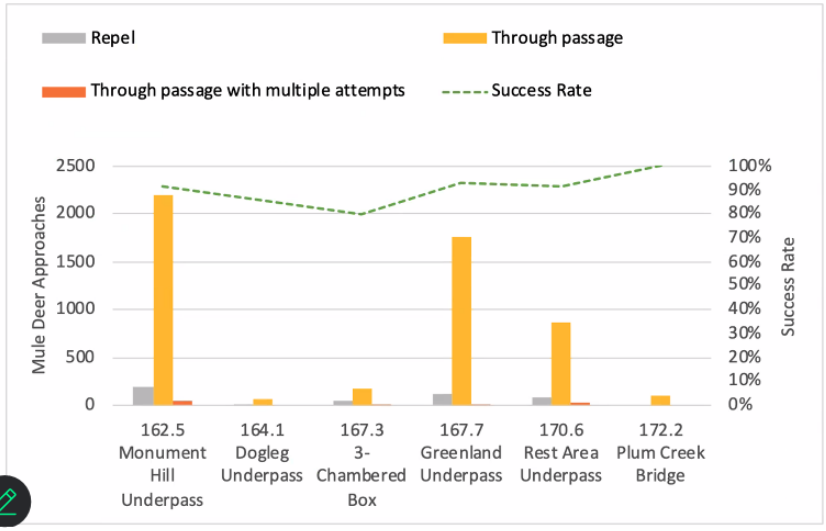
Slides Summarizing Wildlife Usage and Impacts of Wildlife Mitigation on the I-25 Gap project 2023

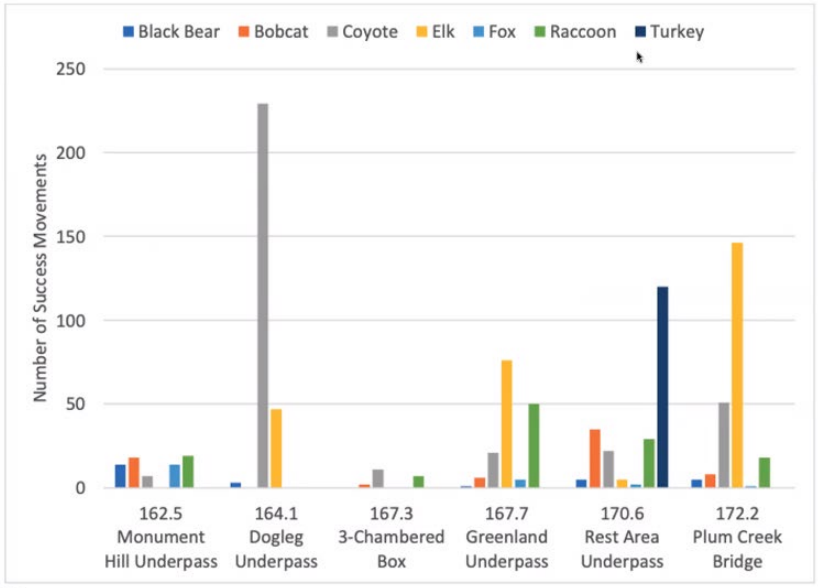
[Results lag due to processing and report compilation time]

Mule Deer Use of Structures – 2023 post-construction phase



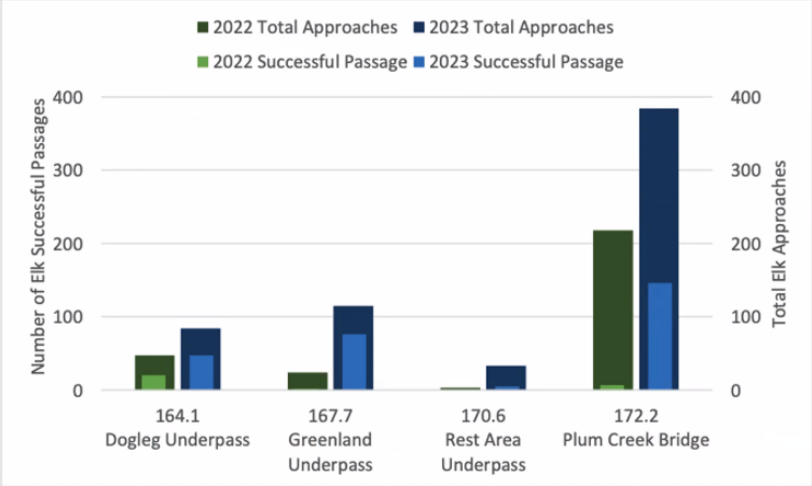
Patterns similar to observations in Year 2 Report:

- 5,276 successful passages
- Average 92% success rate (range = 80-100%)
- Highest number of passages at Monument Hill and Greenland Underpasses



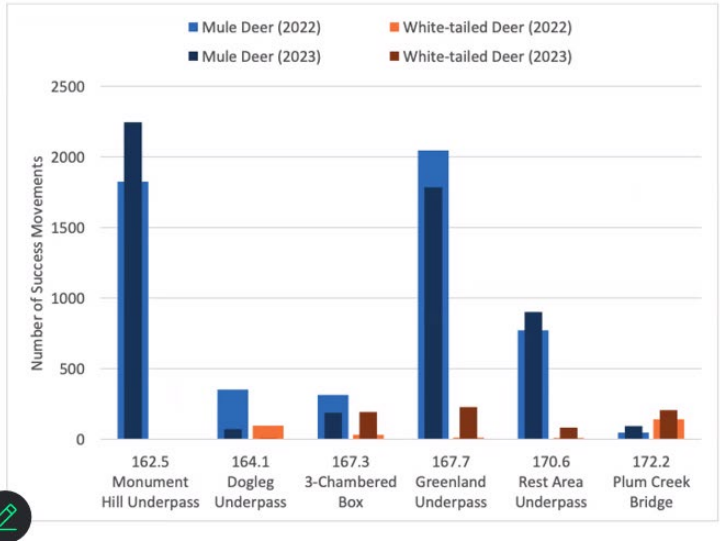
- The number of approaches by each species increases from 2022 for all species except bobcat.
- Overall success rates >80% for all species, except elk (74%)
- Greatest species richness at Rest Area & Greenland Underpasses

Elk



- Elk activity increased by 110%
- Elk successful passages increased by 879%
- Most elk movements at Plum Creek Bridge were parallel movements
- 74% overall success rate
  - 23% Rest Area
  - 68% Dogleg
  - 78% Greenland
  - 81% Plum Creek

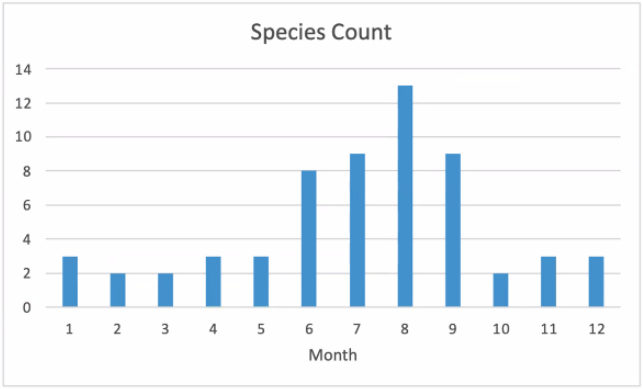
Muleys & White-tailed Deer



- Mule deer detected more overall
  - Except Plum Creek Bridge

Small Mammal Cover Features

- Small mammal cover features – video events
  - In 2023, implemented sampling methodology based on month



Only 3 species captured October – May

- Deer mouse: every month
- Vole: every month
- Cottontail

10 other species only captured June – September

Small Mammal Cover Features

- Greatest species diversity at Greenland, Rest Area & Plum Creek Bridge
  - Most consistent use at Rest Area Underpass
- 19 species detected in total
  - 13 unique to the cover features

Bird	Pocket gopher
Bullfrog	Shrew species
Bull snake	Squirrel
Deer mouse	Vole
Other mouse	Other vole
Ground squirrel	Weasel
Lizard	Woodrat
Mink	

