

Twin Cities Beaver Project: population and distribution in the Mississippi National River and Recreational Area

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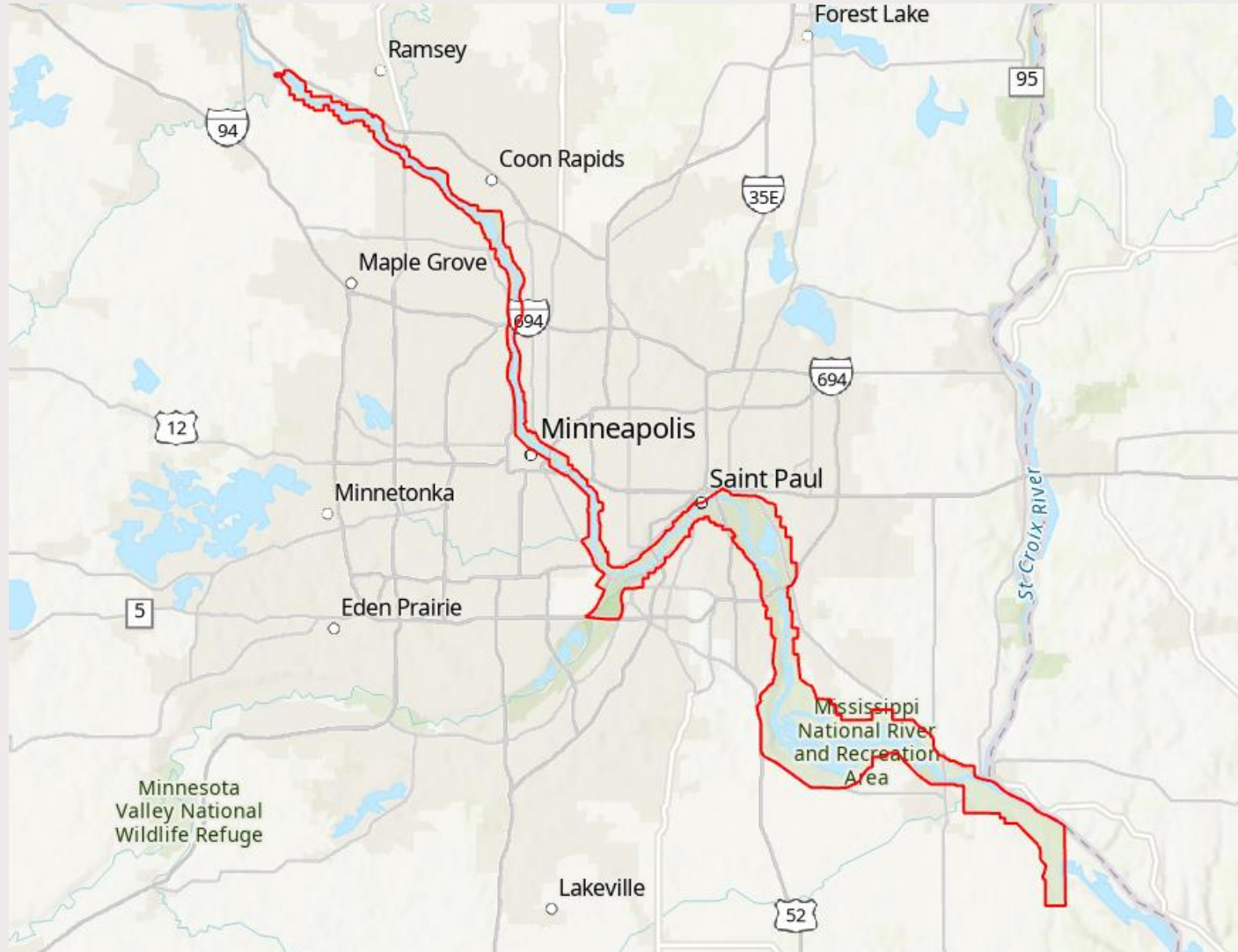
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Mississippi National River and Recreational Area, National Park Service Unit



Twin Cities Beaver Project



- Lack of cottonwood regeneration
- Beaver herbivory on cottonwoods
- MNRRA is home to 70+ nesting bald eagle pairs and 80% nest in mature cottonwoods
- Beaver populations have not been studied here
- Need to better understand the population biology and functional role of beavers
 - Population
 - Distribution
 - Forage selection



Methods

Estimated beaver population by....

