WC Stopover/Flyover Update

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July 2025 TAC Meeting

Stopover/Flyover - Data Analysis Steps

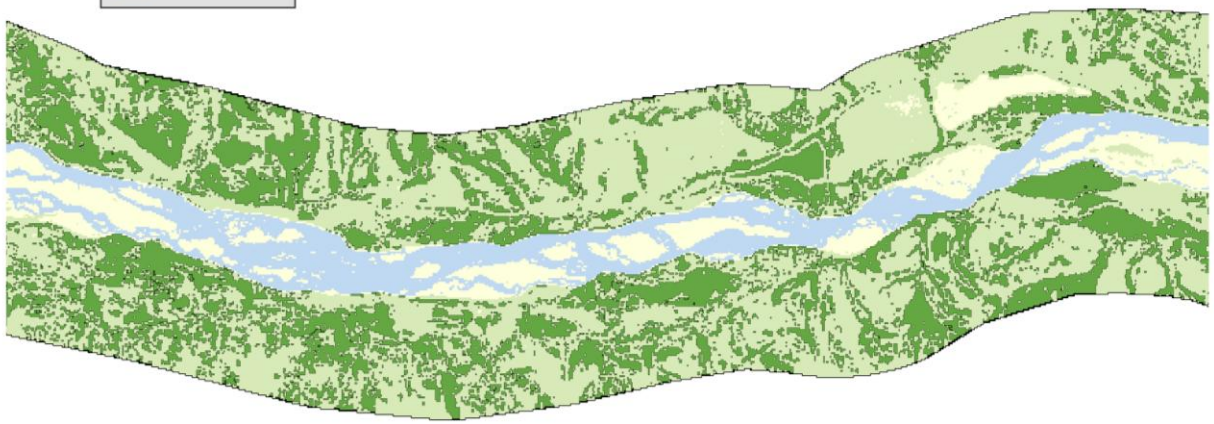
- Step 1
  - *Unmanageable and manageable variables*
    - *On and off-channel variables*
- Step 2
  - *Weather conditions*
- Step 3
  - *Wetland availability*
- Step 4
  - *Conditions ahead of bird*

Imagery Processing for On-Channel Variables

0 0.25 0.5 1 1.5 2 Miles

N

Landcover Class
- forest
- sand
- vegetation
- water



0 0.25 0.5 1 1.5 2 Miles

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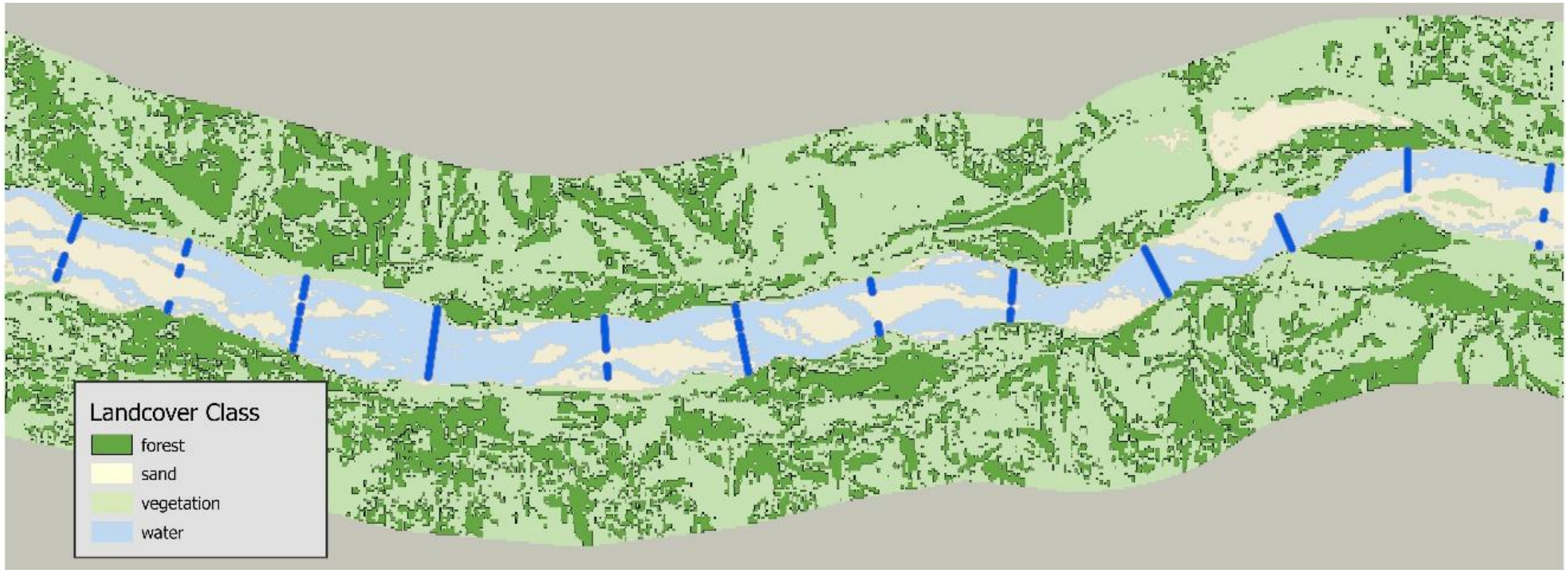
On-Channel Variables

