

2024 Oregon Swiss Needle Cast Aerial Survey

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GEOGRAPHY



VISUAL CUES

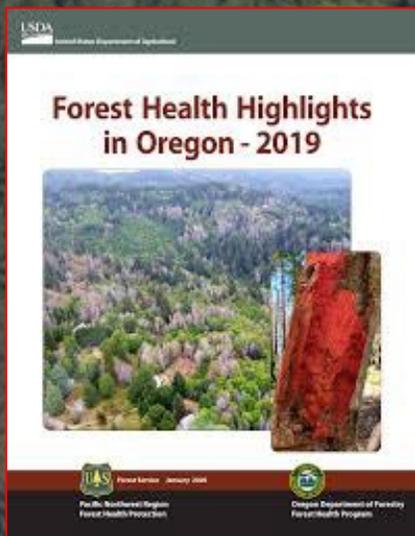


INFERRED AGENT



HOST SPECIES





Technical Bulletins



Conference Presentations

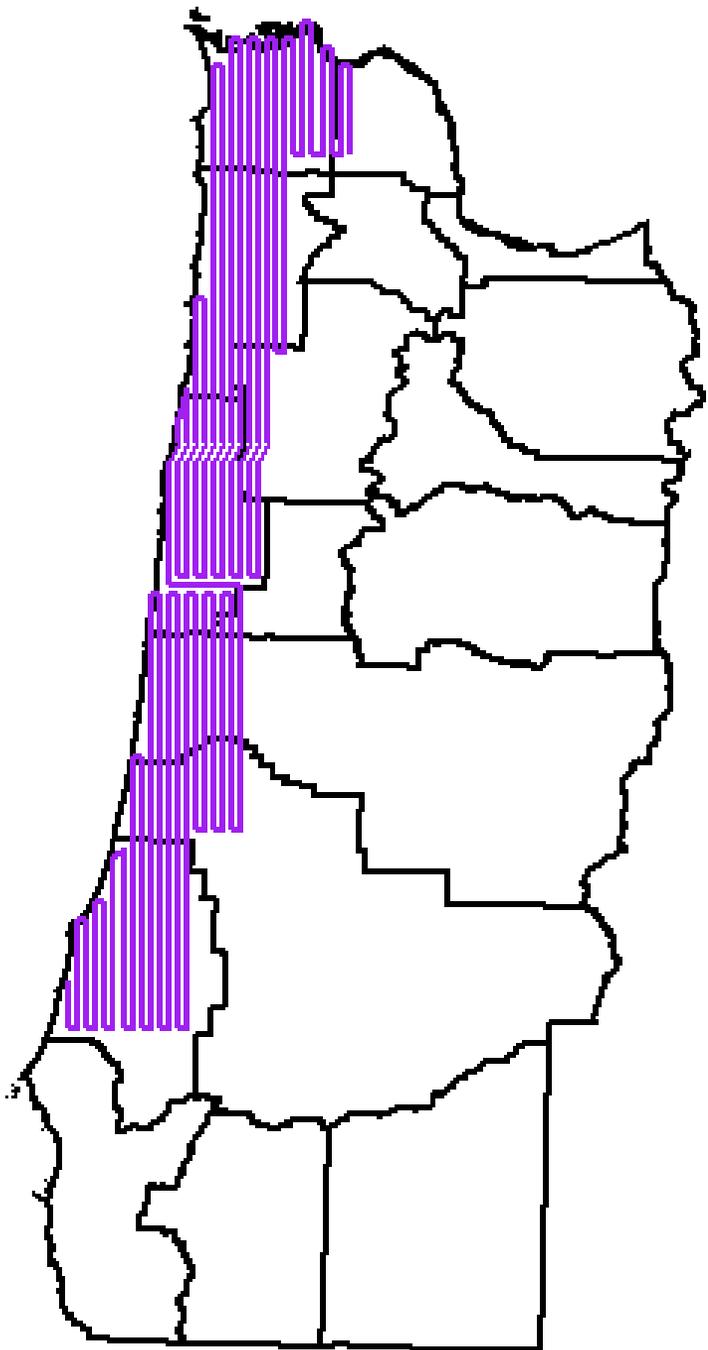


Scientific Research



Forest Restoration/Silvicultural Prescriptions

Why We Do It



May 8 – May 25



2000 ft above ground level



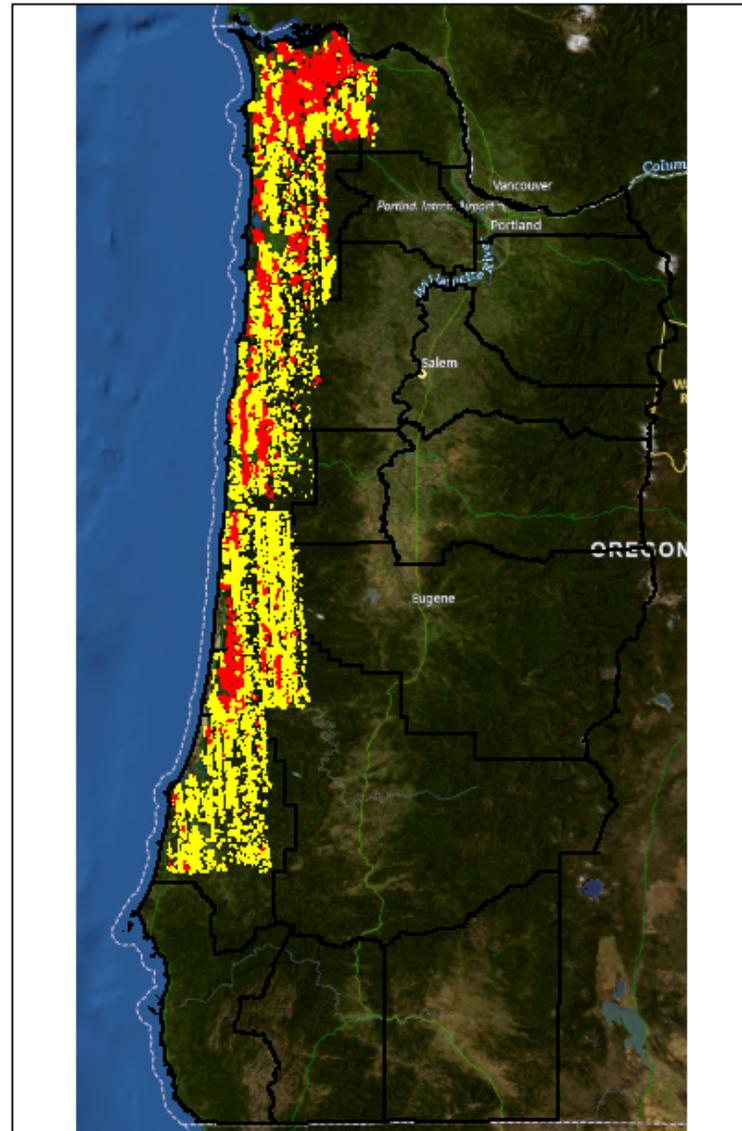
2 mile grid



7.4 million acres

2024 Swiss Needle Cast Survey

Damage Heat Map



Defoliation Severity

- Moderate (50 - 75% defoliation)
- Severe (75 - 100% defoliation)



