

COMMITTEE ON LEGISLATIVE RESEARCH
OVERSIGHT DIVISION

FISCAL NOTE

L.R. No.: 6133-01
Bill No.: HB 1924
Subject: Environmental Protection
Type: Original
Date: May 1, 2012

Bill Summary: Establishes the Night Sky Protection Act to reduce the amount of light emitted into the night sky to near natural levels for specified protected places.

FISCAL SUMMARY

ESTIMATED NET EFFECT ON GENERAL REVENUE FUND			
FUND AFFECTED	FY 2010	FY 2011	FY 2012
General Revenue	(\$126,843 to Unknown)	(\$89,982 to Unknown)	(\$90,944 to Unknown)
Total Estimated Net Effect on General Revenue Fund	(\$126,843 to Unknown)	(\$89,982 to Unknown)	(\$90,944 to Unknown)

ESTIMATED NET EFFECT ON OTHER STATE FUNDS			
FUND AFFECTED	FY 2010	FY 2011	FY 2012
Parks & Soils Tax Fund	(Unknown)	(Unknown)	(Unknown)
Total Estimated Net Effect on <u>Other</u> State Funds	(Unknown)	(Unknown)	(Unknown)

Numbers within parentheses: () indicate costs or losses.
This fiscal note contains 7 pages.

ESTIMATED NET EFFECT ON FEDERAL FUNDS			
FUND AFFECTED	FY 2010	FY 2011	FY 2012
Total Estimated Net Effect on <u>All</u> Federal Funds	\$0	\$0	\$0

ESTIMATED NET EFFECT ON FULL TIME EQUIVALENT (FTE)			
FUND AFFECTED	FY 2010	FY 2011	FY 2012
General Revenue	1	1	1
Total Estimated Net Effect on FTE	1	1	1

Estimated Total Net Effect on All funds expected to exceed \$100,000 savings or (cost).

Estimated Net Effect on General Revenue Fund expected to exceed \$100,000 (cost).

ESTIMATED NET EFFECT ON LOCAL FUNDS			
FUND AFFECTED	FY 2010	FY 2011	FY 2012
Local Government	\$0	\$0	\$0

FISCAL ANALYSIS

ASSUMPTION

Officials from the **Department of Natural Resources (DNR)** assume this proposal would require the Missouri Air Conservation Commission (MACC) to develop guidelines to limit the amount of nighttime light emitted from non-natural sources near certain state parks and historic sites, national wilderness areas, Squaw Creek National Wildlife Refuge, Ozark National Scenic Riverways, and military training areas.

The MACC would be required to develop voluntary guidelines to achieve the following standards: by 2025, no such place should have a night sky more than twice its natural brightness, by 2025, 90% of such places should not be more than 30% brighter than their natural brightness, by 2040, 90% of such places should not be more than 20% brighter, and by 2055, 90% of such places should not be more than 10% brighter.

The MACC must determine each protected area's natural nighttime brightness and must forecast each area's natural brightness for 1 year, 5 years, and 10 years. The MACC would be required to report annually to the department the sky luminance of Missouri protected places in microcandela per square meter.

The Nighttime Sky Protection Act would require the department's Air Pollution Control Program (APCP) to take on new responsibilities of which the program has no previous knowledge or expertise. As such, the program is unfamiliar with the staffing levels and monitoring equipment needed to implement this law. Below represents the program's best estimate.

The department would request two (2) Environmental Engineer I/II's to develop guidelines to limit the amount of nighttime light emitted from non-natural sources near certain state parks and historic sites, national wilderness areas, Squaw Creek National Wildlife Refuge, Ozark National Scenic Riverways, and military training areas. The additional staff would develop a plan for compliance with the law as well as regulations to implement controls on sources of light pollution as well as monitor compliance with and enforce any regulations developed to comply with this law.

The department assumes 50 Sky Quality Meters and 5 Robotic Cameras would be required as a result of this proposed legislation passing. The proposal currently does not appear to contain an associated funding source to offset the cost of implementing this new program. Therefore, the fiscal impact from this proposal is shown as a cost to the General Revenue Fund.

ASSUMPTION (continued)

The department would anticipate additional funding for retrofit or replacement of light fixtures would most likely be required for state-owned and operated facilities in order to comply with rules developed to control sources of light pollution. However, as no control strategies have been developed yet for this proposed law, those costs are currently unknown.

The department's Division of State Parks (DSP) indicated this proposal could have an impact on the State Park System and adjacent landowners. The impact to the Park System would be in changing lighting systems at 40 state parks and historic sites, as well as increased security patrols resulting from these changes.

