

Annual Dark Sky Community Report 2018 - Beverly Shores, Indiana
August 28, 2018

1. We responded to twelve requests for information about viewing of the night sky in or near Beverly Shores. If you require names and dates of each request we will be happy supply them.
2. In March 2018, we were contacted by Brian Edward Forest, professor and lecturer at Indiana University, School of Public Health-Bloomington Department of Recreation, Park and Tourism Studies. Brian asked if we would be willing to provide a presentation for IU students on a field trip at the Indiana Dunes National Lakeshore (INDL) Learning Center. We presented on our Dark Sky Community Designation. We spent approximately 90 minutes reporting on the designation process, answering questions, and in discussion of lighting and related issues.
3. In May 2018 we were contacted by Terri Colby, travel writer for the Chicago Tribune. She was working on a story about Dark Sky locations around the world. We provided a link to the Beverly Shores page on the IDA website along with information on the Second Saturday Stargazing at INDL. We also provided the link to the National Park Service information page on the stargazing...www.nps.gov/indu/learn/news/stargazing-march2018.htm.
4. We were contacted in July 2018 by renowned author Lori Rader-Day, a Mary Higgins Clark Award Winner, who has written a new novel titled "Under A Dark Sky." Lori inquired as to the possibility of doing a presentation for town residents who might be interested in hearing about the Dark Sky Place setting of her book, and how it was researched. Her presentation is upcoming on September 23rd, at the Beverly Shores Sunday Forum, which the Residents Association sponsors regularly through the year.
5. NIPSCO LED Street Light Retrofit scheduled for 2020, follow-up to our 2017 yearly report.

As noted in our email to John Barentine on 7/13/18, Beverly Shores town government received formal notification by way of an option form from our power company NIPSCO. Town would be provided an option of new LED streetlights with either 4,000 Kelvin or our preferred 3,000 Kelvin rating. Our town council president advised that the form was completed requesting the 3,000K option. Please see the attached article that appeared in the Beverly Shores Sand Tracks Newsletter. This was the culmination of a year and 10 month struggle with local power company NIPSCO. We created a power point which was presented at a Beverly Shores town council meeting in February 2017 to educate town government and residents of our concerns regarding this high Kelvin rating. We published an article in the NW Indiana Times Sunday Community Forum, and also in the town Sand Tracks Newsletter regarding this issue. We appeared at a special meeting of the Northwest Indiana Regional Planning Committee, where we debated the issue with NIPSCO representative and Purdue University professor Richard Kramer. Finally we recruited town residents to write letters and emails, make phone calls, and sign petitions informing NIPSCO of the town's preference for 3,000 Kelvin. This final effort proved to be what was needed to convince NIPSCO to provide us with this option. At the time town received the NIPSCO LED Community Acknowledgement preference form, we were made aware that this optional Kelvin rating was made available to all communities in their NW Indiana service area, which includes the retrofit of 143,000 street lights. Our only hope is that other communities have educated themselves as to the dangers of higher Kelvin rated street lights as did the residents of Beverly Shores. Please find the NIPSCO LED Community Acknowledgement Form also attached to this email.

Addendum - not included in prior year reports to IDA.

The Ivy Tech College, Society of Innovators of NW Indiana, in March of 2015 recognized the Association of Beverly Shores Environment Committee, and inducted the members into the Society of Innovators Hall of Fame. The statement in the induction is as follows: This committee led by Beverly Shores residents Alan and Rosemary Bell, launched a five and one half year long grassroots campaign to curb sources of light pollution involving town government, community associations, businesses, and individual residents. This led to Beverly Shores being named an International Dark Sky Community - the seventh in the world.

Respectfully submitted by,
Rosemary and Alan Bell
Beverly Shores, Indiana

LED STREET LIGHTING IN NW INDIANA, WHY 4,000 KELVIN IS NOT THE BEST CHOICE. Our original title, NW Indiana Times editors changed it to

NIPSCO should consider darker skies

In June of 2014 Beverly Shores was awarded the designation of the world's seventh International Dark Sky Community. This achievement was made possible through the cooperative efforts of the Beverly Shores Town Council, Association of Beverly Shores Residents (ABSR), ABSR Environment Committee, NIPSCO, and with the very generous financial support of the residents of Beverly Shores. We now find a new challenge.