0 25 50 100 km

1996



2014



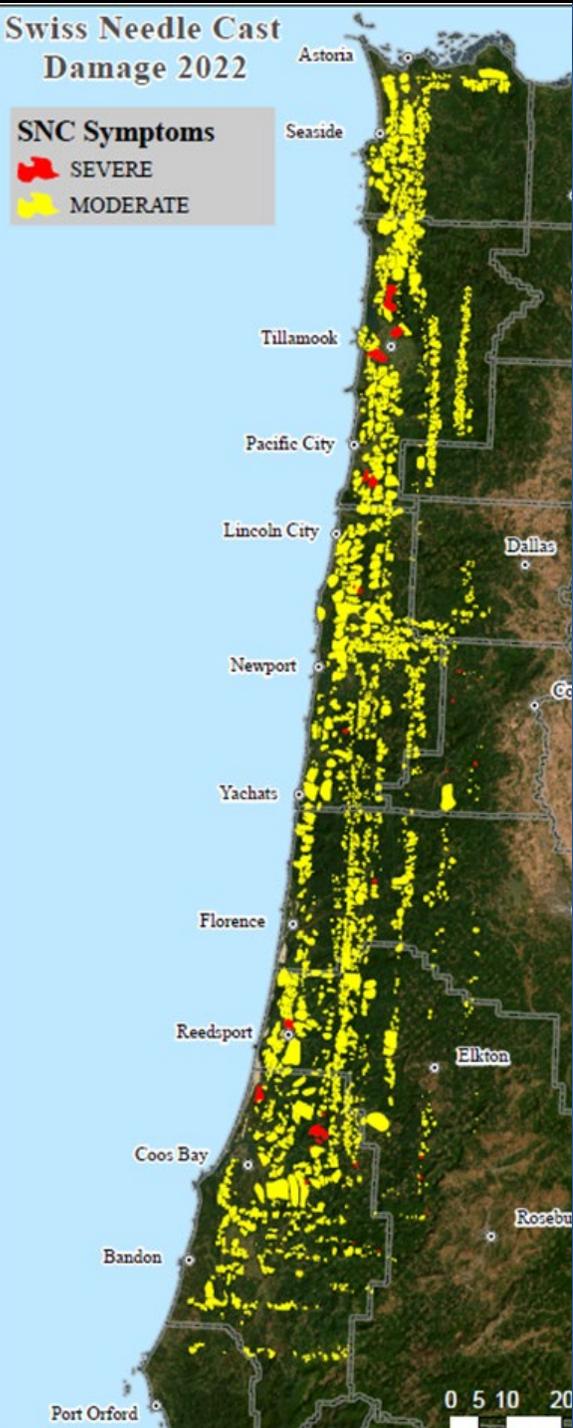
2016



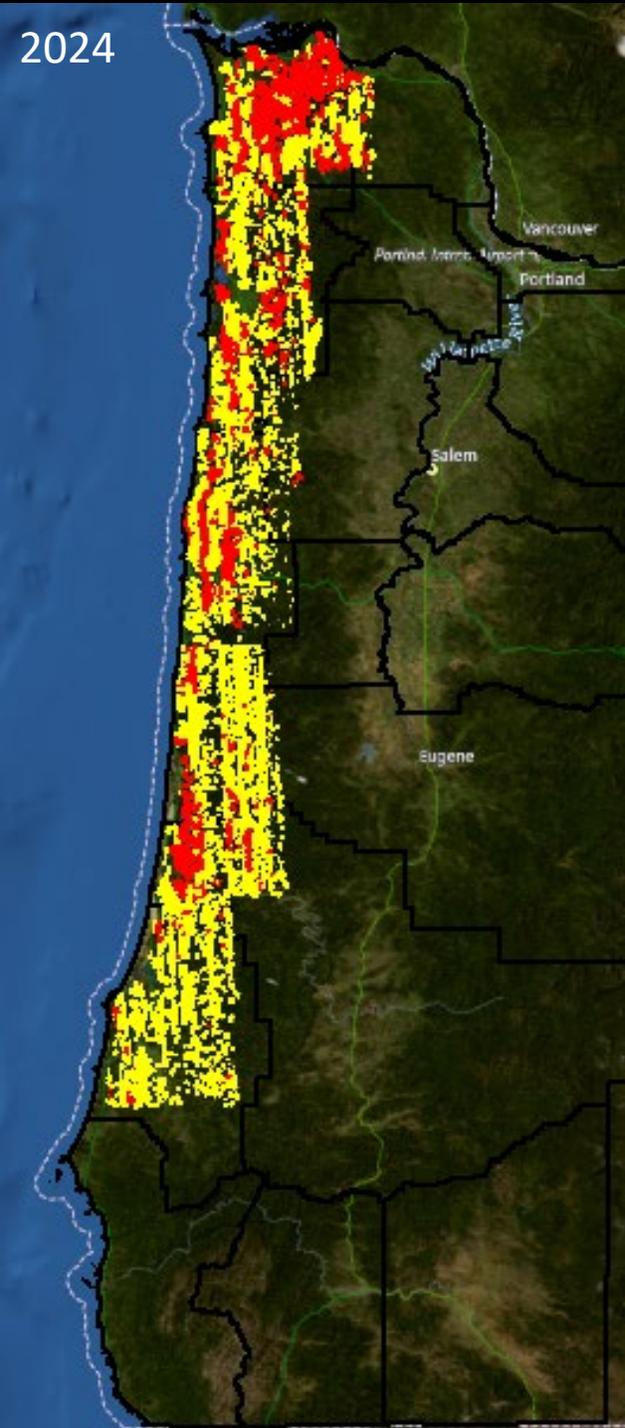
Swiss Needle Cast
Damage 2022

SNC Symptoms

- SEVERE
