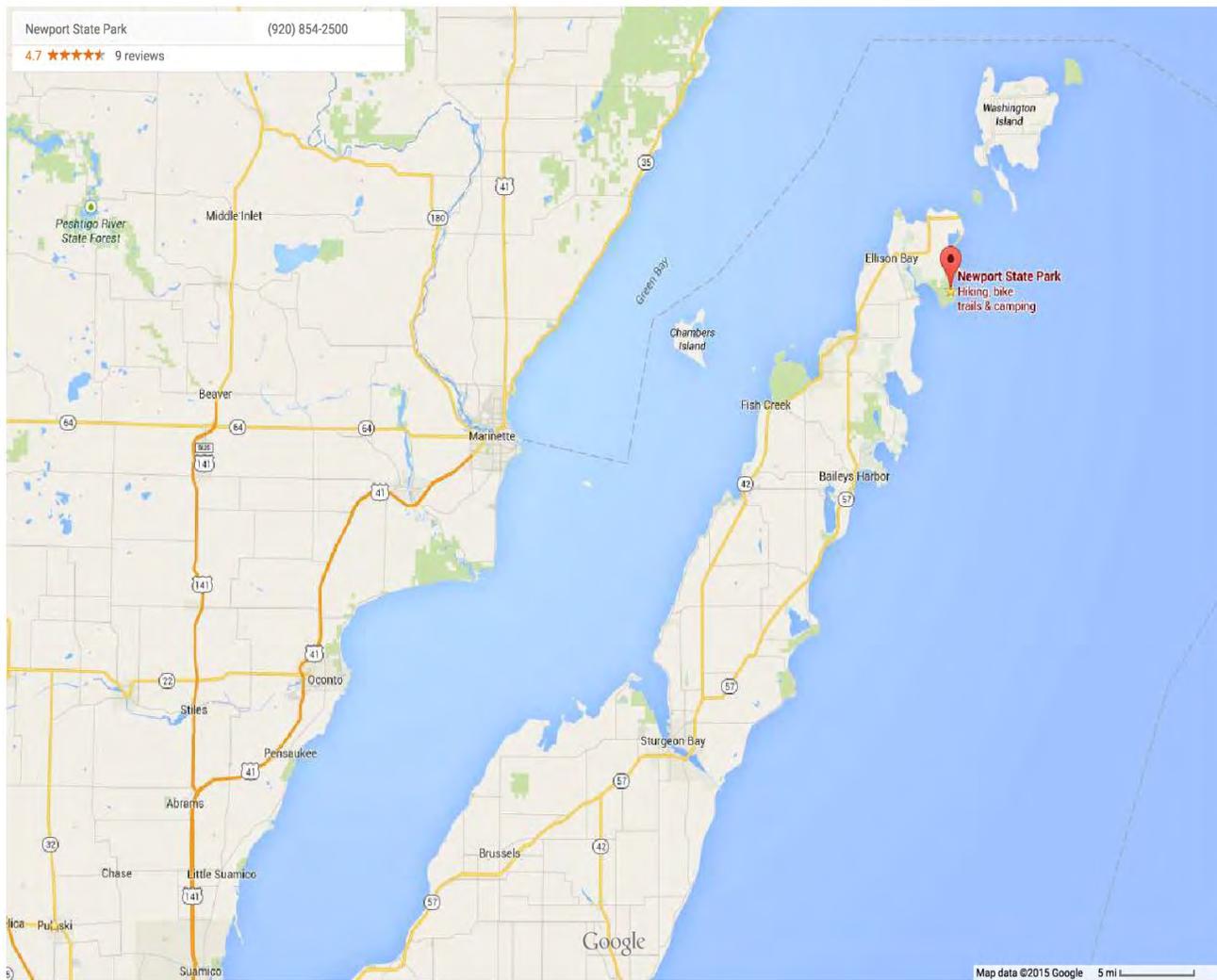
dfetterley@charter.net

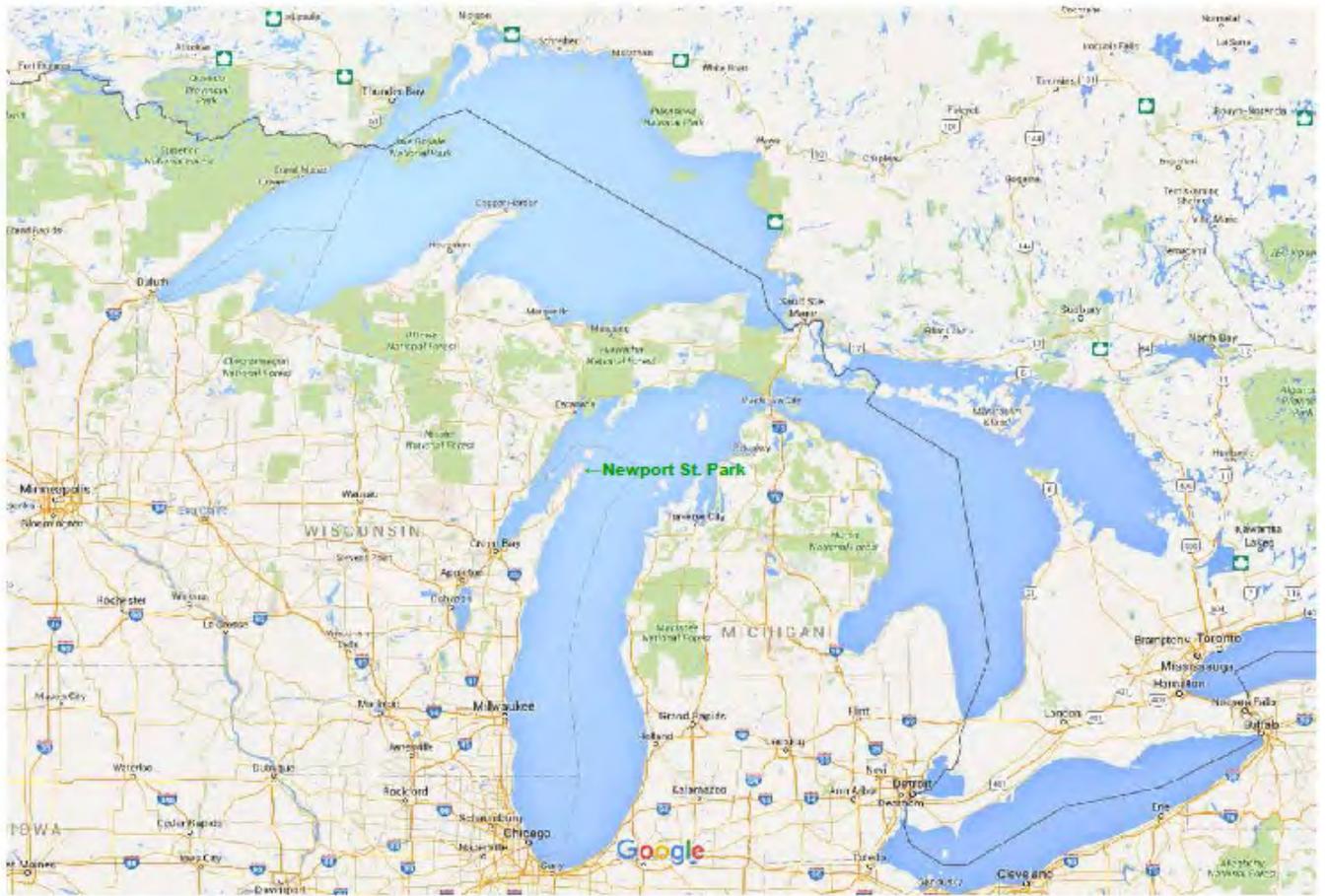
Al Wittenkeller (ex officio)

