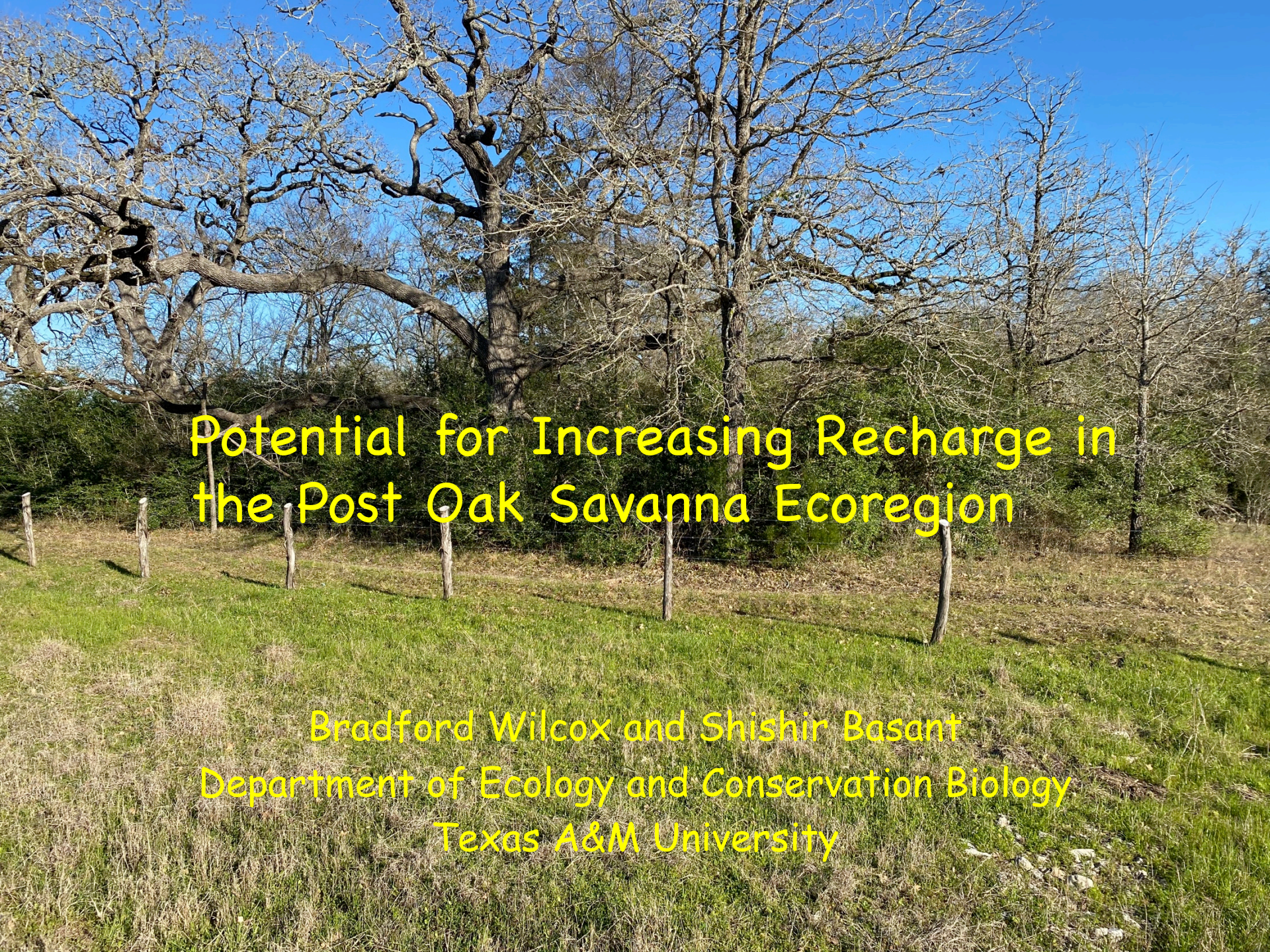
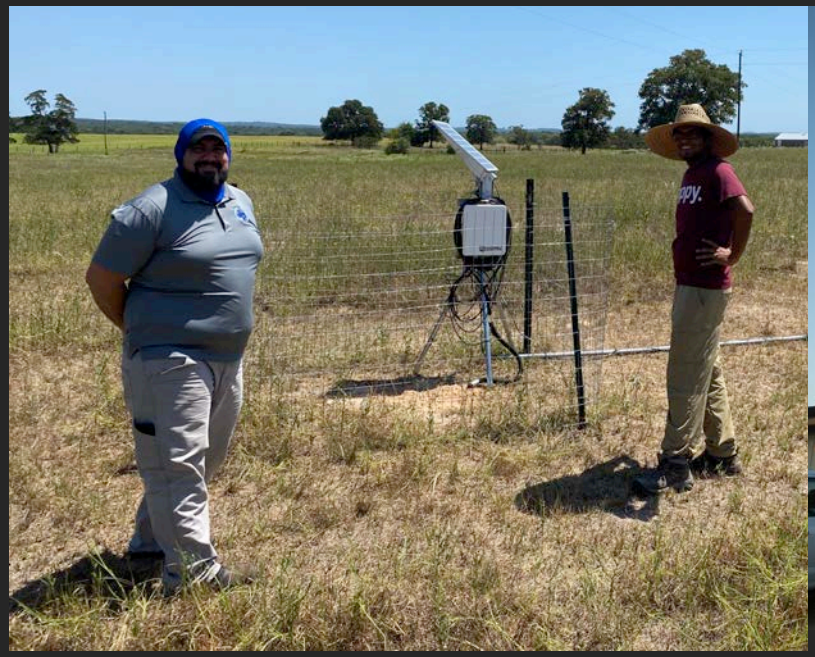


