

# Bats of the Puntledge Watershed (2019-2022)

Tim Ennis  
Executive Director  
Comox Valley Land Trust  
[tim@cvlandtrust.ca](mailto:tim@cvlandtrust.ca)

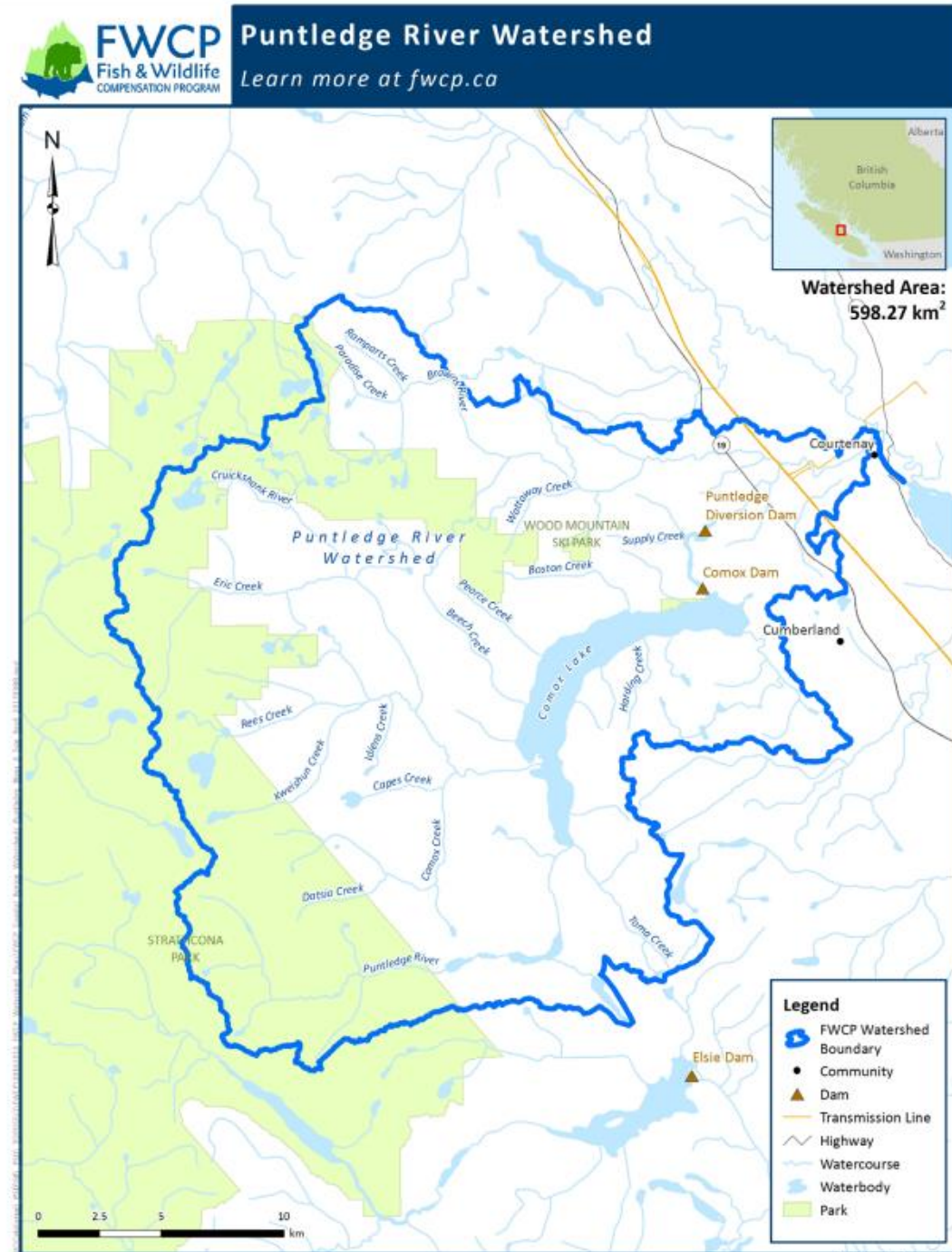


# Project Objectives

1. Determine which bat species occur in the Puntledge watershed and to gather basic information about their life history attributes;
2. Identify maternal colonies and hibernacula; and,
3. Develop strategies to protect high quality bat habitat areas within the watershed.



