



ENHANCE ★ PROTECT ★ CONSERVE

Impacts to Mississippi's Marine Resources

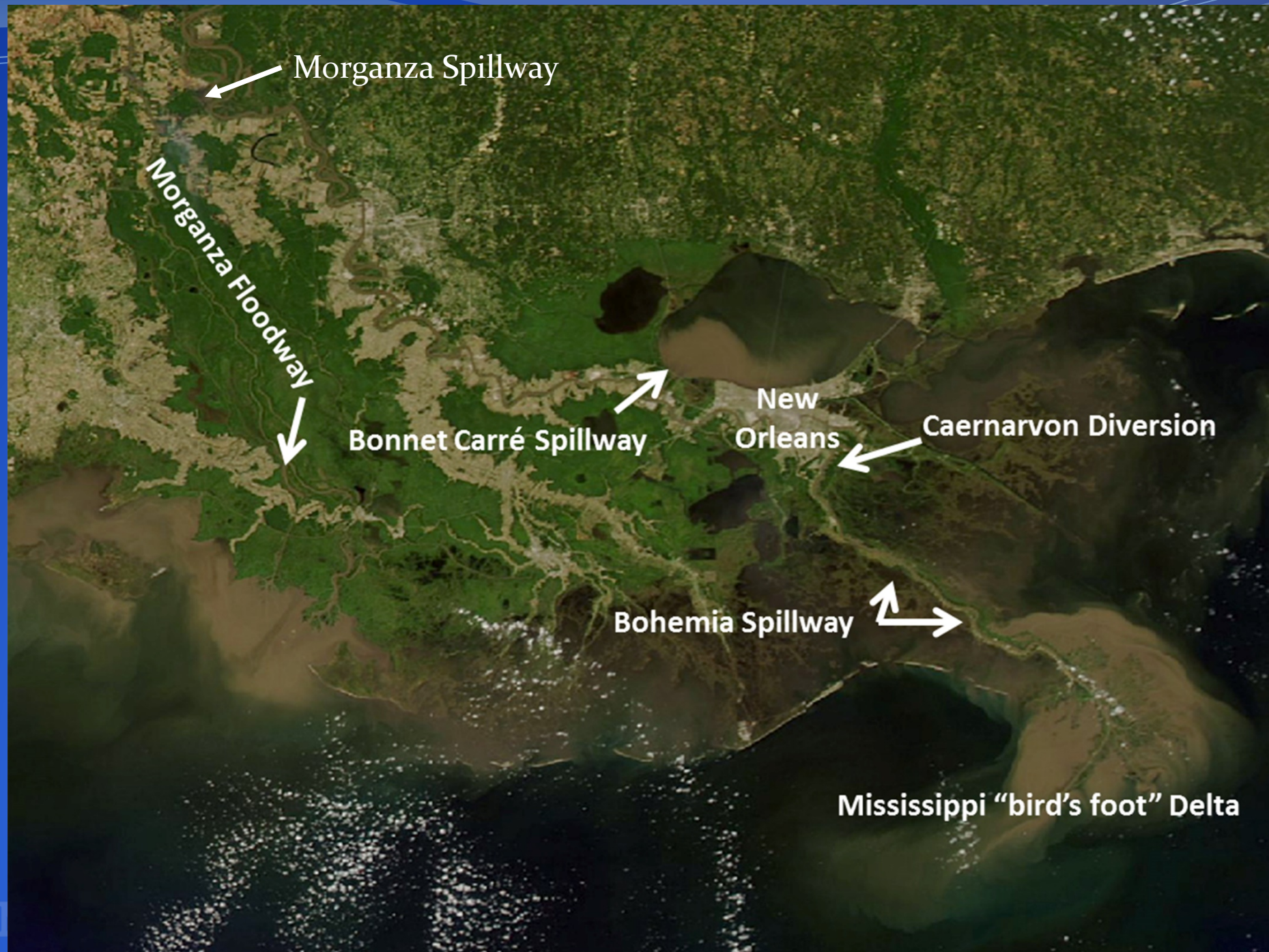
Joe Jewell

October 16, 2019

Historical Context

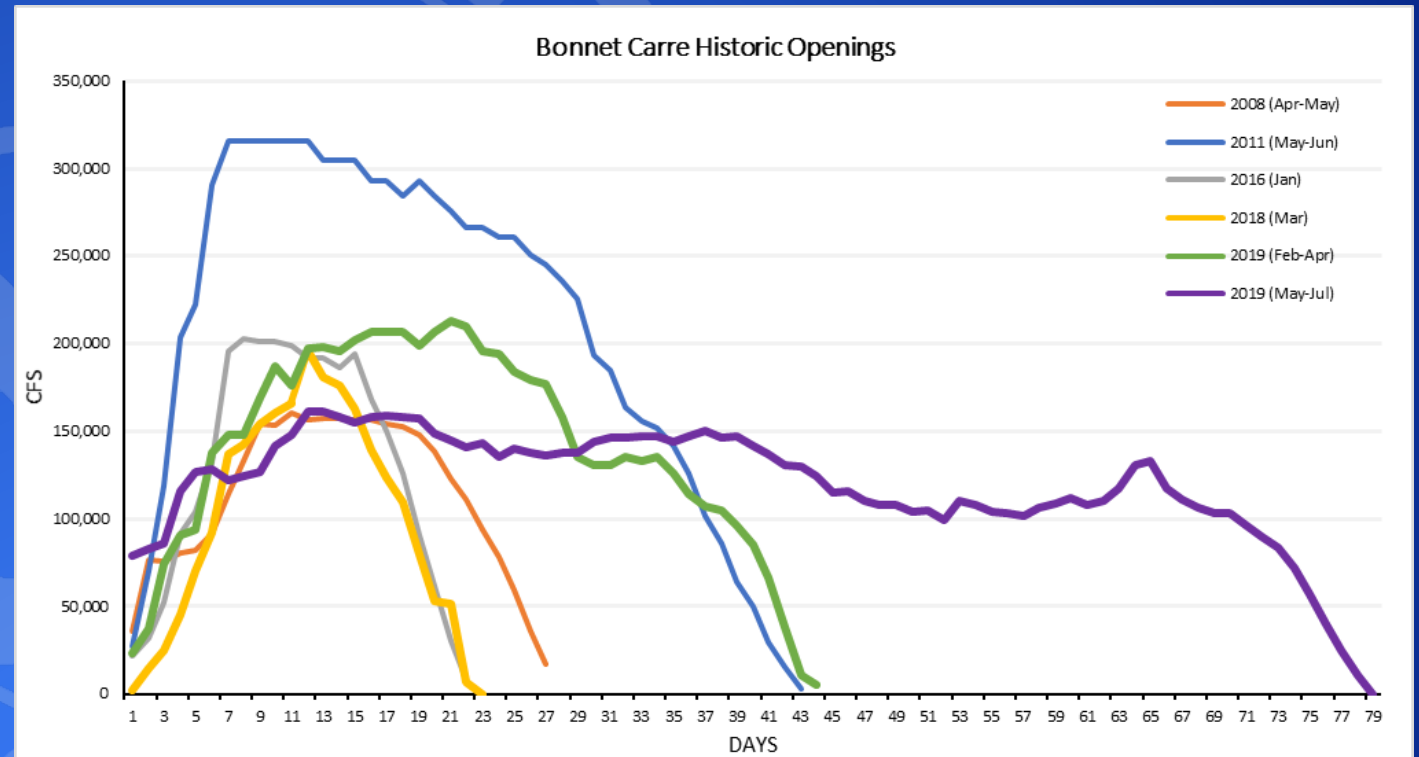
- Became operational in 1931
- Been opened every decade except in 1960's
- First time in history the structure has been opened two consecutive years (2018-19).
- First time in history the structure has been opened twice in one year (2019 February & May).
- 2008-present, open average of every 2.4 years
- Opened 3 of last 4 years
- 2011 Fisheries Disaster declared
- 2016 & 2018 no significant impacts to fisheries
- 2019 Catastrophic Regional Fisheries Disaster Declared (LA, MS, and AL)

