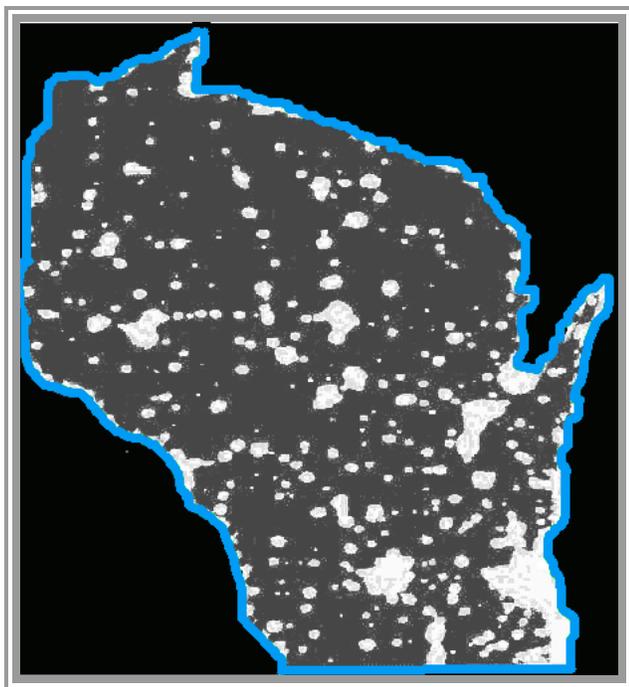


## Village of Shorewood Hills

### Outdoor Lighting Ordinance



Wisconsin at Night from Space

## A Guide for Residential and Commercial Properties

The Village Board of Trustees approved an outdoor lighting ordinance in January 2006.

This brochure explains the basic provisions of the ordinance (Chapter 22) and offers some suggestions for compliance. We encourage you to acquaint yourself with the specifics of the regulations, modifications and exceptions by visiting the Village website: [www.shorewood-hills.org](http://www.shorewood-hills.org) and click on Village Ordinances, Chapter 22.

This is particularly important for residents involved in any construction requiring a building permit. Your contractor needs to comply with these provisions.

The city of Madison and the Town of Westport have passed outdoor lighting ordinances that were reviewed by the Village of Shorewood Hills' Dark Sky Committee. The Committee also reviewed lighting ordinances from other cities around the country.\*\*

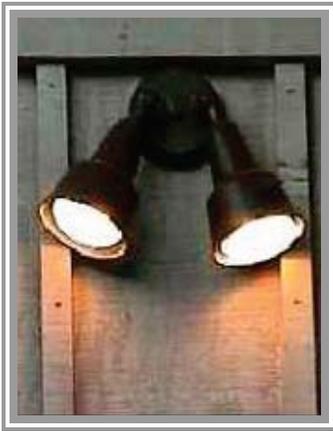
### Why do we have an Outdoor Lighting Ordinance?

Several reasons led to its adoption:

- 1) to improve nighttime visibility, security and safety in the Village;
- 2) to eliminate harsh glare and "light trespass" between properties;
- 3) to reduce the deleterious effects of artificial lighting on the nighttime sky.

\*\*We wish to acknowledge the resource materials written by David S. Liebl, UW Extension which we have used in developing this brochure.

By encouraging lighting practices that direct appropriate amounts of light where and when it is needed, we will use less energy, save dollars and will be good neighbors.



Shielded, downward directed lights

Like many other things, how we use exterior lighting on our own property can affect our neighbors and other village residents. Glare (light causing visual impairment) from poor lighting has the potential to cause severe problems because of its effect on the dark-adapted eye. Problems associated with glare can include transient night blindness in drivers and pedestrians, as well as more pervasive visual problems associated with night vision in the older eye.

High levels of illumination caused by over-lighting create many problems. For example, over-lit surroundings can create security problems when the eye fails to adapt to seeing in adjoining dark areas and shadows, compromising personal security and safety. High illumination levels can also deprive residents of the darkness needed for sound sleep. The cumulative illumination of a large city brightens the night sky for surrounding

communities, changing their rural character and robbing them of the stars.



