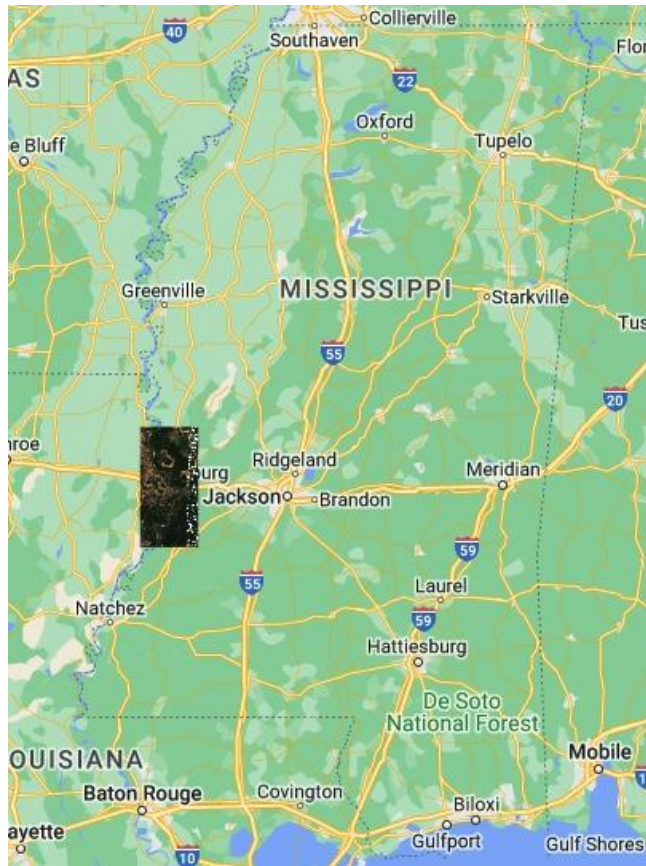# RIMORPHIS

Avra Saslow and Kristen Tortorelli

River Morphology Information System (RIMORPHIS)

- **Science question:** For a given site, at what discharge do channels overflow their banks, and/or can overbank flooding be determined from satellite imagery?

- **Project goal:** Compare gage discharge data for given site against satellite imagery, and determine at which point we can detect overbank flooding
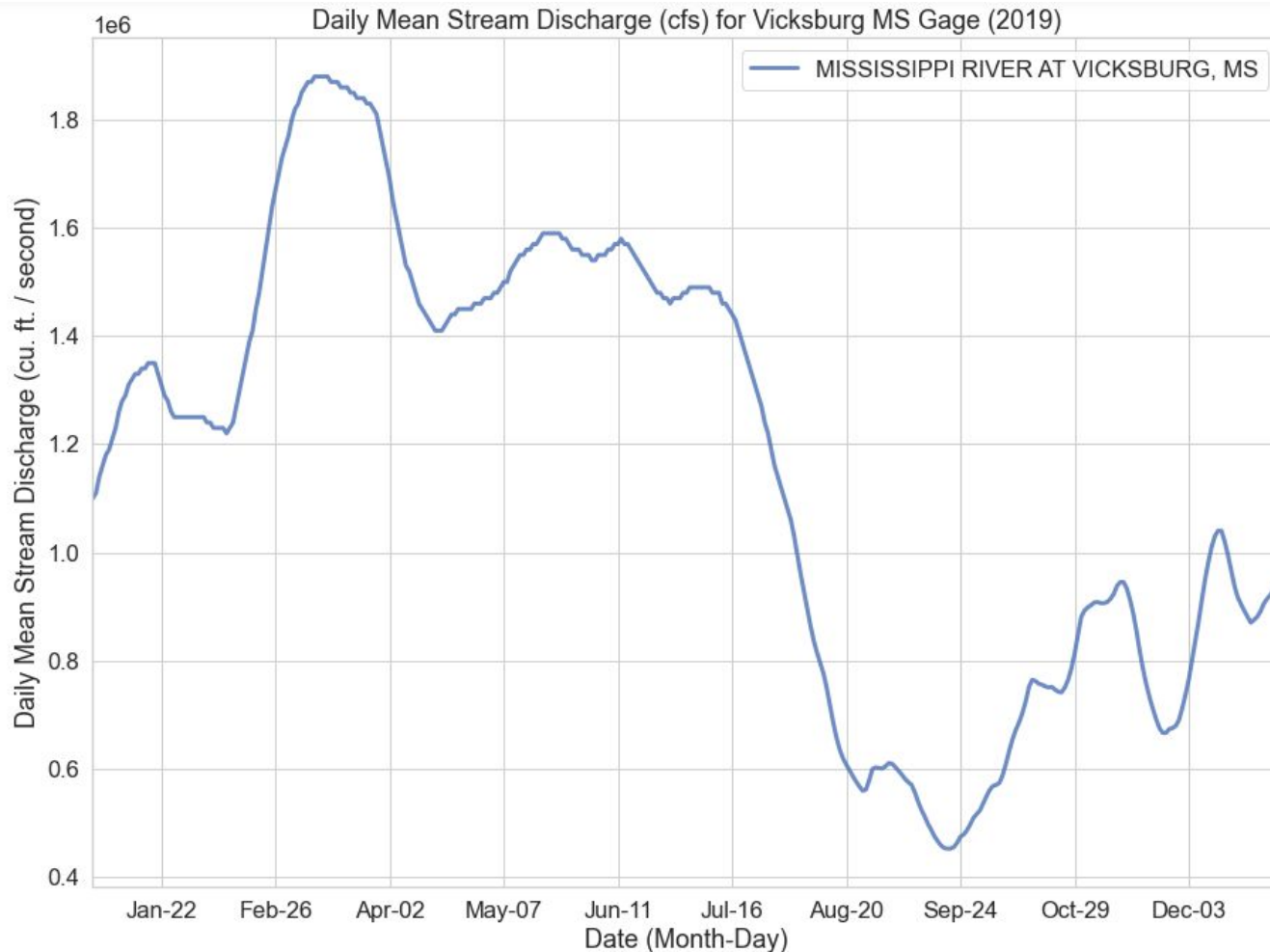

