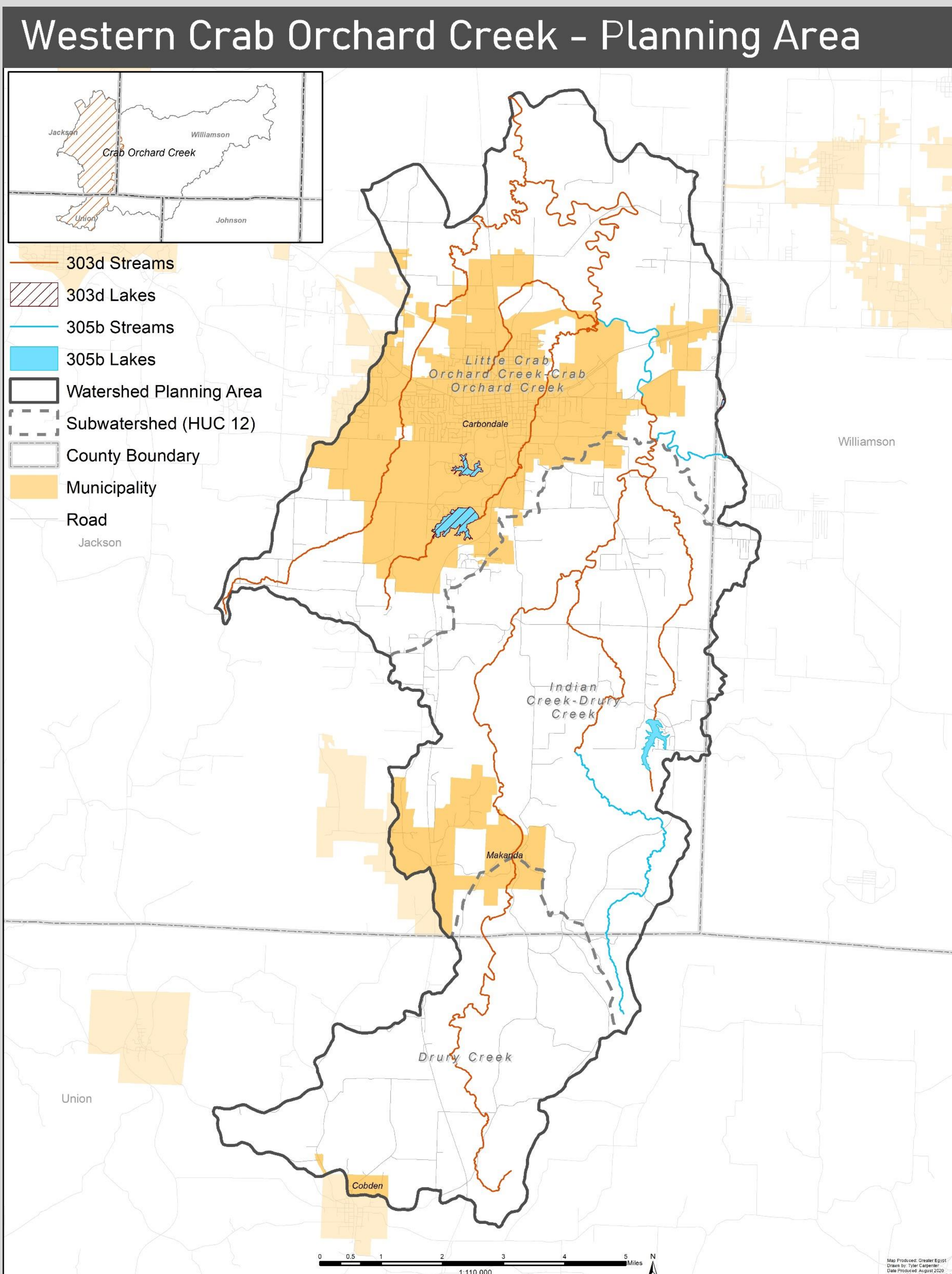
