

Beverly Shores Indiana International Dark Sky Community



Lake Michigan, Beverly Shores Northern Town Border

International Dark Sky Association Dark Sky Community Application

Town of Beverly Shores, Indiana

A Dark Sky Community

This document, along with the Beverly Shores Comprehensive Lighting Code, forms the basis of the Beverly Shores application to the International Dark Sky Association to become a Dark Sky Community.

This application was prepared by Rosemary Bell and Alan Bell, on behalf of the Environment Committee of the Association of Beverly Shores Residents (ABSR).

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Questions about this application may be addressed to:

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ROSEMARY BELL
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Beverly Shores, IN 46301
630-269-4355

March 9, 2014

International Dark Sky Association
3225 North First Avenue
Tucson, AZ 85719

Dear IDA Board of Directors:

As an IDA member, board member of the Association of Beverly Shores Residents (ABSR), and a member of the ABSR Environment Committee, I hereby nominate the town of Beverly Shores, Indiana to become the next Dark Sky Community.

Since 2009, I have been an IDA member. At that time my husband Alan and I resumed the work on lighting issues previously begun by the environment committee in 2006. Our journey began in the fall 2009 when we initiated an investigation of the possibility of refitting all town cobra head streetlights with new full cutoff luminaires. We contacted the local power company NIPSCO, and were directed to chief engineer Tom Miltenberger. In the spring of 2010 Tom graciously offered to install a new sample full cutoff fixture at a location of our choice at no charge. This was the beginning of the Environment Committee Dark Sky Initiative program. This initiative provided, and continues to provide information and education to town government and residents on the security, health and environmental benefits of reduction of light pollution. It also supports increasing access to the beautiful night sky along the south shore of Lake Michigan.

On April 24, 2012 the street light project was completed with the installation of 48 new downward illuminating fixtures. The reduction from the original 61 billed locations has saved \$1,560/year on the town's electric bill in addition to the removal of unnecessary lighting locations. Town residents donated \$7,922.50 of the total cost of \$9,360 for the project. The balance was paid for by the ABSR board. This is a powerful example of the commitment to Dark Skies by Beverly Shores town residents.

I believe the Town of Beverly Shores is qualified to receive the designation of International Dark Sky Association, Dark Sky Community. Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Rosemary Bell".

Rosemary Bell

History

Beverly Shores owes its existence to land speculation activities during the 1920's. In May 1927, Chicago real estate developer Frederick H. Bartlett purchased 3,000 acres of lake front lands from the estates of local owners. The development, which included five miles of shoreline on Lake Michigan, stretched from the western edge of Michigan City to the eastern boundaries of the Indiana Dunes State Park. Bartlett conceived of his new holdings as an urban resort community and during 1927 began selling property in the eastern half of his development extending from the LaPorte-Porter county line westward to Lake Shore County Road. Most residents and prospective buyers rode the Chicago, South Shore and South Bend interurban to the Lakeshore train station at Central Avenue, now destroyed.

In the summer of 1929, the western portion of the development, extending from Lake Shore County Road to State Park Road, was opened for sales. A second train station was constructed on Broadway, north of U.S. Highway 12. Thousands of Chicagoans rode special excursion trains to Beverly Shores, where they were met by salesmen in private automobiles and given a tour of the community, served refreshments and encouraged to purchase one or more of the fifty-foot wide lots.

In 1933 Frederick H. Bartlett sold all of his northwest Indiana properties to his younger brother, Robert Bartlett. Robert touted the community and its attractions with the promotional flair of a born salesman. He constructed a school, a seasonal hotel with botanic gardens, a championship 18 hole golf course with clubhouse, a beach front casino, a riding academy and a theater. In 1935, Robert Bartlett purchased 16 structures from the 1933-34 "A Century of Progress", Chicago World's Fair and moved them to Beverly Shores. Four of the buildings from the Homes and Industrial Arts exhibit of the fair were barged across Lake Michigan and relocated to their permanent site on the lakefront. These houses include the House of Tomorrow, the Florida House, the Rostone House and the Armco-Ferro house. The Cypress Log Cabin was dismantled at the fair site and trucked to Beverly Shores. All five of these structures are located within the Indiana Dunes National Lakeshore. Currently, the Indiana Historic Landmarks Foundation leases five of the houses and has recruited individuals to renovate the structures. The only other remaining World's Fair structure, the Old North Church replica, is a privately owned residence. The other ten structures are no longer standing.

The totally renovated Beverly Shores train station, on the National Register of Historic Places, and the four miles of Lake Michigan beaches form the principal tourist attractions of the Town.

By 1946, the Robert Bartlett Realty Company had sold most of its property and moved on to concentrate on developments in suburban Chicago. It deeded the streets and six beach sections to the property owners, it also sold them the Administration Building and the hotel indoor parking garage. Complying with procedures governed by Indiana State statutes, a special census was conducted; the town divided into wards and an election for or against incorporation was held in December 1946. The community was incorporated as a State of Indiana town on January 1, 1947.

Though thousands bought lots, few built homes. The Depression and World War II impeded the community's growth. The lack of municipal water and sewer system also contributed to the Town's slow development. In the nineteen-fifties and sixties, a slow pattern of building began with about half of the residents living in Town on a full-time basis and the remainder owning summer homes.

In the mid-nineteen-sixties, a movement to include Beverly Shores in the proposed Indiana Dunes National Lakeshore began. When Congress authorized the National Lakeshore in 1966, two-thirds of the town's acreage became part of the park. In 1971, another effort was started to include the remainder of the Town in the Lakeshore. In 1980, after nine years of Congressional consideration, a parcel of land bordering the Town to the south became part of the National Lakeshore, but the center of the community, the Island, and land bordering U.S. 12, the Strip, were excluded. The uncertainty of inclusion or exclusion of the Island and Strip affected building in these areas during the 1970's, and early 1980's. When the public became aware that the Island was not going to be included in the National Lakeshore Acquisition Plan, the Island experienced modest growth in the 1990's.

Demographics and features.

As of the census of 2010, there were 613 people, 312 households, and 193 families residing in the town. The population density was 171.2 inhabitants

per square mile. There were 527 housing units at an average density of 147.2 per square mile. The racial makeup of the town was 96.6% White, 1.3% African American, 0.3% Asian, 0.8% from other races, and 1.0% from two or more races. Hispanic or Latino of any race were 2.8% of the population. The median age in the town was 59 years. 9.8% of residents were under the age of 18; 3.8% were between the ages of 18 and 24; 10.4% were from 25 to 44; 41.9% were from 45 to 64; and 34.1% were 65 years of age or older. The gender makeup of the town was 50.2% male and 49.8% female.

The town is made up of two distinct districts. The commercial district includes the strip of properties on the north and south sides of US Route 12, from County Road 500N. on the east, to Derby St. on the west. (See Map page 6.) The residential district “The Island” boundaries can also be seen on the map on page 6. There are no schools, or commercial properties in the residential district. The town park, Lituanica Park, is located on Ripplewater Drive, with a children’s playground, tennis courts, and Frisbee golf course.

Indiana Dunes National Lakeshore East Area showing the Town of Beverly Shores.

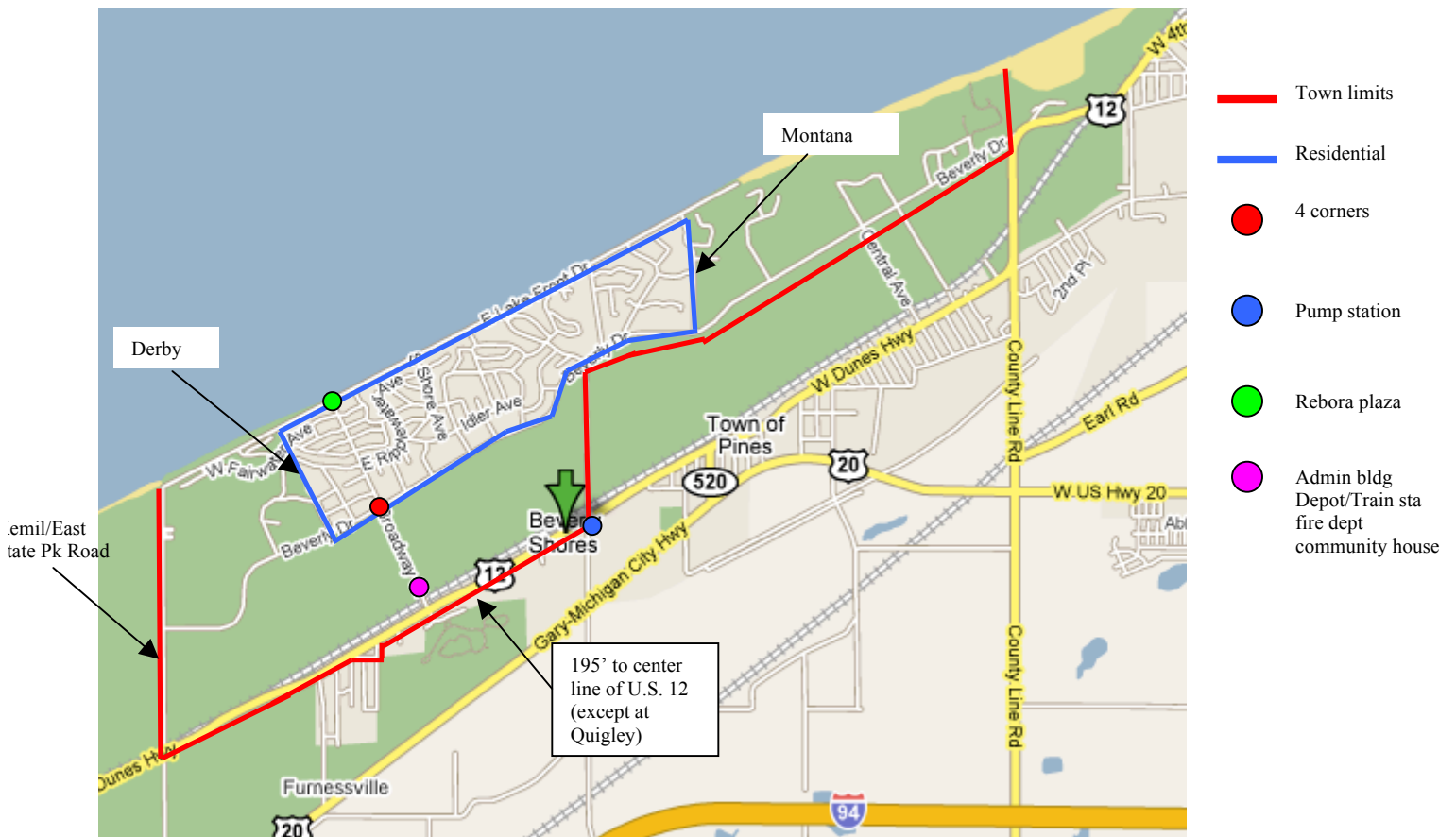


Satellite Image, Town of Beverly Shores.



