National Center for Sustainable Transportation

Project Information Form

Project Title:	Understanding Behavioral Responses of Wildlife to Traffic to Improve Mitigation Planning
University:	University of California, Davis
Principal Investigator:	Fraser Shilling Co-PIs: Winston Vickers, Seth Riley, and Travis Longcore
PI Contact Information:	Email: fmshilling@ucdavis.edu
Funding Source(s) and Amounts Provided (by each agency or organization):	California Department of Transportation (Caltrans) - $96,929.00
Total Project Cost:	$96,929.00
Agency ID or Contract Number:	Caltrans 65A0686 Task Order 015 UCD-CT-FAST-015
Start and End Dates:	December 1, 2018 – November 30, 2019
Brief Description of Research Project:	Creating and maintaining sustainable transportation systems depends in part on understanding and mitigating ecological impacts. Wildlife crossing structures (WCS) are often used to mitigate highway and traffic impacts on wildlife populations. WCS and existing structures (e.g., bridges over creeks) may provide passage for multiple species, depending on species' sensitivity to traffic disturbance and perception of the roadway. Previous work suggests that traffic conditions and traffic noise could reduce WCS effectiveness in facilitating passage of diverse and sensitive species. In this project, more details about noise and light effects on species' use of WCS will be collected. This project will also investigate animal behavior as they approach structures, because reduced species diversity at WCS could be due to behavioral responses to traffic conditions. In order to inform future WCS planning, placement and construction, UC Davis, University of Southern California, and National Park Service scientists will collaboratively study traffic noise and light impacts on wildlife in the vicinity of the proposed Liberty Canyon wildlife over-crossing (over US 101), the first and largest of its kind in California. The results of this project will be a greatly improved statistical model of the effects of traffic on WCS and existing structure use and recommended strategies for transportation agencies to use in developing and modifying WCS to improve wildlife passage.
Describe Implementation of Research Outcomes (or why not implemented): Place any photos here	
Impacts/Benefits of Implementation (actual, not anticipated):	

National Center for Sustainable Transportation

Web Links • Reports • Project website	https://ncst.ucdavis.edu/project/understanding-behavioral-responses-of-wildlife-to-traffic-to-improve-mitigation-planning/ http://wildlifeobserver.net