
RIMORPHIS
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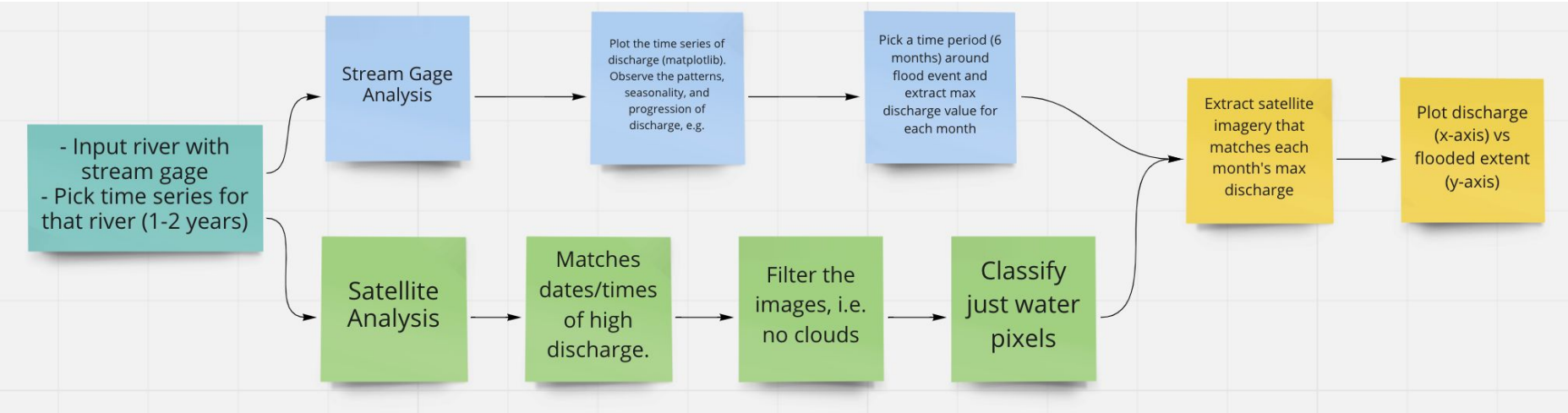
Project Overview

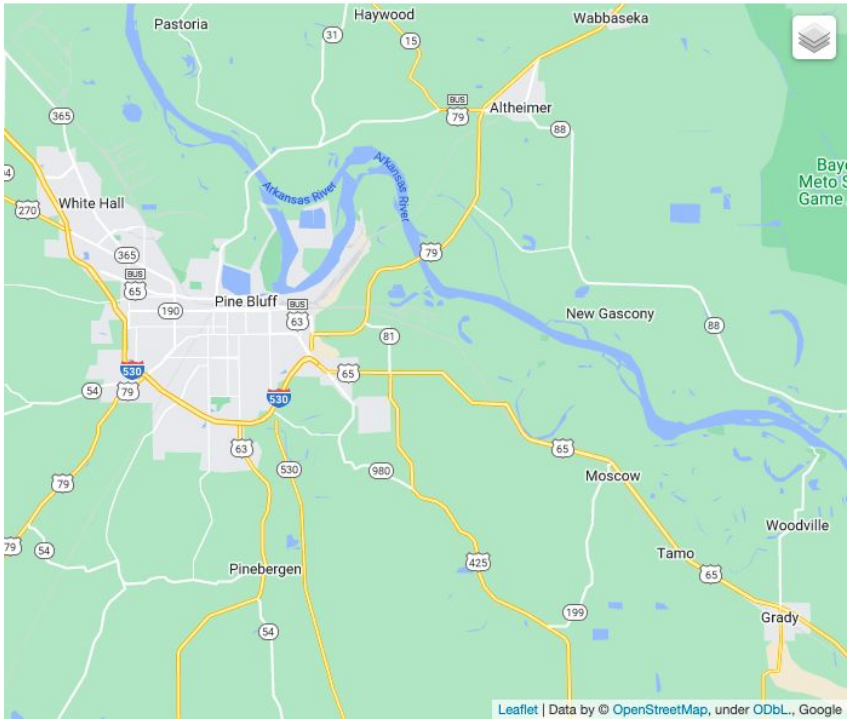
- **Project goal:** Compare gage discharge data for given site against satellite imagery, and determine at which point we can detect overbank flooding
- **Project importance:** As climate change continues to pose a threat to riverine system stability, it will be useful to have a tool that can reliably integrate river flow/geometry data with satellite imagery to gain a better understanding of pre- and post-flood effects.
- This tool may help both define and mitigate the extent of harmful flood impacts on both property and surrounding ecosystems.

