

**Technical Advisory Committee Agenda
February 8, 2012
12:00 noon to 2:00 p.m.
Development Services Center / City Operations Building
1222 First Ave, San Diego, CA 92101
4th Floor Training Room**

<u>Group Represented</u>	<u>Primary Member</u>	<u>Alternate</u>
Accessibility	<input type="checkbox"/> Vacant	<input type="checkbox"/> Mike Conroy
Accessibility	<input type="checkbox"/> Connie Soucy	<input type="checkbox"/> Cyndi Jones
AGC	<input type="checkbox"/> Brad Barnum	
AIA	<input type="checkbox"/> John Ziebarth	<input type="checkbox"/> Kirk O'Brien
AIA	<input type="checkbox"/> David Pfeifer	<input type="checkbox"/> John Ziebarth
ASLA	<input type="checkbox"/> Stephen Halsey	
BIA	<input type="checkbox"/> Kathi Riser	
BIA	<input type="checkbox"/> Matt Adams	
BID Council	<input type="checkbox"/> Tiffany Sherer	
BIOCOM	<input type="checkbox"/> Faith Picking	
ACEC	<input type="checkbox"/> Rob Gehrke	<input type="checkbox"/> Jeff Barfield
Chamber of Commerce	<input type="checkbox"/> Mike Nagy	
EDC	<input type="checkbox"/> Ted Shaw	<input type="checkbox"/> John Eardensohn
In-Fill Developer		
NAIOP	<input type="checkbox"/> Buddy Bohrer	<input type="checkbox"/> Craig Benedetto
Permit Consultants	<input type="checkbox"/> Brian Longmore	<input type="checkbox"/> Barbara Harris
Small Business Advisory Bd.	<input type="checkbox"/> Warren Simon	<input type="checkbox"/> Gary Peterson
SDAR		<input type="checkbox"/> Liz Saidkhanian
Sustainable Energy Advisory Bd	<input type="checkbox"/> Alison Whitelaw	
LU&H Liaison (non-voting)	<input type="checkbox"/> Kelly Batten	

- 1) **Announcements**
- 2) **Public Comment on Non-Agenda Items**
- 3) **Discussion/Action/Informational**
 - A. Energy Efficient Outdoor Lighting Code Amendments (Action) Amanda Lee (20 minutes)
 - B. Mandatory Ministerial Project Manager (Informational) Nabil Chegade (10 minutes)
 - C. Regulatory Relief Ad hoc Committee Report (Discussion) Matt Adams (10 minutes)
- 4) **Future Agenda Item**
 - Discretionary Process Improvements-Process Committee Report
 - Mixed use and multi-family zones being developed through community plan updates (CMT and TAC)
 - DSD Financial Update, effect of fee increase
 - Re-roof recycling (construction recycling)
- 5) **Adjourn – next meeting Wednesday, March 14, 2012 or April 11, 2012**

TAC Mission: “To proactively advise the Mayor and the Land Use and Housing Committee on improvements to the regulatory process through the review of policies and regulations that impact development. And to advise on improvements to the development review process through communications, technology and best business practices to reduce processing times and improve customer service. And to advocate for quality development to meet the needs of all citizens of San Diego.”



THE CITY OF SAN DIEGO

MEMORANDUM

DATE: February 1, 2012

TO: Members of the Technical Advisory Committee

FROM: Amanda Lee, Senior Planner, Development Services

SUBJECT: Amendments to the Outdoor Lighting Regulations

The City's outdoor lighting regulations are intended to minimize light pollution and promote good lighting design that conserves electrical energy. The problem is that the City's existing regulations do not regulate lighting in the best interest of the public as a whole and have not been able to adapt to evolving lighting technologies due to certain requirements in Section 142.0740 of the Land Development Code that specify low pressure sodium or high pressure sodium.

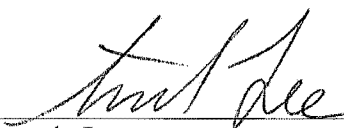
In 2008, the 5th Update to the Land Development Code allowed for alternatives to low pressure sodium, but did not include enough flexibility to allow for energy efficient lighting with corresponding good color rendition for public safety and security along walkways, roadways, and parking lots after 11:00 p.m. The City is exempt from the requirements in Section 142.0740 and is currently in the process of replacing the City's street lights in the public right-of-way with induction lamps, which will result in a tremendous energy savings for the City with a better quality light than the previous high pressure sodium. However, private applicants are precluded from achieving comparable energy savings or better quality light in parking lots or for security.

