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# Decision-Support for Improving Wildlife Connectivity and Transportation

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Ecological Considerations in Planning and Mitigation Measures and Capacity Building Needs for Effective Conservation Alongside Linear Infrastructure

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# What is the Problem? Aquatic Community

# What is the Problem?



# Information Needed

- Traffic (volume, vehicle types, timing)
- Road/rail geometry (width, surface, height relative to land)
- Land morphology (elevation, slope, aspect)
- Land cover (vegetation type, density, height)
- Wildlife species present
- Wildlife mortality on road/rail
- Wildlife movement in vicinity
- Wildlife connectivity

# Decision/Analytical Workflow

# Decision Type & Needs

New or expanded highway
Mitigation for wildlife impacts
Structural mitigation
CITES/heritage species/habitats

### Mitigation

AVOID
Placement
Type & Timing
Benefiting
species/processes
Economic/ecological
benefits

### Construction

Design
Costs
Install/deploy

### Maintenance

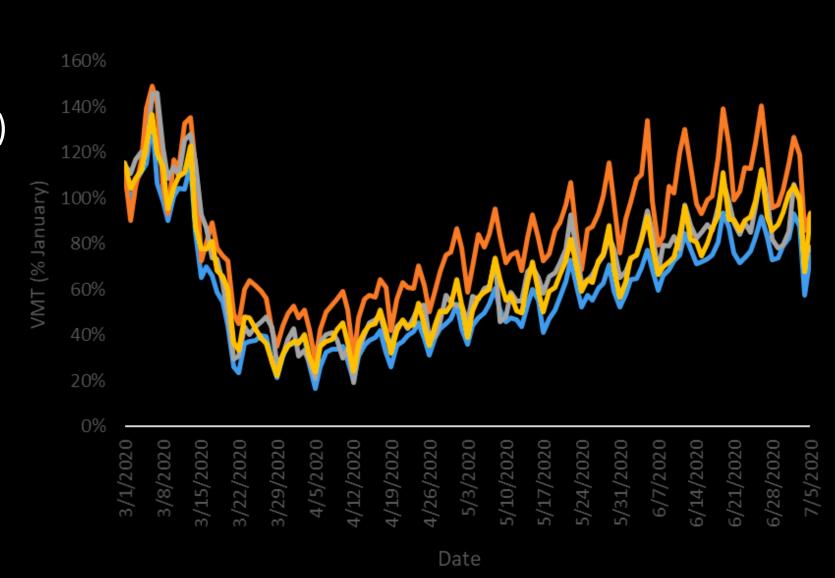
Who How often Costs

### **Monitoring**

Who How often What Costs

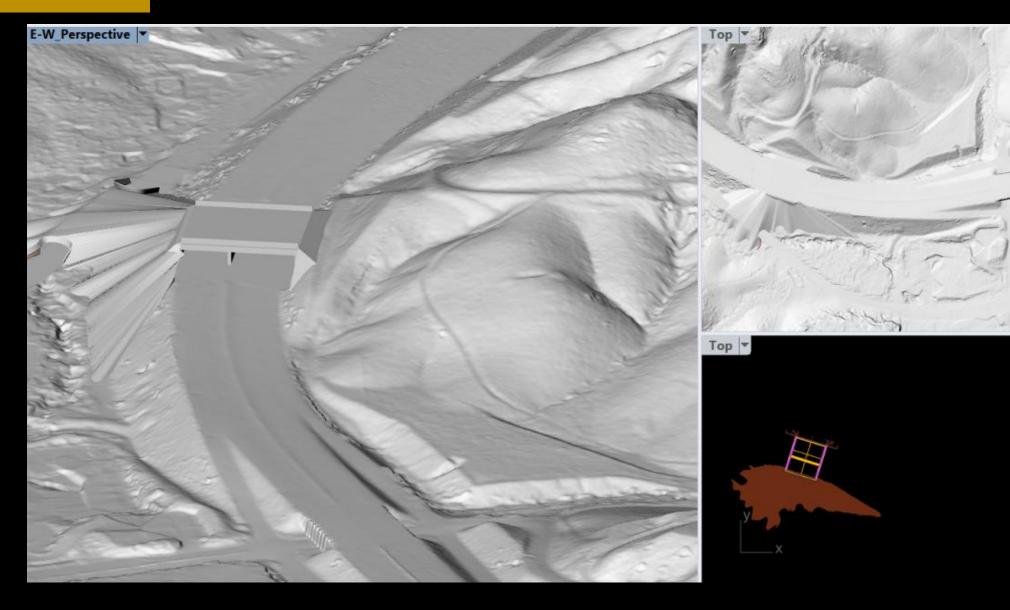
# Traffic

- Volumes (AADT, VMT)
- Timing
- Fleet (cars, trucks)



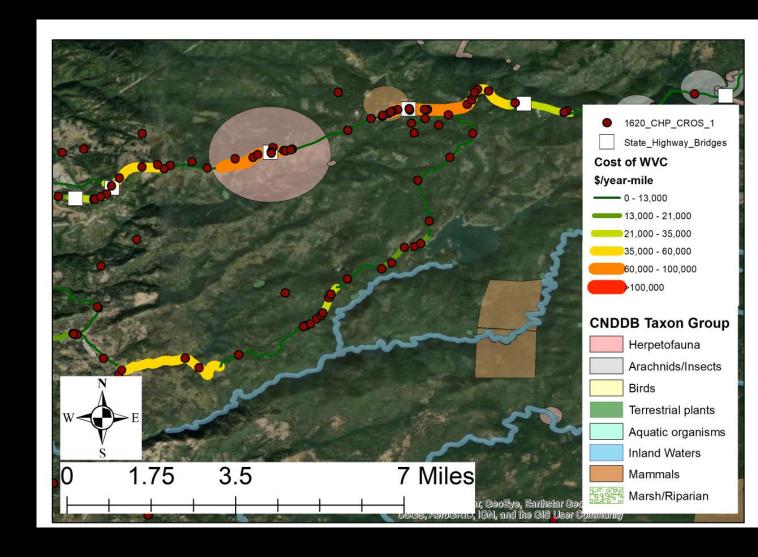
# Geomorphology

- Slope
- Elevation
- Aspect
- Shape
- Design



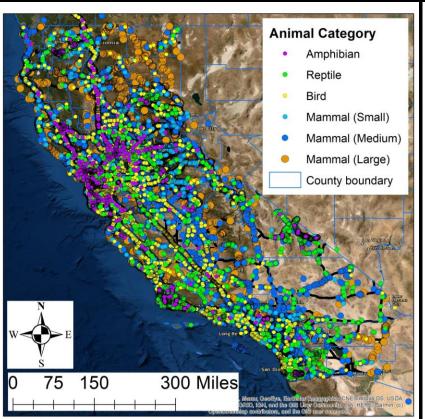
# Land Cover

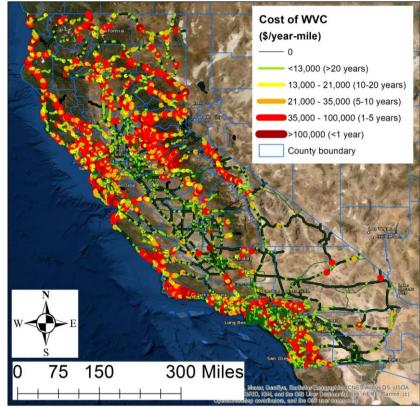
- Habitat/vegetation type
- Density
- Quality
- Special habitats

