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**FISHERIES**

# 2017 Gulf of Mexico Shrimp Effort Estimates

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March 2019

# How Cellular Electronic Logbooks (cELBs) Work

*The goal of the current cELB program is to develop a better system to collect effort data in the Gulf of Mexico shrimp fishery.*

Distance and speed between data points are calculated to determine the amount of time fished by location (effort). Fishing effort data are then matched to the number of pounds of shrimp catch unloaded at the dock (landings) based on date.



NOAA Fisheries Service  
Galveston, TX

Data are received,  
stored, and  
transmitted to  
Galveston.



National Coastal Data  
Development Center (NCDDC)  
at Stennis Space Center, MS

When the vessel is within  
**NON-ROAMING** cellular  
range, data stored on the  
cELB are uploaded.



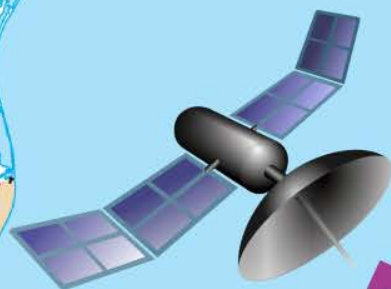
Cellular Tower

Shrimp Boat  
with cELB



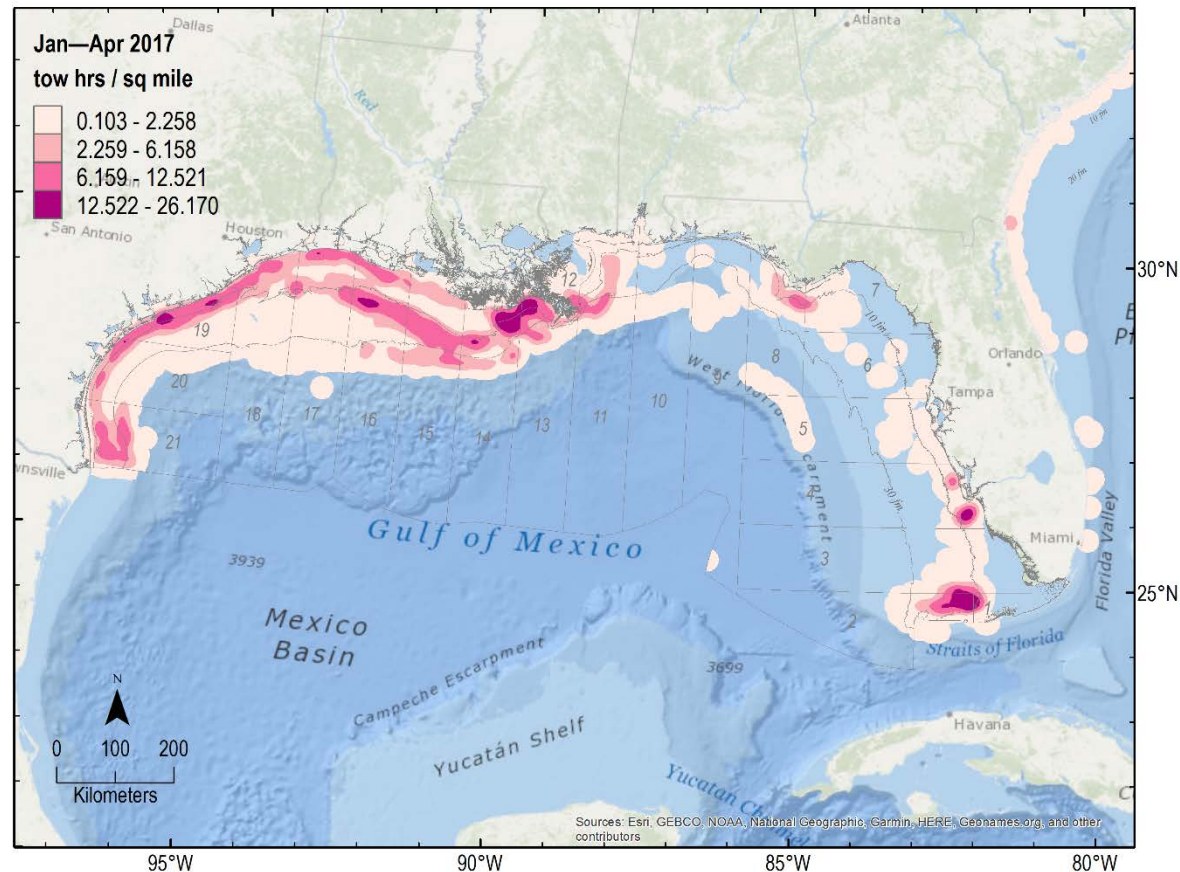
In early 2014, 500  
federally-permitted  
vessels were chosen  
to carry a cELB.

