

ROaDS:

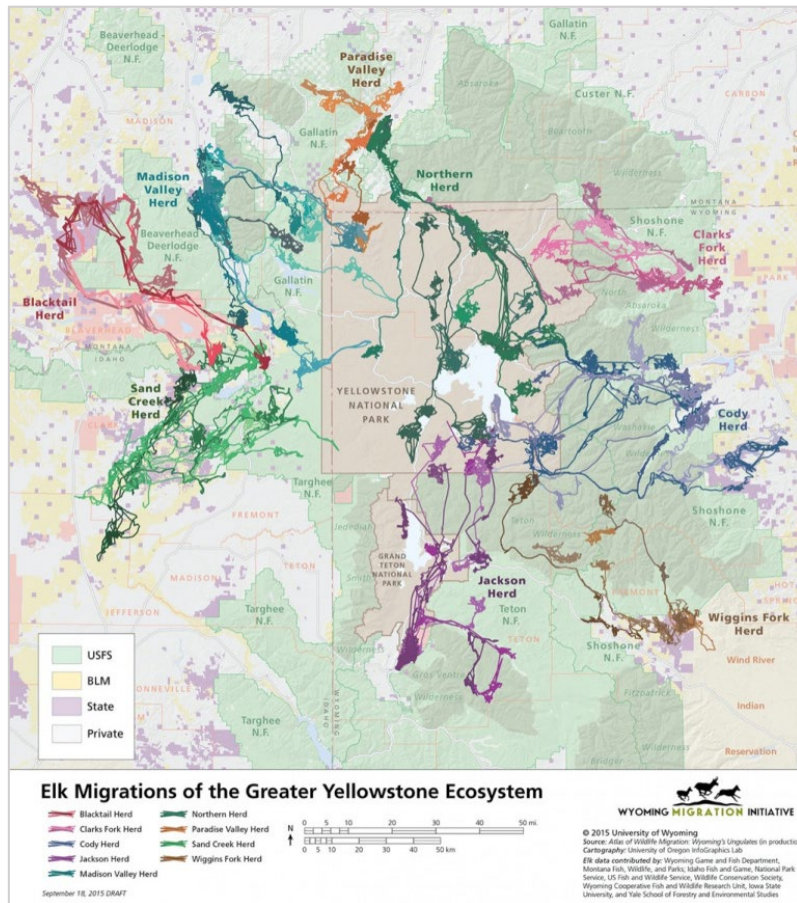
Standardized WVC Data Collection for Better Decision-Making



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January 25, 2024

The Issue

No Standardized WVC Data Collection Nationwide



Carcass Data:

Not all states collect this information at all....

- Search and reporting effort varies drastically and is opportunistic
- Typically only includes state-maintained routes
- Spatial accuracy varies
- Data fields collected are inconsistent
- Skewed towards common large animals
- Very difficult to combine data sets across jurisdictional boundaries

Roadkill Observation and Data System



The National Park Service and U.S. Fish and Wildlife Service contracted the Western Transportation Institute – MSU to develop a standardized WVC data collection system for federal land management agencies.

Now, through a partnership with CLLC, ROaDS is available to other agencies, tribes, and NGOs



Roadkill Observation and Data System



Phase One: Decide on a Platform

Researched many options from build-your-own applications to commercially available options

ArcGIS - Survey123



Roadkill Observation and Data System



Other Benefits of This Platform:

Collect data with or without cell service

Automatically formats data into a spreadsheet and a map with exact GPS locations in real time, no additional data processing required

Observer can lock in the location and then move to a safer site to fill out information about the observation

Geo-synched photo of the animal(s) (QC)

Non-proprietary data form that partners can use and modify to collect similar data

Standardized Data Fields


1. **Location:** GPS coordinates to within a few meters accuracy
2. **Date**
3. **Time**
4. **Photo**
5. **Species** (Can customize, includes “other” with a dropdown to type in spp type)
6. **Observer Confidence Level**
7. **Number of Animals**
8. **Status** (Dead, Alive crossing road, Alive near road)
9. **Observer Comments**

ROaDS Observation

WARNING: NEVER USE THIS APP WHILE DRIVING. Driving requires your full and cautious attention. To make a report on the app, park in a safe location or have a passenger take your phone and ask them to make the report. Parking on a road can be dangerous. When making a report, always be aware of your safety and surroundings, especially approaching vehicles.

