



**House  
Legislative  
Analysis  
Section**

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**REPEAL SUNSET ON DARK SKY  
PRESERVE**

**Senate Bill 430 as passed by the Senate  
First Analysis (12-4-01)**

**Sponsor: Sen. Bev Hammerstrom  
House Committee: Conservation and  
Natural Resources  
Senate Committee: Natural Resources  
and Environmental Affairs**

***THE APPARENT PROBLEM:***

While pollution concerns usually revolve around reducing the amount of toxic substances that contribute to air, water, and ground contamination, a growing problem that started to gain attention in the 1990s is that of excessive night light. Light “pollution” results primarily when outdoor lighting used during hours of darkness leaks into night skies, since many light fixtures are not designed to direct light only toward the ground, where it is needed. This causes glare, reduces night sky visibility, and also wastes energy. In an effort to preserve an area for quality night sky-gazing activities, Public Act 57 of 1993 designated state owned land at Lake Hudson, located within Lenawee County, as the state’s first “dark sky preserve.” The act requires that the Natural Resources Commission (NRC) ensure that outdoor lighting within the preserve isn’t installed unless it is needed for safety, security, or the reasonable use and enjoyment of property in the preserve. The commission also has to ensure that outdoor lighting in the preserve does not unreasonably interfere with nighttime activities that require darkness (i.e., night sky-gazing, night photography, etc.). According to a local astronomers association, the preserve has been hugely successful and is a wonderful place to watch the night sky. Knowing that the act expires on June 10, 2003, ten years after its effective date, the association has requested that the legislature repeal the sunset date now.

***THE CONTENT OF THE BILL:***

Public Act 57 of 1993 designated a “dark sky preserve” on state owned land at Lake Hudson in Lenawee County. Senate Bill 430 would repeal a provision of Part 751 of the Natural Resource and Environmental Protection Act ( MCL 324.75106) that would repeal the dark sky preserve designation effective June 10, 2003.

***BACKGROUND INFORMATION:***

According to information obtained from the International Dark Sky Association ([www.darksky.org](http://www.darksky.org), Issue 47, p. 3), three astronomers recently completed the first world atlas of artificial night sky brightness. According to the association, the work of Pierantonio Cinzano and Fabio Falchi of the Department of Astronomy of the University of Padova, Italy, and Chris Elvidge of the National Oceanic and Atmospheric Administration in Boulder, Colorado, has just been published in the Monthly Notices of the Royal Astronomical Society, and their findings indicate that about two-thirds of the world population, including 99 percent of the people in the continental United States (U.S.) and the European Union (E.U.) countries, live under light polluted skies. They further found that about 20 percent of the world’s population and more than two-thirds of the U.S. population can no longer see the Milky Way. Worse yet, according to the association, about ten percent of the world’s residents, including more than 40 percent of those in the U.S. and one-sixth of those in the E.U., live under skies so light polluted that their eyes can never fully adapt to the dark. Also, according to the association, the study has prompted widespread media coverage, including stories carried by the Associated Press (AP), the CNN and ABC television networks, and National Public Radio (NPR).

***FISCAL IMPLICATIONS:***

According to the House Fiscal Agency (HFA), the bill would have no fiscal impact on the state. (11-28-01)

**Senate Bill 430 (12-4-01)**

**ARGUMENTS:**

Most problems involving light “pollution” occur in or near larger urban areas. However, as populations migrate to suburban and rural areas, the problem has spread. Even in rural areas, poorly designed yard lights, such as the towering mercury vapor lights that have become a fixture in many farmyards, obscure the night sky. The problem is a threat to astronomers, but is also a waste of energy resources. Some communities have tackled light pollution by replacing their streetlights with low-pressure sodium (LPS) fixtures. Reportedly, the same amount of light is received from these fixtures, with none of the glare associated with mercury vapor lights. Michigan has taken one step toward tackling the problem by designating state-owned land in southern Michigan at Lake Hudson as the state’s first “dark sky preserve,” where outdoor lighting is controlled with the intent of preserving an area for the enjoyment of the night sky: outdoor lighting is either not used at all, or, if needed, uses special fixtures that direct light downward.

While the main thrust of the act was to provide a recreational opportunity for tourists from Michigan and elsewhere, the preserve has also served as a refuge for amateur astronomers in southern Michigan. It is a place to go to escape light pollution, and to observe such natural-occurring events as the recent Leonid meteor shower when skies were generally cloudy elsewhere in Michigan. Since its inception, the preserve has been used extensively by amateur astronomers from southern Michigan. Astronomers’ associations from areas surrounding Lake Hudson, such as Kalamazoo, Jackson, Ann Arbor, and Detroit, have come to rely on the preserve. The act will be repealed in 2003, and representatives from various amateur astronomers’ associations have requested that the sunset date be repealed and that the preserve at Lake Hudson be permanently designated a dark sky preserve. Fearing that more urgent matters could sidetrack legislation introduced later, they have requested that the legislation be introduced now.

**Against:**

Public Act 57 of 1993 specifically required that outdoor lighting in the dark sky preserve either not be used at all, or, if necessary, that special fixtures be used and light directed downward away from the night sky. It was intended that the preserve, in addition to providing a recreation opportunity for tourists from Michigan and elsewhere, also be used as a pilot project to study the impact of light pollution. In 1997, noting that little had been done to

**For:**

complete the study, legislation was introduced to establish an Outdoor Lighting Study Board within the Department of Natural Resources to study the problem. The legislation (House Bill 4254 of 1997) passed the House but was not acted upon in the Senate. It would seem that this legislation should be reintroduced, and that the impact (both environmentally and fiscally) of improper use of outdoor lighting should be studied before other action is taken to extend the life of the preserve.

**POSITIONS:**

The Department of Natural Resources (DNR) supports the bill. (11-30-01)

The Amateur Astronomers of Jackson support the bill. (11-30-01)

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■ This analysis was prepared by nonpartisan House staff for use by House members in their deliberations, and does not constitute an official statement of legislative intent.