



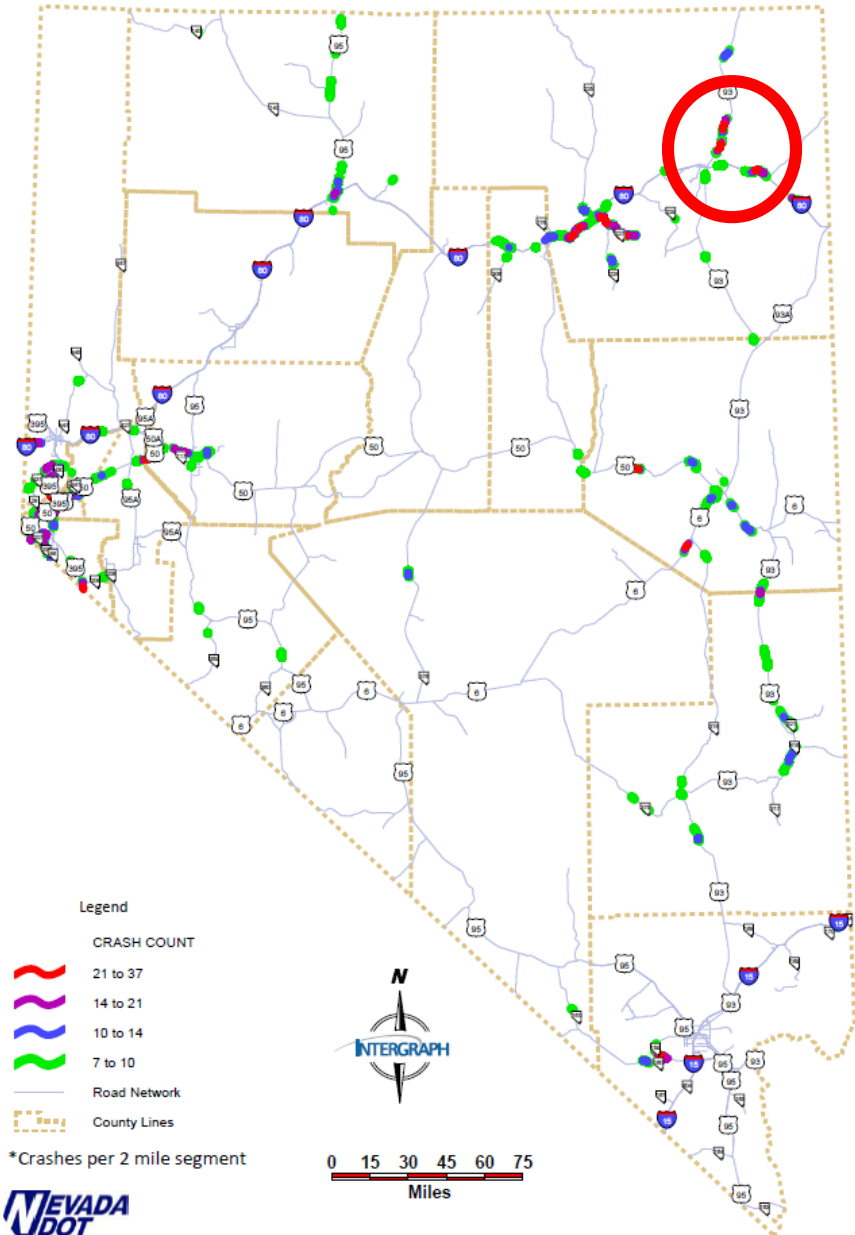
U.S. Department of Transportation  
**Federal Highway  
Administration**

## **Wildlife and Safety Improvements along US 93 and I-80; A Landscape Scale Approach to Habitat Connectivity and Traffic Safety in Elko County, Nevada**