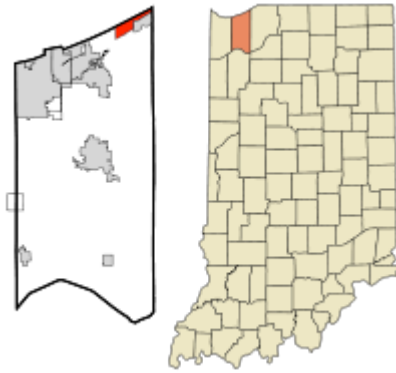
Beverly Shores Map, Town Features and Boundaries.

All green areas including those within the “Town Limits” boundary are property of the National Park Service and part of the Indiana Dunes National Lakeshore. These areas are not subject to Beverly Shores Town Ordinances.





Town of Beverly Shores, Indiana

[Town](#)



Location in the state of [Indiana](#)

Coordinates:  [41°41'3"N 86°59'8"W](#)Coordinates:  [41°41'3"N 86°59'8"W](#)

[Country](#) [United States](#)

[State](#) [Indiana](#)

[County](#) [Porter](#)

[Township](#) [Pine](#)

[Area](#)^[1]

• **Total** 5.83 sq mi (15.10 km²)

• **Land** 3.58 sq mi (9.27 km²)

• **Water** 2.25 sq mi (5.83 km²)

Elevation 620 ft (189 m)

Population (2010)^[2]

• **Total** 613

• **Estimate** (2012^[3]) 617

• **Density** 171.2/sq mi (66.1/km²)

Time zone [CST \(UTC-6\)](#)

• **Summer (DST)** [CDT \(UTC-5\)](#)

ZIP code 46301

Area code(s) [219](#)

FIPS code 18-05158^[4]

GNIS feature ID 0430998^[5]

Website <http://www.beverlyshoresindiana.org/>

Beverly Shores: A Unique Dunes Ecosystem

The Town of Beverly Shores is surrounded on the east, west, and south by the Department of the Interior, National Park Service, Indiana Dunes National Lakeshore. The northern town boundary is Lake Michigan. All beach areas to the north of Lake Front Dr. are the property of the National Park Service. This is why residents often refer to the town as “The Island.” The Island of Beverly Shores is in the middle of many acres of completely dark territory.

Beverly Shores also contains tracts of land owned and managed by the Shirley Heinze Land Trust. The Beverly Shores Heinze Project Area comprises hundreds of mostly noncontiguous lots in the Town of Beverly Shores and Pine Township, totaling more than 70 acres. The lots were acquired over the past quarter-century via donation, purchase, and tax sale. These lots form part of the National Lakeshore Great Marsh, the vast wetland that once paralleled the shoreline of Lake Michigan from Gary to Michigan City. Also in Beverly Shores are two small rare-plant refuges, McAllister Prairie and Hiawatha Meadow.



The Indiana Dunes area features a wide variety of habitats, including beach, sand dunes, black oak forest and savanna, wooded wetlands, open prairie, and button-bush swamps. Together, these areas contain some of the most diverse flora and fauna in the Midwest. Botanists from across the country enjoy studying the unusual collections of plant life. In fact, it was here, that Henry Cowles, known to many as the “father of ecology” did his landmark studies of plant succession in the early 1900s. As a result of his work, Indiana Dunes became known as “the birthplace of ecology.”

Biological diversity was a primary reason for the creation of Indiana Dunes National Lakeshore. Because the national lakeshore is located in several ecological transition zones, the diversity is many times greater than most areas its size. Remnant species from past climatic changes have managed to survive in sheltered habitats. The moderating effect of Lake Michigan, along with the great variety of habitats within a small area, explain much of the plant and animal diversity. Forty-six species of mammals, 18 species of amphibians, 23 species of reptiles, 71 species of fish, 60 species of butterflies, and 60 species of dragonflies and damselflies can be found here. The largest herbivore is the white-tailed deer while the largest predator is the coyote. Three-hundred-and-fifty-two species of birds have been identified, with 113 of these being regular nesters. The national lakeshore also provides habitat for a great blue heron rookery and the federally endangered Karner blue butterfly.



The national lakeshore is an important feeding and resting area for migrating birds. Lake Michigan influences the migration patterns of bird species. During the fall migration, southbound birds follow the north-south shoreline and are funneled into Indiana's dunes. Also, the expanse of open water and miles of shoreline can attract large numbers of wintering birds. Indiana Dunes National Lakeshore provides an excellent opportunity for birders to see a variety of bird species. Birders can watch birds along the shoreline with a spotting scope, stand on the foredunes observing the hawks during migration, or look for wetland birds in remnant sections of the Great Marsh. Whether you have beginner or advanced identification skills, the national lakeshore is a great place for birders. To help identify and find the birds of Indiana's dunes we have a "Seasonal Bird Checklist"

(<http://www.nps.gov/indu/naturescience/upload/Birds%20checklist.pdf>).

The national lakeshore conducts annual monitoring of birds at several different park locations. The monitoring is focused on tracking population trends of breeding birds. Monitoring programs provide valuable data on the

status of birds in the park and also contribute to national efforts to track bird populations. The “North American Breeding Bird Survey” (<http://www.nps.gov/indu/naturescience/upload/NA%20Breeding%20Bird%20Survey%20data%20with%20intro%2093-05.pdf>) for Indiana Dunes National Lakeshore is one example of such a monitoring program.

The national lakeshore provides habitat for approximately 1,130 native vascular plants, including the federally threatened Pitcher’s thistle. The lakeshore is home to populations of 30% of Indiana’s listed rare, threatened, endangered, and special concern plant species. Shaped by glacial events and changing climates, the dunes landscape contains disjunct flora representative of eastern deciduous forests, boreal forest remnants, and species with Atlantic coast affinities. In addition, the national lakeshore is part of the upper- and eastern-most limits of the tallgrass prairie peninsula and supports high quality remnants of this ever-diminishing vegetation type. The presence of many unique dune and wetland plant community types has led to a long history of botanical exploration and research. Lands within the national lakeshore have been called the birthplace of American ecology as a result of early work on plant succession performed by Dr. Henry Cowles over 100 years ago. Investigations related to several areas of plant ecology continue today and are viewed as essential to preserving the dynamic ecosystems of the Indiana Dunes.

Timeline for ABSR Environment Committee Dark Skies Project, including educational presentations.

2009 – In support of the Association of Beverly Shores Residents (ABSR) Environment Committee streetlight conversion project, town resident Joan Bliss provided her lighting project files of work done between 2006-2008 to Rosemary and Alan Bell. The original town lighting committee included Mort Arnsdorf, Joan Bliss, Rick Rikoski, and Rich Manalis. The committee was unable to accomplish their goal of complete streetlight amnesty for town, at which point their work ended.

2009 - Rosemary and Alan Bell joined the International Dark Sky Association. They contacted Tom Miltenberger, engineering supervisor at NIPSCO regarding possible refitting of 61 existing High Pressure Sodium Vapor COBRA street light fixtures with downward illuminating fixtures. Subsequently, Alan Bell determined that there were 7 streetlights that the town was paying for at \$120/year that were either not functioning or no longer existed. He contacted the Town Council to advise them of this situation. Subsequently Grant Ireland took the initiative to shut down four of these that were on National Park Service leaseback land.

Spring 2010 – Tom Miltenberger offered to install a new sample fixture at a location of our choice for no charge. The location chosen was the pole at Reborn Plaza, and was installed by NIPSCO. At the same time we were given a price of \$125 per unit for equipment and installation.

Summer 2010 – Continuing education. Initial articles were written for the town SandTracks newspaper on the many advantages of improved town lighting. Additional articles were printed in subsequent SandTracks. At the Environment Committee Summerfest booth, information handouts and other educational materials were made available to town residents. These educational activities continue to the present.

Fall 2010 – Rosemary and Alan Bell provided a demonstration of full cutoff lighting at a meeting of the Town Council. At which time Councilman Rikoski moved to approve and fund replacement of all town streetlights with new fixtures. Council approved the project but it was decided that the town would be unable to fund the project. Another demonstration was provided for a meeting of the ABSR Sometimers group, an organization of town part-time residents. The Sometimers unanimously voiced their approval of the project and offered their financial support.

February 2011 – Rosemary Bell contacted Indiana Dunes National Lakeshore director Garry Traynham investigating the sources of funding for improved fixtures that were installed in the national park. Traynham advised that they were paid for with federal stimulus money and that those funds were already exhausted.

July 2011 to present – Rosemary Bell has contacted the Indiana Department of Corrections, Michigan City State Prison, to discuss light pollution from the many floodlight fixtures at the prison. To date, officials at the prison have advised they do not have funds available for shielding of prison lighting.

October 2011 – NIPSCO provided a final cost per fixture from Miltenberger of \$195/unit. Between Spring 2010 and Fall 2011, the cost increased three times due to delays in the process of determining the number of street light fixtures that would be retained and refitted. During the summer of 2011 councilman Rikoski and Marshall Landis attempted to eliminate all but 8 of the streetlights in town. Over the ensuing months, it became clear that many residents were concerned that eliminating street lighting would affect their safety. Residents appeared at town council meetings or wrote to the council protesting the elimination of particular light locations. The town council subsequently voted to retain 48 streetlight locations and approved refitting them with full cutoff fixtures, if the funds were made available from other sources. There was a further delay when the Environment Committee researched the possibility of installation of LED full cutoff fixtures. It was determined that this would be too costly and not environmentally friendly to plants, animals and humans per information from the International Dark Sky Association.

Spring 2012 – The ABSR Environment Committee approached the ABSR board requesting a maximum of \$10,000 to complete the streetlight installation project. ABSR agreed to provide the total upfront funds with half to be repaid by resident donations solicited by the Environment Committee.

April 24, 2012 – Project completed with the installation of 48 downward illuminated fixtures. The reduction from the original 61 billed location has saved the town \$1,560/year on the town electric bill.

May 1, 2012 – The ABSR board closed donations for the project. Sixty town residents donated a total of \$7922.50 of the total cost of \$9360, far exceeding ABSR expectations.

June 2012 – Environment Committee member Bill Carstedt wrote to the Michigan City Water Department, requesting existing fixtures on the town pumping station be replaced with downward shielded fixtures. A letter from Town attorney Jeff Katz assisted in the communications with the water department.

October 2012 – Environment Committee members Marcia Metzcus and Toots Foy completed a “drive around” survey of unshielded residential lighting.

February 2013 – Environment Committee member Toots Foy wrote an article for the Sandtracks, showing residents how to effectively shield a garage spotlight using inexpensive materials purchased at Lowes home improvement center.

November 7, 2013 – Northern Indiana Regional Planning Commission (NIRPC) presentation by Rosemary and Alan Bell utilizing IDA “Protecting The Night Environment.” Power Point presentation and full cutoff fixture demonstration.

December 9, 2013 – Beverly Shores Planning Commission Board Meeting. In support of a new commercial district lighting code prepared by town attorney Jeffrey Katz, Rosemary and Alan Bell, and ABSR board member Marcia Metzcus presented IDA’s “Protecting The Night Environment.” Power Point presentation and full cutoff fixture demonstration. Code was unanimously approved, with 50,000 lumen/acre revision.