The Division of State Parks may have to update in-park/site lighting infrastructure as a capital expenditure. This proposal could impact building exterior lighting such as: showerhouses, visitor centers, and contact stations. Security lighting, such as dusk to dawn lights and lights around sensitive areas (e.g. water tanks, wastewater treatment plants, maintenance shops, etc.) could also have to be eliminated or replaced with lowered output fixtures.

Many Division of State Parks' facilities could be affected. The parks and sites near urban areas would be greatly affected by factors outside our control due to the "glow" received from nearby developed areas. If neighboring areas do not comply, it may be impossible for the parks and sites to be in compliance.

Without the determination of both the actual, and targeted, nighttime luminance as would be required by this proposal, it would be difficult to estimate the potential fiscal impact of compliance on the Division of State Parks.

Once guidelines are established, a detailed assessment of campground lodging facilities, Visitor Centers, and other park facilities impacted by this proposal would have to be undertaken in order to ascertain the degree of light-emitting modifications necessary for each facility to come into compliance with the requirements of this bill.

Oversight has reduced the FTE requested from two to one as this proposal would create new responsibilities for DNR and the APCP. **Oversight** assumes any additional FTE would need to be requested during the normal appropriation process.

ASSUMPTION (continued)

Oversight assumes the fiscal impact of this proposal would be allocated to General Revenue or the Parks and Soil Tax Fund dependent upon whether the new FTE allocates time at a state park, historical site or other wilderness area. Oversight is showing an unknown cost to the Parks & Soil Tax Fund for work, expense, and equipment at Missouri's State Parks and Historical Sites.

Oversight assumes the cost of 1 FTE to unknown, paid by General Revenue, for work, expense, and equipment on other Night Sky Protection Sites outside of state parks and historical sites.

Officials at the **Department of Conservation** and **Department of Transportation** each assumes there is no fiscal impact from this proposed legislation.

<u>FISCAL IMPACT - State Government</u>	FY 2010 (10 Mo.)	FY 2011	FY 2012
GENERAL REVENUE			
<u>Cost - Department of Natural Resources</u>			
Salaries	(\$46,290)	(\$56,103)	(\$56,664)
Fringe Benefits	(\$24,839)	(\$29,701)	(\$29,998)
Equipment & Expense	(\$52,319)	(\$4,178)	(\$4,282)
Other Fund Costs	<u>(Unknown)</u>	<u>(Unknown)</u>	<u>(Unknown)</u>
ESTIMATED NET EFFECT ON GENERAL REVENUE	<u>(\$126,843 to Unknown)</u>	<u>(\$89,982 to Unknown)</u>	<u>(\$90,944 to Unknown)</u>
Estimated Net FTE Change for General Revenue	1	1	1
PARKS AND SOILS TAX FUND			
<u>Cost - DNR - Costs at State Parks and Historical Sites (to comply with the Night Sky Protection Act)</u>			
	<u>(Unknown)</u>	<u>(Unknown)</u>	<u>(Unknown)</u>
ESTIMATED NET EFFECT ON PARKS AND SOILS TAX FUND	<u>(Unknown)</u>	<u>(Unknown)</u>	<u>(Unknown)</u>

<u>FISCAL IMPACT - Local Government</u>	FY 2010 (10 Mo.)	FY 2011	FY 2012
	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>

FISCAL IMPACT - Small Business

Although this law is voluntary, small businesses would be asked to voluntarily comply with recommended guidelines developed to control light pollution to meet the standards established by the law.

FISCAL DESCRIPTION

This proposal establishes the Night Sky Protection Act to reduce the amount of light emitted into the night sky to near natural levels for specified Missouri protected places including certain parks and historic sights that allow camping, wilderness areas, riverways, and designated military training areas. The Air Conservation Commission within the Department of Natural Resources must develop voluntary guidelines to achieve specified reduction rates starting in 2025.

The definition of "air contaminant" is revised to include light and allows the commission to regulate it in the same way as other air contaminants under Chapter 643, RSMo.

The commission must determine the natural nighttime sky luminance for each protected place based on environmental conditions; develop a forecast of the luminance over the next year, five years, and 10 years; and annually report to the department the luminance in microcandela per square meter.

This legislation is not federally mandated, would not duplicate any other program and would not require additional capital improvements or rental space.

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SOURCES OF INFORMATION

Department of Natural Resources
Department of Transportation
Department of Conservation

A handwritten signature in black ink that reads "Mickey Wilson". The signature is written in a cursive style with a large initial "M".

Mickey Wilson, CPA
Director
May 1, 2012