

VTrans – Alternate Strobe light color proposal

April 12, 2023

ODOT is using green flashing LED lights placed atop its snowplow vehicles. Additionally, NDDOT is currently testing steady burning - green warning lights located outside the box (along with stop/tail/turn) and on a telspar post. One of the main reasons given by NDDOT for testing green lights is the frequent use of amber lights by vehicles other than DOT trucks (oil trucks, construction trucks, etc.).



Figure 8: (The green lights demonstrated in snowy conditions on Nov. 18, 2014
[\(http://woodtv.com/2014/11/13/kent-co-wants-new-green-lights-for-plow-trucks/\)](http://woodtv.com/2014/11/13/kent-co-wants-new-green-lights-for-plow-trucks/)

4.3 Intensity

Intensity of warning lights can play a key role in alerting the vehicles following behind a snowplow vehicle. In general, agencies chose the brightest light bulb type for warning lights, such as LEDs. In some cases, increased intensity could be distracting or blinding especially for other snowplow vehicle operators following behind during snow removal operations. In general survey respondents indicated warning lights can never be too bright, while a small percentage indicated that warning lights can be too bright for those following behind a snowplow vehicles. Operators who indicated warning lights can be too bright suggest having lower intensity settings especially at night. Another option suggested by operators is to keep a reasonable distance from the back of the snowplow vehicles. In general, operators who think warning lights are not too bright consider that brighter lights are better to warn drivers approaching from the rear.

4.4 Flashing patterns

Different flashing patterns improve visibility of the snowplow vehicles to nearby vehicles. The ability of a driver to detect the presence of a snowplow vehicle is different than the ability of the driver to detect the relative speed of the snowplow vehicles (perceived approach). The enhanced

