

Project Information Form

Project Title:	Genetic Toolkit for Assessment and Prediction of Population-level Impacts of Bridge Construction on Birds
University:	University of California, Davis
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Funding Source(s) and Amounts Provided (by each agency or organization):	California Department of Transportation (Caltrans) - \$96,180.00
Total Project Cost:	\$96,180.00
Agency ID or Contract Number:	Caltrans 65A0686 Task Order 002 UCD-CT-FAST-002
Start and End Dates:	December 1, 2018 – November 30, 2019
Brief Description of Project:	As part of an effort to curb declines in bird populations, most birds in California are protected under the Migratory Bird Treaty Act and California Fish and Game Code. Attempts to minimize impacts of Caltrans infrastructure projects, especially bridge construction, on birds have been costly and resulted in project delays. To predict and avoid such conflict, a framework for understanding population-specific migration and nesting patterns would be helpful but efforts to create such frameworks have been limited by the lack of methods for identifying populations at spatial scales relevant for managers. Using Anna’s hummingbird (a species whose ecology has led to conflicts with construction in California) as a case study, the researchers propose to develop a genetic toolkit to assess population-level impacts of Caltrans projects. Products include: 1) A spatial map delineating populations, allowing planners to understand which habitats vulnerable populations are utilizing; and 2) a low-cost genetic assay for population assignment, allowing for specific assessment from individuals at proposed construction sites. This project provides specific tools to avoid impacts with hummingbirds nesting on or around bridges and serve as a general framework for assessing population-specific impacts of Caltrans projects on bird populations.
Describe Implementation of Research Outcomes (or why not implemented): Place any photos here	



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Impacts/Benefits of Implementation (actual, not anticipated):	
Web Links <ul style="list-style-type: none">• Reports• Project website	https://ncst.ucdavis.edu/project/assessment-of-population-impacts-of-construction-on-birds