GPS Satellite



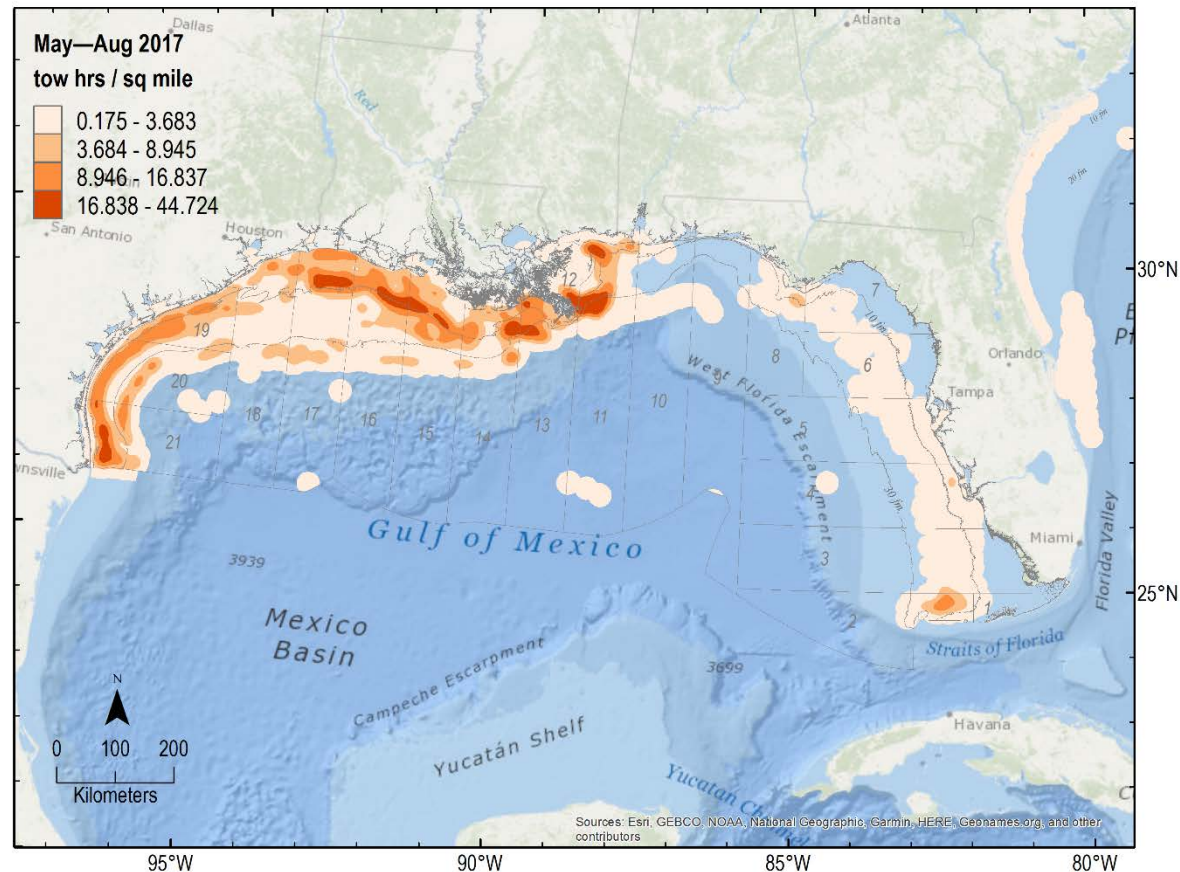
The cELB  
records the  
vessel's  
location every  
10 minutes  
using GPS  
technology.

