

Fighting Light Pollution

By John Batinsey, Eatontown (Monmouth) Environmental Commission

A retired accountant and member of the Eatontown (Monmouth) Environmental Commission for about 20 years, I became active in Light Pollution when I realized that it was a very misunderstood problem, mainly communicated as a narrow astronomy issue. Most people, especially municipal officials, feel that preventing glare, light trespass and energy waste has far more significance than concerns about dark skies. As a result and using the recommendations of the Illuminating Engineering Society of North America (IES), Eatontown adopted an Outdoor Lighting Ordinance.

IES is widely recognized as the foremost authority on lighting in the US. Earlier this year, the New Jersey IES invited me to speak at a special meeting to outline how we established one of the most successful outdoor lighting ordinances in New Jersey. The ordinance is designed to save energy, eliminate unnecessary glare and other forms of light pollution.

Most media light pollution coverage emphasizes the need for dark skies, 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

In the early 1990's the Eatontown Environmental Commission initially defined light pollution to the local governing body as misdirected and excessive outdoor lighting that causes

- Glare
- Light trespass (a nuisance)
- Energy waste
- Unnecessary sky glow.

Next, the commission explained key ordinance requirements.

- 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;

Comparing Energy Wastes

Type of Facility	Maximum Average Allowed In Eatontown (Foot Candles)	Average Commonly Allowed Elsewhere (Foot Candles)
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

Foot Candle is a measure unit of light intensity

- Not exceeding IES Illuminance and Luminance recommendations;
- Significantly reducing retail and industrial lighting after business hours.

We showed examples of "good" and "bad" lighting, to illustrate how well IESNA recommendations improved visibility and provided more than adequate illumination for safety and security and avoided glare, light trespass and energy waste.

Ordinances

Adopted in 1993, Eatontown's *Outdoor Light Ordinance* requires developers to submit a lighting plan including a full description and picture of every light, a computer-generated grid to review uniformity and identification of lights to be turned off after business hours. Under the effective and fairly simple process the lighting designer discusses and usually resolves any problems before a Planning Board meeting. In response to complaints from some engineers/designers for these new information requirements, we suggested applicants ask the fixture manufacturers to supply a photometric grid.

In 2006 Eatontown adopted a *Glare Nuisance* ordinance that applies to all objectionable existing lighting, (whenever installed) including

- Business lighting affecting roadways, other business and residential properties;
- Electric utility floodlights affecting roadways and all other property.

Time for Environmental Commissions to Become Active

Much of New Jersey's outdoor lighting is a "Train-wreck," with some retailers 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. Electric utilities continue to carelessly install their floodlights in protected zones and elsewhere to illuminate parking lots with no regard to glare issues. State and local roadway lights should not cause glare problems, energy waste or unnecessary sky glow. It's time to fix these problems. This can only be done with an ordinance that will control light pollution.

For Additional Information

- Eatontown's ordinance, environmental commission's *Outdoor Lighting Ordinance Guide* and photos in *Identifying Good & Bad Light Fixtures* available from ANJEC Resource Center at (973) 539-7547, or by email: resourcecenter@anjec.org.
- Illuminating Engineering Society, www.iesna.org
- Work with ANJEC for a training seminar and/or a tour of Eatontown to see effectiveness of IES illuminance recommendations; contact ANJEC if interested at (973) 539-7547, info@anjec.org 