December 16, 2013 – Beverly Shores Town Council approved revised commercial district lighting code.

December 19, 2013 – John Barentine confirms approval of local lighting code language for both the commercial and residential town districts.

March 2014 – Rosemary and Alan Bell submitted formal application to the International Dark Sky Association for Beverly Shores, Indiana Dark Sky Community Designation.

Resident Donations Street Light Retrofit ABSR Sand Tracks June 2012

Dark Skies Finale

By Rosemary Gemperle

The Dark Skies Fundraising Campaign successfully ended on May 5, 2012. To date, community donations have provided close to \$8,000 of the \$9,350 originally paid to NIPSCO by ABSR. Thanks again to everyone who so generously participated in this project which now provides both environmental and safety improvements to Beverly Shores, and will for years to come.

**Margery al-Chalabi
Hans Lagoni
Suhail al-Chalabi
Paul and Mia Levy
Bob and Arlene Beglin
MJ Loftus
Alan and Rosemary Bell
Nicholas Loizzi and Shauna Reitz
Rael and Sarah Betensley
Greg Lyman
John Blackburn and Bill Gilmer
Mary and Howard Marvel
John and Joan Blew
Rick Malkowski and Hilary Pople
Robert Bonace
Pam Mayers
Aldona Brazis
Morris McKnight
Grace Budrys and Dan Lortie
Marcia and Dick Metzcus
Bill and Mary Carstedt
Bob Neilsen
Dan Casey
Nancy Nichols
Vincent Connelly and Florence
Larsen
Anna Palchik
Rosemary Crowley
Matt Piers
Dan Dresner
Dominic and Beth Polizzotto**

**Brian and Audra Ebling
Rick Rikoski
Joan and Ron Engel
Guy Rowley
Don and Mary Jane Eisenhower
Jean Rudd and Lionel Bolin
Toots and Bill Foy
Lisa Sarsany
Troy Ford
William and Maureen Sammon
Norman Glassberg
Yolanda and Richard Saul
Constance and Arnold Goldberg
Bill and Lorene Schaudt
Timothy Griffin and Susan Vance
Jeff Slutsky
Erv and Marilyn Hawrylewicz
Meredith and Mark Weber
David Healy
Henry Streiffer and Mary White
Larry Jensen and Rosemary
Gemperle
Thomas Thorne-Thomsen
Jason Kasal
Rick and Barbara Valicenti
Ed Kleese
Tom and Barbara Wehner
Mark Klein and Mary Wagner
Susan and Paul Zucker
Donna Kuschel**

Successful light pollution reduction projects:

Municipal/Utility projects:

April 24, 2012, 13 of the original 61 town streetlights were retired.
Remaining 48 Cobra head streetlights replaced with downward illuminating full cutoff high-pressure sodium vapor luminaries.

Before:



After:



Michigan City Department of Water Works, Pumping Station Project:

June 2012 – Water Department Pumping Station, unshielded security lighting replaced with downward illuminating fixtures in response to a requests from William Carstedt of the ABSR Environment Committee and Town Attorney Jeffrey Katz.



William D. Carstedt

P.O. Box 586
Beverly Shores, IN 46301-0586

Tel: 219-872-3301
Email: carstedt@csinet.net

July 30, 2012

Randall E. Russell, Superintendent
Department of Water Works
532 Franklin Square
Michigan City, Indiana 46360

Re: Beverly Shores Water Station

Dear Mr. Russell:

I am writing on behalf of the Environmental Committee of the Association of Beverly Shores Residents (ABSR) regarding your Department's water station at the northwest corner of Route US 12 and Lake Shore County Road (500 E), at the southeast entrance to Beverly Shores.

The Environmental Committee recently succeeded in its Dark Skies Campaign to convert all of the town's streetlights to downward-shielded lights, paid for with voluntary contributions from a large number of individual town residents. The Town Council and NIPSCO implemented the change which provides environmental and safety improvements within Beverly Shores. We are continuing to pursue an educational effort to achieve safer, environmentally sound lighting throughout the community.

We would appreciate your cooperation to improve the lighting on the exterior of your Beverly Shores water station. The present fixtures do not shield the light, but rather present a glaring effect which is environmentally harmful, unsightly, and unsafe. The safety of your facility is a prime concern. That safety can be enhanced by lighting shielded to reduce the effects of glare, and especially by motion-activated lighting which calls attention to any unwanted activity at the site.

I am enclosing copies of some materials (with highlighting) which address security lighting effectiveness:

- Excerpt from an article in the 8/20/2007 issue of The New Yorker magazine;
- International Dark-Sky Association material addressing security lighting and safety; and
- Excerpts from an American Water Works Association report, & WAS Design Guidelines.

Please feel free to contact me, by e-mail or telephone. I would be pleased to meet with you, perhaps next Monday, or to have you attend an ABSR Environmental Committee meeting, next scheduled for August 11th at 8:30 am. We will appreciate your consideration.

Respectfully,

William D. Carstedt

November 16, 2012

Beverly Shores Town Council
Beverly Shores, Indiana 46301

Re: Water Station Lighting

To the Town Council:

The ABSR Environmental Committee, in further pursuit of its and the Town's Dark Skies initiative, seeks to improve the lighting situation at the Beverly Shores water station at the corner of US 12 and Lake Shore County Road.

The Committee had been informed that the Michigan City Department of Water Works in the past had resisted removal or shielding of its glaring lights because of some governmental security requirement, supposedly tied to anti-terrorism legislation. We have been unable to find any such requirement, and in fact have found American Water Works Association, and other information, in support of the use of motion detectors and/or shielded lights.

We have written to the Superintendent of the Department of Water Works providing some of that information, and requesting cooperation in improving the site by downward shielded lights and use of motion detectors. Significantly, an early response from the Department did not raise any governmental requirement for the existing lights, but deferred action "to when funds and time permit". We replied with a request for his further consideration soon. We have had no further response. A copy of all that correspondence, with enclosures, is enclosed for your reference.

The Committee believes that an official request by the Town Council for prompt action by the Department of Water Works may have better results. We request that the Council request the Michigan City Department of Water Works act soon to place downward shields on the water station lights, and to install motion detectors to light them only when motion is detected at or within the fenced perimeter.

Respectfully submitted,

William D. Carstedt,
On behalf of the ABSR Environmental Committee

Tel: 219-872-3301
Email: carstedt@csinet.net

Randall E. Russell, Superintendent
Department of Water Works
532 Franklin Square
Michigan City, Indiana 46360

Re: Beverly Shores Water Station

Dear Mr. Russell:

Your e-mail of February 15th to Laura Sullivan, Clerk/Treasurer of Beverly Shores (copy enclosed), has been forwarded to our committee, the Environmental Committee of the Association of Beverly Shores Residents (ABSR). We are the ones who first wrote to you in July, 2012 requesting your cooperation in improving the lighting on the exterior of your Beverly Shores water station.

The conversion to downward-shielded lights within the Town was not done to provide expense savings, it was implemented to provide environmental and safety improvements. The substantial expense of the conversion was paid for by voluntary contributions from a large number of individual town residents through the efforts of our committee.

We are pleased that you indicate a willingness to consider the changes we have requested. We believe the changes will improve the security of your station, as well as eliminate the unsightly and unsafe glare at an entrance to our town. We are enclosing a copy of our original letter with enclosures which address the safety issues.

Although we believe the cost of the change is fairly one to be borne by your Department which will receive its cost and security benefits, if you can provide the labor we feel confident we could provide the cost of the hardware through voluntary contributions. A cost estimate of motion detectors and down-ward shielded lights is enclosed.

We will appreciate your consideration.

Respectfully,

The ABSR Environmental Committee

Residential lighting improvements:



DARK SKIES INITIATIVE

BY TOOTS FOY ON BEHALF OF THE ARBSR ENVIRONMENT COMMITTEE

Congratulations to Beverly Shores for downward shielding all street lights on public lands!



Now, let's turn our attention to reducing light and glare on private property. The following pictures are of one resident's attempt to downward shield spot lights on a garage. Materials used were venting ducts purchased at Loews @\$5.50 a piece and black spray paint (to reduce glare).

The vents were simply put over the floods by unscrewing the bulb, placing the vent in place, putting the bulb back in – so that the light simply rests on the vent, and then rescrewing the light.

What other creative ways can you come up with to help darken the skies for night viewing of the stars? Let someone from the Environment committee know of your idea and win a prize.



Town Train Station, Depot Art Gallery and Town Museum full cutoff lighting:



Letters of Endorsement

Organizations/Officials

1. Peter J. Visclosky, US House of Representatives, Indiana 1st Congressional District.
2. United States Department of the Interior, National Park Service, Indiana Dunes National Lakeshore - Acting Director, Garry Traynham.
3. Northern Indiana Regional Planning Commission (NIRPC) - Kathy Luther, Director Environmental Programs.
4. Town Council, Beverly Shores, Indiana - Geof Benson, President.
5. Coffee Creek Watershed Conservancy - Rafi Wilkinson, Stewardship Manager.
6. Town of Beverly Shores Building Commissioner - Hans Lagoni.
7. Beverly Shores Environmental Restoration Group – Gary Garrett, President.
8. Association of Beverly Shores Residents - William Gilmer, President.
9. One Star at a Time – Audrey Fischer, One Star and Global Star Park Network founder and co-chair.

Beverly Shores Residents

1. Bill and Mary Carstedt
2. Troy Ford
3. Rosemary Gemperle, Larry Jensen
4. Mary and Howard Marvel
5. Marsha and Richard Metzcus
6. Donna Norkus
7. Rosamond Potter
8. Ron Reason
9. Guy and Anat Rowley
10. William Taylor
11. Mary Ann Zolis
12. Susie and Walter Jacobson, CBS WBBM-TV Chicago News Anchor

Organizations/Official Letters of Endorsement:

PETER J. VISCLOSKY
101 DEMING BLVD.
COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE
RAMMING MONITOR, DEFENSE
PACIFIC AND WATER DEVELOPMENT
CONGRESSIONAL STEEL CAUCUS
STEEL CHAIRMAN
U.S. HOUSE LAW ENFORCEMENT
CAUCUS

Congress of the United States
House of Representatives
Washington, DC 20515-1401

3250 BAYVIEW BUILDING
WASHINGTON, DC 20015-1401
1000-225-3481

7095 BROADWAY, SUITE A
MERRILLVILLE, IN 46410
1000-225-3481

Call For Free
1-800-425-1844
11-030-425-1844

INTERNET:
http://visclosky.house.gov

March 4, 2014

Dr. John Barentine
Program Manager
International Dark-Sky Association
3223 North First Avenue
Tucson, Arizona 85719

Dear Dr. Barentine:

I write in support of a proposal submitted to the International Dark-Sky Association for its consideration designating the town of Beverly Shores, Indiana as a Dark Sky Community.

Due to the dedicated efforts extended by Mr. and Mrs. Alan and Rosemary Bell, and in conjunction with the Association of Beverly Shores Residents Environment Committee, Beverly Shores has transformed itself into a community that values the effect that a clear night's sky has upon its residents as well as upon the overall environment. Beverly Shores is located along the shoreline of Lake Michigan and is surrounded by the Indiana Dunes National Lakeshore, which boasts of sand dunes and is home to ecologically rare species.