We respectfully acknowledge that the Puntledge River Watershed is the unceded traditional territory of the K'ómoks First Nation, the traditional keepers of this land.



Better three hours too soon than a minute too late!

-Batman *(well, and I guess Shakespeare too)*





# Methods: Acoustic Sampling: Driving Transects

iPad Air (Apple) and EchoMeter  
software (Wildlife Acoustics)



EchoMeter Touch  
2 Pro and Vehicle  
Mount (Wildlife  
Acoustics)



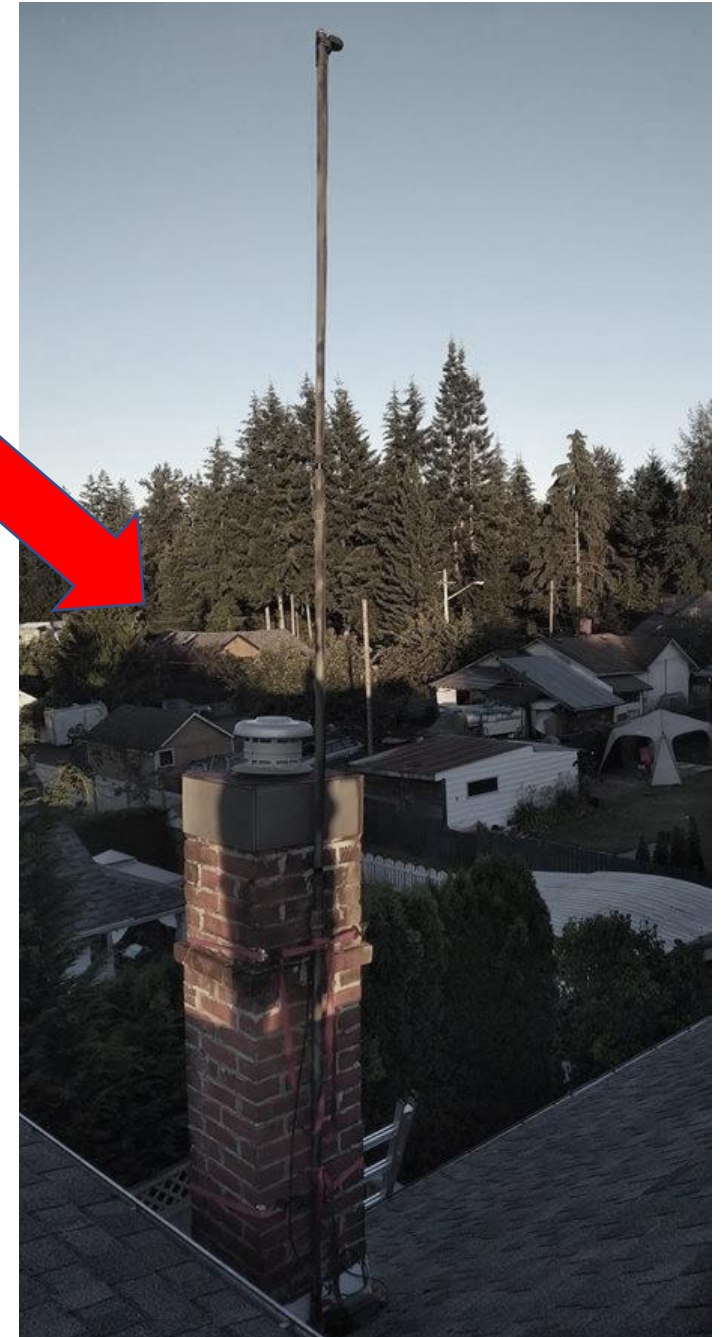
My  
truck

# Methods: Acoustic Sampling: Autonomous Recording Unit (ARU)

SM4 BAT (FS)  
recorder and U2  
microphone (both  
Wildlife Acoustics)



My house (aka  
Allen Ave Bat  
Observatory)

