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Geospatial Analysis of Precipitation Data and River Networks Using Satellite Imagery

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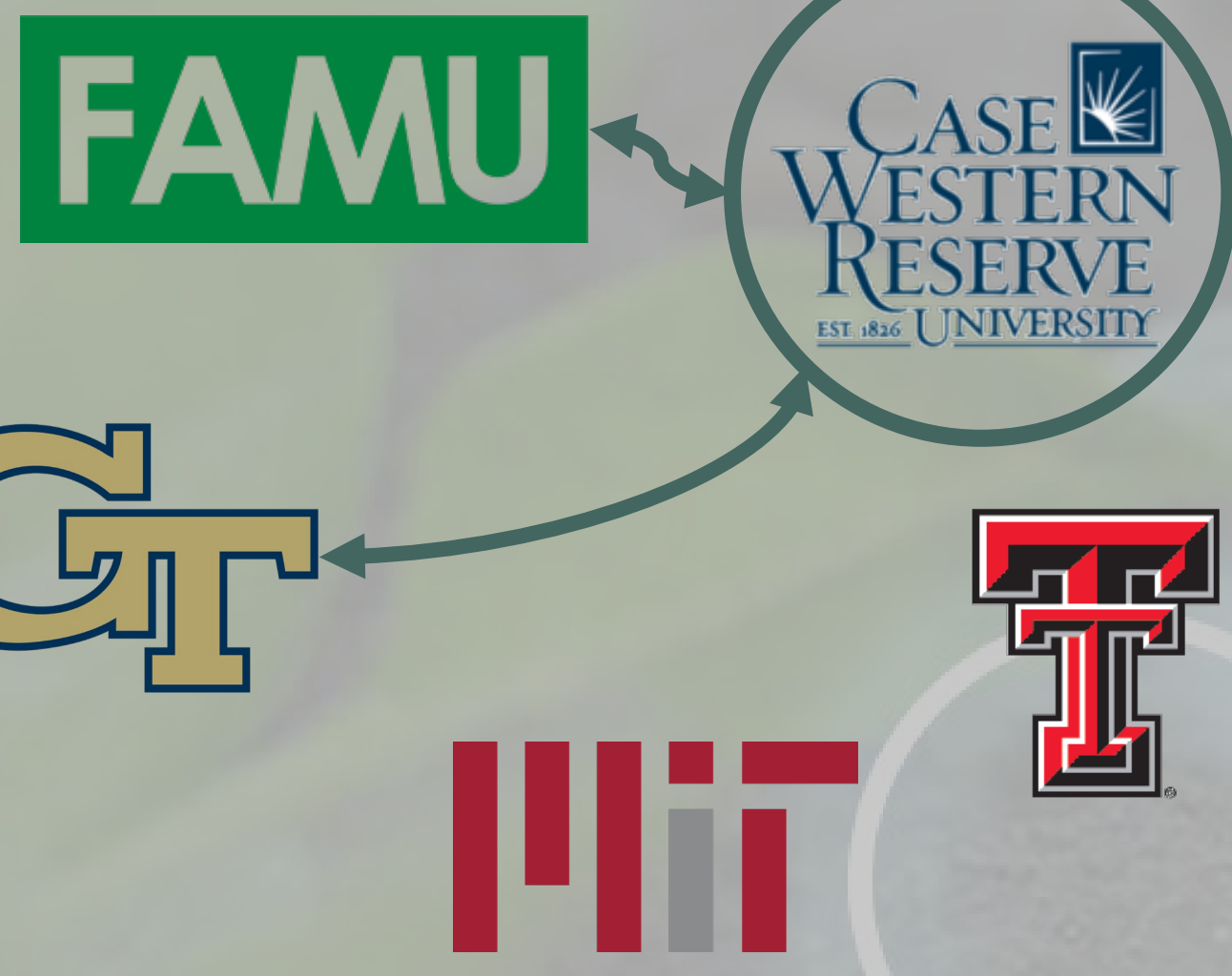
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