



**2011 Fall I-80 Coalition Meeting**  
**DISTRICT III**  
**WILDLIFE SAFETY PROJECTS**

**Michael Murphy, Assistant District Engineer, Elko**

# Why Wildlife Safety Projects

- 150 to 200 fatalities occur each year due to deer /vehicle collisions (DVC).
- 1.5 million DVC occur each year.
- 1.1 billion dollars in vehicle damage occurs each year.
- Nevada averages one DVC for every 33 miles of public road each year.
- More people are killed by deer than any other wild animal in the United States.







# How Nevada's Plan Got Started

- In the early 2000's NDOT received negative press regarding its lack of action on DVC.
- Much of NDOT's previous wildlife mitigation had proved to be ineffective.
- NDOT developed a working partnership with NDOW.
- Both agencies began looking at
  - Funding.
  - Information and research on various methods of reducing hits.
  - Tracking animal hit locations.

# Funding

- Methods of funding were researched by both NDOT and NDOW.
- NDOT and NDOW's Directors discussed working together to fund the initial projects.
- NDOT received approval to design a potential project for future funding.

# Information and Research

- Both agencies looked for research and possible solutions.
  - Signage
  - Reflector fencing
  - Herd management
  - Automated interactive warning systems
  - Fencing
  - Over or underpass structures

# Tracking Animal Collisions

- NDOT, NDOW and NHP worked together to develop a system for tracking locations of animal collisions.
  - Location
  - Species
  - Gender

# Initial Planning

- In 2007 multi-agency field trips were organized to review high crash locations for DVC and to look at other states' wildlife safety projects.
- The data showed various locations were possible, but the group felt that NDOT & NDOW should concentrate on one general location to develop a working solution.
- The group felt that a location on a two-lane road would be more economical and practical for the initial projects.

# Wyoming – Nugget Canyon

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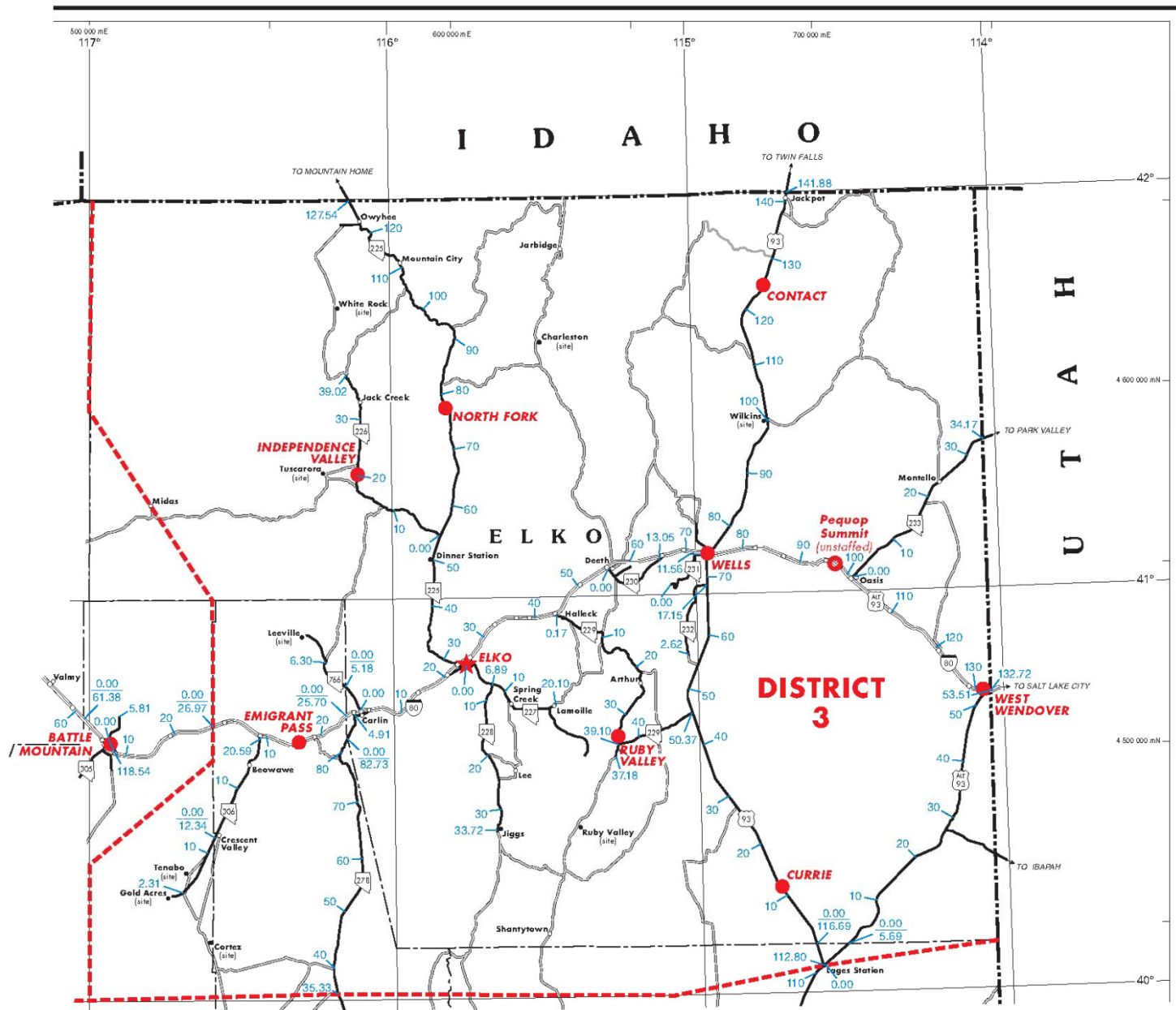
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# Initial Location