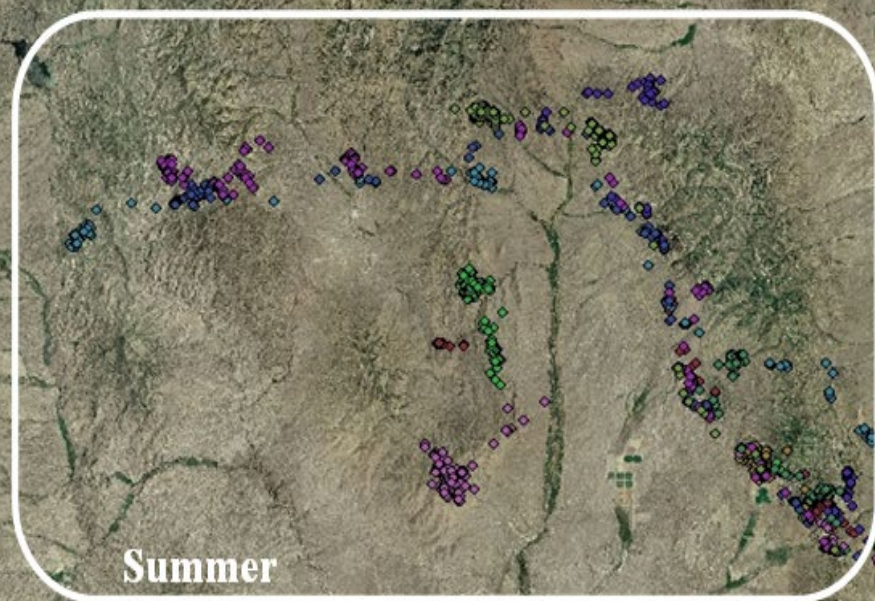




## STATEWIDE ANIMAL CRASH/HIT DENSITY





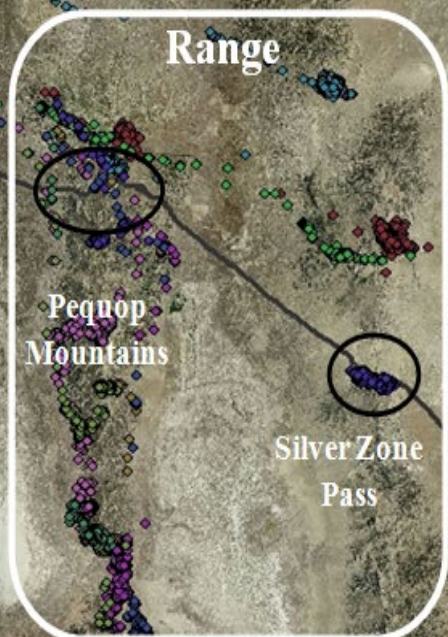


Summer  
Range

US-93  
HD Summit  
10 Mile  
Summit

Wells

I-80



Winter  
Range

