

## The facts about sports lighting at Battle Point Park

The 35-year lease compromise between the Parks District and the Battle Point Astronomical Association states that the parks will not add any lighting that would *unreasonably* interfere with the mission of the observatory. The BPAA has always abided by the terms of the agreement, amounting to millions of dollars of improvements and volunteer labor invested in the site over the years.

Adding lights of any kind at Battle Point Park would impair the BPAA's mission and the ability of star-gazers to view the wonders of the night sky. The installation of sports lighting there would be a severe violation of the contract between the Parks district and the BPAA.

Encroaching lights have impacted the usefulness of many observatories around the world. The major observatory in Sydney, NSW, Australia, is now a museum; it cannot function as an observatory because it is much too bright there. The observatory on Haleakala, Maui, Hawai'i has been impacted by light pollution; a grass roots community effort is trying to enact legislation on lighting to reverse this process. Mounts Palomar and Wilson in California have been impacted; even Kitt Peak, Arizona, has suffered increasing brightness from nearby Tucson. All the major observatories in western Europe have been impacted.

We have no information about any observatory in any community that has continued to function well in spite of encroaching lights, due to some kind of compromise with a sports arena or other venue. Numerous observatories have gone out of operation, entirely due to increasing nearby lights.

Lights that shine into the eyes of people on the ground constrict their pupils, causing the night sky to look falsely black—in that we cannot see the thousands of faint stars that we could otherwise see. It takes up to a half hour for a person's eyes to fully adjust to darkness. Turn out the lights in your house for a half hour (put on some good music), and you'll be surprised how well you can see in the "dark." Most people in the world have never seen the Milky Way, which is a shame, since it's a breath-taking thing to view.

A one HOUR exposure of Los Angeles taken from Mount Wilson in 1908 (top, photo © KPNO);  
A one SECOND exposure of Los Angeles from Mount Wilson in 1988 (bottom © photo IDA)



*Light pollution is a global problem that is amply illustrated by composite satellite photos of the Earth at night, which clearly show "civilization" as a spreading of lighted areas of the earth. Lights on earth that can be seen from space are wasted since that light never made it to the ground to light the intended target—unless our intention is to notify someone very far away about our presence—in case they haven't picked up our radio transmissions.*

*The United States of America as seen from space (photo credit IDA, excerpted from the article "Light Pollution: Efforts to Bring Back the Night Sky," Environmental Building News, September, 1998, see full article at [www.buildinggreen.com](http://www.buildinggreen.com))*

Lights may also be disorienting to animals and insects, in some cases gruesomely impacting their populations—as when sea turtle hatchlings are attracted inland; or moths while away their brief existence romancing lamps.

Lights give people a false sense of security; yet there have been no studies showing ANY reduction in crime and vandalism due to "safety" lights, which often create shadowed areas into which our constricted pupils will not allow us to see.

Further sources and on-line information:

Battle Point Astronomical Association [www.bicomnet.com/ritchieobs/](http://www.bicomnet.com/ritchieobs/)

International Dark-Sky Association, 3225 N. First Avenue, Tucson AZ 85719; phone 520/293-3198; website [www.darksky.org](http://www.darksky.org)

See also <http://members.cox.net/mbonadio/light.htm> and <http://www.pha.jhu.edu/~atolea/second/page3.html> articles with nice pictures.

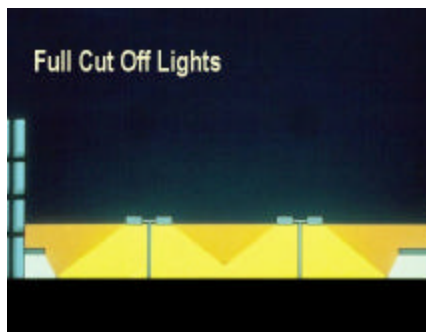
Crawford, David L., "Light Pollution: the Problem and the Potential Solutions," *Baltic Astronomy*, v. 5, p. 263-269, 1996.