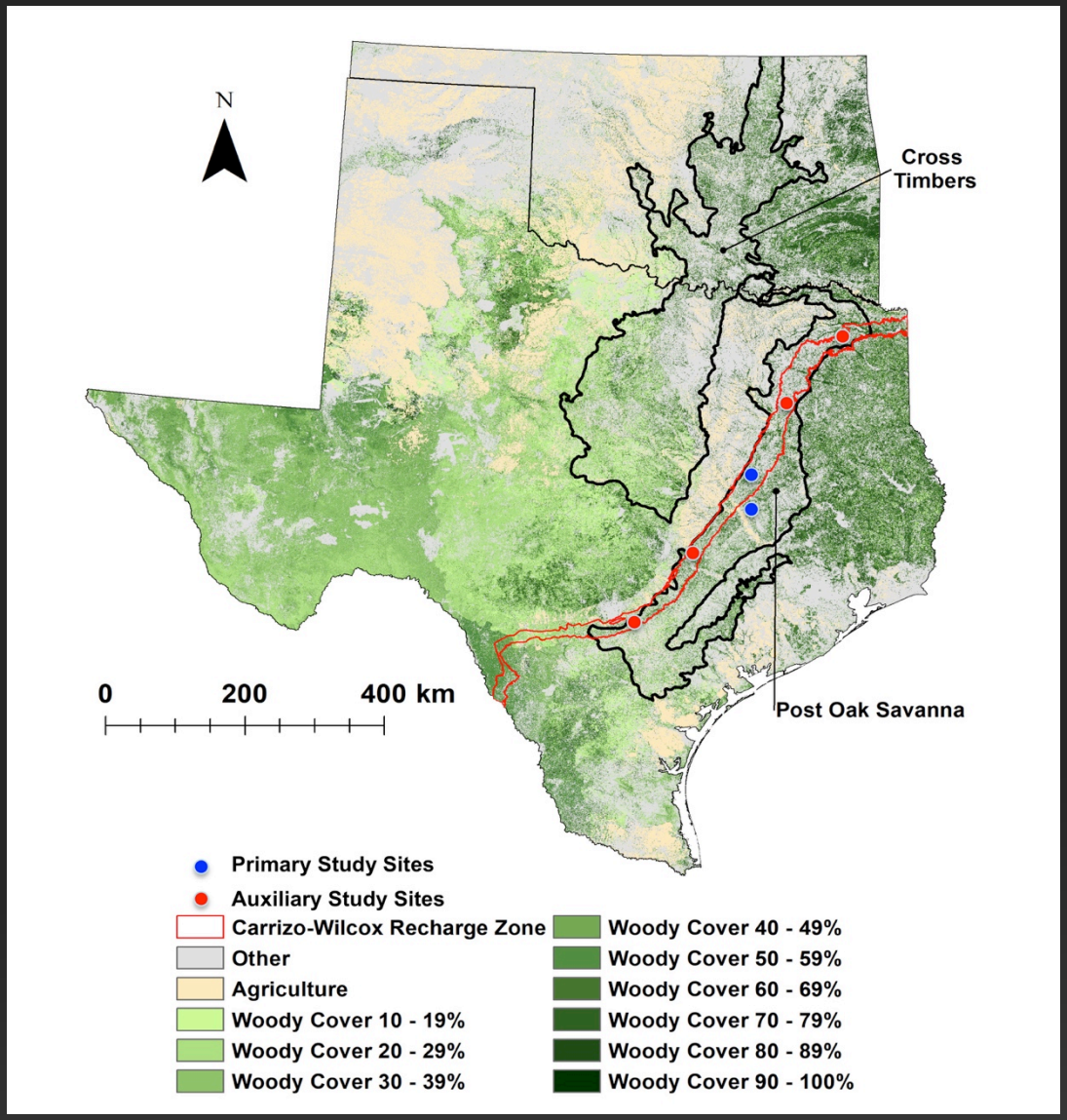
Potential for Increasing Recharge in the Post Oak Savanna Ecoregion