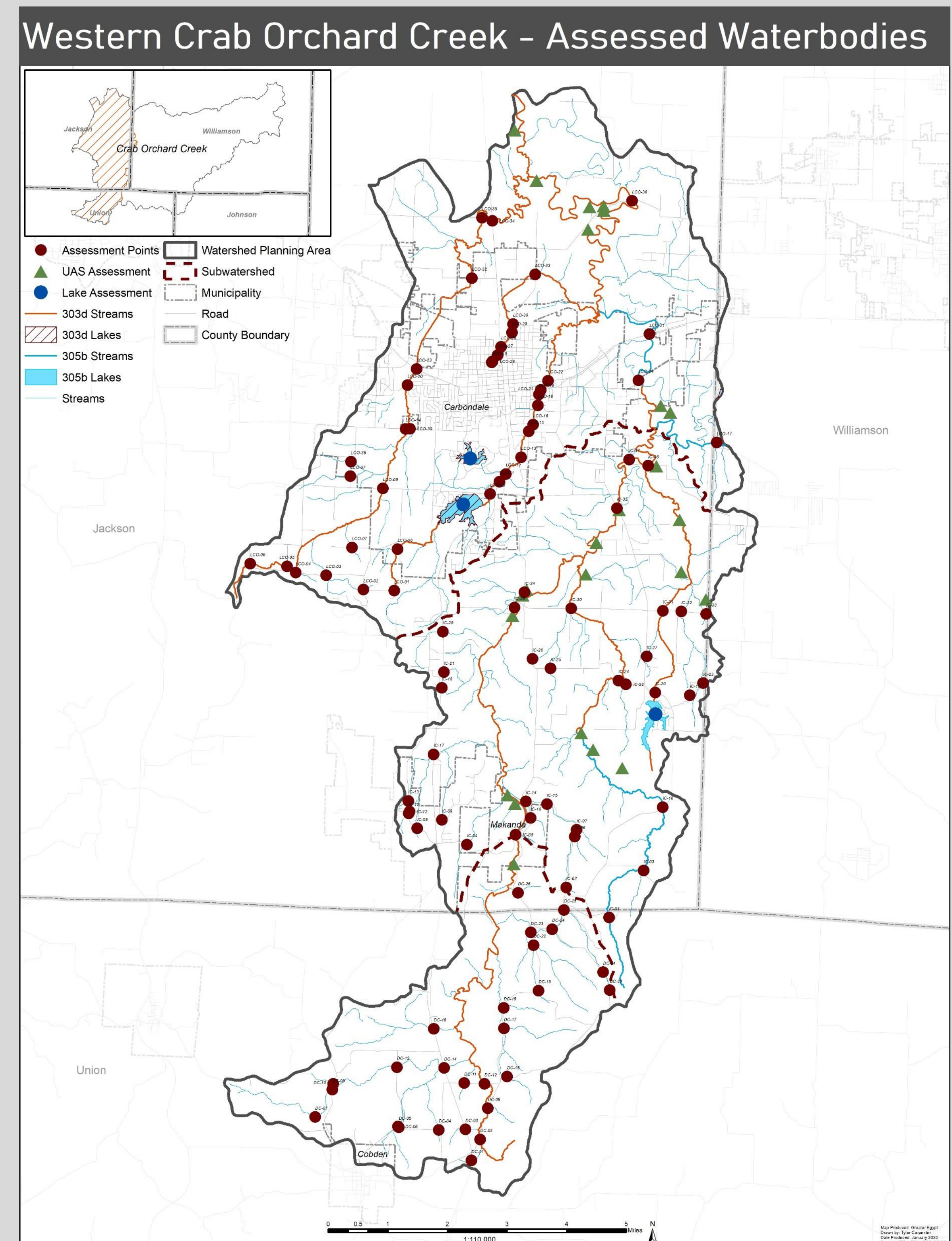