Amendments are therefore proposed to accommodate broad spectrum alternatives for better lighting for public safety and energy efficiency. The proposed amendments are necessary because the existing code limits outdoor lighting for parking lots and security to generally monochromatic lighting, which tends to create a dark environment instead of the intended secure and safe environment. To offset the increase in allowable lighting for security, new limitations on color temperature, shielding, and full cut off (flat lenses) are proposed to better regulate available light technologies and minimize associated light pollution and sky glow impacts, particularly in consideration of the Palomar and Mount Laguna Observatories. The proposed amendments also are important for the downtown community plan area to provide for better light that supports its high pedestrian, commercial, and entertainment activities. In case of conflict, the proposed amendments defer to the Downtown Lighting Plan (scheduled for adoption in February 2012).

Following is a summary of the proposed changes:

REQUIREMENT	PURPOSE	COMMENT
Shields	Limits light emission above the horizontal plane	Existing requirement
Flat lenses (Full cut-off)	Limits illumination to 0% up-light	New requirement
Color temperature (Kelvin CCT)	Limits blue light that can interfere with observatories and circadian sleep rhythms	New requirement
Required shut off 11pm to 6am.	To help preserve dark night sky	Existing requirement
Exemptions from 11pm shutoff	To provide for public safety and comply with applicable laws	
• Fully operational uses	To provide for safe operation of commercial and industrial businesses that are permitted to operate past 11pm	Modified requirement
• Parking lots and security lighting	To provide for public safety	Modified requirement
• Recreational activities	To provide for safety of participants and spectators for recreational uses that are permitted past 11pm	Existing requirement
• Signs for business open after 11pm	To provide for public safety and compliance with federal and state protections for signage	Existing requirement
• ATMs	To provide for public safety in compliance with the State Financial Code	Existing requirement
• Downtown	To support commercial activity downtown for consistency with the Downtown Lighting Plan	New requirement
Sensitive biological areas	To direct light away from sensitive biological areas	Existing requirement

As part of the public outreach, the City is working with key stakeholders and recently distributed a request for public input on the draft amendments (distributed January 26, 2012), which has yielded a positive response. The Technical Advisory Committee may choose to provide input and make a recommendation. As part of the typical code amendment process, review and input will also be obtained from the Code Monitoring Team (February 8, 2012) and Community Planners Committee (February 28, 2012) prior to Planning Commission and City Council. If you have any questions, please contact me at (619) 446-5367 or ajohnsonlee@sandiego.gov.


 Amanda Lee
 Senior Planner, Development Services

§142.0740 Outdoor Lighting Regulations

(a) Purpose and Intent

- (1) Outdoor lighting shall be installed in a manner that minimizes negative impacts from light pollution including light trespass, glare, and urban sky glow in order to preserve enjoyment of the night sky and minimize conflict caused by unnecessary illumination.
- (2) Regulation of outdoor lighting is also intended to promote good lighting design that conserves electrical energy. ~~Outdoor lighting is regulated by the State of California's Building Energy Efficient Standards of Title 24 of the California Code of Regulations, parts 1 and 6 [Title 24]. No light fixtures shall exceed the light emission requirements of Section 142.0740 unless the light emission requirements of Section 142.0740 do not comply with Title 24's energy efficient standards.~~

(b) ~~Outdoor lighting fixtures that are used to illuminate a premises, architectural feature or landscape feature on private property shall be directed, shielded, or located in such a manner that the light source is not visible offsite, to minimize light emission above the horizontal plane and so that light does not fall onto surrounding properties or create glare hazards within public rights of way.~~

(b) Outdoor lighting shall be installed and operated in compliance with Section 142.0740 in addition to the following regulations:

- (1) California Energy Code, California Code of Regulations, Title 24, Part 6,
- (2) California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, and
- (3) Electrical Regulations (Chapter 14, Article 6).