Source: Vicksburg Post, "Top Story of 2019: Impact from historic backwater flood and recovery shaped 2019"
(https://www.vicksburgpost.com/2020/01/01/top-story-of-2019-impact-from-historic-backwater-flood-and-recovery-shaped-2019)
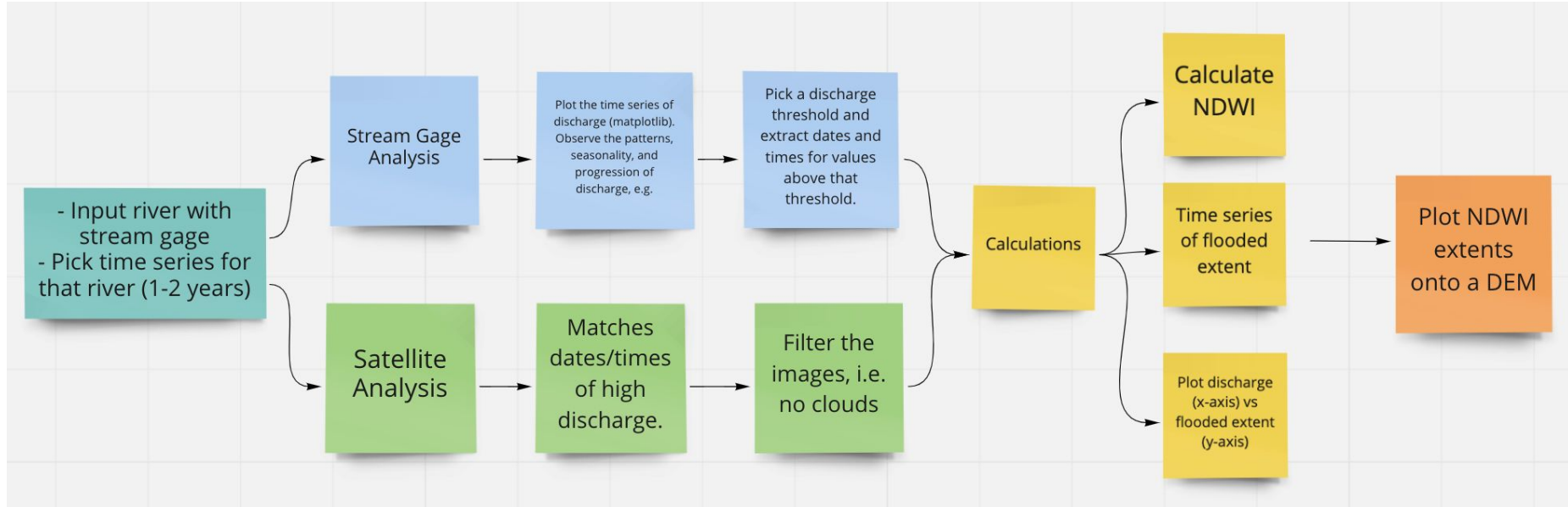
Project Study Area

Data Types

- Sentinel-2 imagery over project site
- NWIS Stream Discharge Data for Vicksburg, Mississippi River Gage

Daily Mean Stream Discharge (cfs) for Vicksburg MS Gage (2019)

Data Types and Methodology

April 2019

September 2019

Methodology

Desired Outcomes

- Build a workflow that works for any steam gage/river location
- Better understand river morphology pre- and post-flood event
- Answer the question: At what point do stream gage values correlate with rise in number of water pixels in satellite image?