Project Methodology and Approach

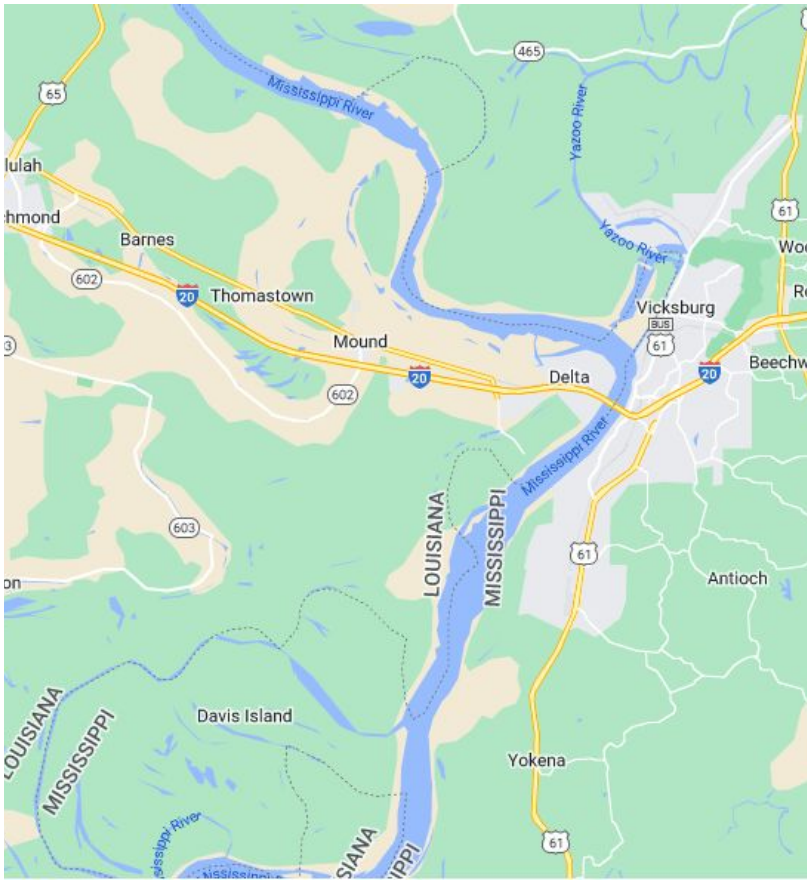


Study Areas

Arkansas River at Pine Bluff, AR