Observed animal location? *

45°40'N 110°33'W ± 65 m



Date Data is Collected? *

July 8, 2020 4:46 PM

Photo

Type of animal observed? *

✓

ROaDS Observation

Photo

Type of animal observed? *

What is your confidence in this species' identification? *

High
 Medium/Low

How many animals were observed? *

- 1 +

Animal(s) status? *

Dead
 Alive crossing road
 Alive next to road (<100 yards from road)

Comments?

✓

ROaDS in Action On The Ground

- Beta-Tested in WTI Process by USFWS and NPS Staff for WTI Team – now in final round of beta testing to be complete summer '24
- Adopted by Vermont agencies for use across the Staying Connected Initiative region in the NE US and SE Canada
- Road surveys in Kaziranga National Park, Assam, India
- Blackfeet Nation Animal-vehicle collision reduction study, Montana
- Jicarilla-Apache Nation, New Mexico
- Tortoise Group/USFWS Road Warriors Program, Nevada
- Yellowstone Safe Passage Coalition, Montana
- Highway 191 Wildlife and Transportation Assessment, Montana
- Virginia Safe Wildlife Corridor Collaborative, Virginia



ROaDS in Action On The Ground

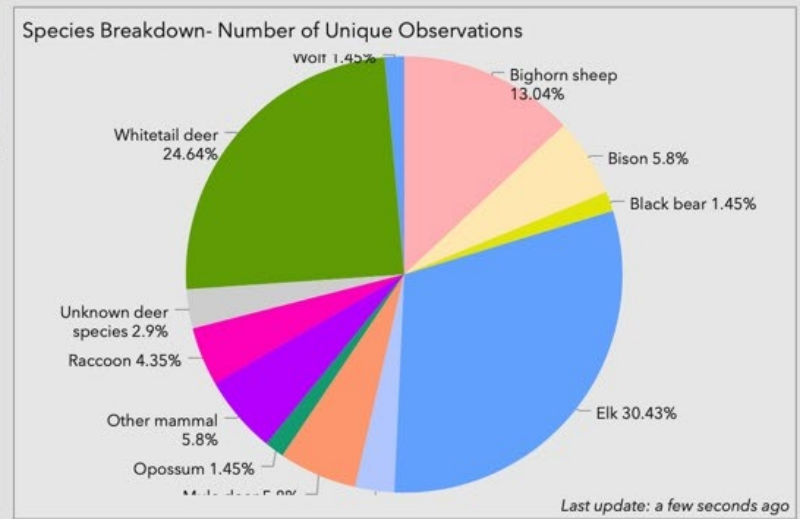
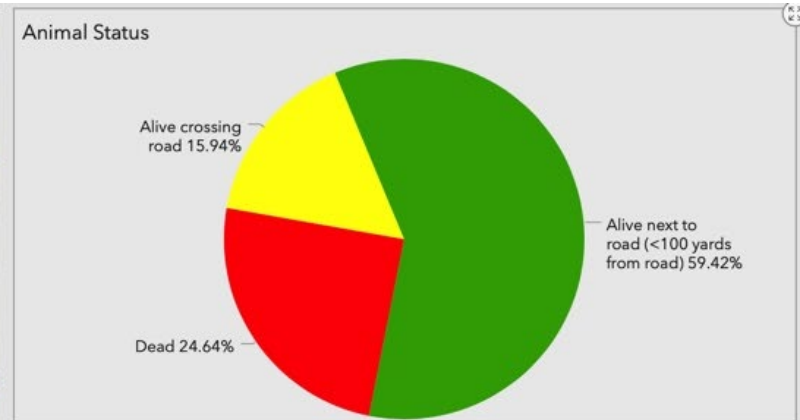
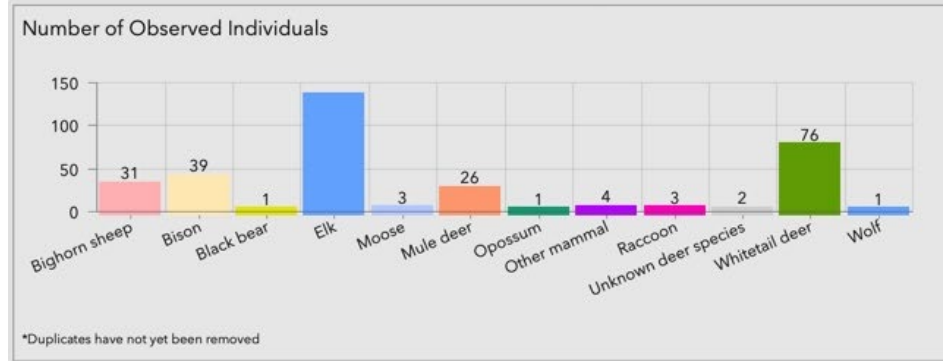
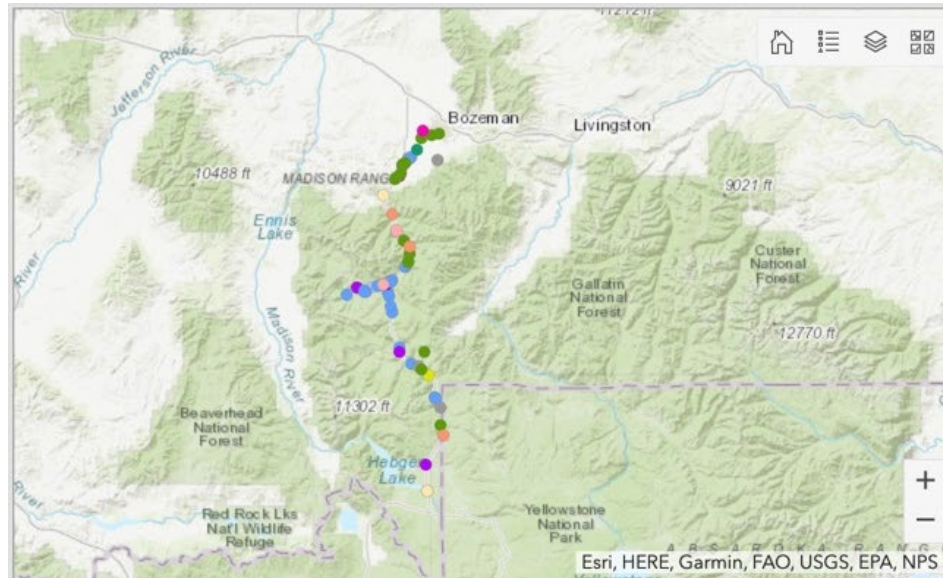
Setting up a project is simple and CLLC can help interested groups initiate their own projects!