- MODERATE



2024



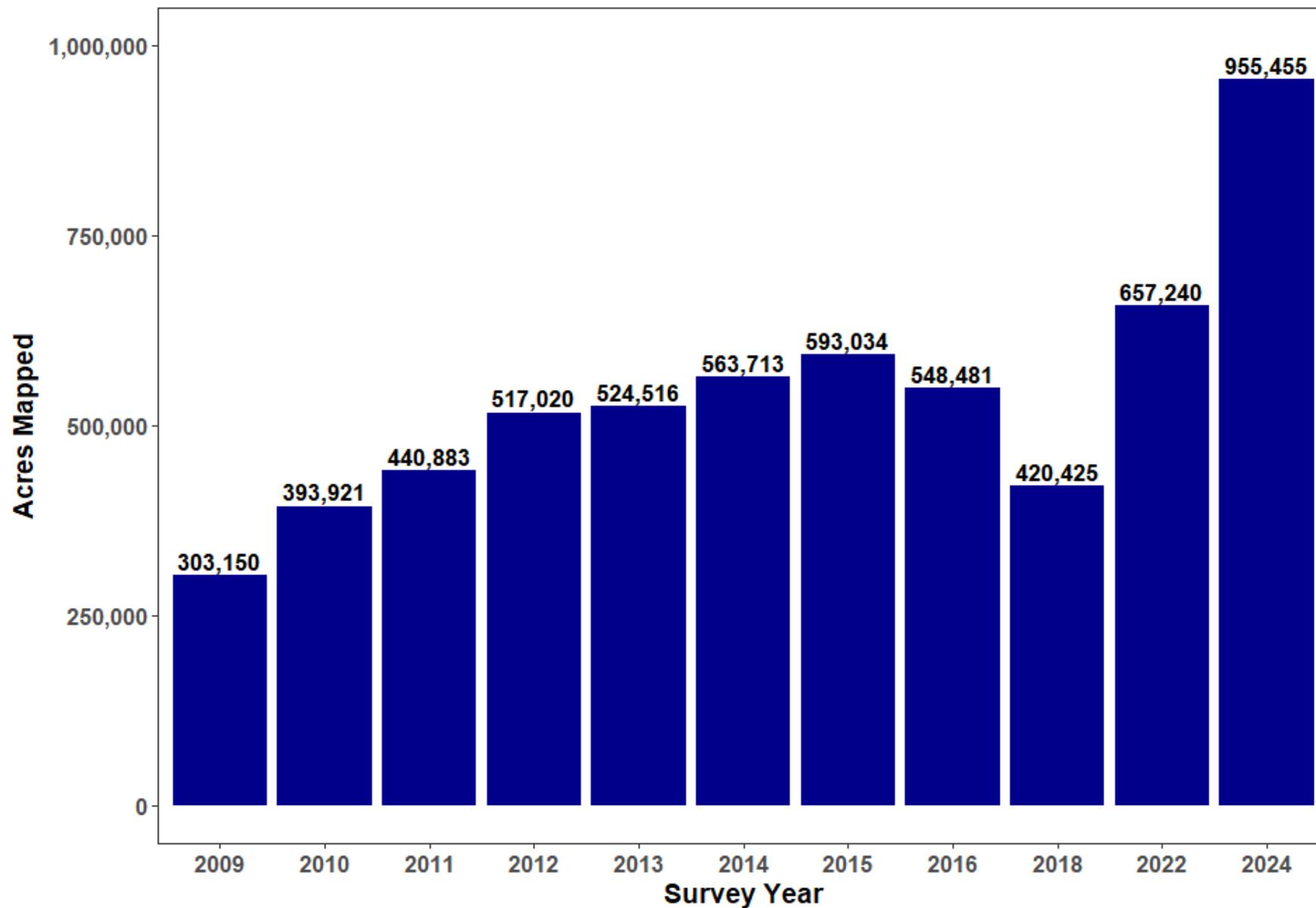
HOW WE USE TO DO THINGS

2562 acres mapped

SNC – Severe



Swiss Needle Cast Damage Extent Through the Years (2013 - 2024)