- US 93 from Elko County milepost 82 to 94 showed a very consistent number of DVCs on a two-lane roadway and was selected to be the location of Nevada's next generation of wildlife safety projects.
- Information showed that overpasses and underpasses with exclusionary fence had the best success rate.
- The project would qualify for safety funding.





# Project Design – Fall 2008

- NDOT , NDOW selected the exact location of the first project on US 93 EL MP 83.34.
- NDOT's design team finalized the design for a concrete precast overcrossing structure.
- NDOW designed the exclusionary fencing needed to guide animals toward the structure.
- Planning continued on additional locations for other necessary structures.

# Contract 3388 (Ten Mile Overcrossing)

- Contract was bid in the spring of 2009. An overpass @ MP 83 was included.
  - Contractor was Rafael Civil .
  - Bid Amount \$1,800,000
    - ARRA Funding
    - NDOW contributed \$500,000.
  - Work was started in August 2009.
  - Substantial completion June 2010 .
  - NDOW built and funded the fencing .



















# Contract 3408

## Three Undercrossings

- Contract was bid in the early spring of 2010. Included were three underpasses @ EL MP 82.16, 84.65 and 92.57 and all fencing.
  - Contractor was Capriati Construction.
  - Bid amount \$2,200,000.
    - Safety funding
  - Work was started in April 2010.
  - Substantial completion September 2010.

















# Contract 3407

## HD Summit Overcrossing

- Contract was bid in the spring of 2010. Included one overpass @ EL MP 93.4 and all fencing.
  - Contractor was Peek Construction.
  - Bid amount was \$3,150,000.
    - Safety funding
  - Work was started in May 2010.
  - Substantial completion June 2011

