Simple Citizen Science Instructions....

1. Go to the App Store or wherever you usually download your apps
2. Search for the free “Survey 123” App and Select “GET”
3. Once the App has downloaded, just scan the QR code with your phone’s camera and it will prompt you to open the form using Survey123, no sign in required.
4. Read the training materials for instructions on data entry.
5. Now you’re ready to start collecting data!!

You can even create an online dashboard for your project to view data in real time!

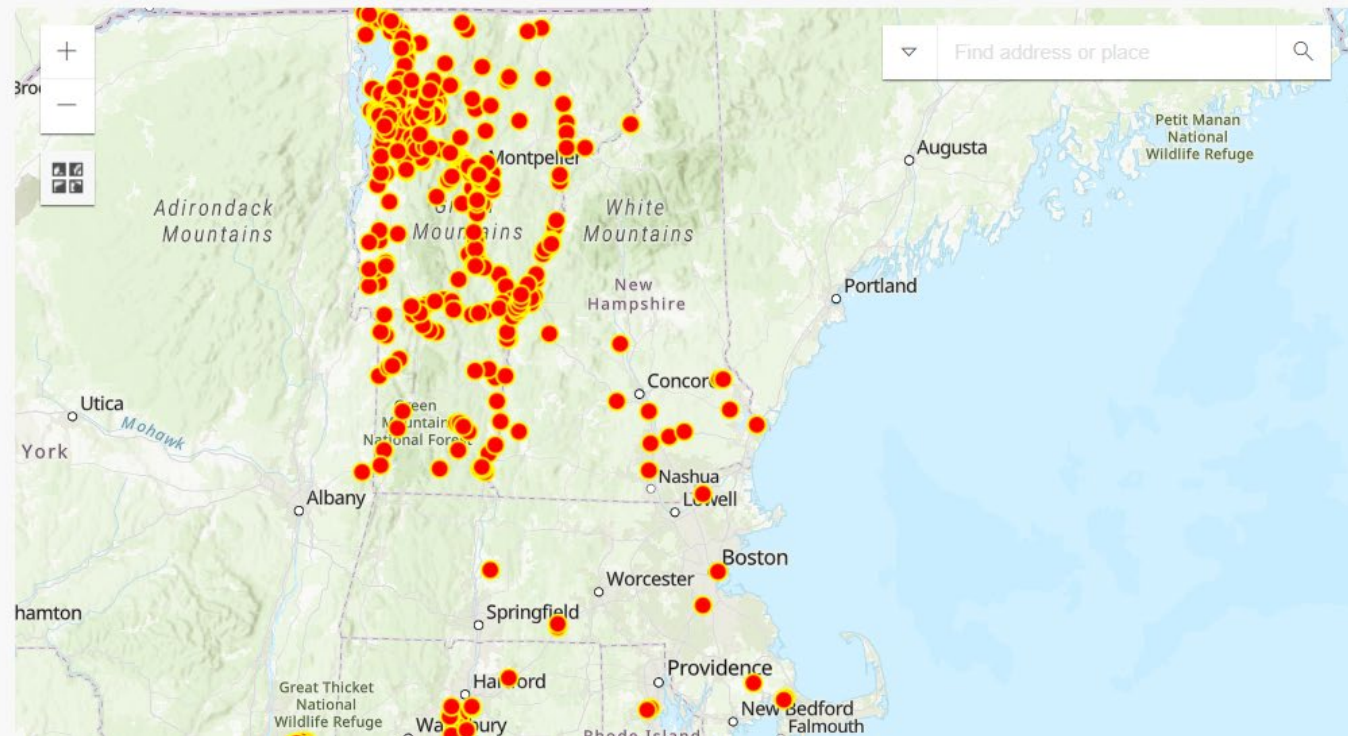


ROaDS in Action On The Ground: Vermont and Beyond!

Vermont ROaDS and Wildlife Website: <https://anr.vermont.gov/content/vt-roads-and-wildlife>

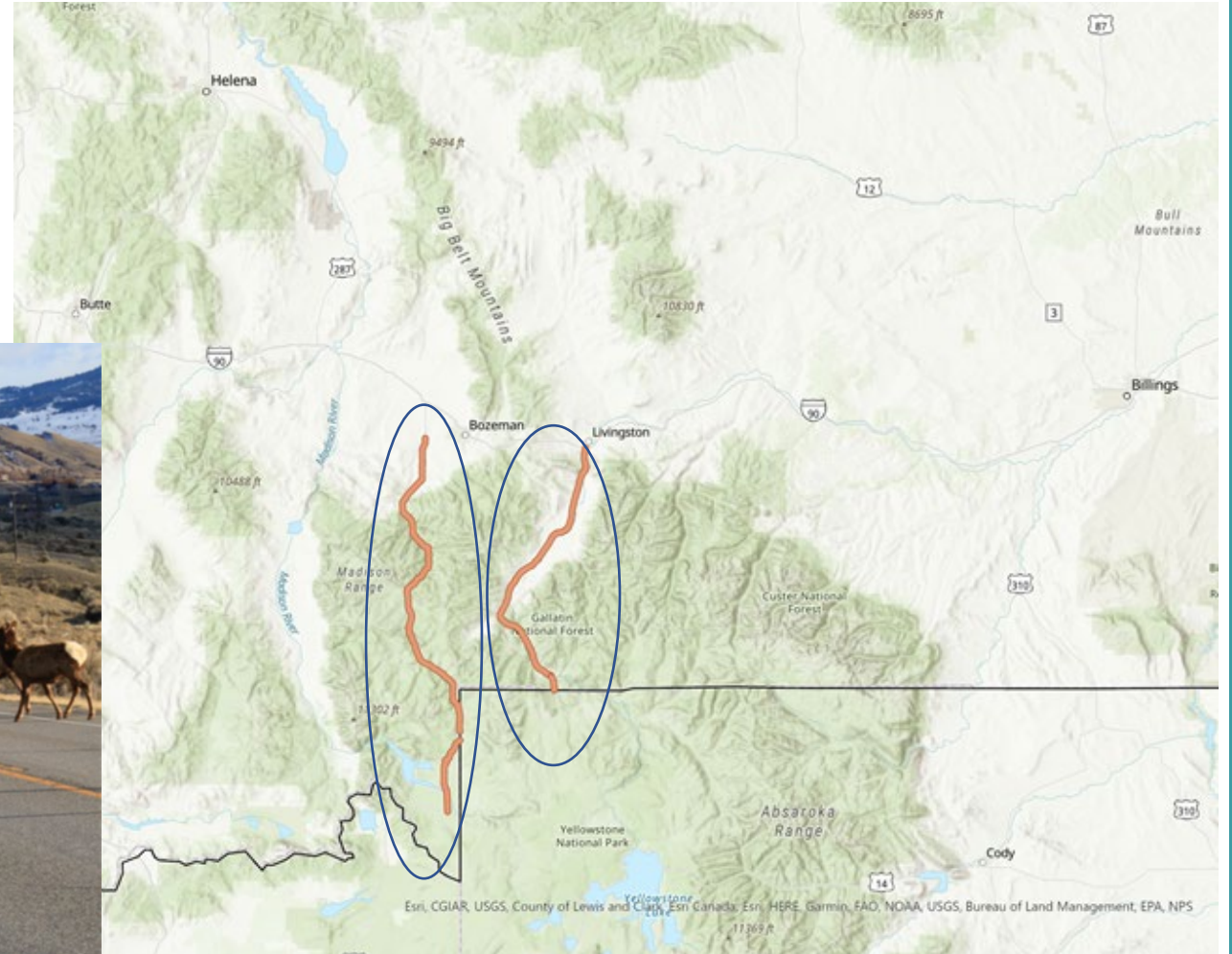
Roadkill data collected since January 2022