Lewin, Ian, "Light Trespass and Light Pollution—Practical Approaches to Dealing with Problems," paper to the IESNA Street and Area Lighting conference, Minneapolis, Minnesota, USA, September, 2000.

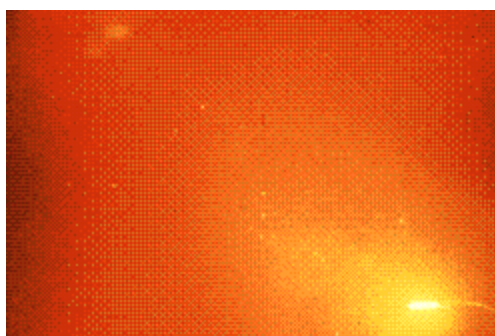
Massey, Philip and Craig B. Foltz, "The Spectrum of the Night Sky over Mount Hopkins and Kitt Peak: Changes after a Decade," *Publications of the Astronomical Society of the Pacific*, 112: 566-573, April, 2000.

## Lights in the Park: More Facts

- Taking away the Dark Skies steals what was promised to Star Gazers and the Community by the Parks and by the City.
- The best time for School groups, Scout groups, and families to visit the observatory is in the early evening hours, during the time of year when it gets dark before bedtime.
  - The Ritchie Observatory is a one of a kind treasure. The telescope is the largest in the Northwest that is accessible to the public. If astronomers have to compete for dark skies, the Observatory mission will not survive.
- From fall to spring, nighttime fog is a common occurrence. Many days, the fog forms a few hours after sunset making early evening the only time that telescopes can be used.
  - It is not possible to predict clear skies with any level of accuracy more than a few hours to a day or so in advance.
  - Viewing of objects that set early in the evening cannot be “scheduled” to happen after a sporting event is over.
- Astronomers freely bring their telescopes to the Park to share views of the night sky with the public. With lights, astronomers will leave the Island or stay home.
- If lights are installed on one field, then they could be installed on all the fields. Battle Point Park will have all the ambience of Auto Center Way in Bremerton.
- Even fully shielded luminaires on the soccer fields would violate multiple City ordinances, and the plan was to not use fully shielded luminaires. This will result in glare, sky glow, and light trespass (the big 3 of light pollution) (see below).
- BPAA’s lease agreement with BI Parks directs both parties to cooperate on lighting and avoid unreasonably interfering with the Observatory. Sports field lighting, whether allowed on certain days or until certain hours, would **unreasonably interfere** with BPAA’s use of the Ritchie Observatory, in violation of the lease.

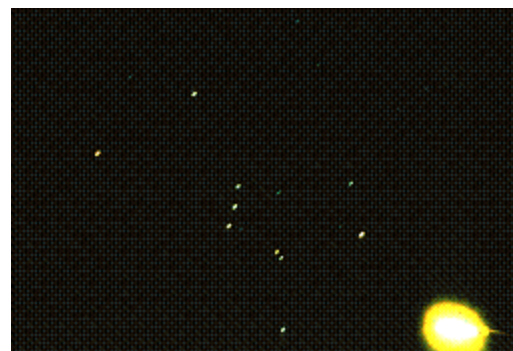


As awareness of the problem grows, many communities—including Bainbridge Island—have passed light pollution ordinances. In response, vendors are now claiming their lights make minimal impact on the environment—for the most part an empty promise, as the diagrams illustrate. Full cut-off sports lighting is simply impracticable—it would require poles in the middle of the fields, or much more extensive and expensive fixtures—and would therefore not be likely to be used.



The night Sky through the glare of an unshielded LPS photo © IDA (left)

The night Sky on the background of a LPS lamp when a rejection filter was applied photo © IDA (right)—what you would be able to see if you weren’t “night-blinded” by the lights.



We cannot go back in time and choose a different location for the Observatory. Because they have not yet invested millions of dollars of funds and volunteer labor in a particular site, the lighting proponents are free to select another site for their lighting project.

BPAA is not against soccer or other sports. BPAA opposes the installation of sports field lighting in Battle Point Park.