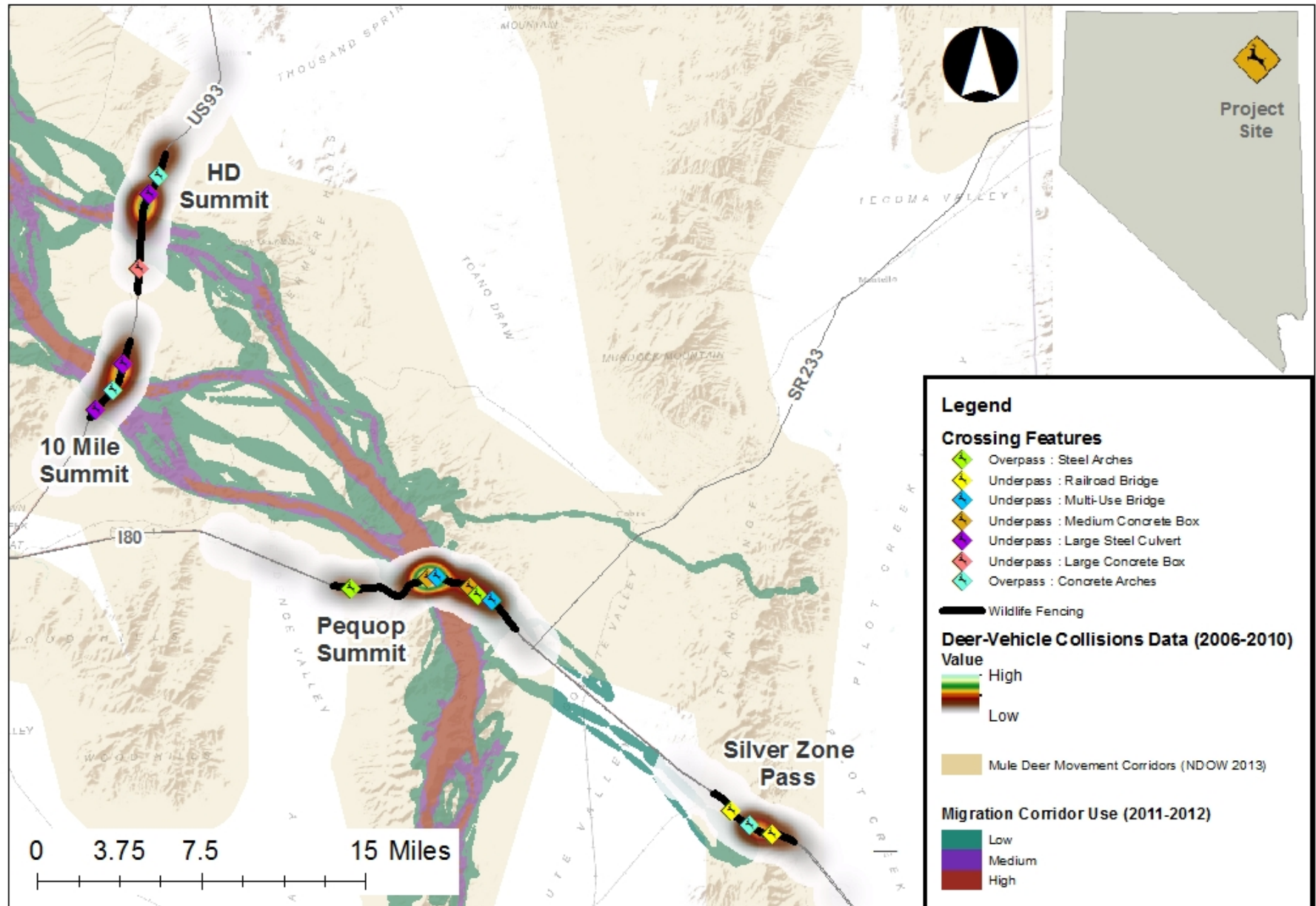
Pequop  
Mountains

Silver Zone  
Pass





# Wildlife and Safety Improvements along US 93 and I-80; A Landscape Scale Approach to Habitat Connectivity and Traffic Safety in Elko County, Nevada.





