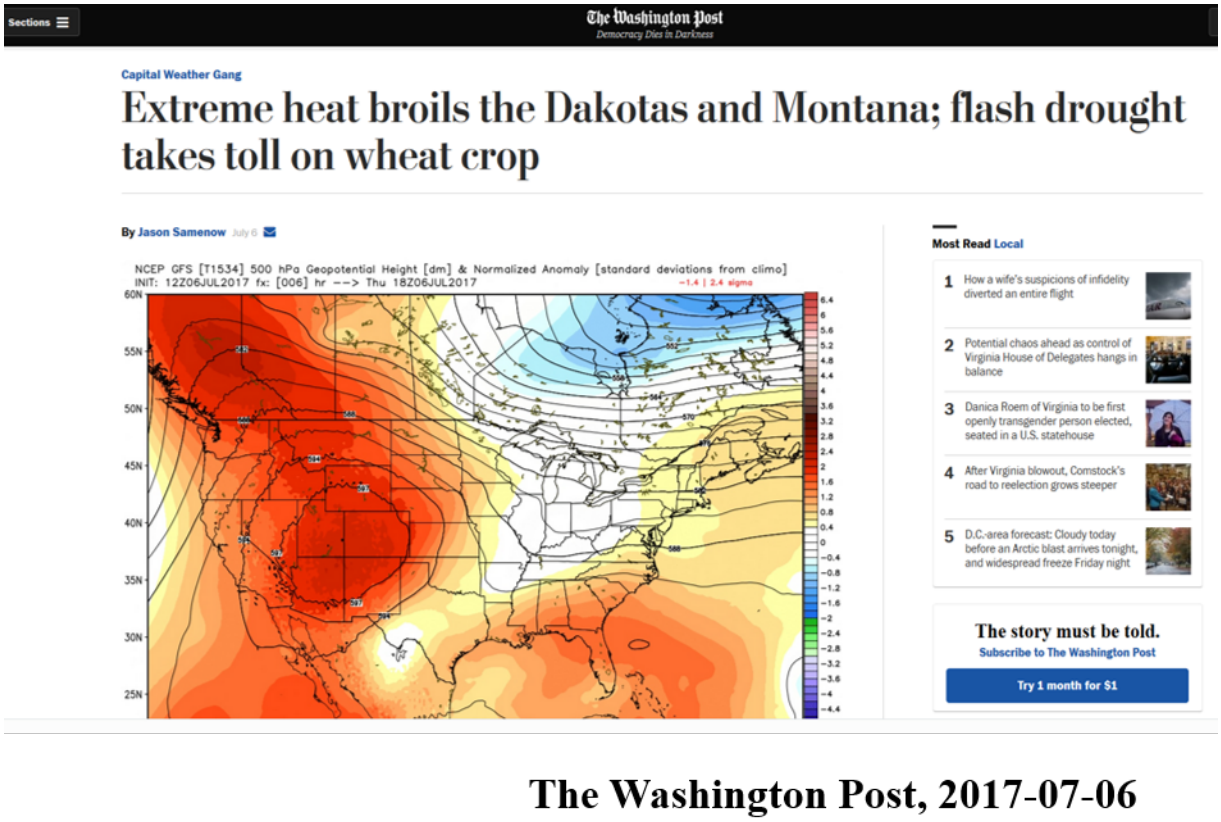
Research Experience: Understanding Flash Drought

The Project

Flash droughts are rapidly intensifying droughts that develop over the course of a few days to weeks. They can have devastating consequences for agriculture and water resources.

Ongoing and future climate change, will likely increase the risk of flash drought.



The Washington Post, 2017-07-06

Figure 1: Flash Drought Coverate, Washington Post 2017-07-06

The reason for the rapid drought development during flash drought is poorly understood, but we think that feedbacks between the land-surface and atmosphere are at least partially to blame.