Bradford Wilcox and Shishir Basant
Department of Ecology and Conservation Biology
Texas A&M University




310 E. AVE. C
POST OAK
SAVANNAH
GROUNDWATER
CONSERVATION
DISTRICT

Thank you !


N
Cross Timbers
Post Oak Savanna
0
200
400 km
Primary Study Sites
Auxiliary Study Sites
Carrizo-Wilcox Recharge Zone
Other
Agriculture
Woody Cover 10 - 19%
Woody Cover 20 - 29%
Woody Cover 30 - 39%
Woody Cover 40 - 49%
Woody Cover 50 - 59%
Woody Cover 60 - 69%
Woody Cover 70 - 79%
Woody Cover 80 - 89%
Woody Cover 90 - 100%

Rapidly changing land cover

What does this mean in terms of recharge?

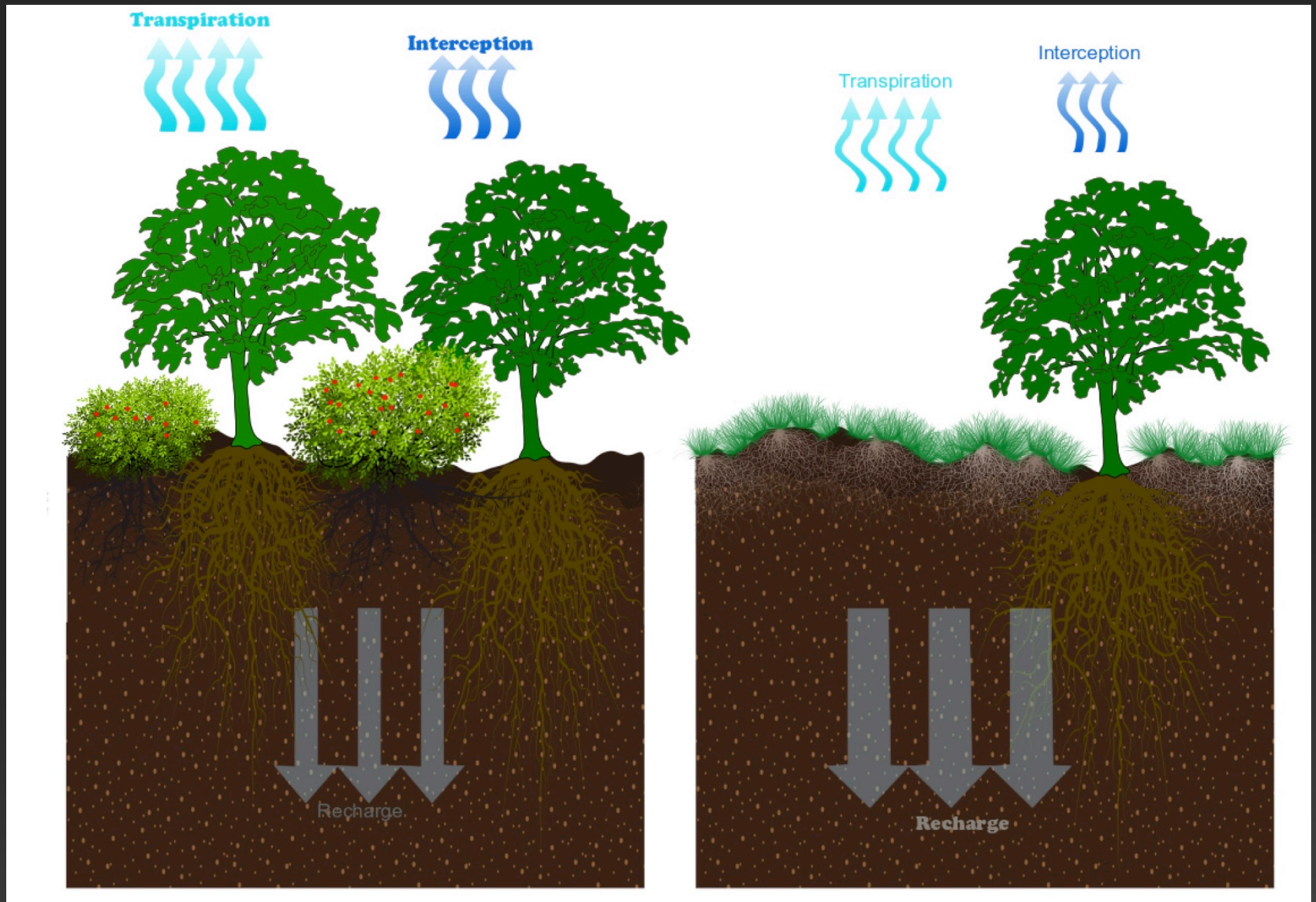


Figure 4. Locations of soil water monitoring. Plots A-G; A – Woodland Site-1, B – Pasture Site-1, C – Woodland Site2, D – Pasture Site-2, E – Pasture Site (Independent), F – Woodland Site-4, G – Pasture Site-4

Figure 5. Vegetation and cover conditions for the different monitoring sites.

