

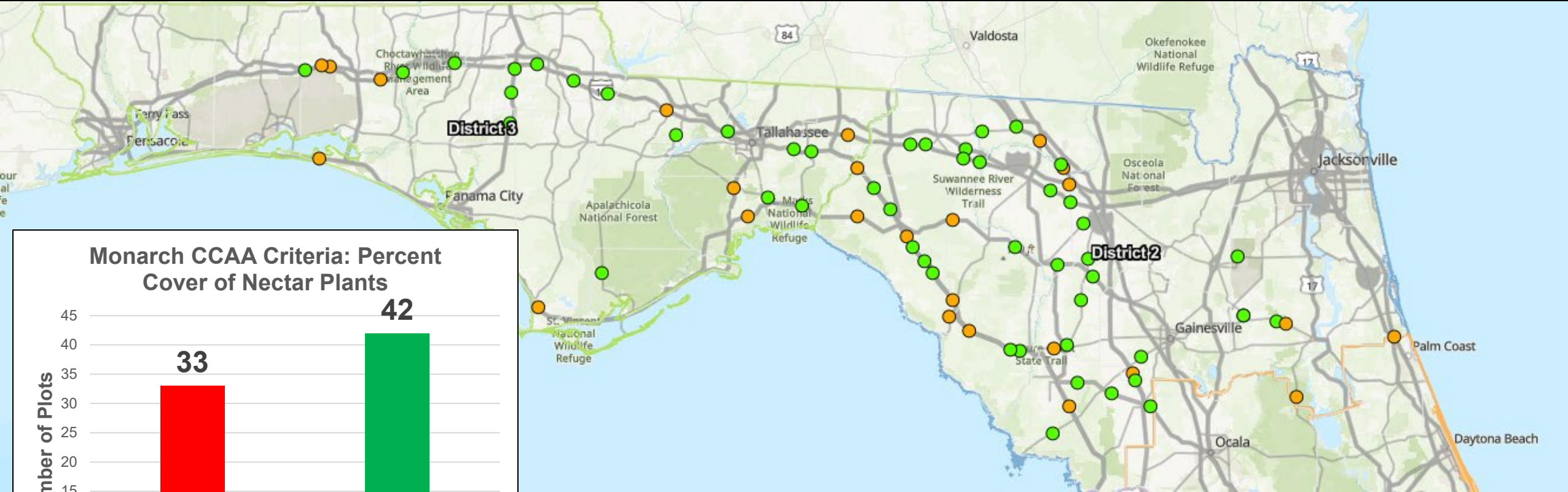


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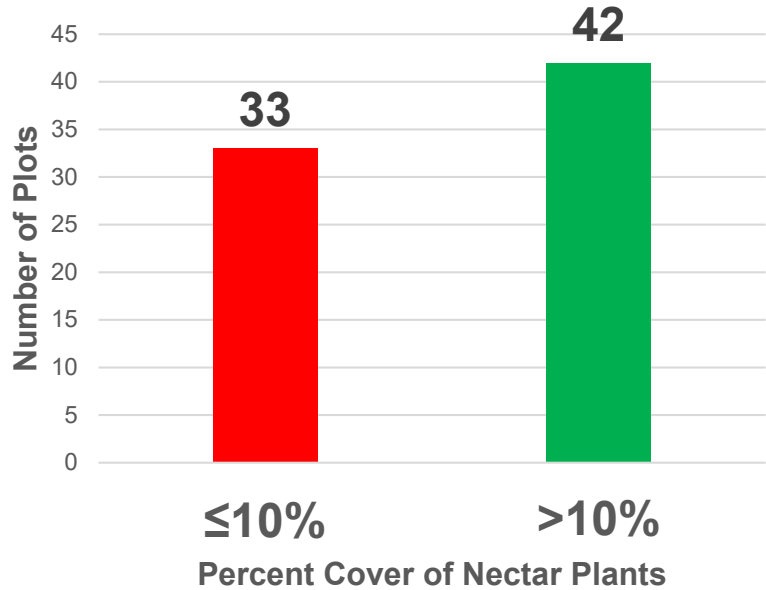
Remote Sensing Solutions: Quantifying Monarch Butterfly Habitat in Transportation Right-of-Way



