

# JOHN SPIROS

State Representative • 86th Assembly District

## Senate Bill 386

October 4, 2017

Testimony from Rep. Spiros

Hello, and thank you Chairman Petrowski and members of the Senate Committee on Transportation and Veterans Affairs for allowing me to have the opportunity to share my testimony with you today regarding Senate Bill 386, which would help to address the issue of public safety on our roadways as it relates to animal-drawn vehicles.

Too often, we see in the news of accidents involving animal-drawn vehicles and other motorists, sometimes resulting in fatalities. One of the main reasons for crafting this legislation came after public outcry from Wood County Board supervisors brought to our attention an incident involving an intoxicated driver. Tragically, an intoxicated driver ran into an Amish buggy, killing a father of 6 children. His 10 year-old son, who was with him at the time, was taken to the hospital via helicopter in critical condition. CPR was performed on both the father and the son until first responders arrived on the scene. According to press reports at the time, lighting was not present on the buggy. This past summer, Rebecca Helmuth, 20 years old, was hit and killed when an SUV collided with the Amish carriage in which she was a passenger. The driver of the SUV was transported to the hospital with non-life threatening injuries. The 17 year old driver of the carriage was also injured. Unfortunately these incidents are not isolated. The Wisconsin Department of Transportation has shared the following statistics on the number of crashes involving animal drawn vehicles as well as the number of fatalities.

Year	# of Crashes Involving Animal-Drawn Vehicles	# of Fatalities
2012	31	3
2013	28	1
2014	31	1
2015	34	5
2016	32	2

This bill creates new lighting requirements for animal-drawn vehicles to increase public safety for all motorists and users of the road. Currently, state law calls for one white light to be mounted on the front of an animal-drawn vehicle and two red lights to be mounted on the back of an animal-drawn vehicle, both of these lights visible from 500 feet in their respective direction.

This bill would replace the requirement for the 2 red lights in the rear with 2 yellow or amber strobing lights to be mounted on the rear of the vehicle visible from 500 feet. This bill does not disallow red lights to be used but rather removes their mandated use in favor of a better alternative.

Because a yellow or amber strobe light is a commonly understood caution light already used on numerous slow-moving vehicles, utilization of a yellow or amber strobing light on the rear of animal drawn vehicles will be more easily understood by motorists as a sign to slow down and use caution on approach. Additionally, it is a well-known phenomenon in the law enforcement community that impaired/intoxicated motorists can become fixated/drawn to a solid, red light as a means to help them better see the road. This is why law enforcement and first responder vehicles have moved away from the solid red warning lights and have moved to what has become the traditional strobing red/blue or yellow lights. Given this information, the current requirement could potentially place individuals in animal-drawn vehicles at a greater risk of crash, injury and/or death.

This bill would bring Wisconsin in-line with other states that have successfully addressed the safety concerns associated with slow-moving, animal-drawn vehicles, specifically Pennsylvania and Indiana. Both states already require the lighting configuration being proposed in this bill. In their horse and buggy driver's manual, Indiana encourages operators of animal drawn vehicles to use as many lights as possible to alert drivers of their presence. Pennsylvania is slightly different in that their flashing amber lights are affixed to the front of the vehicle and flashing red lights are affixed to the rear of the vehicle. However, both states require flashing lights to some degree or another for the safety of all users of the road.

Rep. Kulp and I have been in consultation with various groups and agencies in crafting this bill. This bill has the support of the Wood County Board of Supervisors, although they would like to see a tougher penalty for infractions. Additionally, I have reached out to the Wisconsin Chiefs of Police Association, the Wisconsin Sheriffs and Deputy Sheriffs Association, and the Badger State Sheriffs Association; all of these groups were supportive of the legislation. Rep. Kulp has reached out to various Amish communities as well as acting as a go-between for the Amish communities and the Wood County Board of Supervisors.

Currently, there is a penalty in place for operators of animal-drawn vehicles that choose not to comply with lighting requirements. That penalty is a forfeiture of not less than \$10 but not more than \$200 depending on number of violations. However, because this bill would introduce a new requirement, a 6 month grace period will be implemented from the date of passage of the bill. Within the 6 month grace period, any operator found not to be in compliance by law enforcement, will be issued a warning but not a penalty. The penalty will be enforced after the 6 month grace period. We need law enforcement and sheriffs to close the loop on this public safety issue and enforce current laws when they see violations so we can avoid these fatal accidents.

The purpose of the bill is to create a safer environment on our roads while respecting the right of all users on our roads. By requiring a more universally understood caution light, such as the

yellow or amber strobing light, all motorists and users of the road will be better protected from tragedy.

Thank you again for allowing me the opportunity to share testimony in support of this bill, and I welcome any questions.

SB 386

## POCONO RECORD

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# Fatal attraction: 'The moth effect' endangers motorists, police

By KAREN M. HARRIS

Posted Jul 15, 2012 at 12:01 AM

You're driving home at night. It's darker than a coal mine at midnight when, in the distance, you see flashing red lights off to the side of the road.

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You're driving home at night. It's darker than a coal mine at midnight when, in the distance, you see flashing red lights off to the side of the road.

As the lights draw closer, you notice how bright they are.

How mesmerizing.

You continue to watch the lights.

Suddenly, you realize how close they are. You're almost on the shoulder and coming up fast on the emergency vehicles. You swerve to regain your lane and avoid adding to the crash carnage.