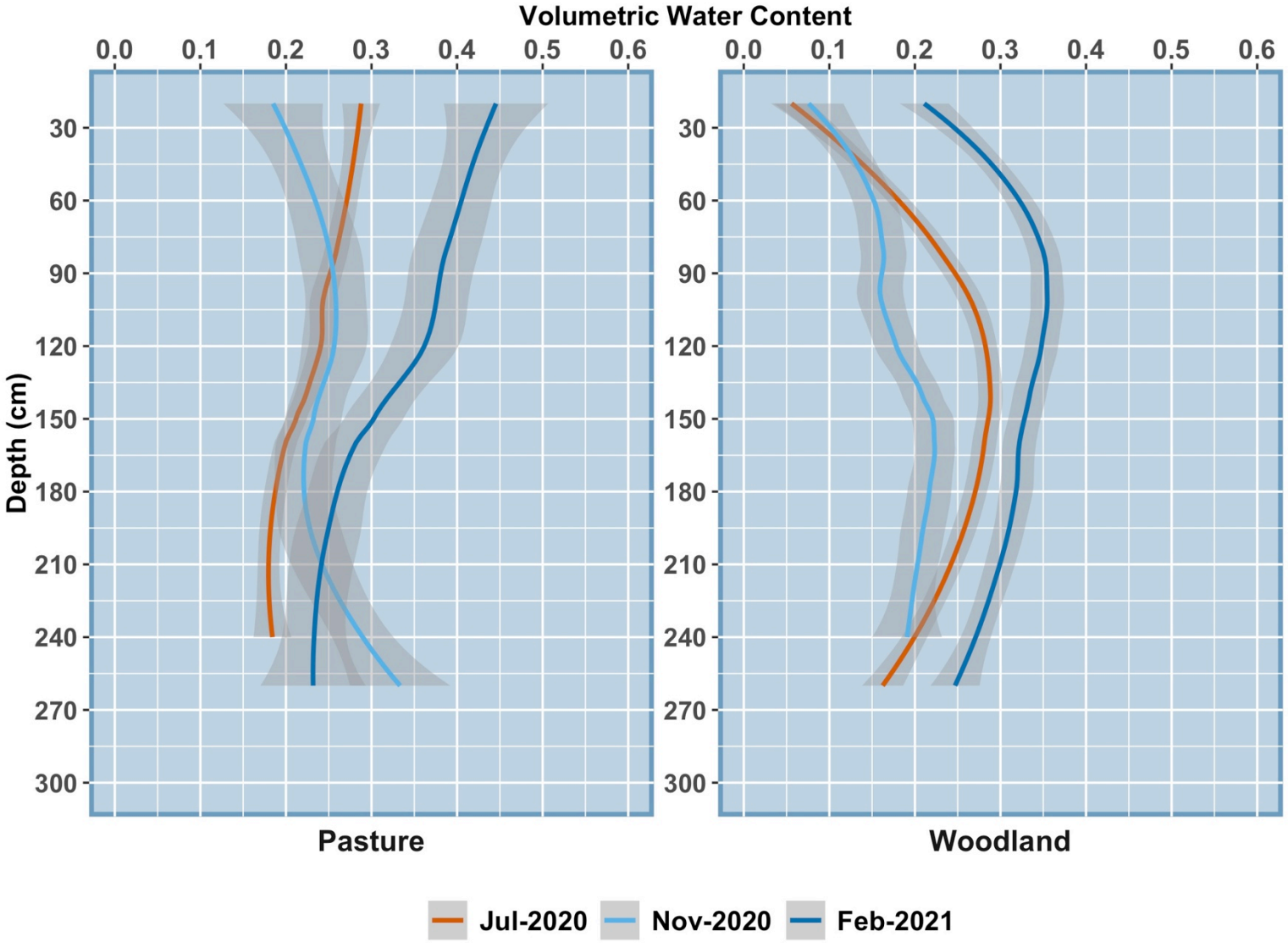


Figure 7. Soil water profiles for a pasture and a wooded areas for a 10 month period. These profiles are based on data from 6 open and 6 wooded locations). The gray bands are the standard error.