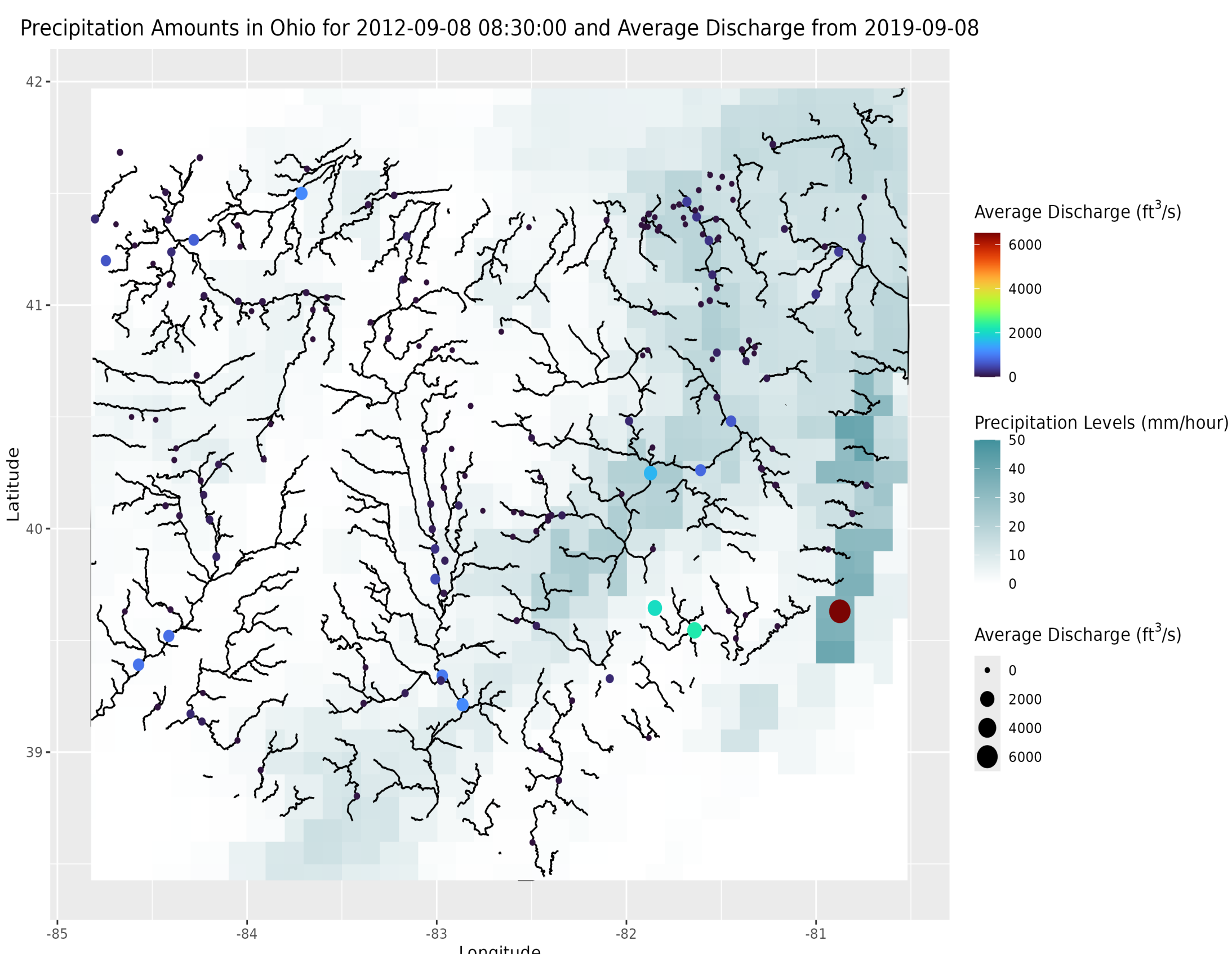
Introduction
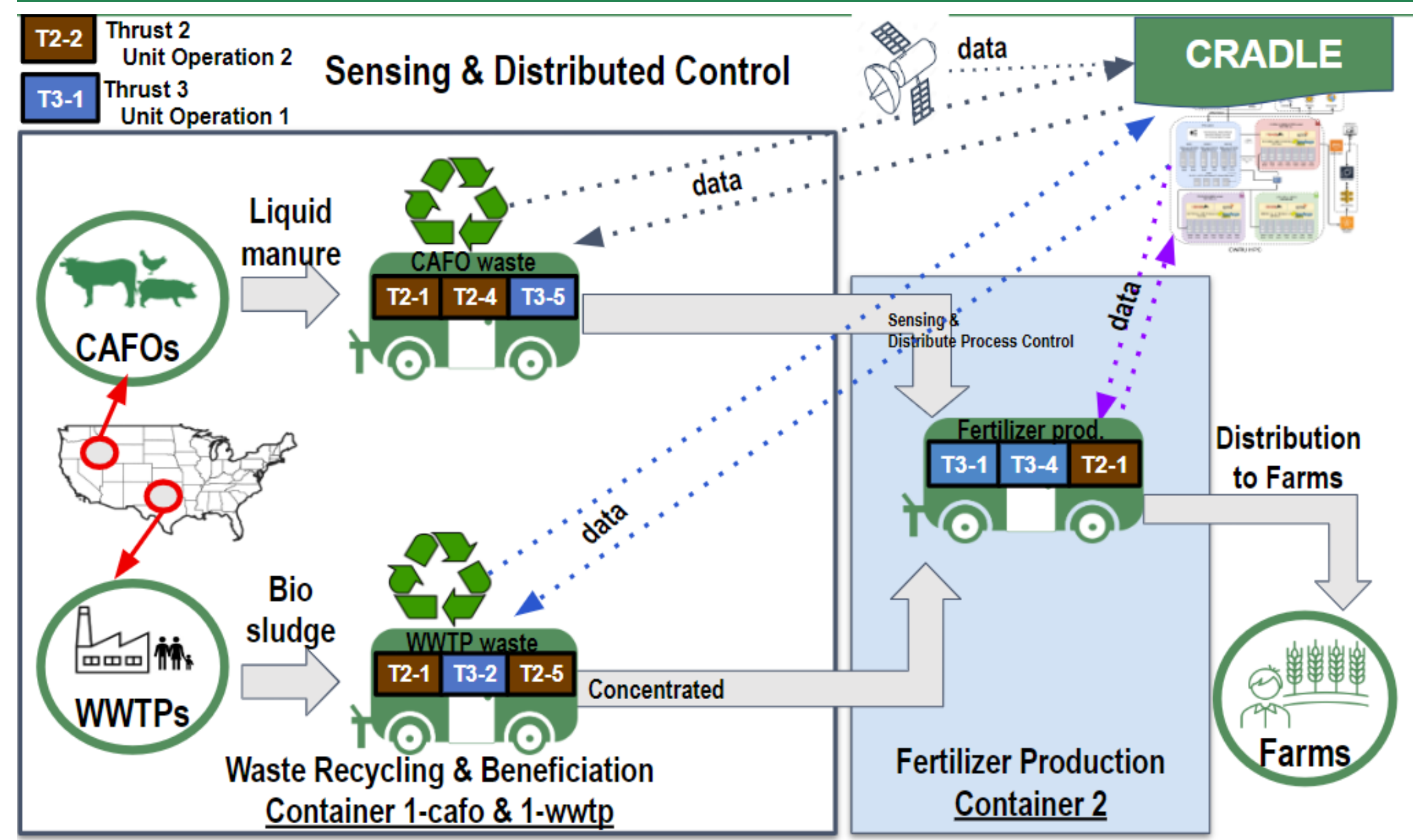
Objectives:

- Understand how precipitation can be used by farmers to predict land use
- Explore how precipitation interacts with physical and chemical properties obtained from stream gauges
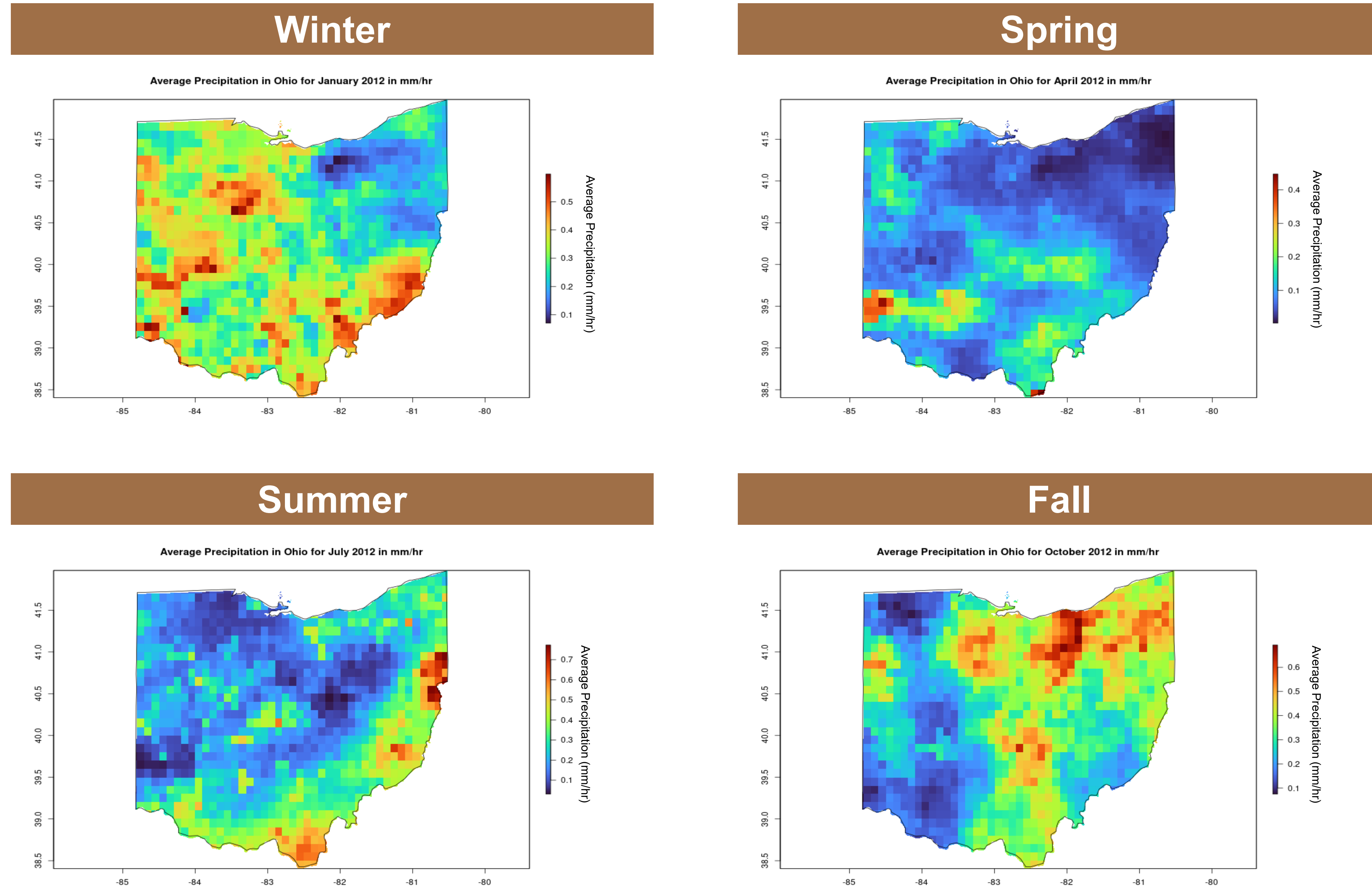- Understand how precipitation contributes to continual runoff from