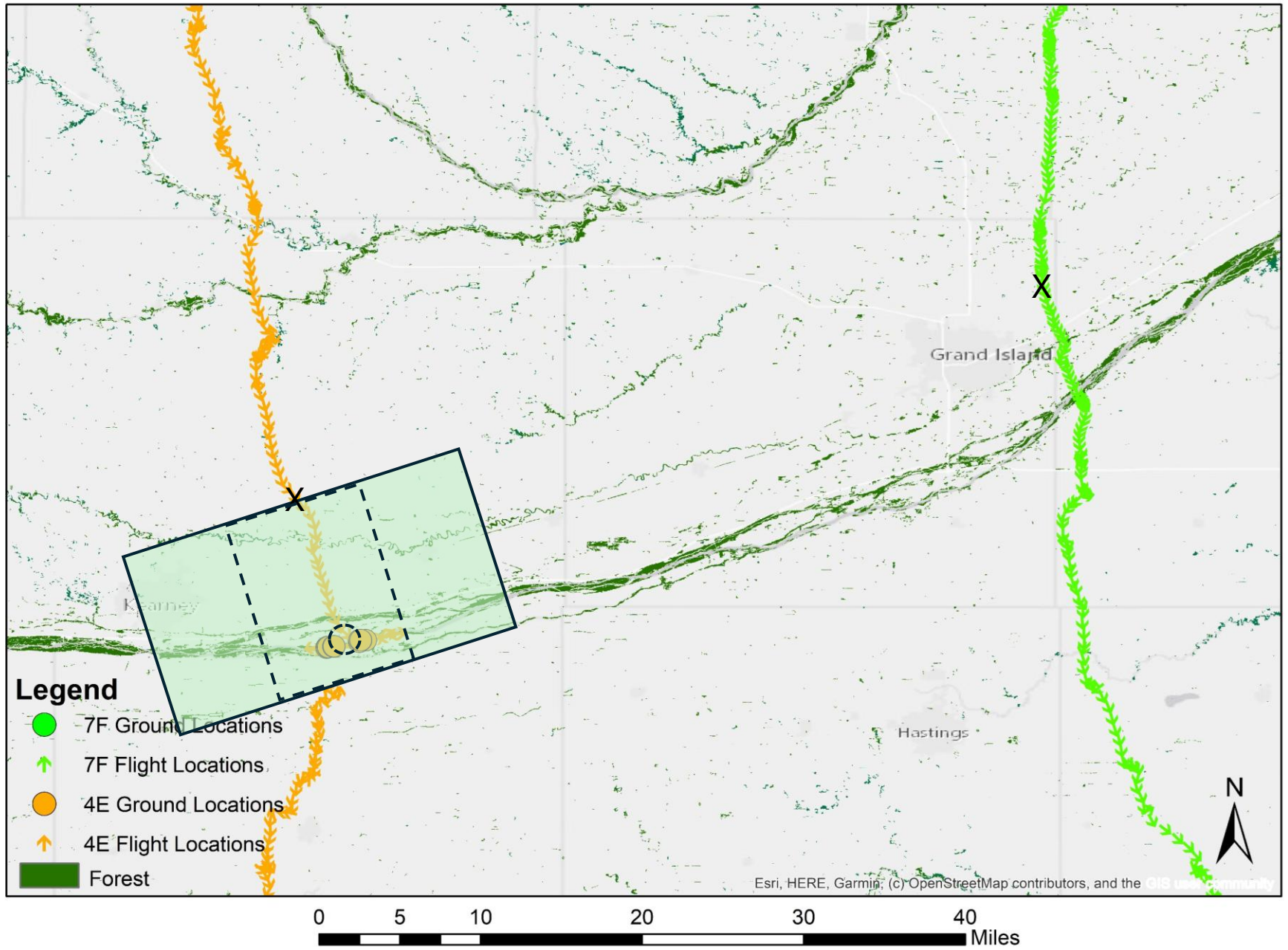
- Unforested Channel Width
- Max Unvegetated Channel Width
- Wetted Channel Width