HOW WE TO DO THINGS NOW

2652 acres mapped ×

$\frac{(50\% + 75\%)}{2}$ *acres affected =*

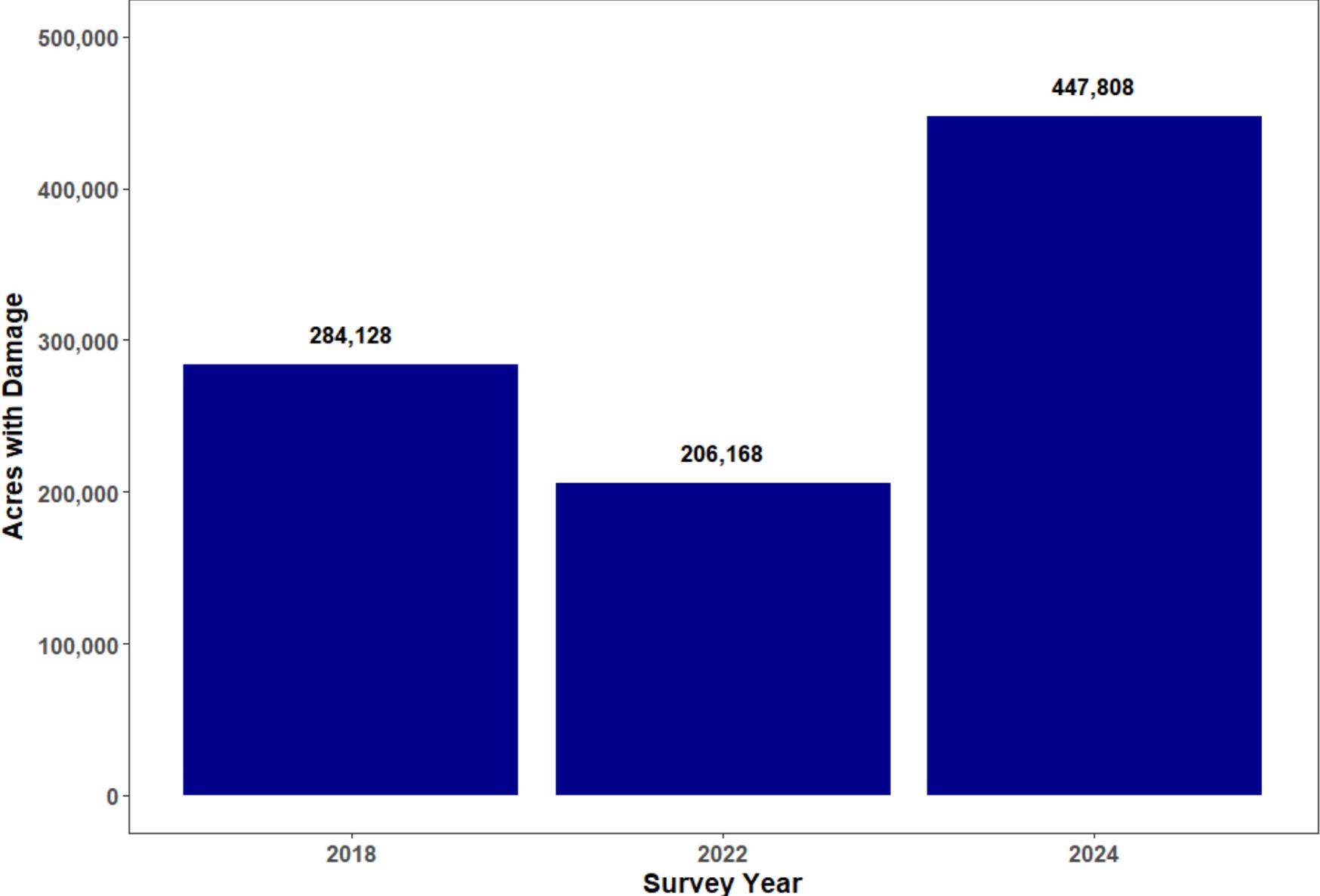
2562 ac × 62.5% =