alnjudy2@gmail.com

Ray Stonecipher (ex officio, deceased)







11 miles of shoreline
2,373 acres

Newport State Park
Ellison Bay, Wi.

Map data ©2015 Google 50 mi

State of Wisconsin

DEPARTMENT OF NATURAL RESOURCES

Newport State Park
475 County Road NP
920-854-2500
Ellison Bay WI 54210

Scott Walker, Governor
Cathy Stepp, Secretary



March 1, 2016

Subject: Letter of Nomination

Dear IDA Board of Directors:

Please accept this letter of nomination for Newport State Park for International Dark Sky Park Designation.

The designation as a Dark Sky Park would be a great step towards recognizing and promoting the value of dark skies throughout the Wisconsin State Park System and the State of Wisconsin.

This nomination package seeks to demonstrate that Newport State Park, along the western shoreline of Lake Michigan, is uniquely blessed with virtually no artificial light sources, and has a clear and unobstructed view of the eastern sky to the horizon.

Please feel free to call upon me personally as you consider the acceptance of this nomination package seeking the Dark Sky Park Designation of Newport State Park.

Sincerely,

Michelle M. Hefty

Park Manager

Michelle.hefty@wisconsin.gov

920-854-2500



JOEL KITCHENS

STATE REPRESENTATIVE • 1ST ASSEMBLY DISTRICT

Newport State Park
Attn: Michelle Hefty
475 County Road NP
Ellison Bay, WI 54210

July 25, 2015

Dear Superintendent Hefty,

I am supportive of your effort to achieve dark- sky designation for Newport State Park. Newport is such a unique park and this would only add to its appeal. One of the most important roles of our parks, aside from recreation, is to provide educational opportunities. This designation would also be valuable in bringing a group of people to our area that might not otherwise visit.

I will voice my support for this designation to the DNR. If I can be of assistance in any other way, please let me know.

Sincerely,

A handwritten signature in blue ink, appearing to read "Joel Kitchens".

Rep. Joel Kitchens



TOWN OF LIBERTY GROVE

County of Door

Town Hall: 11161 Old Stage Road
Sister Bay, Wisconsin 54234
Phone: 920-854-2934
Fax: 920-854-7366
tlibertygrove@dewis.com

August 26, 2015

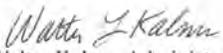
Michelle Hefty, Superintendent
Newport State Park
475 County NP
Ellison Bay, WI 54210

Dear Michelle:

The Town of Liberty Grove wishes to thank you for your presentation in making the Board aware of the International Dark-Sky Association and the benefits it provides. The Board has been aware of increasing light pollution over the years. The Board feels that nothing but positives can come from this designation as we seek to preserve the nighttime features by minimizing unnecessary lighting during hours of darkness. The saving of energy and reduced impact on wildlife, vegetation and humans are goals that can be worked toward through this designation.

The Town Board wholeheartedly supports your efforts to join the Dark-Sky Association and is open to any suggestions you can bring forward to mitigate the issue of light pollution.

Sincerely,


Walter Kalms, Administrator
Town of Liberty Grove

Fifty Miles of Scenic Shoreline at the Tip of Door County



July 17, 2015

Newport State Park
475 County Hwy NP
Ellison Bay, WI 54210

Michelle,

On behalf of the Door County Visitor Bureau I am writing to support Newport State Parks application to become a Dark Sky Destination. One of our main missions, as Door County's destination marketing organization, is to promote sustainable tourism while attracting new visitors to our beautiful slice of the Midwest. Door County is heavily reliant on tourism for economic growth so finding new ways to draw people here is a must.

The parks are one of Door County's biggest draws and our night skies are one of the most breathtaking features we have. As communities evolve and grow it will be important that designations like the Dark Skies exist so future generations can experience the same sense of awe.

Sincerely,

A handwritten signature in cursive script that reads "Michelle Rasmusson".

Michelle Rasmusson
Director of Marketing & Sales
Door County Visitor Bureau

DOOR COUNTY VISITOR BUREAU®
1015 GREEN BAY ROAD • P O BOX 406 • STURGEON BAY, WI 54235
PHONE (920) 743-4456 • FAX (920) 743-7873 • WEB WWW.DOORCOUNTY.COM

The Newport Wilderness Society
The Friends Group for Newport State Park
P.O. Box 187
Ellison Bay, WI 54210

Ms. Michelle Hefty
Park Manager
Newport State Park
475 County Hwy NP
Ellison Bay, WI 54210

Dear Michelle,

As the official Friends group for Newport State Park, we commend the Park's application to the International Dark Sky Association for designation as Wisconsin's first Dark Sky Park. This designation, with its attendant signage, other publicity, and informational materials will more fully highlight this special aspect of the Park. It will also increase awareness of the need to preserve the natural state of the night sky among the many visitors to Door County and to the Park.

As we have in the past, we intend to fully support activities in the Park featuring its night sky. These include the ever-popular Perseid meteor shower viewing each August and the several trips by the University of Wisconsin-Madison astronomy department to the Park each year. We also look forward to working with the Park naturalists and others, such as the Door County Astronomical Society, to expand such programming.

Yours very truly,

Richard Heil
President

Door Peninsula Astronomical Society
2200 Utah Street • PO Box 608 • Sturgeon Bay, WI 54235
www.doorastronomy.org



May 14, 2015

Michelle Hefty
Newport State Park
475 County Highway NP
Ellison Bay, WI 54210

Dear Michelle,

The Door Peninsula Astronomical Society supports the designation of Newport State Park as a Dark Sky Park by the International Dark Sky Association. To reach this point in the application process meant many hours of work at night by our member, Ray Stonecipher and others.

This designation will be very good publicity for the park and for Door County in general as a site to enjoy the dark skies.