Louisiana Mississippi River Control Structures



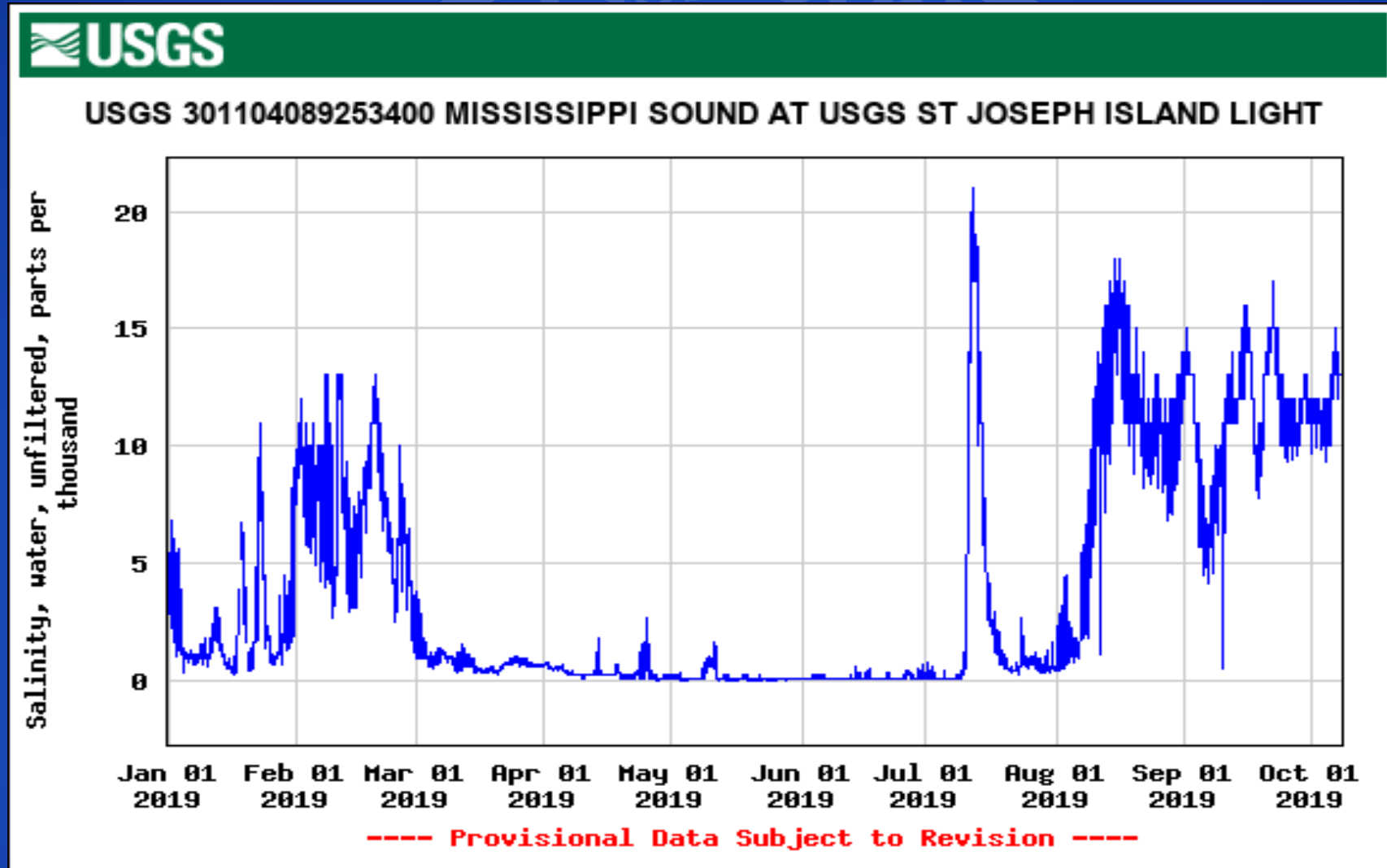
Bonnet Carré Spillway Gates and Flow Rate

- Feb 27 - Apr 11 (44 days)
 - Maximum gates open – 206
 - Maximum flow – 213,000 cfs
- May 10 - July 27 (79 days)
 - Maximum gates open – 168
 - Maximum flow – 161,000 cfs
- Opened a total of 123 days