Several months ago NIPSCO announced that as a cost saving intervention, they will be replacing every street light in their system in NW Indiana with new LED street light fixtures. This will include the Town of Beverly Shores. We appreciate NIPSCO's goal of the reduction of maintenance costs, and also the reduction of power usage and operating costs that will be achieved through the retrofitting of the older High Pressure Sodium Vapor street light fixtures currently in use, with new LED technology. Reducing the use of fossil fuels, reduction of mining operations and other negative aspects of lower efficiency municipal lighting is a goal we support. NIPSCO has advised that the LED technology being utilized in this equipment will be 4,000 Kelvin rated. This Kelvin rating is our primary concern. The information that follows will help area residents understand the implications of this decision by NIPSCO. As a reference, high pressure sodium (2200K) is currently in use on most of our streets.

The source of the information that follows is from the AMERICAN MEDICAL ASSOCIATION REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH - LED LIGHTING, 2016, and from THE INTERNATIONAL DARK SKY ASSOCIATION.

Kelvin (K) is the unit of measurement used to describe the "hue" of a light source. 4,000K generates a color spectrum with excessive blue wavelength. Such wavelengths are associated with more scattering of light in the human eye, causing disability glare, visual impairments due to stray light, and reduced night time visual acuity. This is a more serious problem in eyes of those over 40. Research suggests intense blue spectrum light emissions may also cause retinal damage. 4,000K is environmentally disruptive to many nocturnal species, including birds, some plant species, certain insect species, and is of considerable concern in our unique dune land environment. Some potential health effects of higher Kelvin light sources...medical evidence supports long-term increase in cancer risk, diabetes, cardiovascular disease and obesity from chronic sleep disruption associated with exposure to higher Kelvin light sources at night. 4,000K "blue/white" LED lighting is estimated to be 5 times more powerful in influencing circadian disruptions and causing sleep disturbance, due to melatonin suppression. The American Medical Association recommendation: AMA encourages the use of 3,000K or lower

lighting for all outdoor installations such as roadways. The International Dark Sky Association (IDA) concurs with this recommendation.

We are not the only community objecting to the use of LED streetlights with a high Kelvin rating. Installation of 4000K streetlights is the first generation of such conversions, and it has been met with considerable opposition. The following places have either rejected them, expressed strong opposition and demands for modification, or already been refitted with lower Kelvin rated replacements: Davis, CA, Seattle, WA, Cambridge, MA, Queens, NY, Phoenix, AZ, Los Angeles, CA, Monterey, CA and The Georgia Power Company. In addition to these cities, the City of Chicago has announced that it's LED retrofitting program will utilize streetlights with a Kelvin rating of 3,000 or less.

The Association of Beverly Shores Residents has been in contact with residents and organizations from other Indiana lakeshore communities who agree with these concerns and who are working on their own initiatives on this issue. The Association of Beverly Shores Residents, and the Beverly Shores Town Council has requested that NIPSCO change the Kelvin rating of the new fixtures from 4,000K to the AMA and International Dark Sky Association recommendation of a Kelvin rating of 3,000 or lower. Technology as low as 2700K is currently available for streetlight applications and is the specific Kelvin rating we have asked to be used on this project. To date, NIPSCO has declined to consider making this adjustment...and the entire NIPSCO service area in NW Indiana is now scheduled to have their street lighting refitted with this older, first generation 4,000 Kelvin rated LED equipment over the next few years.

This requested Kelvin rating is supported by the AMA, an unsurpassable authority. It is also the standard for the International Dark Sky Association. This requested change will support the Indiana Dunes National Lakeshore effort for designation for Dark Sky Park, along with the Town of Beverly Shores Designation as the world's seventh Dark Sky Community.

Respectfully,

Rosemary and Alan Bell
Association of Beverly Shores Residents Board of Directors
ABSR Environment Committee



Town of Beverly Shores

LED Street light Replacement Program – Community Acknowledgment Form

NIPSCO is ready to start replacing existing NIPSCO owned streetlights with a new LED (light emitting diode) light fixture in your community. The LED streetlights will bring many advantages to your community compared to the older high pressure sodium light fixtures.

- **Lower Energy Use** – LED lights use 40% less energy than existing high pressure sodium.
- **Longer Life Span** – These LED lights have a 20-year expected bulb life.
- **Clear Uniform Light** – LED fixtures will produce a light that appears whiter, similar to moonlight. The result is a more consistent uniform light pattern that improves safety and visibility.
- **Faster On-Off Switching** – LED lights turn on instantly compared to existing street lights which take time to heat up and reach maximum light exposure.

Number of existing NIPSCO owned street lights to be replaced:

_____51_____

Expected Start Date:

2020_____

_____February 1,

Please circle the preferred LED Light Correlation Color Temperature:

4000K (Standard offering)

3000K (Alternative

offering)

I _____(print name and title) state that I am a representative of the community of _____, authorized to sign this document, acknowledging the selection of the replacement LED lights that NIPSCO will use.

Signature

Date