Madison's skyglow as seen from Dodgeville

### Understanding our Outdoor Lighting Ordinance

To achieve lighting improvements in our village, the ordinance includes the following provisions:

- Use of shielded light fixtures to prevent glare and skyglow (light spilling into the night sky.)
- Proper installation of shielded fixtures to prevent light trespass (glare and spill light that shines onto neighboring properties)
- A maximum allowed lighting limit and light curfews for residential and commercial properties.

Outdoor lighting for all proposed new land uses, developments, buildings and structures that require a permit need to meet the requirements. Minor additions or modifications that require a permit need to submit an outdoor lighting inventory/plan.

Owners of existing residential and commercial properties need to comply with the ordinance regulations no later than January 2009.

**Sensible Outdoor Lighting Principles and Practices**

1. Shielding the Light Source -

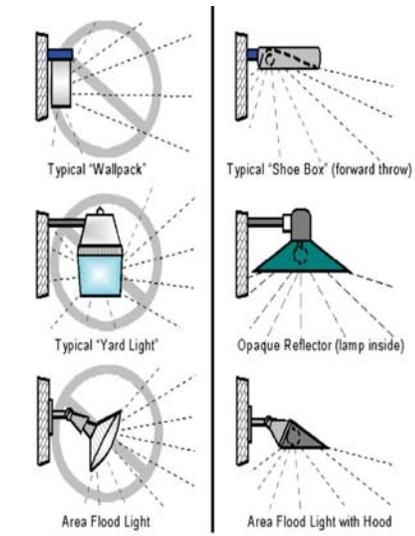
Illuminate only what you wish to see by using shielded fixtures that direct the light properly. In most cases, a light source must be enclosed in a non-adjustable shield that is aimed downward. If your eye is above the fixture, you should not be able to see glare from the light source or lens.

For all residential and commercial properties, any exterior light fixture with a light source (bulb) brighter than:

150 watts (450 watts for commercial)- must be “fully shielded”, i.e. no light above the horizontal plane;

60 watts (100 watts for commercial)- must be “shielded”, i.e. less than 2% of its light output above the horizontal plane.

Modifications and exemptions from these requirements include street lighting, emergency lighting, recreational lighting and holiday lighting. See Chap. 22.06.



Unshielded vs. Shielded Lighting

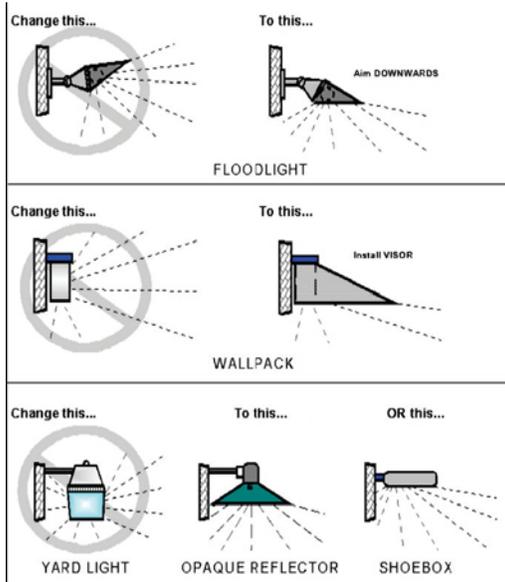
2. Preventing Light Trespass -

Install lighting fixtures carefully to maximize their effectiveness on the target area and minimize their adverse impact beyond your property line. Brighter is not always better; provide adequate light for the intended task, but never over-light.

Proper position and aiming are important. Properly installed and adjusted motion detectors can minimize the amount of time your lights are on and provide better security.

All village outdoor lighting must be shielded or installed so that there is no direct line of sight between the light source or its reflection at a point 3 feet or higher above the ground at the property line of the source. Light that does not meet this requirement constitutes light trespass.

