

New Cal/OSHA Ag Night Work Regulation

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Night Work in Agriculture

- ✓ **December 2013:** Cal/OSHA requests Cal/OSHA Standards Board produce a night work in agriculture regulation
- ✓ **February 2014:** California Rural Legal Assistance Foundation letter to Standards Board urging action on the Cal/OSHA request
- ✓ **2014-2018:** a series of inconclusive stakeholder meetings and delays
- ✓ **2019:** Standards Board staff proposes, and the Board approves a regulation
- ✓ **2020:** Office of Administrative Law approves final regulation, effective July 1



Night Work in Agriculture

Basic Requirements

- ✓ Rear light (in addition to existing requirement for front light) on self-propelled equipment (tractors, harvesters, trucks) (GISO 3441)
- ✓ Illuminate meeting and rest areas to 3 foot/candles (GISO 3449)
- ✓ Illuminate “outdoor agricultural operations except where otherwise specified...,” walkways, restrooms, storage areas” to 5 foot/candles (GISO 3449)
- ✓ Illuminate “agricultural operations that involve the use of tools that can potentially cause cuts, etc.” to 10 foot/candles (GISO 3449)
- ✓ Typical head lamp available through brick-and-mortar (Grainger) or on-line (Amazon, Gemplers) suppliers should be adequate for either 5 f/c requirement for general lighting, or 10 f/c for work with sharp tools

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Night Work in Agriculture

The Details

- ✓ Allows any combination of hands-free portable personal lighting, equipment lighting, or area lighting to achieve required illumination
- ✓ Area lighting illumination measured 30 inches “above the floor, vertical or horizontal or sloped surface” where an employee may walk or work
- ✓ Light for a specific task measured “in the plane” of the task or work surface
- ✓ Use of hi-visibility clothing (vests, shirts, other)
- ✓ Pre-shift safety meetings

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Night Work in Agriculture

Problems we fixed:

- ✓ Advocates wanted minimum illumination with area lighting only, no personal lighting
- ✓ Advocates sought construction site- or petroleum refinery-style “traffic plans”
- ✓ Advocates wanted extensive annual training and higher illumination of all outdoor areas

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Night Work in Agriculture:

Problems unresolved:

- ✓ How responsive will PG&E be to need to install permanent lighting?
- ✓ Absurd under-estimate of compliance cost:
 - ❖ Estimated only @ 1700 farms do night work
 - ❖ Estimated night work only occurs two-three months/year

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Night Work in Agriculture:

Qs & As:

- ✓ **What's a Foot-Candle? What's a Lux? What's the difference?**
 - ❖ Foot-candle: brightness of a light-measurement point one foot away from the source
 - ❖ Lux: unit of measurement of light-level intensity, commonly referred to as “illuminance” or “illumination”
 - ❖ Lights are rated by the manufacturer in foot-candles, lux or both.
 - ❖ Some rated in lumens
 - ❖ Cal/OSHA uses **foot-candles** for this standard

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Night Work in Agriculture:

Qs & As:

- ✓ **How will Cal/OSHA measure light? How should I measure light?**
 - ❖ Illumination levels for task lighting measured at task/working surface, in the plane in which the task/work surface is present
 - ❖ Illumination levels for area lighting measured at @ 30 inches above the floor or other horizontal, vertical or sloped surface on or through
which the employee walks, works or gains access to a work area

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Night Work in Agriculture:

Qs & As:



Do I Need to Purchase a Light Meter?

- ❖ The standard requires specific levels of light for specific tasks and situations
- ❖ Employers should use a light meter to assure compliance when and where employees are working
- ❖ Cal/OSHA staff will use commonly available brands of light meters that can be purchased from various online and brick-and-mortar sources:
 - **Sper Scientific Model # 840020**
 - **Davis Light Meter Model # 401025**
 - **Extech Model # 407026**
- ❖ Standard light meters measure light levels in foot-candles, lux, or lumens.



Night Work in Agriculture:

Qs & As:

- ✓ **How do I Provide Light?**
- ❖ By any one light source or a combination of light sources (e.g., equipment lighting, vehicle lighting or personal hands-free portable lighting like a head-light).
 - ❖ Must provide and maintain hands-free portable personal lighting or area lighting or both.
 - ❖ Tractors, self-propelled farm equipment, and trucks used between sunset and sunrise must be equipped with at least one headlight that must be used to illuminate the area in front of the equipment or truck at least 50 feet. At least one light must illuminate equipment at the rear.

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Night Work in Agriculture:

Qs & As:



Am I Required to Position Lighting to Reduce Glare?

- ❖ Area lighting should be provided and positioned to minimize glare
- ❖ Carefully select lamps, shielding, proper adjustment of the beam angle, and glare avoidance screens.
- ❖ Additional lighting installed on vehicles to meet the requirements of the standard does not need to be used on roads



Is High-Visibility Clothing Required?

- ❖ Provide and require employees to wear Class 2 high-visibility garments (American National Standard for High-Visibility Safety Apparel and Accessories (ANSI/ISEA) 107-2015)

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Night Work in Agriculture:

Qs & As:

✓ Am I Required to Have Safety Meetings?

- ❖ At the beginning of each shift worked at night
- ❖ Inform employees of the location of:
 - Restrooms
 - Drinking water
 - Designated break area
 - Nearby bodies of water
 - High-traffic areas

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Night Work in Agriculture:

Qs & As:



Can I train workers who will work at multiple locations once per shift?

- ❖ GISO 3449 training is required to cover locations of bathrooms, break areas and other factors that are **specific to a given sight**.
- ❖ When conducting an inspection, Cal/OSHA will ask employees about these things
- ❖ If employees can't say (for example) where the bathroom is **at this location**, they will consider training to be inadequate

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Night Work in Agriculture:

Qs & As:

✓ **Should light meter measurements be documented?**

- ❖ Documentation is always helpful to demonstrate compliance, or least a good-faith effort at compliance
- ❖ GISO 3449 light requirements are specific to specific worker activities; that's how OSHA will measure light levels

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Night Work in Agriculture:

Qs & As:

✓ Does a PTO-driven implement need a light on the tractor or the implement?

- ❖ GISO 3441 concerning placement of light on machines requires light on the rear of the machine to illuminate the machine being towed by the tractor
- ❖ *“There shall be at least one rear light which shall illuminate **equipment at the rear.**”*
- ❖ The three types of equipment specified in GISO 3441 are tractors, self-propelled equipment, and trucks
- ❖ It seems the require to provide front and rear light is limited to these types of equipment

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Night Work in Agriculture:

Qs & As:



Is autonomous equipment required to have a rear light?

- ❖ GISO 3441 requires *self-propelled* agricultural equipment used between sunset and sunrise to have specified lights
- ❖ If autonomous equipment is currently provided with lights to the front (as previously required by GISO 3441), it seems likely that GISO 3441 as revised also requires lights to illuminate equipment at the rear

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Thank You!

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