1657.5 acres with damage

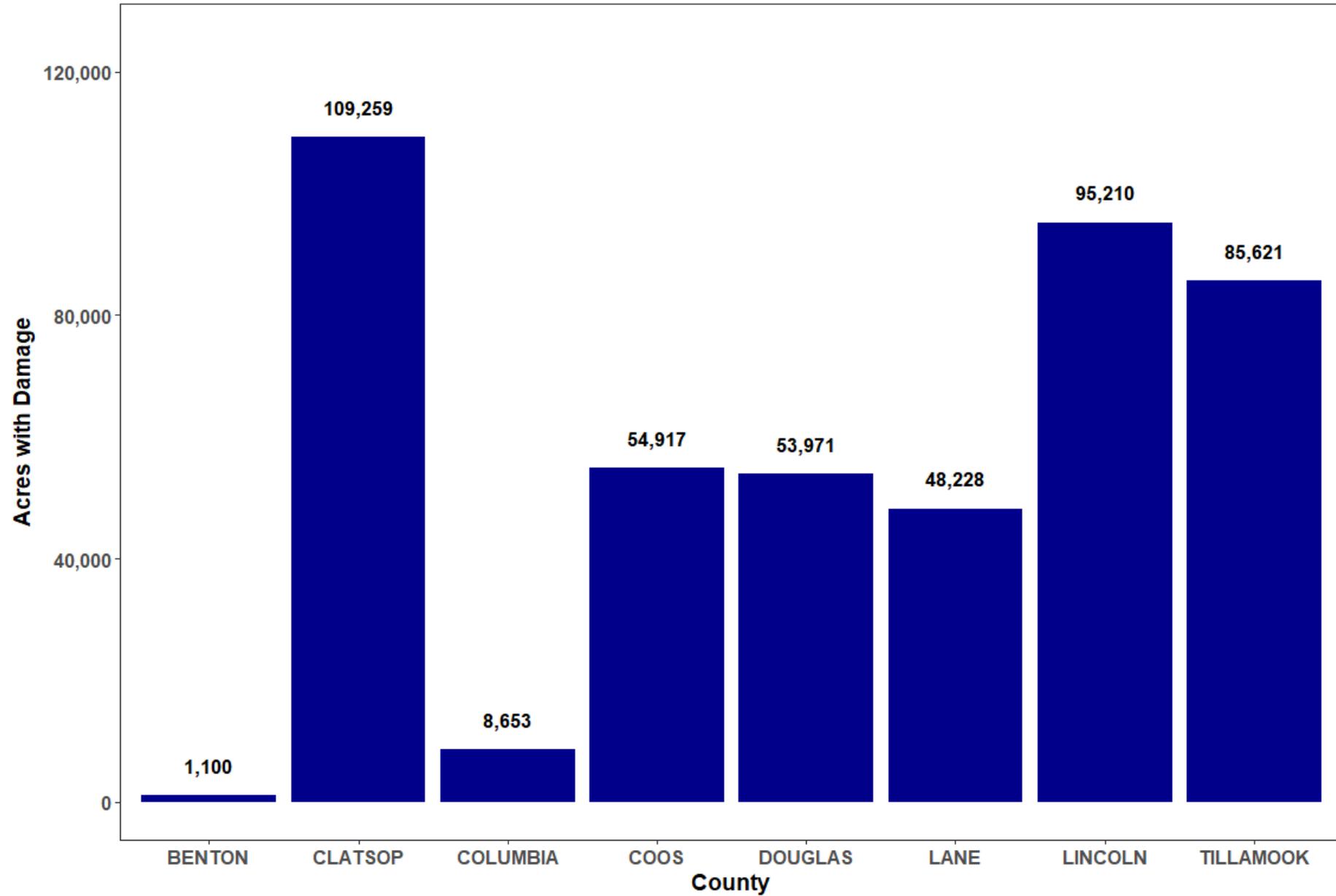
SNC – Severe
50 – 75% affected



Swiss Needle Cast Acres with Damage (2018 - 2024)