We strongly urge you to do all that you can to see that the DNR and the State Park system submit this application.

Thank you for your assistance.

Sincerely,

Susan Basten
DPAS Board of Directors



Michelle Hefty
Park Manager
Newport State Park
475 County Hwy NP
Ellison Bay, WI 54210

August 14, 2015

Dear Michelle,

The Ridges Sanctuary supports the Newport State Park's application for a Dark Sky Designation. This designation is one of many critical steps to help protect the coastal wetlands along the Door Peninsula. It will also help preserve the incredible views of the night sky along the peninsula - a real treasure for those who visit and are year-round residents of Door County.

Newport State Park is a main tourist destination point in Door County. Park visitors have the opportunity to hike the trails and/or participate in a variety of environmental education programs. Having Newport State Park receive this designation will be a great advantage in teaching the community about the Dark Sky program.

If you need any further support with the application process, don't hesitate to call me at (920) 839-2802.

Sincerely,

Steve Leonard
Executive Director



DOOR PROPERTY OWNERS

P.O. Box 429

Sturgeon Bay WI 54235

DPO@dewis.com

920.746.4450

13 July 2015

Newport State Park
Attn: Michelle Hefty
475 County Road NP
Ellison Bay WI 54210

Re: DARK-SKY DESIGNATION PROPOSAL FOR NEWPORT STATE PARK

Dear Superintendent Hefty:

The Board of Directors of Door Property Owners, representing more than 500 local residents, is writing to express our unreserved support for the dark-sky designation at Newport State Park. This would be a real coup for Newport Park, as the only location with this distinction in the entire state of Wisconsin. Newport is uniquely located to be viable for this distinction; it will be an achievement with real distinction.

Please pursue the dark-sky proposal to add an additional educational and scientific component to our beautiful Newport State Park.

Sincerely,

DPO Board of Directors
Michael Serpe, President
Kathie Vavra, Vice President
Peter Sigmann, M.D., Treasurer
Richard Dirks
Nancy Fisher
Robert Graef
Karen Newbern
Kurt Pagel
Ray Stonecipher

cc: Door County Astronomy Club
Cathy Stepp, DNR
Dan Schuller, DNR
Joel Kitchens, Dist. 1 Representative
Frank Lasee, State Senator

The Ellison Bay Service Club

P.O. Box 181
Ellison Bay, WI 54210

Ms. Michelle Hefty
Park Manager
Newport State Park
475 County Hwy NP
Ellison Bay, WI 54210

Dear Michelle,

As you know, the Ellison Bay Service Club is a group of local business people and residents working to make Ellison Bay and northern Door County a great place to visit, stay, shop, and dine. Newport State Park is an integral and significant member of our community.

We have learned that the Park is making application to the International Dark Sky Association to designate Newport State Park as a Dark Sky Park. From our perspective, such a designation will be yet another reason to come to our part of the County. And, those coming to enjoy or use the Park's dark sky could well be different than visitors coming to enjoy other aspects of our natural beauty.

We would be pleased to assist in making the community aware of this unique aspect of Newport State Park and in encouraging prudent night lighting practices in northern Door County.

We wish you much success in this endeavor.

Ellison Bay Service Club

Gary and Michelle Kemp

Hefty, Michelle M - DNR

From: Bonadurer, Bob <Bonadurer@mpm.edu>
Sent: Tuesday, June 23, 2015 10:33 AM
To: Hefty, Michelle M - DNR
Subject: Dark Sky Park Designation

Dear Ms. Hefty:

I absolutely support Newport State Park becoming a Dark Sky Park—as recognized by the International Dark Sky Association.

In my 30 years experience teaching astronomy at various Planetariums, the top draw for people is a clear starlit sky far from city lights. They “ooh” and “aah” as the Planetarium takes them slowly from the city to the country sky. To be able to communicate to the thousands of people who visit our Planetarium, that there is true dark site worth visiting in Wisconsin, would be more than tremendous.

Gazing at thousands of stars under the dark firmament stirs the soul. It connects people to the majesty and mystery to everything that surrounds our planet Earth. Having Newport State Park receive this stellar designation will be a great way to promote the biggest, most beautiful thing there is—the universe.

We need to preserve what’s left of our current dark skies. Newport State Park must become a Dark Sky Park.

Clear Skies,

Robert Bonadurer
Director, Daniel M. Soref Planetarium
Milwaukee Public Museum
800 West Wells Street
Milwaukee, WI 53233
414.278.6985

CORRESPONDENCE/MEMORANDUM

DATE: March 23, 2015

TO: Sanjay Olson, Acting Lands Division Administrator
Dan Schuller, Bureau Director, Parks and Recreation

FROM: Michelle Hefty, Park Manager, Newport State Park

SUBJECT: Request Approval to Apply for a Dark Sky Designation to the International Dark-Sky Association (IDA)

Issue Title: Dark Sky Park Designation (DSP) For Newport State Park, Ellison Bay, WI

Author: Michelle Hefty, Park Manager, Newport State Park

Date Written: February 26, 2015

Goal: To offer astronomical, biological and environmental resources to increase opportunities for learning experiences at Newport State Park. These are to take place in a dark scenic setting with minimal impact on the park.

Proposal: Requesting permission to apply for a "Dark Sky Designation" from the International Dark Sky Association, (IDA); Tucson, Arizona.

~www.darksky.org~

Benefits: The prestigious "DSP" designation opens the park to local, regional, national and international astronomical, wildlife clubs and societies, increasing tourism, especially ecotourism. Obtaining this prestigious designation will accord national and international recognition to Newport State Park and the Wisconsin State park System. The DSP designation should result in increased visitation and revenues to the park. These anticipated increases will be from a different user group (astronomers and biologists), than the group that typically uses a wilderness (campers, hikers, cross country skiers and the like).

Background Information:

The Night Sky – In a modern world that is accompanied by ever increasing levels of nighttime illumination, a truly "dark" sky at night is rare and unique. Dark skies are important for astronomers. Also, they minimize the impact on the habitats of nocturnal wildlife. The sky makes up half our natural environment. The "natural" state of the sky at night is dark. This natural resource is becoming increasingly degraded and endangered from light pollution. Approximately 30% of vertebrates and 60% of invertebrates are nocturnal. Loss of the natural dark environment at night adversely affects food gathering, social behavior, mating, migration and other activities of these organisms. Preserving the dark sky of Newport State Park will have a highly positive impact on the environment.



I. Newport State Park has a dark night sky. In 2014, it celebrated its 50th anniversary as Wisconsin's first wilderness park. As part of maintaining its wilderness nature, the park has only the lighting necessary for safety and proper park administration.

Located on the western shore of Lake Michigan, the Park offers excellent nighttime viewing, featuring an unobstructed view of the eastern horizon. The annual Perseid meteor shower program held in the Park each August typically attracts 300+ nighttime visitors.