Wildlife Guards

5 locations monitored

- Misty Acres Camera stole late Spring 2023

Species	Count	Breach Rate	Repel Rate
Mule Deer	44	34%	66%
White-tailed Deer	13	77%	23%
Elk	37	62%	38%
Black Bear	4	50%	50%
Coyote	5	20%	80%
Fox	8	77%	23%

Black bear successfully breaching the Upper Lake Gulch Road East Wildlife Guard

Mule deer buck repelling from the Upper Lake Gulch Road East Wildlife Guard

Escape Ramps

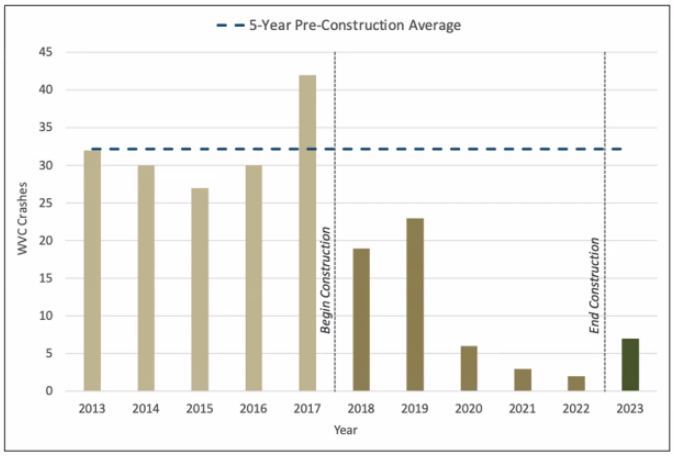
- Seven ramps monitored
  - Four 3:1 slope ramps
  - Three 2-sided ramps
- 90% increase in detections compared to 2022
  - Ungulate escape rate the same (44% vs 40 % in 2022)

Species	Count	Intercept Rate	Escape Rate	Successful Jump up	Unsuccessful Jump up
Ungulates	82	91%	44%	0	0
Carnivores	36	44%	25%	0	0

Northeast Fence End

- Most ungulate movements beyond the fence end (76%)
  - 10% of movements into ROW
  - 14% of movements out of ROW
- Geocell fence end treatment – of animals that approached,
  - 60% walked around Geocell
  - 20% breached Geocell
  - 20% repelled

Wildlife-vehicle Collisions



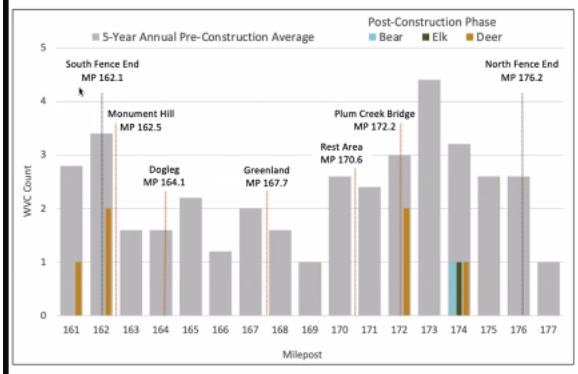
Preconstruction (2013-2017)

- WVC = 3rd most common crash type
- 5-year preconstruction average 32.2 WVC/year

Post-construction Phase (2023)