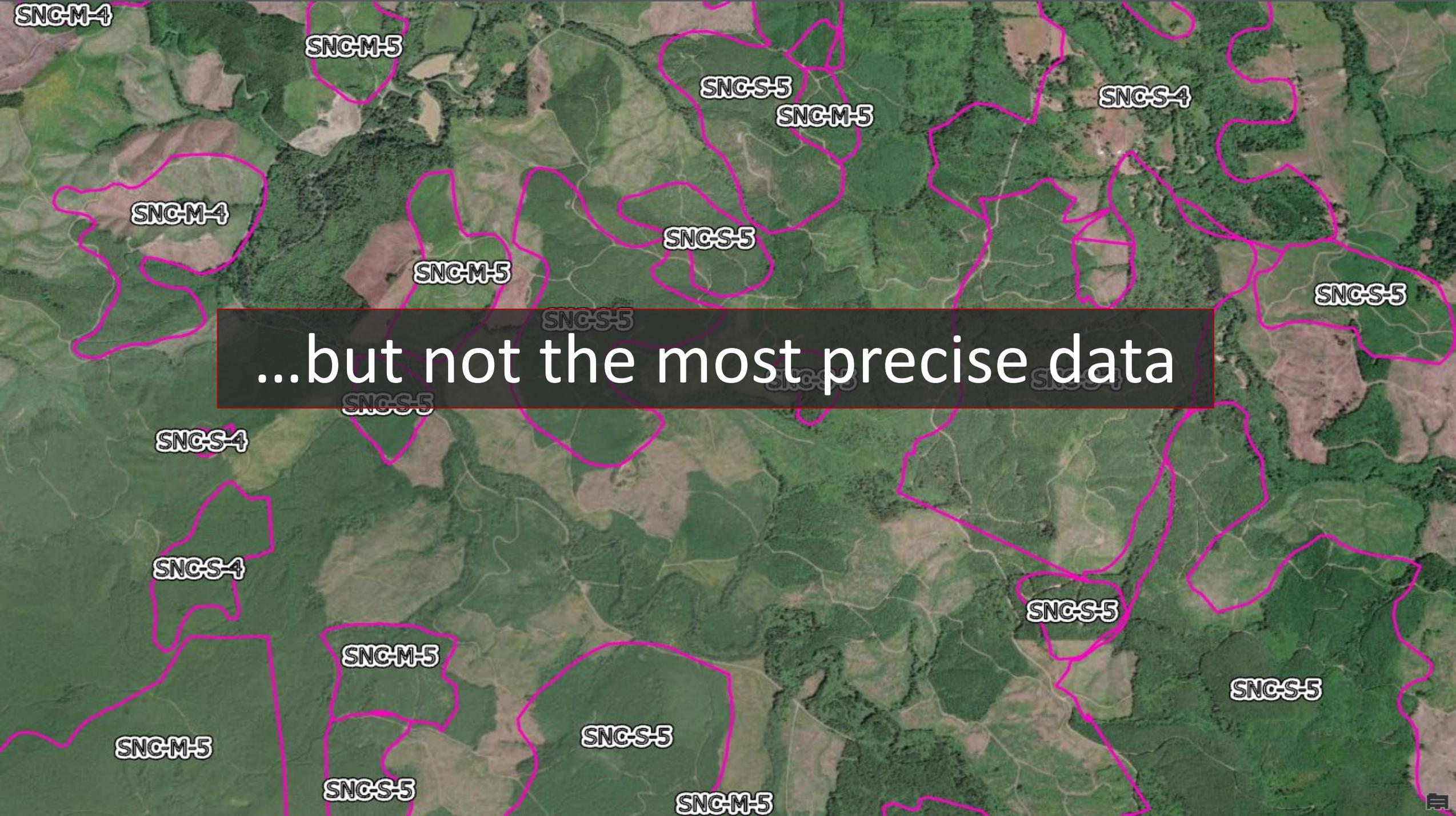


2024 Swiss Needle Cast Survey Acres with Damage by County



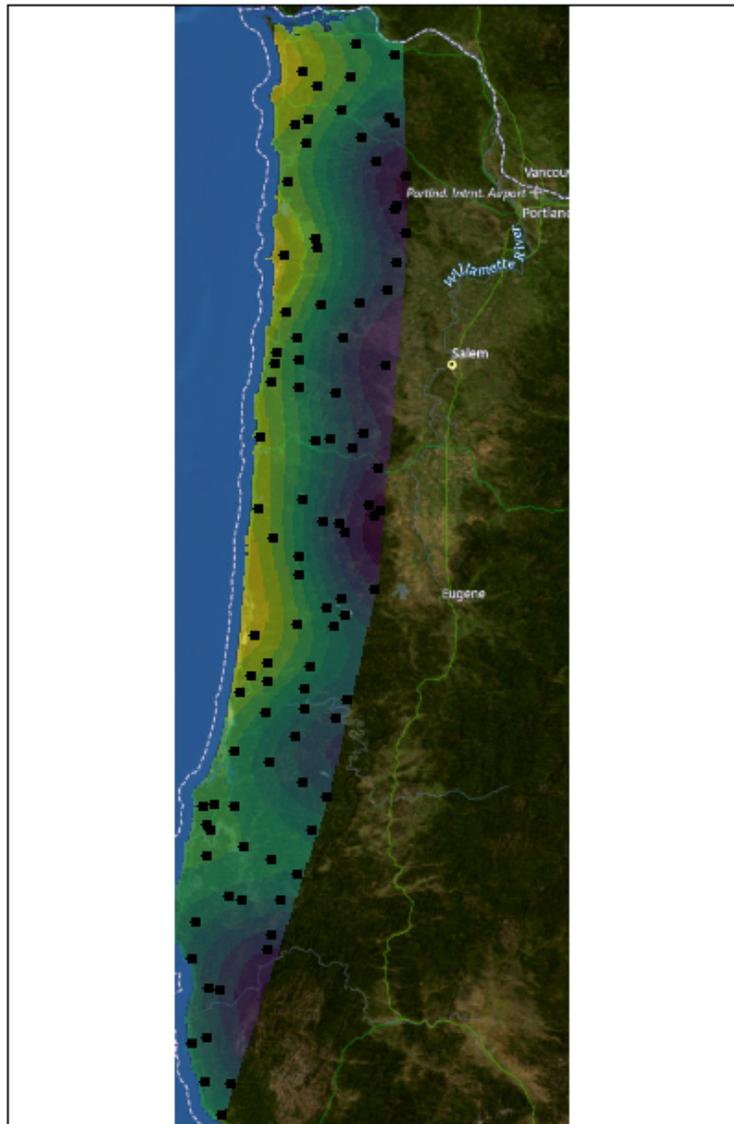
An aerial photograph showing a vast, rolling landscape covered in dense green forests. The terrain is hilly, with various shades of green indicating different types of vegetation or forest density. In the foreground, a light-colored, winding road or path curves through a grassy area. The background shows more distant hills and valleys, with some patches of lighter green or brown, possibly indicating cleared land or different forest types. The overall scene is a wide, panoramic view of a forested region.