(c) General regulations that apply to all outdoor lighting:

- (1) Outdoor lighting shall not exceed the maximum watts per square foot identified in California Code of Regulations, Title 24, Parts 6 and 11.
- (2) Outdoor lighting shall comply with the applicable California Green Building Standards Code lighting power requirement for the lighting zones identified on Map xxx filed in the office of the City Clerk.
- (3) Shields and flat lenses shall be required to control and direct the light below an imaginary horizontal plane passing through the lowest point of the fixture, except where otherwise authorized for:
 - (A) Residential entrance lights installed in accordance with the California Building Code and Electric Code requirements for residential exit doors, or

Comment [a3j1]: Designate all of Downtown Community Plan area as Zone 4 on Map. Follow process outlined for informing state and public of change in requirement.

- (B) Outdoor lighting fixtures less than 4,050 lumens.
- (4) Light trespass shall be minimized in accordance with the California Green Building Standards Code, California Code of Regulations, Title 24, Part 11.
- (5) Outdoor lighting shall not exceed nominal 4000 Kelvin Color Correlated Temperature (CCT).
- (6) Outdoor lighting on commercial and industrial properties shall be equipped with automatic timing devices that turn the lights off during daylight and as otherwise required in accordance with Section 142.0740(c)(7).
- (7) All outdoor lighting, including search lights, shall be turned off between 11:00P.M. and 6:00A.M. except:
 - (A) Outdoor lighting may remain lighted for commercial and industrial uses that continue to be fully operational after 11:00P.M. such as sales, assembly, and repair; and for security purposes or to illuminate walkways, roadways, equipment yards, and parking lots subject to the following:
 - (i) Adequate lighting for public safety shall be maintained. Outdoor lighting shall otherwise be reduced after 11:00 P.M. where practicable.
 - (ii) Within 30 miles of the Palomar and Mount Laguna observatories, outdoor lighting after 11:00P.M. shall be limited to a maximum of 4,050 lumens per fixture or a maximum of 2500 Kelvin CCT.
 - (B) Outdoor lighting for the following is permitted to remain lighted after 11:00 P.M. and is exempt from the maximum Kelvin CCT and maximum lumen requirements specified in Section 142.0740(c)(5) and (c)(7)(A):
 - (i) Outdoor lighting used to illuminate recreational activities that are not in a residential zone may continue after 11:00P.M. only when equipped with automatic timing devices and shielded to minimize light pollution.
 - (ii) Illuminated on-premises signs for businesses that are open to the public after 11:00P.M. may remain lighted during business operating hours only. Illuminated off-premises advertising display signs shall not be lighted after 11:00P.M. Signs located both on-and off-premises shall be equipped with automatic timing devices.

Comment [a3j2]: Term "nominal" considers +/- 300 to allow for typical manufacturing variance in products

(iii) Outdoor lighting for automated teller machines and associated parking lot facilities and access areas shall be provided during hours of darkness in accordance with the California Financial Code Section 13040-13041.

(C) Outdoor lighting within the Downtown Community Plan boundary designated on Map C-xxx may remain lighted after 11:00 P.M. in accordance with the Downtown Lighting Plan.

Comment [a3j3]: Insert official map # for Downtown community plan boundary.

(8) On properties which are adjacent to or contain sensitive biological resources, any exterior lighting shall be limited to low-level lights and shields to minimize the amount of light entering any identified sensitive biological resource areas.

(9) Prior to installation of an outdoor light fixture, an Electrical Permit shall be obtained when required in accordance with Section 129.0302. The applicant shall identify the proposed light fixture schedule to the satisfaction of the Building Official including the number of lumens and backlight, up light, glare rating for each fixture to demonstrate compliance with Section 142.0740.