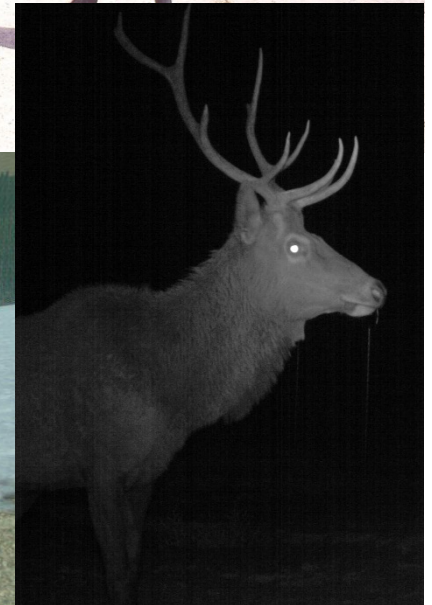




# Post Construction Research

> 1,000,000 Photos

- 20% - No Wildlife
- 5% - Various Species





# Post Construction Research

> 1,000,000 Photos

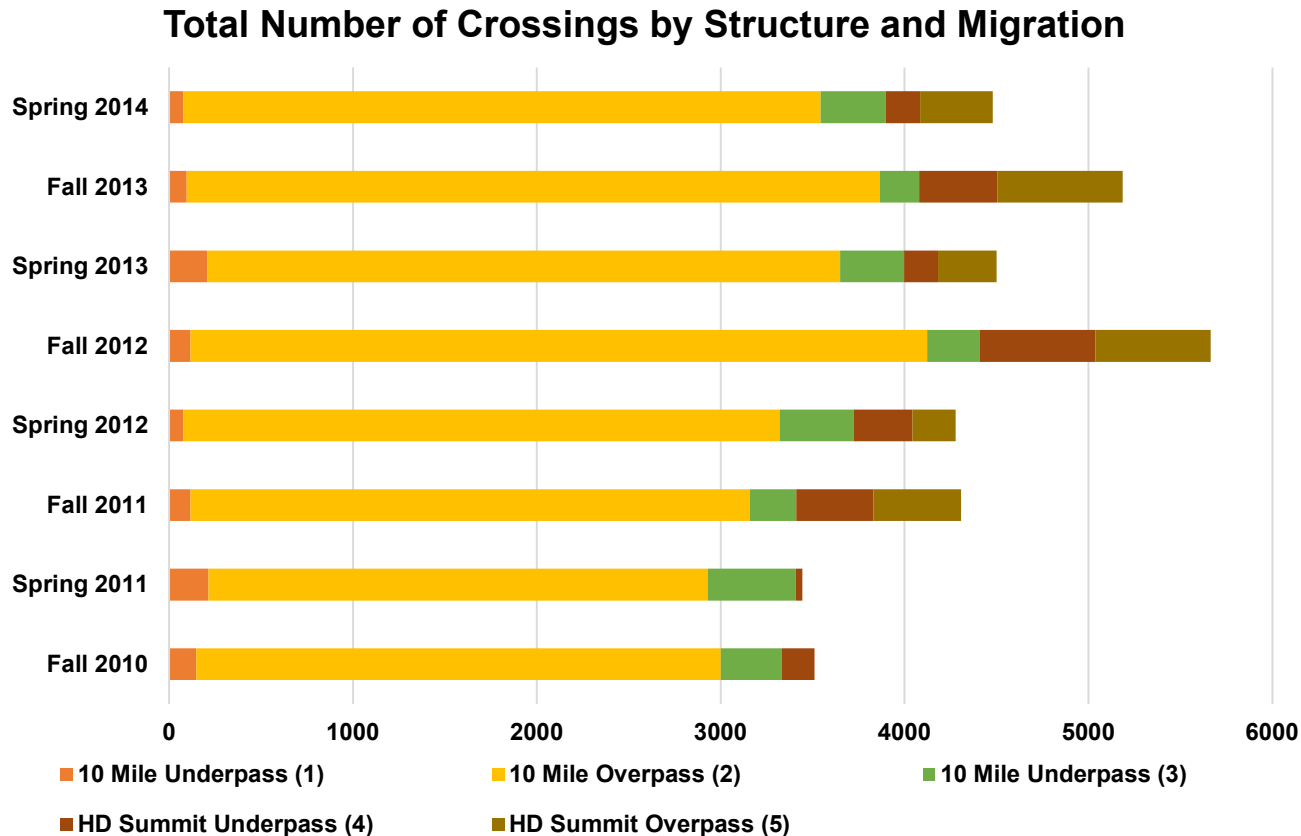
- 20% - No Wildlife
- 5% - Various Species
- 75% - Mule Deer