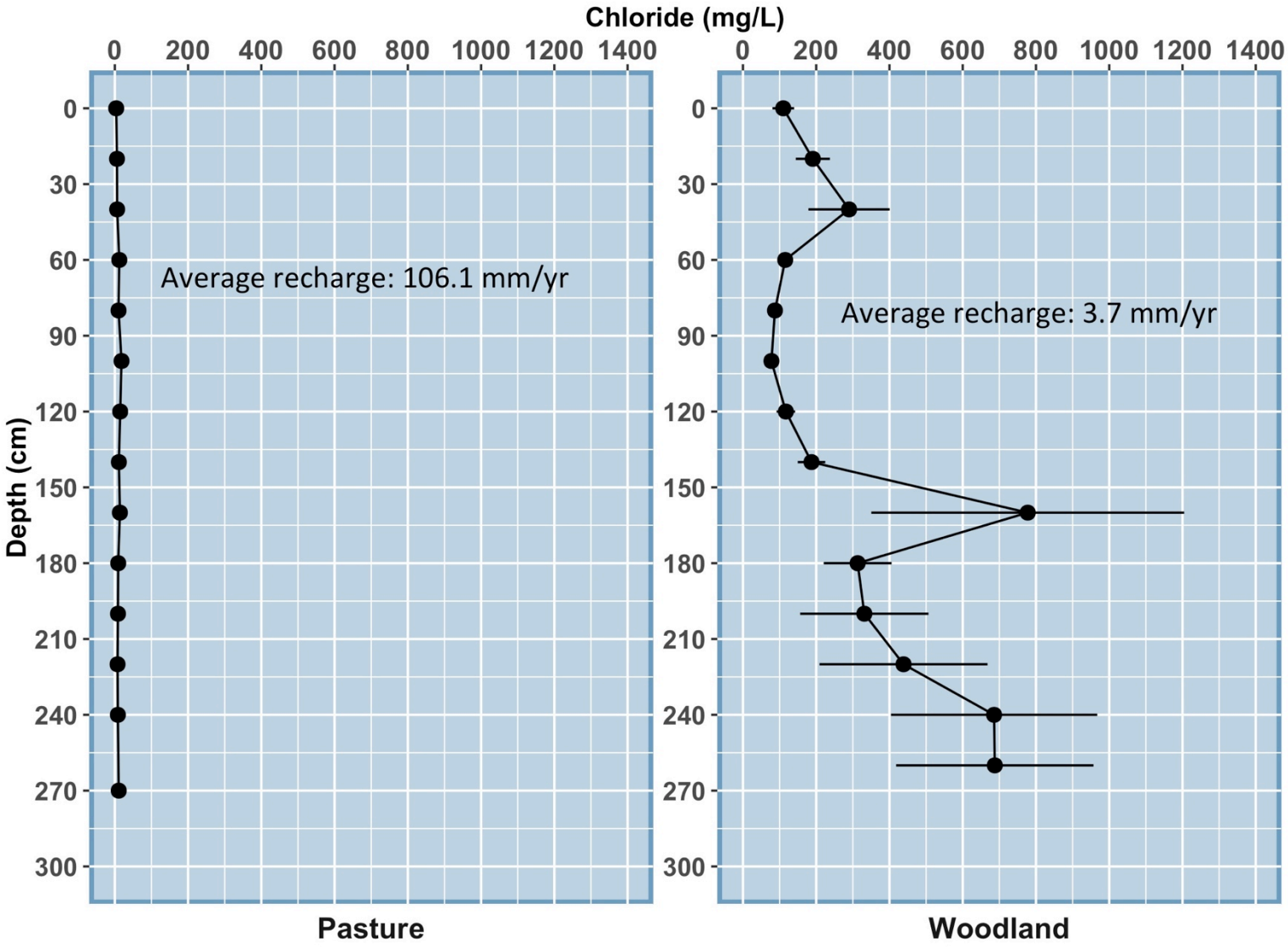