MDMR/USGS Gauge at St. Joe, MS

Salinity



March 6, 2019



First Opening: FEB 27 – APR 11, 2019

MODIS Satellite Imagery

March 20, 2019



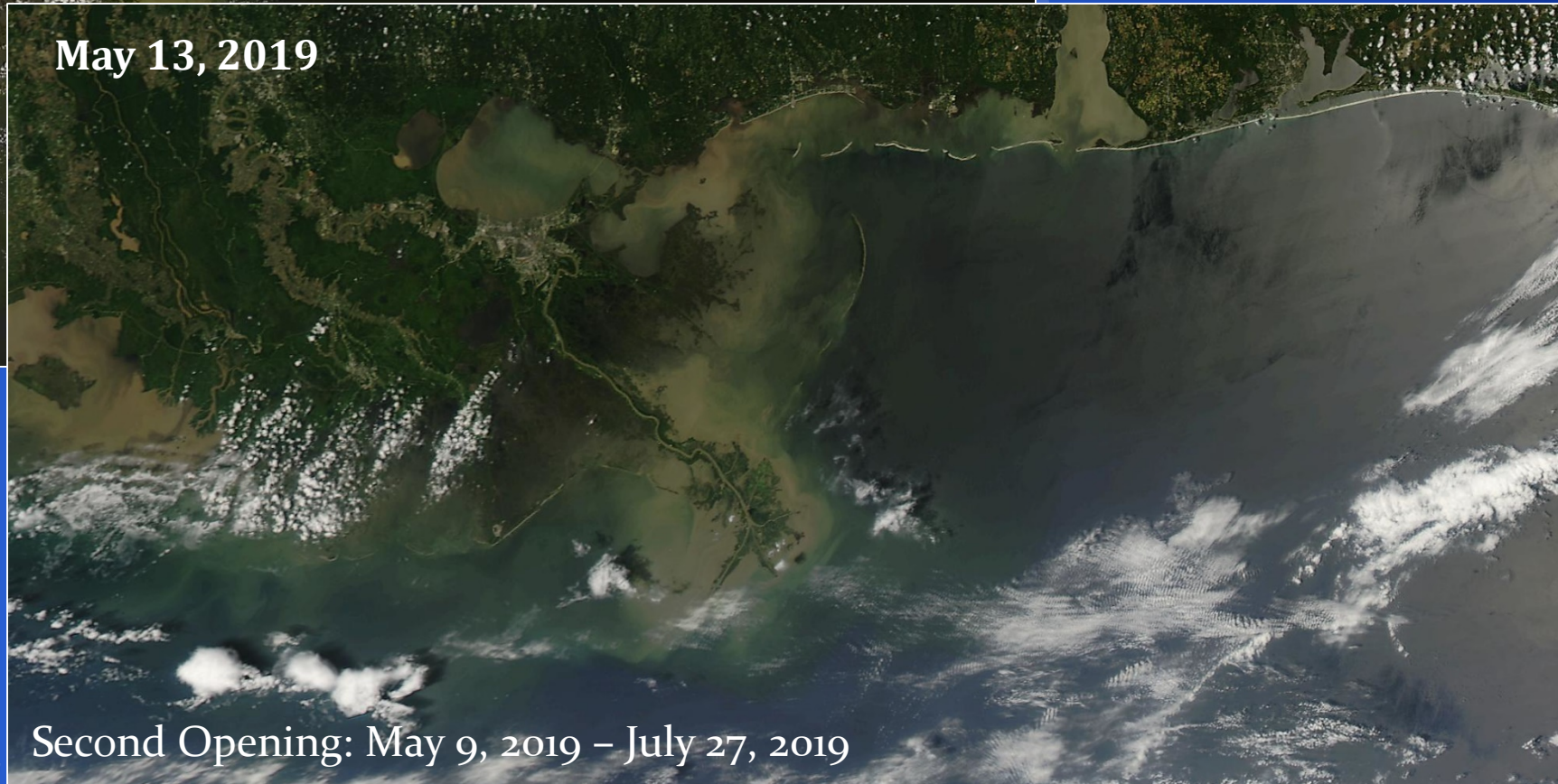