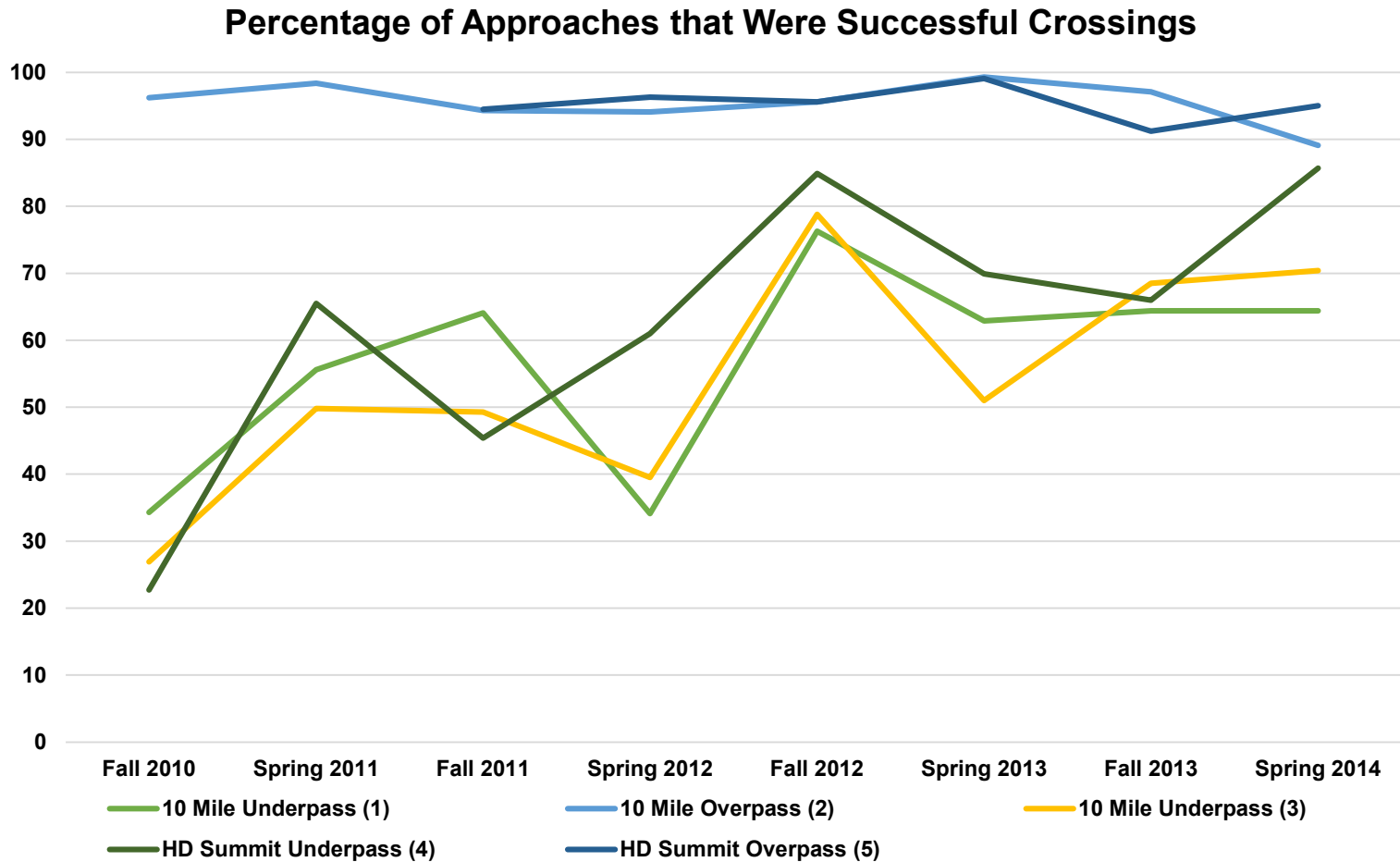
# Results

**> 35,000 Successful Crossings by Mule Deer**



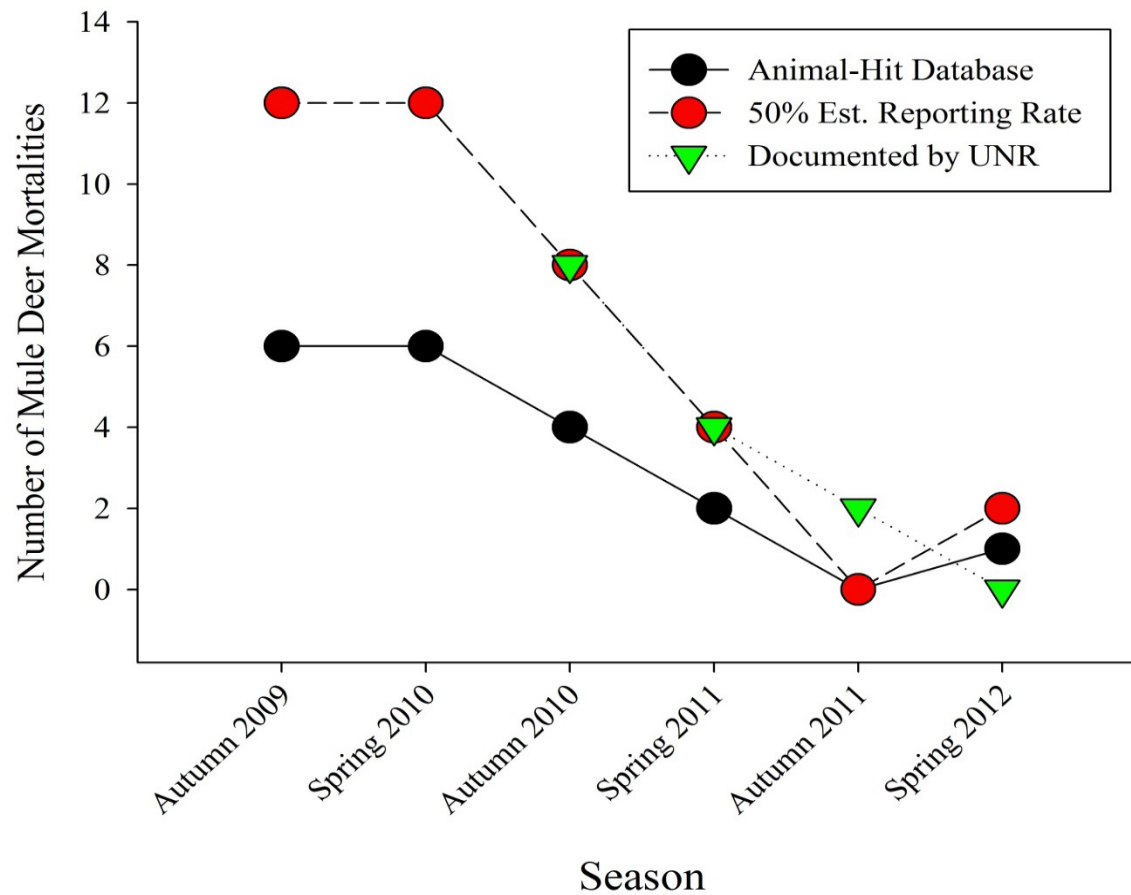


# Results



# Results – Collision Data

## Deer-Vehicle Collisions





# Collaboration

- FHWA & NDOT covered the costs associated with project design, construction, and project research.
- NDOW assisted with the costs of wildlife fencing, post construction vegetation, and project research.
- NV Legislature voted into law limitations on hunting within  $\frac{1}{2}$  mile of all crossing structures.