# Future Contracts

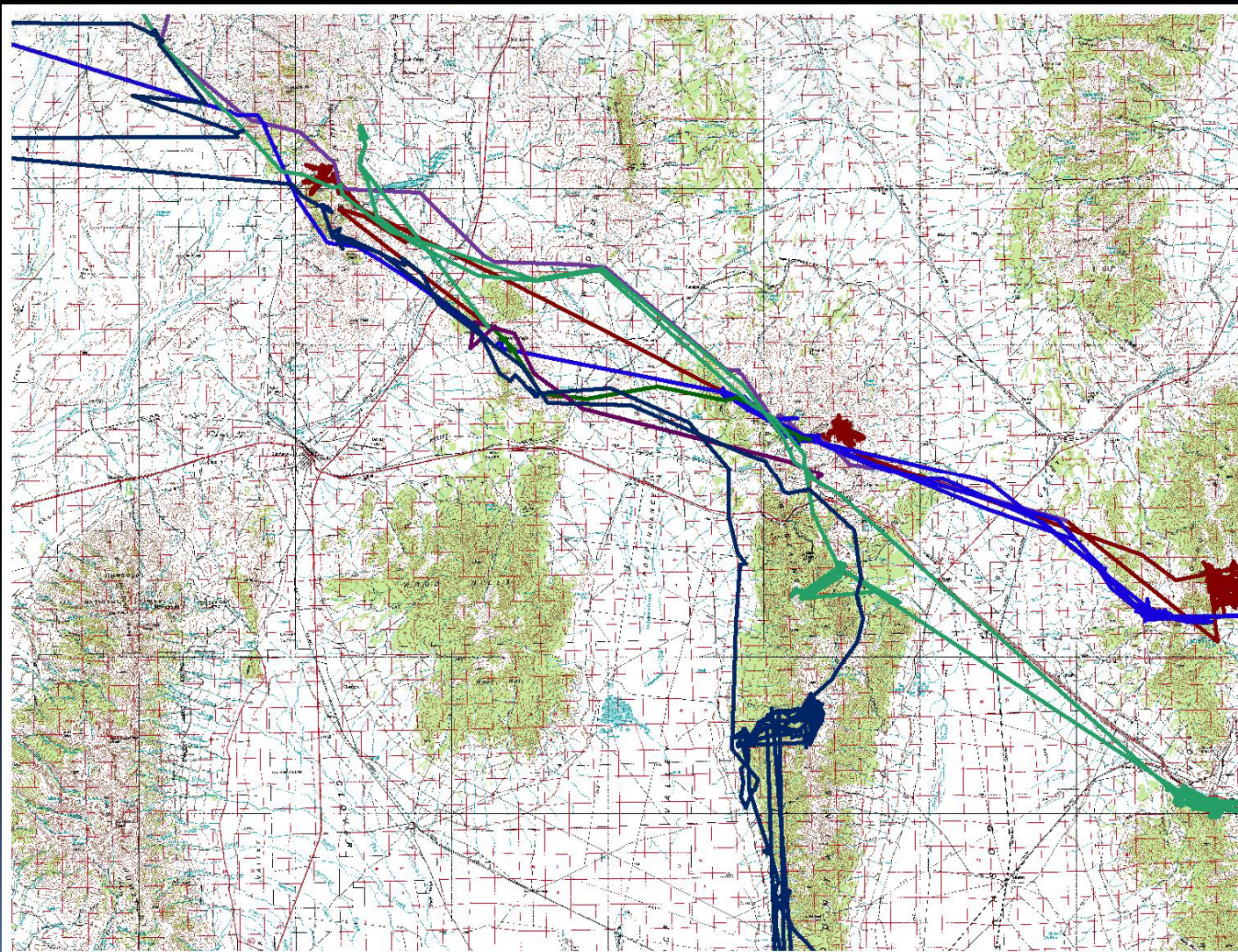
- Future crossings are currently in design at:
  - I-80 on Pequop Summit.
  - US 93 at MP 95 - 96 or at MP 88 – 90.
- The first crossing on I-80 to be constructed in Nevada will be at:
  - I-80 in the Silverzone Pass area.
- NDOT and NDOW are currently looking statewide for additional locations.

# Research Grant

- In the fall of 2010 NDOT funded research with NDOW and University of Nevada – Reno to monitor deer migration through the crossing on US 93 for several years.
  - NDOW provided cameras to monitor all the completed crossing locations.
  - NDOW also installed satellite tracking collars on several deer whose migration route crosses US 93.