CAFOs/WWTPs into streams
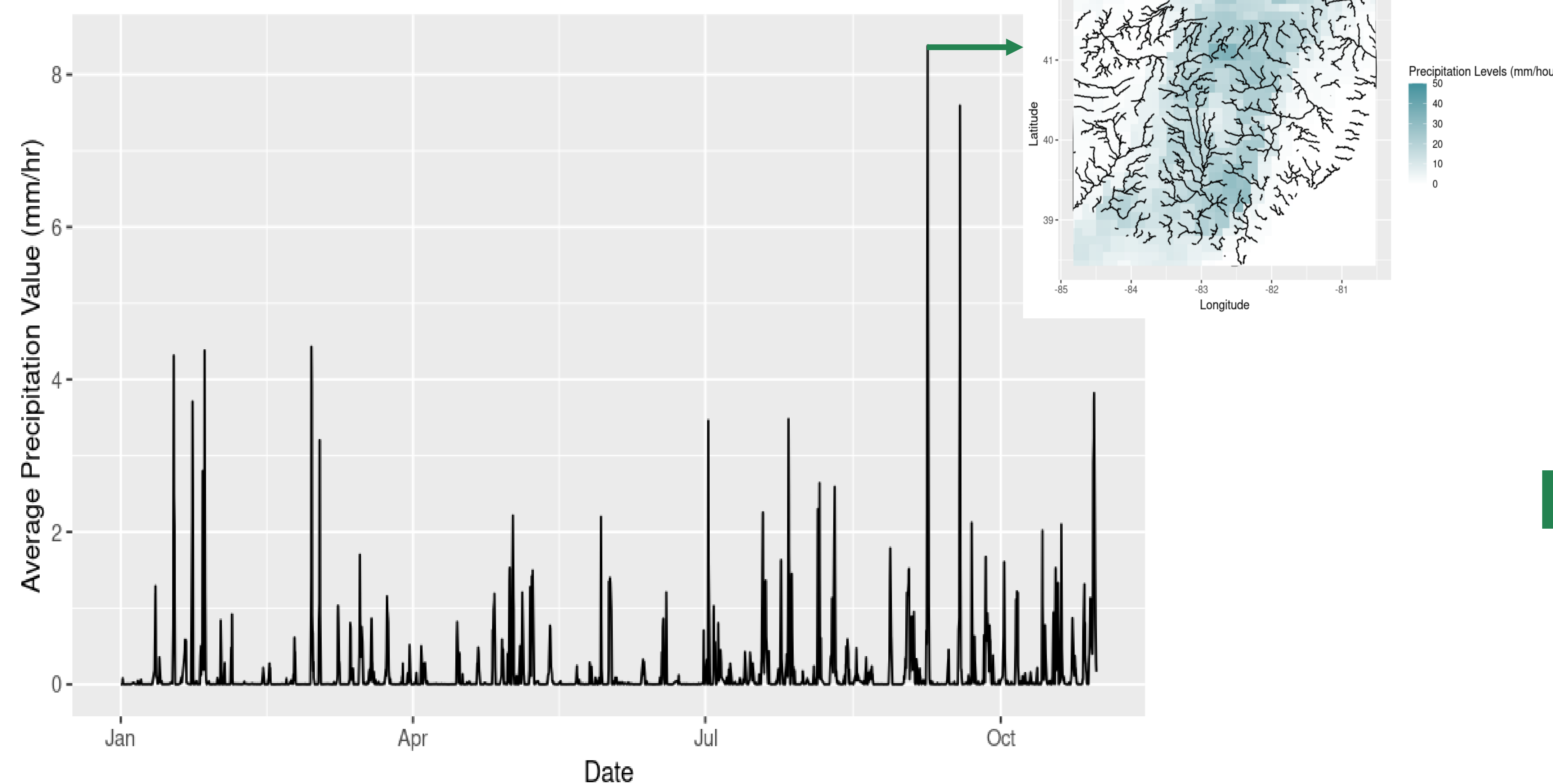
Methodology
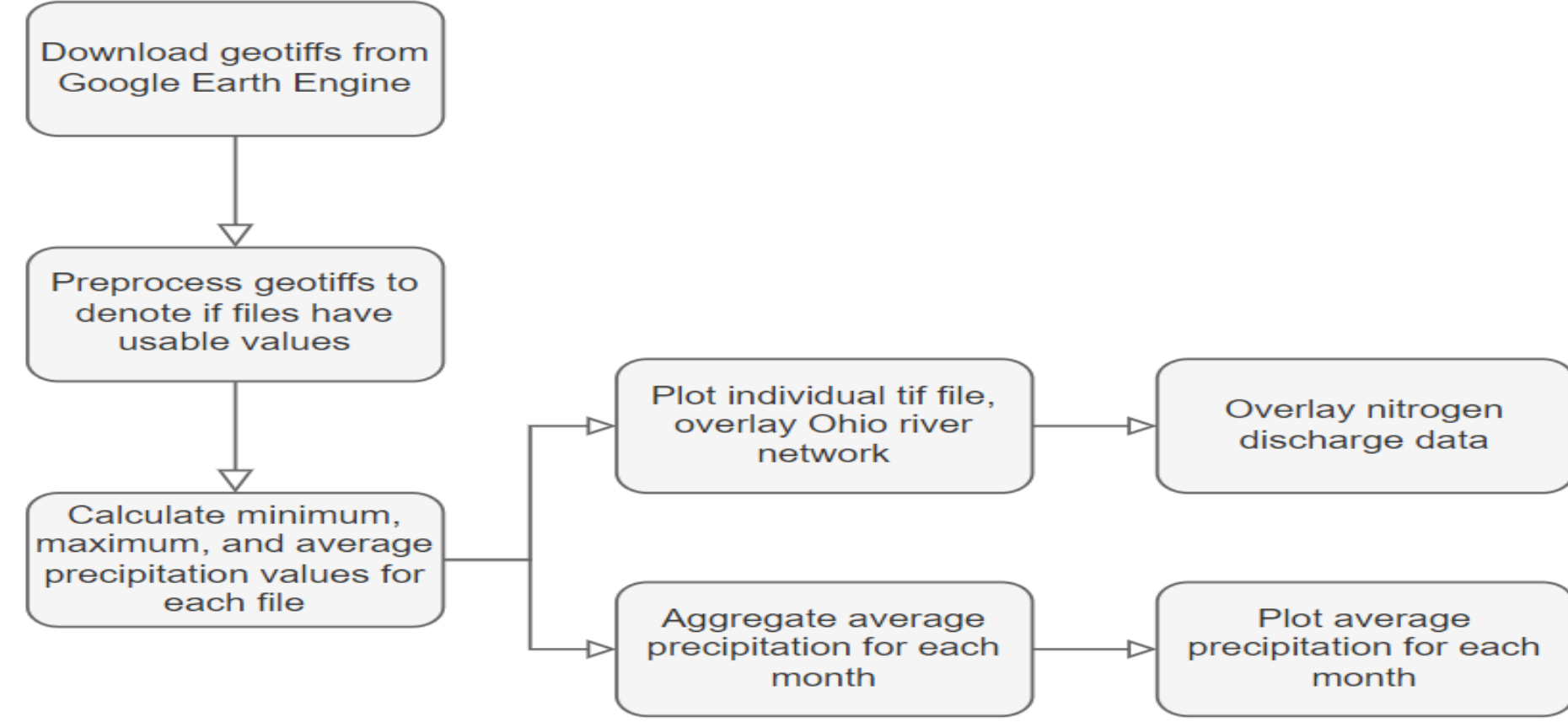
Results: Precipitation