Designating Beverly Shores as a Dark Sky Community will enhance the quality of life within the town. Further, the town may serve as an example to other communities within Northwest Indiana who may choose to implement similar measures in order to extend such benefits to their residents.

I appreciate your consideration of this proposal and know you will give it the serious attention it deserves. If you are in need of any additional information, please feel free to contact me or Elizabeth Johnson, Director of Projects and Planning, in my Merrillville District Office at 219-795-1844.

Sincerely,



Peter J. Visclosky
Member of Congress

PIV:ej

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United States Department of the Interior

OFFICIAL ELECTRONIC CORRESPONDENCE

No Hard Copy to Follow NATIONAL PARK SERVICE

Indiana Dunes National Lakeshore
1100 N. Mineral Springs Road
Porter, Indiana 46304-1299

1

February 14, 2014

A3815(INDU)

Association of Beverly Shores Residents (ABSR)
c/o Rosemary and Alan Bell
roandalan@yahoo.com

Dear ABSR Board:

The National Park Service (NPS) fully supports efforts of the Town of Beverly Shores (Town) to comply with international guidelines for the Dark Sky Initiative. The NPS has included the Dark Sky Initiative in the agency's policy guide Call To Action (Action Item 27 Starry, Starry Night) stressing the importance of natural darkness.

Indiana Dunes National Lakeshore which surrounds the Town and is a unit of the NPS interprets the night sky as a resource and strives to utilize technology to enhance opportunities to reduce light pollution to the greatest extent possible.

The Town is situated on the southern tip of Lake Michigan and an important migratory bird flyway. Improving the natural darkness will benefit migratory birds and provide a less impactful flight corridor for seasonal migrations.

The NPS applauds the progressive steps that the Town is taking to mitigate the effects of light pollution in the areas and pledge our support to assist in making this a successful venture.

Sincerely,

Garry M. Traynham
Acting Superintendent



**NORTHWESTERN INDIANA
REGIONAL PLANNING COMMISSION**

Together We Make The Difference

6100 Southport Road Portage, Indiana 46368

Fax Messages

(219) 763-6080
(219) 762-1653

On the Internet
E-mail Messages

www.nirpc.org
nirpc@nirpc.org

January 13, 2014

Association of Beverly Shores Residents
c/o Rosemary Bell roandalan@yahoo.com
Beverly Shores, IN 46301

Dear ABSR Board,

The Northwestern Indiana Regional Planning Commission (NIRPC) Environmental Management and Policy Committee has been provided valuable information as to the importance of Dark Skies through the efforts of the ABSR Environment Committee. Members of the group presented information about their efforts at our November meeting.

In our 2040 Comprehensive Regional Plan for Northwest Indiana maintaining and enhancing nationally significant biodiversity of our region is a major priority. The primary strategy for accomplishing this goal is through implementation of green infrastructure, habitat restoration, and connecting corridors. In addition energy conservation is an important part of our approach to ongoing air quality improvements.

Through the presentation from ABSR we have learned that the Dark Sky initiative can be an important tool supporting both of these objectives. Regional experience with this tool will be greatly enhanced by the Dark Sky initiative in Beverly Shores.

Please count our organization as one that is invested in the continued effort to preserve the night sky. We enthusiastically support the efforts of the town of Beverly Shores, IN to become the next Dark Sky Community.

Sincerely,

Kathy Luther
Director of Environmental Programs

TOWN OF BEVERLY SHORES

PO BOX 38, BEVERLY SHORES, IN 46301 (219) 728-6531. FAX (219) 728-6532

February 7, 2014

Association of Beverly Shores Residents
c/o Rosemary Bell
roandalan@yahoo.com

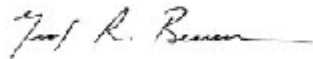
Dear ABSR Board,

The ABSR Environment Committee provided information, to the Beverly Shores Town Council regarding the value of the Dark Sky Initiative to Beverly Shores. As a result of the ABSR's efforts it is the Council's position that our personal health, safety, the quality of flora and fauna in our region, and an invaluable right to view the night sky will be enhanced by the Dark Sky Initiative in Beverly Shores.

The Beverly Shores Town Council has recently amended its Zoning Ordinance with respect to the General Commercial District, which conforms to the principles and guidelines of the Dark Sky Initiative.

The Beverly Shores Town Council enthusiastically supports all efforts contributing to making Beverly Shores, IN the next Dark Sky Community.

On behalf of the Beverly Shores Town Council Members,



Geof Benson, President

Coffee Creek Watershed Conservancy



PO Box 802 • Chesterton, IN 46304 • (773) 573-6413
rafi@coffeecreekwc.org • www.coffeecreekwc.org

January 14, 2014

Association of Beverly Shores Residents (ABSR)
c/o Rosemary Bell
Beverly Shores, IN 46301

Dear ABSR Board,

Coffee Creek Watershed Conservancy has been provided valuable information as to the importance of Dark Skies through the efforts of the ABSR Environment Committee. We have become aware that our personal health, safety, the quality of flora and fauna in our region, and our invaluable right to view the night sky will be greatly enhanced by the Dark Sky initiative in Beverly Shores. In fact, as a result of ABSR efforts, we are now researching to see if our conservancy can become a Dark Sky Places park.

Please count our organization as one that is invested in the continued effort to preserve the night sky. We enthusiastically support the efforts of the town of Beverly Shores, IN to become the next Dark Sky Community.

Sincerely,

A handwritten signature in black ink, appearing to read "Rafi Wilkinson", is positioned below the "Sincerely," text.

Rafi Wilkinson
Stewardship Manager

Association of Beverly Shores Residents
c/o Rosemary Bell roandalan@yahoo.com
Beverly Shores, IN

Dear ABSR Board:

As the Building Commissioner of Beverly Shores, IN, I was made aware of the importance of Dark Skies through the efforts of the ABSR Environment Committee. I feel that our personal health, the quality of flora and fauna in our region, and our invaluable right to view the night sky will be greatly enhanced by the Dark Sky initiative in Beverly Shores.

Please include me as one that is invested in the continued effort to preserve the night sky. I fully support the efforts of the town of Beverly Shores, IN to become the next Dark Sky Community.

Sincerely,

Hans P. Lagoni
Building Commissioner
Beverly Shores, IN

January 12, 2014

Association of Beverly Shores Residents
c/o Rosemary Bell roandalan@yahoo.com
Beverly Shores, IN

Dear ABSR Board,

Our organization -- the Environmental Restoration Group (of Beverly Shores) -- has been provided valuable information as to the importance of Dark Skies through the efforts of the ABSR Environment Committee. We have become aware that our personal health, safety, the quality of flora and fauna in our region, and our invaluable right to view the night sky will be greatly enhanced by the Dark Sky initiative in Beverly Shores.

Please count our organization -- which has over 100 members -- as one that is invested in the continued effort to preserve the night sky. We enthusiastically support the efforts of the town of Beverly Shores, IN to become the next Dark Sky Community.

Sincerely,

Gary Garrett
President



March 1, 2014

International Dark Sky Association
3223 N. First Avenue
Lucas, Arizona 85719

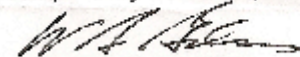
Dear Selection Committee:

I am writing this letter on behalf of the entire Association of Beverly Shores Residents (ABSR) to request your association's designation of the Town of Beverly Shores, Indiana as a Dark Sky Community. The concerted efforts of our town government, community association, businesses and individual residents to reduce all sources of light pollution in our town have been an exemplary model of a community working together towards a primary goal.

The residents of Beverly Shores are proud of our accomplishment in returning dark skies to Beverly Shores. As such, the community would be honored to join the ranks of other designated Dark Sky communities, and looks forward to serving as a model to other communities striving to reclaim and preserve the dark skies.

Please take this letter as an endorsement of our community's commitment to this ongoing mission.

Respectfully submitted,


William S. Gilmer, M.D.
ABSR President

P.O. Box 458 Beverly Shores, IN 46301-0458

April 2, 2014

Dear Directors on the Board, and Officers of the International Dark Sky Association,

As a past IDA board member and one who values the importance of IDA Dark Sky designations, I am delighted to offer this letter of endorsement and recommendation for the IDA Dark Sky Community designation for the beautiful nature-filled community of Beverly Shores, Indiana, significantly positioned nearby the Indiana Dunes National Lakeshore national park of the Great Lake Michigan. As you know, an important step to protect and restore the starry skies over our treasured state and national parks is the commitment of the people living in the neighboring communities. You couldn't ask for a better neighbor than a certified IDA Dark Sky Community!

I commend the relentless, consistent efforts over many years to reduce light pollution --initiated by Rosemary and Alan Bell, that grew into thoughtful discussions and official dedicated meetings amongst residents and organizations within the Beverly Shores community, town council members and attorneys. This hard work will pay off in starlight for current residents and visitors as well as future generations.

Notably, Beverly Shores has on the books, a lighting ordinance addressing glare dated 1983, 6 years before the establishment of IDA:

§ 155.201 HEAT AND GLARE REGULATIONS.

No operation or activity under the control of the property user shall cause or generate heat or glare in excess of the limits provided herein:

(A) Heat. Every use and activity shall be so operated that it does not raise the ambient temperature at or beyond any lot line more than 2°F; and

(B) Glare. In addition to the standards imposed by particular use district regulations, no operation shall, between the hours of 11:00 p.m. and 6:00 a.m. cause illumination in excess of 0.05-foot candles at a point 40 feet from the street line in a Residential District.

(Ord. 208, passed 12-19-1983) Penalty, see § 155.999

Beverly Shores community and leadership is in agreement and committed to minimize residential and commercial light pollution, including light trespass, glare, clutter, skyglow in order to protect the character of their beautiful naturalized dune homeland area and starry skies as much as possible within their control. Currently over-lighting from commercial properties within the community is very nearly non-existent, and this action serves as a safeguard in place for future times. Beverly Shores is exemplary and truly is a model of commitment to behold. The heart of the leadership and the community is behind this long and focused effort... which makes all the difference in the world.

It is without question that Beverly Shores deserves certification as an IDA Dark Sky Community... the very first in the state of Indiana, and, I believe, the very first IDA DSC bordering a national park.

Every state in the U.S. needs a community to step up into a leadership position and show that the path that embraces starlight is good for the community and its treasured and diverse ecosystems. I hope that every state in the US and other regions around the globe soon find similar models like Beverly Shores. It is always a bigger challenge to be the first in the area. Soon, I hope we will see cluster DSC communities, each neighbor certified in their own right, exponentially increasing their combined starlight together for the benefit of all.

cheers+stars
Audrey Fischer



-page 1 of 2-

Audrey Fischer
 director, Chicago Astronomical Society (founded 1862)
 founder & co-chair, OneStar and Global StarPark Network *which is supported by the United Nations UNESCO Man & Biosphere Programme. OneStar/GSPN is an int'l program that has it's roots in Chicago.*
 founder & co-chair, Int'l Starry Night2013, ISN2014<http://starry-night.org>
 Climate Reality Leadership Corps, leader
 Chicago Conservation Corps, leader
 IDA Chicago Leader <http://www.darksky.org/>, served as IDA BOD
 Boy Scout Astronomy Merit Badge counselor
 IDNR Conservation Congress delegate
 773.233.5037
 773.233.7579
 skype: audfischer
 google hangout: audrey fischer
onestaratime.org
<https://www.facebook.com/onestaratime>

It is possible to recover the magnificence of the starry night sky to once again inspire and nurture the hearts and souls of all children of this planet. This is the goal at its core and intrinsic to humanity.