75 Random Samples – Pollinator Scorecard Tier 2

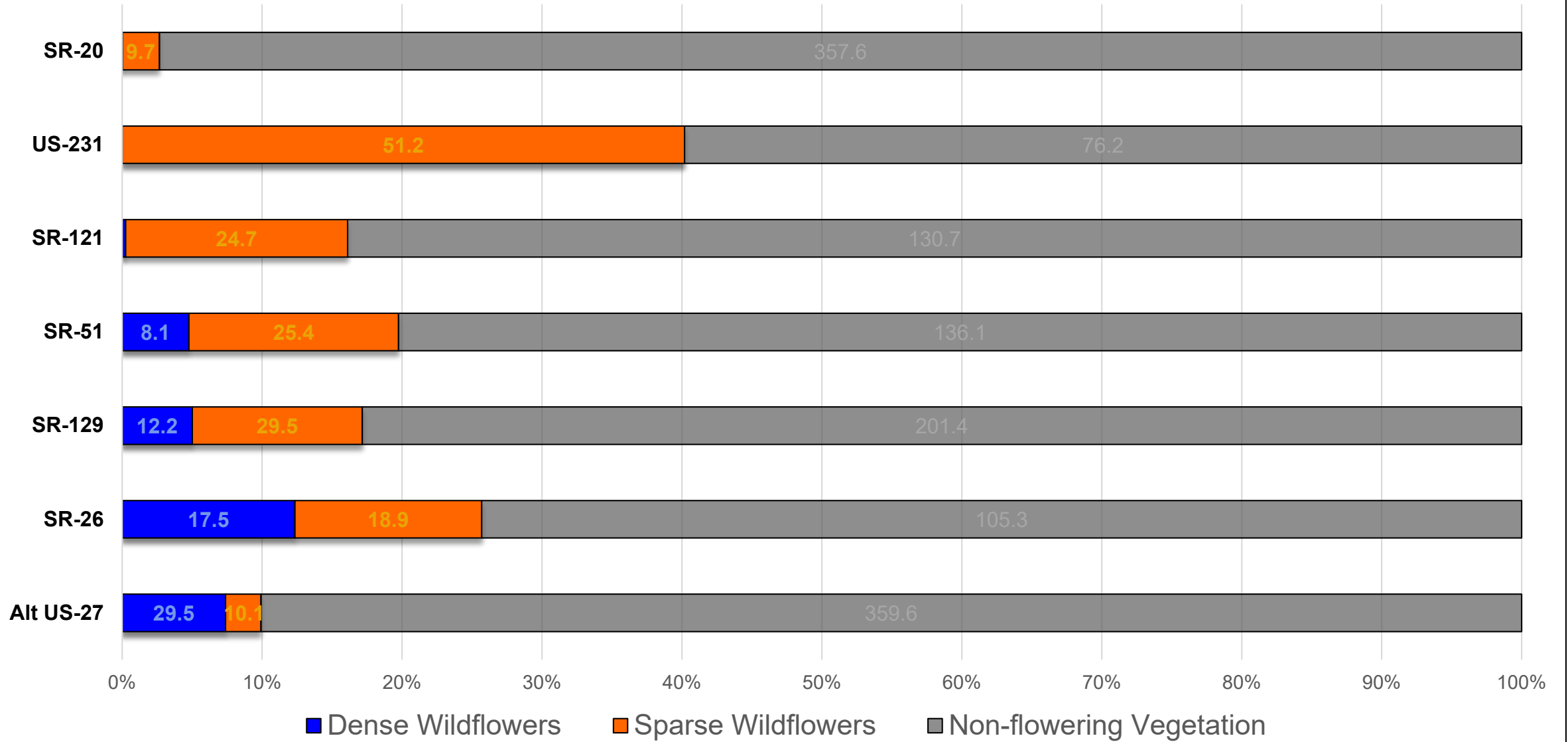