The National Science Foundation has recently funded a research project in collaboration with the University of Wisconsin-Madison to help uncovering the role of land-atmosphere feedbacks on drought development and intensification; **and you can be part of this research!**

What You Will Need

- JMU Student at Sophomore or Junior level
- Interest in Climate & Climate Impacts
- Interested in hands-on data work

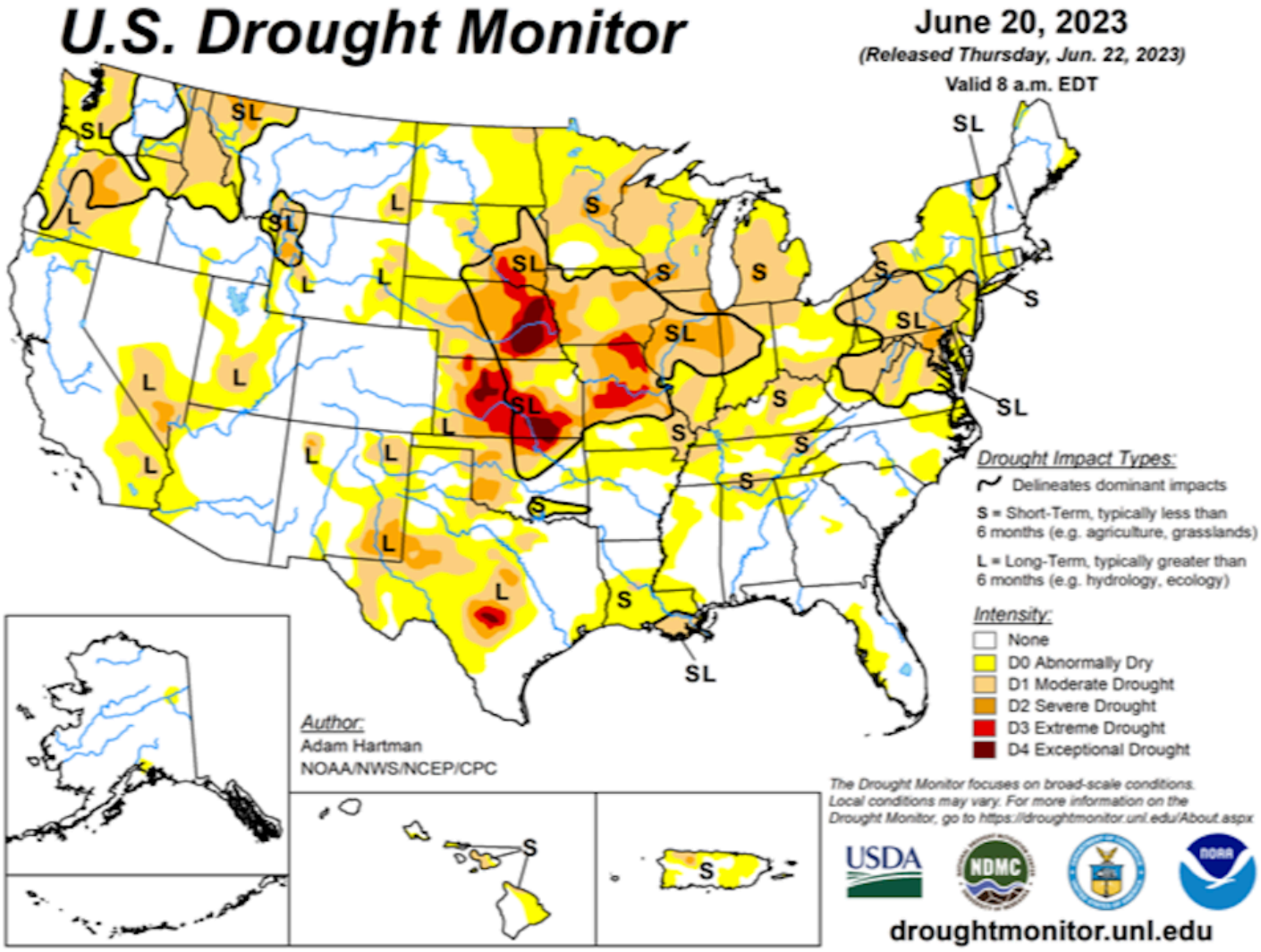


Figure 2: A developing flash drought during the summer of 2023 that affected the Mid-West agricultural belt

- Some experience in Python Programming and Statistics demonstrated through relevant course work (e.g. *ISAT 251 & 252*) or other means.
- Time to commit at least 5 hours per week during the Spring 2024 Semester with opportunity to continue at least next Fall.
  - The project is funded for 2 years.

What You Will Get Out of This

- Contribute to a National Science Foundation funded research project, that aims to better understand this important climate impact.
- Learn about working with climate data
- Opportunity to develop and showcase your reseach skills
- Pay: $15/hour

Contact

Contact Dr. Tobias Gerken (gerkentx@jmu.edu) for additional details and how to apply.