Mississippi River at Vicksburg, MS



Results: Vicksburg MS Site

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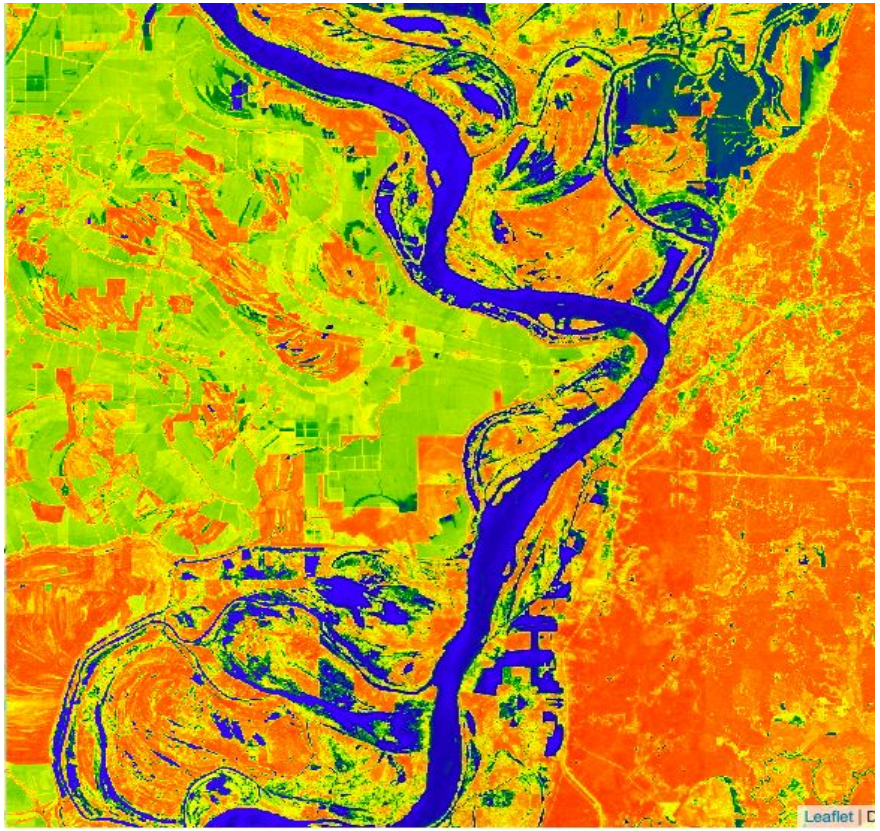
