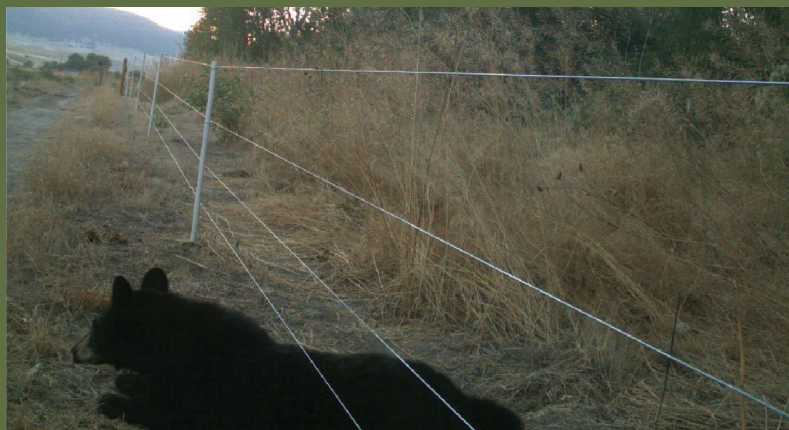


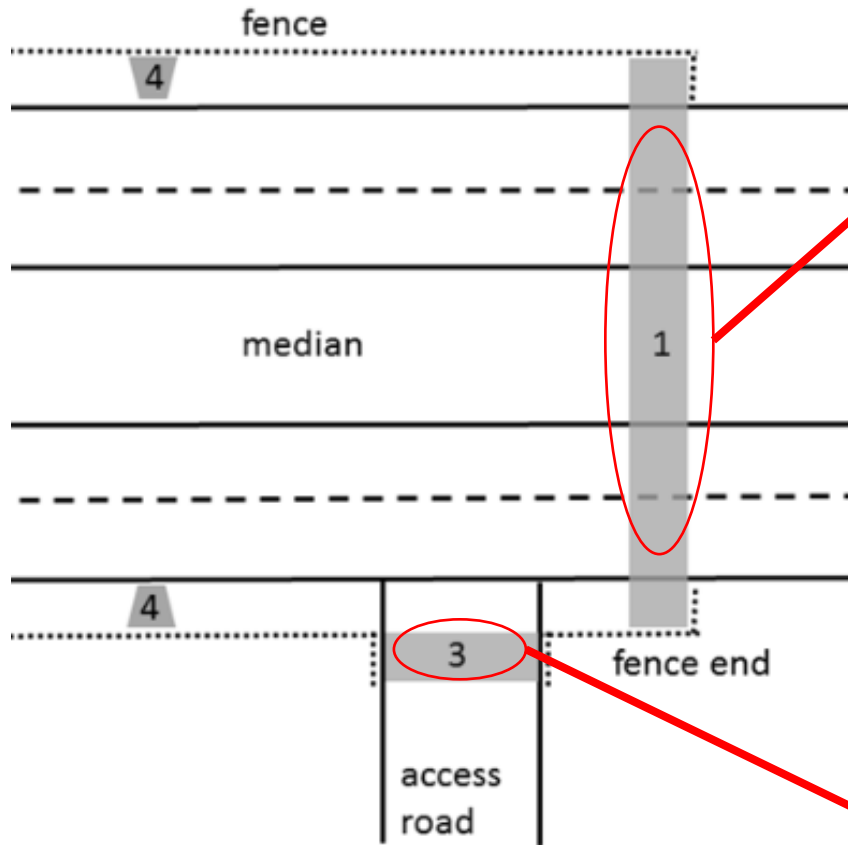


Electrified wildlife barriers at fence ends and at access roads

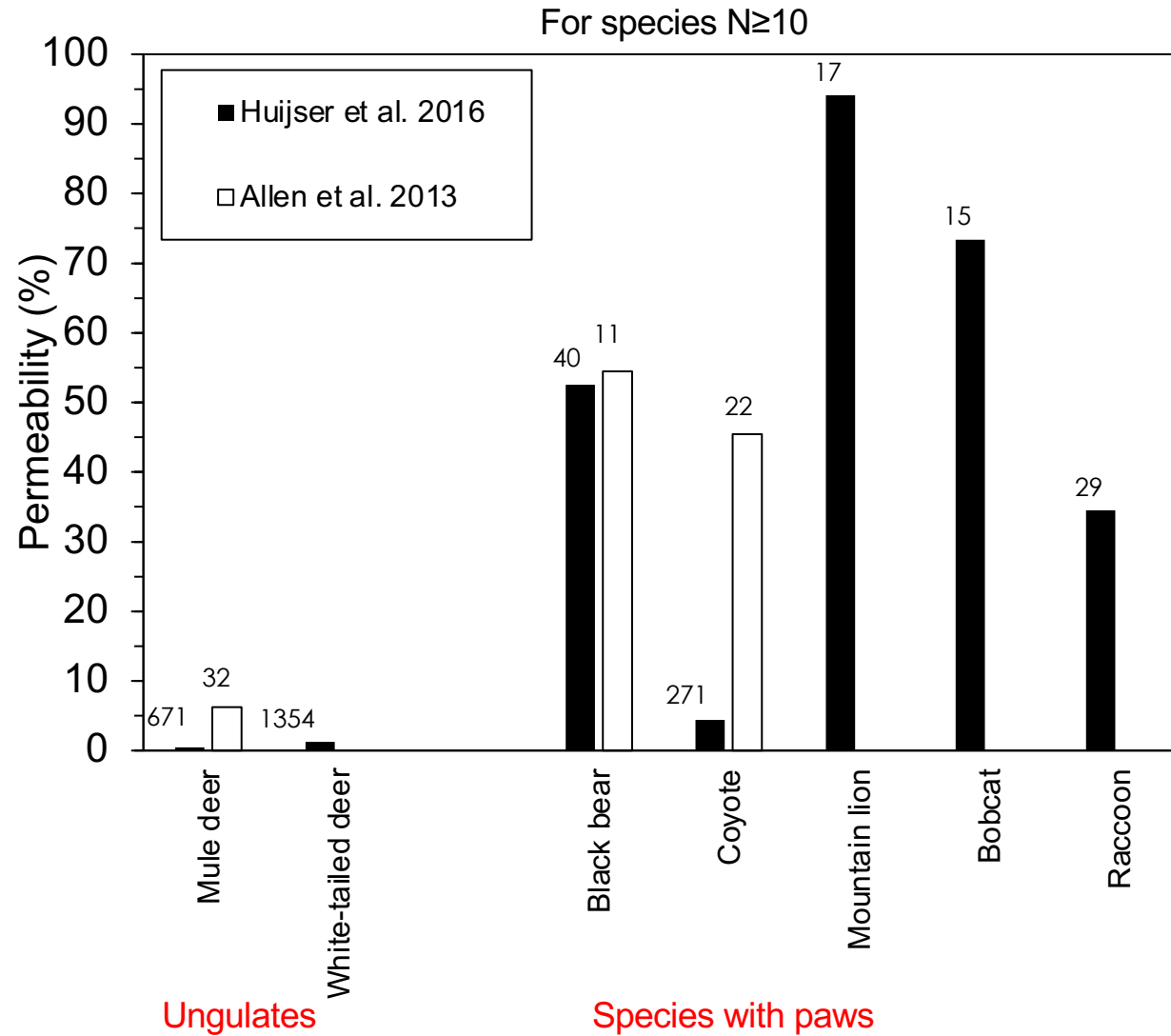
Marcel Huijser
Samantha Getty
Western Transportation Institute



Wildlife Guards



Wildlife Guards



Traffic speed

Electrified barriers

Low

Medium

High

Traffic volume

Low



Medium



High



Thompson Falls



Many low volume access points!



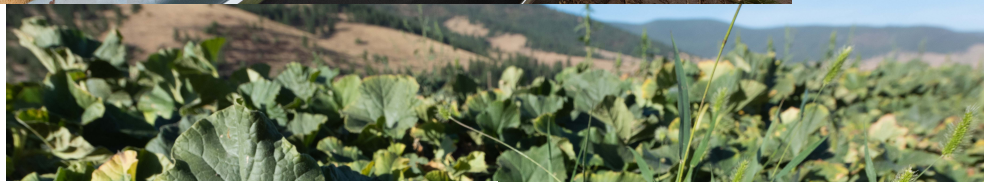
Low cost:

A few hundred
A few thousand
Ten thousand
Not \$100k+

Not a pain:

Drive-over
Drive-thru

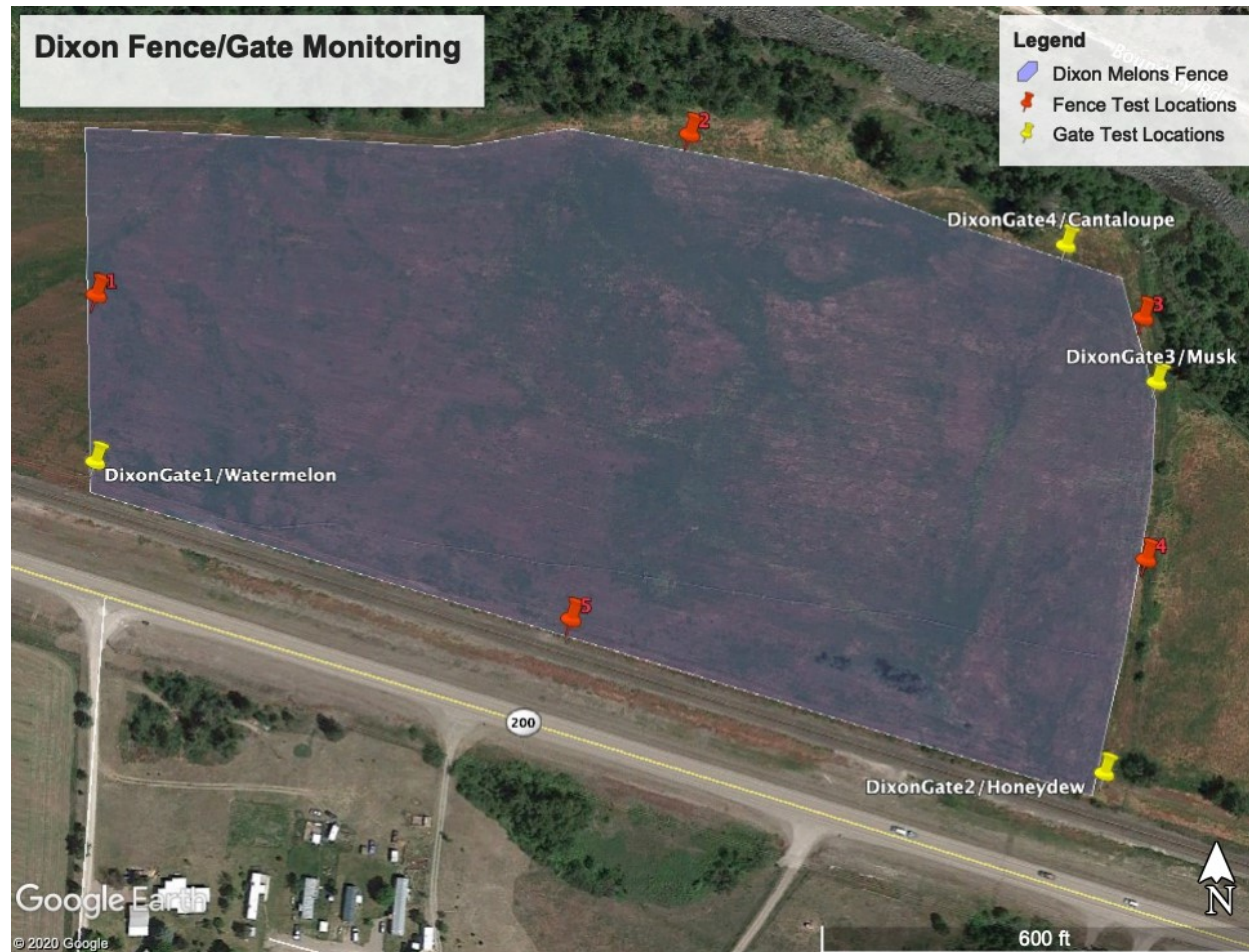




Up to 7 black bears eating melons
at the same time !



