

2025 Mississippi SuRF Projects

GSMFC TCC Update

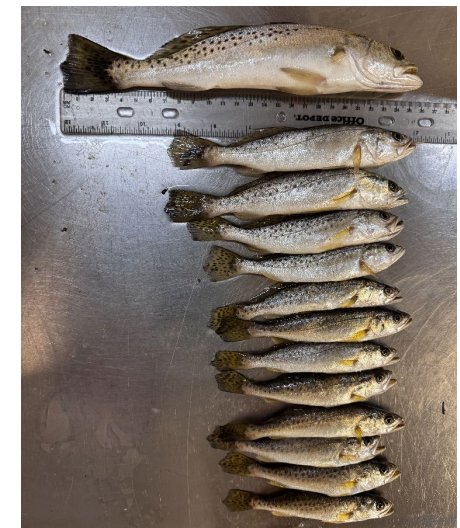
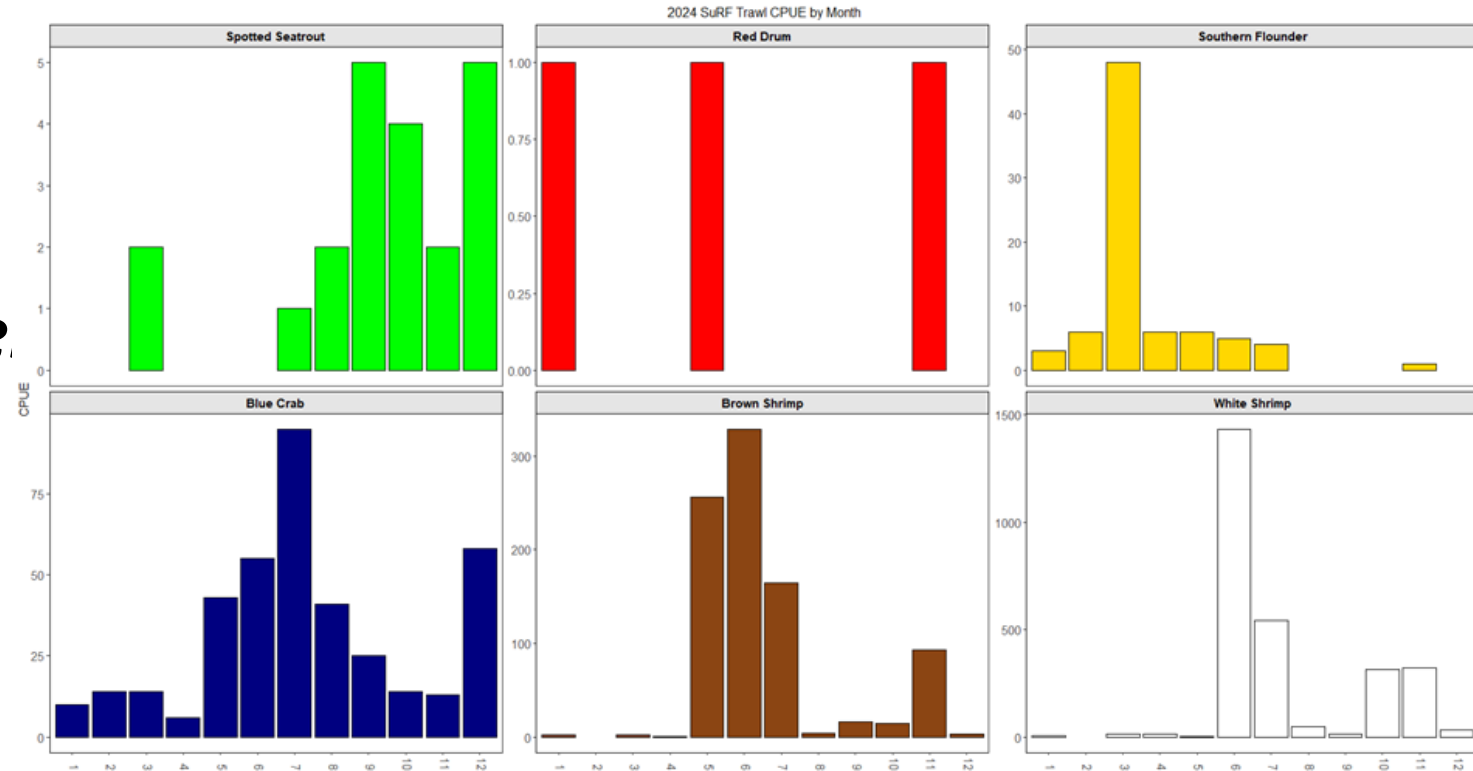
Task 1 - *Alternative Gear Studies in Mississippi Waters*

- Standardized sampling within inshore, nearshore, and offshore waters using five experimental gear types - **crab traps**, **small inshore trawls**, **50-foot bag seines**, **gill nets** and **fyke nets**.
- Provides an opportunity to test the utility of these gear types as well as establish sampling protocols that can be adopted for long-term monitoring.
 - **28** seines sets, **119** small inshore trawls, **89** gill net sets, **8** fyke net sets, and **126** crab trap pulls were completed in 2025.



Task 1 - *Alternative Gear Studies in Mississippi Water*

- The primary objective of this project was to develop standardized sampling methods to generate juvenile indices of abundance for numerous recreationally commercially important finfish and invertebrate species.
- Analyses have provided direct comparison of the gears to inform their efficacy and spatial/temporal resolution across six different species.
- Thus far, the project shows promise to meet the primary objective, and analyses have shown enough matching signals to potentially focus on a single gear rather than multiple.
- This project also provided a positive signal to managers during the January 2025 freeze event as numerous YOY Spotted Seatrout were observed post-events indicating potential limited impact on recruitment.



Task 2 - *MDMR Eastern Oyster Recruitment and Settlement Patterns on Oyster Reefs in the Mississippi Sound*

- Aims to identify peak seasons and locations of oyster spat settlement in the Mississippi Sound to improve effectiveness of oyster restoration in Mississippi.
- Multi-stage sampling routine to determine the abundance and spatio-temporal variation of spat settlement and oyster larvae on natural molluscan shellfish reefs.
 - Settlement plates are used to document spatial-temporal variation in spat settlement throughout the entire year.
 - Plankton tows are also conducted during active spawning season over reef complexes to determine the abundance of oyster larvae in the area.



Task 2 - *MDMR Eastern Oyster Recruitment and Settlement Patterns on Oyster Reefs in the Mississippi Sound*

- **140** settlement plates from ten sampling sites were collected in 2025.
- **100** larval tows were conducted in 2025.
- **671** settlement plates have been collected since the project began in 2021.
- Analyzing settlement plate and larval tow data results pinpoints optimal cultch planting sites and refines deployment timelines to align with peak larval settlement periods.
- Ensures cultch material is placed in conditions that minimize sedimentation and maximize larval attachment success.
- Contributed to the successful restoration of Mississippi's Oyster Fishery following the 2019 BC Spillway Disaster