~~(e) Outdoor lighting on commercial and industrial properties shall be equipped with automatic timing devices.~~

~~(d) Outdoor lighting fixtures that are existing and were legally installed before October 28, 1985, shall be exempt from Sections 141.0740(a) and (b), unless work is proposed over any period of time to replace 50 percent or more of the existing outdoor light fixtures or to increase the number of outdoor light fixtures by 50 percent or more on the premises.~~

~~(e) All outdoor lighting, including search lights, shall be turned off between 11:00P.M. and 6:00A.M. except:~~

~~(1) Outdoor lighting in conjunction with commercial and industrial uses that continue to be fully operational after 11:00P.M. such as sales, assembly, and repair may remain lighted after 11:00P.M., provided that all lights are shielded, equipped with automatic timing devices, and utilize only the minimum amount of light necessary to conduct such uses;~~

~~(2) Outdoor lighting used for security purposes or to illuminate walkways, roadways, equipment yards, and parking lots may remain lighted after 11:00P.M. where the lighting meets the following criteria:~~

~~(A) Where located within 30 miles of the Palomar Observatory or Mount Laguna Observatory, lighting fixtures below 4,050 lumens are permitted. Lighting fixtures above 4,050 lumens shall be limited to low pressure sodium or high~~

~~pressure sodium equipped with full cut-off optics (fixtures with flat lenses that limit illumination to below the horizontal plane of the fixture or 0 percent up light). Where high pressure sodium lighting fixtures are proposed, a photometric study or lighting power density calculation of ground lighting levels shall be required to demonstrate that a 3-footcandle or 0.19 watts per square foot average will not be exceeded.~~

~~(B) — Where located 30 miles or more from the Palomar Observatory or Mount Laguna Observatory, lighting fixtures below 4,050 lumens are permitted. Lighting fixtures above 4,050 lumens shall be limited to low pressure sodium or high pressure sodium and equipped with cut-off optics (fixtures that limit illumination to less than 2.5 percent up light).~~

~~(3) — Outdoor lighting used to illuminate recreational activities that are not in a residential zone may continue after 11:00P.M. only when equipped with automatic timing devices and shielded to minimize light pollution; and~~

~~(4) — Illuminated on-premises signs for businesses that are open to the public after 11:00P.M. may remain lighted during business operating hours only. Illuminated off-premises advertising display signs shall not be lighted after 11:00P.M. Signs located both on- and off-premises shall be equipped with automatic timing devices.~~

~~(5) — Outdoor lighting for automated teller machines and associated parking lot facilities and access areas shall be provided during hours of darkness in accordance with the California Financial Code Section 13040-13041. Lighting fixtures shall be directed or shielded so that light does not fall onto surrounding properties or create glare hazards within public rights-of-way.~~

~~(f) — On properties which are adjacent to or contain sensitive biological resources, any exterior lighting shall be limited to low-level lights and shields to minimize the amount of light entering any identified sensitive biological resource areas.~~

~~(d) — In case of conflict between Section 142.0740(c) and the goals and objectives of the Downtown Lighting Plan, the Downtown Lighting Plan shall apply to all areas within the Downtown Community Plan boundary as designated on Map C-XXX.~~

~~(e) — Temporary outdoor lighting, including lighting for temporary uses, special events, and seasonal holiday lighting, may be exempt from Section 142.0740 where the lighting does not exceed 30 consecutive days during any one year period or create a light pollution nuisance or glare hazard.~~

Draft January 26, 2012

- (e)(f) Outdoor lighting on facilities or lands owned, operated, controlled or protected by the United States Government, State of California, County of San Diego, City of San Diego, or other public entity or public agency not subject to City of San Diego ordinances is exempt from the requirements of this division. Voluntary compliance with the intent of Section 142.0740 is encouraged.



Federal Trade Commission Protecting America's Consumers

Facts for Consumers

Email PDF Format En Español

Shopping for light bulbs? Learning about *lumens* is a bright idea

Light bulbs are getting better. Newer bulbs — like halogen incandescents, CFLs and LEDs — last longer and use less energy than traditional incandescent bulbs, saving you money on your energy bills. In fact, beginning in 2012, everyday light bulbs have to meet new Department of Energy standards for how much energy they use. Bulbs that don't will be phased out over the next couple of years.

Along with this move to more efficient bulbs comes a new way to shop for them.

What Are Lumens?

For years, people have chosen light bulbs by the watt, learning over time about how bright a typical 40-watt or 60-watt bulb is. But wattage tells you only how much energy a bulb uses — not how bright it is.