According to some experts, you've just experienced "the moth effect."

Like moths to a flame, experts maintain that motorists are attracted to bright lights, whether the flashing red of a police cruiser or the stadium lighting of a construction zone.

While we're all guilty of rubbernecking at the hustle and bustle on the side of the road, doing it at night can be deadly.

During the day, our eyes are able to process not only all that is happening on the shoulder, but we're able to gauge our speed and distance relative to vehicles and people. We can gauge what lane we're in and we can gauge how close we are to the parked vehicles and whether we need to move to the left.

At night, it's a different story.

There are no objects to focus on. There is a minimal flow of optic information. It's the same as driving at night in the rain. You just can't see well, so you're forced to rely on those objects you can identify.

In the case of a crash, it's those flashing lights.

Theories suggest that fixating on these identifiable objects causes you to forget all the other factors that go into driving: maintaining speed, maintaining lane position. Instead, you focus on the lights and so "aim" for them.

Tom Vanderbilt writes in his book, "Traffic," that "the simplest explanation may be that most drivers, upon seeing a car on the highway, assume that it is moving at the same high speed as everyone else — and cars with flashing lights are usually moving even faster than that."

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This optical illusion proves your assumptions false because the vehicles are, in fact, stopped.

He also notes that we tend to look longer at dramatic things, such as a bad crash, meaning that the longer we become distracted, the harder it is to maintain direction.

Researchers have been studying the effect for decades, all the way back to B2 pilots in World War II, who spoke of becoming fixated on the lead plane and navigating toward it.

Today, researchers look at its effects on motorists.

In 2008, the University of Michigan Transportation Research Institute studied the effects of warning lamp color and intensity on driver vision. Variables included color and intensity of light.

Participants were asked to differentiate, as quickly as possible, whether the flashing lights were on the right or left side of an emergency vehicle. They were then asked to differentiate whether an emergency responder was standing on the right or left side of the vehicle.

As expected, participants were better able to differentiate the lights at night and the pedestrians during the day. When color was added to the equation, blue markings were the most easily distinguishable, followed by yellow, red and white.

Researchers suggested equipping all emergency vehicles with blue lights, as is common in Europe. They also suggested that blue lights might prevent the moth effect, in which drivers would mistake red lights for vehicle taillights and follow them off the road and into the emergency personnel.

According to FBI data, 44 police officers were struck by vehicles and killed while directing traffic

or assisting motorists from 2001-10, and 74 were killed while executing traffic stops or roadblocks.

There were 11 just in 2010 alone, the most recent year recorded. Three firefighters were killed in 2011, according to data available in the annual Firefighter Fatality Report, put out by the National Institute for Occupational Safety and Health.

The numbers are even higher for construction workers.

The Bureau of Labor Statistics reports that 268 workers were killed in 2009 and 277 in 2010, accounting for 6 percent of all fatal occupational injuries for those two years.

None of the data differentiates between day and night events, meaning that drivers may have been inattentive for other reasons.

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The "moth effect" is a popular term but not scientifically proven, according to Martin Pietrucha, a Penn State civil and environmental engineering professor and director of the Thomas D. Larson Pennsylvania Transportation Institute. Studies have compared the use of emergency lights at accidents vs. no lights.

"In some cases, the police cruiser would use its lights to pull over a speeder. The officer would turn off the light bar and put on flashers," he said. "In another study, officers would use no light bar at all, and they were still getting hit."

He sees it as a multifaceted problem.

There is a definite optical illusion at night as to placement and speed (if any) of the vehicles on the shoulder.

"Since there are no other visual clues, the driver's depth perception is off," he said. "During the day, we have the cues: Our visual corners are expanding away."

At night "there is a greater chance of driver fatigue or impairment by drugs or alcohol," said Pietrucha. These factors can result in lane drift, which can be deadly if there are other vehicles or people on the shoulder.

"The moth effect is a pop phrase, but the phenomenon is real," said Jack Sullivan, director of training for the Cumberland Valley (Va.) Volunteer Firemen's Association's Emergency Responder Safety Institute and one of the nation's leading experts.

He calls it simply "distracted driving."

Crashes occur because of our innate nosiness. We need to see who got pulled over, so we look at the driver and unwittingly steer the car that way. Crashes occur because of the context.

We see something not so common on the side of the road, fixate and head that way. Crashes occur because we're distracted and not paying attention to the road, not because lights have hypnotized us.

Experts like Pietrucha and Sullivan continue to explore ways to make the roads safer for emergency personnel.

"We study proper positioning of response vehicles, temporary traffic control systems," Sullivan said.

~~Should emergency vehicles be further out into traffic? Should cones and other barriers be further away from the crash or work zone? What types of lighting should there be? Should all lighting and vehicle colors be standardized? Should reflective patterns be standardized?~~

The U.S. Fire Administration collaborated with the Emergency Responder Safety Institute to create respondersafety.com, which contains the latest news and training on roadside safety, as well as incidences of on-duty responders injured or killed by vehicles.

It aims to become a repository for lessons learned, thus helping emergency personnel respond more safely and effectively to roadway incidents.

Sullivan, who speaks to emergency responder groups across the country, has been trying to raise awareness for more than 10 years.

"Any place I go, there is always someone (an emergency responder) who has experienced this (distracted driving) or knows someone who has," he said. "It happens both day and night."



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