Spring 2018 - Unvegetated Widths

Spring 2018 – Wetted Widths



Step 1 - Multiple Scales to Assess Variables



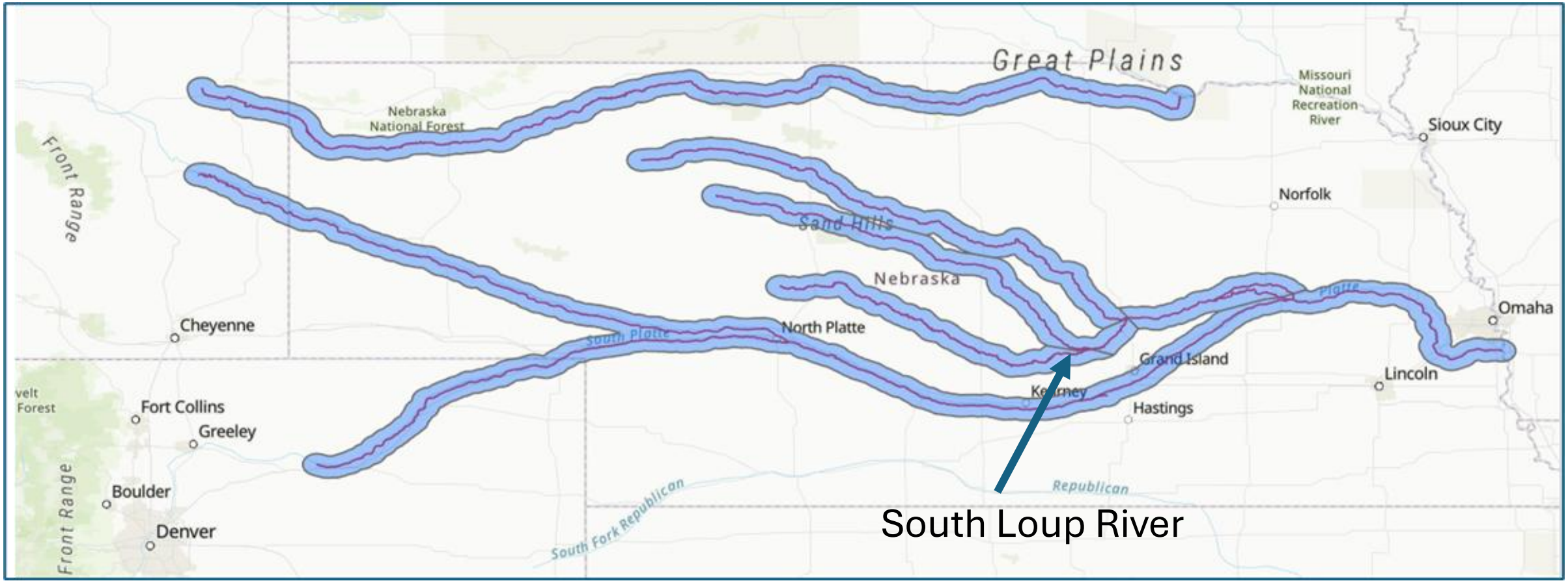
Step 1 Analysis – On-Channel Variables (within 0.77, 4, and 10 miles)

- Wetted Width
  - Maximum
  - Average
- Unvegetated Width
  - Maximum
  - Proportion of transects ≥650 ft
- Unforested Channel Width
  - Maximum
  - Proportion of transects ≥1100 ft

Step 1 Analysis (Previous Results)

Variable	AIC	AUC
Time of Day	773.81	0.73
Time Since Last Stopover	797.72	0.69
Latitude (Season Specific)	802.48	0.69
Distance Since Last Stopover	809.14	0.66
Distance to Centerline of Migration	814.98	0.65