Preliminary "Sky Quality" meter readings, an IDA requirement, indicate that Newport State Park is a prime candidate.

II. The International Dark Sky Association was formed in 1988 for the purpose of encouraging the preservation and protection of the dark sky nighttime environment. The impetus for its formation was degradation of major astronomical observatories by nighttime lights from surrounding communities.

As part of its work the IDA promotes a dark sky program for public lands, including state parks, that meet IDA criteria for absent, or minimal nighttime illumination. Public lands meeting IDA criteria receive an IDA Dark Sky Park (DSP) designation.

~ Refer to the IDA Dark Sky Program (attached) ~

Currently there are 32 DSP areas in the World, 9 in the US with only 2 being state parks, (PA and NM). The only Midwest designated area is a county park in Michigan.

Dark Sky Criteria:

1. The park must have a lighting management plan relating to the current and future location of the lighting in the park that meets IDA requirements. This is in process, but at this time the current lighting in the park meets IDA requirements.
2. A light measurement program must be maintained in the park by park personnel, or a private organization, such as a friends group, nature, or astronomy club. The astronomy club, DPAS, and Newport's friends group have committed to do the light measurement.
3. At least a portion of the park must allow for public access for at least a part of the night. Our hours allow for this criterion.
4. The park must offer educational programs on an ongoing basis related to astronomy and nocturnal animals, emphasizing the importance of dark skies and the benefits of good lighting. Newport currently offers these types of programs.
5. The park must submit an annual activity and progress report to the IDA. This is a simple one page report which will be completed by the Newport Wilderness Society.
6. Display "Dark Sky Park" signage upon receiving the DSP designation from IDA. The only requirement for this sign is that it must display the IDA logo. The Door Peninsula Astronomical Society has committed to making and paying for this sign after Department approval of the design and size.

*must be
LWSSD in conjunction w/ IDA logo ?*

Recommendations:

When we go into the Master Planning process we would like to include lighting guidelines for the park that maintain park lighting, now and in the future, that preserves the dark nighttime sky of Newport State Park.

Fiscal Impact:

There is no financial commitment required from the Department of Natural Resources. Financial support is available from the Newport Wilderness Society, and the Door Peninsula Astronomical Society.

Local Organizations and Partners:

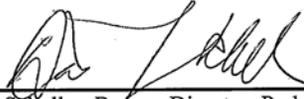
1. Newport State Park
2. Newport Wilderness Society
3. Door Peninsula Astronomical Society
4. Door Property Owners Association
5. Liberty Grove Town Board
6. Sister Bay Advancement Association
7. Ellison Bay Service Club
8. Door County Environmental Council
9. Door County Visitors [Tourism] Bureau

Ability to end Relationship with Dark Sky – non binding:

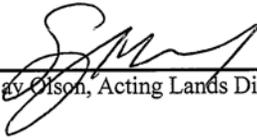
1. To obtain, and maintain the DSP designation requires yearly light metering, educational programs, annual reporting, and commitments to lighting controls. If these requirements are not met, then IDA may suspend the DSP status until annual reporting requirements have been met.
2. If the Department of Natural Resources or the partners no longer wish to continue with the designation, for whatever reason, then the above requirements (see number 1. above) are simply not done, any designation signage is removed, and IDA will suspend the DSP designation.

I'm requesting approval for the Department of Natural Resources in cooperation with the Newport Wilderness Society to apply for a Dark Sky Park Designation to the International Dark-Sky Association.

Approvals:



Dan Schuller, Bureau Director, Parks and Recreation



3/25/15

Sanjay Olson, Acting Lands Division Administrator

State of Wisconsin

DEPARTMENT OF NATURAL RESOURCES

Newport State Park
475 County Road NP
920-854-2500
Ellison Bay WI 54210

Scott Walker, Governor
Cathy Stepp, Secretary



March 13, 2016

IDA Board of Directors
3223 N. First Ave
Tuscan AZ 85719

Subject: Management Document

Dear IDA Board of Directors:

Newport State Park is designated as a Wilderness State Park in Wisconsin. In 1973 the Wisconsin Department of Natural Resources approved a set of guidelines, which constituted a Master Plan for Newport State Park. These guidelines state why the park exists and what its purpose is and what needs it will fulfill.

The purpose of Newport State Park is to preserve and interpret a large area of great natural beauty for this and future generations to enjoy, and to provide recreational opportunities “compatible with the preservation of the resource.” The dark skies of Newport State Park have always been considered one of our most valued and treasured natural resources. With 11 miles of Lake Michigan shoreline, there are unobstructed views of the northern, eastern and southern skies, and no significant impact from artificial light sources for at least 5 miles surrounding the park.

During the next year Newport State Park will be going through a review and revision process of this Master Plan document. While the current protections in the document will not be changed, we will be adding specific verbiage addressing protection of the dark skies. This verbiage has been added to master plan documents in other Wisconsin State Parks and it is our goal to have this included in all master plan documents statewide.

We have included the Introduction, and Purpose and Objectives of the Newport State Park Guidelines with this letter.

Sincerely,

Michelle M. Hefty

Park Manager

Newport State Park

1 INTRODUCTION

A. PURPOSE OF THE GUIDELINES

These guidelines, together with the General Development Plan, constitute a master plan for Newport State Park, as such they present what is considered to be the best scheme for resource perpetuation, development and use.

These guidelines are a control document, a general plan to guide the preparation of more detailed plans. The guidelines spell out the physical and social factors upon which decisions were based to allow future plans to be put into proper perspective. The guidelines also state why the park exists and what its purpose is and what needs it will fulfill. Additionally, the guidelines outline in general terms what actions must be taken to achieve the purpose and objectives.

B. BACKGROUND

Long before its establishment as a state park, Newport had been recognized as an area of outstanding quality. In a 1946 joint study of the area by the State Planning Board and the Wisconsin Conservation Department, the Newport area was described as being "without the slightest doubt the most outstanding state park possibility along the Lake Michigan shore." The Great Lakes Shoreline study of 1957-58 conducted by the National Park Service and the Wisconsin Conservation Department, also highly recommended the area for state park acquisition. On September 24, 1964, the park was established as Europe Bay State Park. (Original studies had recommended that the park include acreage on Europe Bay and Europe Lake). In August 1970, the name was changed by Natural Resources Board action to the present, Newport State Park.

Development work began in 1970 when the entrance road and day use areas were established. Since its establishment, use at the park has increased to over 50,000 visitors in 1972. Use will undoubtedly increase as the park becomes more well known.

