



NOAA
FISHERIES
SEFSC

Gulf Shrimp Effort Estimation

Presentation to: Gulf Council

Alan Lowther, SEFSC, Fisheries Statistics Division
Kyle Dettloff, SEFSC, Fisheries Statistics Division

October 28, 2026

Methodology

$$\text{total effort} = \sum \text{ELB effort}_{\text{area/time}} \times (\text{total landings}_{\text{area/time}} / \text{ELB landings}_{\text{area/time}})$$

Dettloff, K. 2024. Estimation of Commercial Shrimp Effort in the Gulf of Mexico. SEDAR87DW-01. SEDAR, North Charleston, SC. 31 pp.

<https://sedarweb.org/documents/sedar-87-dw-01-estimation-of-commercial-shrimp-effort-in-the-gulf-of-mexico/>

Observer CPUE adjustment and historical effort:

Atkinson, Sarina, Kyle Dettloff, Cheston Peterson, Steve Smith. 2025. Estimation of Commercial Shrimp Effort in the Gulf of Mexico from 1984-2023. SEDAR98-DW-23. SEDAR, North Charleston, SC. 22 pp.

<https://sedarweb.org/documents/sedar-98-dw-23-estimation-of-commercial-shrimp-effort-in-the-gulf-of-mexico-from-1984-2023/>

Assumptions

1. ELB devices are capturing all fishing activity
2. There is no systematic bias in classification of effort from ELB devices
3. CPUE of vessels with ELBs on board is representative of the total fleet
4. Spatial distribution of ELB vessels is representative of the total fleet within strata
5. Reporting of landings is similar between ELB and non-ELB vessels

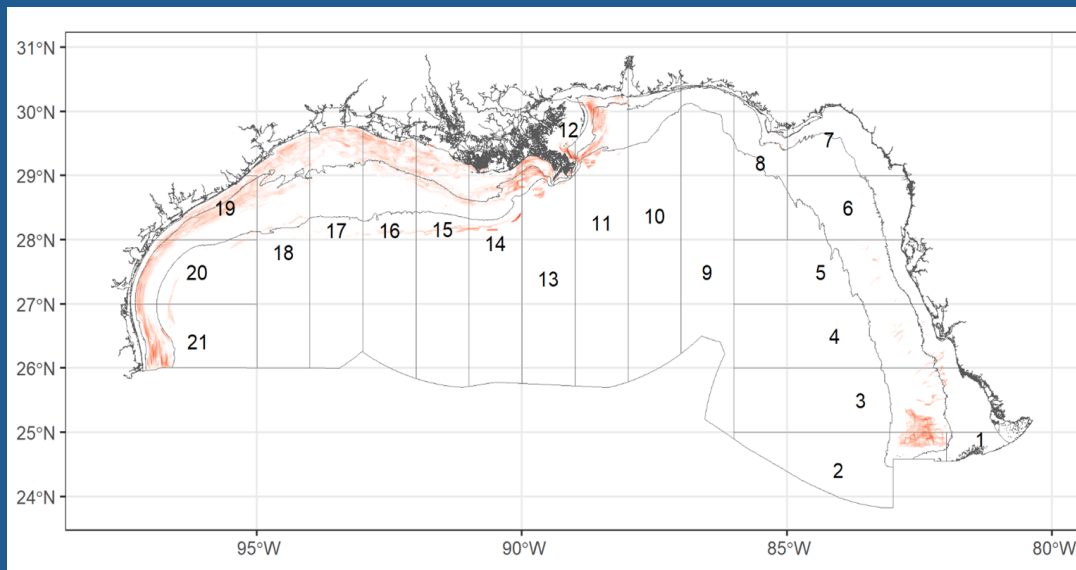


2023 SEFSC Offshore Effort Estimates

Region	Depth	Landings ¹ (tail lbs.)	Effort (24 hr. days)	Cap ²	Pct. of Cap
Western Gulf (Zones 10-21)	10-30 fm	23,006,159 (est.)	12,963	33,124	39.1%
Total Gulf	All	61,503,727	33,757	—	—

