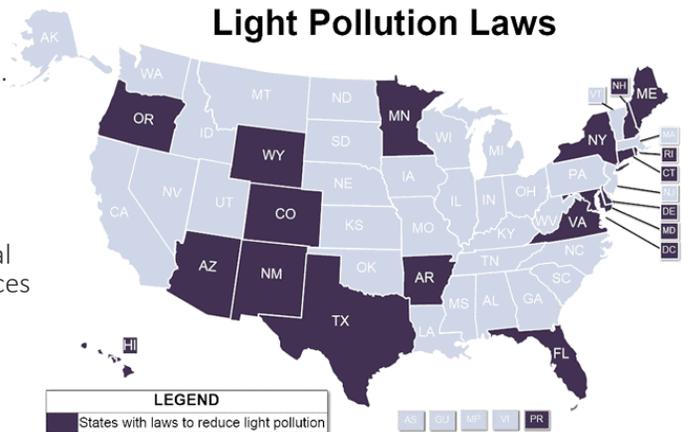


### DESCRIPTION

Lighting regulation changes within the Colorado Oil & Gas Conservation Commission's (COGCC) latest update on 1/25/2021.

- Lighting mitigation plan requirements have significantly changed from former Rule 803.
- The Lighting changes are detailed under **Rule 424** of the COGCC 400-Series requirements update.
- Throughout the U.S. southwest and Rocky Mountain Region, states, counties, and local jurisdictions have enacted specific ordinances as a way to reduce and control extraneous light pollution, as well as mitigate atmospheric light dispersion that can be cast into the night sky.



### REQUIREMENT

Colorado operators will submit a formal **Lighting Mitigation Plan** as an attachment to their **form 2As**. The plan must be signed by a person with relevant experience in **Light Mitigation techniques and design**. The plan will address the following:

#### 1 Lighting Standards

- Dark sky compliant that directs lighting downward & inward such that no illumination shines above a horizontal plane.
- Use appropriate technology within fixtures to obscure, block or diffuse light to intensity outside of the facility boundaries.
- Implement Best Management Practices to minimize light pollution such as timers, motion sensors, lighting colors that reduce light intensity and release low or no-glare illumination.

#### 2 Pre-Production Facility Lighting

- Prior to the commencement of production operations:
  - O&G facilities with active operations must provide sufficient lighting to ensure safety of all personnel on or near the site.
  - All necessary and reasonable precautions must be taken to ensure the facility lighting does not impact the health, safety or welfare of persons or wildlife within 2,000 feet of the facility.
- If the facility has a noise barrier, the lighting must be within the barrier.

#### 3 Production Facility Lighting (When personnel are on-site & off-site)

- After the commencement of production operations:
  - O&G facilities with active operations must provide sufficient lighting to ensure safety of all personnel on or near the site.
  - The O&G facility must not exceed maximum permissible light levels.
  - The O&G facility must minimize continuous on-site lighting when personnel are not present.

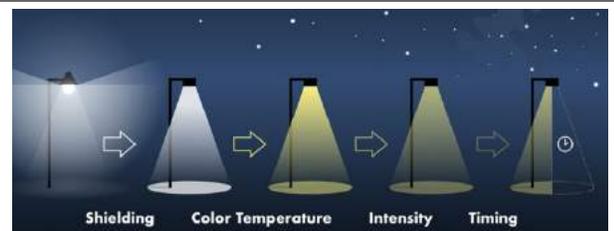
#### 4 Cumulative Light Impacts

- Site lighting must be developed to reduce cumulative nighttime intensity when within 1 mile of any residential or high occupancy building.

### DELIVERABLES

A detailed set of **engineering & design solutions** will ensure you are following the current and established industry regulations from local authorities with jurisdictions.

- All-inclusive site & mitigation lighting plan
- Full cutoff & dark sky compliance light fixture specifications
- Pole & base designs
- Fixture mounting details
- Photometric or lumen performance calculations
- Specific fixture selection & expected illumination performance



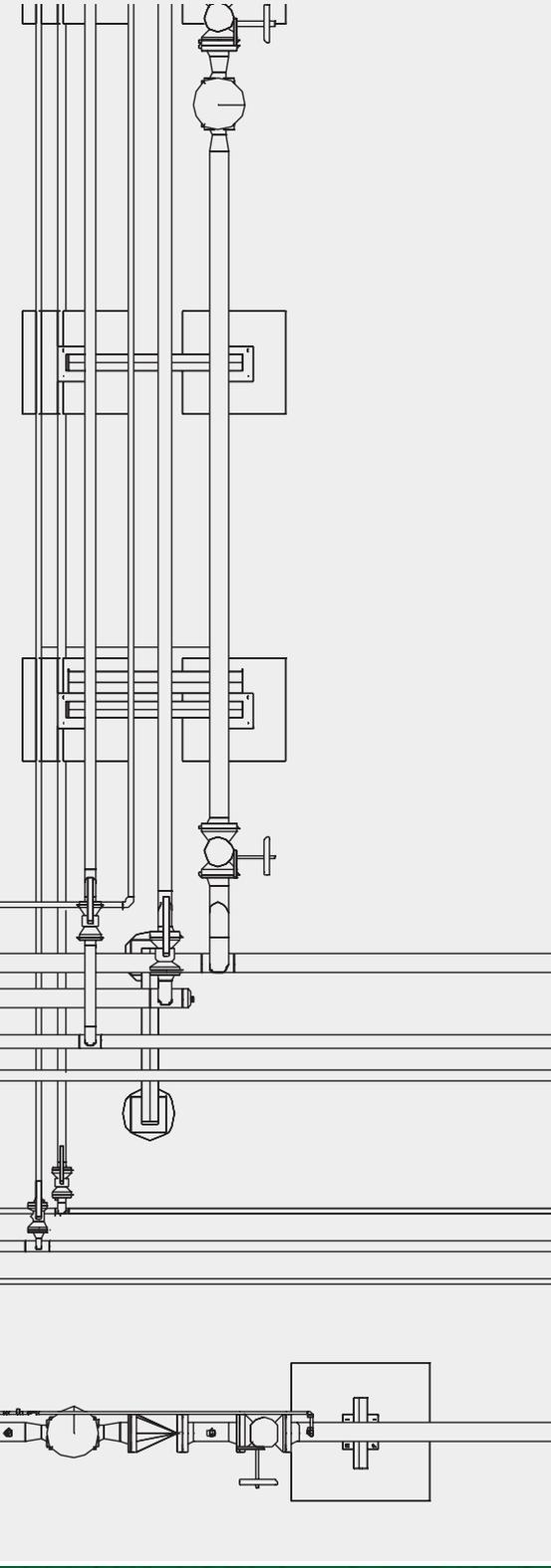
## WHY HALKER?

**Halker** uses a people-first approach to every step of project execution, assembling the best teams, gathering input from everyone, and leveraging the power of this open and inclusive environment to develop industry-leading designs. We leverage process, methodology, standards and policy to scale productivity and continually improve quality and efficiency.

Given our broad background in engineered solutions, we understand the factors beyond project objectives that go into everything we work on, including evolving regulations and environmental impacts. By addressing these aspects head-on at the start of every project, **Halker** is better able to design effective, compliant projects and reduce rework.

We dig deep to fully understand your strategic objectives and what you need to accomplish. This sets **Halker** up to deliver fit-for-purpose solutions as well as additional, value-added project approaches that make a real difference to your bottom line.

To find out more about how **Halker** can help move your project forward in a safe, professionally engineered and optimized manner, contact us today.



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