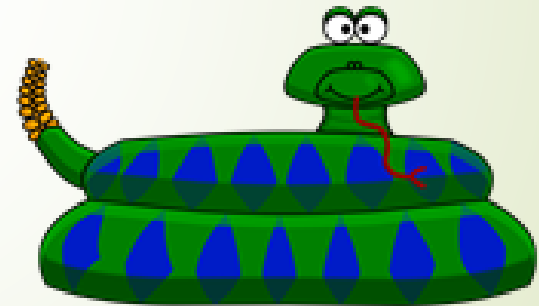


A snake in the grass.....
is likely better off


Localized garter snake road mortality

(citizen science effort by Friends of
Cooking Lake-Blackfoot)

Wildlife Mortality Workshop
March 2026



MJ Pybus
Pres, Friends of Cooking Lake-Blackfoot



Garter snake road mortality 2023-2025

- Road survey of plains garter snakes
- East of Edm, along west boundary road beside EINP & Cooking Lk-Blackfoot PRA
- Intermittent, standardized vehicle-based surveys t'o summer 2023-2025 (April to October)
- Count, geo-reference, upload location, & remove each dead snake
- And enjoy the few live snakes seen 😊



▸ RR 210 west of park fences

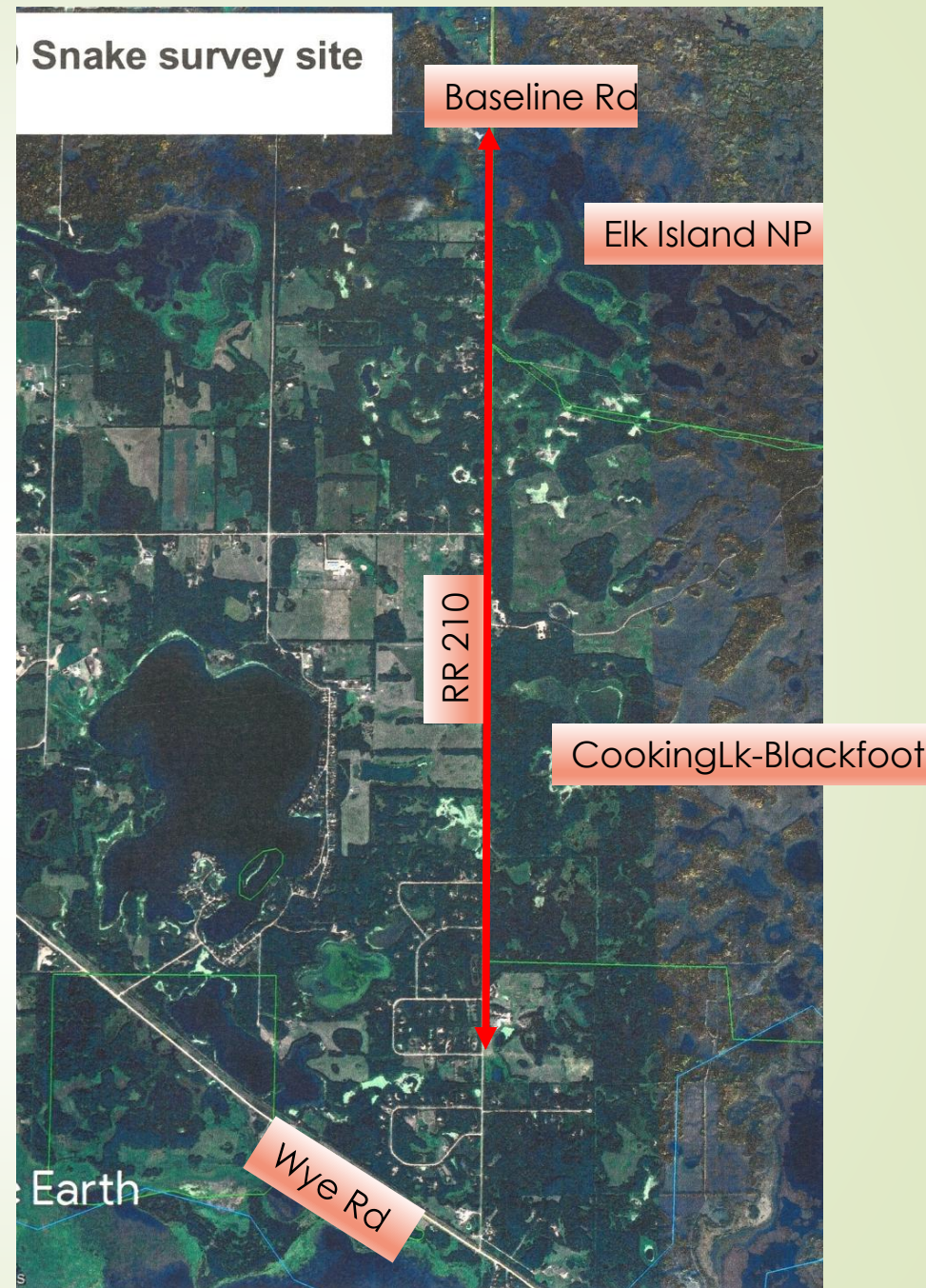
Primarily 7 km stretch:

from Twp Rd 530 (Baseline)

to rural subdivision Voyageur
Estates south entrance

(n of Sec Hwy 630 (Wye Rd)

- full survey 530 -210 – 524 but
focus today on RR 210



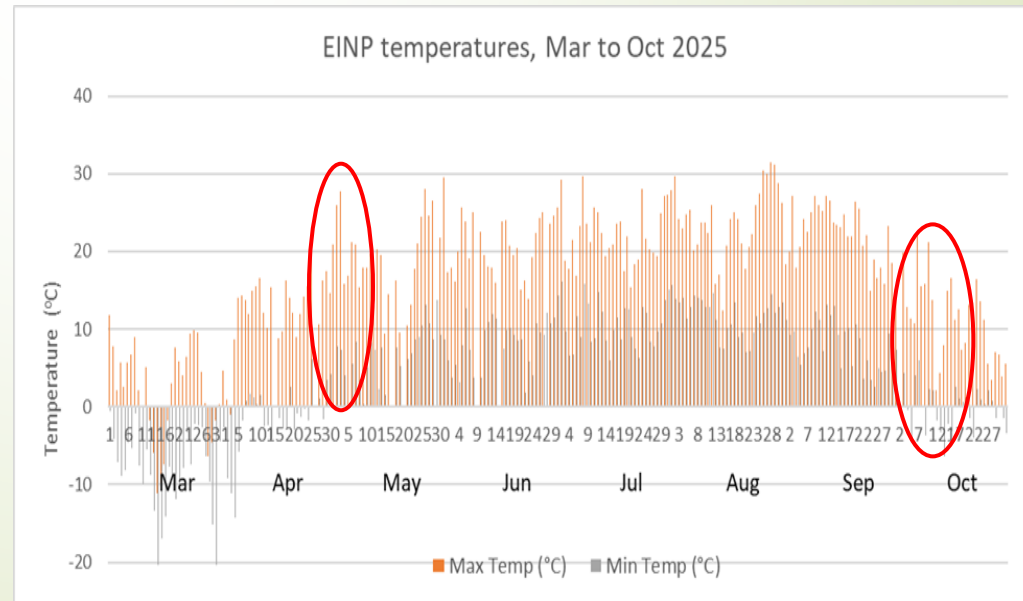
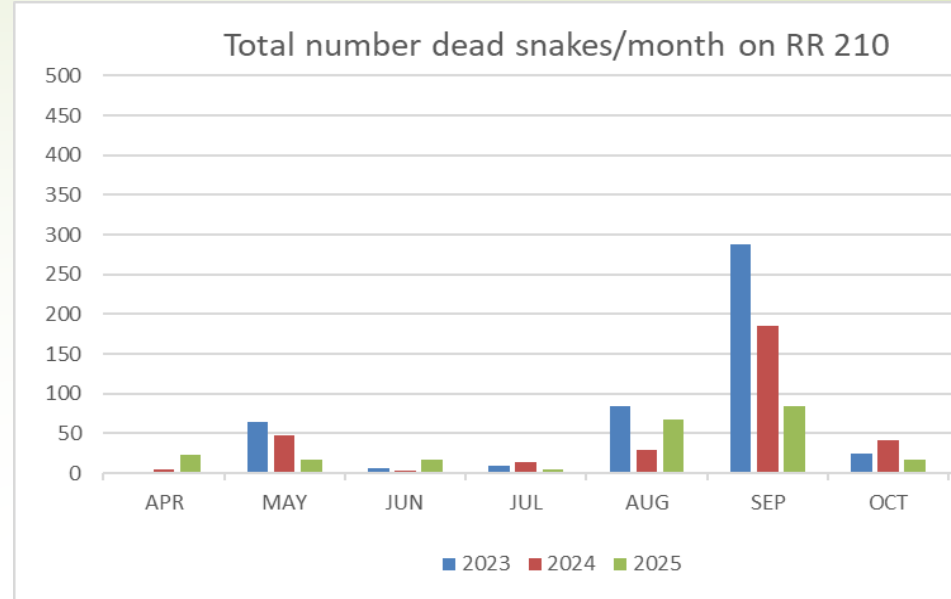
Overview (RR 210)