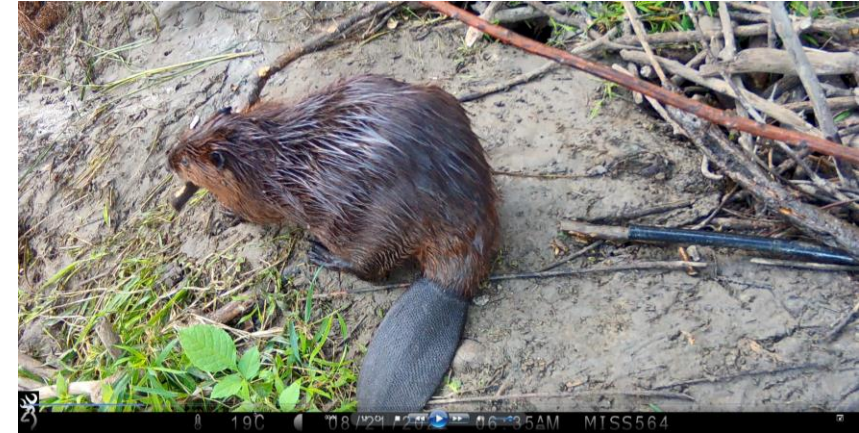


Aerial cache surveys via helicopter

- 2022
- 2023
- 2024



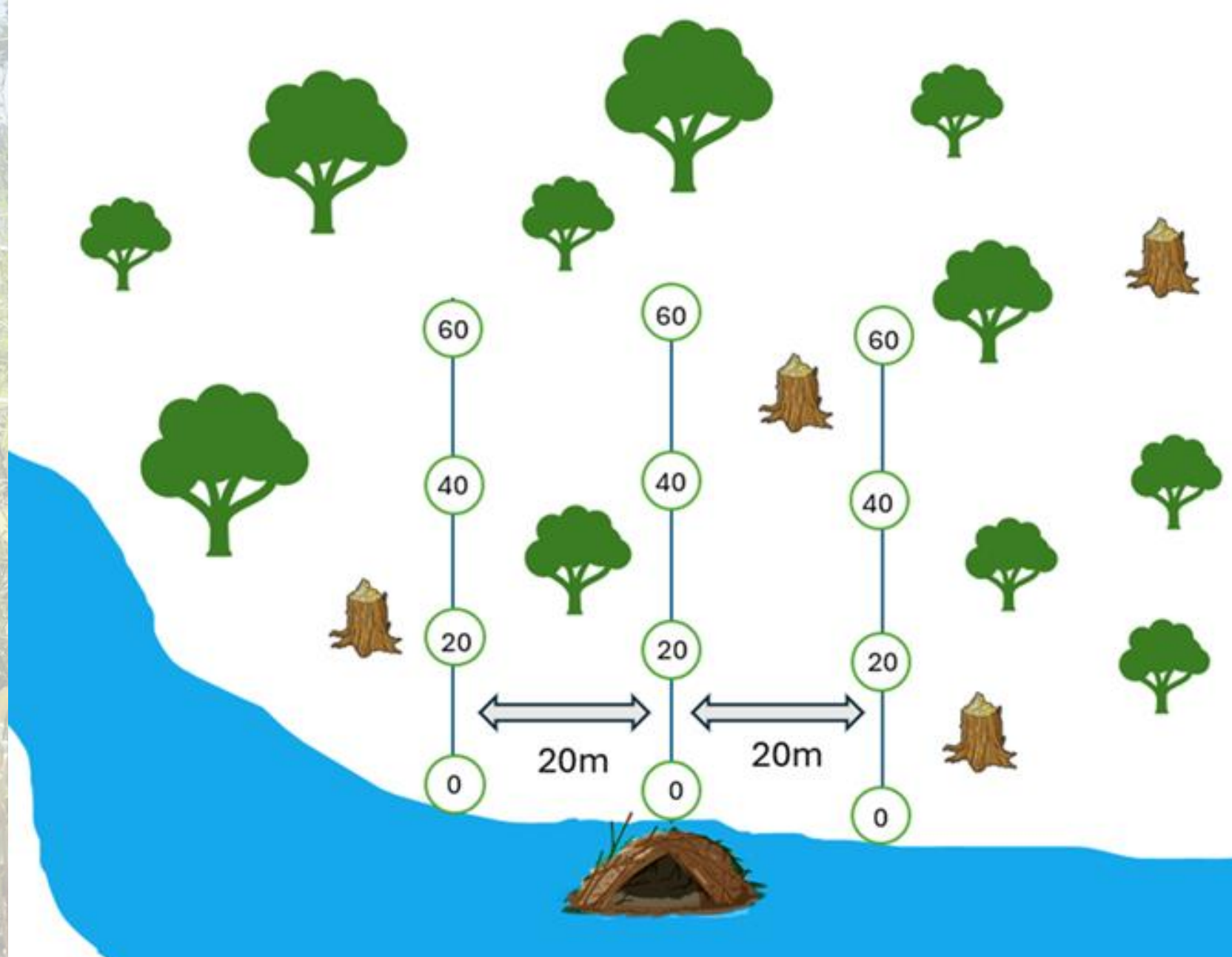
Estimated family group size via remote cameras