ENHANCE

May 6, 2019



MODIS Satellite Imagery

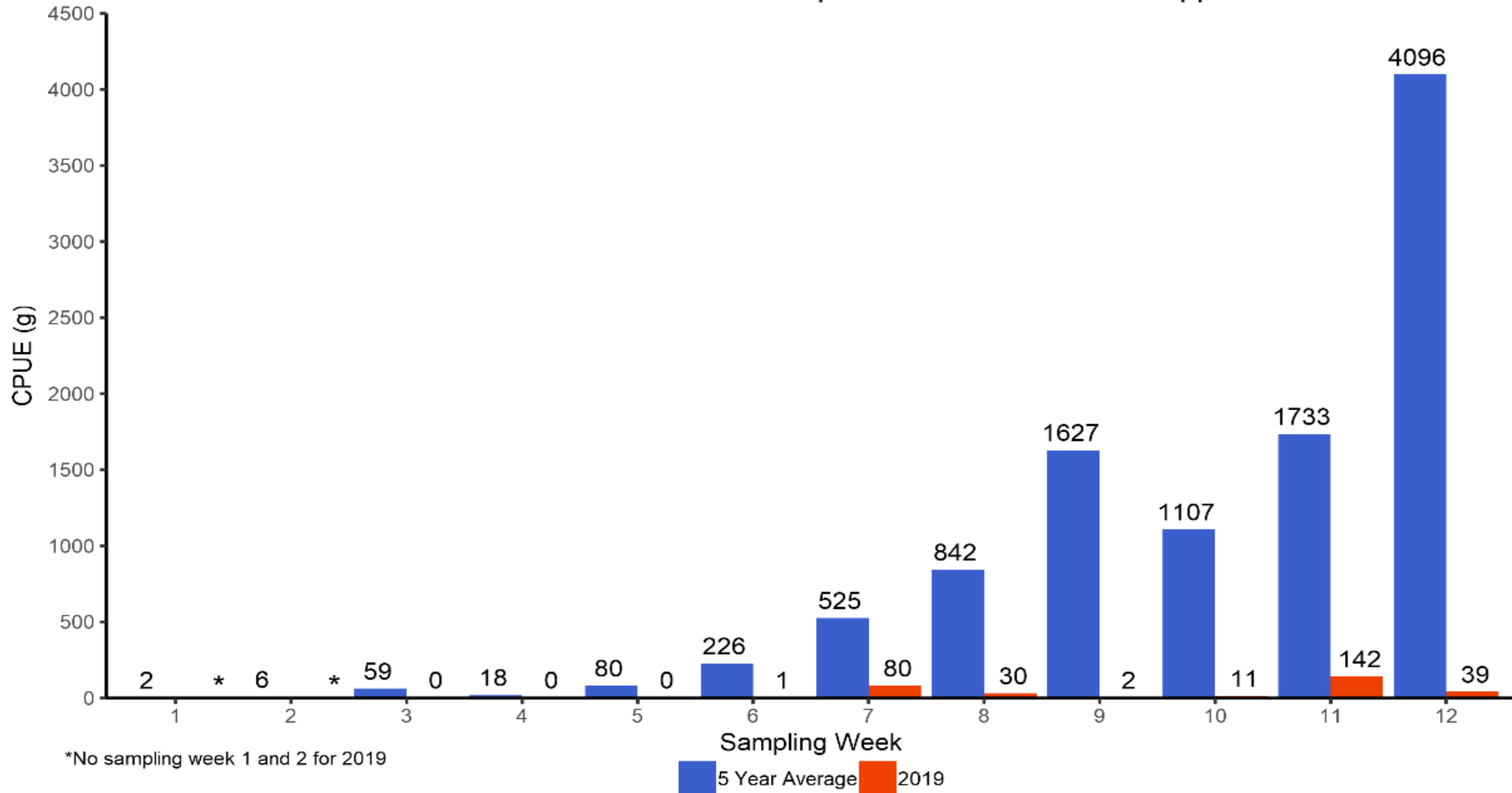
May 13, 2019



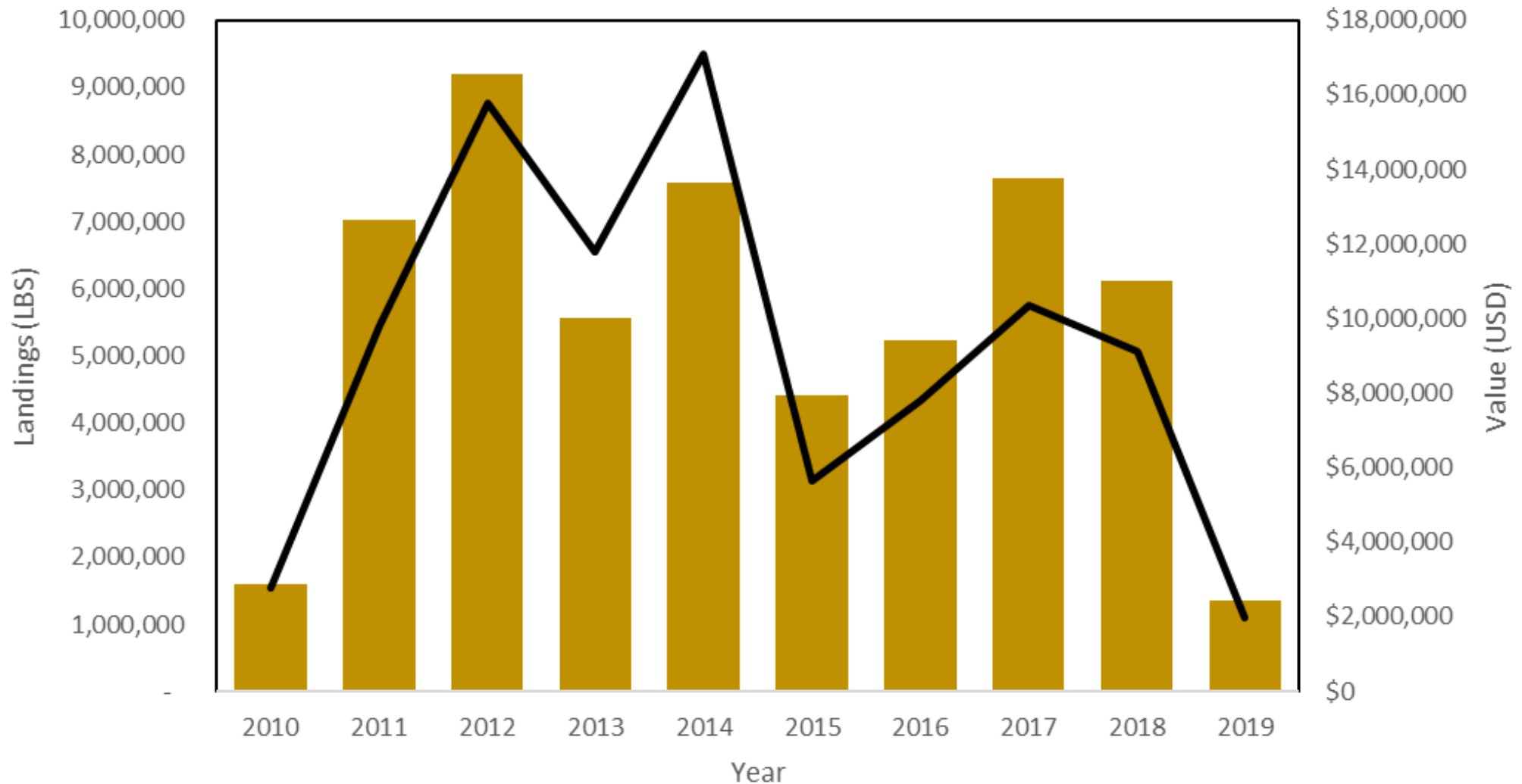
Second Opening: May 9, 2019 – July 27, 2019