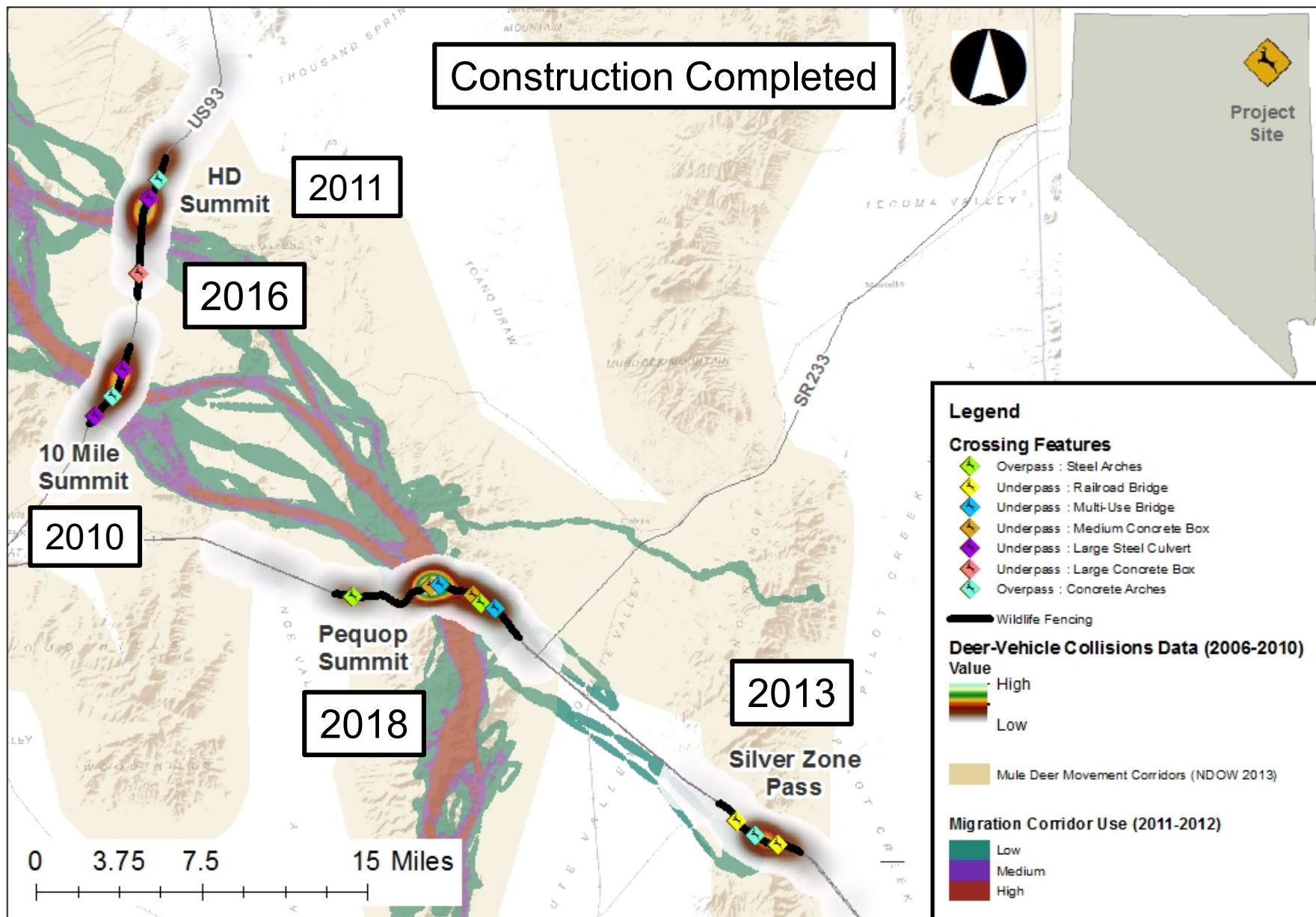








# Wildlife and Safety Improvements along US 93 and I-80; A Landscape Scale Approach to Habitat Connectivity and Traffic Safety in Elko County, Nevada.



# LESSONS LEARNED

## What Functioned and What Didn't Work?

- Fence Ends, Extensions & Treatments

## Early Coordination Efforts with Partners

- Funding Opportunities
- Laws

## Public Outreach Before and After

- Inform and Prove with Research

## Construction Pros and Cons

- Standard Bridge Design vs. Arches
- Concrete Arches vs. Steel Arches
- Ecological Timing

## Crash and Carcass Data

- Collection Methods
- Doesn't Show Avoidance Behaviors





# LESSONS LEARNED

## Continued Research

### Species Use of Infrastructure

- Overpass vs. Underpass
- Multi-Use vs. Single Use
- Sizes and Ratios
- Escape Ramps and Gates
- Cattle Guards
- Baiting



### Species selection of structures

- Availability vs. Use

### Active Warning Systems

- Lidar



# FUTURE GOALS

## Personal Wish List

Continue to Build Meaningful Partnerships

Wildlife Mitigation Consideration with New Developments

Integration of Wildlife Mitigation into Transportation Requirements

Formal Budget for Wildlife Mitigation





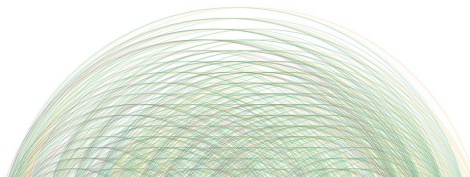


# NWRB

U.S. Department of Transportation  
**Federal Highway  
Administration**



ARC  
NEW THINKING | NEW METHODS | NEW MATERIALS | NEW SOLUTIONS





**Nova Simpson, Biological Supervisor  
Nevada Department of Transportation**

[nsimpson@dot.nv.gov](mailto:nsimpson@dot.nv.gov)