Vegetation transect surveys

- What woody vegetation is available near active lodges
- What species are selected for use

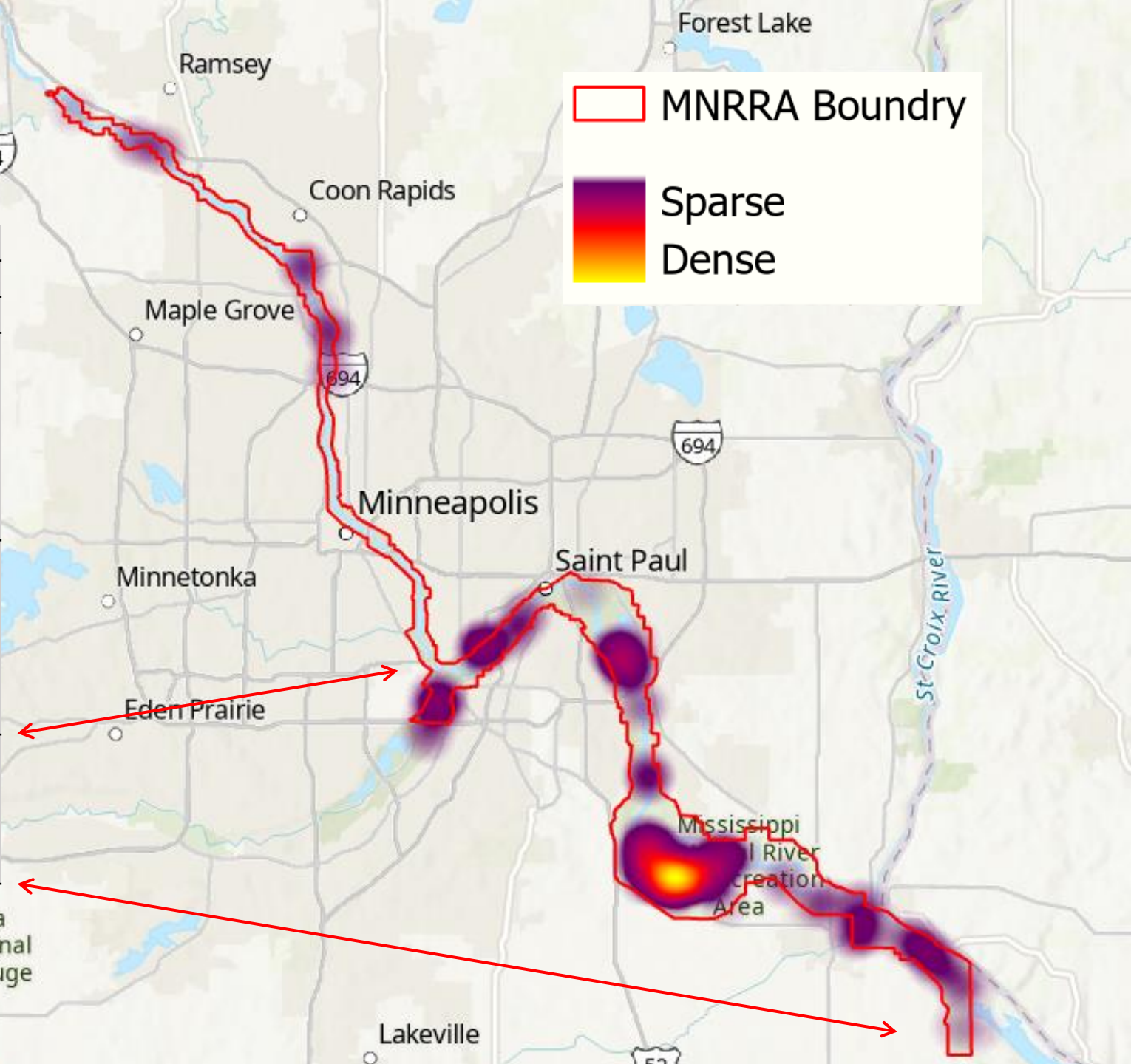


Results

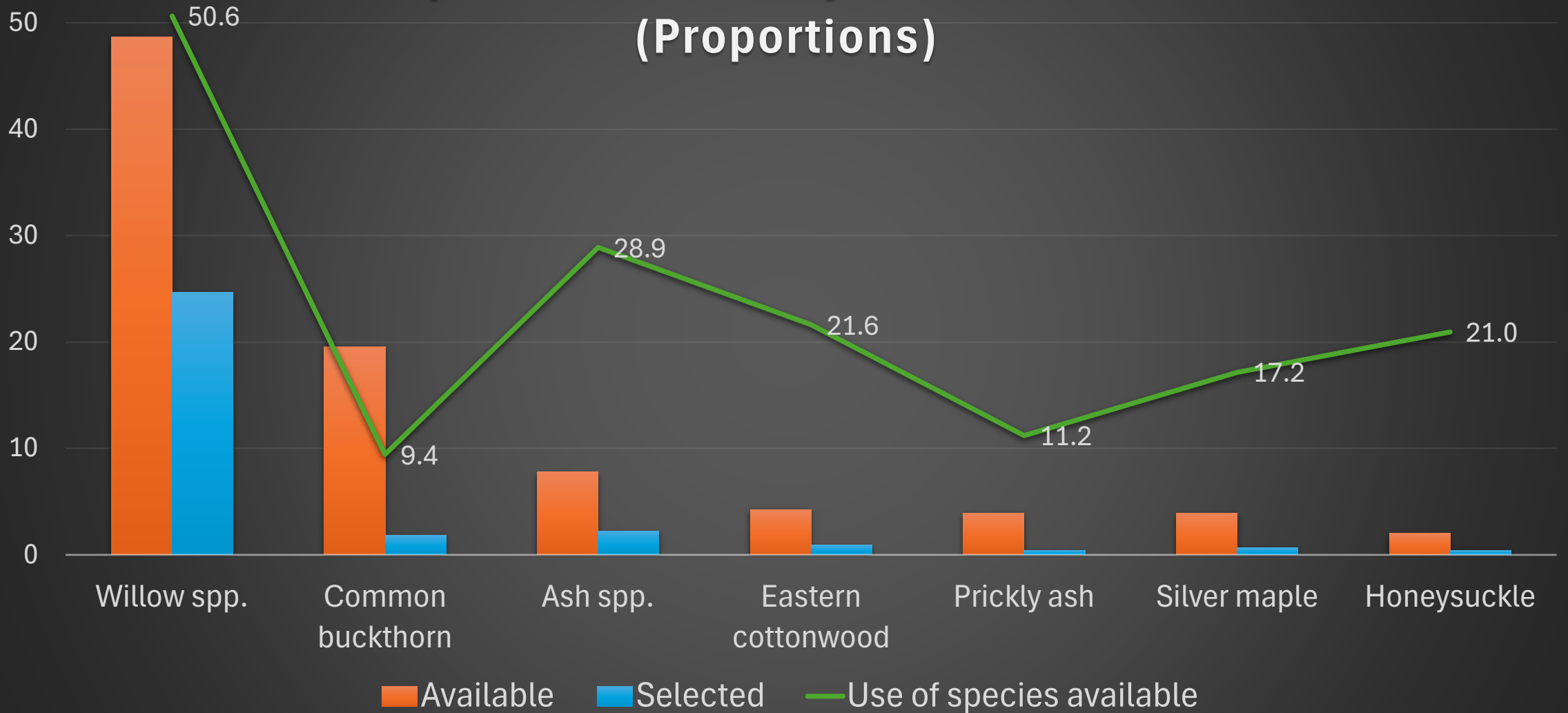


MNRRA Beaver Abundance

	2022	2023	2024
Entire MNRRA			
No. Caches	75	54	54
No. Beaver	202.5 - 690	145.8 - 496.8	145.8 - 496.8
Beaver/km	1.7 - 5.9	1.3 - 4.3	1.3 - 4.3
Above confluence			
No. Caches	6	5	3
No. Beaver	16.2 - 55.2	13.5 - 46	8.1 - 27.6
Beaver/km	0.3 - 1.0	0.3 - 0.9	0.2 - 0.5
Below confluence			
No. Caches	69	49	51
No. Beaver	186.3 - 634.8	132.3 - 450.8	137.7 - 469.2
Beaver/km	3 - 10.1	2.1 - 7.2	2.2 - 7.4



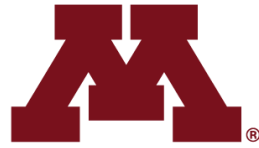
Species Availability and Selection (Proportions)



Future opportunities

- Cellular GPS/VHF tag a subset of beaver populations
- Diet composition from stable isotope analysis from hair samples
- Population source studies through genetic analysis
- Stress response of beaver in gradients of urban development and aquatic system (i.e. Lake, River)

Special thank you to everyone involved



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AND NATURAL RESOURCES
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Thank You!

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