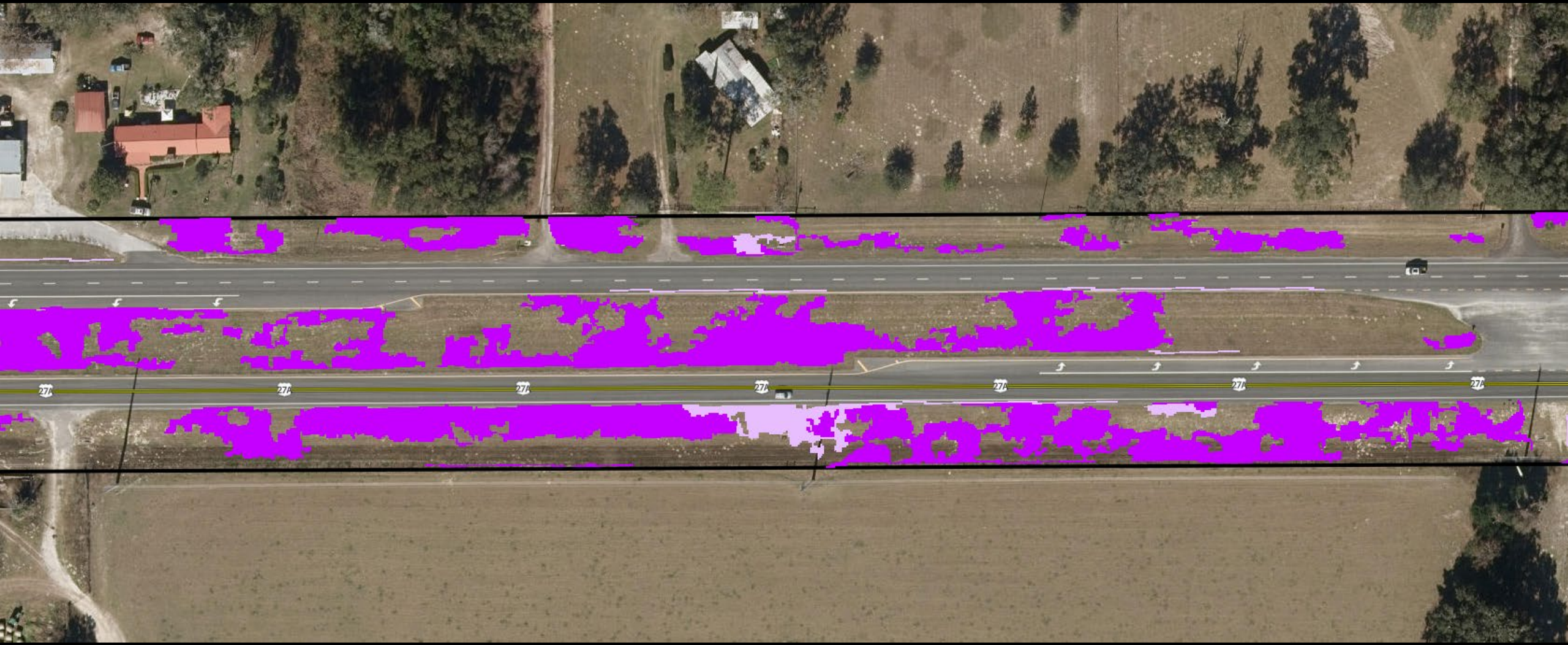
Monarch CCAA Criteria: Percent Cover of Nectar Plants