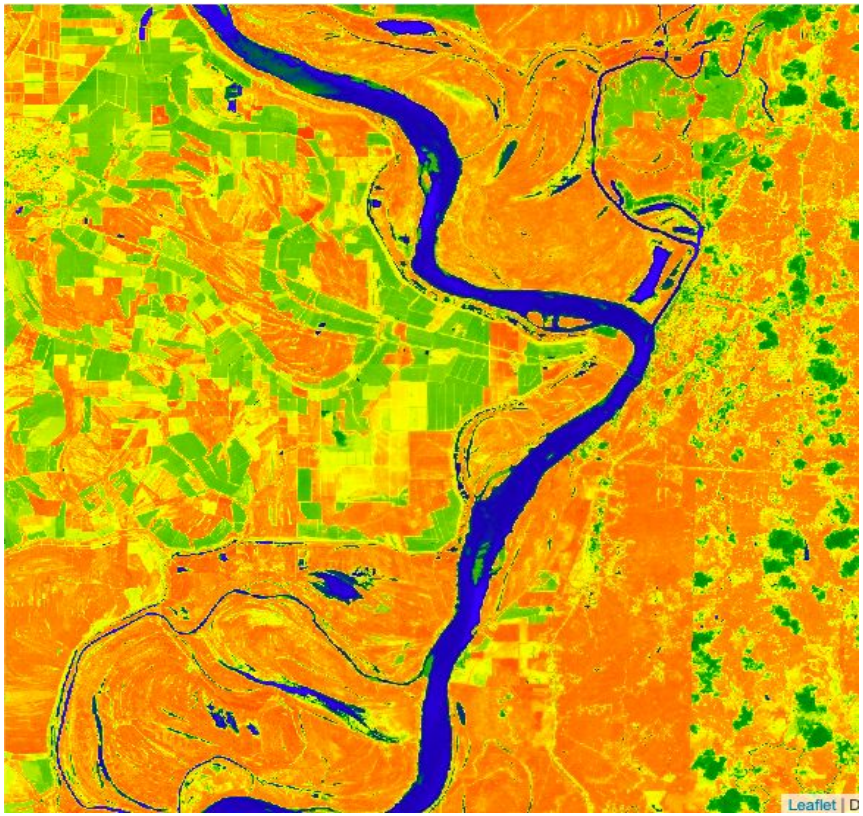
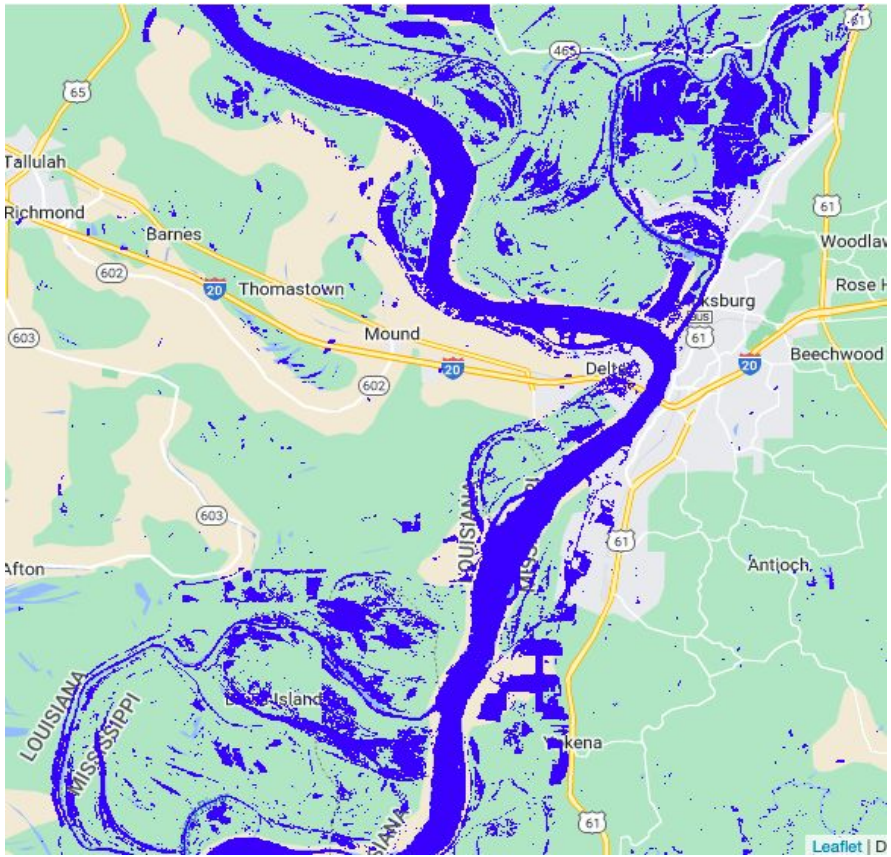
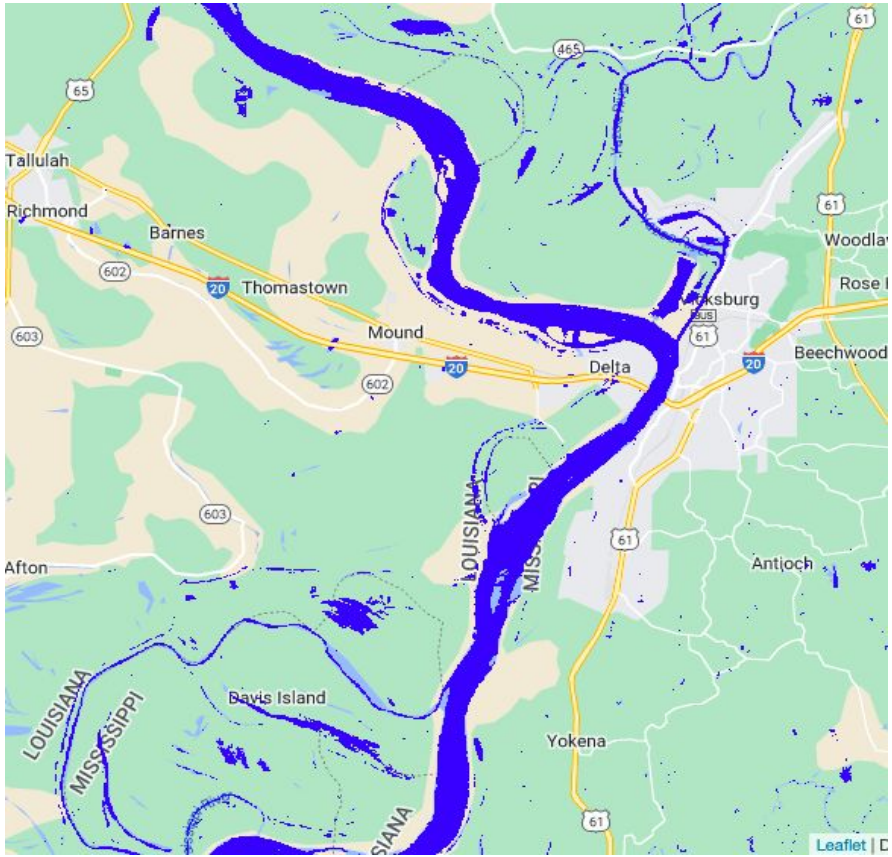