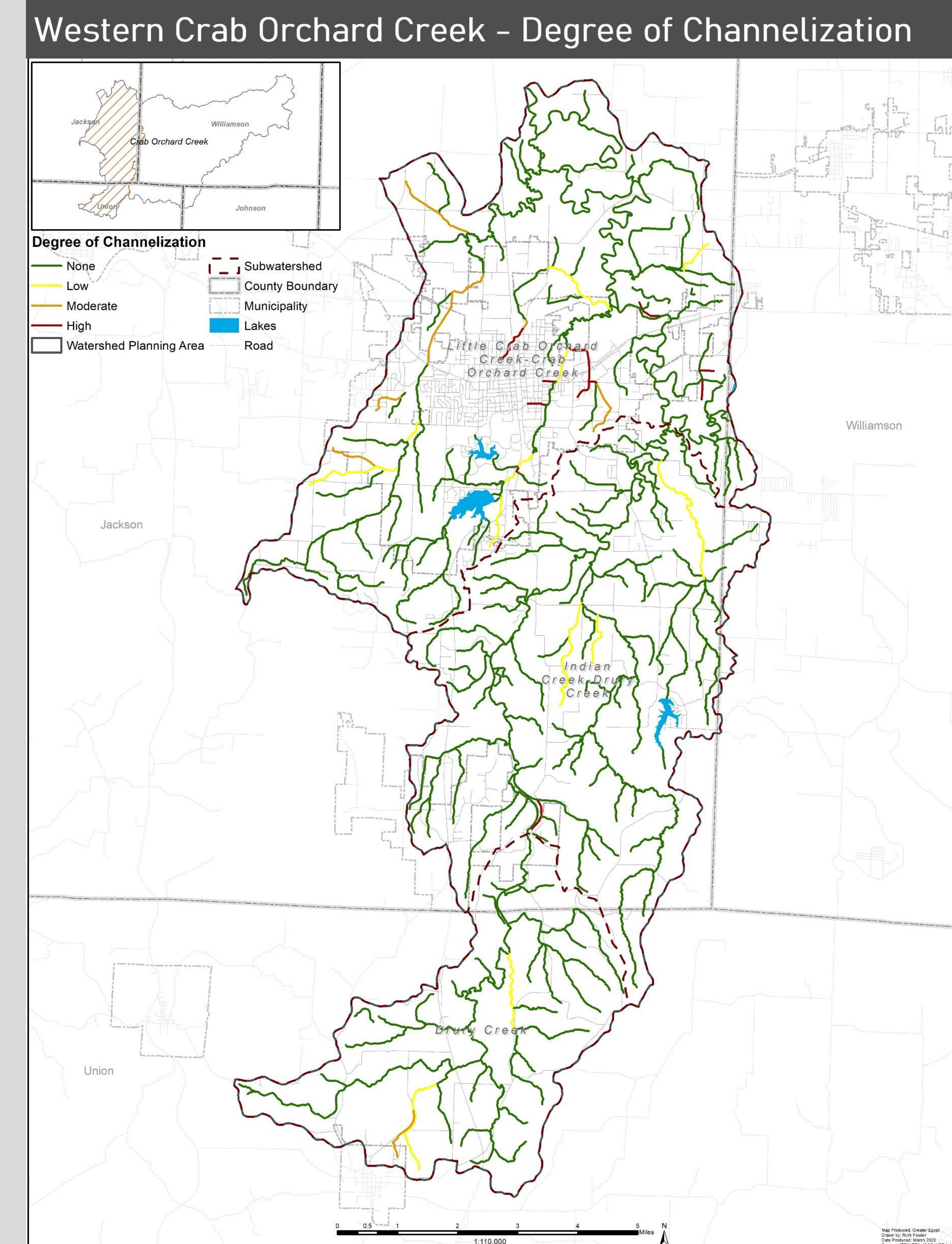
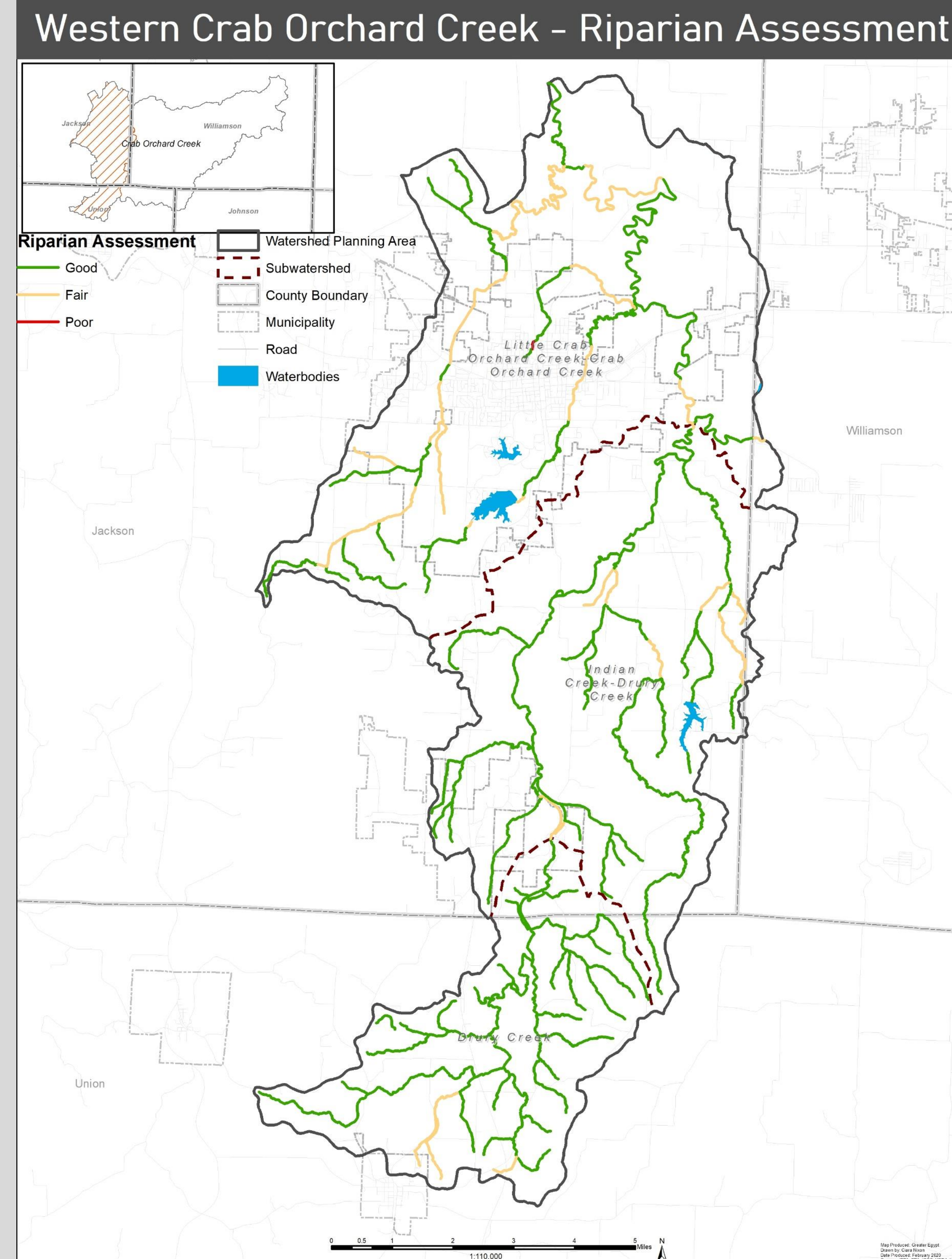
