

Shrimp cVMS Early Adopter Program

Progress to Date

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March 12, 2024

Pathway for the Early Adopter Program

- NOAA's cellular Electronic Logbook (cELB) program to collect shrimp effort data became obsolete when 3G network by Verizon was discontinued.
 - Manual retrieval of data is now necessary
- Several attempts to test replacement systems since 2019 involving LGL, NOAA, and the shrimp industry
- A path forward: cellular Vessel Monitoring Systems (cVMS)
- In September of 2023 LGL was contracted through the Gulf States to coordinate the "Early Adopter Program" to modernize shrimp effort data collection by soliciting volunteers to trial cVMS units
 - Free units, installation, 2 years of cell service, and access to online portal

Early Adopter Program - Outreach

- **October 2023** - LGL contributed to the production of communication materials by NOAA Fisheries
- **December 2023** – NOAA publishes online news releases about the Early Adopter Program
- **December 2023** – LGL presented information on the Early Adopter Program to the Southern Shrimp Alliance during their annual board meeting in Tampa, Florida
- **January 2024** - LGL presented information on the Early Adopter Program to Port Arthur Area Shrimp Association during their annual meeting in Port Arthur, Texas
- **February 2024** – LGL engaged in informal dockside discussions in Bayou La Batre, Alabama
- **March 2024** – LGL presented information on the Early Adopter Program to the Louisiana Shrimp Task Force during their quarterly meeting in Baton Rouge, Louisiana
- **March 2024** – LGL engaged in informal dockside discussions from Ft. Myers, FL through Biloxi, MS (and will continue through Port Arthur, TX)



**NOAA
FISHERIES**

Southeast Fisheries
Science Center

NOAA Fisheries and the Gulf States Marine Fisheries Commission are encouraging the early adoption of a new system to modernize shrimp effort data collection.

The new system will increase the quality and efficiency of data collected to describe the Gulf of Mexico shrimp fleet, and reduce burden on the shrimping industry.

The program is seeking volunteers to adopt these new devices at no cost through September 2024.

Shrimp cVMS Fact Sheet 2023

NOAA Fisheries Seeks Help to Modernize Shrimp Data Collection

New Shrimp Effort Monitoring Program Seeks Early Adopters

OVERVIEW AND BENEFITS

The new system involves installation of cellular Vessel Monitoring System units on board federally-permitted shrimp vessels in the Gulf of Mexico shrimp fleet. These devices will transmit data directly to the Southeast Fisheries Science Center via cellular networks. This will allow scientists to measure shrimping effort more accurately and efficiently. The new system also provides direct benefits to the shrimping industry. Depending on the device installed, shrimp vessel owners can choose to access applications that allow them to track their boats in near real-time, if within cellular range, and save them for comparison.

How to Sign Up

The new devices are now available at no cost for a limited number of participants. The program will cover the cost for a limited number of new units, installation and maintenance, and 2 years of cellular service for the new device. We are seeking volunteers through September 2024. Early adopters must possess a federally permitted shrimp vessel. Interested parties should contact LGL Ecological Research Associates:

Nathan Putnam
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Cell: (205) 218-5276
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DATA COLLECTED

The new devices track time-stamped vessel position to determine how much time is spent towing nets versus steaming to fishing grounds. This is converted to an estimate of effort, in tow days. These data are used directly in stock assessments to estimate red snapper bycatch and are essential to meet sea turtle conservation requirements. Position information also helps scientists identify important shrimping grounds. This helps determine where certain activities may take place such as deploying artificial reefs, or developing aquaculture and offshore wind infrastructure.



Gina M. Raimondo
U.S. Secretary of Commerce

Richard W. Spinrad
Under Secretary of Commerce
for Oceans and Atmosphere

Janet Coit
Assistant Administrator for Fisheries

October 2023

www.fisheries.noaa.gov

OFFICIAL BUSINESS

National Marine
Fisheries Service
Southeast Fisheries Science Center
75 Virginia Beach Dr.
Miami, FL 33149

Frequently Asked Questions

WHY IS THIS CHANGE OCCURRING?