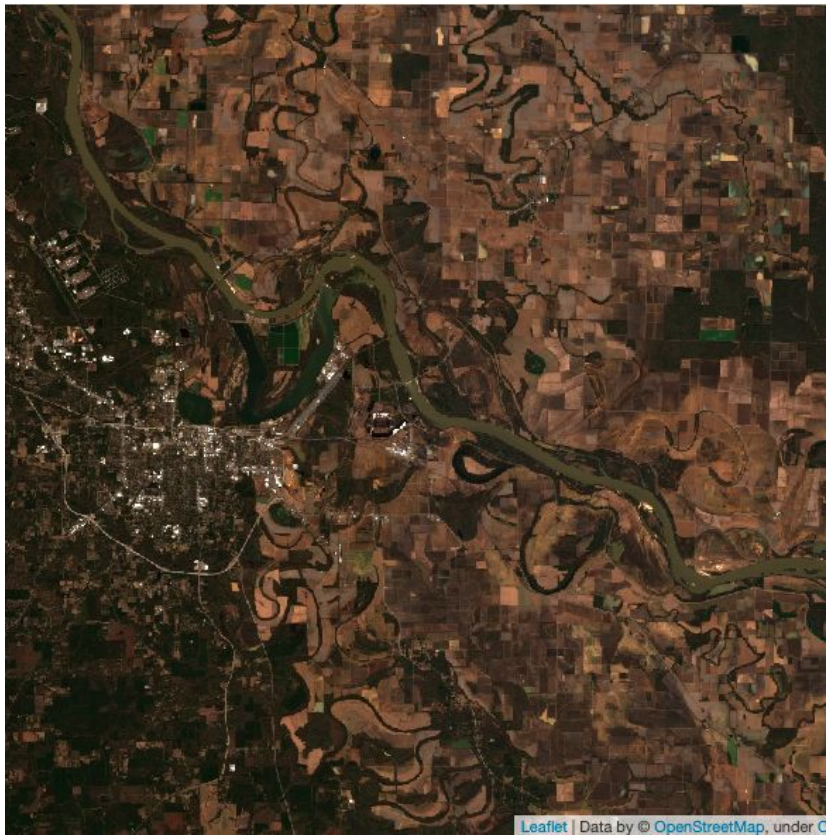


Results: Vicksburg MS Site

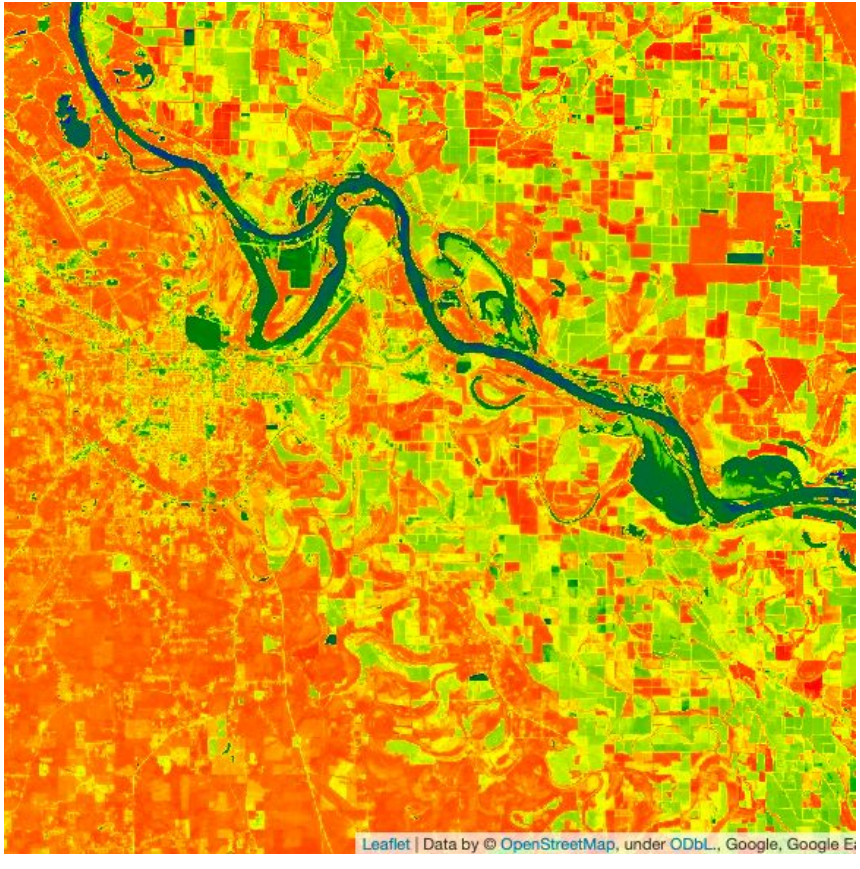


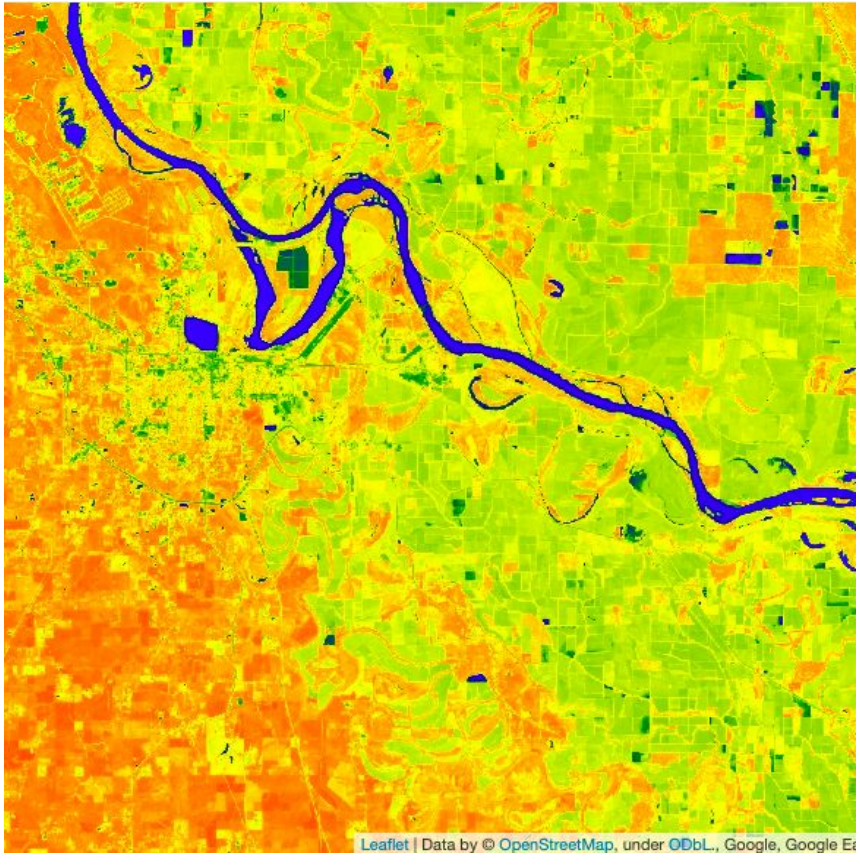


Results: Pine Bluff AR Site