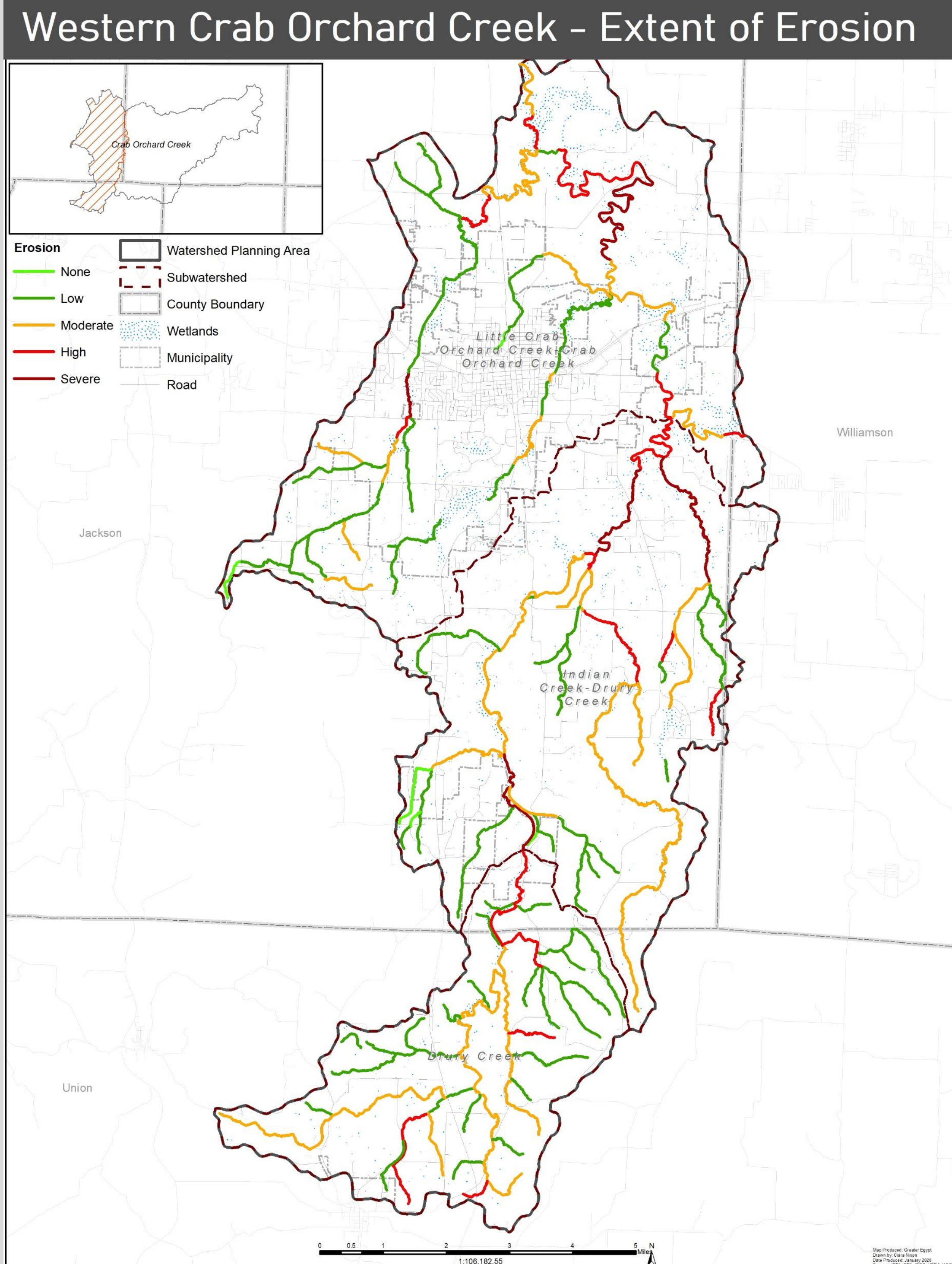
# Watershed Summary and Assessment Locations



