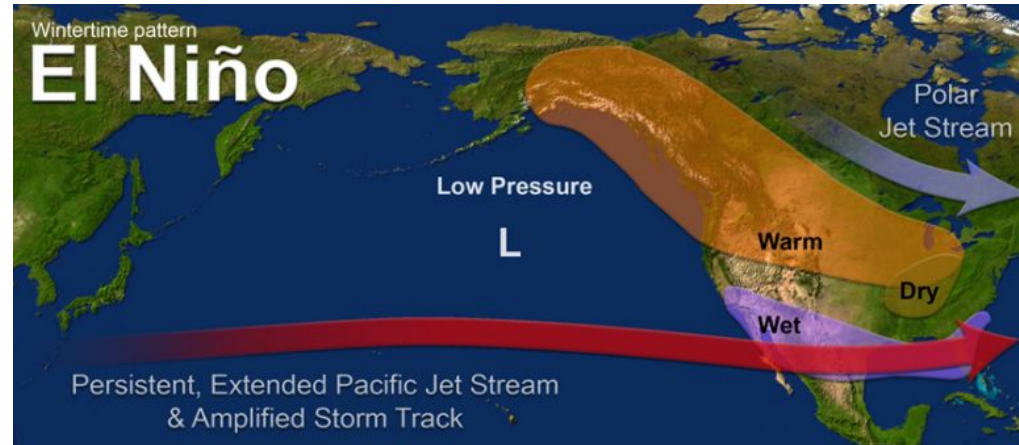


# El Niño

- El Niño Southern Oscillation (ENSO)
- Pacific sea-surface temperature cycle
- Strong influence on global weather
  - Climatologists / meteorologists seeking to better understand connections with other regions



# Partner

- Dr. Samuel Muñoz, COS
- Earth Surface Systems Lab
- Focus on Mississippi River Basin

Article | [Open Access](#) | Published: 11 May 2017

## El Niño increases the risk of lower Mississippi River flooding

Samuel E. Munoz  & Sylvia G. Dee

*Scientific Reports* **7**, Article number: 1772 (2017) | [Cite this article](#)

**988** Accesses | **22** Citations | **13** Altmetric | [Metrics](#)

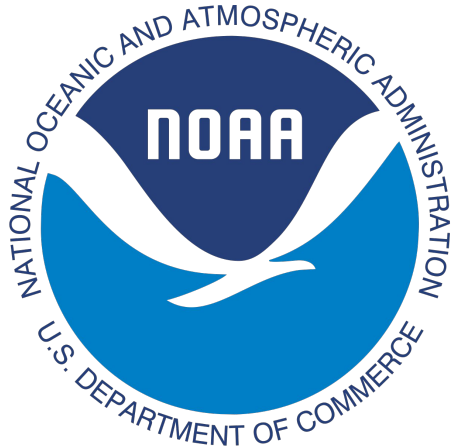


# Goal

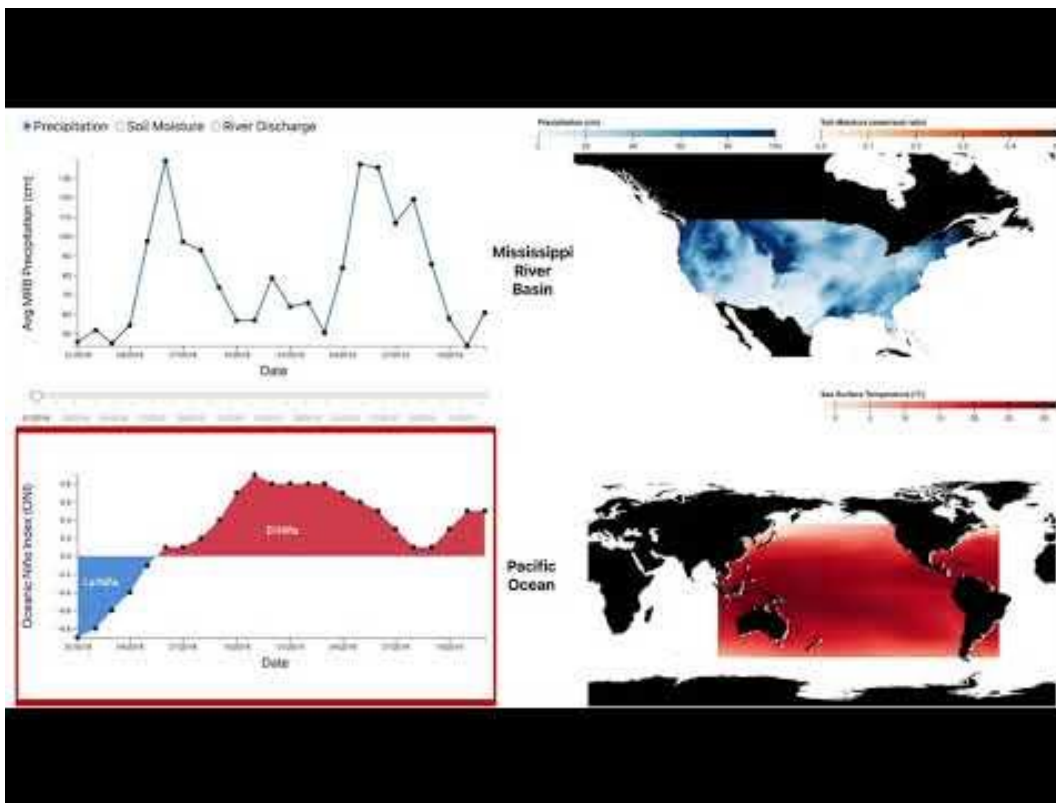
- Explore connection between ENSO and MRB conditions
- View Pacific SST during ENSO cycle
- Compare MRB precipitation levels across ENSO spectrum
  - MRB soil moisture levels across ENSO spectrum
  - MRB river levels across ENSO spectrum
- Examine environmental conditions over the ENSO time cycle
  - ONI index across ENSO time cycle

# Data

- Monthly averages for the 2018-2019 ENSO cycle of:
  - Pacific Ocean sea-surface temperature ( $^{\circ}\text{C}$ )
  - MRB soil moisture (water / soil ratio)
  - MRB precipitation (cm)
  - MRB river discharge ( $\text{ft}^3 / \text{s}$ )



# Demo



# Conclusion

- Our visualizations show the relationship between the ENSO conditions in the Pacific Ocean and its effect on the Mississippi River Basin
- Interactive visualizations that communicate Dr. Muñoz's findings
- We hope we are able to aid Dr. Muñoz's research