Removal of South Loup Due to Sample Size



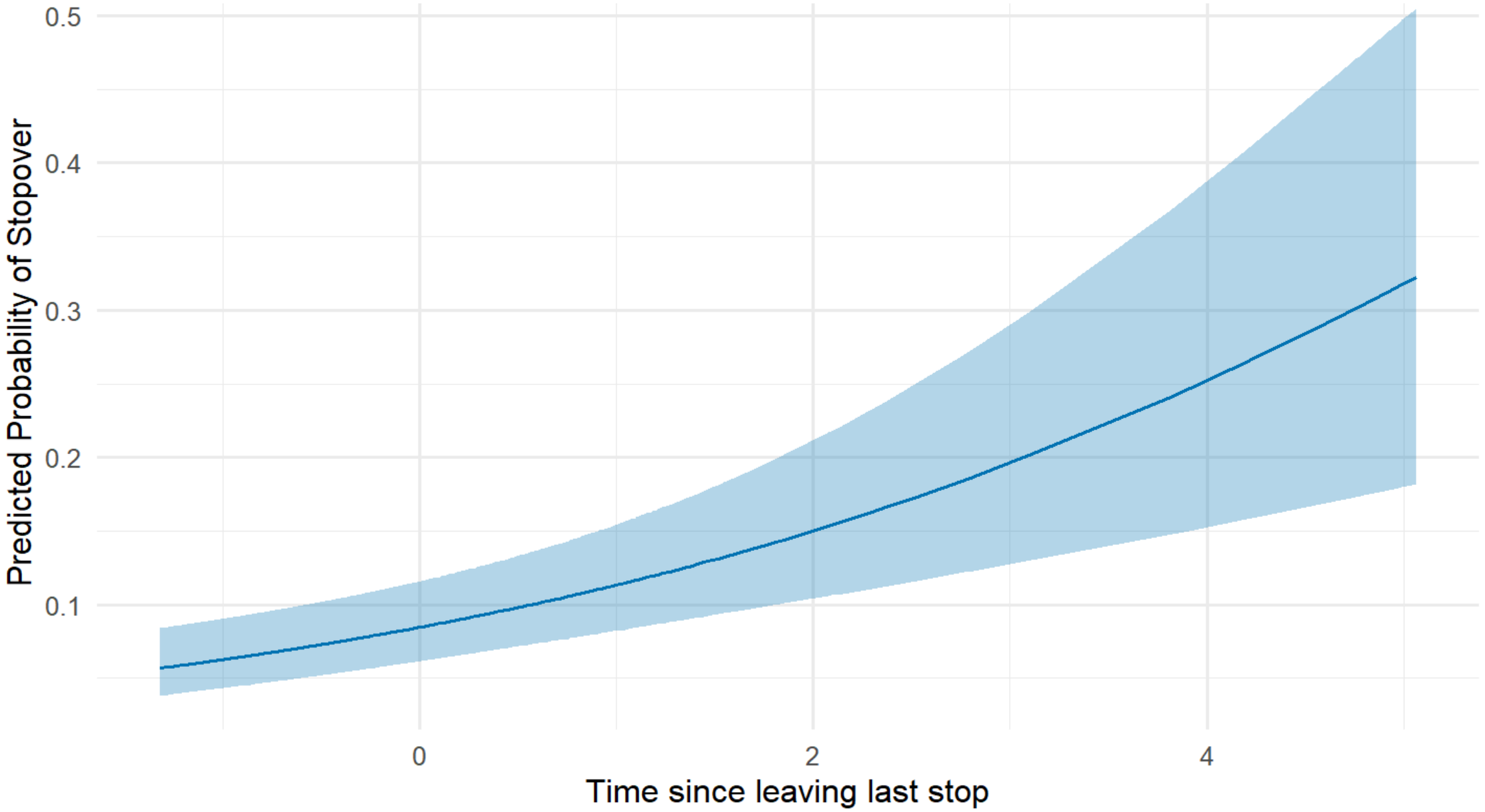
Step 1 Analysis (Current Analysis)

Variable	AIC	AUC
Time Since Last Stopover	830.04	0.64
Time of Day	831.86	0.63
Average Wetted Width (0.77mi)	833.41	0.63
Prop Unveg Width ≥ 650ft (0.77mi)	835.24	0.61