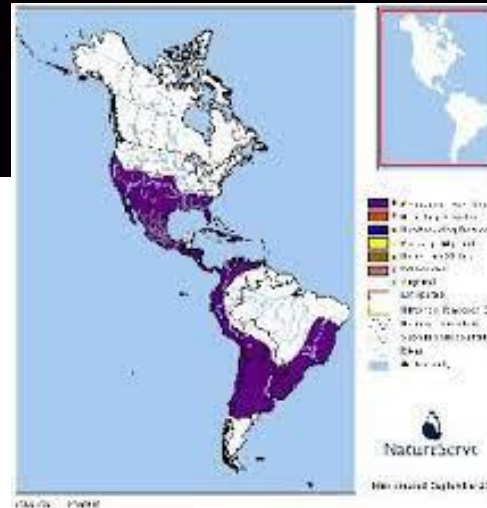




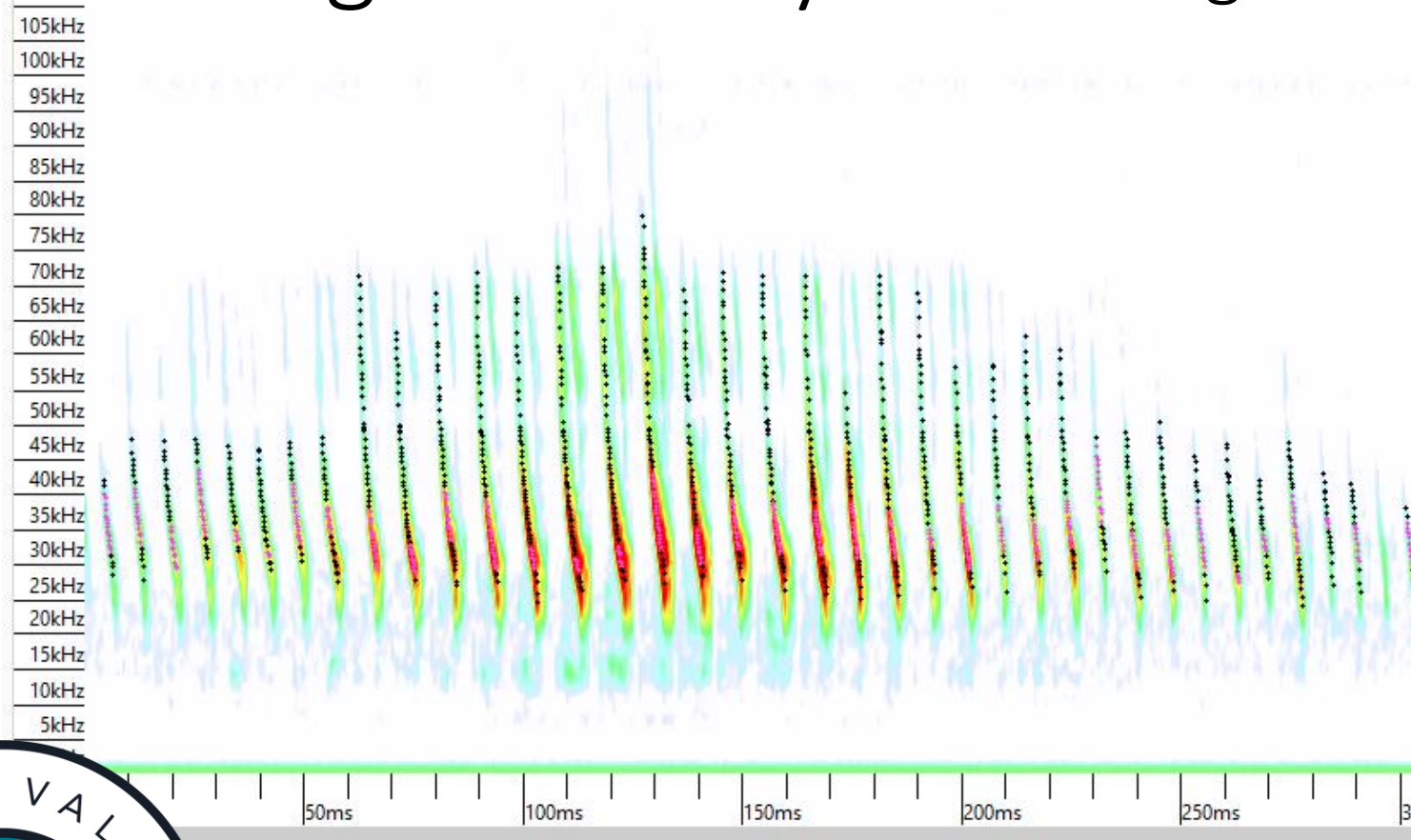
# Interesting discovery #1 – Mexican Free-tailed Bat!