Shrimp effort data was historically logged through a cellular electronic logbook system. These devices transmitted time-stamped vessel position data through a 3G cellular network to our scientists. Since 3G cellular technology was shut down in December 2020, shrimpers have been physically sending in memory cards for data retrieval.

HOW DID THIS COME ABOUT?

With funding from Congress, NOAA Fisheries worked with the Gulf States Marine Fisheries Commission and LGL Ecological Research Associates to test the new system. They outfitted commercial shrimp vessels with new devices alongside the existing ones and found their effectiveness comparable.

WHAT ARE THE DIFFERENCES BETWEEN THE NEW AND EXISTING SYSTEMS?

The new and existing devices collect the same data. The new system will automatically transmit the data to NOAA Fisheries through current cellular networks. This is an improvement upon the current process, which requires vessel owners to manually remove memory cards from their device and mail them to NOAA Fisheries for data retrieval. Volunteers for the early adopter program will have a choice among multiple devices, some of which allow vessel owners to see and save vessel positions using vendor applications.



Contact Us

Sign up: **Nathan Putnam**
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DO SHRIMPING VESSELS NEED TO HAVE BOTH DEVICES INSTALLED ON BOARD?

It is not necessary to have an electronic logbook to volunteer for a new device. Early adopters must possess a federally permitted shrimp vessel. Shrimping vessels with an existing electronic logbook will need to maintain the old system for compliance purposes. Participating in this early adopter program is encouraged as this will allow us to compare the new and old systems.

WHAT WILL THE NEW SYSTEM COST FOR NON-EARLY ADOPTERS?

Standard expenses for systems vary. The cost for the new device, including fees for installation and transmission, could cost upwards of \$3,000 plus cellular service charges. Volunteers for this early adopter program will have costs covered for the new device, installation and maintenance, and 2 years of cellular service.

FM A SHRIMP VESSEL OWNER/OPERATOR. WHY WOULD I WANT TO PARTICIPATE?

By participating, you will help NOAA Fisheries maintain the sustainability of the Gulf shrimp fishery and important shrimping grounds. If you choose, you can access and store the data from your vessel(s) for your own purposes and choose the device that best suits your needs. You will be able to do this at no cost to you.

WHEN WILL OTHER SHRIMP VESSELS (NON-EARLY ADOPTERS) BE REQUIRED TO INSTALL THESE NEW UNITS?

At this stage, no requirements are in place for use of the new devices in the Gulf of Mexico federal shrimp fishery. Shrimp vessel owners should stay up to date on any changes to federal shrimping regulations through mail notifications and Fishery Bulletins.

Early Adopter Program - cVMS Vendors

- **October 2023** – LGL reached out to several vendors to determine interest/ability to supply the Early Adopter Program with cVMS devices.
- **November 2023** – LGL made pricing and purchasing agreements with Woods Hole Group (Nemo), Viatrac (Boat Command), and Atlantic Radio Telephone (ZenVMS) to provide cVMS devices, 2 years of cellular airtime, and remote technical support for the Early Adopter Program.
- **November 2023 – January 2024** – All cVMS vendors have demonstrated the ability to automatically and directly transmit data to the Southeast Fisheries Science Center API.
- **February 2024** – All cVMS vendors mailed postcards to Gulf shrimp permit holders providing specific information about their devices and encouraging people to reach out to LGL to volunteer for the program
- **November 2023 - March 2024** – LGL has purchased 5 Nemo, 20 Boat Command, and 45 ZenVMS units.