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Catch-Per-Unit-Effort of Brown Shrimp for the Western Mississippi Sound

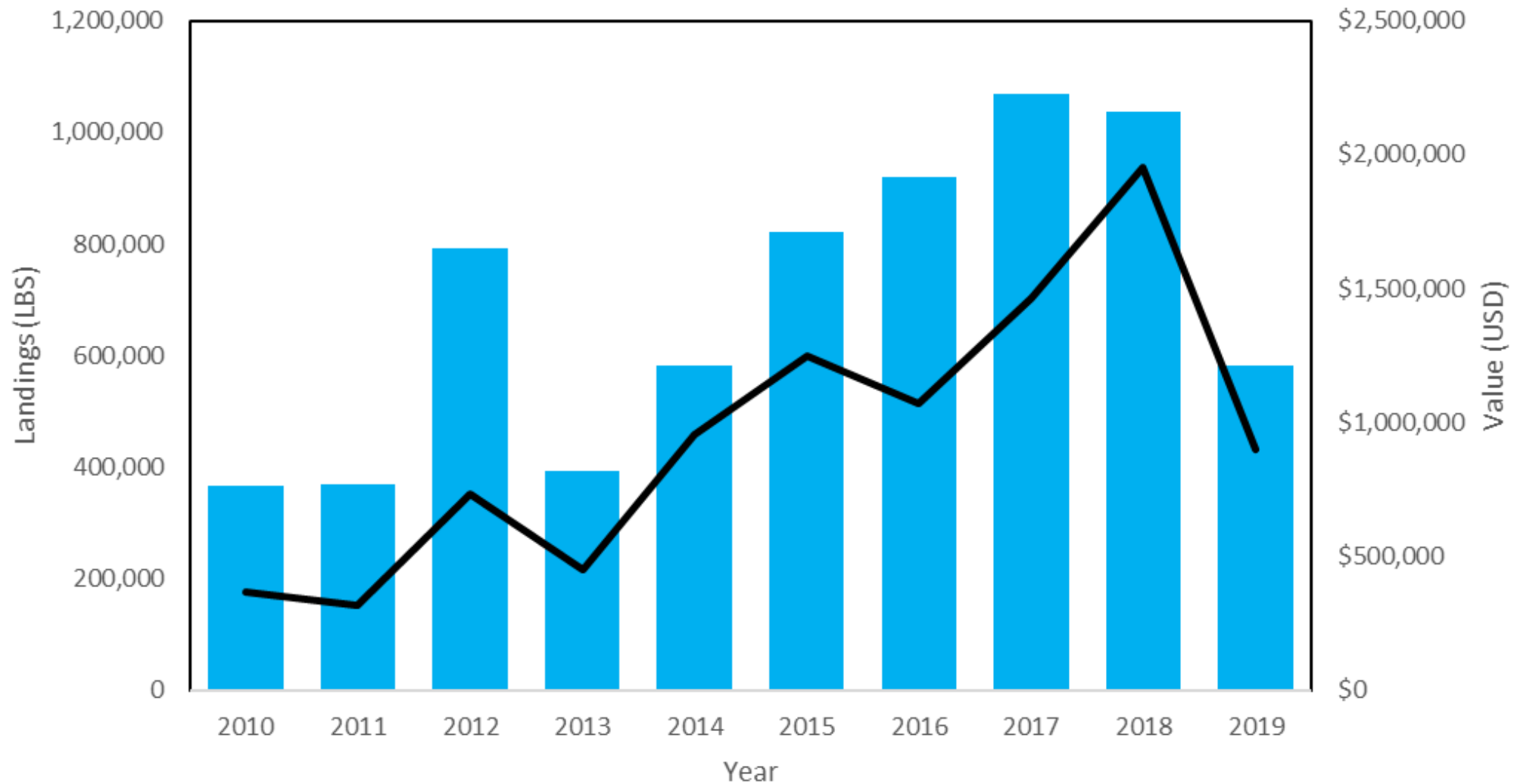


MISSISSIPPI HEAD ON BROWN SHRIMP LANDINGS



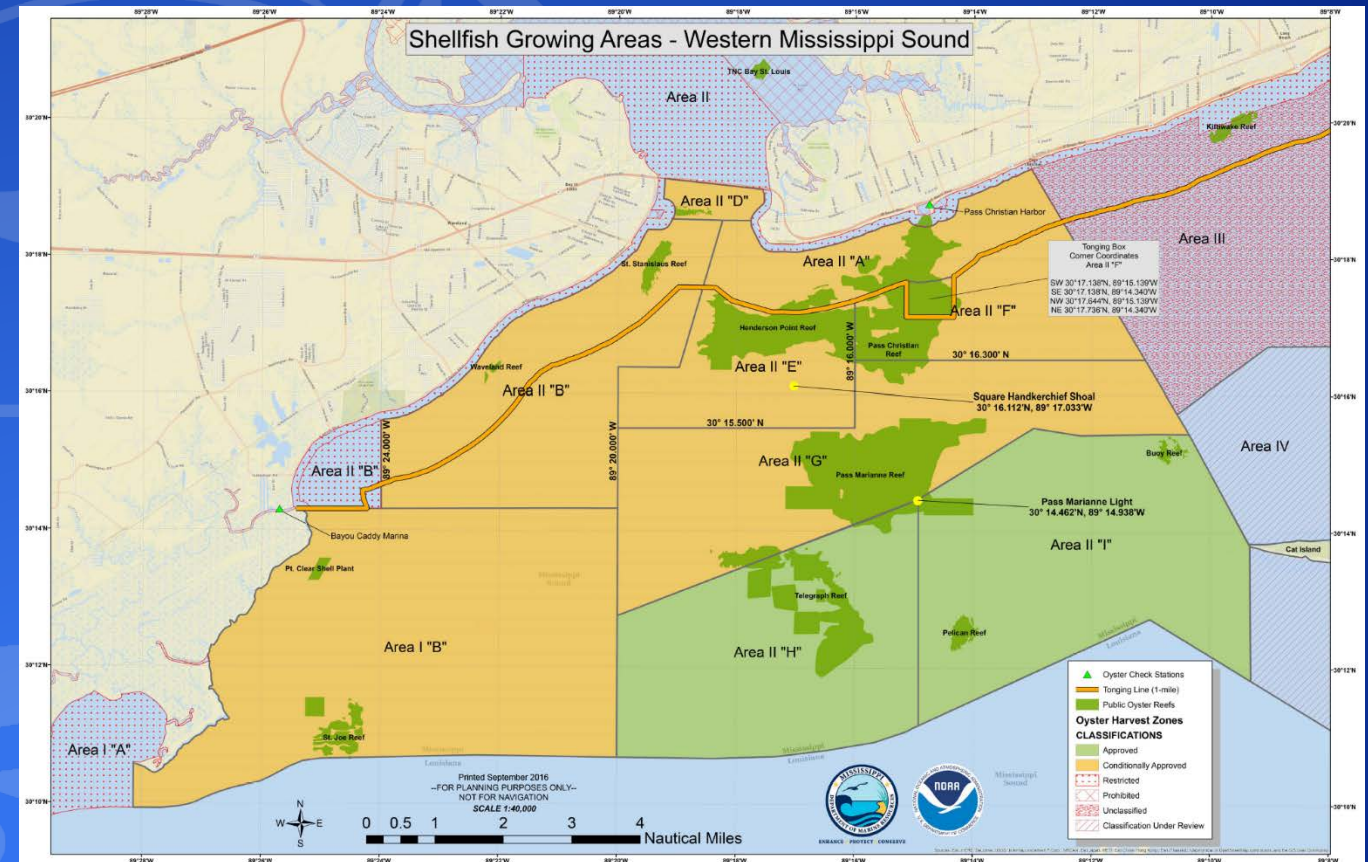
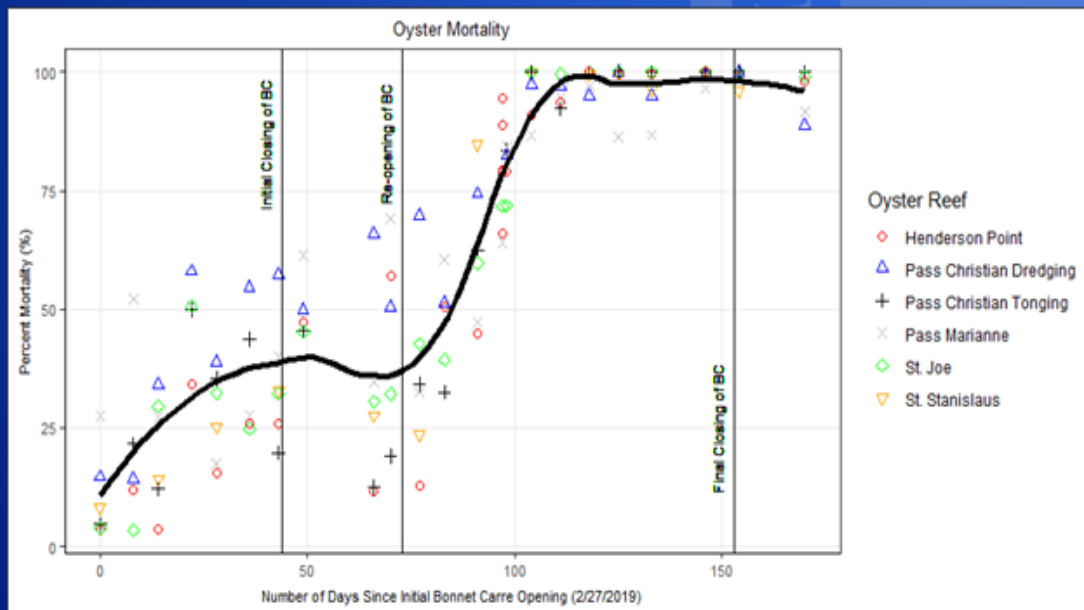
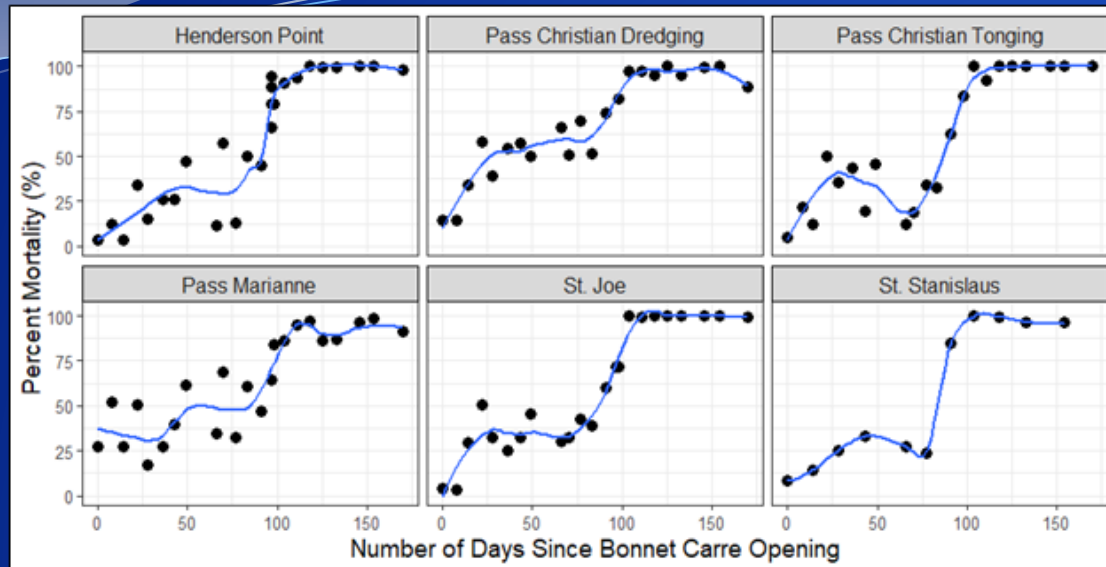
* Preliminary Data Through August 2019

MISSISSIPPI BLUE CRAB LANDINGS



* Preliminary Data Through August 2019

MDMR Shellfish Field Data



Freshwater Algal Bloom

- The MDMR Harmful Algal Bloom (HAB) Response Team has analyzed 1,300 water samples since June 12, 2019.
- *Microcystis* persisted within most samples collected.
- MDMR and MDEQ worked closely to monitor for the presence of cyanobacteria both near shore and off shore.
- MDEQ issued water contact advisories for the majority of Mississippi's beaches from June 23 to October 4, 2019.
- Water samples analyzed for microcystins (cyanotoxin) have all come back below the EPA's recommended value for recreational contact.
- Seafood samples from a variety of finfish species, shrimp and blue crab were analyzed for cyanotoxins. Results indicated that no cyanotoxins were detected above the Method Detection Limit in the meat samples from shrimp, fish and crab.



Blue Green Algal Bloom off Bayou Caddy, MS June 2019

MODIS Satellite Imagery



August 16, 2019