Aerial survey provides *BEST* SNC visual!

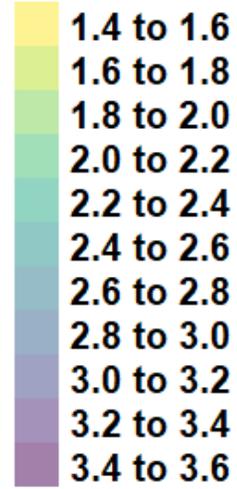


...but not the most precise data

Interpolated Douglas-fir Foliar Retention from SNC Plot Network

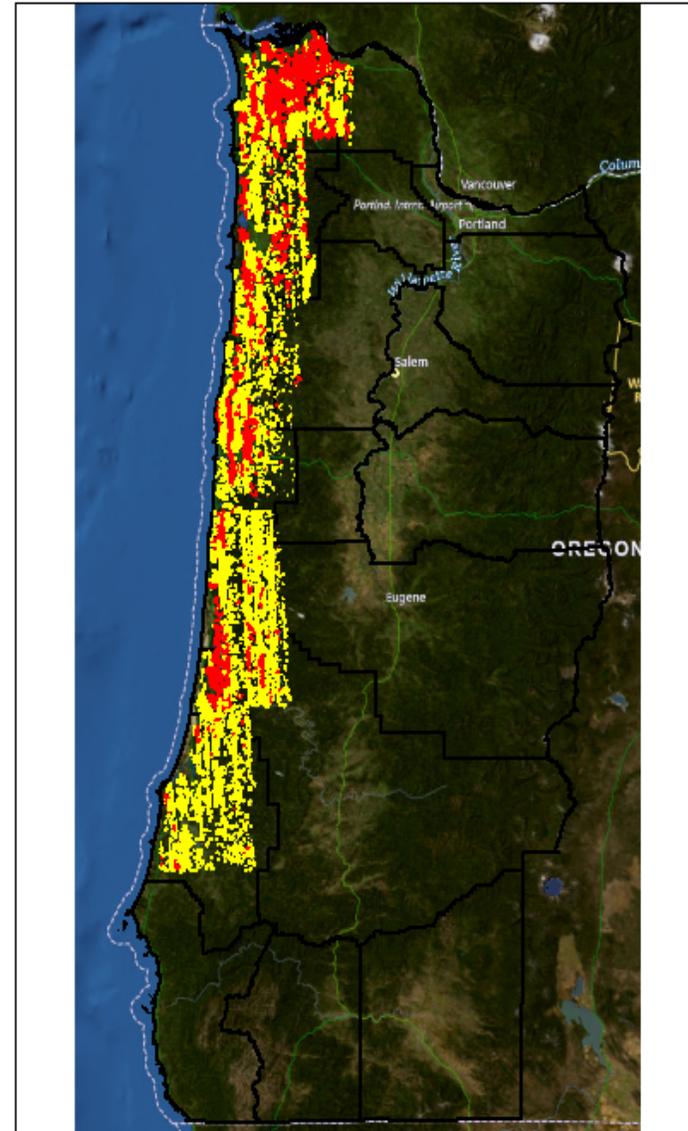


Average Years of Foliar Retention

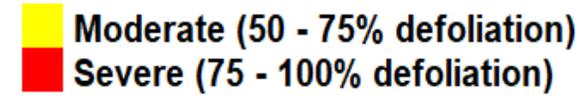


0 25 50 100 km

2024 Swiss Needle Cast Survey Damage Heat Map

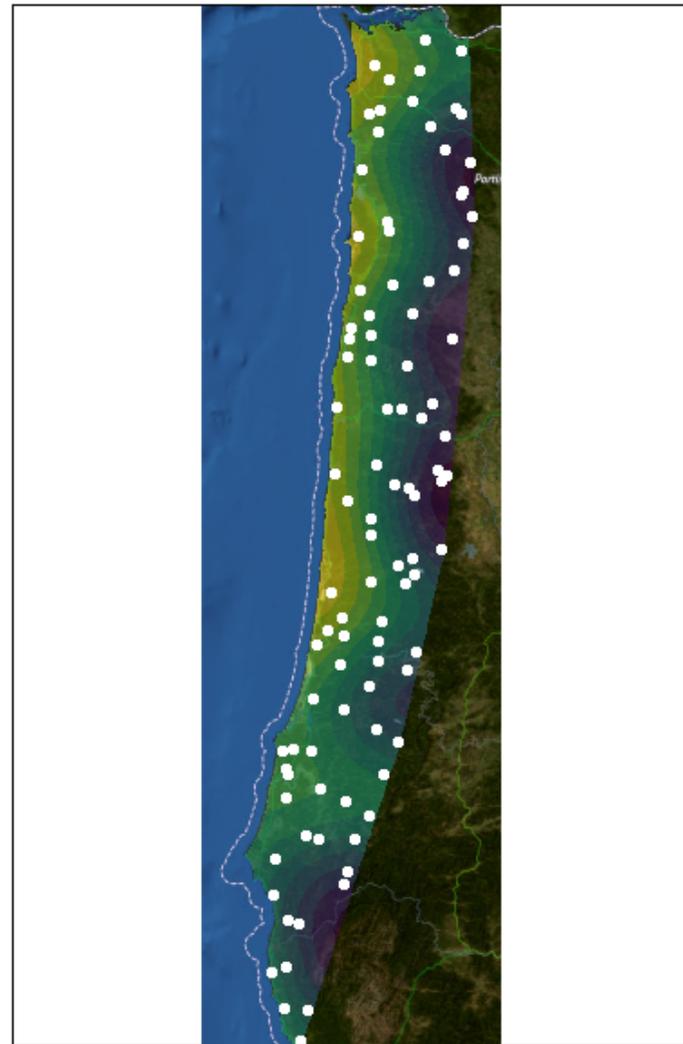


Defoliation Severity

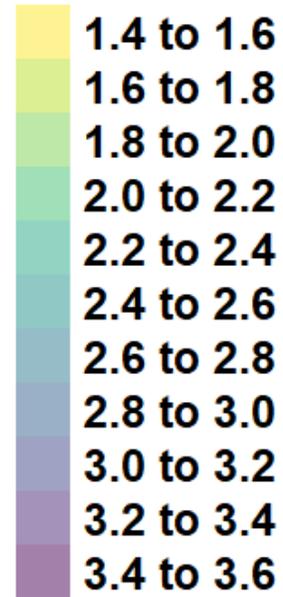


0 25 50 100 km