- The Western Crab Orchard Creek Watershed flows into the Big Muddy River
- Encompasses 56,533 acres in Jackson, Williamson, and Union Counties
- Includes 3 Subwatersheds: Little Crab Orchard Creek, Indian Creek, and Drury Creek
- 8 streams and 2 lakes in the watershed are listed as impaired on the EPA 303(d) list (see left).

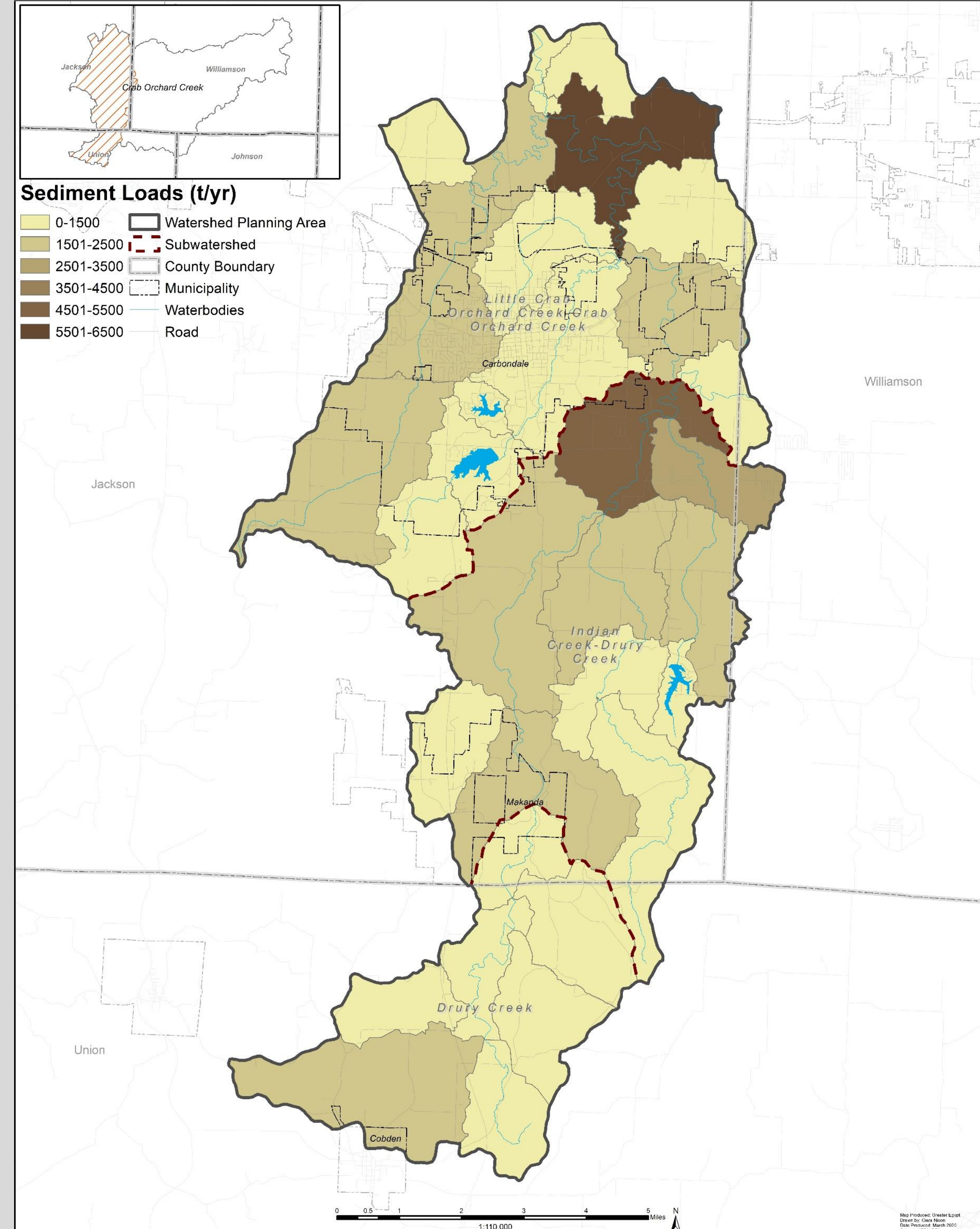


# Streambank Assessment Results

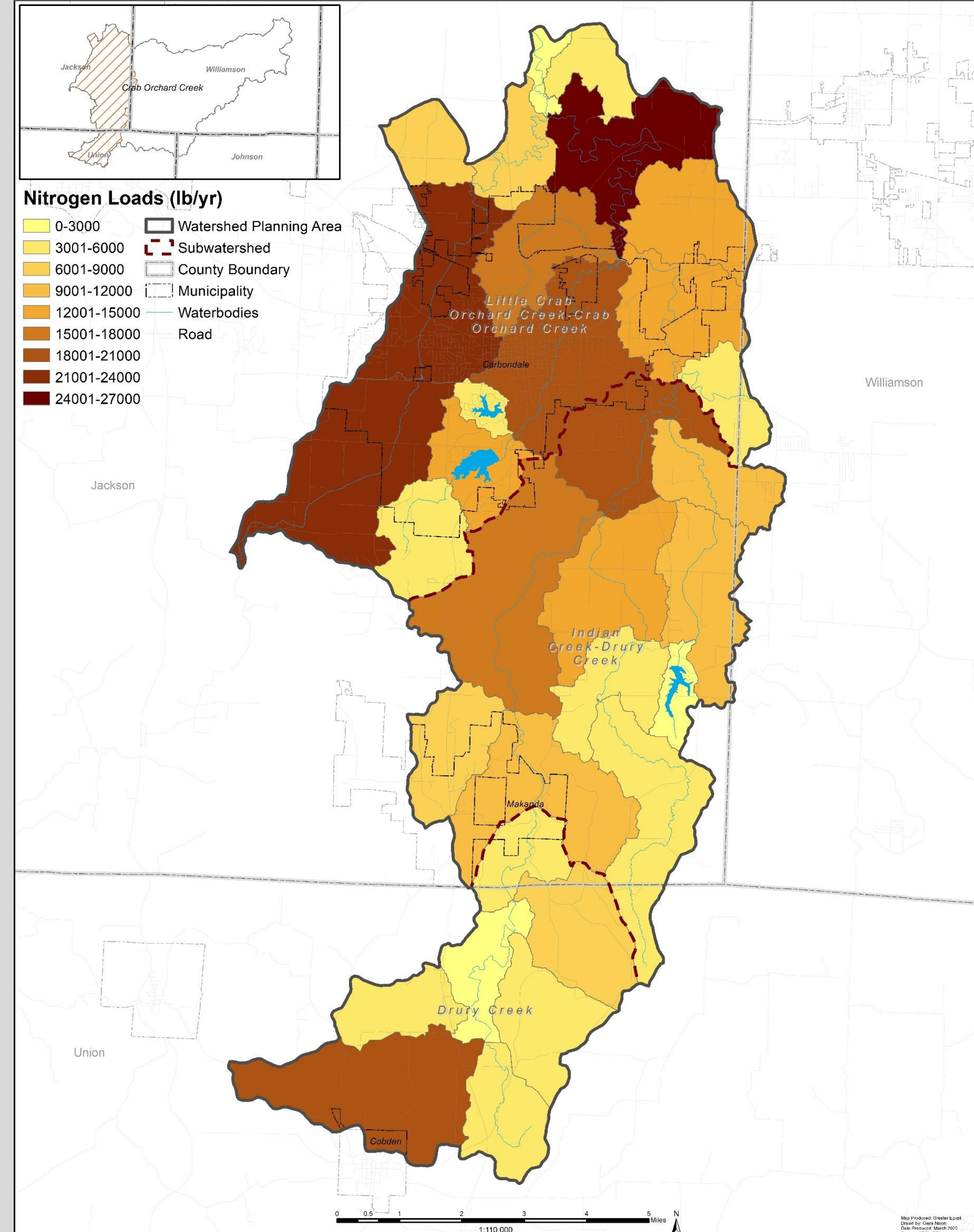


# Watershed Pollutant Load Estimates

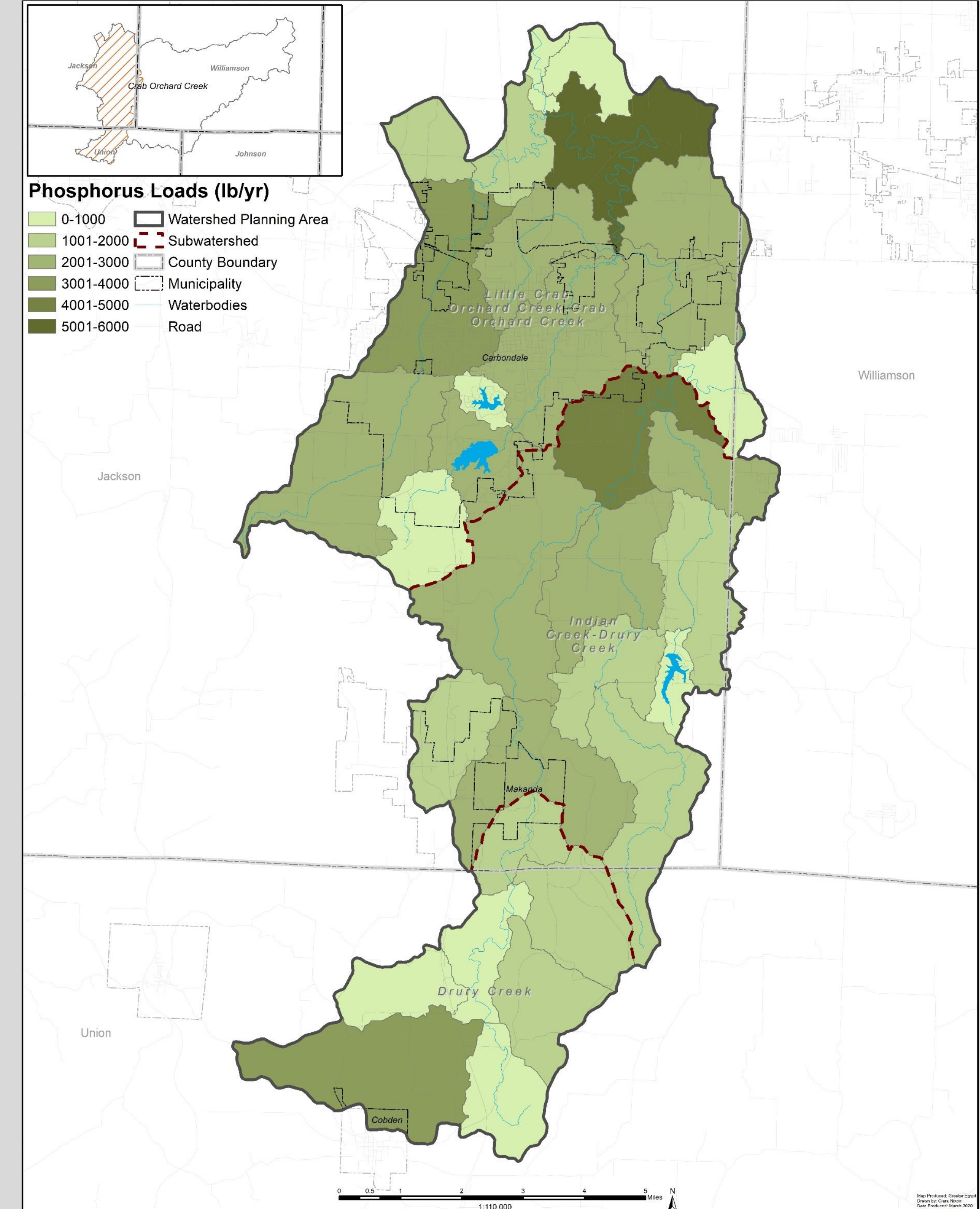
Western Crab Orchard Creek - Sediment Load