*How can you find your wishing star
 if it is hidden by light pollution?*

Resident's Letters of Endorsement:

Association of Beverly Shores Residents
c/o Rosemary Bell roandalan@yahoo.com
Beverly Shores, IN

Dear ABSR Board,

Our organization TroyL. Ford has been provided valuable information as to the importance of Dark Skies through the efforts of the ABSR Environment Committee. We have become aware that our personal health, safety, the quality of flora and fauna in our region, and our invaluable right to view the night sky will be greatly enhanced by the Dark Sky initiative in Beverly Shores.

Please count our organization as one that is invested in the continued effort to preserve the night sky. We enthusiastically support the efforts of the town of Beverly Shores, IN to become the next Dark Sky Community.

Sincerely,

Troy L. Ford
10 W. Ripplewater
PO Box 141
Beverly Shores, IN. 46301
773-383-4371
troylford1@mac.com

Association of Beverly Shores Residents
c/o Rosemary Bell roandalan@yahoo.com
Beverly Shores, IN

Dear ABSR Board,

We, Larry Jensen & Rosemary Gemperle, have been provided valuable information as to the importance of Dark Skies through the efforts of the ABSR Environment Committee. We have become aware that our personal health, safety, the quality of flora and fauna in our region, and our invaluable right to view the night sky will be greatly enhanced by the Dark Sky initiative in Beverly Shores.

Please count us as persons that are invested in the continued effort to preserve the night sky. We enthusiastically support the efforts of the town of Beverly Shores, IN to become the next Dark Sky Community.

Sincerely,

Larry Jensen
Rosemary Gemperle

Association of Beverly Shores Residents
c/o Rosemary Bell roandalan@yahoo.com
Beverly Shores, IN

International Dark Sky Association:

The ASBSR Environment Committee has provided us with valuable information concerning the importance of the Dark Sky Initiative. We believe that our personal health, safety, the quality of flora and fauna in our region, and our invaluable right to view the night sky are greatly enhanced by the Dark Sky Initiative in Beverly Shores.

Please count us as one of the many who are invested in the continued effort to preserve the night sky. We enthusiastically support the efforts of the town of Beverly Shores, IN to become the next Dark Sky Community.

Sincerely,

Mary and Howard Marvel

Association of Beverly Shores Residents

c/o Rosemary Bell roandalan@yahoo.com

Beverly Shores, IN

Dear ABSR Board,

We have been provided valuable information as to the importance of Dark Skies through the efforts of the ABSR Environment Committee. We have become aware that our personal health, safety, the quality of flora and fauna in our region, and our invaluable right to view the night sky will be greatly enhanced by the Dark Sky initiative in Beverly Shores. As a member of the ABSR Board, and of the Environment Committee, Marcia has participated in our local efforts. Please count us as invested in the continued effort to preserve the night sky.

We enthusiastically support the efforts of the town of Beverly Shores, IN to become the next Dark Sky Community.

Sincerely,

Richard H. Metzcus, Ed.D.
Marcia W. Metzcus
Beverly Shores, IN.

Donna M Norkus
PO Box 344
Beverly Shores, IN 46301

January 13, 2014

Association of Beverly Shores Residents
c/o Rosemary Bell roandalan@yahoo.com
Beverly Shores, IN

Dear ABSR Board,

Having received valuable information as to the importance of Dark Skies through the efforts of the ABSR Environment Committee, I have concluded that our personal health and safety, the quality of flora and fauna in our region, and our invaluable right to view the night sky will be greatly enhanced by the Dark Sky initiative in Beverly Shores.

Please count our organization as one that is invested in the continued effort to preserve the night sky. We enthusiastically support the efforts of the town of Beverly Shores, IN to become the next Dark Sky Community.

Sincerely,



Donna M. Norkus, J.D., C.P.A.

Association of Beverly Shores Residents
c/o Rosemary Bell roandalan@yahoo.com
Beverly Shores, IN

Dear ABSR Board,

I and other residents of our town have been provided valuable information as to the importance of Dark Skies through the efforts of the ABSR Environment Committee. We have become aware that our personal health, safety, the quality of flora and fauna in our region, and our invaluable right to view the night sky will be greatly enhanced by the Dark Sky initiative in Beverly Shores.

I am very much in favor of the continued effort to preserve the night sky and enthusiastically support the efforts of the town of Beverly Shores, IN to become the next Dark Sky Community.

Sincerely,

Rosamond Potter

Ron Reason
10 W Bellevue
Beverly Shores, IN

Dear ABSR Board,

I have been provided valuable information as to the importance of Dark Skies through the efforts of the ABSR Environment Committee. I have become aware that our personal health, safety, the quality of flora and fauna in our region, and our invaluable right to view the night sky will be greatly enhanced by the Dark Sky initiative in Beverly Shores.

Please count me in as invested in the continued effort to preserve the night sky!

I enthusiastically support the efforts of the town of Beverly Shores, IN to become the next Dark Sky Community.

Sincerely,

RON REASON
10 W Bellevue
Beverly Shores, IN

Association of Beverly Shores Residents
c/o Rosemary Bell roandalan@yahoo.com
Beverly Shores, IN 46301

Dear ABSR Board,

We have been provided valuable information as to the importance of Dark Skies through the efforts of the ABSR Environment Committee. We have become aware that our personal health, safety, the quality of flora and fauna in our region, and our invaluable right to view the night sky will be greatly enhanced by the Dark Sky initiative in Beverly Shores.

Please count on us as ones who are invested in the continued effort to preserve the night sky. We enthusiastically support the efforts of the town of Beverly Shores, IN to become the next Dark Sky Community.

Sincerely,

Guy and Anat Rowley
837 E Lake Front Drive
Beverly Shores, IN.

**William T Taylor
PO Box 344
Beverly Shores, IN 46301**

January 13, 2014


Association of Beverly Shores Residents
c/o Rosemary Bell roandalan@yahoo.com
Beverly Shores, IN

Dear ABSR Board,

Having received valuable information as to the importance of Dark Skies through the efforts of the ABSR Environment Committee, I have concluded that our personal health and safety, the quality of flora and fauna in our region, and our invaluable right to view the night sky will be greatly enhanced by the Dark Sky initiative in Beverly Shores.

Please count our organization as one that is invested in the continued effort to preserve the night sky. We enthusiastically support the efforts of the town of Beverly Shores, IN to become the next Dark Sky Community.

Sincerely,


William T. Taylor

Association of Beverly Shores Residents
c/o Rosemary Bell roandalan@yahoo.com
Beverly Shores, IN

Dear ABSR Board,

I, Mary Ann Zolis have been provided valuable information as to the importance of Dark Skies through the efforts of the ABSR Environment Committee. I have become aware that our personal health, safety, the quality of flora and fauna in our region, and our invaluable right to view the night sky will be greatly enhanced by the Dark Sky initiative in Beverly Shores.

Please count me as invested in the continued effort to preserve the night sky. I enthusiastically support the efforts of the town of Beverly Shores, IN to become the next Dark Sky Community.

Sincerely,

Mary Ann Zolis
Beverly Shores, IN.

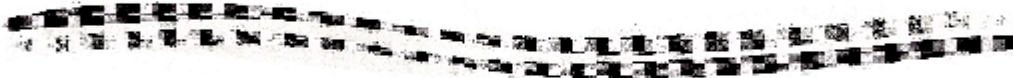
Sample Letter

Association of Beverly Shores Residents
c/o Rosemary Bell roandatan@yahoo.com
Beverly Shores, IN 46301

Dear ABSR Board, *Susie + Walter Jacobson on E. Lakefront Drive*
I/We (Our organization, _____) has/have been provided valuable
information as to the importance of Dark Skies through the efforts of the ABSR Environment
Committee. We have become aware that our personal health, safety, the quality of flora and
fauna in our region, and our invaluable right to view the night sky will be greatly enhanced by
the Dark Sky initiative in Beverly Shores.

Please count our organization as one that is invested in the continued effort to preserve the night
sky. We enthusiastically support the efforts of the town of Beverly Shores, IN to become the
next Dark Sky Community.

Sincerely,



Local Media Articles:



Beverly Shores poised to become Dark Sky community **November 07, 2013 1:45 pm • Lauri Harvey Keagle**

A grassroots efforts by a Beverly Shores couple to reduce light pollution in the Lake Michigan shoreline town may be recognized by an international organization supporting the efforts.

Alan and Rosemary Bell addressed the Northwestern Indiana Regional Planning Commission's Environmental Management Policy Committee meeting Thursday in Portage seeking support for their efforts.

The Bells joined the Beverly Shores Environmental Committee in 2006 after receiving a copy of National Geographic magazine from a friend with a cover story about light pollution.

The couple then embarked on a campaign to alter the 61 street lights in town to direct light toward the ground, thereby reducing glare.

They said reducing glare is easier on aging eyes and improves safety by providing clearer visibility in dark areas.

"We need to change the 'we've always done it this way' mentality," Alan Bell said. "More light isn't necessarily more secure or safe light."

The couple worked with NIPSCO to install downward shields with flat bottoms to direct the public street lights toward the ground at a reduced rate with matching funds from the town.

Beverly Shores didn't have the funds needed, so the Bells spearheaded a fundraising effort.

"After we did it, people just started writing us checks," Rosemary Bell said.

They received \$10,000 from the homeowner's association and eventually had to cut off donations because of the overwhelming support.

The town now has decreased the number of streetlights from 61 to 48, all of which have the downward shields.

The Bells are now working to get shields for lights on a pumping station operated by the Michigan City Water Department and with the Indiana Department of Correction for the Michigan City prison.

The Bells are also working with residents on ways to inexpensively improve their lighting as well. One resident installed a shield for just \$5.

The Bells are working with town officials and region leaders to get letters of endorsement in an effort to be designated one of a handful of communities recognized by the International Dark Sky Association as a dark sky community.

The NIRPC committee agreed to endorse their efforts.

Alan Bell said education is the key, for builders, contractors, government officials and residents.

"We're just two people joining the environmental committee and we did something," Rosemary Bell said. "We're hoping to get the designation soon."

Post-Tribune

Beverly Shores looks to darken night skies

By Matt Mikus mmikus@post-trib.com November 7, 2013 9:22PM

PORTAGE — Beverly Shores wants to become the fifth community in the world designated as a Dark Sky Community, trying to combat light pollution.

To receive the commendation from the International Dark Sky Association, Beverly Shores has had to create a community-wide lighting code, as well as promote responsible lighting and receive support from the public.