¹Reported area of catch

²60% reduction in 2001-2003 baseline of 82,811 days



ELB effort distribution

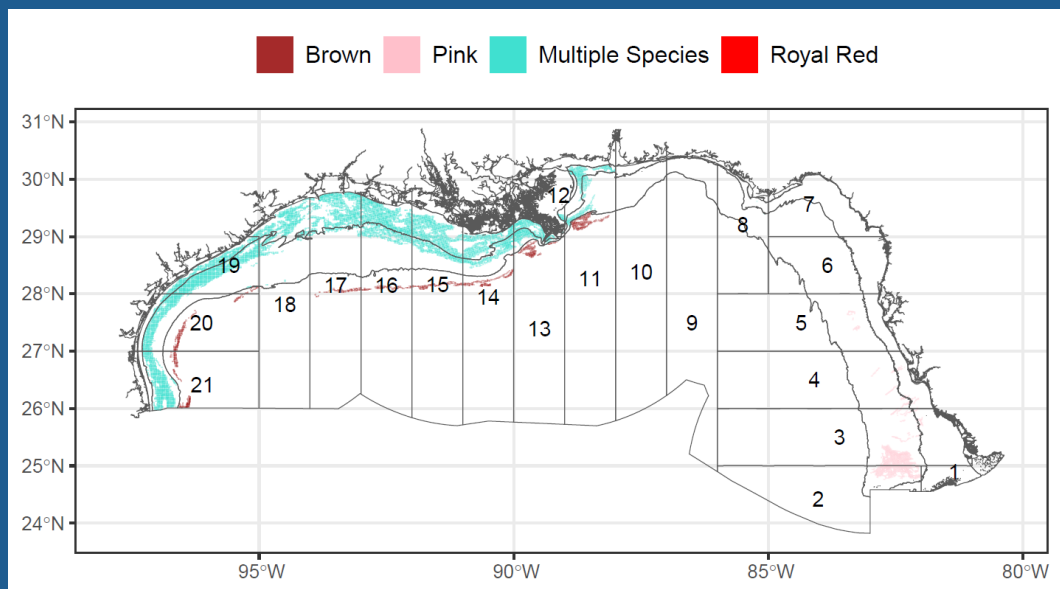


2024 SEFSC Offshore Effort Estimates

Region	Depth	Landings ¹ (tail lbs.)	Effort (24 hr. days)	Cap ²	Pct. of Cap
Western Gulf (Zones 10-21)	10-30 fm	14,412,153 (est.)	10,523	33,124	31.8%
Total Gulf	All	49,154,177	35,095	—	—