- ▶ May 2023 to October 2025
- ▶ TOTAL snakes removed: **1035**
 - ▶ Minimum # (sm snakes, scavengers)
- ▶ Gender determined when possible (male/female tail)
- ▶ Size estimated (v sm ~15 cm, sm 15-25, med 26-50
lge 51-70, vlge >70)
- ▶ EnvCan Weather records for EINP station (max min temp, daily precip)
- ▶ Ad hoc pictures



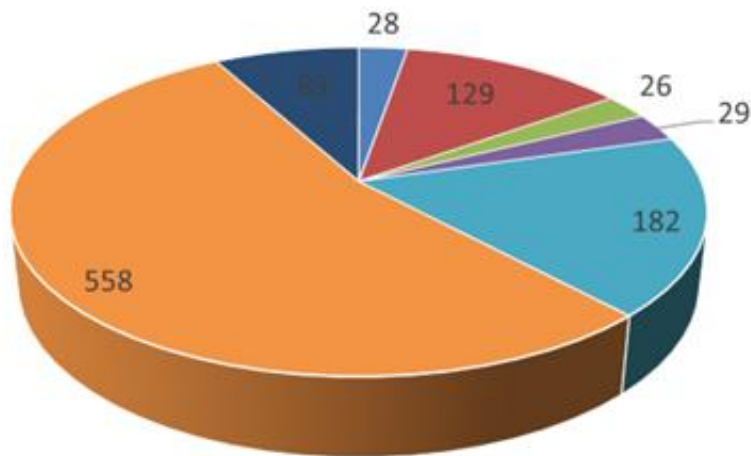
Cumulative Bi-modal mortality: spring & fall

- Spring: April / May
 - Above zero nights, above 20C days
- Fall: Aug to Oct
 - No movement below 15C



Cumulative mortality by month, 2023-2025

Snake mortality RR 210 2023-2025



■ APR ■ MAY ■ JUN ■ JUL ■ AUG ■ SEP ■ OCT

- 15% mortality occurs in spring (April + May)
- 80% mortality occurs in fall (Aug to Oct)