- First reported in BC on Salt Spring Island in 2015/2016. (P. Ommundsen, C. Lausen, L. Matthias);
- “Normally” lives as far north as southern Oregon
- Species also confirmed at Comox Lake by the NABAT program from our recordings here in the Comox Valley (2018);
- **FUN FACT:** these bats have been recorded flying at speeds of over 160 km/hr!



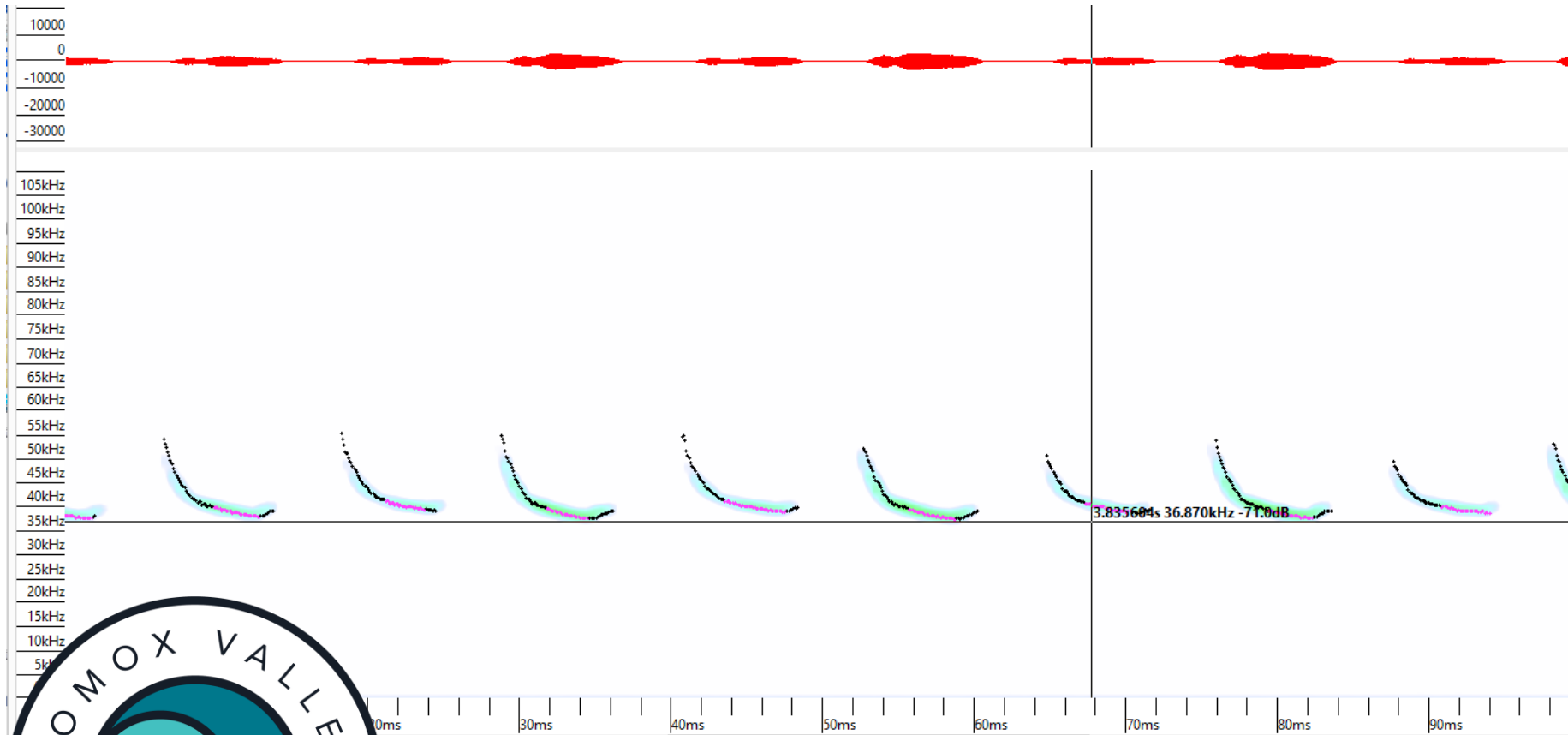
# Interesting Discovery #2 – Fringed Myotis!