C. THE REGION

Located at the top of the Door County thumb, Newport is located in one of Wisconsin's most scenic and popular areas. Access to the park is via STH 42 and town roads. The park is about 45 miles north of Sturgeon Bay and about 90 miles north of Green Bay. It is within a one-day drive of nearly the entire state as well as Upper Michigan and Northern Illinois, Indiana and Southeastern Minnesota, putting the park within easy reach of several million people.

There are five other state parks in Door County - Rock Island, Peninsula, Potawatomi, Whitefish Dunes and Ahnapee Trail. A variety of landscapes and visitor services are available at these parks, each is unique. Besides state parks, there are three public hunting grounds in the county. In addition, there are 13 county parks (total 526 acres) and 26 township and village parks (220 acres) in Door County.¹ The county and village parks provide recreational opportunities for tourists as well as for county residents.

In addition to the state and municipal parks, there are 9 private camp-¹grounds in the county, providing a total of 750 camping units.

¹

Door County Outdoor Recreation Plan, 1969.

REGIONAL MAP

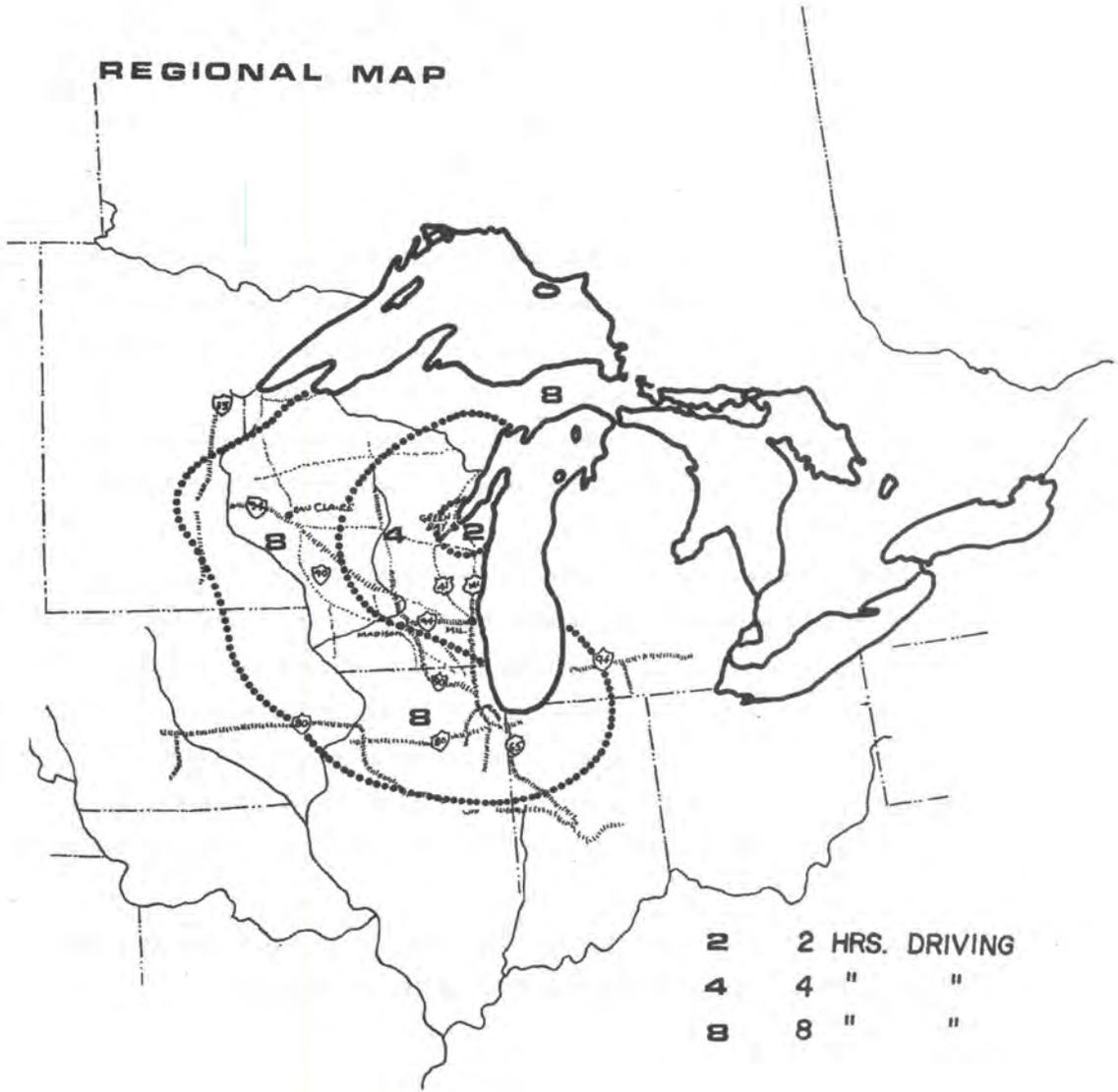


Fig. 1
NEWPORT STATE PARK

2 PURPOSE AND OBJECTIVES

A. PURPOSE

The purpose of Newport State Park is to preserve and interpret a large area of great natural beauty for this and future generations to enjoy, and to provide recreational opportunities compatible with the preservation of the resource.

B. OBJECTIVES

1. Development will be simple and minimal to best protect and portray the natural features and wild character of the park. Simple day use will be provided but the only camping facilities to be provided are to be primitive, pack-in sites. Conventional camping is out of place at Newport, and is available at other state parks as well as at numerous private facilities.
2. Newport was established as a scenic park. Under the NRB policy of March 24, 1971, scenic parks are those "having unusual charm and beauty, distinctive landscapes, and particular appeal to nature lovers, and of sufficient size to enable use by large numbers of people without destruction of the qualities essential to their purpose." Newport certainly fills these criteria. And further, because of its wild character, it very nearly approximates the conditions required for inclusion under the "Wilderness Area" classification of the proposed DNR Wild Resources Policy. That is, 3,000 acres or more, outstanding opportunities for solitude and a primitive natural type of recreation, and an area of ecological, geological or other features of scientific, scenic, or historical value.

Therefore, because Newport approximates those criteria, most of the park will be managed as a wilderness area. This means that except for specific emergency conditions:

a. No timber harvesting or other manipulation of vegetation shall be permitted.

b. Only such protective activities as are necessary to protect the values to be preserved shall be permitted.

c. No motors of any type shall be permitted at any time. (Except as required under b.)

d. There shall be no permanent roads or structures.

e. Hunting, fishing and trapping as limited by the Board may be permitted.

f. No utility or other easements, or mineral exploration or extraction shall be permitted.

The area of the park developed for day use will obviously not fall into this wilderness classification, but even there every effort will be made to preserve those values. Also included within the park, is a 140 acre scientific area that will be managed in accord with the guidelines established by the Scientific Areas Preservation Council.