Map of Melon Patch



Fence
8-9kV

Some barriers less
5kV bump gates

1 barrier 10kV



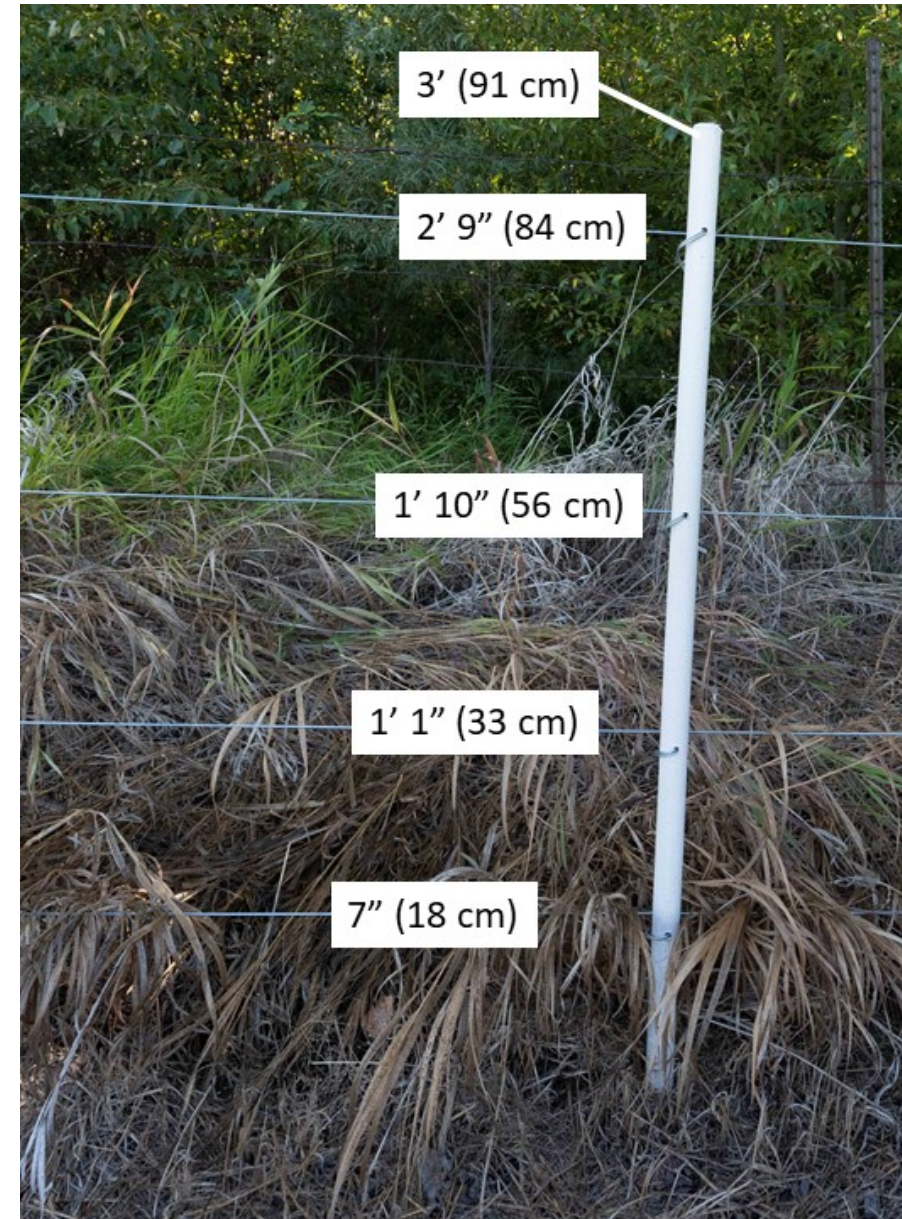
Electric Fence

8-10kV

Simple, relatively inexpensive

For bears

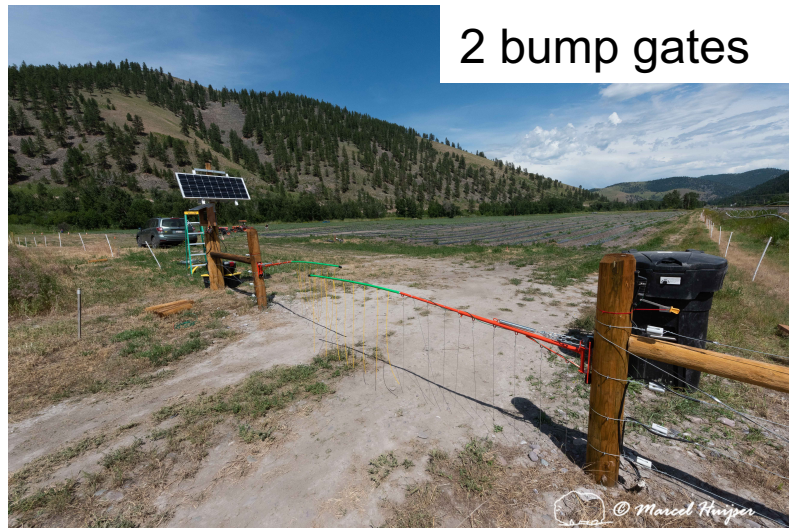
Not for ungulates



Gates = Road ecology!