Rosemary and Alan Bell of Beverly Shores showed the Environmental Management Policy Committee how simple changes to outdoor lighting can improve safety and reduce energy costs for a community, and asked the committee from Northwestern Indiana Regional Planning Commission to support their efforts.

“Of all the forms of pollution,” Alan Bell said, “the easiest one to address is light pollution.” The couple’s efforts to preserve the night sky began after reading an article in National Geographic about the effects of light pollution. After four years, the Bells and others in the community worked with NIPSCO to replace public utility lights in Beverly Shores with ones approved by the International Dark Sky Association. They reduced the number of streetlights from 61 to 48, and installed dark sky friendly downward shields.

They have also approached other communities, including the Michigan City Indiana State Prison facility, on proper lighting techniques.

By replacing outdoor lights with downward reflective shields, the illumination is focused, helping to illuminate people and objects on the ground. It also reduces glare, which can damage eyes and make it harder to see at night.

“Using more light isn’t necessarily better,” said Alan Bell. “More light can actually make it harder to see. It’s the glare created by these lights — glare actually destroys your security.”

The committee voted to provide letters of support for the efforts.



Porter County on the move

March 16, 2014 12:00 am • [Times Staff](#)

As Porter County looks to a new year, quality life life issues are a priority.

BEVERLY SHORES

The town is poised this year to become the sixth Dark Sky Community in the world.

It began six years ago, when residents Alan and Rosemary Bell, members of the Association of Beverly Shores Residents Environment Committee, embarked on a campaign to reduce light pollution in the town.

A plan was developed to alter the streetlights to direct light toward the ground, thereby reducing glare. All of the town's 48 streetlights now have been refitted with downward shields.

The first downward shield retrofitted light was given to the town by NIPSCO more than four years ago. The other 47 lights were paid for by residents.

If granted, the town would join the communities of Flagstaff, Ariz.; Borrego Springs, Calif.; Homer Glenn, Ill.; the Isle of Coll, Scotland; and the Isle of Sark, Channel Islands, United Kingdom.

- *Susan Emery*

Educational Activities - Newsletter Articles

Association of Beverly Shores Residents Sand Tracks Newsletter

Street Lighting project – May 2011

The ABSR Environmental Committee is requesting funds to match a commitment from ABSR to replace all town streetlights with new downward illuminating fixtures. The benefits of this project would be an elimination of glare and light pollution from streetlights, and improved visibility for drivers and those interested in enjoying the night sky. There will be no reduction in downward light intensity (in fact, illumination will be increased). We have been advised that after the shutdown of some non-essential streetlights, there should be approximately 50 fixtures to be replaced. The quoted cost per fixture from NIPSO is \$175.00. The total cost of replacement of all fixtures in town is anticipated to be \$8,750.00. We have the commitment from ABSR for \$4,375.00, if the town council will match that amount.

Your consideration in this matter will be greatly appreciated.

Why replace our street lighting?

Light pollution. Light pollution is any adverse effect of artificial lighting including glare, surface reflections, lighting trespass, and “sky glow” (the brightening of the night sky as a result of light pollution).

Glare. Light directly entering the eye from unshielded streetlights actually reduces visual acuity. It makes it more difficult to see into nearby darker areas. As glare increases, people, cars and other objects in the illuminated area become more difficult to see.

Illumination. Light spreading outward horizontally from a street fixture quickly loses intensity and is less effective in illuminating objects. Light focused downwards actually increases illumination and the visibility of objects in the illuminated area. The only improvement in lighting intensity comes from focusing all the light downward into the target area.

Crime. Effective lighting that minimizes light pollution and reduces glare increases illumination of target areas and is more effective in discouraging criminal activity. As stated above, glare makes it more difficult to see into dark areas, where criminal activity could be taking place.

Health. There is research that indicates a correlation between increases in night lighting and specific health issues including certain cancers and sleep deprivation.

The aging eye. Since aging eyes are much more sensitive to glare, bright light sources should be out of direct view or shielded so direct glare is eliminated. The only thing we can do to decrease or avoid disabling glare is to screen the glaring light source from reaching the eye.

Association of Beverly Shores Residents Sand Tracks Newsletter

DARK SKY INITIATIVE

**Submitted By: Bob Stanley on behalf of the ABSREnvironment
Committee
Sandtracks ABSR Newsletter
December 2013**

Our town is just the width of a photon away from being designated one of a handful of communities recognized by the International Dark Sky Association as a Dark Sky Community. This designation will take us all a bit closer to nature and bring Beverly Shores a bit of renown. Representing ABSR's Environment Committee, Alan and Rosemary Bell addressed the Northwestern Indiana Regional Planning Commission's Environmental Management Policy Committee (NIRPC) meeting Thursday, November 7, to gain support. NIRPC will endorse their efforts. The Bells are also working with the Town Council and regional leaders to get letters of endorsement. So successful is this effort that now neighboring towns are inquiring how they might become Dark Sky Communities.

Previously Alan and Rosemary worked with NIPSCO to have our public street lights focused downward. The purposes were to keep us safe, with the least amount of light necessary, so that we would be closer to nature in the sky as well as in the dunes.

Our deeper natural skies exist now because of ABSR financial help, Town Council support, and fundraising efforts. "People just started writing checks to ABSR for the project," Rosemary Bell said.

"Education is the key, for builders, contractors, government officials and residents," according to Alan Bell. He and Rosemary are also working with residents on ways to inexpensively improve their lighting as well. One resident created her own shield for \$6.95.

The Dark Sky Initiative lists the following benefits from improved lighting:

- Promote Safety**

More light is not necessarily better. If not designed and installed correctly, unsafe glare can result, reducing the effect of lighting which can contribute

to accidents and hinder visibility. Lighting that is too bright interferes with the eye's ability to adapt to darker areas.

- Save Money

Adhering to professionally recommended light levels provides adequate illumination. Shielded fixtures with efficient light bulbs are more cost-effective because they use less energy by directing the light toward the ground. See this website for cost comparisons:

<http://www.netacc.net/~poulsen/lightcost.html>.

- Conserve Natural Resources

Inappropriate or excessive lighting wastes our limited natural resources and pollutes the air and water

by unnecessarily burning our limited supply of fossil fuels.

- Be Better Neighbors

Excessive or misdirected lighting can intrude on the privacy of others when light or glare trespasses over property lines.

- Retain Community's Character and Reduce Skyglow

Our clear view of the dark starry night sky is a resource to be preserved and protected. Stray and excessive lighting contributes to light pollution, clutter, and unnatural sky glow.

- Protect Ecology of Flora and Fauna

Research studies indicate that artificial night lighting disrupts the migrating, feeding, and breeding

habits of many wildlife species, as well as growth patterns of trees. Google "Ecological Consequences of Artificial Night Lighting."

Association of Beverly Shores Residents

Sand Tracks Newsletter

What you and your neighbors might want to know about Dark Sky friendly residential lighting. – January 2010

After completing the refitting of town public street lighting to Dark Sky friendly fixtures, we are now ready for the next phase in our Dark Sky initiative. We wish to provide information to town residents on residential lighting that will improve the quality of the night sky in Beverly Shores. This includes suggestions for how residents can reduce light pollution, and energy waste, and improve safety and security for our homes.

An efficient and user friendly way to provide this information is through the International Dark Sky Association (IDA) Practical Guide to Residential Lighting. This 7 page information booklet can be found on the IDA website at <http://www.darksky.org/education>. Under “Lighting Guides” click the “Outdoor lighting” link, and on the next page that comes up, under “Lighting Guidance” click the “IDA Practical Guide to Residential Lighting” link, which will open the booklet.

Included in the booklet is information about:

- Safety
- Energy and Cost Savings
- Use of compact florescent lights (CFL’s) in our homes.
- Benefits to wildlife.
- And much more.

Also provided in the booklet is a sample letter that might be sent to a neighbor to help resolve a problematic lighting issue.

In October 2011 the IDA entered into a unique partnership with the National Park Service (NPS). The IDA staff is working with the NPS in 9 national park locations to find innovative ways to upgrade lighting in order to protect wildlife and their habitat. Due to our unique location, any way the residents of the town of Beverly Shores might contribute to this effort would certainly be a positive step.

Thanks to all for your interest and cooperation in this effort.

FROM MY PERSPECTIVE: LIGHT POLLUTION

BY MORTON F. ARNSDORF, M.D., M.A.C.C.

I would suggest that the ABSR Environmental Action Committee look into the issue of light pollution. At one time, homeowners took pride in having their homes blend into the environment. Some of the newer homes in Beverly Shores, however, are blindingly illuminated and, in my perspective, are not only aesthetically objectionable but also commit light trespass. There also may be environmental and health implications.

Astronomical Light Pollution

The first level of light pollution is "astronomical", which obscures the night sky. It is difficult to find a place to see the stars or observe the aurora borealis. Every night, we are blinded by the "sky glow" of thousands of urban lights reflected back from sky. In 2001, it was estimated that only 40% of Americans live where it becomes dark enough for the human eye to make a complete transition from cone to rod vision, rod vision being true night vision.

Ecological Light Pollution

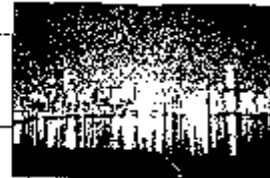
The next level is what has been termed "ecological light pollution", which changes the normal exposure to light and dark in both aquatic and terrestrial ecosystems. The world is probably brighter than it was 4 years ago. The NOAA satellite image of light shows that Beverly Shores, at the "tip of the lake," is next to the very large light bulb that is Chicago. The inset over the title shows the Chicago lake front at night with sky glow, reflection and glare. Ecological light pollution results from sky glow, lighted buildings, streetlights, security lights, and the like.

We are all familiar with the attraction of moths to a light. Lights on the sandy beaches where sea turtles are newly hatched disorient the hatchlings and confuse their march to the sea. Migratory birds are similarly disoriented by tall lighted structures. Some species use light to communicate such as glowworms, and artificial light will disrupt such communication. We are blessed in Beverly Shores with magnificent displays of fireflies, in large part due to the darkness in the interior of the community.

In honor of co editor Rich Manalis, a reknown expert on frogs, here is a frog story. Some frogs prefer to mate quickly rather than avoid the risk of exposure to predators when the level of light is increased. Other frogs, after adjusting to light, may be attracted to the light. The figure on this month's cover shows the attraction of frogs to a candle that has been placed on a small raft. This illustration by Charles Copeland is based on a study by William Long in 1901 in which 12 to 15 bullfrogs, seemingly attracted to and mesmerized by the light, climbed onto the raft before it flipped over. There are many more such examples, and the interested reader is referred to the nice review by Travis Longcore and Catherine Rich (*Front Ecol Environ* 2004; 2:191 - see <http://www.urbanwildlands.org/Resources/LongcoreRich2004.pdf>), which includes our frogs on a raft that graces the cover.

Light, Circadian Rhythms and Health

Bright daylight resets the circadian clock to begin a 24-hour day. The clock genes are estimated to be 4 billion years old, and for most of this time the cycles remained undisturbed. We now know that it is not only the intensity of the light, but also the wavelength of the light that may have important effects on our inborn cycles.