RR 210 snakes/survey

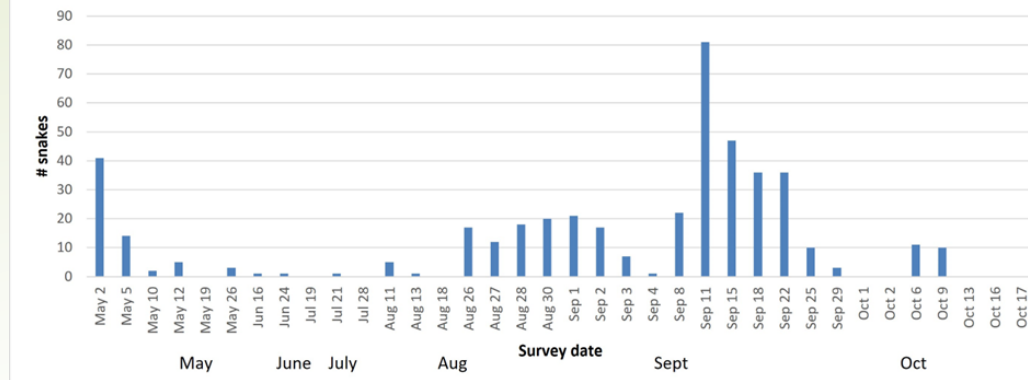
Spring: late April to early May

- Condensed
- Leave hibernacula
- 'rapid' movement to summer sites

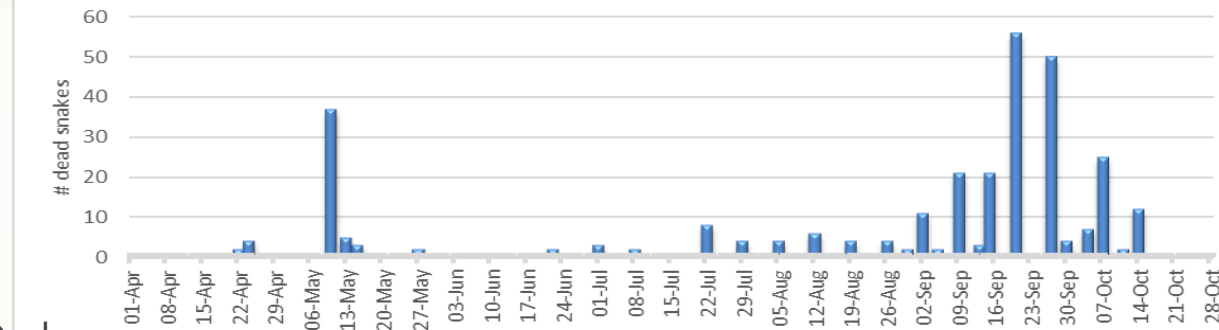
Fall: mid Aug to early Oct

- Extended period
- Move towards dens but do not enter
- Increased risk on warm dark roads in late afternoon

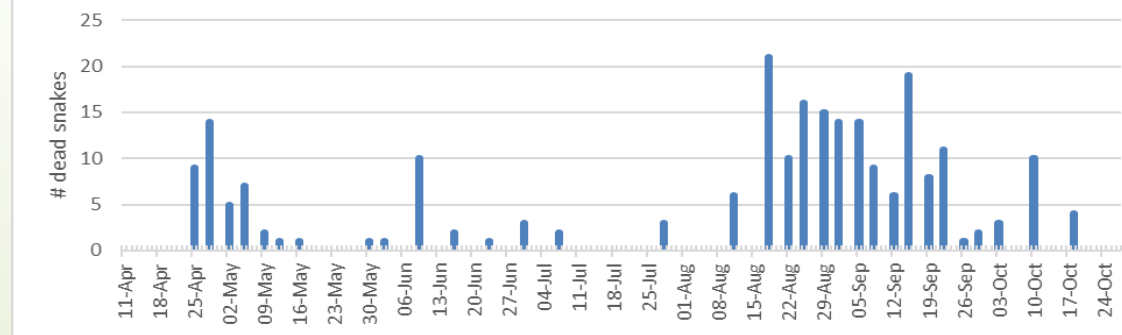
RR 210, Baseline Rd to Voyager 1 (7km): 2023