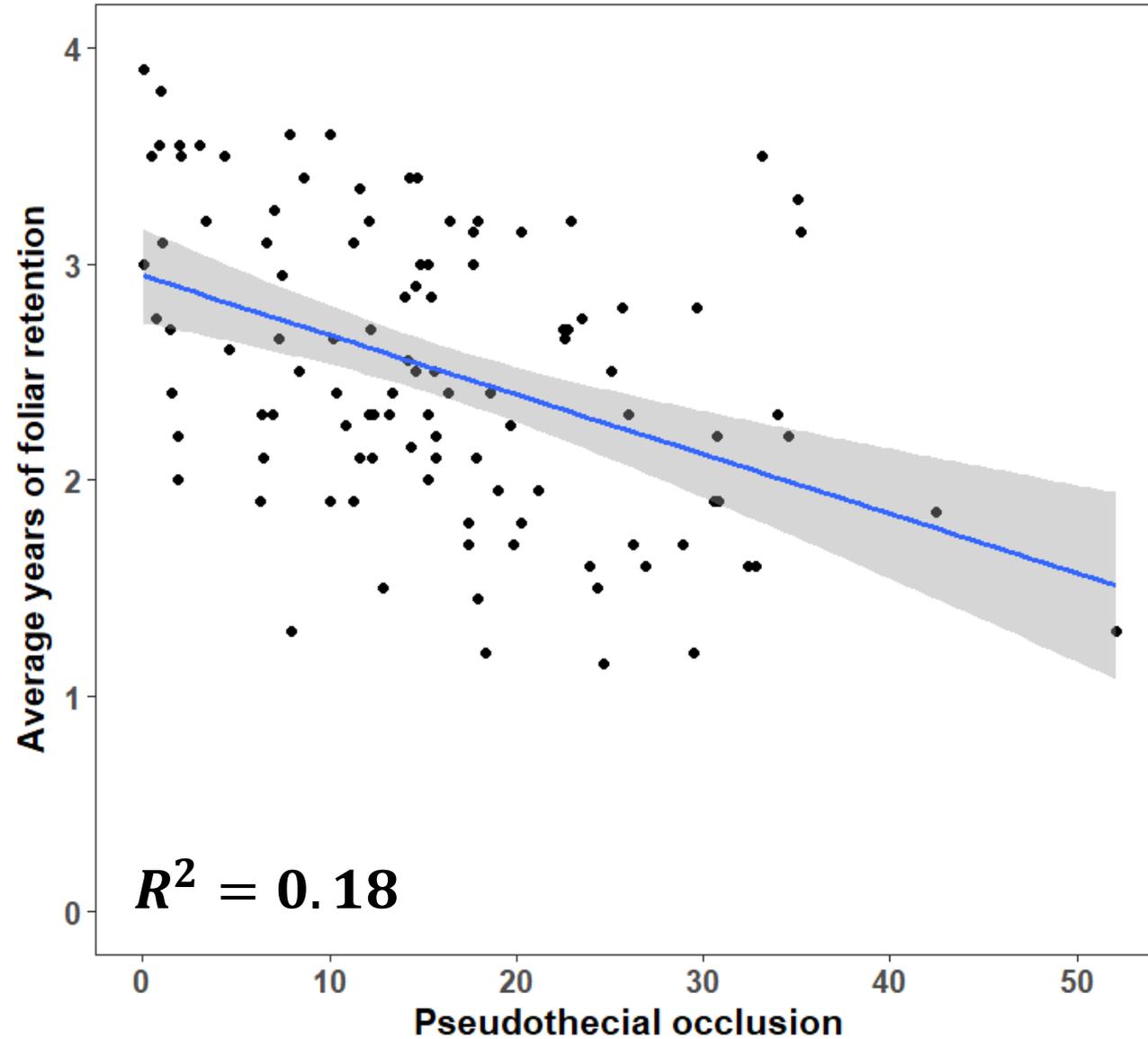
Interpolated Swiss Needle Cast Pseudothecial Occlusion from SNC Plot Network



Pseudothecial Occlusion



Relationship between Pseudothelial occlusion and Douglas-fir needle retention



FOREST HEALTH UNIT STAFF



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Pathology



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Entomology



Wyatt Williams
Invasive Species



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Aerial Survey



Questions?