4/06

LIGHT POLLUTION

BY MORTON F. ARNSDORF, M.D., M.A.C.C.



I was asked by members of the Town Council to submit a brief report on light pollution as a followup to the article that I wrote in *Sand Tracks* (February 2006), which I did prior to the April meeting of the Town Council. What follows are the high points of my report. Much of the information was obtained from the website of the International Dark-Sky Association (IDA), which is a non-profit organization founded in 1988 that has as its mission to preserve and protect the nighttime environment and our heritage of dark skies through quality outdoor lighting. IDA's informative website is <http://www.darksky.org>. Another useful source was the Indiana Council on Outdoor Lighting Education (ICOLE), which has a website at <http://home.att.net/~icole/> <http://home.att.net/~icole/>.

Definition and Causes of Light Pollution. Light pollution is any adverse effect of artificial lighting including sky glow, glare, and light trespass. The causes are lighting that shines up into the sky, reflects from a surface, or shines into an area where lighting is not wanted or needed.

Lighting Zones and Environmental Zones. The IDA has developed a Model Lighting Code for Lighting Zones (abbreviated "LZ") which ranges from LZ0 (very dark), which designates critical dark environments such as wildlife preserves and parks as well as astronomical observatories, up to LZ4 (very bright), which applies to high-security areas and the like. LZ1 (dark) is appropriate for "developed areas in state and national parks, recreation areas, wetlands and wildlife preserves, developed areas in natural settings . . . and areas where residents have expressed the desire to conserve natural illumination levels." Environmental Zones also have a rating, in which E1 is considered appropriate for "National Parks, areas of outstanding natural beauty, or other dark landscapes". Our town should be an E1 Environmental Zone with a rating of LZ0 or LZ1.

Framework for Outdoor Lighting Improvement Ordinances. Ordinances can be quite complex, but three central issues are directional control and intensity of the light, light trespass, and hours. The glossary contains some commonly used terms.

Directional Control and Intensity. The IDA document discusses directional control and intensity, but the actual values and types of luminaires depend on the lighting zone designation. An LZ0, for example, would have much stricter directional and intensity regulations than a higher zone.

Glossary

Foot candle: one unit is equal to the light of a candle at a distance of one foot.

Full-cutoff: A light fixture that cuts off all upward transmission of light.

Glare: discomfort experienced by an observer with a direct line of sight to a light source, which often results in visual impairment.

HID lighting: high intensity discharge lighting including mercury vapor, metal halides, high or low pressure sodium, which glow when an electric current is passed through a gas mixture inside the bulb.

Horizontal (or vertical) foot-candles: The amount of light striking a horizontal or vertical plane.

Inventory of lighting: A list of lamps including the bulb type, bulb wattage, and manufacturer through which the rated lumens can be determined.

Light trespass: light projected onto a property from a fixture not directed on that property.

Lumen: measure of brightness of the illumination exiting a bulb, usually provided by the manufacturer.

Luminaire: The complete lighting unit, including the lamp, fixture, and other parts.

Non-cutoff: a light fixture that does not cut off all upward transmission of light.

Light fixtures should be used that cut off all upward transmission of light (full cut-off). *Figure 1* shows an example of poor lighting, a typical globe on a pole. The light is directed upward which, as mentioned, is a major source of light pollution. Moreover, the area underneath the light is in shadow, so the intended illumination is poor. As one article I read said, it "illuminates little but for the bellies of the birds."



Figure 1. Poor lighting, with light projected into the sky and a shadow under the fixture.



Figure 2. Good, full cut-off lighting with no light projected into the sky and full illumination under the fixture.

Figure 2 shows a full cut-off fixture, which projects light only downward and avoids light trespass. Residential lighting should be shielded to prevent light trespass, and again, uplighting should be avoided, since almost all of the light is spilled into the night sky either directly or by reflection.

Some communities establish a lumen-per-acre maximum for different types of zoning designations, while others measure illumination levels directly with a light meter. A common misconception is that the stronger the light, the better will be the security. Actually, the higher the intensity and contrast between light and dark, the less you will see in the shadows because the eyes are being dazzled and the pupils constrict. This is called "disability glare", because the human eye adjusts to the brightest object, which limits the ability to see anything else: the brighter the object, the greater the disability to see things in the shadows.

To put things in perspective, in one article I read, it was noted that the brightest lighthouse in Britain has a 1000W light, which can be seen 25 miles away. Yet, most security lights have bulbs of between 300 and 500W. In my previous article, I discussed the cost of unnecessary light to animals such as migratory birds, turtles, and, as featured on the cover, frogs.

The town currently uses the drop-lens cobra head luminaire (*Figure 3*), which produces a level of glare and uplight that is considered unnecessary and unacceptable by IDA (information sheet 122). Flat-lens cobra head

fixtures should be used as replacements (*Figure 4*). Following the body of this article, I have included a "Notice Regarding the Town of Branford, Connecticut: Planning and Zoning Commission Outdoor Lighting Regulations" which includes examples of acceptable and unacceptable lighting fixtures.

Light Trespass. Very frequently, light is projected onto a property by a luminaire that is not on the property, and this is called light trespass, such as a streetlight that illuminates a bedroom of a nearby house. Another example would be globe or other types of unshielded driveway lights. Here again the standards for horizontal or vertical foot-candles at a given distance from an artificial light source may vary. Line of sight is sometimes used as a standard as well: no line of sight to a bulb may be permitted for some distance, say 5 feet or more, beyond a residential or public right of way property line by an observer viewing from a position that is level with or higher than the ground below the fixture. This is achieved by shielding, directional control designed into the fixture, fixture location, fixture height, fixture aim, or some combination of these.

Many homes in Beverly Shores would violate such a standard. I now realize that my own driveway lights, although low-wattage and on a timer, are examples of light trespass. Please have a look at the examples of acceptable and unacceptable lighting fixtures according to the Town of Branford, Connecticut, which follows the body of this article.



Figure 3. Bad. Drop-lens cobra head luminaire



Figure 4. Good. One type of flat-lens cobra head luminaire

Notice Regarding Town of Branford, Connecticut Planning & Zoning Commission Outdoor Lighting Regulations

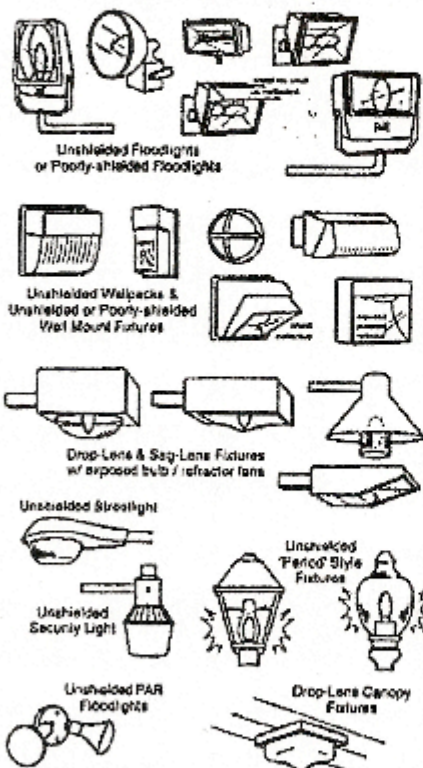
The Branford Planning & Zoning Commission enacted specific outdoor lighting amendments as part of the town's zoning regulations on June 1, 1997. These regulations are designed to benefit residents and businesses in Branford by consulting better nighttime visibility, public safety, energy efficiency, and preservation of the natural night environment. Please refer to Section 31 of the town's zoning regulations for the complete Outdoor Lighting Regulations.

*Note: Recommended illumination levels established by Illuminating Engineering Society of North America shall be observed. When taking out an electrical permit, provide an iso-footcandle plot and fixture "cut sheet" for proposed lighting along with permit application.

Examples of Acceptable / Unacceptable Lighting Fixtures

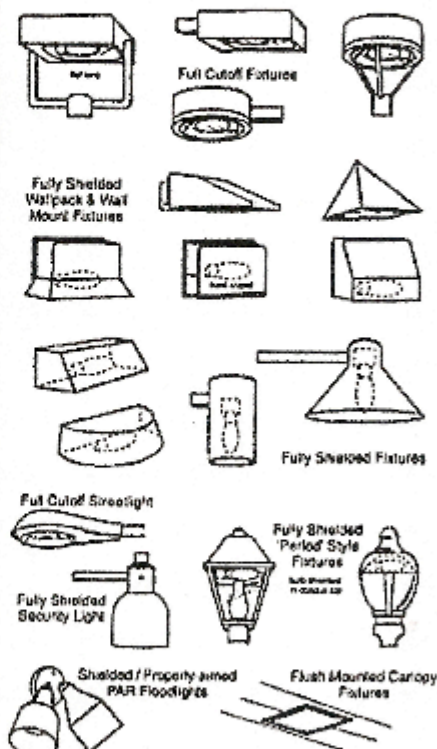
Unacceptable / Discouraged

Fixtures that produce glare and light trespass



Acceptable

Fixtures that shield the light source to minimize glare and light trespass and to facilitate better vision at night



BC 1490

Educational Activities – Dark Sky Presentations

July 2010 to present – Annual town Summerfest, ABSR Environment Committee booth, information, handouts and other educational materials on Dark Skies are made available to town residents.

September 2010 – Beverly Shores “Sometimers” part-time residents group, tabletop presentation on reduction of street light glare with full cutoff luminaires.

October 2010 – Beverly Shores Town Council meeting, tabletop presentation on reduction of street light glare with full cutoff luminaires.