Western Crab Orchard Creek - Nitrogen Load



Western Crab Orchard Creek - Phosphorus Load



# Climate Change and Your Watershed

## Regional and Local Effects

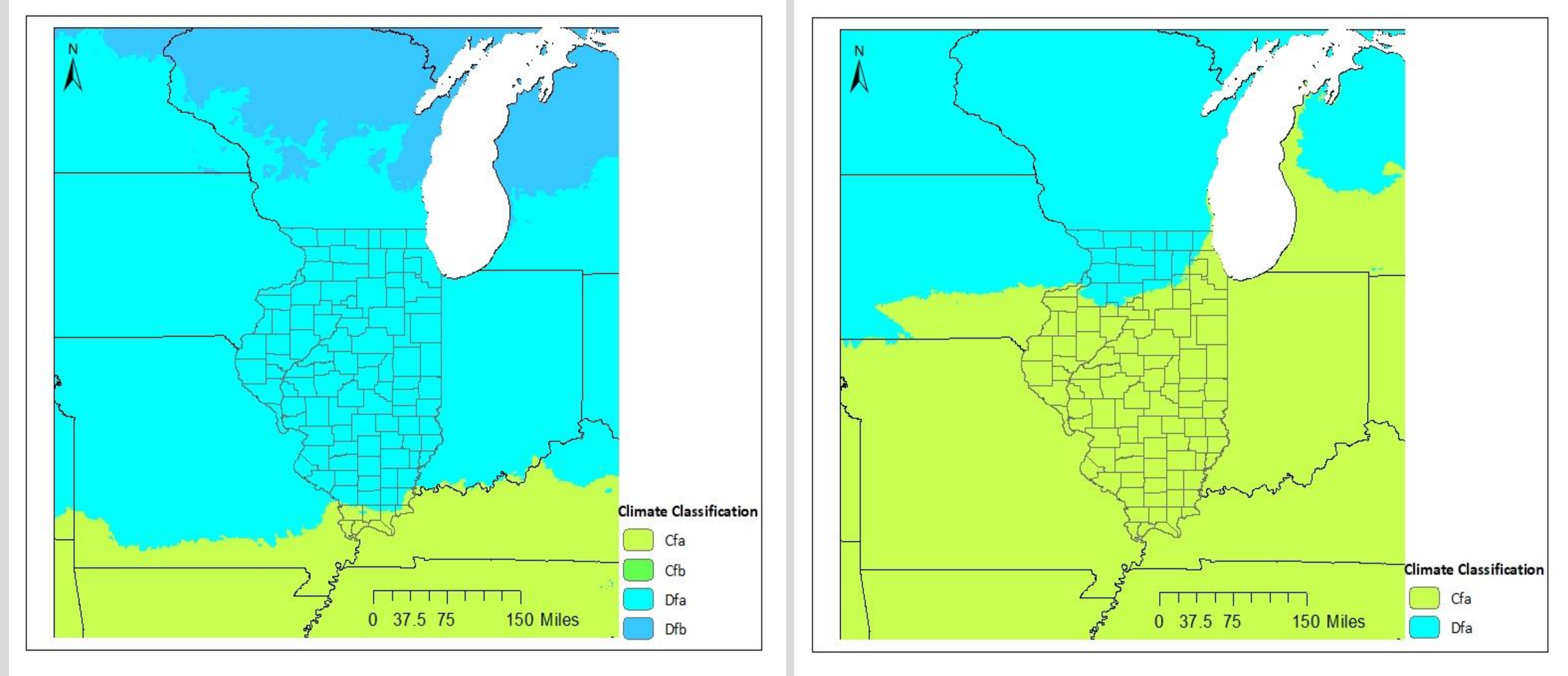
- Increased frequency and severity of droughts and storms
- More frequent and severe floods
  - 2019 was the 2<sup>nd</sup> wettest year ever recorded in the U.S. and the Mississippi river experienced record breaking flood conditions
- Urban Heat Islands (UHIs)
  - Many heavily urbanized areas are hotter than surrounding agricultural and natural landscapes
  - Residents in UHIs may experience lower water & air quality and higher energy bills
- Harmful Algal Blooms (HABs)
  - Caused by cyanobacteria in warm, nutrient rich waters
  - Toxic to humans, pets, and aquatic life
  - Disrupts natural ecosystems, may significantly disrupt the tourism industry

## Environmental Justice

- By lowering the exposure of people to pollution by improving air and water quality.
- Helping communities to find affordable home insurance so that they are more resilient when an event occurs.
- Ensuring that communities get the proper medical treatment needed so they are in good health when an event happens.
- Improving peoples resilience to natural hazards through education, so that efforts can be made to plan ahead for future events.