3. Because of the wild character of the park, the naturalist/interpretive program should play an important part in the total scope of the park, and should be central to visitor activities. A seasonal naturalist, perhaps shared with other neighboring state parks, should be available. A nature trail near the day use area should also be established.

4. Year round use should be encouraged. Snowmobiles will not be permitted, but the park provides excellent opportunities for ski-touring and snowshoeing. These activities are in harmony with the wilderness concepts of the park.

NEWPORT STATE PARK NIGHT SKY BRIGHTNESS MEASUREMENTS

Date	Map Location #	Area	GPS Coordinates	Reading Average	Reading Average
				<i>Unihedron Sky Quality Meter</i>	Dark Sky Meter iPhone app
2/22/2014	#1	Park Entrance	N45.2347° W86.9978°	20.831	
“	#2	Maintenance Road Intersection	N45.2349° W86.9960°	21.012	
“	#3	Parking Lot #2	N45.2339° W86.9893°	21.384	
“	#4	Parking Lot #3	N45.2380° W86.9878°	21.122	
“	#5	Sugarbush	N45.2482° W86.9988°	21.520	
“	#6	Europe Bay	N45.2594° W86.9861°	21.578	
5/28/2014	#7	Monarch Trail	N45.23089° W87.00154	21.24	
“	#8	Rowleys/Newport Trail Intersection	N45.22453° W86.99690°	21.99	
“	#9	Campsite #11	N45.21366° W86.99980°	21.77	
“	#10	Ridge Trail South Intersection	N45.21925° W86.99241°	22.29	
“	#11	Sand Cove/Duck Bay Intersection	N45.22840° W86.98519°	22.41	
“	#12	Newport Beach	N45.23754° W86.98752°	21.68	
“	#13	Lynd Point, Campsite #1	N45.24199° W86.97811°	21.74	
5/28/2014	#14	Europe Bay	N45.24732° W86.98455°	22.52	
2/10/2016	#1	See above location	See above coordinates	21.56	18.66
“	#2	“	“	21.72	19.09
“	#3	“	“	21.67	18.55
“	#4	“	“	21.71	18.74
“	#5	“	“	21.79	19.08
“	#6	“	“	21.82	19.09

Source: Michelle Hefty, Park Manager

Door Peninsula Astronomical Society Members and/or Park Staff will be monitoring dark sky readings in the future.

Newport State Park

Comparison to Bortle Dark-Sky Scale

July 31, 2016

- Class: 1-2. We consistently are in the 2 scale and on extremely clear nights get to 1. Winter cold and clear air may bump things up to a 1 on the scale more often.
- Naked Eye Limiting Magnitude. Again here we are at the upper range of 2 on the scale and with cooler nights with less humidity should be on the edge of 1 on the scale.
- Sky Description: Typically truly dark skies!
- Milky Way: Shows tremendous detail, highly structured. Due to the trees and horizon hard to tell if casting a shadow but structure is easily seen with naked eye!
- Astronomical Objects: M33 is visible as well as and some other globular clusters are visible with the naked eye.
- Zodiacal Light/Constellations: Some constellations are hard to distinguish due to the number of visible stars. This is especially true if you get out late and are not familiar with constellations. It can be overwhelming.
- Airglow and Clouds: Clouds/trees on horizon appear as dark masses or blobs silhouetted against the sky.
- Night Time Scene: Ground is dark. Trees are dark and silhouetted against the sky.

Newport State Park

Ellison Bay, WI

Naked Eye Limiting Magnitude Test

This test was performed numerous times by a group of volunteers as a citizen science project. Our average number of participants was 7, including several amateur astronomers from Door Peninsula Astronomical Society. As this is a very subjective test and everyone has different degrees of visual accuracy, our goal was to get volunteers of various ages. Our volunteers fell mostly in the “mature” category.

Waiting for good weather/humidity conditions with no moon light present proved to be a daunting task. Working around the time of the new moon, a group was out viewing the nights of September 30, October 3 & 6, November 1 (all in 2016) and February 1, 2017. Conditions varied greatly.

The areas to view were chosen from the NELM chart found on the website www.project-nightflight.net.

Results of our viewing:

DATE	STAR FIELDS COUNTED	STARS COUNTED/AVG.	LIMITING MAGNITUDE
09/30/16 (cloudy)	S	3	3.9
10/03/16	S	16	6.3
10/03/16	R	13	6.7
11/01/16	S	15	6.3
11/01/16	R	17	6.9
02/10/17	F	17	6.4
TOTAL/AVERAGE (low score not included)			6.52

Lightscape Management Plan

Newport State Park

475 County Road NP

Ellison Bay, WI 54210

- A. Newport State Park adopts the “Guidelines for Outdoor Lighting in RASC Dark-sky Preserves and IDA Dark Sky Places” as their Lightscape Management Plan. In addition to these guidelines, the correlated color temperature (CCT) of lamps installed in the park shall not exceed 4000K.

- B. Newport State Park is within the town of Liberty Grove and we meet and exceed lighting policies as set forth in the Town’s Comprehensive Plan of 2003.

NEWPORT STATE PARK LIGHTING INVENTORY

Location	Fixture	Application	Lumens	Shielded	Conform to LMP
Office	6 HPS 70W	Entrance, Security	1300	Yes	Yes
Maintenance Shop	1 LED 8W	Entrance, Security	500	Yes	Yes
	6 MV 100W	Under Eaves, Occasional Night operation	3900	No	No – see plan below
Manager Residence	1 LED 30W	Front Entrance, parking	2700	Yes	Yes
	1 6LED	Motion detector, front entrance	<300	No	Yes
	1 LED 7W	Side entrance	425	Yes	Yes
	2 LED 8W	Patio, back entrance	500	Yes	Yes

Source: Michelle Hefty, Park Manager, February 2016

NEWPORT STATE PARK LIGHTING INVENTORY PLAN

As of February 28, 2017 the 6 mercury vapor lights under the eaves of our maintenance building are the only lights that have not been replaced or retrofitted to be compliant with our Lightscape Management Plan (LMP). However, we have received and will be replacing them in March/April 2017 with LED 42W full cut off, 4080 lumens, 3000K CCT compliant lights. The circuit breaker to the lights on the maintenance building is currently disabled, when the breaker is on they are also on a timer.

Once the lights are replaced at the maintenance building 100% of the lighting in Newport State Park will be compliant with our LMP. Any further lighting that may be added/replaced shall be compliant with the LMP.

Restoration Project

Newport State Park

475 County Road NP

Ellison Bay, WI 54210

The entrance building, which is the main office and nature center, was completed in 2008. During the planning and early construction phases, park manager Michelle Hefty requested that all lighting be compliant with good lighting practices. This included shielded lighting, down lights, timers and the ability to turn off any outdoor lighting. This was approved and built to these specifications.