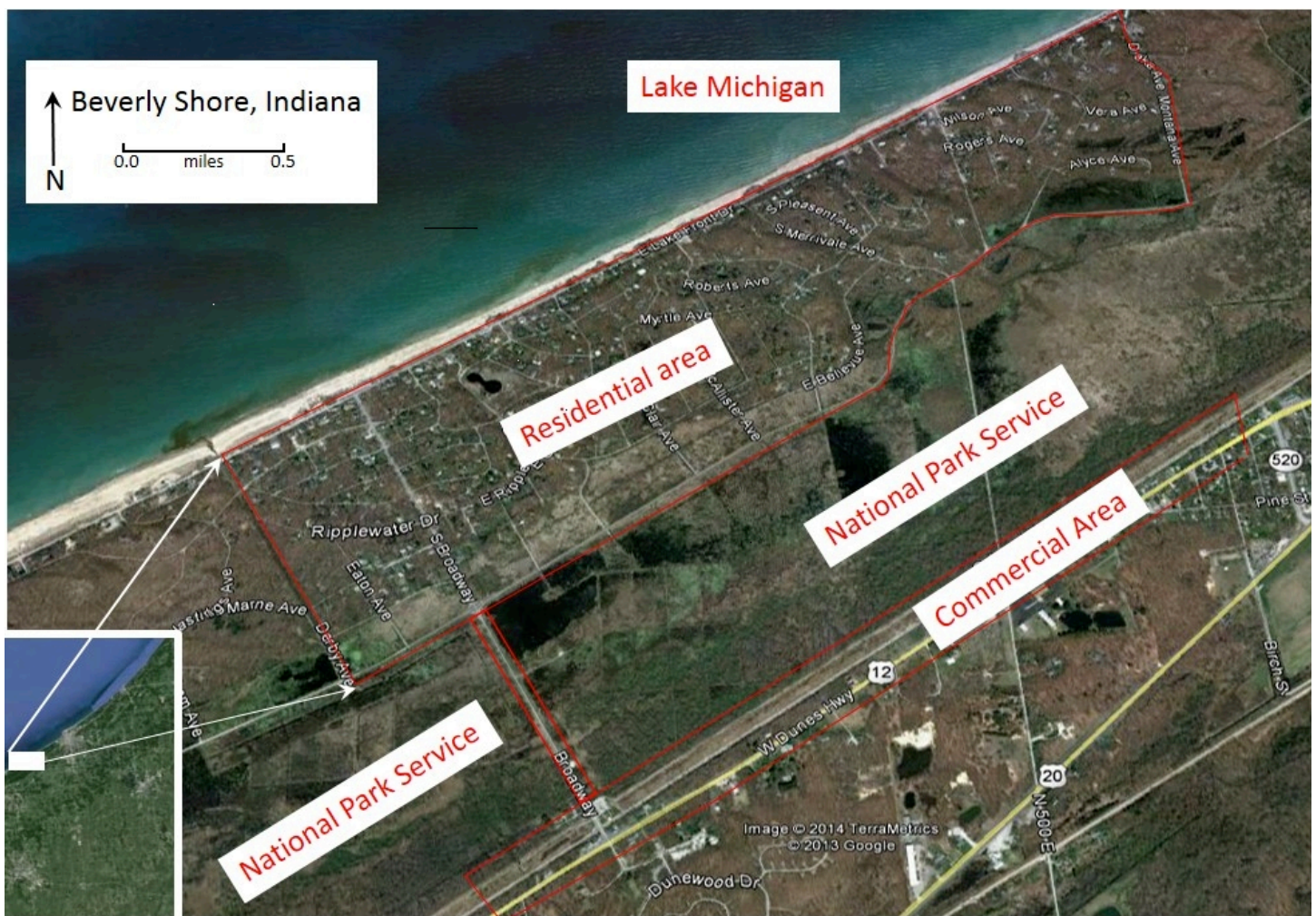
October 2010 – Association of Beverly Shores Residents Board meeting, tabletop presentation on reduction of street light glare with full cutoff luminaires.

September 9, 2013 – Beverly Shores Planning Commission presentation utilizing IDA “Protecting The Night Environment.” Power Point presentation and tabletop full cutoff fixture demonstration.

November 7, 2013 – Northern Indiana Regional Planning Commission (NIRPC) presentation utilizing IDA “Protecting The Night Environment.” Power Point presentation and tabletop full cutoff fixture demonstration.

Comprehensive Lighting Codes

The Town of Beverly Shores is organized in two distinct districts. The residential area, also known as “The Island”, and the commercial area. Because of this, the town lighting codes are located in two sections of the town ordinances under Residential District Lighting Code and Commercial District Lighting Code. There are no commercial properties in the residential district and no residential properties in the commercial district. Revised Commercial District Comprehensive Lighting Code prepared by town Attorney, Jeffrey Katz.



Notated Map By Mary White, ABSR Environment Committee Chair.

Residential District Lighting Code

§ 155.201 HEAT AND GLARE REGULATIONS.

No operation or activity under the control of the property user shall cause or generate heat or glare in excess of the limits provided herein:

(A) Heat. Every use and activity shall be so operated that it does not raise the ambient temperature at or beyond any lot line more than 2°F; and

(B) Glare. In addition to the standards imposed by particular use district regulations, no operation shall, between the hours of 11:00 p.m. and 6:00 a.m. cause illumination in excess of 0.05-foot candles at a point 40 feet from the street line in a Residential District. (Ord. 208, passed 12-19-1983)

Penalty, see § 155.99.

Commercial District Lighting Code

BEVERLY SHORES TOWN COUNCIL

ORDINANCE No. 2013-09

ADOPTING THE RECOMMENDATION OF THE PLAN COMMISSION TO AMEND THE ZONING ORDINANCE BY REPEALING COMMERCIAL DISTRICT REGULATIONS SECTIONS 155.105 THROUGH 155.115, INCLUSIVE AND ADOPTING IN REPLACEMENT THEREOF COMMERCIAL DISTRICT REGULATIONS SECTIONS 155.105 THROUGH 155.112

WHEREAS, the Plan Commission prepared a Proposed Amendment to the Zoning Ordinance that repeals Commercial District Regulations Sections 155.105 through 155.115, inclusive and adopts in replacement thereof Commercial District Regulations Sections 155.105 through 155.112, inclusive, that is consistent with IC 36-7-4-601;

WHEREAS, pursuant to IC 36-7-4-604, the Plan Commission conducted a Public Hearing on June 3, 2013 at 6:30 PM CDT at the Administration Building, 500 S Broadway, Beverly Shores, IN 46301 concerning a Proposed Amendment to the Zoning Ordinance that repeals Commercial District Regulations Sections 155.105 through 155.115, inclusive and adopts in replacement thereof Commercial District Regulations Sections 155.105 through 155.112, inclusive. The public hearing was continued on June 3, 2013 and was completed on August 5, 2013;

WHEREAS, on December 2, 2013, the Plan Commission approved a favorable recommendation of the Proposed Amendment to the Zoning Ordinance that repeals Commercial District Regulations Sections 155.105 through 155.115, inclusive and adopts in replacement thereof Commercial District Regulations Sections 155.105 through 155.112, inclusive; and

WHEREAS, upon due consideration of the recommendation of the Plan Commission and other evidence, the Town Council of the Town of Beverly Shores finds it is in the best interest of the Town and its residents to follow the recommendations of the Plan Commission regarding amending the Town Code of Ordinances to repeal Commercial District Regulations Sections 155.105 through 155.115, inclusive and adopt in replacement thereof Commercial District Regulations Sections 155.105 through 155.112, inclusive.

NOW THEREFORE, BE IT ORDAINED by the Town Council of the Town of Beverly Shores that it accepts the recommendation of the Plan Commission and that the Town of Beverly Shores Code of

Ordinances be amended by repealing Title XV Commercial District Regulations Sections 155.105 through 155.115, inclusive and adopt in replacement thereof Commercial District Regulations Sections 155.105 through 155.112, inclusive, as follows:

155.110 SIGN REGULATIONS

The following sign regulations shall apply in the General Commercial District:

(A) No flashing, animated or moving business or identification signs shall be permitted in the General Commercial District.

(B) No pennants, streamers and other moving or fluttering eye-catching devices shall be permitted in the General Commercial District.

(C) Roof and wall signs shall be permitted.

(D) Except for a gas station and mini-marts or convenience stores with fuel pumps, pylon signs are not permitted.

(E) No billboards shall be permitted in the General Commercial District.

(F) Signs shall not be located in any public right-of-way and shall not be any closer than five (5) feet to any boundary Lot line.

(G) A Lot may contain multiple signs for each permitted use on the Lot provided that their total area does not exceed one hundred (100) square feet in the aggregate and no individual sign shall be larger than fifty (50) square feet.

(H) All illuminated signs shall be front lit and the lighting fixtures shall be mounted facing down at or near the top of the sign structure and located a minimum of two hundred (200) feet from any residential property line or any residential lot of record.

(I) The design of all signs shall be approved by the Building Committee. Signs shall be subdued in appearance, harmonizing in design and color with the surroundings and shall not be attached to any tree or shrub.

(J) All signs in the General Commercial District shall be located on the Lot to which they refer and shall not advertise off-site goods or services.

(K) All existing permanent wall and freestanding signs lawfully in existence immediately prior to enactment of this Ordinance can remain until removed or replaced by a lawful sign as defined by this Ordinance or until such time as said existing legal sign is no longer safely maintained or the use is changed. An existing sign may be changed so long as the sign's gross surface area is not increased.

155.112 BULK REGULATIONS

All buildings, structures and uses shall conform to the following requirements:

(H) Lighting standards: The purpose of these lighting standards and the policy of the Town of Beverly Shores is to minimize glare and over-lighting beyond the property boundary of each Lot by limiting outdoor lighting that is misdirected, excessive or unnecessary. The density of outdoor lighting, whether shielded or unshielded, shall not exceed in the aggregate 50,000 lumens per acre in the General Commercial District. Lighting shall be shielded to meet the following requirements:

- (i) No light shall shine directly into the windows of a building on abutting Lot.
 - (ii) No light shall shine directly from a light source onto the ground or improvements of an abutting Lot, although incidental light may be permitted to fall on an abutting Lot. Such lighting shall not exceed one-half (1/2) of an ISO foot-candle at ground level on the abutting Lot.
 - (iii) No light shall shine directly onto public roads.
 - (iv) No parking lot lighting standard or building fixture shall exceed twenty-five (25) feet in height from grade level.
 - (v) Light fixtures located closer to a side or rear lot line than the side or rear yard setback, shall be no more than ten (10) feet high, and shall direct the light source away from the boundary line of the Lot.
 - (vi) Light fixtures located adjacent to a residential use of a Lot shall be setback a minimum of twenty (20) feet from the boundary line of the Lot.
 - (vii) No streamers or festoon lighting, comprising a group of incandescent light bulbs, shall be hung or strung on a building or any other structure.
 - (viii) No flashing or intermittent or moving lights, including lights on signs, shall be permitted.
 - (ix) Any lighting fixture with a lamp or lamps rated at a total of more than 1800 lumens, and all flood or spot lighting fixtures with a lamp or lamps rated at a total of more than 900 lumens, shall not emit any direct light above a horizontal plane through the lowest direct-light-emitting part of the lighting fixture.
 - (x) All existing lighting fixtures lawfully in existence immediately prior to enactment of this Ordinance can remain until removed or replaced by a lawful lighting fixture as defined by this Ordinance or until such time as said existing lighting fixture is no longer safely maintained or the use is changed.
- (I) Violations. All violations of the regulations of the General Commercial District shall be punishable by a fine not exceeding \$2,500 per violation. Each calendar day that the violation shall continue to exist, or each distinct repetition of any violation, shall constitute a separate violation.

Sky Brightness Monitoring

During the summer of 2013, Toots Foy and Marcia Metzcus of the Environment Committee of the Association of Beverly Shores Residents completed a block-by-block survey of town private lighting. The Committee has made a commitment to continue these surveys on a regular basis, and to provide education and lighting recommendations as the need is identified.



We would like to thank the staff members at IDA, Amee Hennig, Scott Kardel, and Dr. John Barentine, whose dedication, education and support were invaluable in guiding us through this process.

Sincerely,
Rosemary and Alan Bell
March 11, 2014

Long Eared Owl – Sighted in Beverly Shores, November 2008.



The Beverly Shores Dark Sky Community Initiative is dedicated to the memory of Dr. Morton Arnsdorf.