# Distribution of cELB Effort: Jan–Apr 2017

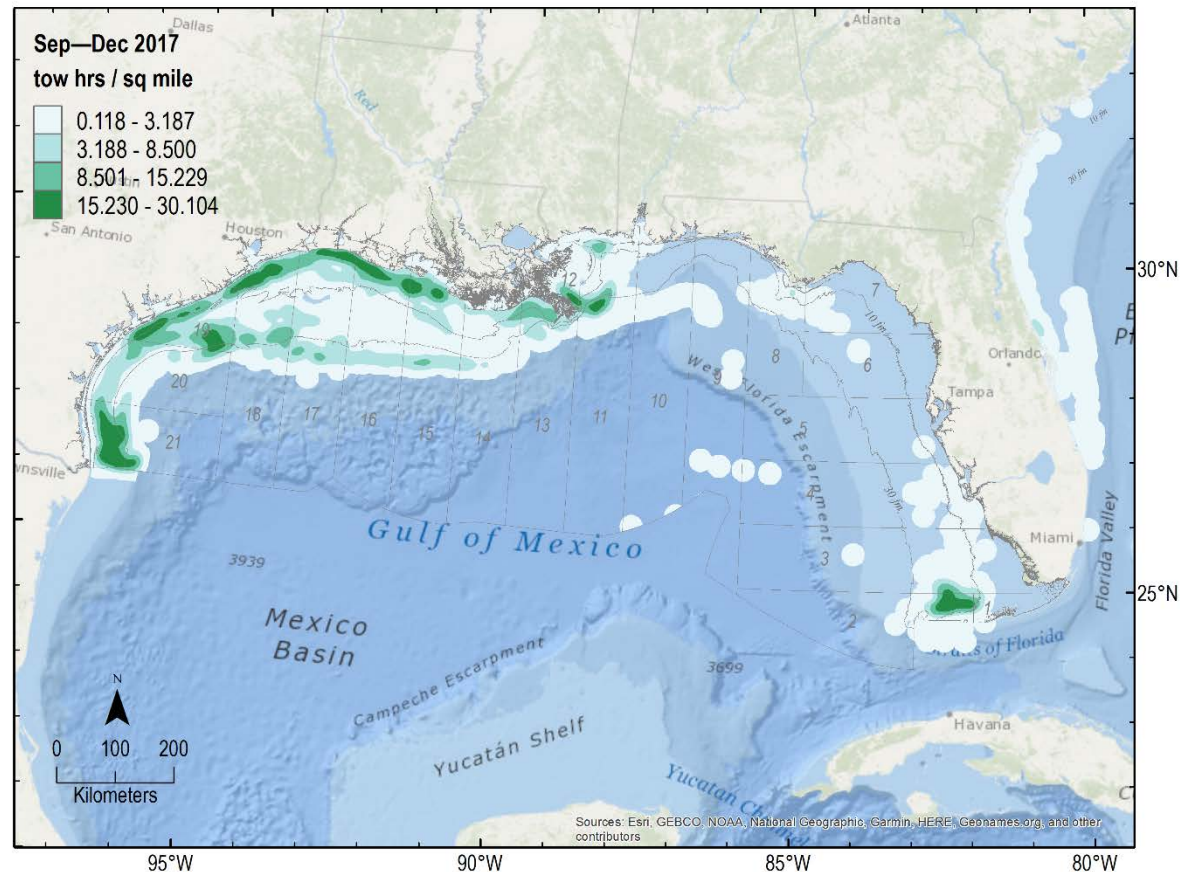




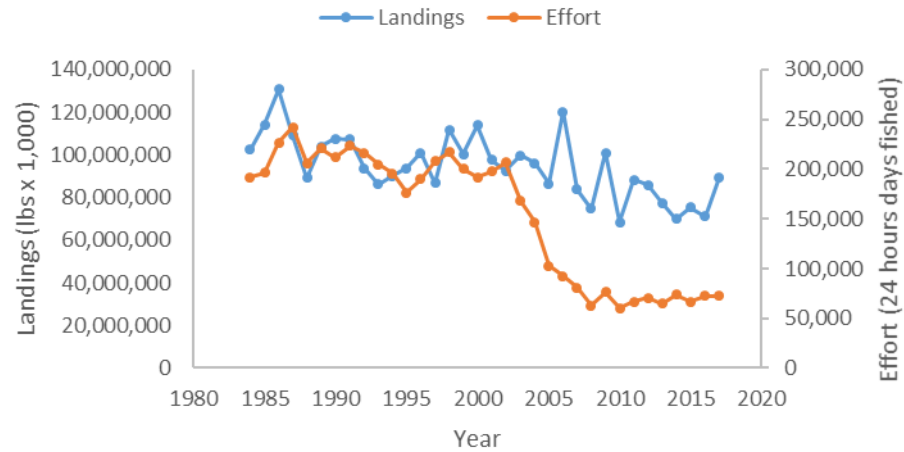
# Distribution of cELB Effort: May–Aug 2017