Specific regulations and exceptions regarding shielding, installation and height limits for pole mounted lighting and lights mounted to buildings or structures are listed in Chap. 22.08 and 22.09.



Modifications to eliminate glare and skyglow

### 3. Lighting Limits -

Use only as much illumination as you need. Excessively bright lighting wastes energy, hampers our night vision and creates a harsh and unattractive nighttime environment. Several well aimed low wattage fixtures usually do a better job than a single high output lamp.

For village residential properties, the maximum allowed lighting limit is the lesser of 7000 lumens or 400 watts (incandescent equivalent is 175 lumens/100 watts).

For commercial properties the limit is 70,000 lumens per acre.

### 4. Lighting Curfews -

Residential exterior lighting, including holiday, ornamental and decorative lighting must be turned off by 10 pm.

Lighting systems for commercial properties need to be turned off or reduced by 50% by 11 pm or close of business (whichever is earlier).

### Does Your Outdoor Lighting Comply with the Ordinance?

Although you may not own a light meter, or be able to estimate the lighting load for architectural lighting, determining if your lights cause glare, light trespass, or skyglow is as easy as taking a quick nighttime walk along your property line.

Looking at your residence, do you see any of the following:

- Can you see glare from your exterior lights?
- Do any of your lights shine upward into the night sky?
- As you walk along the property line, do your lights cast a dark shadow onto your neighbor's property or the sidewalk?

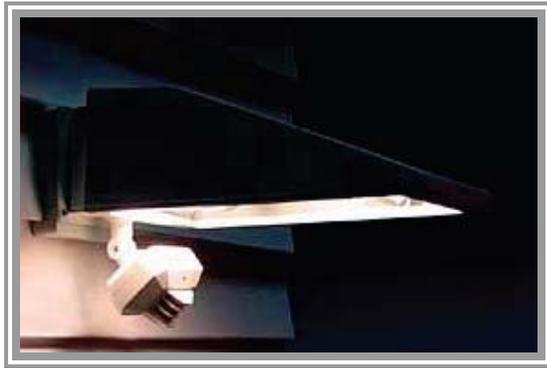
If so, here are a few things you can do:

- 1) Re-aim light fixtures so that the light is directed only to the area you want to illuminate.

2) Add shields to existing fixtures to prevent glare and spill light, or replace your fixtures with shielded ones.

3) Replace an existing lamp with one that has less wattage.

4) Add motion sensors to all-night security lighting to light your entry when you come home or draw your neighbor's attention to prowlers.



Motion sensor light

### **What To Do About Other Sources of Non-Compliant Outdoor Lighting**

Once your own lighting complies with the ordinance, you may want to discuss the ordinance with a neighbor whose light is annoying you.

Remember, most people are not aware that their light is a nuisance, and may not realize how easy it is to fix. Ask them to evaluate their exterior lights, just as you evaluated your own. Share with them how you modified your lights to improve the nighttime environment. Try to be helpful and supportive, and maintain neighborly relations.

If you find that exterior lighting from nearby residential or commercial property continues to be an annoyance, contact Village Hall (267-2680). Make a note of the location of the light fixture,

the time of day it is normally lit, and your vantage point for viewing the problem light.

You may find that a streetlight is the cause of glare or overlighting on your property. The Village is replacing current fixtures with a flat lens that focuses the light toward the ground and this should eliminate the problem.

### **Sources of Sensible Outdoor Lighting Fixtures**

International Dark Sky Association (IDA)-approved fixtures are becoming more available. Information resources include home building suppliers, electrical supply houses and commercial and industrial lighting designers.

### **Sources of Additional Information**

Wisconsin Dark Sky  
<http://www.darkskywisconsin.org>

International Dark-Sky Association (IDA)  
<http://www.darksky.org>

The Illuminating Engineering Society of North America  
<http://www.iesna.org/>