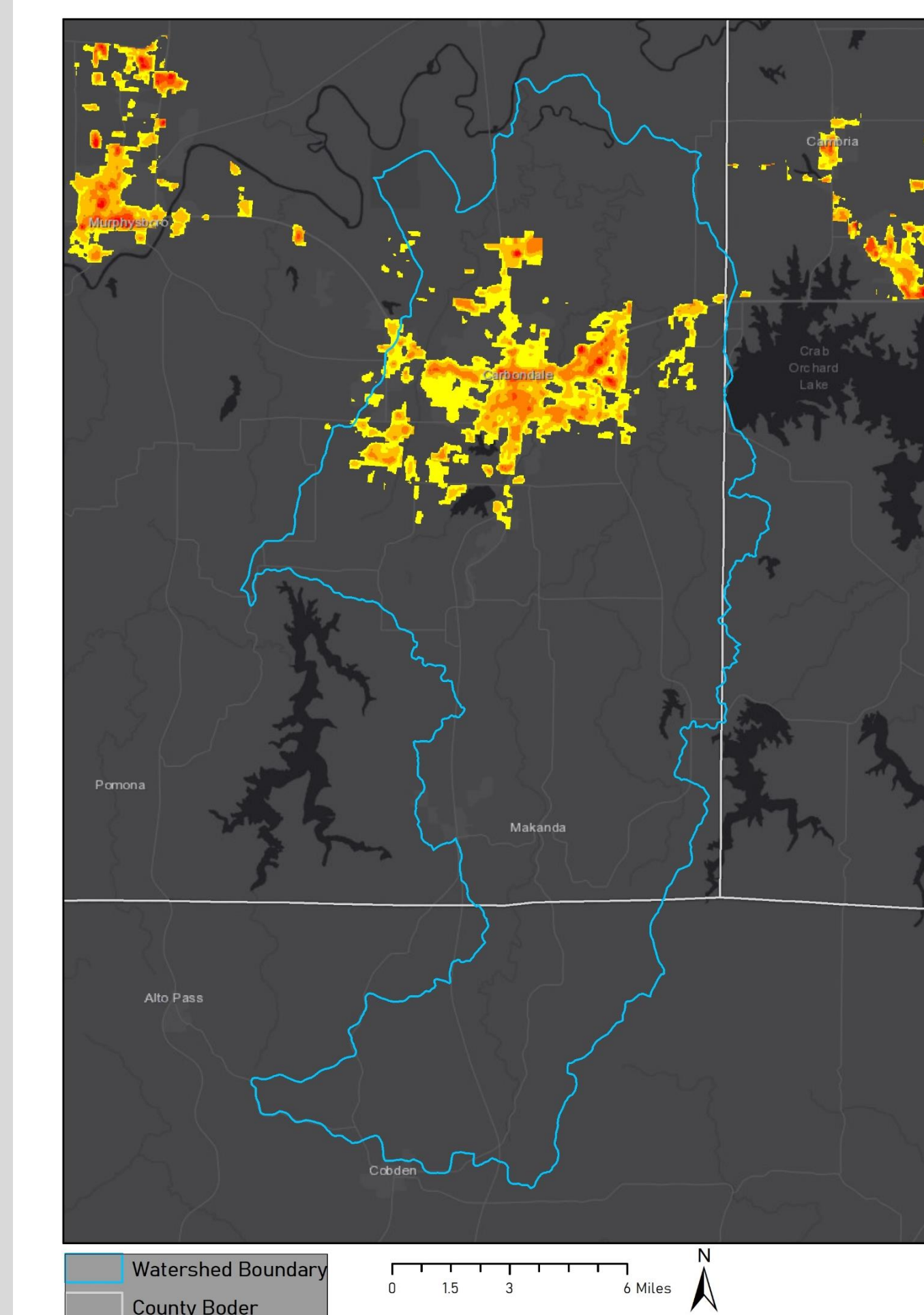
## Mitigation Strategies

- Stream and wetland restoration
- Green roofs or greenspaces within the heat island
- Community outreach to educate the people on the effects of climate change and ways to combat the effects.



Köppen-Geiger climate classifications of Illinois and surrounding areas for present day (based on data from 1980-2016) and projected climate types for the future (based on 32 different climate models for years 2071-2100).

Data Source: Beck, H.E., N.E. Zimmermann, T.R. McVicar, N. Vergopolan, A. Berg, E.F. Wood: Present and future Köppen-Geiger climate classification maps at 1-km resolution, Scientific Data 5:180214, doi:10.1038/sdata.2018.214 (2018).



## Algae blooms force closure of Campus Lake



Left: Urban Heat Island Effects in the Western Crab Orchard Creek Watershed

Data Source: The Trust for Public Land, Descartes Lab, USGS

Bottom: Recent closure of Campus Lake in the Western Crab Orchard Creek Watershed

Photo source: The Southern Illinoian July 13, 2021