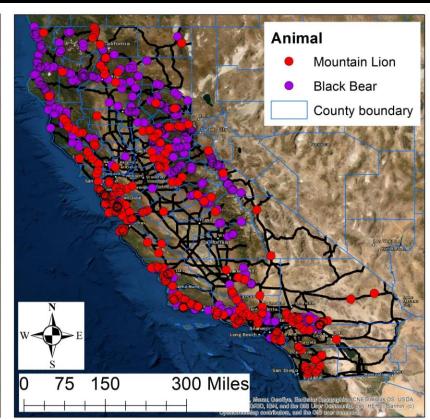


# Wildlife Mortality

- Species
- Locations







### Wildlife Movement

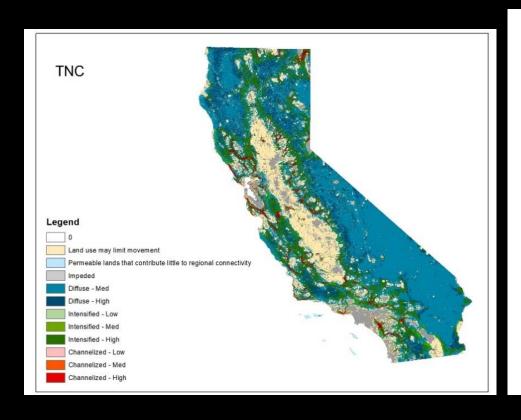
Not much is known about successful crossing on road surface

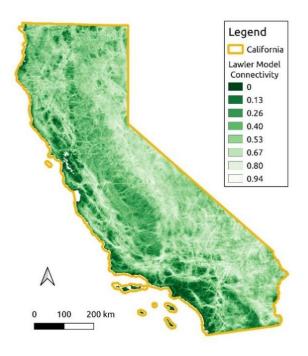


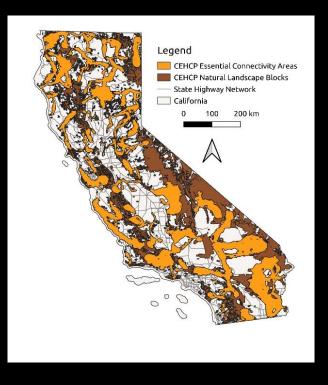




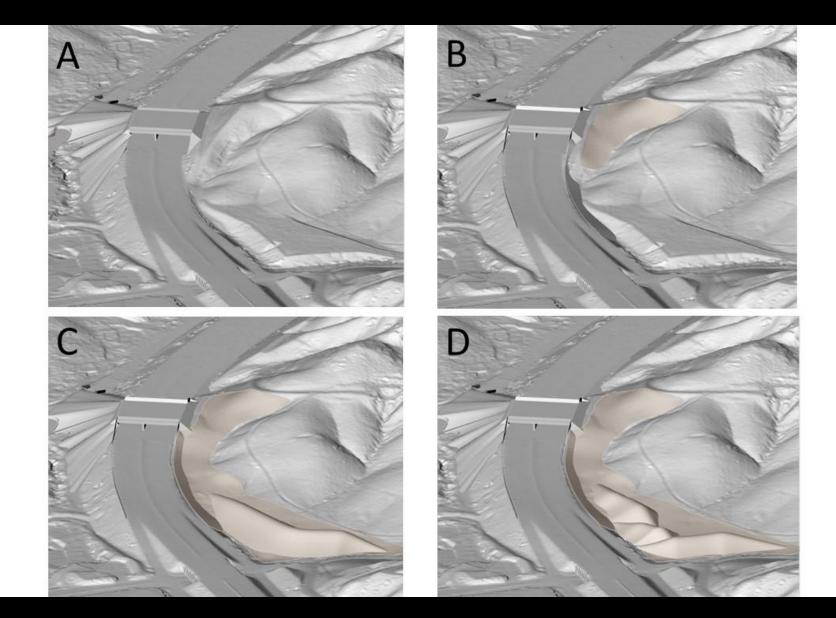
## Wildlife Connectivity







# Design





# Contact

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