- Typically known from the interior grasslands of BC;
- A coastal subspecies is known from Wa, Or, and Ca;
- This recording was reviewed by Cori Lausen who agreed it was “most likely” a Fringed Myotis – more work is needed to verify the occurrence of this species on the Island.



# Interesting Discovery #3 — Eastern Red Bat!

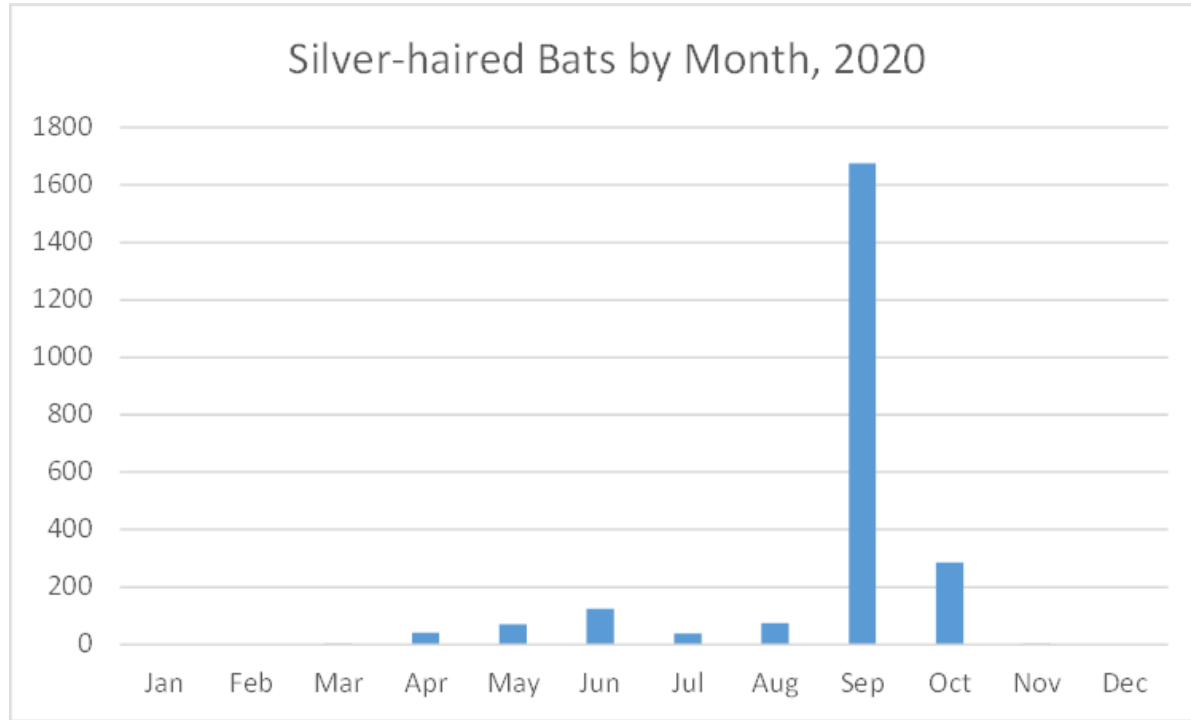


- Previously thought to be only east of the Rockies!
- This recording also reviewed and verified by Cori Lausen;
- **FUN FACT:** Sometimes roost in leaf litter on the forest floor!