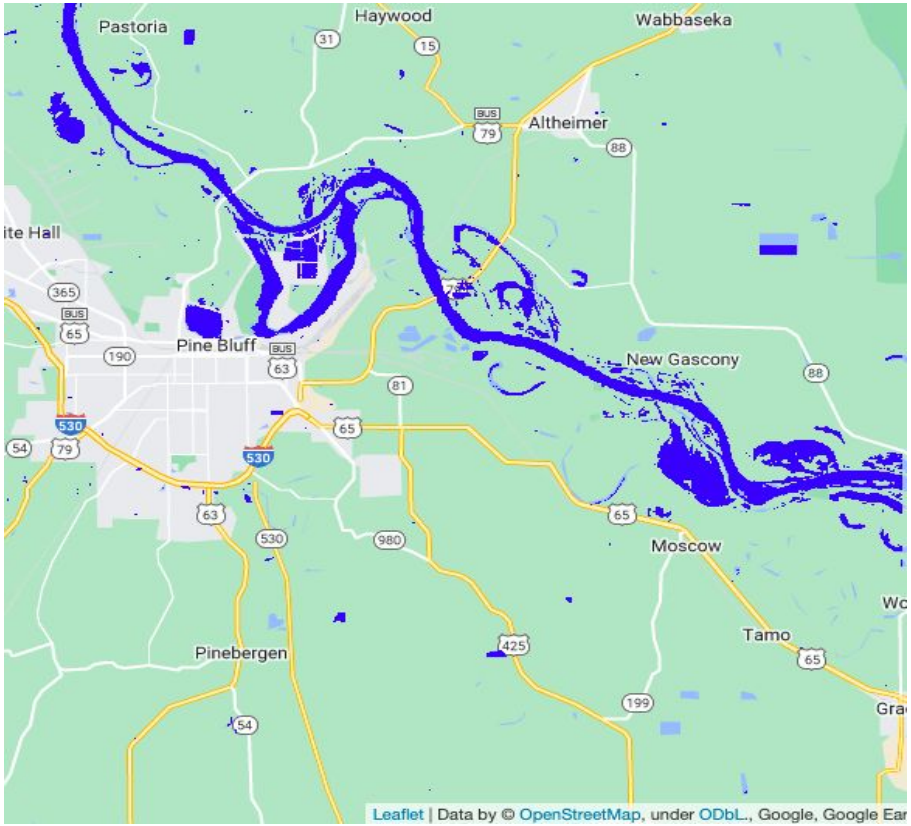


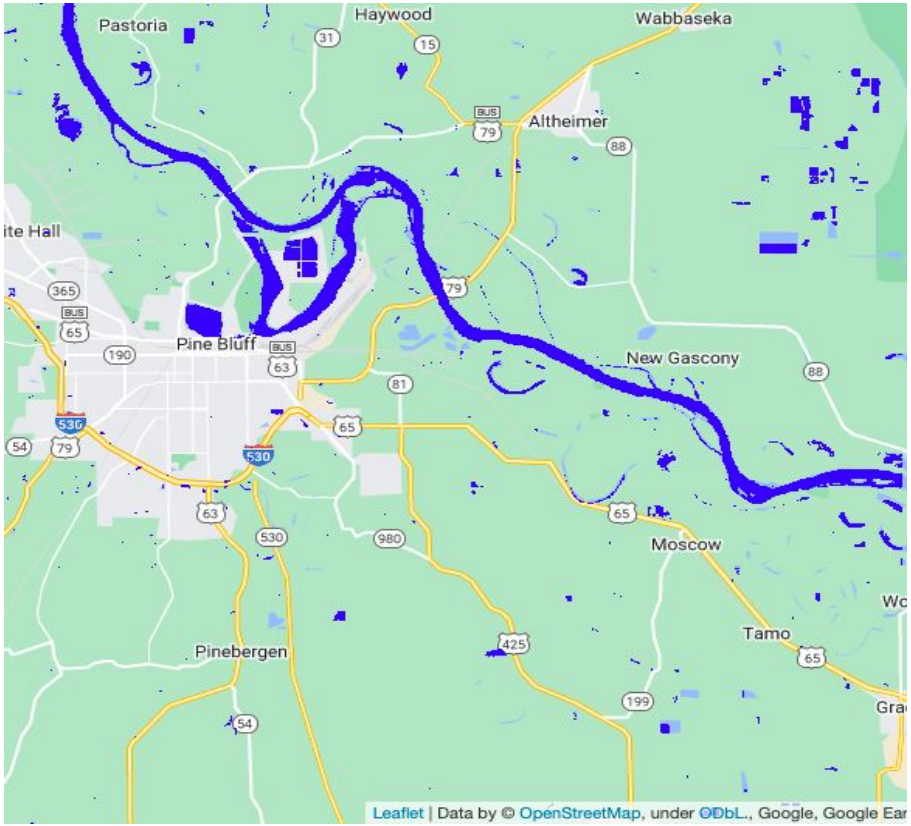
Results: Pine Bluff AR Site



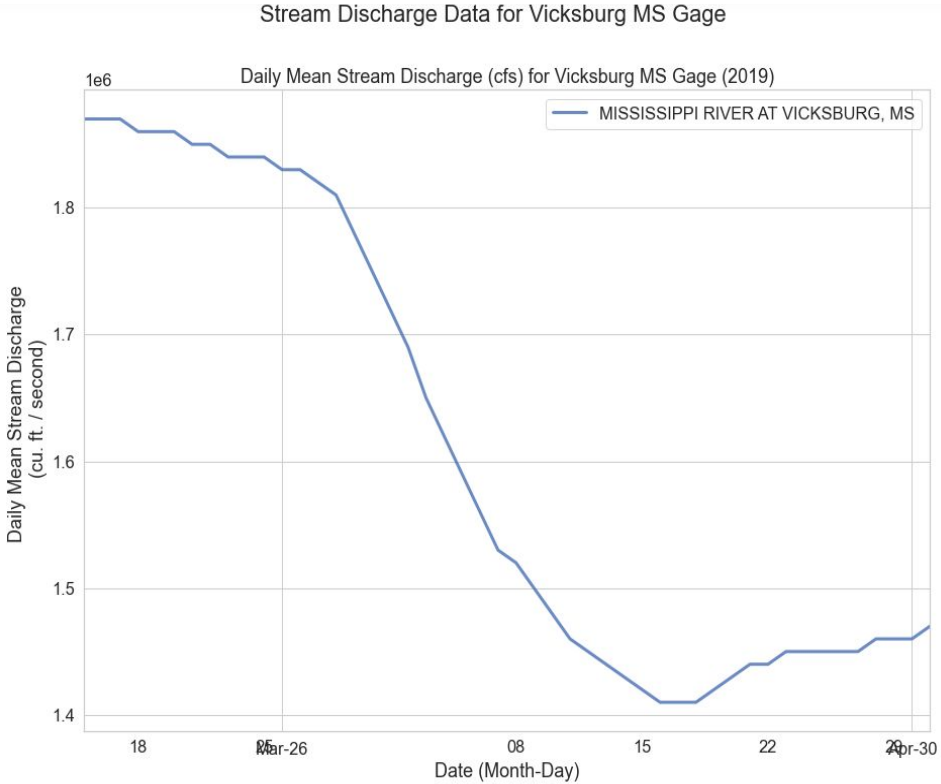