Results: Averaged Monthly Precipitation

Winter
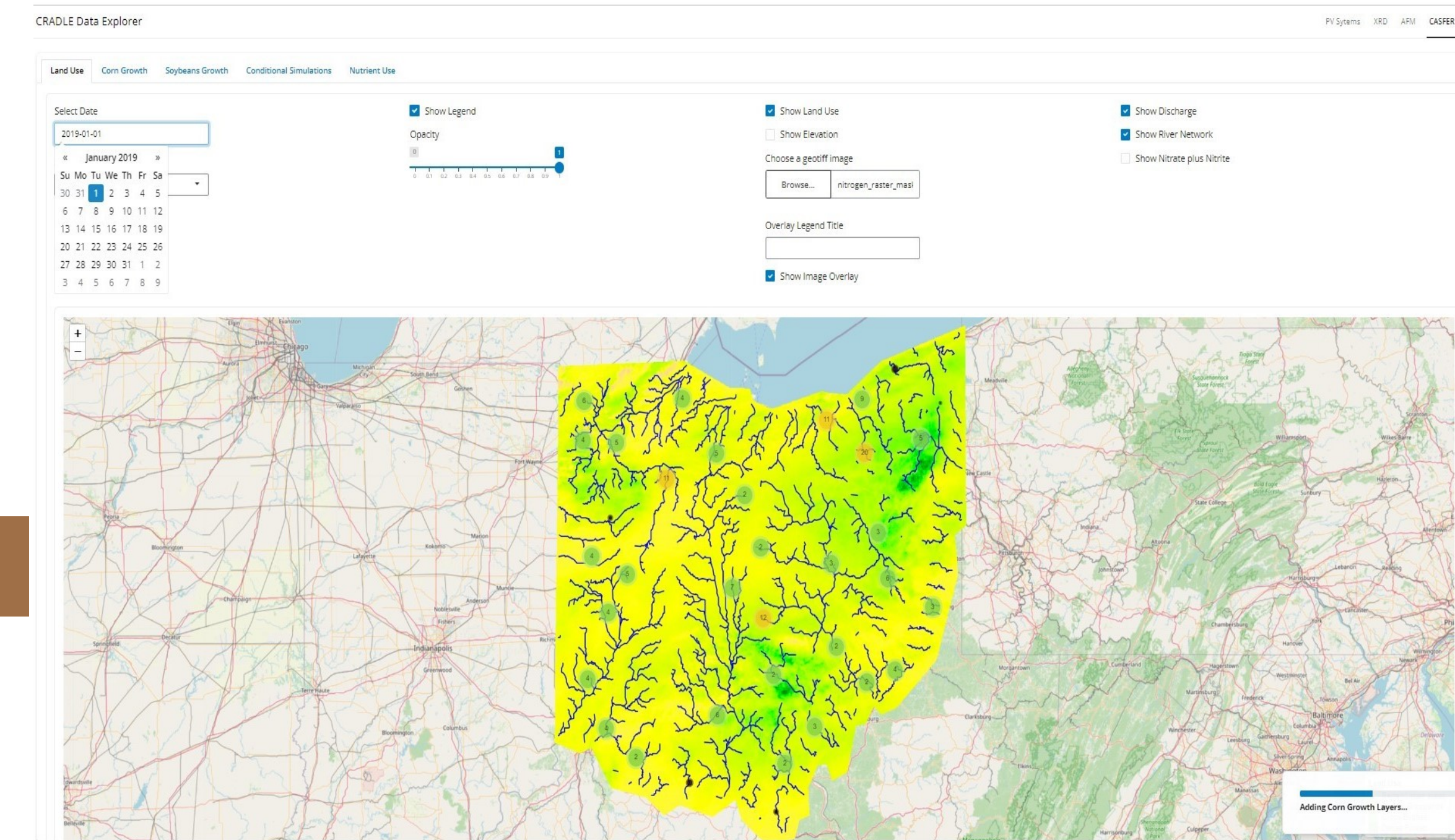

Spring

Summer

Fall

Average Precipitation Value Over Time in Ohio in 2012

Conclusion

Future Work:

- Study the impact of precipitation on crop growth and nutrient flow
- Integrate precipitation data into CRADLE Data Explorer seen below:

Acknowledgement

References

1. Huffman, G.J., E.F. Stocker, D.T. Bolvin, E.J. Nelkin, Jackson Tan (2019), GPM IMERG Final Precipitation L3 Half Hourly 0.1 degree x 0.1 degree V06, Greenbelt, MD, Goddard Earth Sciences Data and Information Services Center (GES DISC)], 10.5067/GPM/IMERG/3B-HH/06

Thrust Interactions

Thrust 1

Thrust 2   Thrust 3