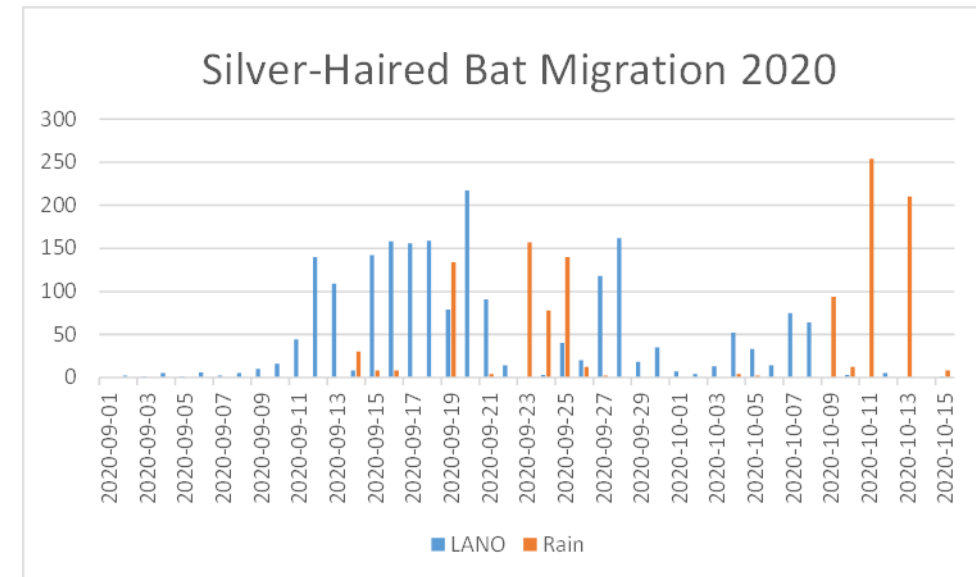




# Interesting Discovery #4 — Silver-haired Bat Migration Stopover!

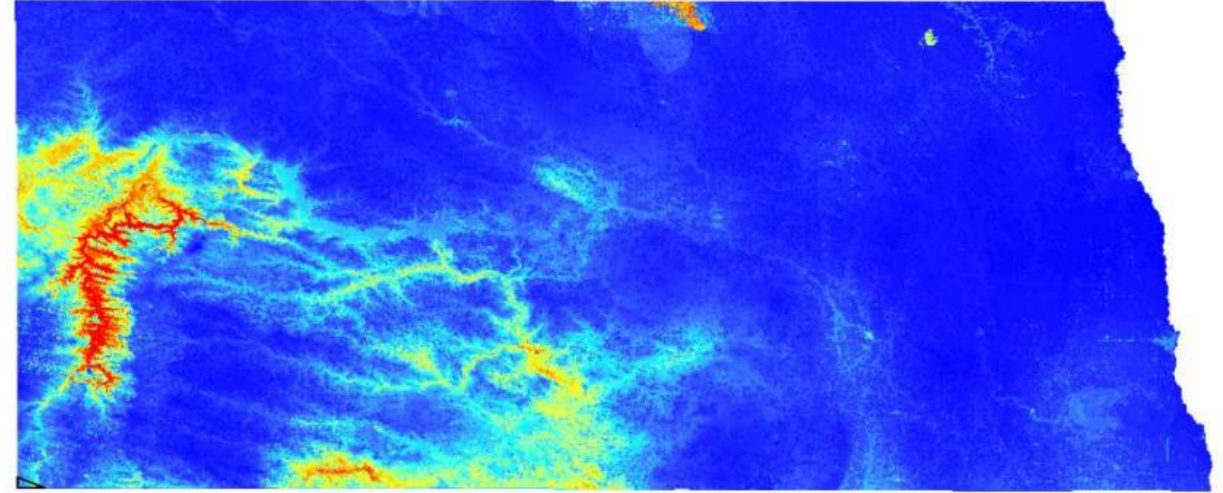


- Leap-frog migration;
- 300-500 km/night;
- Feed briefly after sunset before flying south;
- Use a different route to go north in the Spring;



# What is next?

- Our recordings are geo-tagged and time-stamped, so we can tell which kinds of habitats a given bat species prefers (e.g., riparian areas, wetlands, mature forest, clearcuts etc.) and when they use those habitats.
- We are using our data to model (map) high quality habitats at the watershed-scale.
- This will guide our work to protect important bat habitats.



Example output from North Dakota in: Barnhart PR, Gillam EH (2016) Understanding Peripheral Bat Populations Using Maximum-Entropy Suitability Modeling. PLoS ONE 11(12): e0152508. doi:10.1371/journal.pone.0152508



Thank You!



Latitude Conservation  
Solutions Company



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**Habitat Stewardship Program**