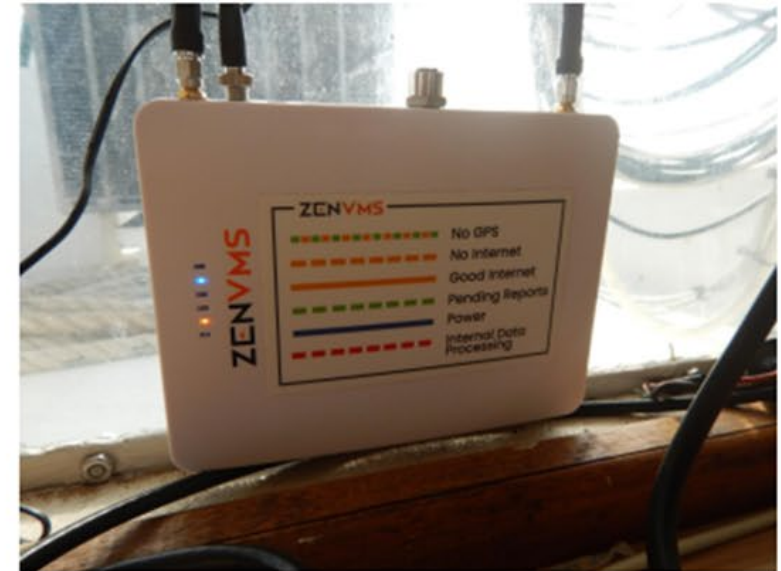
Approved devices for the Early Adopter Program



Boat Command



Nemo



ZenVMS

Early Adopter Program - Results through March 12, 2024

87 total requests, 33 installations

- FL = 23 requests, 12 installations
- AL = 9 requests, 6 installations
- MS = 14 requests, 10 installations
- LA = 9 requests, 2 installations
- TX = 32 requests, 3 installations

57 requests (65%) came through “personal interactions” – dockside or meetings

Early Adopter Program - Results through March 12, 2024


Breakdown of cVMS Units in the EAP

- Nemo – 0 requests; 0 installations
- Boat Command – 6 requests; 4 installations
 - 12 requests initially but 6 requests changed upon seeing the 3 units in person
- ZenVMS – 57 requests; 29 installations
- Undecided – 24 requests



Early Adopter Program for the Gulf of Mexico Shrimp Fishery

Vessel Monitoring Systems (VMS)

	 Zen VMS	 Boat Command VMS	 NEMO VMS
Retail Cost* (Your Price):	\$1,095 (\$0)	\$199 (\$0)	\$574 (\$0)
<u>Reliability</u> Pilot Test Success Rate**: Vessels Monitored Successfully: Positions Correctly Reported*: NOAA Type Approved?	93 % (14/15) 98.2 % YES	80 % (4/5) 97.3 % YES	60 % (3/5) 85.6 % YES
Annual Cellular Fees* (Your Price):	\$99 (\$0)	\$179 (\$0)	\$349 (\$0)
<u>Specifications</u> Voltage: Hardwired: Dimensions: Waterproofing:	9-60 DC, 110 AC NO 7.5 x 5.5 x 1.5" IP67	9-32 DC, 110 AC Optional 4.5 x 3.5 x 3.6" IP66	3.7 V, 5.2 A (battery) NO 8.75 x 5 x 4" IP67
<u>Install Location</u> VMS Terminal: LTE/GPS Antenna:	Interior Interior/Exterior	Exterior Exterior	Exterior Exterior
<u>Warranty</u>	2 Years	2 Years	2 Years
<u>Features</u> Optional Web-based Tracking Interface: Annual Interface Fee* (Your Price):	 \$99 (\$0)	 \$0 (\$0)	 \$0 (\$0)

Get yours today! Contact Nathan Putman
nputman@lgl.com, Office: 979-846-7000, Cell: 205-218-5276

* Cost per tracking unit
 ** Percent of shrimp vessel pilot tests without large (>6hr) data gaps.
 † Percent of GPS positions correctly reported during pilot tests.

Early Adopter Program – Next Steps

- We anticipate that installations will slow down as shrimping season picks up in the coming weeks.
- The remainder of this year and into the next we will install cVMS on vessels as is convenient for owners and is practical to minimize travel costs.
- Given that we have 87 requests for cVMS units and we estimate 75-100 units can be installed with available funding, new volunteers are placed on a waitlist.
 - We will purchase and install devices for these volunteers if funds allow (or if new funding becomes available), but we are no longer guaranteeing people who sign up will get free units/installations.
- Given the growing interest in this program, we hope additional funds will become available to accommodate all of the volunteers.
- Interestingly, we have found significant interest in a similar program for state permitted shrimp vessels.

Early Adopter Program – THANKS!

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Early Adopter Program

First come, first serve. Sign up for waiting list.

Contact us if interested or with questions!

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