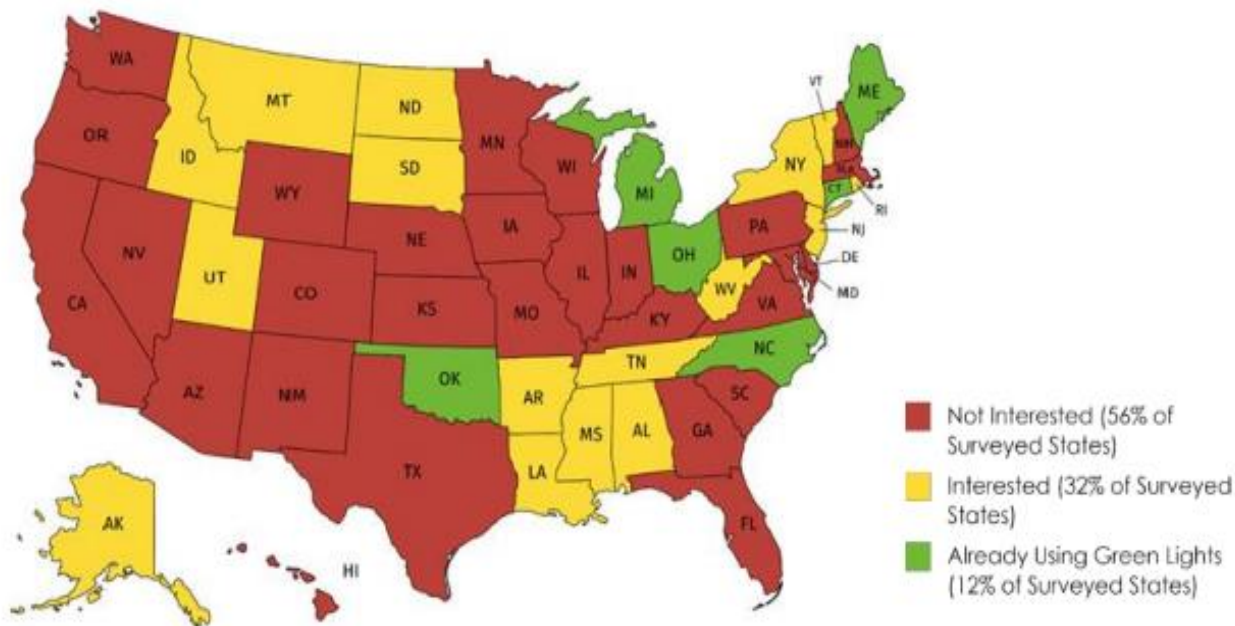


Figure 3-3 Use of/interest in green lights on maintenance trucks

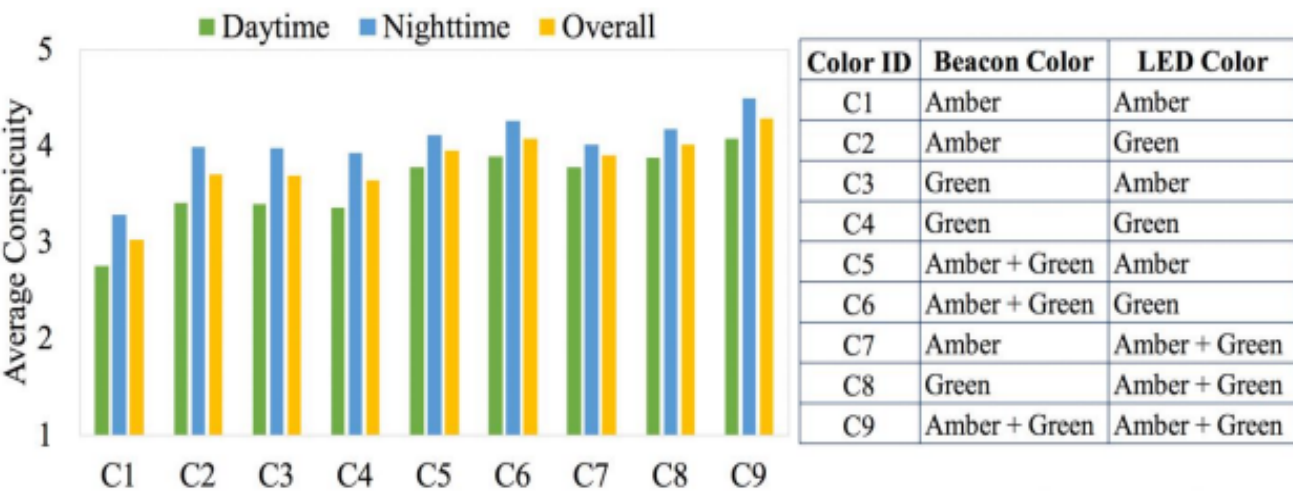


Figure 5-1 Static experiment under clear weather conditions: Conspicuity test results for nine color groups in daytime and nighttime contrasts



Figure 4-9 Conspicuity, appropriate driving action and glare rating tests in the dynamic experiment

Table 3-2 Comments from states that are not interested in green lights on their WMTs

Reason	Number of States
Current legislation or state regulations	13
Satisfactory performance of their current color combinations	6
Using green for other vehicle types such as police, fire and emergency vehicles	5
An informal study on green lights showing their ineffectiveness	1
Green means "go"	1
Perceptions of different colors by the general public	1
Financial concerns regarding the investment cost	1

GREEN STROBE EFFECTIVENESS/ CONCLUSIONS

- 2012: “To make the vehicles easier to see, MDOT began using flashing green lights in 2016 in conjunction with traditional amber warning lights....researchers found that a combination of amber lights in a quad flashing pattern (four times per second) and single flashing green lights on the back or top of the vehicle was the most effective warning configuration. The finding confirmed the effectiveness of MDOT's original warning light configuration, which officials say turned out to be nearly identical to the researchers' recommendations.”
- 2019 - The MTA plans on equipping 17 snowfighters with green flashing lights and retrofitting others in the future. MaineDOT has two trucks right now with the lights and will add more to plows on I-295. Brian Burne, the Highway Maintenance Engineer at the MaineDOT, says they plan on modifying 40 trucks in all.
“Other states have done some testing with this and they’ve found green shows up better than amber does under certain conditions,” said Burne. “When [amber] lights get overused they lose their effect of getting people to slow down and be cautious about what's going in that area.”

[Green is the new orange for Maine plows during weather |
newscentermaine.com](https://www.newscentermaine.com)

[Green lights on Montana snow plows means slow down |
Watch \(msn.com\)](https://www.msn.com)