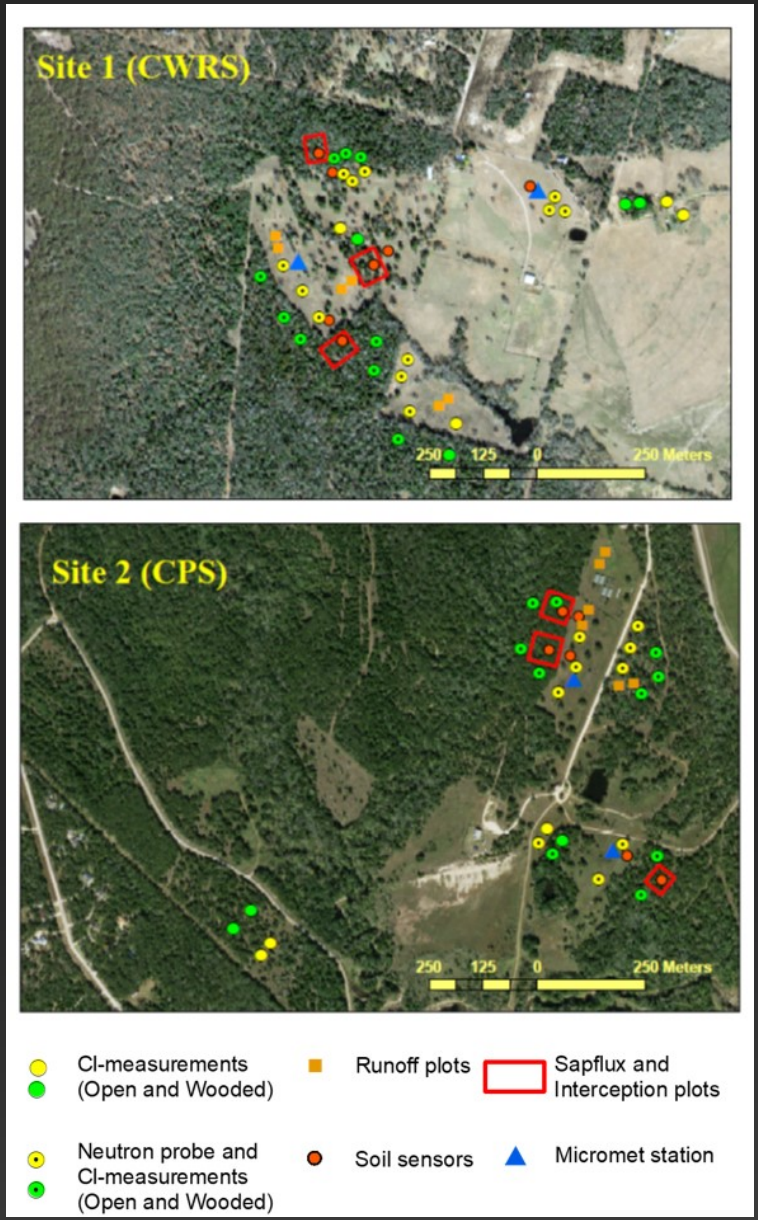