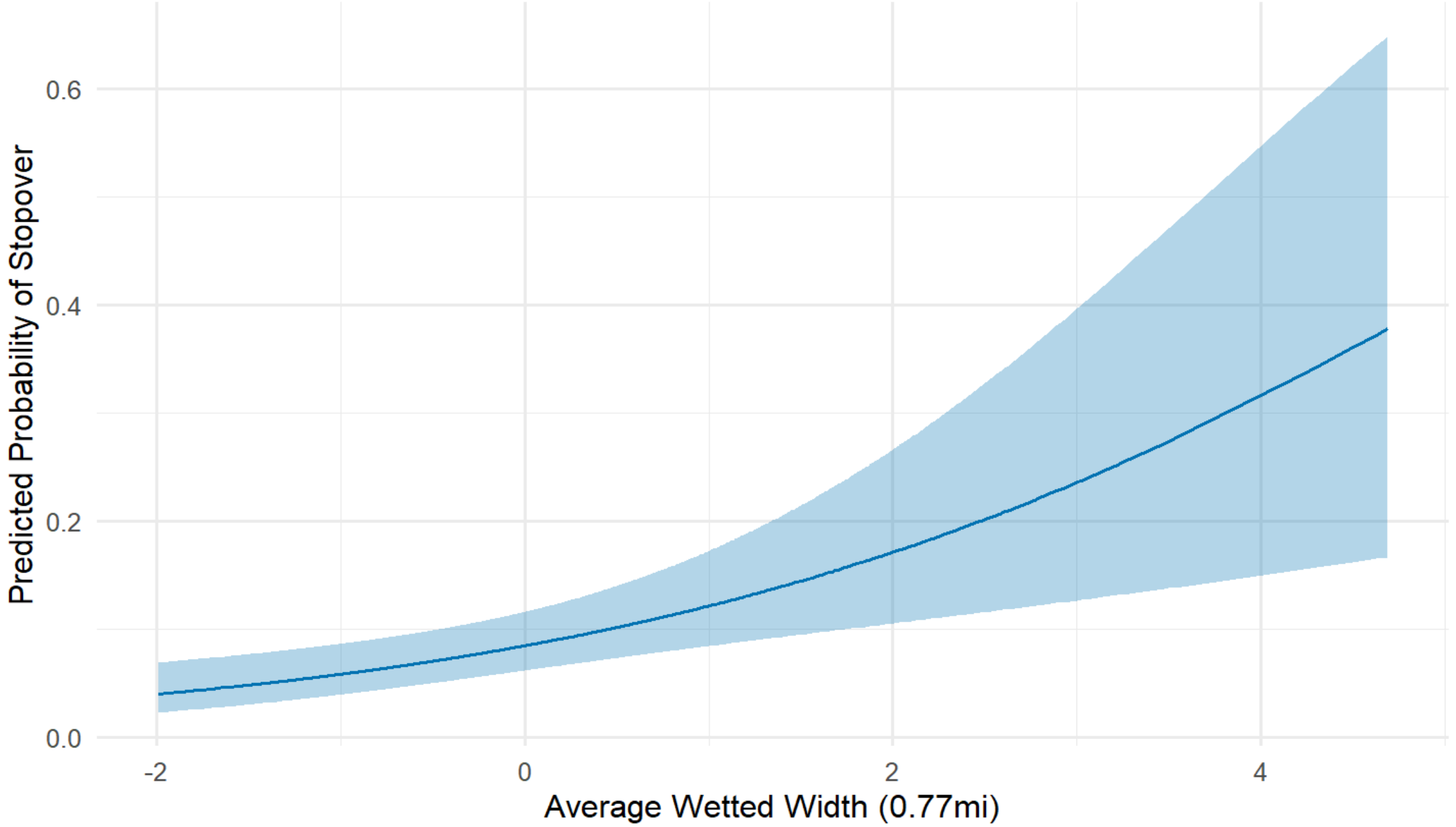
Step 1 Analysis (Current Analysis)

Variable	AIC	AUC
Time Since Last Stopover + Average Wetted Width (0.77mi)	818.33	0.67
Time of Day + Average Wetted Width (0.77mi)	818.46	0.67
Time Since Last Stopover + Prop Unveg Width ≥ 650ft (0.77mi)	819.97	0.66
Time of Day + Prop Unveg Width ≥ 650ft (0.77mi)	820.99	0.65