This is a regularly-updated map of roadkill and animal collision incidents across the Northeast United States and Southeast Canada.



ROaDS in Action On The Ground: Greater Yellowstone Ecosystem

The Center for Large Landscape Conservation (CLLC) is currently collecting WVC data in the GYE through a series of projects utilizing citizen science.



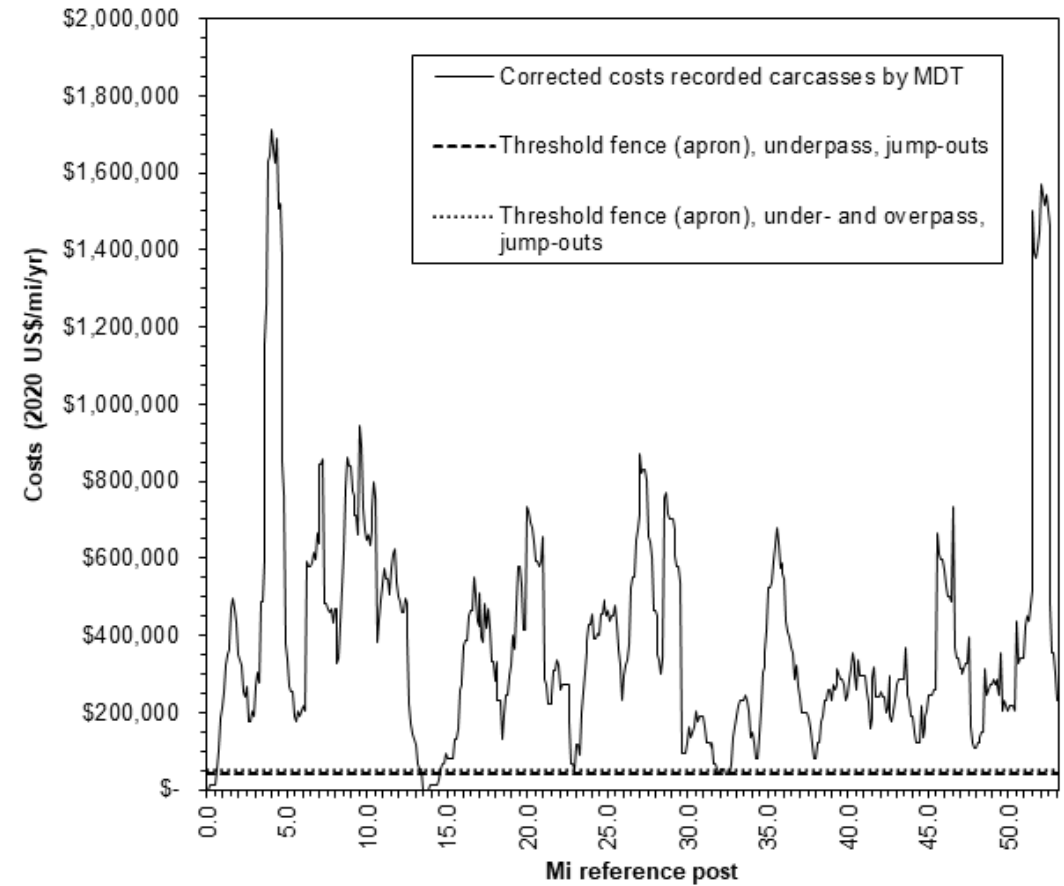
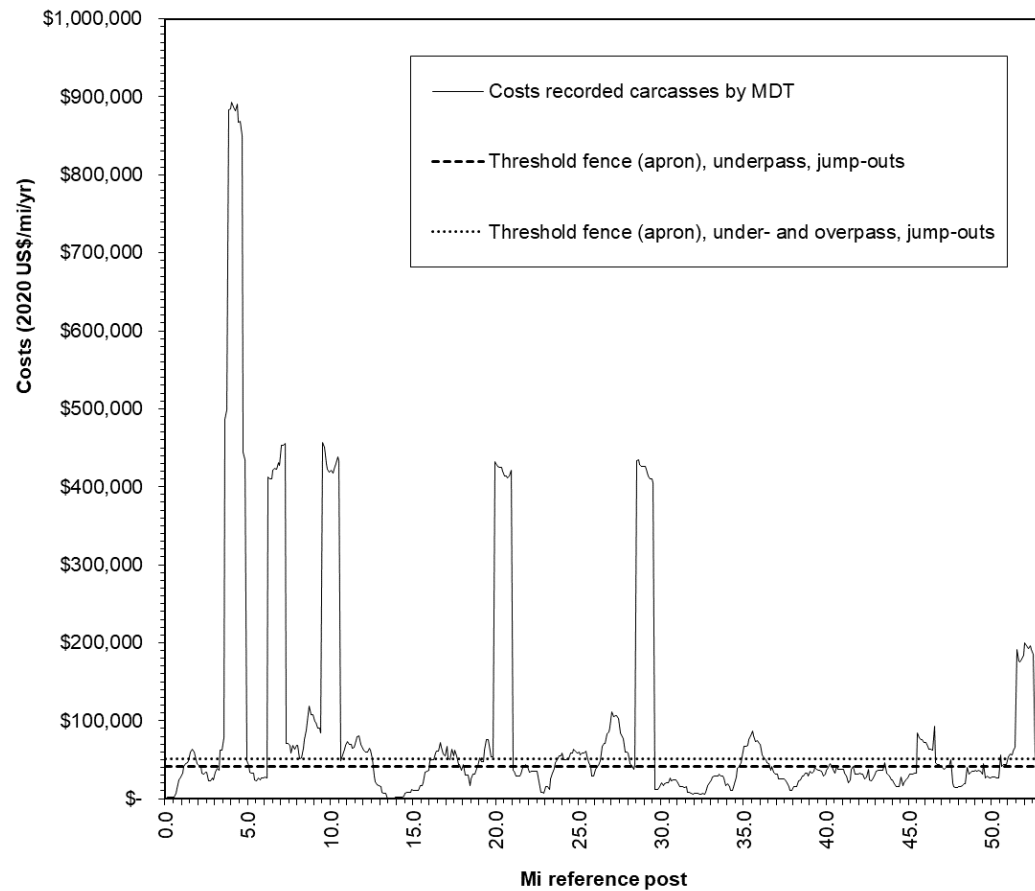
ROaDS in Action On The Ground: Paradise Valley, MT

