

STAFF REPORT

DATE: October 22, 2019

TO: Pierce County Planning Commission

FROM: Dan Cardwell, Supervisor, Long Range Planning

BY: Erik Jaszewski, Associate Planner, Long Range Planning

SUBJECT: **Light Pollution Prevention – Development Regulations Amendments.**
The Planning Commission will review and consider proposed amendments to Development Regulations Chapter 18B.20 “Countywide Sign Design Regulations” and Chapter 18J.15 “Countywide Design Standards and Guidelines” to adopt enhanced exterior lighting standards.

NOTICE: Notice of the Planning Commission public hearing was published in the News Tribune on October 8, 2019.

SEPA: The Responsible Official conducted an environmental review of the proposed amendments and issued a Determination of Nonsignificance (DNS) on October 15, 2019.

ATTACHMENTS:

- Attachment A Proposed Amendments to Chapter 18B.20, “Countywide Sign Design Regulations”**
- Attachment B Proposed Amendments to Chapter 18J.15, “Countywide Design Standards and Guidelines”**

STAFF RECOMMENDATION

Staff recommends approval of the proposed amendments to Chapter 18B.20 “Countywide Sign Design Regulations” and Chapter 18J.15 “Countywide Design Standards and Guidelines.” Staff finds that the proposed amendments are consistent with the Growth Management Act, VISION 2040, Countywide Planning Policies, and the Pierce County Comprehensive Plan.

PROPOSAL

Amend Chapter 18B.20 and Chapter 18J.15 to adopt enhanced exterior lighting standards based on International Dark-Sky Association best practices in order to reduce the incidence of light pollution resulting from new development and its associated interference with night-time military training operations.

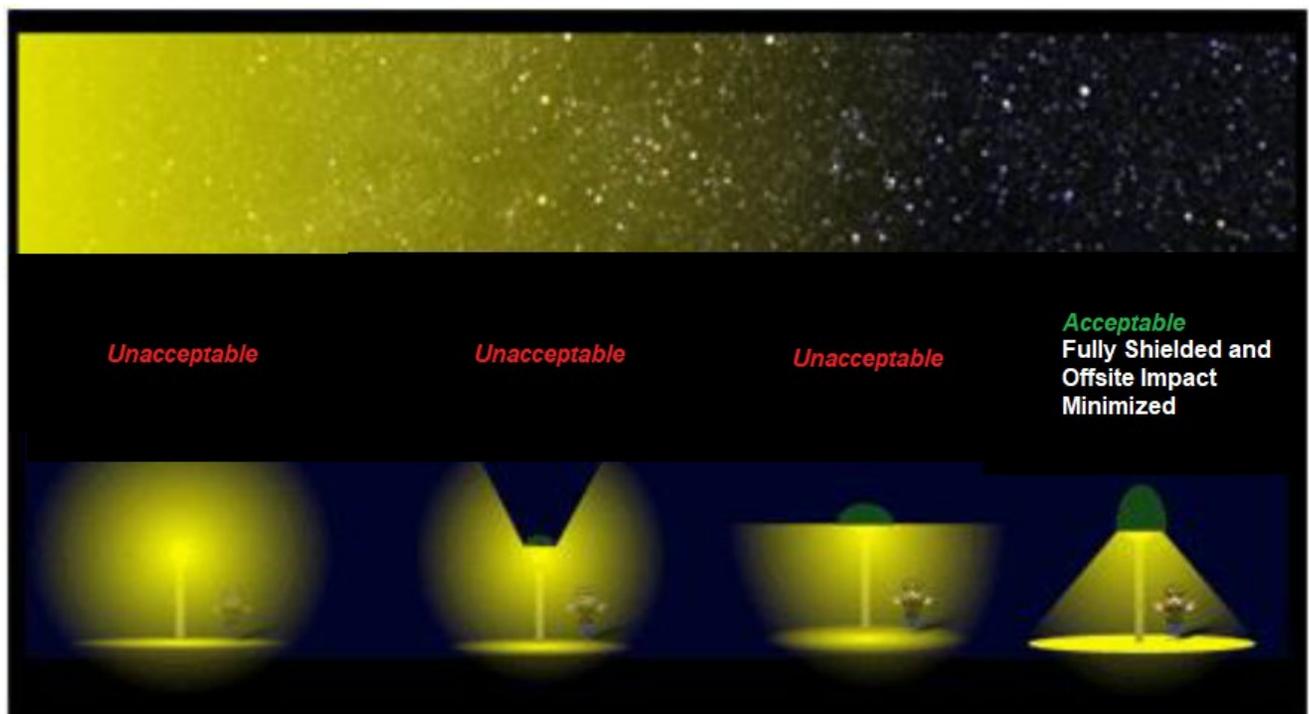
The proposed amendments are based on a recently released report and its associated recommendations, including International Dark-Sky Association best regulatory practices. Those best practices revolve around shielding light sources and employing warm-toned lighting.

The proposed regulations would not apply to existing exterior lighting, existing signs, or future single-family residential development.

The proposed amendments provide stronger and more detailed standards than existing regulations by:

- Requiring lighting to be indirect;
- Requiring all lighting to be directed downward and fully shielded;
- Specifying a certain minimum level of light warmth;
- Prohibiting lighting installations that cast illumination beyond the intended area;
- Prohibiting specific types of highly impactful light sources;
- Minimizing the visual presence of light fixtures; and
- Ensuring lighting cannot be tampered with after installation to defeat glare-reducing elements.

Figure 1 - Acceptable Light Shielding



Analysis

Low-glare lighting applications are becoming more common due to lower energy costs, as well as increased awareness around light pollution impacts. The proposed regulations are expected to further broaden adoption of better lighting applications.

In addition, by targeting the proposed requirements as part of the initial development process, appropriate lighting would be installed in the first place, eliminating the need for costly retrofits or replacements in the future. Additional development costs associated with the proposed regulations are expected to be negligible.

Finally, the Pierce County Comprehensive Plan generally supports coordination between Pierce County and JBLM to ensure compatibility between military activities and land uses. The proposal is supported by the following goals and policies:

- **Goal LU-105** Recognize the unique character of land uses associated with military operations and support structures.
- **Goal LU-106** Provide the military installations with opportunities to participate in the review and development of land use programs, policies, and decisions that affect them.
- **Policy LU-106.7** Consider amendments necessary to provide consistency and compatibility between the County’s Comprehensive Plan, Development Regulations, and the Joint Base Lewis-McChord (JBLM) Joint Land Use Study (JLUS) upon completion of the JLUS which is anticipated to occur in October 2015.

BACKGROUND

The South Sound Military and Communities Partnership published a “Joint Base Lewis McChord (JBLM) Lighting Study Report” in May 2019. This study found that light pollution in the area around JBLM impacts nighttime flight training operations by interfering with aviators’ night vision devices. The report also found light pollution worsening over time, with those trends likely continuing in the future. The Report also provided recommendations to address its findings.

Light pollution is a brightening of the night sky caused by ground-level illumination of buildings, properties, and infrastructure. Those lights affect military night flight training because of aviators’ use of night-vision equipment, blinding pilots and hindering their critical exposure to total or near-darkness conditions.

To compensate for this, JBLM has changed its flight training areas in order to avoid exposure to glare, by limited flight paths to the areas southwest and southeast of JBLM. However, these available training areas continue to shrink as unincorporated Pierce County, and other jurisdictions around JBLM, grow and develop.

Beyond impacts to military readiness, light pollution can have serious consequences on people and the environment including:

- Increasing energy consumption;
- Disrupting natural ecosystems and wildlife patterns; and
- Harming human health through sleep problems.