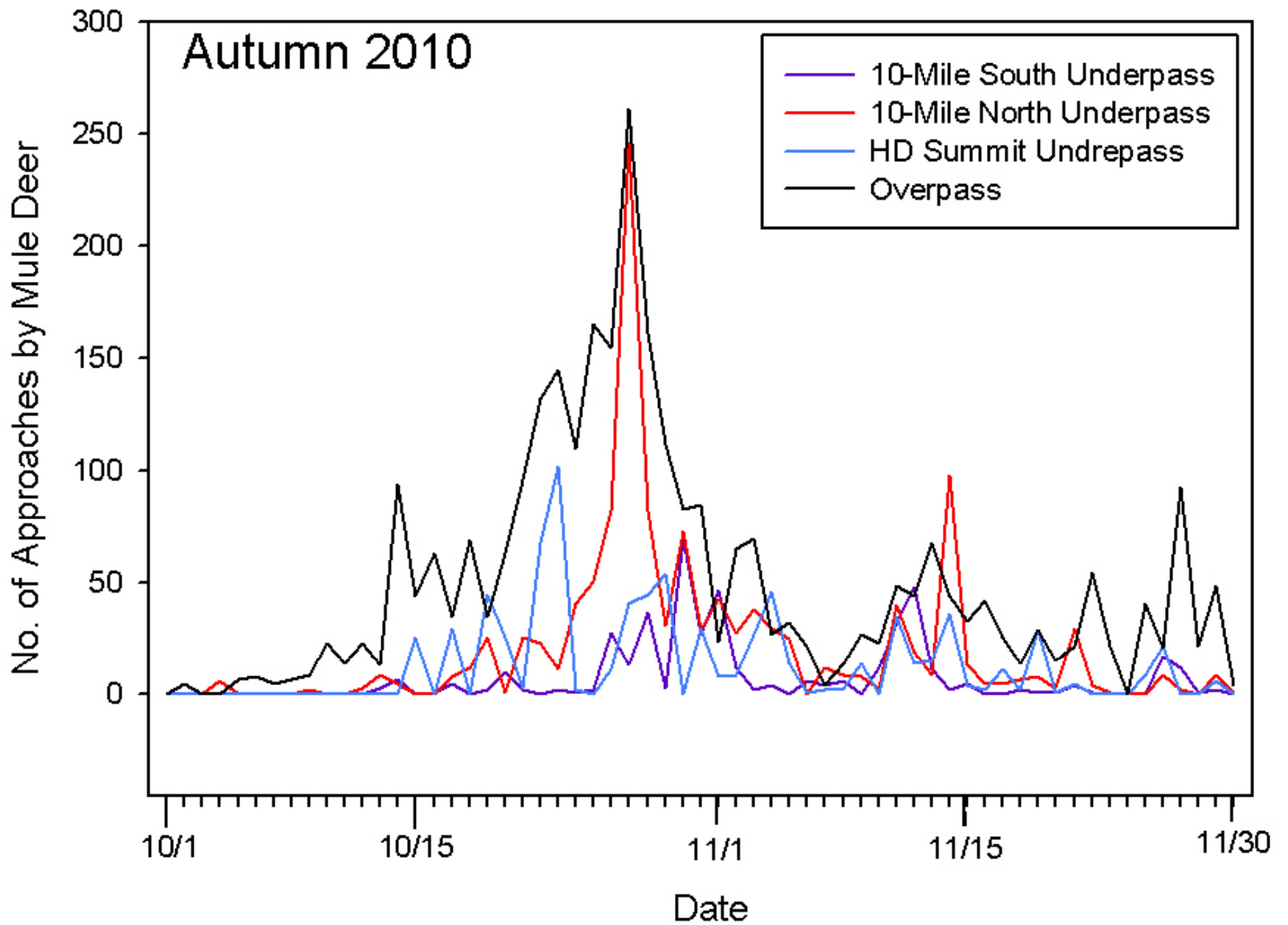
# NDOW's Satellite Tracking



# Fall 2010 – First Migration

- In October a UNR grad student began monitoring four complete structures.
- NDOT, UNR, NDOW, and NHP met weekly to discuss problems and to record any physical changes during the week .
- UNR will publish a research paper each year with the results of the study.





# Fall 2010 Migration

	Type of Structure	Milepost	Deer Crossed
1	Undercrossing	82.16	156
2	Overcrossing	83.34	2908
3	Undercrossing	84.65	331
4	Undercrossing	92.57	189
5	Overcrossing	93.43	N/A
Totals			3584



# Spring 2011 Migration

	Type of Structure	Milepost	Deer Crossed
1	Undercrossing	82.16	218
2	Overcrossing	83.34	2745
3	Undercrossing	84.65	477
4	Undercrossing	92.57	54
5	Overcrossing	93.43	N/A
Totals			3494

# Totals Fall/Spring Migration

	Type of Structure	Milepost	Deer Crossed
1	Undercrossing	82.16	156+218=374
2	Overcrossing	83.34	2908+2745=5653
3	Undercrossing	84.65	331+477=808
4	Undercrossing	92.57	189+54=243
5	Overcrossing	93.43	N/A
Totals			7078







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RECONYX













# Thank You

**Special Thanks and Credit to:**

**Kevin Lee – District Engineer**

**Chris Rupinski - R.E. Crew 908**

**Nick Senrud - Supervisor III Crew  
908**

**John Bradshaw – Design Div.**

**Jessen Mortensen – Bridge Div.**

**Nova Simpson – UNR Graduate  
Student**

**Val Nance – Maintenance  
Manager**

**Buzz Jackson – Maintenance  
Supervisor II**

**Construction Crew 908**

**Maintenance Crew 335**