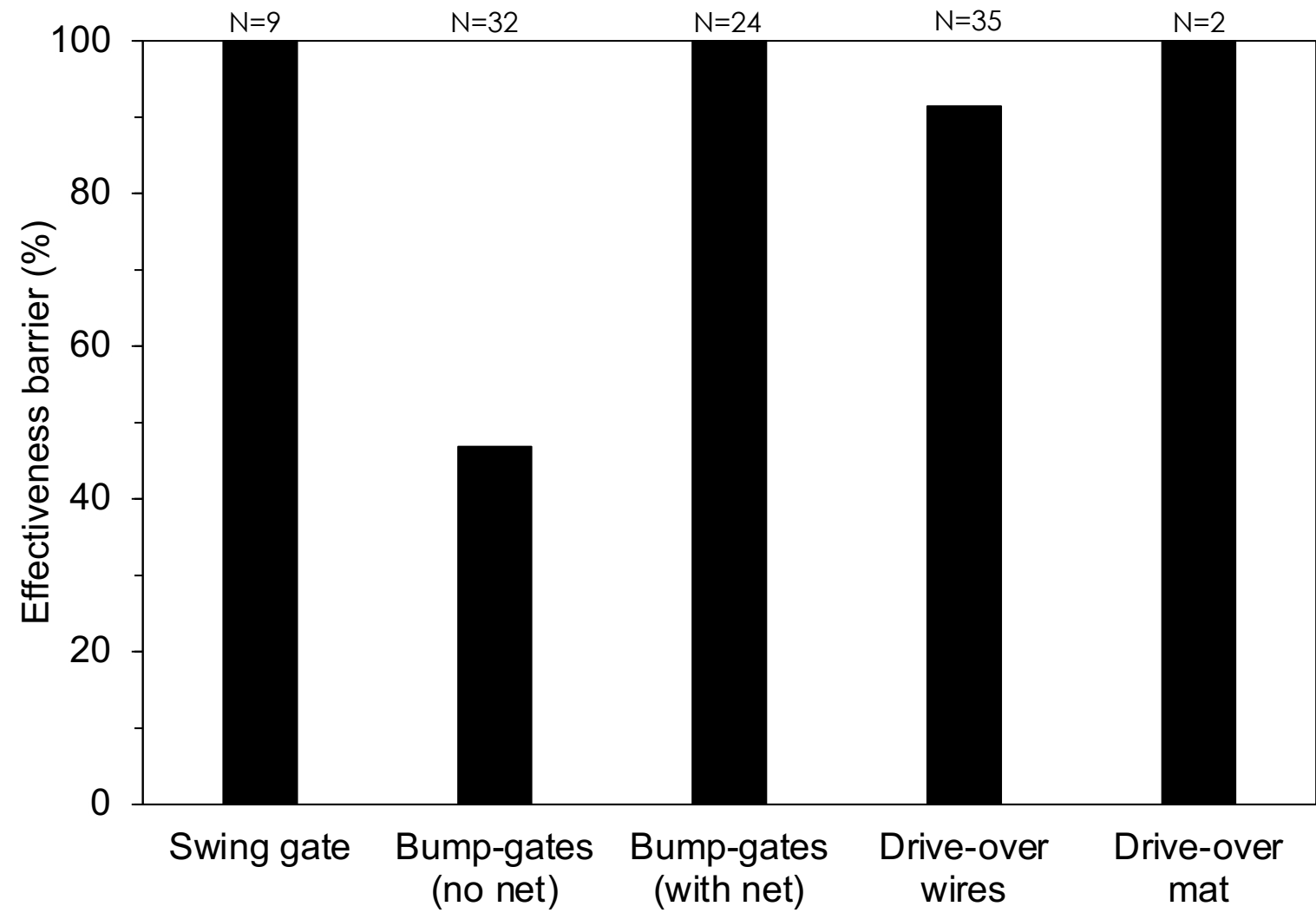
1 drive-over wires

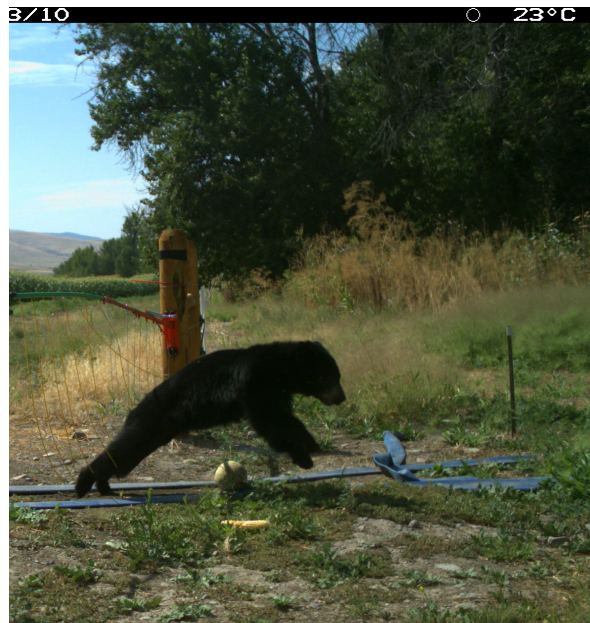


1 drive-over mat (Crosstek)