RR 210, Baseline Rd to Voyager 1 (7km): 2024

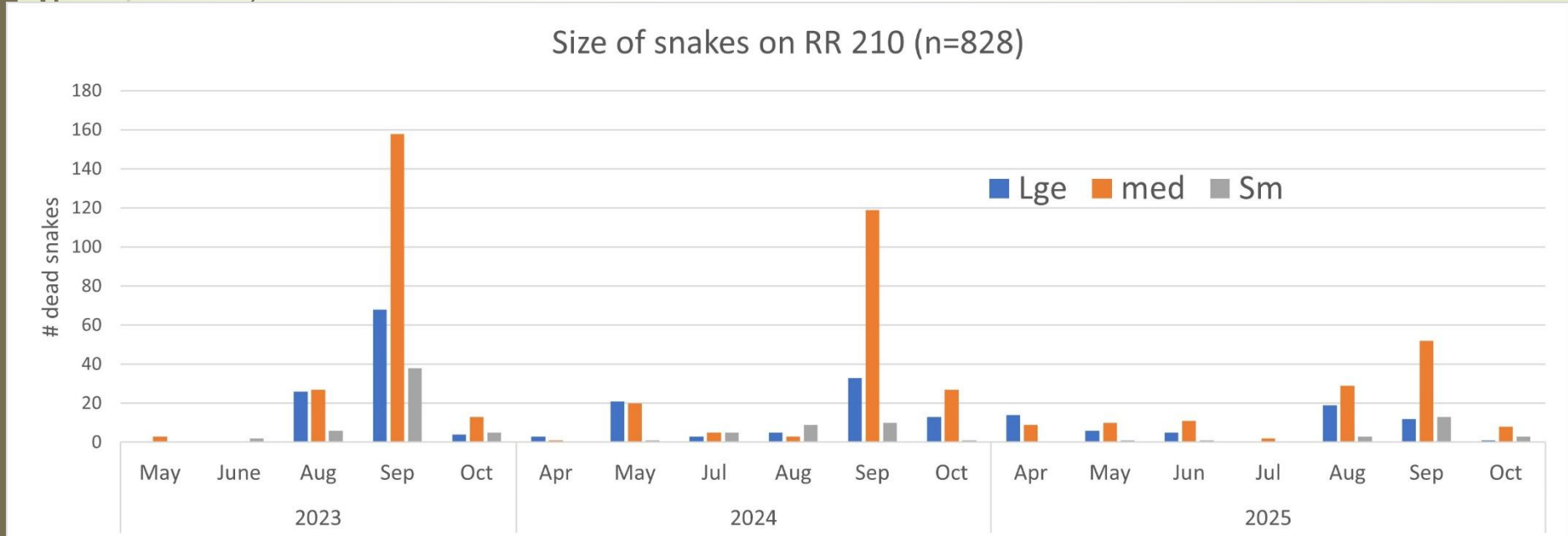
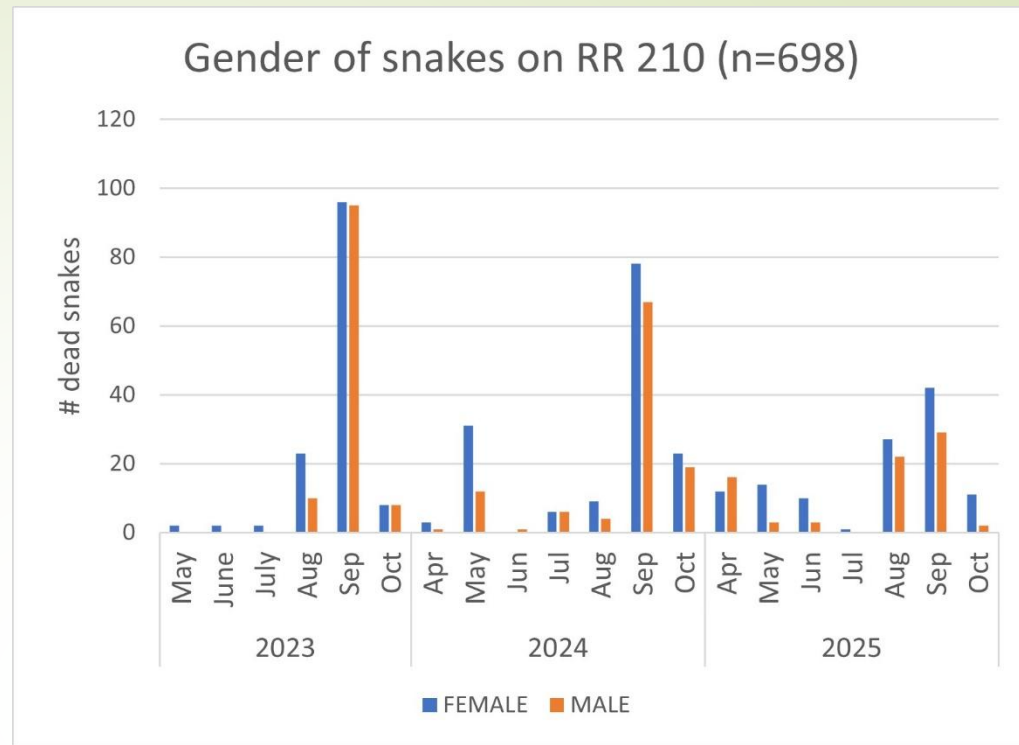


RR 210, Baseline Rd to Voyager 1 (7km): 2025



Gender & Size

- Slightly more females each month, particularly in spring
- Med (26-50cm) most common all months