Figure 9. Chloride profiles for pastures and woodlands in the CWRS site. Error bars represent the standard error

Future Research



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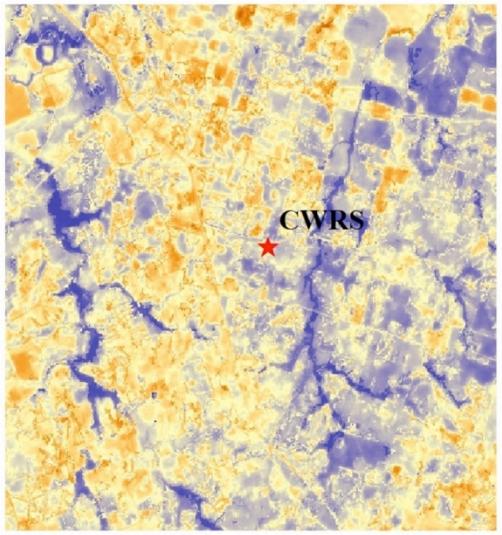
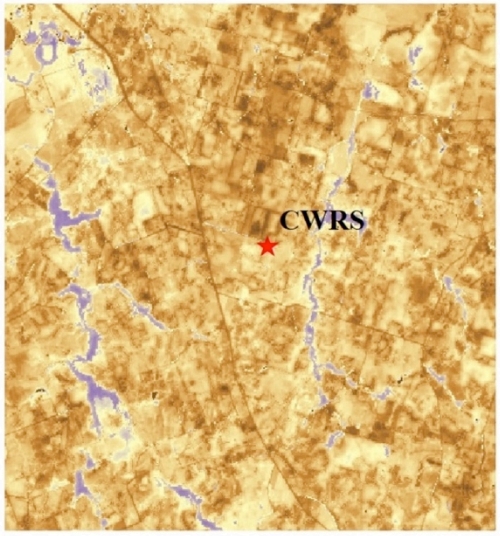
July 26, 2014



Monthly Precipitation: 142.7 mm
Temperature: 23 C
Daily Humidity: 72%
Wind Speed: 24 kph

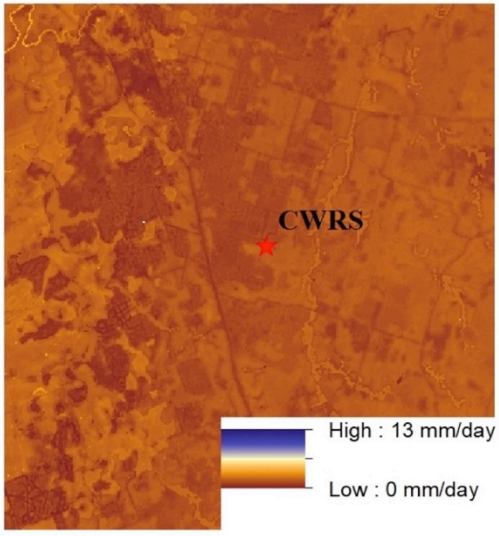
6 3 0 6 Kilometers

July 24,2019



Monthly Precipitation: 43.9 mm
Temperature: 26 C
Daily Humidity: 45%
Wind Speed: 21 kph

Jan 4, 2019



Monthly Precipitation: 243.84 mm
Temperature: 6 C
Daily Humidity: 82%
Wind Speed: 19 kph

Future Research