The restoration project that is underway involves replacing the lighting on the two remaining buildings within the park, the maintenance building and the manager residence. All fixtures have been purchased, some have already been installed. When all are installed, this makes the park 100% compliant with IDA guidelines.

Park personnel are documenting the progress, including before and after pictures, to use for public outreach and educational purposes.

Maintenance Building

<u>New Fixture</u>	<u>Application</u>	<u>Lumens</u>	<u>Shielded</u>	<u>Conform LMP</u>
1-LED 6W wall mt.	entrance/security	500	fully	yes
6-LED 42W wall mt.	occasional night use	4080	fully	yes

Manager Residence

<u>New Fixture</u>	<u>Application</u>	<u>Lumens</u>	<u>Shielded</u>	<u>Conform LMP</u>
2-LED 6W wall mt.	patio	500	fully	yes
1-LED 6W wall mt.	side entrance	400	no	yes
1-LED 30W wall mt.	front entrance	2700	fully	yes

Restoration Project

Interpretation/Education

Newport State Park

As mentioned previously, the project of bringing all light fixtures into IDA compliance is being well documented to use in our educational programs. Before and after photos of the buildings and explanations will be on a tri-board that is used at all NSP/Dark Sky Park programs, presentations and informational booths. When not being used for programs, it will be on display in our nature center.

The photos in particular have a strong visual impact in regards to the positive effects of good lighting practices and it reaches people on a personal level. Used in conjunction with the IDA video, "Losing the Dark", we have found these to be powerful teaching tools.

Newport State Park Lighting
Maintenance Building
Before Restoration



After Restoration



New Overhead Lights to Be Installed at Maintenance Building

42W, Full Cutoff, LED Color Temperature 3000K

These lights are only turned on when needed, and are not on for more than 2-4 hours at a time.



Newport State Park Lighting
Managers Residence
Retrofit/Restoration



Main Entrance
Before



Main Entrance
After Retrofit



Side Entrance

Before



Side Entrance

After



Patio
Before



Patio Lights
After



Patio Lights at Night After Replacement with Fully Shielded Lights

Newport State Park

Main Office and Public Entrance and Visitor Station

Built in 2008 with Dark Sky Compliant Lighting







IDA Dark Sky Park Education Plan

Newport State Park

475 County Road NP

Ellison Bay, WI 54210

Newport State Park is located on the shoreline of Lake Michigan, near the northern tip of Wisconsin's Door Peninsula. This being an ideal place to view dark skies, we look forward to the opportunity of promoting it and IDA.

Together with the Door County Environmental Council and Door Peninsula Astronomical Society, we stress the importance of all aspects of natural darkness. Included in this is emphasis on good lighting practices, energy efficiency and the effects of light pollution on humans and wildlife.

Newport State Park has been hosting astronomy programs since 1991. In collaboration with the University of Wisconsin-Madison, post graduate students come to the park and present programs at least three times per year. They also bring a high powered telescope to share with participants so all visitors have an opportunity to view the night skies.

Programs and brief descriptions:

- Universe in the Park – (ongoing) UW post graduate students present a variety of programs on topics of their choosing. Topics included planets and galaxies, super nova's, star formation, black holes, the Milky Way and dark skies, space probes, the sun and sun activity, moons of the planets, etc. After the presentations, a high powered telescope was set up near the beach area to view many of these points of interest. Many attendees had never seen the Milky Way. This area was chosen because of its open expanse of sky, unobstructed view of the eastern horizon over Lake Michigan and because of the dark sky.
- Was That a Wolf? – Presentation on wolves, coyotes and other canids. Discussion about differences, hunting, habitat, effects of humans including light pollution and loss of habitat.
- Wings of the Night; Bat Surveying – (ongoing through summer and fall) All about our night flying winged mammals. Discussion of White Nose Syndrome, habitat disturbance, night time skies, GPS/ANABAT surveys.
- Night Photography – Local photographer exploring the dark skies over Newport State Park. Excellent viewing of the Milky Way and the Aurora Borealis.
- Perseid Meteor Shower – Scheduled event every August in conjunction with UW post graduate students. Extremely well attended event because of level of darkness at Newport.

- “Our Night Sky” DVD series with IDA “Losing the Dark” movie presentation – Movie event showing one in a series of 12 lectures from The Great Courses, along with “Losing the Dark” as an introduction to IDA and the importance of dark skies. This is done on a regular basis throughout the year, with major emphasis during peak visitor times.
- IDA Introduction with “Losing the Dark” movie presentation – Program presented to Ellison Bay Service Club, the Lions Club and Liberty Grove Town Board, promoting pending IDA Dark Sky Park designation for Newport State Park. This program will also be presented to Northern Door Rotary Club in April.
- Viewing of the Supermoon Total Eclipse - Informal program with areas set up for telescope and binocular viewing, discussion of dark sky/IDA.
- Introduction to the Night Sky and Reading a Star Chart – Class taught by Dave Udell of the Door Peninsula Astronomical Society. IDA is included in the discussion.



Universe in the Park Astronomy Programs, Presented by University of Wisconsin Graduate Students



Introduction to the Night Sky and Reading a Star Chart, Presented by Door Peninsula
Astronomical Society



Educational Display Board with IDA Informational Brochures



Annual Perseids Meteor Shower Event, August 2015

Future Plans for
Newport State Park
475 County Road NP
Ellison Bay, WI 54210

Based on current master plan and DNR guidelines, there are no plans for future expansion or additional buildings at the park due to its wilderness designation.

Appendix

Community Letters of Support

Door Peninsula Hikers
8916 So. Highland Rd.
Fish Creek, Wi. 54212

June 20th, 2015

Newport State Park
475 County Hwy NP
Ellison Bay, Wi. 54210

Park Manager
Michelle Hefty

Hello Michelle,

The Door Peninsula Hikers have been hiking the area parks, sanctuaries and conservation lands for the last 14 years. As you are aware, the group has hiked several times at Newport, with occasional night time outings. The current membership of 53, are pleased to hear of the Park's application for a Dark Sky Designation. We know this special designation will have a positive impact on the entire peninsula. It will be a symbol for the importance of reducing, and preventing light pollution.

Please let us know how we can help with the application process, and be part of any future dark sky events.

Best Regards,

AL Wittenkeller

Hefty, Michelle M - DNR

From: negativespace <negativespace@dcwis.com>
Sent: Tuesday, June 23, 2015 8:50 AM
To: Hefty, Michelle M - DNR
Subject: Dark Skies Initiative

Michelle,

I am writing in support of the initiative to designate Newport State Park as a Dark Sky Park. Since I live near the park, I presented many astronomy programs at the park in the 1990s during the summer months. These programs were well attended by adults and children alike. One of the high points of these programs was an opportunity to see the Milky Way which many had never before seen because they lived in or near cities.