With newer light bulbs designed to use less energy, wattage is no longer a reliable way to gauge a light bulb's brightness. That takes lumens.

lumens = brightness

watts = energy

Lumens measure brightness. A standard 60-watt incandescent bulb, for example, produces about 800 lumens of light. By comparison, a CFL bulb produces that same 800 lumens using less than 15 watts.

How Bright a Light?

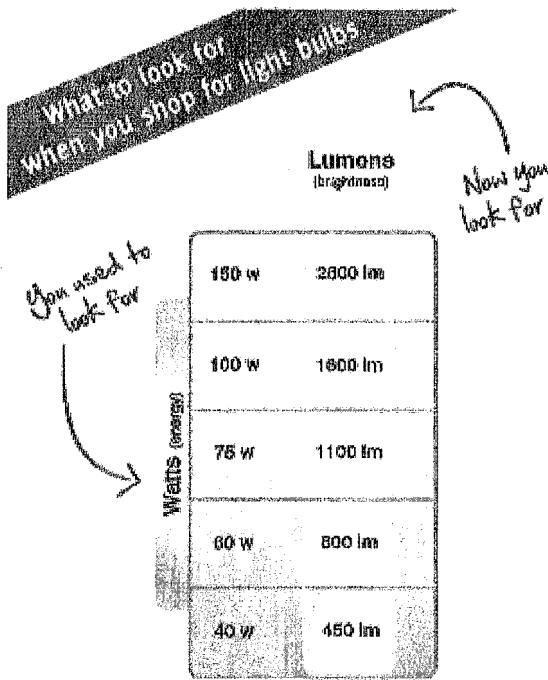
This chart shows the number of lumens produced by common incandescent bulbs. If you're looking to buy a bulb that will give you the amount of light you used to get from a 60-watt bulb, you'll now look for 800 lumens.

You can use lumens to compare the brightness of any bulb, regardless of the technology behind it, and regardless of whether it's a halogen incandescent, CFL or LED. Using lumens helps you compare "apples to apples" when you shop for light bulbs. Once you know how bright a bulb you want, you can compare other factors, like the yearly energy cost.

What to look for when you shop for
light bulbs

Watts (energy)	Lumens (brightness)
150 w	2600 lm
100 w	1600 lm
75 w	1100 lm
60 w	800 lm
40 w	450 lm

A Label to Help You Shop



Estimates based on typical incandescent bulbs

Lighting Facts Per Bulb	
Brightness	820 lumens
Estimated Yearly Energy Cost	\$7.23
<small>Based on 3 hrs/day, 11c/kWh Cost depends on rates and use</small>	
Life	1.4 years
<small>Based on 3 hrs/day</small>	
Light Appearance	
Warm	Cool
<small>2700 K</small>	
Energy Used	60 watts

When you shop for light bulbs, you'll also want to think about light appearance, or color temperature. Light appearance ranges from warm to cool. Warmer light looks more yellow, like the light from a traditional incandescent bulb, cooler light appears more blue.

To find out the light appearance of a light bulb, look at the Lighting Facts label on the package. The Lighting Facts label gives you information you need to compare different bulbs. It tells you:

- Brightness (in lumens)
- Yearly estimated energy cost
- Expected bulb life (in years)
- Light appearance (how warm or cool the light will look)
- Wattage (the energy used)

- If the bulb contains mercury



The label may include the Energy Star logo if the bulb meets the energy efficiency and performance standards of the Environmental Protection Agency and the Department of Energy's Energy Star program. For more on Energy Star standards, visit energystar.gov.

Lighting Facts labels will be on most everyday household light bulbs starting in 2012.

On the Bulb

The number of lumens will be printed on the bulb. If the bulb is a CFL, it may be on the bulb's base. CFLs also will include a web address, epa.gov/cfl, for information on safe recycling and disposal. CFLs contain mercury, so cleanup and disposal require some care and attention.

For More Information

Learn more about shopping for light bulbs at energysavers.gov/lighting.

Watch a video on lumens and the Lighting Facts label at ftc.gov/lightbulbs.

To get free information on consumer issues, visit ftc.gov or call toll-free, 1-877-FTC-HELP (1-877-382-4357); TTY: 1-866-653-4261.

April 2011

Last Modified: Tuesday, June 14, 2011