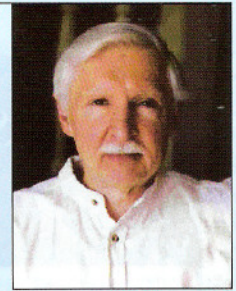


Controlling Light Pollution! Choose the Winning Approach



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Non-cutoff, light pollution fixtures are shown on the left. The better alternatives are on the right.

The New Jersey Chapter of the Illuminating Engineering Society of North America (IES) asked me to make a presentation at their March, 2007 meeting held in Eatontown, to explain the way we have been successfully controlling Light Pollution since 1993. Here is a summary of the presentation.

Most media coverage about Light Pollution presents the issue primarily as an astronomy problem, heavily emphasizing the need for dark skies. Those amateur astronomers who have lobbied local and state officials with this message have experienced very little success in New Jersey. Pushing too hard for dark skies is often perceived by non-astronomers as a "Light Versus Darkness Issue", rather than a "Good Lights Versus Bad Lights Issue".

Why we needed to control Light Pollution

Light Pollution affects everyone and controlling it benefits everyone. This is how the Eatontown Environmental Commission presented the problem to our local governing body. We then proceeded to explain why we needed to adopt an ordinance to solve this problem.

1. First we clearly defined Light Pollution as:

Misdirected and excessive outdoor lighting that causes:

- Glare
- Light Trespass (a Nuisance)
- Energy Waste
- Unnecessary Sky Glow

Light Pollution is understood by many to simply mean "sky glow", but misdirected and excessive lighting causes all of the above adverse components.

2. The ordinance would follow the guidelines of the IES, widely recognized as the foremost authority on lighting in the US. The IES works closely with the CIE (International Lighting Commission) in providing the world with credible lighting recommendations for all categories of application.
3. We explained the key elements of the ordinance that would require:
 - The use of cutoff (shielded) lights for all pole and wall mounted installations.
 - Confining all other illumination to the intended target and not spilling light in unwanted directions.
 - Not exceeding IES Illuminance and Luminance recommendations.
 - Retail and industrial lighting to be significantly reduced after business hours.
4. We showed examples of "good" and "bad" lighting, to illustrate how well IES recommendations improved visibility and provided more than adequate illumination for safety and security, and also avoided glare, light trespass and energy waste. Here are some illuminance levels to compare the waste of energy:

Average:	Maximum Allowed	Commonly Allowed
Type of Facility	Eatontown	Elsewhere
Fast Food Restaurants	2.5	20.0
Car Dealers - Front Row	20.0	120.0
Gas Stations (Pump Island)	20.0	150.0
Shopping Malls	2.5	10.0

5. Lighting Plan submissions would require a full description and picture of every light. Another requirement would be a computer generated photometric grid showing illuminance points every ten feet and a computed average. The grid would provide a means to review uniformity. When applicable, lights to be turned off after business hours would also be identified.

How the ordinance has worked

The lighting plan review process has shown to be effective and fairly simple to administer. Any problems found are discussed with the lighting designer and usually resolved before meeting with the Planning Board. At the beginning, some engineers/designers complained that they never had to submit such information before. In some cases, when the designer was unfamiliar with providing such data, we suggested that they ask the manufacturer to supply a photometric grid (since they want to sell light fixtures). This proved to be a successful solution.

Existing lighting (Grandfathered) causing light pollution

A second lighting ordinance covering a "Glare Nuisance," applicable to all objectionable existing lighting, (whenever installed) was adopted in 2006. It applies to the following categories.

- Business lighting affecting roadways and other business property.
- Business lighting affecting residential property.

- Electric utility floodlights affecting roadways and all other property.

Additional information available

Additional information is available from the League of Municipalities (NJLM), such as the "Outdoor Lighting Ordinance Guide"(17 pages). This "Guide" contains a Model Outdoor Lighting Ordinance similar to Eatontown's. It contains many references and quotes from IES publications and is arranged by category. It also includes a recent change that addresses Homeland Security concerns. Another "tool" that would be helpful is the 2 page "Identifying Good & Bad Light Fixtures" showing pictures of various lights.

Perhaps it would be beneficial to conduct a training seminar to illustrate how well the process of review and enforcement actually works. Some actual lighting plan examples could be shown. Eatontown has reviewed at least 200 lighting plans and "walking" through the process could be useful. In addition, a tour of Eatontown lighting would enable attendees to see the effectiveness of IES illuminance recommendations. If you would be interested in participating, contact the League.

It's time for municipalities to become active

Join us in fighting light pollution. Much of the outdoor lighting in New Jersey is a "train-wreck," with some retailer's still installing outrageous floodlights in parking lots, unshielded wall-packs and or excessive levels of lighting with the direct glare source highly visible from roadways and other properties. State and local roadway lights should not cause glare problems. Electric Utilities continue to carelessly install their floodlights in easement zones and elsewhere to illuminate parking lots with no regard to glare issues. It's time to fix this problem. The only way this can work is by adopting an ordinance. ▲

OPRA Compliant?



Problem

The Open Public Records Act (OPRA) requires records used by the government be readily accessible to the public for inspection, examination and copying, as long as it does not violate a citizen's right to privacy. Ex. public meeting minutes, budgets, bargaining agreements. In the digital age, OPRA also includes email communications related to the same government records.

Solution

A complete and affordable email archiving solution, the Barracuda Message Archiver easily achieves OPRA compliance by indexing and preserving all sent and received emails throughout the organization. Designed for rapid searching and retrieval by authorized users, the Barracuda Message Archiver provides tamper-resistant storage, prevents messages from being deleted and maximizes message storage for a comprehensive solution.



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