Barrier effect







Modification



REDUCE
Wildlife Vehicle Collisions



INCREASE
Habitat Connectivity

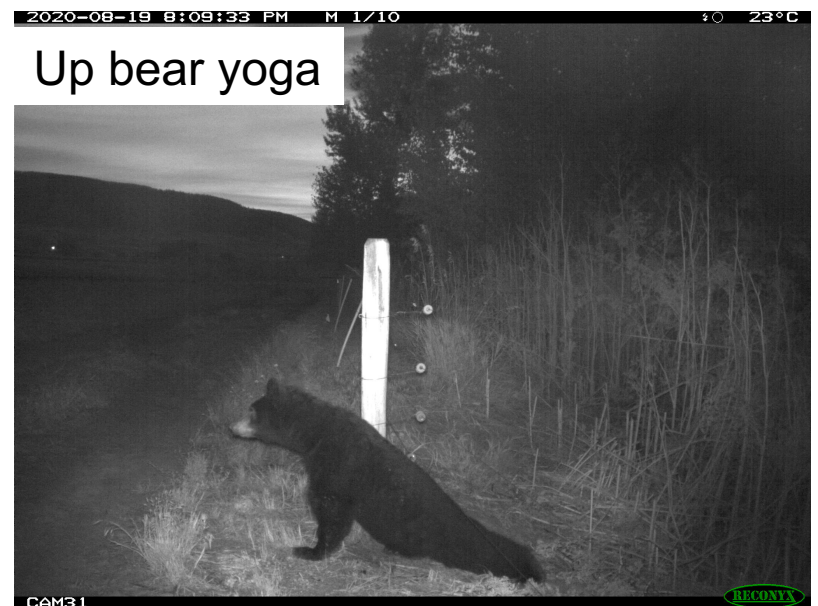


IMPLEMENT
Cost Effective Solutions

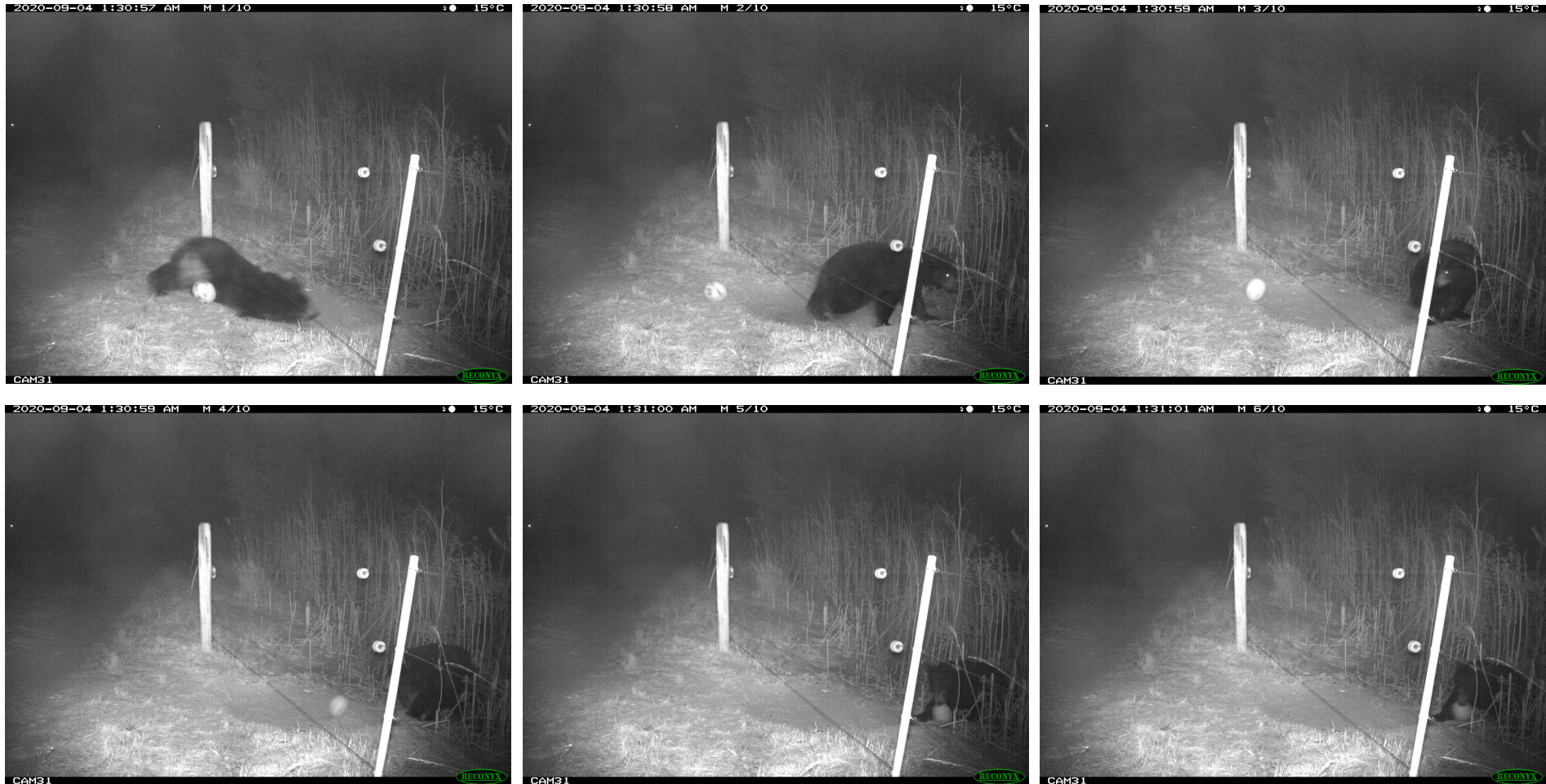


The weakest spot...