MONTH	cum # snal
APR	28
MAY	129
JUN	26
JUL	29
AUG	182
SEP	558
OCT	83
Total	1035

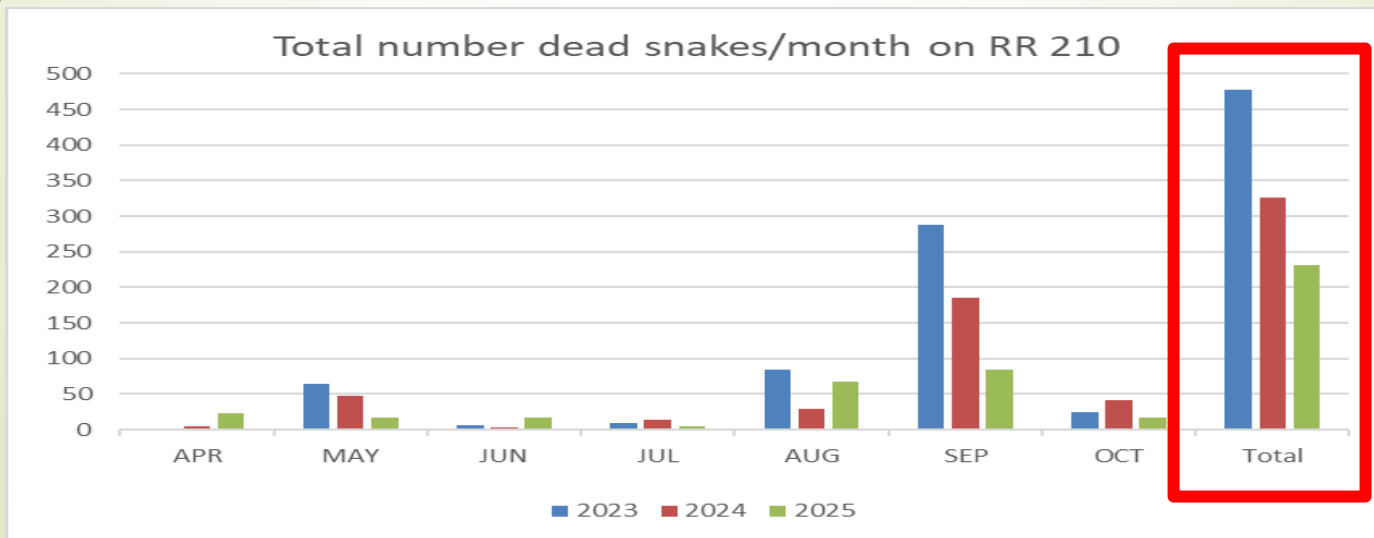
Three primary cluster points

- All close to known hibernacula
- these sites.. ~50% of annual mortality



Cumulative patterns:

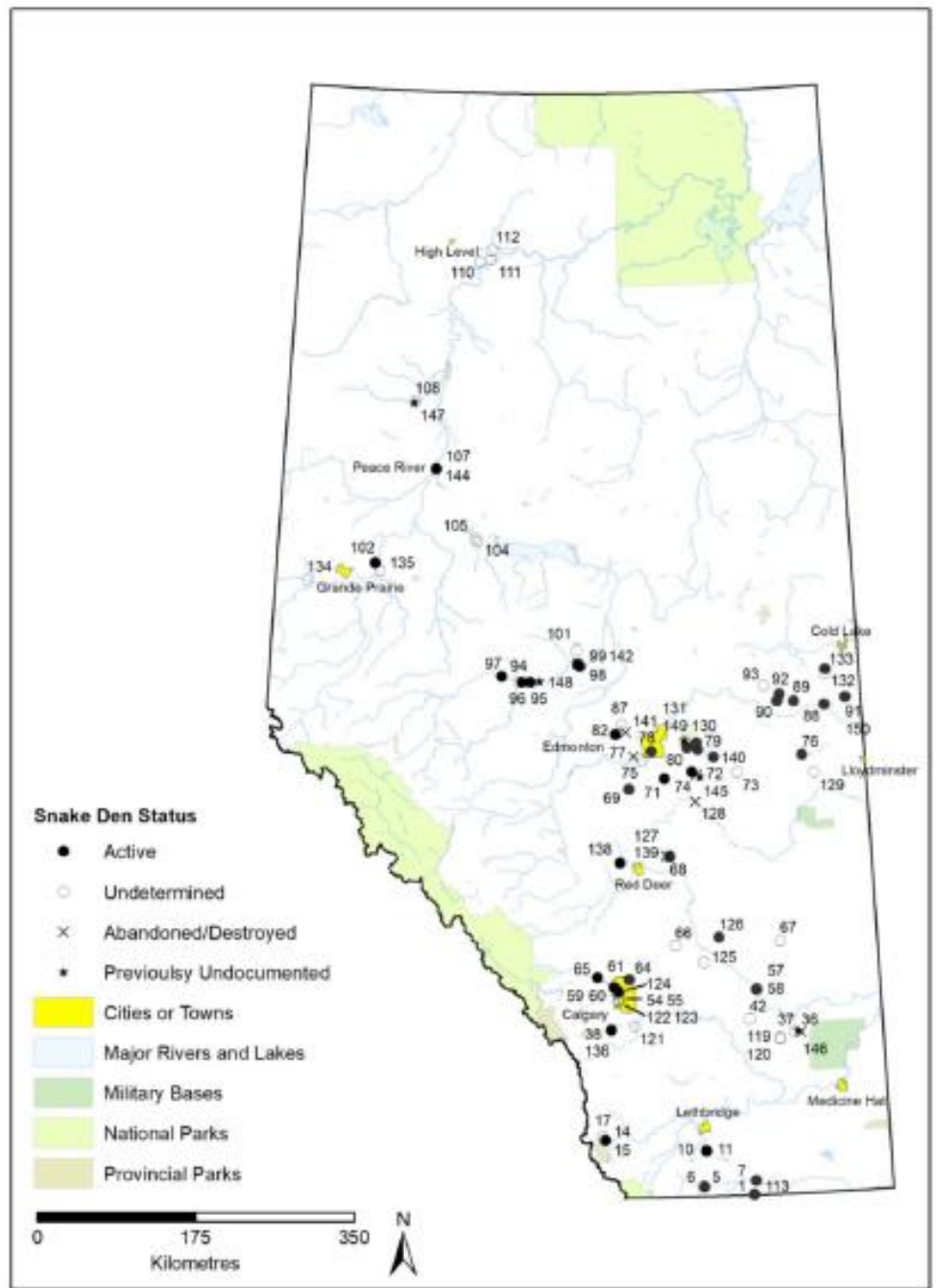
- ▶ Large numbers females & males of all sizes (ages)
Risk to all snakes ?
- ▶ Greater risk in fall than spring
- ▶ Focal points of greatest risk adjacent to hibernacula
- ▶ **Declining # snakes each year**
 - ▶ Increased traffic & higher speeds ??
 - ▶ Connector road to Hwy 16, residential & commercial traffic use traffic counts ??





So what?

- Perspective for mortality... ??
 - No baseline pop'n estimate
 - Seems an inordinate # of dead snakes in a small area (7km),
 - All ages, both sexes... pop'n effects ??
 - Landscape/ecosystem ripple effects ??
- What about other hibernacula..?
 - On the moraine, elsewhere in AB



Kendell, K. 2020. Garter snake (*Thamnophis* spp.) surveys at historical den sites in Alberta, 2017–2019. Data Report, produced by Alberta Conservation Association, Sherwood Park, Alberta, Canada. 17 pp + App.



RR 210
Snake
Migration
Corridor



Please
Avoid snakes
on the road

Over 800 snakes killed
in 2023 + 2024
RR 210,
Baseline Rd to Wye Rd
Spring Migration: late April thru May
Fall migration: late Aug to mid Oct



Why Did the Garter Snake Cross the Road?

June 10, 2020

By Sarah May, 2014-2019, Wildlife Coordinator




Photo credit: Photo by Sarah May
© Sarah May - How To

education
education
education





Where from here....

- Activate snake mortality working group
 - Under umbrella Beaver Hills Biosphere?? & Strathcona Co (RR210)
 - Incl: Strathcona Co, AB Parks, AB EPA, EINP, ACA, Fr of EI, local residents, reptile NGOs
 - Synergy from combined wisdom, authority & resources
 - Direct & immediate mitigations
 - Apply temporal and geographic filters
 - April/May, Aug to Oct, cluster sites
 - flashing roads signs permanent seasonal signs
 - Maintain those currently provided by Strathcona Co
 - Temporary awareness signs & displays



Long-term ... brainstorm

- Cluster sites:
 - Modify traffic
 - traffic calming, lower speed limit
 - Limit snake road surface access
 - manipulate roadside veg
 - modify localized roadside substrate
 - Install culverts & directional barriers
(within bounds of driver safety AND snake protection)
- Hibernacula close to high traffic areas:
 - Relocate snakes to other hibernacula ?
 - Consider new artificial sites distant from primary roads ?

Conclusion....

Better to be a live snake in the grass



than a dead snake on the road

WE are the problem
WE can do better