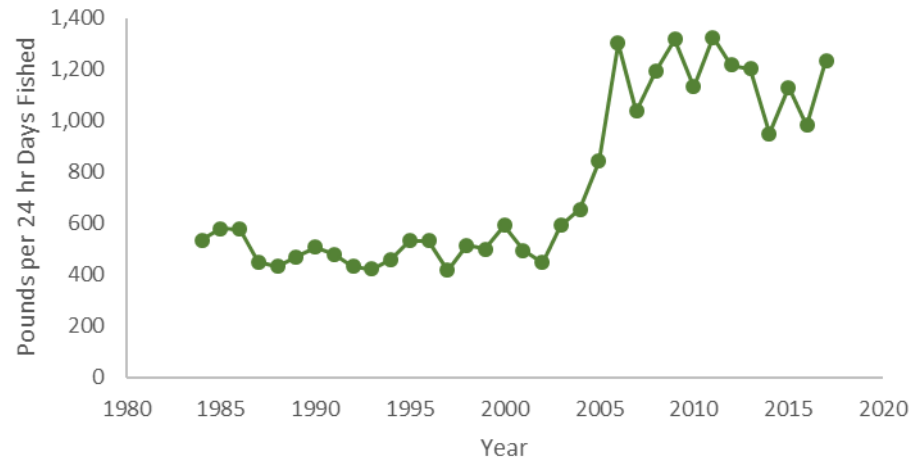
# Distribution of cELB Effort: Sept–Dec 2017



### Total Offshore Landings and Effort

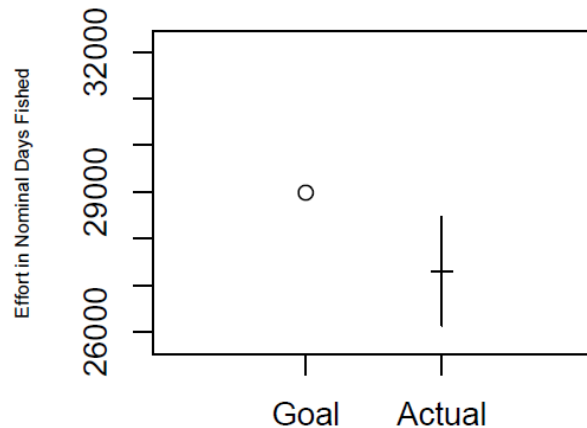


### CPUE

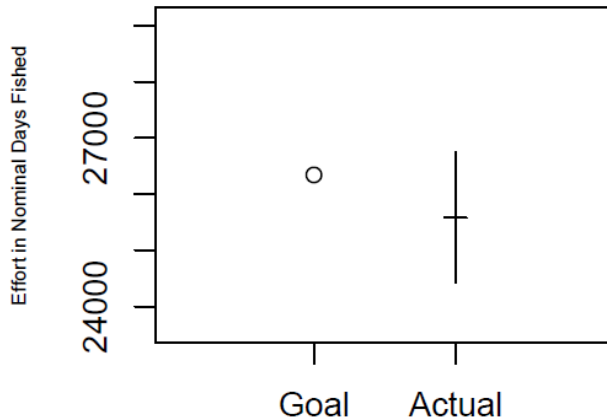


# 2017 Effort Estimates

SZ 10-21 10-30 fm - trimester 3



SZ 13-21 10-30 fm - trimester 3



Prepared: Sat Oct 6 13:33:02 2018 based on 2017 landings file dated 2018-10-06

Table 1: 2017 Effort Estimates – Trimesters 1-3

description	Landings	Effort	low	high
Total Offshore	89590005	72539	70685	74394
SZ10-21 10-30f	34661816	27302	26134	28471
SZ10-21 Offshore	78898742	64949	63229	66670
SZ13-21 10-30f	31393702	25582	24423	26742
SZ13-21 Offshore	70342329	60070	58371	61768

Table 2: Cumulative Mean Baseline Effort 2001-2003

desc	tri.1	tri.2	tri.3
s1021d1030	10043	54800	82811
s1321d1030	9319	50341	75262

Table 3: Percent Reduction of Effort from Baseline 2001-2003

desc	pctRed
SZ10-21 10-30f	0.6703
SZ13-21 10-30f	0.6601

# 2017 Effort Estimates

Area	Depth	Landings (pounds- heads off)	Effort (nominal days fished)	Baseline	Percent Decrease from Baseline
Offshore		89,590,005	72,539	-	-
Stat Zone 10-21	10-30 fathom	34,661,816	27,302	82,811	67.03%
Total Effort (in-offshore)			103,817		



# NMFS cELB Shrimp Effort Estimates

- Effort data collected with the NMFS cellular Electronic Logbooks (cELB)
- Effort in the 10-21 stat zone and 10-30 fathom zone for 2017 is at 67.03% of the baseline

# Summary

- 2017 Effort in the Red Snapper zone is below the baseline (67.03%)
- Offshore effort equaled 72,539 days fished
- Offshore landings equaled 89.6 mill lbs.
- Offshore CPUE high at 1235 lbs per days fished

# Acknowledgements

We thank the following groups/individuals for their significant contributions in making these effort estimates:

- Gulf of Mexico Shrimp Fishing Industry
- Gulf of Mexico Fishery Management Council and Shrimp SSC and AP
- Gulf of Mexico Commercial Shrimp Fishermen