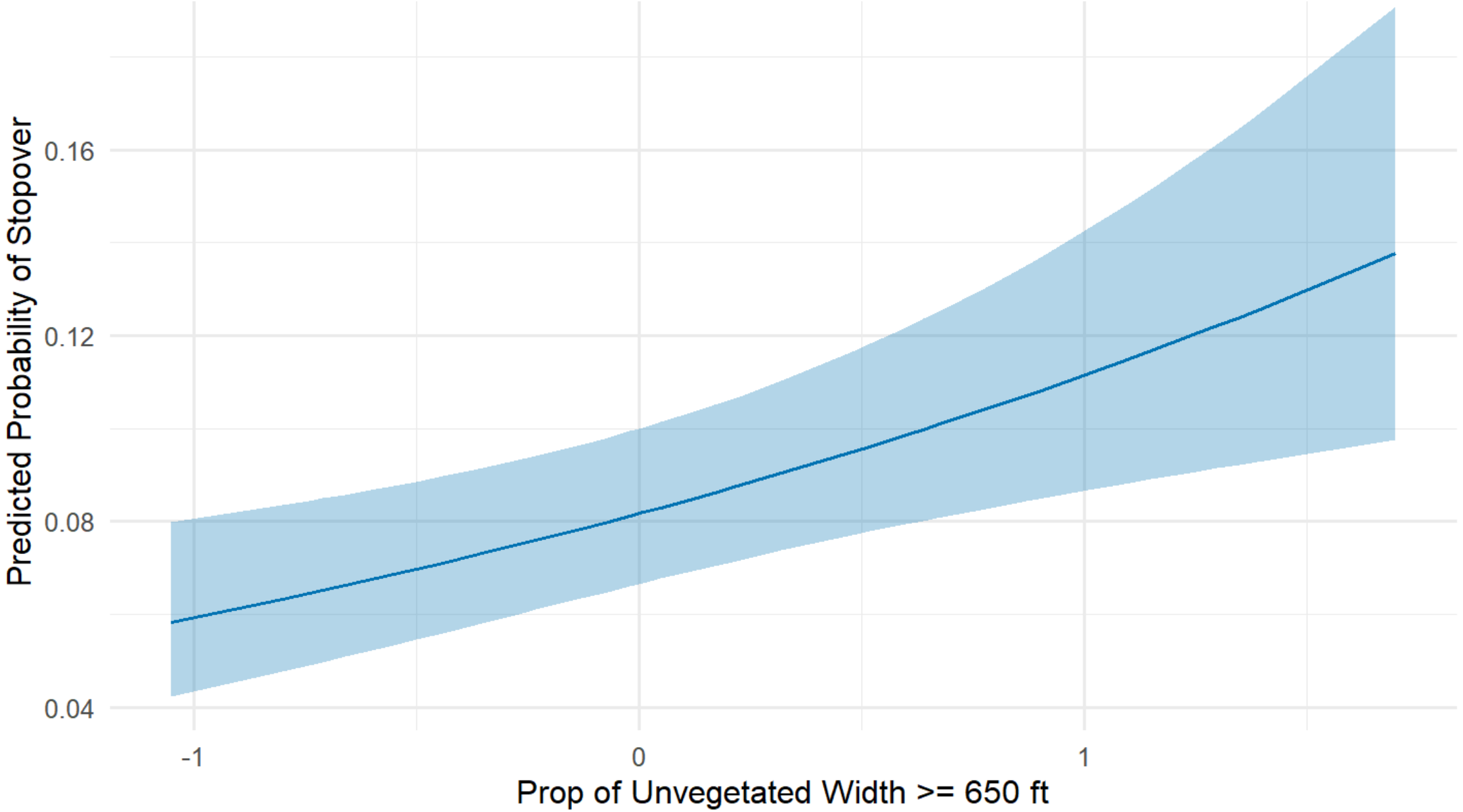
Time Since Last Stopover Predictions



Wetted Width Predictions



Unvegetated Width Predictions



Next Steps

- Add 2024 data to analysis
- Add off-channel variables (Forest and Developed)
- Create list of candidate models for Step 1
- Discuss full Step 1 analysis with Working Group
- Decide if Step 2 is needed