It is important that people continue to have access to places such as Newport State Park that provide opportunities for viewing the night sky and all of its wonders.

Sincerely,

Bruce W. Mielke
Assoc. Professor Emeritus
UW-Green Bay



May 17, 2015

Dear Michelle Hefty,

We are proud to support the nomination of Newport State Park as the first International Dark-Sky Park in Wisconsin.

We are fortunate to live so near this pristine park. Eager to highlight its uniqueness, we were pleased to attain the required filming permit that allowed us to film several spectacular scenic background shots for our movie, *The Emissary*. In this movie a spaceman lands in the park at night. He later extols the value of the park's beauty which can't be duplicated by the large "garden" that he has to make do with on his space station. "You can't fake the wilderness!" he explains. We would like to use our movie's fan base and its association with Newport State Park to promote community events such as star parties, teaching participants the value of dark skies.

During filming we found that Newport State Park's night sky was so dark that various deep sky objects appeared visible to the naked eye. The wildlife obviously appreciated not having their circadian rhythms disturbed by light pollution. We discovered in recording ambient sound an unusually large variety of cricket species chorusing. Although we tried to record this same multitude of cricket sounds at other locations, we failed. There must be something special about the park, we concluded. During filming we often picked up, by chance, coyotes howling and owls hooting in the park, which can be heard in our movie in the background as well.

Door County's one-of-a-kind natural setting surrounded by Lake Michigan attracts people from all over the world, and its proud residents work hard to preserve it. Certification will help reduce the future impact of light pollution so that future generations can continue to marvel at the park's star-filled skies.

Enforcing a reduction in light pollution will prevent harmful health effects on the circadian rhythms of the wildlife and humans living nearby. It will preserve a place where children and adults will be able to look up and see the Milky Way with their own eyes, for the first time. Strategies for maintaining this status will also serve as an important teaching tool and example for other communities to follow.

Tim and Holly Erskine
producers of *The Emissary* Movie

PO Box 196 • Sister Bay, WI 54234 • 920-854-2529

www.nightskyventures.com

Hefty, Michelle M - DNR

From: Carl M.Zapffe <cmzapffe@dcwis.com>
Sent: Friday, June 12, 2015 1:02 PM
To: Carl M. Zapffe
Cc: Hefty, Michelle M - DNR
Subject: Re: Dark Skies Initiative for Newport State Park

Dear Fellow Members of NDNA,

From the Spring, 2015 DCEC newsletter:

Holly Erskine has posted on her Facebook page a request that we get behind designating Newport State Park, the other treasure up here in Northern Door County, the coveted status as an

International Dark-Sky Association Dark Sky Park

We as the officers of NDNA **strongly** urge that you send an email to Michelle Hefty at Newport State Park supporting this petition!

Michelle.Hefty@wisconsin.gov

This is excerpted from the DCEC Spring 2015 newsletter (page 4), for which they have my thanks. I do not know Holly Erskine, but I am a friend of Newport State Park and a member of DCEC, so supporting this petition seems like a wonderful thing to do.

Thank you for your support!

**Carl Zapffe,
President,
Northern Door Neighbors Association**

Michelle ~

We are supportive of the park becoming an IDA dark site. This designation may encourage other parks and towns to help preserve the dark night skies in Door County.

Please encourage the DNR and all others involved to complete the application process with IDA.

Thank you for your consideration,
Lee + Susan Basten

Ms. Michelle Hefty
Park Manager
Newport State Park
475 County Hwy NP
Ellison Bay, WI 54210

Dear Michelle,

I am a person who is concerned about the serious problem of light pollution. I am glad to learn there is something that I can do about it.

I support Newport State Park's application to the International Dark Sky Association for designation as the Midwest's first Dark Sky Park.

I am philosophically in agreement with protecting the view of the night sky, and will factor in the impact of outdoor lighting for all of my future lighting decisions.

I am happy to advance awareness of this unique aspect of Newport State Park and to encourage thoughtful night lighting practices.

I fully support activities in the Park featuring its dark skies and wish you the greatest success.

Sincerely,

Marilyn Hansotia

Ellison Bay

Hefty, Michelle M - DNR

From: Daniel Edelstein <danieledelstein@att.net>
Sent: Friday, June 12, 2015 1:05 PM
To: Hefty, Michelle M - DNR
Subject: To Michelle: Dark Skies Initiative for Newport State Park

Please note that as a Northern Door Neighbors Assn. member, I support designating Newport State Park, the other treasure up here in Northern Door County, the coveted status as an **International Dark-Sky Association Dark Sky Park**.

Do you agree?

Regards,

Daniel Edelstein
Ellison Bay property owner

Hefty, Michelle M - DNR

From: Dorene Dempster <dorenedemp@gmail.com>
Sent: Monday, June 01, 2015 3:51 PM
To: Hefty, Michelle M - DNR
Subject: Dark Sky Initiative

We are writing to express our support in getting Newport State Park designated as an International Dark Sky Association Dark Sky Park. This is a timeless and beautiful attraction of Door County for residents and tourists. Helping preserve this area that is light pollution free is important as a local "attraction," as well as a learning site for student astronomers.

Dorene E. Dempster, MD
Mark F. Herrell
Mark H. Herrell and
Samantha E. Herrell

4895 Harder Hill Rd.
Sturgeon Bay, Wisconsin

Mr. Michael Hefty
Newport State Park
475 County Road NP
Ellison Bay, Wisconsin 54210

Dear Mr. Hefty

I send this letter in full support of the "Dark Skies Initiative" For Newport State Park. Let Newport State Park be the first in Wisconsin to acquire the coveted status of an International Dark-Sky Park.

Sincerely
Bill Rack
414-305-2790
BILLRACK@GMAIL.COM

Hefty, Michelle M - DNR

From: Bob Murray <rw Murray_98@yahoo.com>
Sent: Friday, June 12, 2015 1:30 PM
To: Hefty, Michelle M - DNR
Cc: cmzapffe@dcwis.com
Subject: Newport State Park

Dear Ms. Hefty . . .

We support the petition for Newport State Park to be designated as an **International Dark-Sky Association Dark Sky Park**.

Bob and Faith Murray
12118 Rustic Lane
Ellison Bay, WI 54210

Hefty, Michelle M - DNR

From: John Wilson <jfw91250@yahoo.com>
Sent: Friday, June 12, 2015 1:13 PM
To: Hefty, Michelle M - DNR
Subject: Dark skies Initiative.

I strongly support the initiative to contain nighttime light to an absolute minimum. We have a unique opportunity to view celestial objects in the door county nighttime sky - but it is in desperate need of preserving the darkness that has always been here naturally since I was a kid.

Thank you for your consideration,

John Wilson
2126 Grove Rd
Baileys harbor, WI