¹Reported area of catch

²60% reduction in 2001-2003 baseline of 82,811 days



ELB effort distribution



2024 Stratified Offshore Estimates

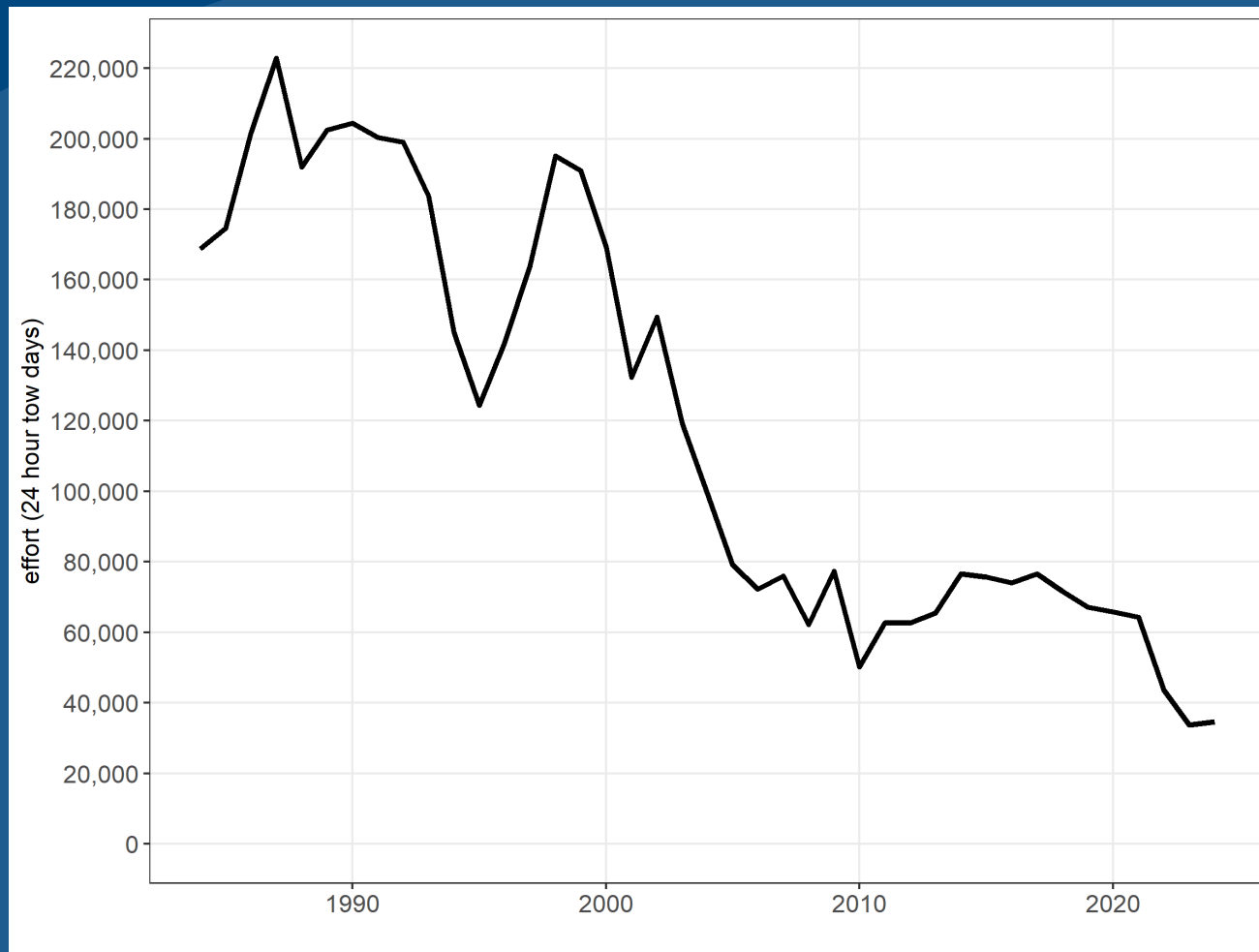
region	depth zone	species	tow days	lower	upper	landings	CPUE
East	0-10 ftm	BROWN	24	0	49	24,629	1,039
East	10-30 ftm	BROWN	7	0	14	4,703	645
East	0-10 ftm	PINK	610	419	800	534,581	877
East	10-30 ftm	PINK	4,990	4,068	5,911	5,952,184	1,193
East	30-100 ftm	PINK	5	0	14	5,601	1,093
East	0-10 ftm	WHITE	17	0	33	14,873	893
East	100+ ftm	ROYAL RED	NA	NA	NA	NA	NA
West	0-10 ftm	BROWN	5,149	4,537	5,761	7,954,974	1,545
West	10-30 ftm	BROWN	8,835	7,843	9,828	12,038,529	1,363
West	30-100 ftm	BROWN	4,302	3,381	5,223	6,532,886	1,519
West	0-10 ftm	PINK	607	481	732	956,418	1,577
West	10-30 ftm	PINK	498	410	586	678,158	1,362
West	0-10 ftm	WHITE	8,775	7,766	9,784	12,662,594	1,443
West	10-30 ftm	WHITE	1,190	939	1,441	1,695,466	1,424
West	100+ ftm	ROYAL RED	37	0	87	41,796	1,142

East: Zones 1-9; West: Zones 10-21

- Landings obtained from state trip tickets and allocated to depth zones using ELB data
- Relative species proportions derived from SEAMAP data to subdivide effort totals within strata
- Species-specific estimates not used in management



Gulf Total Offshore Effort, 1984-2024



Calibrated port agent totals 1984-2006, ELB (current methodology) 2007-2024



Species Specific Offshore Effort, 1984-2024



Breakdown of total effort in previous figure



Acknowledgements

- Gulf Council, SSC and Shrimp AP
- Gulf commercial shrimp fishermen and ELB device holders
- SEFSC shrimp bycatch and effort working group

