

FY 2009 RESEARCH PROBLEM STATEMENT

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TITLE

GHE-09-01 The Effectiveness of Vertebrate Passage and Prevention Structures: a Study of Boeckman Road in Wilsonville

PROBLEM (Description of need)

Wildlife collisions are a serious issue resulting in extreme costs from property damage, including injury and possible death, as well as typically fatal results for the wildlife. Given the impacts to both the driver and wildlife, which may include at-risk or endangered animals, more recent attention has been given to modifying or retrofitting roads to facilitate wildlife passage. There has not been sufficient research done to determine the actual utilization of various wildlife passage structures. In the case of the Boeckman Road Project we have a unique opportunity to examine the efficacy of multiple types of passage and prevention structures in a given area where no road existed previously.

PROPOSED RESEARCH, DEVELOPMENT OR TECHNOLOGY TRANSFER ACTIVITY

The Boeckman Road Project in Wilsonville is utilizing a bridge, three large box culverts, and eleven small round culverts to facilitate wildlife passage as well as an amphibian wall and deer fence to prevent wildlife from getting onto the road. Two large culverts and three small culverts will include elements that will allow natural light to penetrate the culvert. Using motion detection cameras and tracking methods coupled with road kill surveys, the types, frequency and preferences of animal (mammals and amphibians) passage will be determined.

BENEFITS

Determining the species-specific use of the different passage types and the efficacy of fencing, will help identify best environmental practices for future projects and retrofits. This information should help match structure type to species of most concern, improving animal use and avoiding costs of less effective passages and fencing. The results of this study will also provide information valuable in assessing the proper passage structures in sensitive habitats, aiding transportation planners and wildlife biologists in working together in making the best assessment for the given area. The proposed project will be an important first step in a broader study that will also include, among other developments, comparison with other roadways with and without culverts and fences and with additional types of passage structures.

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