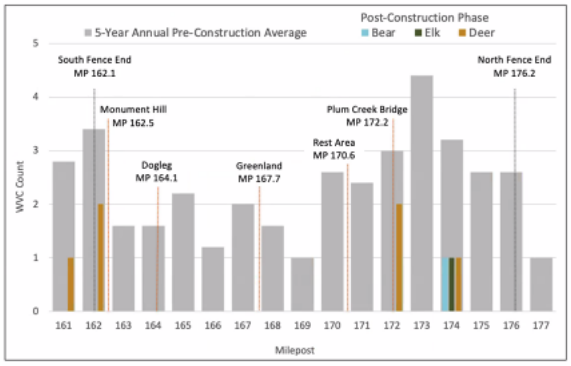
- WVCs decreased 78%
  - 7 WVC/year

Post-construction Phase WVC Crashes

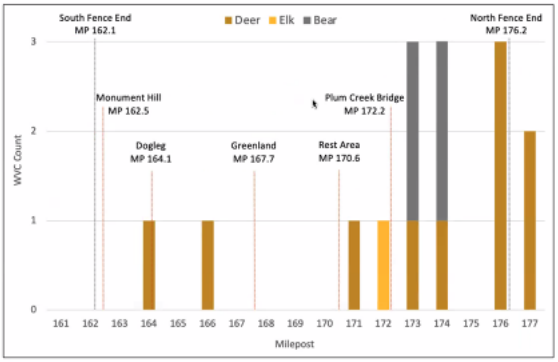


Crash data

Post-construction Phase WVC Crashes



Crash data



Carcass data

Progress Towards Performance Measures

Wildlife Connectivity and Successful Passages

	Performance Measure	Year 3 Status
1	Mule deer success movements at each structure will increase over time; with a minimum of success rate of 80% and a goal of 90%.	***Partially Met.*** Success movements decreased slightly in 2023; Success rate in 2023 was 86% or greater at each crossing location, for a combined success rate of 92%
2	The number of successful elk passages at all structures will be at least 50% of the number of elk movements captured at associated control cameras.	***Met.*** Elk use of structures is 68% of elk activity at habitat cameras.
3	Elk success movements at each structure will increase over time with a minimum success rate of 70% and a goal of 80%.	***Partially Met.*** Overall success rate was 74%, ranging from 23-81%
4	Mule deer movements east-west through the crossing structures will be roughly equivalent to west-east movements.	***Met.***
5	Over time, mule deer and elk movements through the crossing structures will be represented by males, females, and juveniles.	***Met.***
6	Detections of less common species will remain constant or increase over time (e.g., pronghorn, white-tailed deer, mountain lion, black bear, bobcat).	***Partially Met.*** Met for black bear and white-tailed deer.

Progress Towards Performance Measures

Motorist Safety

	Performance Measure	Year 3 Status
7	The proportion of ungulate movements at the northeast fence end that enter the fenced right-of-way will decrease to 20% or less.	***Met.***
8	Over time, detections of ungulates attempting to breach wildlife guards to enter the road right-of-way will decrease; and ungulates will be deterred from entering the road right-of-way at least 80% of the time.	***Not Yet Met.***
9	Over time, ungulate detections at escape ramps will decrease; and, of ungulates that ascend an escape ramp, the proportion that successful escape to the habitat side will increase; and no ungulates will jump up onto the ramp from the habitat side.	***Not Yet Met.*** ***Partially Met.*** Slight increase in escape rate documented in 2023. ***Met.***
10	The annual average number of reported WVC crashes (CDOT Traffic and Safety data) within the mitigated area will decrease over time by a minimum of 80% and with a goal of a 90% reduction compared to the five-year preconstruction average.	***Not Yet Met.*** In 2023, WVC crashes decreased 78% relative to the five-year pre-construction average.

Final Report prep & discussion

- Focus on post-construction time frame (2023 & 2024)
- Investigate species use of crossing structures relative to species distributions on the landscape
  - Map structure use and CPW habitat data
- Incorporate recommendations, e.g.,
  - Minimize opportunities for wildlife to enter fenced ROW
    - Wildlife guards?
  - Small fauna photo booths

Final Report Schedule and Deliverables

Task/Deliverable	Estimated Timeline
Camera monitoring	Completed December 31, 2024
Final report analyses	Conduct on rolling basis, March – June 2025
Final reporting	Prepare on rolling basis, May – July 2025
Submit draft report to Study Panel • QA/QC process statement • Recommendations	July 15, 2025
Reviewer comments due	July 31, 2025
Final Report	August 15, 2025
Final Presentation to Study Panel	August 2025
Research Brief: Study results	August 2025
Digital data	August 2025
Deliverables summary	August 2025