



Coordination of Reptile and Amphibian Conservation  
with Transportation Projects



## Habitat Loss, Vermont Examples

1997-2007, 7.5 square miles per year  
2007-2015, 15 square miles of forest per year



200 acres per year

# Habitat Fragmentation



Reptiles and amphibians are the vertebrate groups most sensitive to road mortality.



## Why Reptiles and Amphibians?



Populations vrs. Individuals



# Why Reptiles and Amphibians ?



Limited range



# Why Reptiles and Amphibians?

An aerial photograph showing a large, dark, muddy wetland area in the center. To the right is a large, blue pond. A dirt road runs from the top left towards the bottom center, curving around the wetland. In the background, there are green fields, some buildings, and a line of trees. The overall scene is a mix of natural wetland and human-managed land.

Annual movement



# Why Reptiles and Amphibians?



**Annual  
movement**

# Why Reptiles and Amphibians?



**Movement within contiguous habitat**



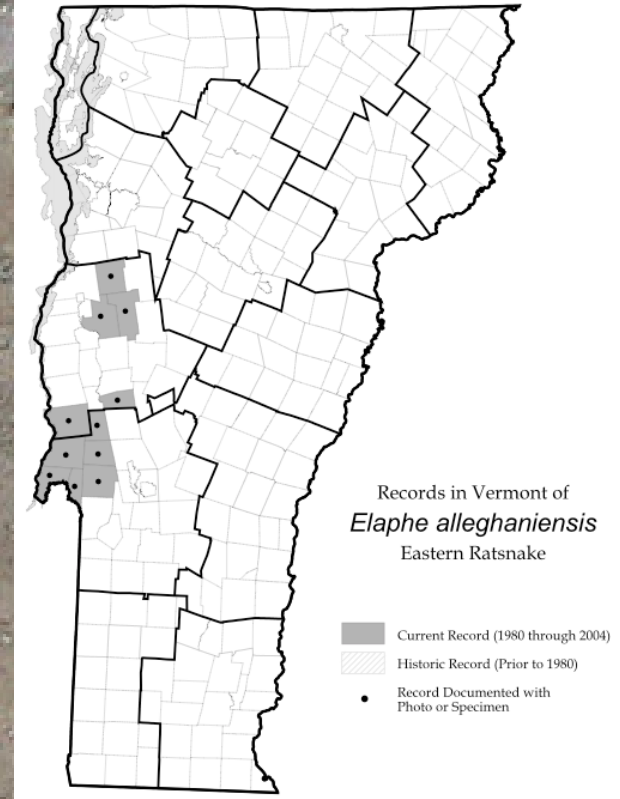
# Why Reptiles and Amphibians?



Recolonization movements



# Why Reptiles and Amphibians?



Genetic Exchange



## Why Reptiles and Amphibians?



Small Size & Slow Speed



## **Why Reptiles and Amphibians?**



**Long lives and low productivity**



# Why Reptiles and Amphibians?



**Road surfaces and edges can  
attract some species**





# All roads



Cause the direct mortality of herptiles using and crossing roads and hence deplete or eliminate populations in the vicinity of their roads and their associated developments









- Netting injuries and fatalities



# Transportation Related Goals

## Locate and map significant crossing areas

### Significant?

- Where rare, threatened, or endangered species are crossing.
- Where concentrations of common species are crossing.
- Where a wide diversity of species are crossing.
- Where road mortality is in danger of eliminating a population.