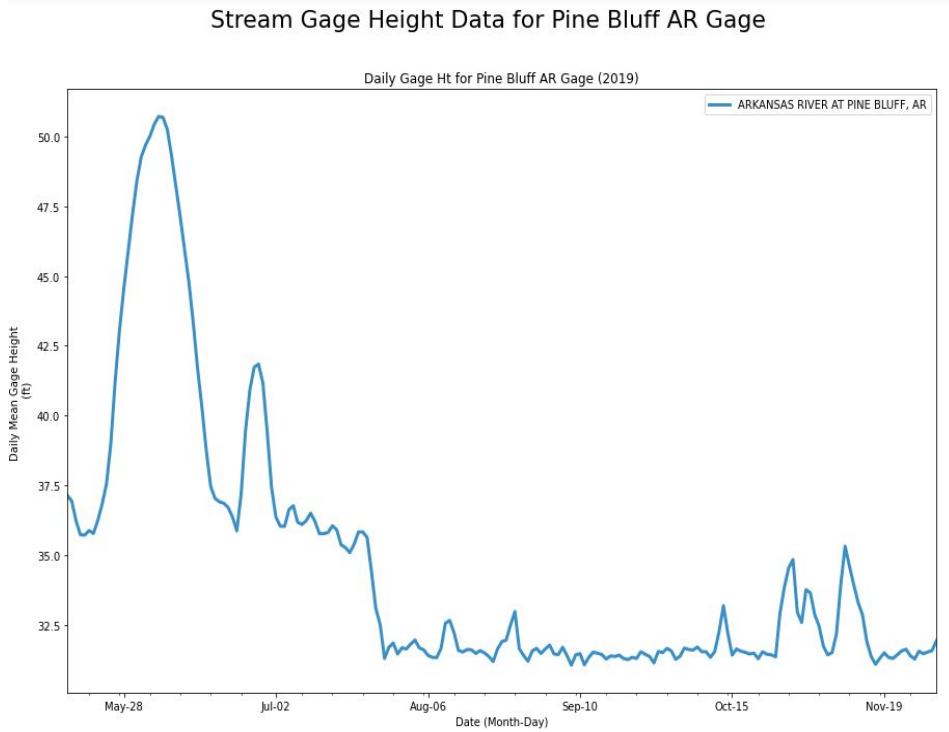
Results: Pine Bluff AR Site





Results: Hydrofunctions





Next Steps

1. Extract water pixel counts from water images for each month (within 1 year period) at each site.
2. Combine monthly maximum discharge/gage height values and pixel counts in dataframe.
3. Plot water pixel counts against discharge/gage height for each site.