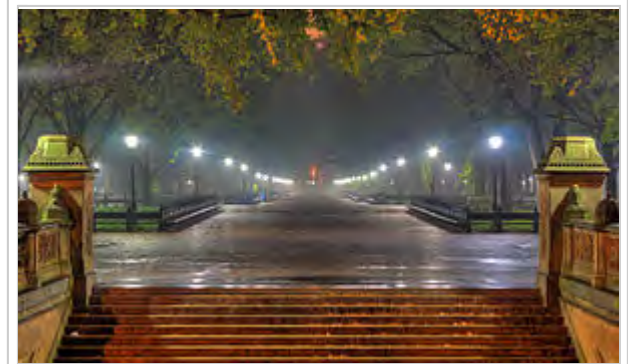


Landscape lighting

From Wikipedia, the free encyclopedia

Landscape lighting or **garden lighting** refers to the use of outdoor illumination of private gardens and public landscapes; for the enhancement and purposes of safety, nighttime aesthetics, accessibility, security, recreation and sports, and social and event uses.



Central Park on a foggy night

Contents

- 1 History
- 2 Current
- 3 Power sources
- 4 Lighting components
- 5 Lamp Types
- 6 Underwater
- 7 Upcoming
- 8 See also
- 9 References
- 10 External links
 - 10.1 Vendor web sites
 - 10.2 Books

History

The public landscape and gardens have been illuminated for as long as interior structures have; for security, circulation, and social occasions; since ancient times by firelight from wood, candles, and animal-plant oil fuels in torches, sconces and lanterns. Since the 19th century's introductions of new interior illumination fuels, the technology has then been used outdoors and in gardens. As municipal systems were developed for their power delivery; Gas lighting of the 19th century and electric light of the 20th century became part of exterior functioning and design.^[1]

Current

Conventionally generated and sourced electricity remains the most used source for landscape lighting in the early twenty-first century. With the combination of energy costs from energy demands, increasing availability of sustainable design methods, global warming considerations, and aesthetic and safety concerns in garden and landscape design the methods and equipment of outdoor illumination have been evolving. The increasing use of solar power, low voltage fixtures, energy efficient lamps, and creative lighting design are examples of innovation in the field.^[1]

Power sources

The outdoor lighting can be powered by:^[1]

Electricity

- conventional source electricity-based fixtures —fixed post, wall, hanging, in-grade, tree mount, stake-mount, stationary, and movable fixtures:
 - Line voltage: 120V - light bulbs, Compact fluorescent lamps-bulbs, custom neon lamps
 - Extra-low voltage: 12V - light bulbs, fiber optics
- solar source electricity based fixtures:
 - On each fixture - photovoltaics - light bulbs

- from property's solar panel system - lighting fixtures, fiber optics
- rechargeable battery fixtures - table top lanterns

Other

- natural gas - fixed post lamps and wall lanterns, flex-connection fixtures
- propane - table top portable lanterns, flex-connection fixtures
- oil fuels - hurricane lamps, 'camping lanterns'
- fire-based flame - candle lanterns, outdoor fireplaces, chimineas, fire bowls, "tiki-torches"

Lighting components

There are many different types of landscape lighting systems, controls and switching, wiring connections, fixture types, functions-purposes-styles, and light sources.

Components can include:

- Power
 - connection to main property power source (*code and permit determined*)
 - Transformers (12v and multi-tap transformers)
 - Timers
 - Light sensor switching (photocells)
 - motion sensor switching
 - Manual 'light switches'
 - automated light switching units-systems
 - remote lighting switching - on-property devices, off-site phone or online systems
- Electric wiring
 - conduit - underground for line voltage, vulnerable locations, under or in constructed elements-pavements
 - cable, wire - underground per codes for line and low voltage, above ground at stake-mounted and tree mounted fixtures.

- Light Fixtures - fixed location - line voltage (120V U.S.) and low voltage (12V U.S.)
 - Post mount - column mount
 - Address light
 - Wall mount
 - Ceiling mount - hanging fixture
 - Security lights
 - Tree lights - up and down lights
 - In-grade fixtures- uplights buried in-ground - top flush with surface
 - Adjustable aim "bullet" - uplight
 - sports court lights - i.e.: tennis courts
 - portable fixtures "hard-wired" or "plug-in" 'wet location rated' interior style fixtures
 - string lighting - "holiday lights" - bulbs and LED
- Light fixtures - low voltage (12V U.S.) - modest location adjustments
 - path lights
 - area lights
 - uplights (directional, spot, and flood lights)- stake mount
 - wall lights - surface mount
 - tree-mount lights - down lights
 - deck lights - surface mount
 - well lights - mounted below grade
 - hardscape lights- integrated into walls.
 - step lights - recessed into stair risers
 - rope lighting - fiber optics

Lamp Types

- - MR16 - 10w, 20w, 35w, 50w. Come in a variety of beam angles from narrow spot (12 degrees, spot 24 degrees, flood 36 degrees, wide flood 60 degrees).
 - Bi Pin - 10w, 20w, 35w, 50w. G4 and G5.3 pin configurations
 - PAR36 - 20w, 35w, 50w

- T3 Wedge
- Single Contact Bayonet (SCB)
- LED MR16 (retrofit lamp)
- LED Bi Pin
- Integrated LED Lamps - LED chips and driver are built into the fixture (permanently)

Underwater

- Water features
 - swimming pools
 - hot tubs
 - plunge pools
 - water gardens
 - reflecting pools
 - fountains
 - garden ponds
 - constructed streams and waterfalls
- Light sources - underwater
 - fixed mount fixtures - i.e.: pool wall light
 - movable uplights
 - fiber optic lights
 - floating fixture lights - rechargeable battery & solar photovoltaic



An illuminated fountain at the Teatro Principal in Mexico

Upcoming

- DIY - designs in public domain^[2]

See also

- Lighting designer
- Garden designer

- Landscape designer
- Landscape architect
- Lighting for the elderly
- Light pollution
- Architectural lighting design

References

1. The Landscape Lighting Book ISBN 0-471-45136-3
2. DIY Plans of simple autonomous automated electric torch
(<http://www.elektor.com/magazines/2008/july-047-august/solar-lamp-using-the-pr4403.532499.lynkx>)

External links

Vendor web sites

- Garden Lighting advice and tips
(http://www.gardenlightinglondon.co.uk/lighting_tips_and_advice.php)
- Example of an LED Landscape Lighting Fixture
(<http://www.affordablequalitylighting.com/outdoor-lighting/led-outdoor-lights/spot-and-flood-lights>)
- Example of an LED retrofit bulb (MR16 LED bulb)
(<http://www.affordablequalitylighting.com/light-bulbs/led-bulbs-120v-and-12v/3w-led-mr16-12v-high-output-bulb>)
- Gallery of LED landscape lighting applications (<http://oclights.com/led-lighting/>)
- Types of LED Landscape Lighting Fixtures
(<http://www.landscapelighting.vegas/led-info/led-landscape-lighting>)

Books

- *The Landscape Lighting Book*; Janet Lennox Moyer; John Wiley and Sons; 2005; ISBN 0-471-45136-3.

Retrieved from "https://en.wikipedia.org/w/index.php?title=Landscape_lighting&oldid=701954651"

Categories: Garden features | Lighting | Architectural lighting design
| Landscape architecture

- This page was last modified on 27 January 2016, at 15:36.
- Text is available under the Creative Commons Attribution-ShareAlike License; additional terms may apply. By using this site, you agree to the Terms of Use and Privacy Policy. Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a non-profit organization.