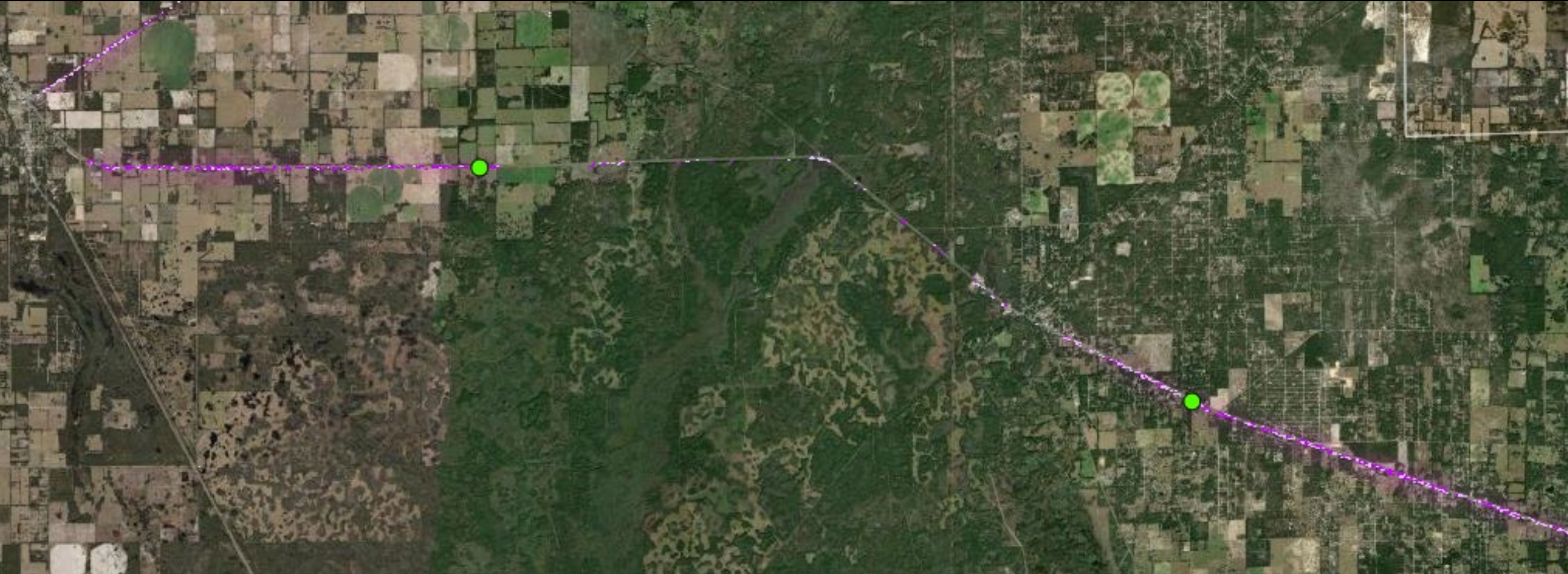


Object-Based Image Analysis Results: Proportion of Right-of-Way Conditions



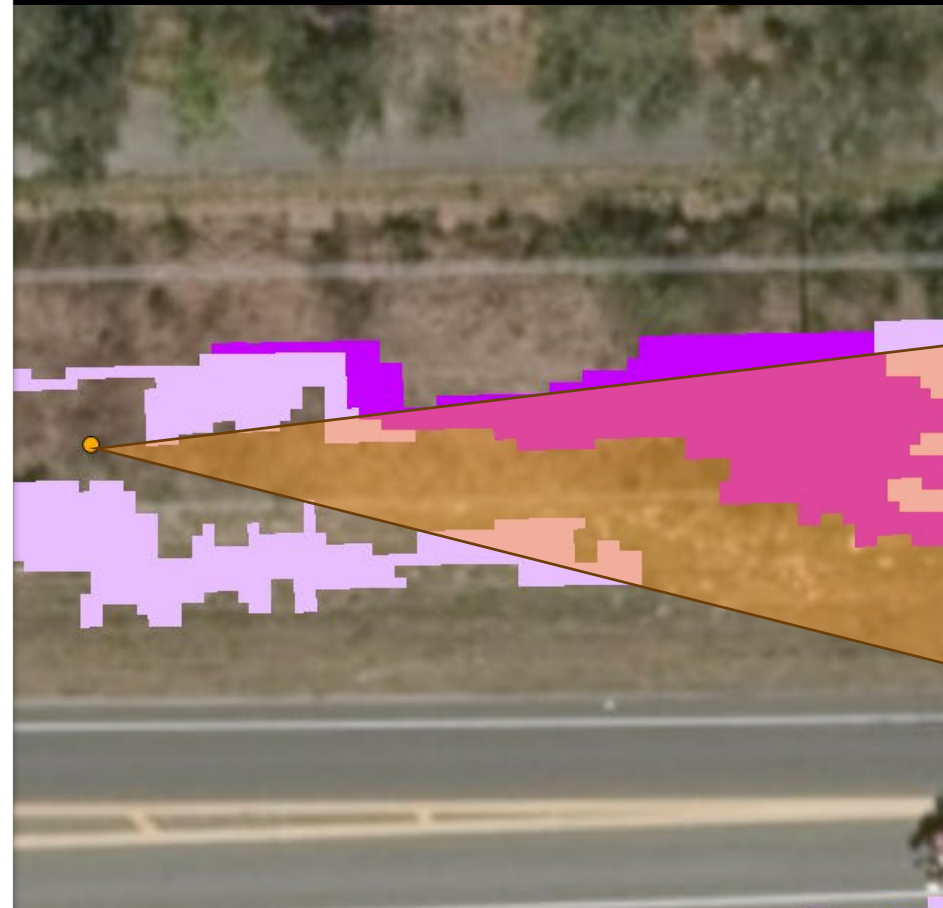


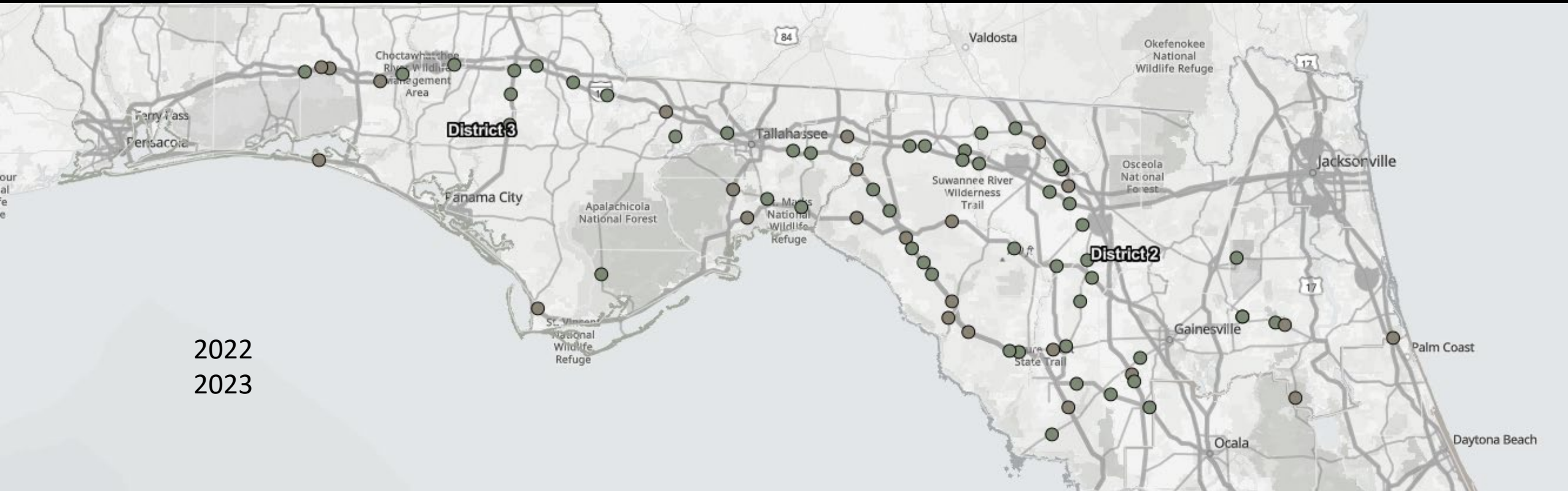












2022
2023

2022

2023

30% of imagery usable

99% of imagery usable

4,193.1 ac analyzed

2,704.5 ac analyzed

Wildflowers = 25 – 35.4% of vegetation (avg. 30%)

Wildflowers = 2 – 24% of vegetation (avg. 15%)

188 ac of dense wildflowers

67.8 ac of dense wildflowers

467 ac of sparse wildflowers

169.5 ac of sparse wildflowers

Imagery dates: April 19, April 27, May 4

Imagery dates: April 5, April 7, April 14, April 25



Year 1 vs Year 2



Discussion: Two-Year Summary

Field Sampling

- 135 plots sampled 4.65 acres
- 55% of plots had >10% cover of nectar plants
- Milkweed observed at 18 sites in 2023 (*new achievement!*)
- Using a 90% CI, vegetated rights-of-way contained 18.7 – 21.7% cover of nectar plants

Remote Sensing

- Model analyzed 6,897.6 acres
- 255.8 acres contained >25% cover of nectar plants
- 636.5 acres contained 1-25% cover of nectar plants



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