Digging under the fence



One for the road...



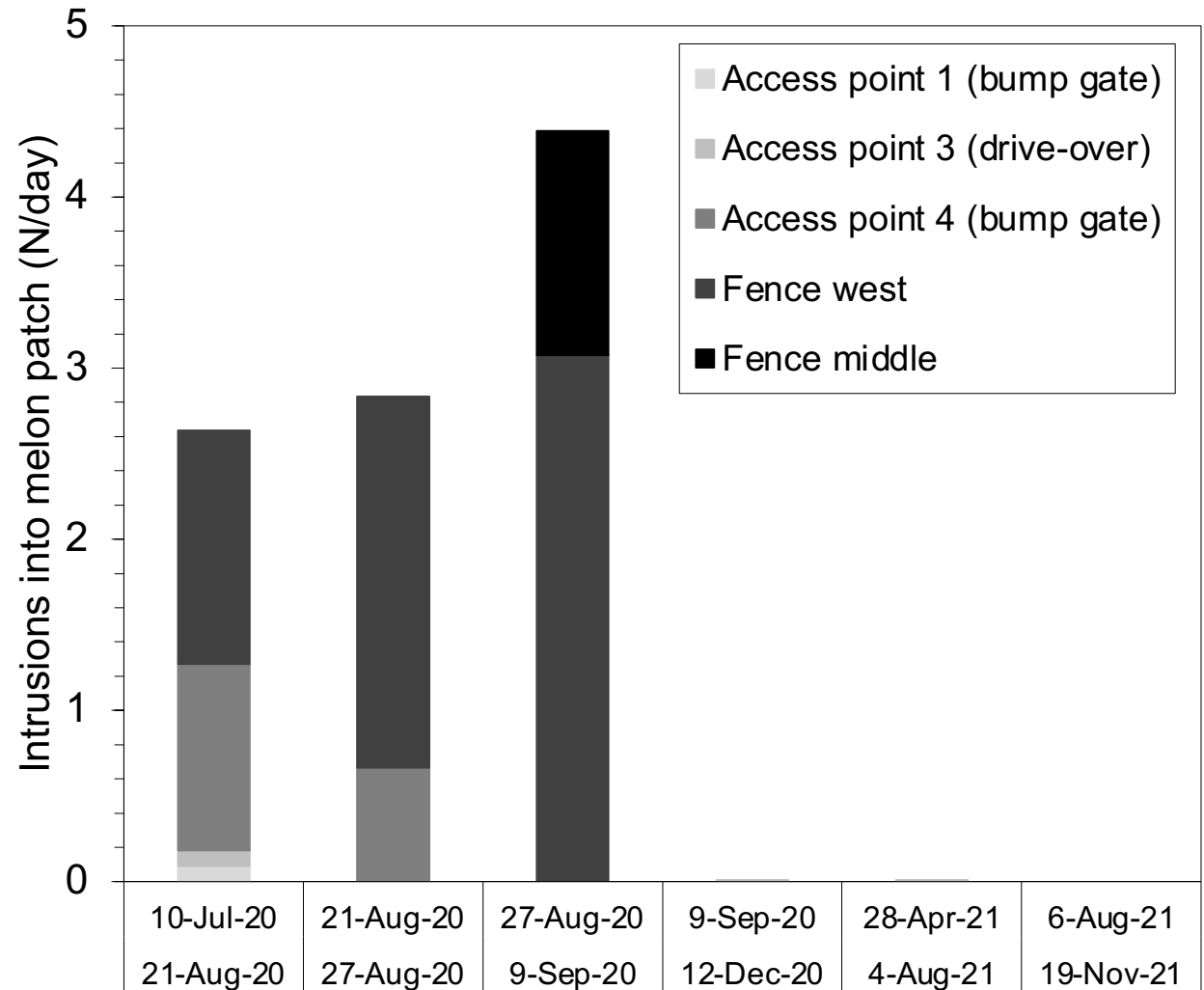
Fence Fixes

- Lower wires
- Additional wire
- 2nd wire hot (not ground)
- Light scare
- Sound scare



It is a system!