Highway 89 – Livingston to Gardiner - 2021			
Species	MDT Carcass	MDT + ROaDS (duplicates removed)	Correction factor
White-tailed deer	46	295	6.41
Mule deer	15	150	10.00
Unknown deer	0	35	Not recorded at all in MDT carcass data
All deer	61	480	7.87
Elk	8	61	7.63
Moose	0	2	Not recorded at all in MDT carcass data
Pronghorn	0	3	Not recorded at all in MDT carcass data
Red fox	0	5	Not recorded at all in MDT carcass data
Coyote	0	8	Not recorded at all in MDT carcass data
Mountain lion	0	1	Not recorded at all in MDT carcass data
Striped skunk	0	27	Not recorded at all in MDT carcass data
Raccoon	0	34	Not recorded at all in MDT carcass data
Cat	0	1	Not recorded at all in MDT carcass data
Dog	0	1	Not recorded at all in MDT carcass data
Livestock	0	1	Not recorded at all in MDT carcass data
Birds	0	6	Not recorded at all in MDT carcass data
Other	0	2	Not recorded at all in MDT carcass data
Other mammal	0	13	Not recorded at all in MDT carcass data

* Duplicates were removed based on same species within 0.1-mile within 1 week.

ROaDS in Action On The Ground: Paradise Valley, MT

Cost-Benefit Thresholds for Highway 89 from Livingston to Gardiner with just agency-collected data (left) vs. with ROaDS correction factor for deer and elk (right). Costs based on Huijser et al. 2022.



Thank you!!

For more information, please
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