- Fix one point?
- Another point now becomes the weakest spot
- Stepwise approach to eliminate all weak spots!
- The same with a transportation corridor!



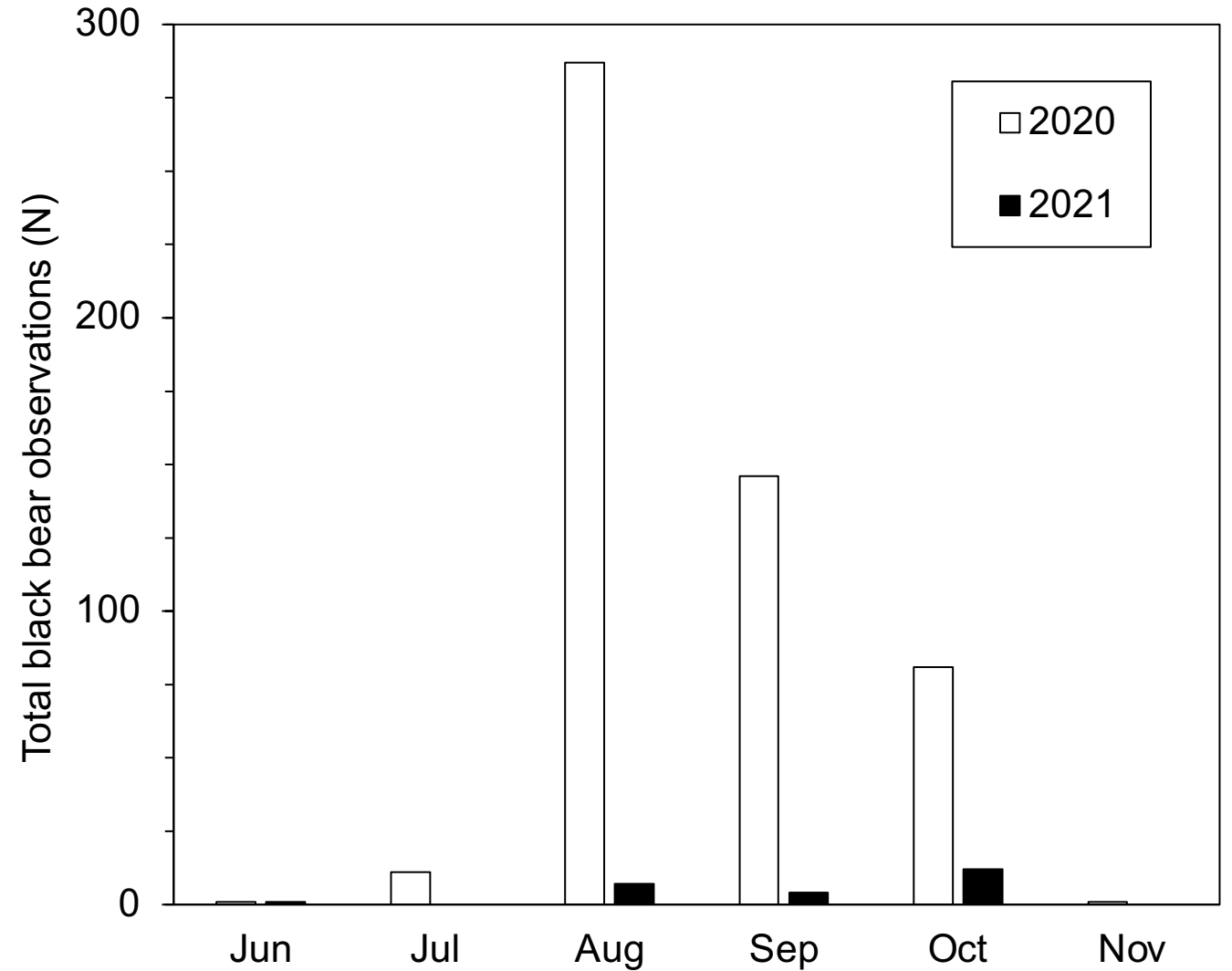
Addiction was broken

Black bear observations

7 locations monitored with a camera

Regardless of which side of the fence or electrified barriers the bears were on

95% lower in 2021 (N=24)
than in 2020 (N=527)



Farmer's perspective

2020: 80% reduction in melon loss due to bears

2021: Near 100% reduction in melon loss due to bears

2022: Poor fence maintenance, bears are back!



Operation and Maintenance

- Need to be certain that electricity is ON
- Bump gates are easily damaged
- Commitment to maintenance?



Thank you!

Project partners:

Melon farmers (Cassie & Faus Silvernale)

People and Carnivores (Bryce Andrews)

Crosstek (Tim Hazlehurst)

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- Washington State Department of Transportation

