



ENHANCE • PROTECT • CONSERVE

SPRING 2015

# Shrimping THE SOUND

A newsletter of the  
Mississippi Department of Marine Resources Shrimp and Crab Bureau



Mississippi Inshore and Territorial Seas  
Shrimping Grounds

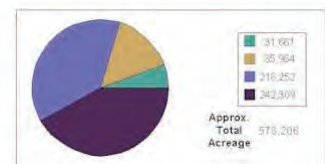


Not for Navigational Use  
For Planning Purposes Only



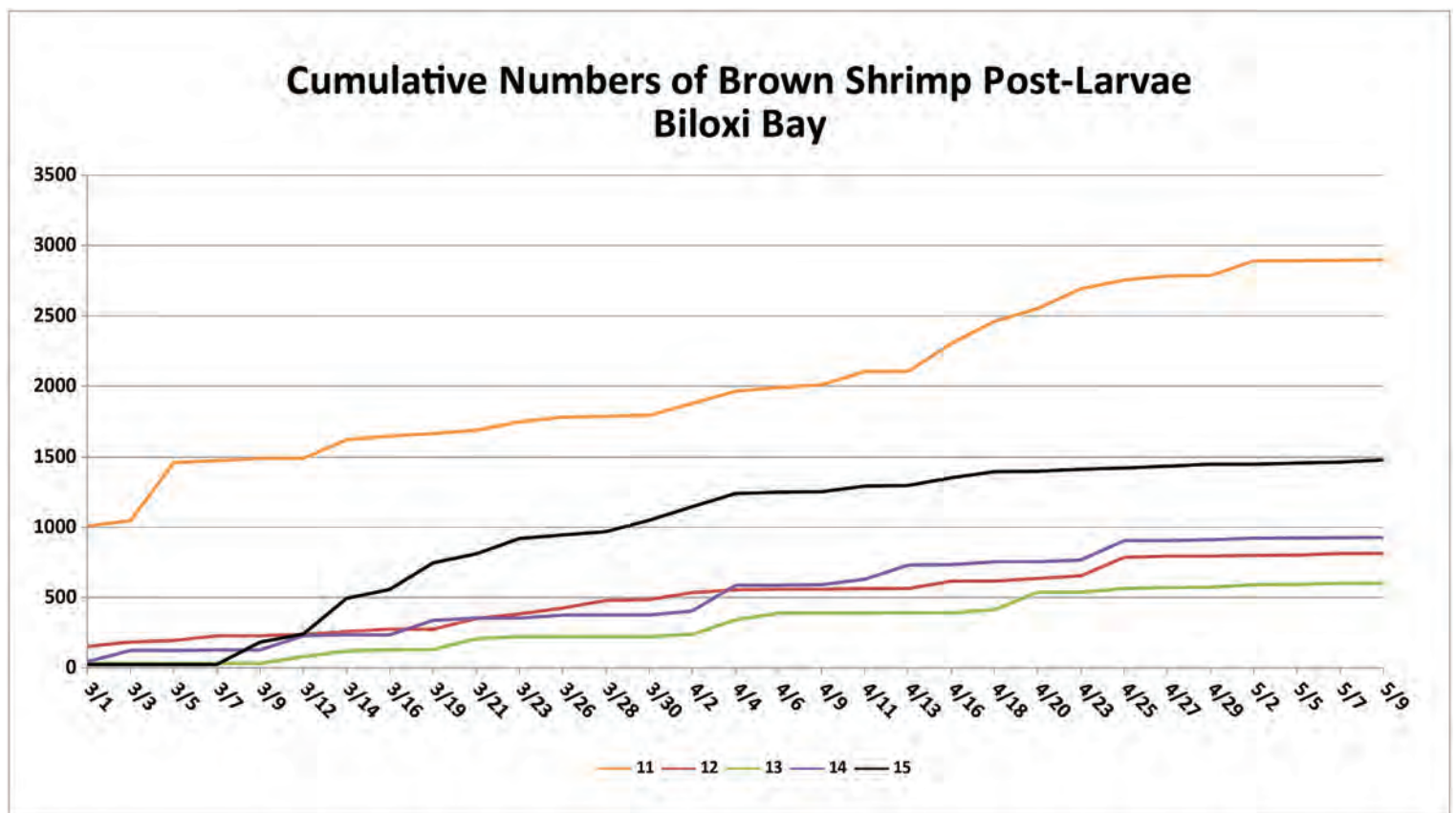
- Closed to all shrimping, inland and within 1 mile of Gulf Islands National Seashore shoreline
- Open to live bait shrimping only, within 1/2 mile of the shoreline
- Open to commercial & recreational shrimping on a seasonal basis until December 31
- Open to commercial and recreational shrimping on a seasonal basis until April 30
- Exclusive Economic Zone and/or other state waters

- Intracoastal Waterway
- Colregs Demarcation Line

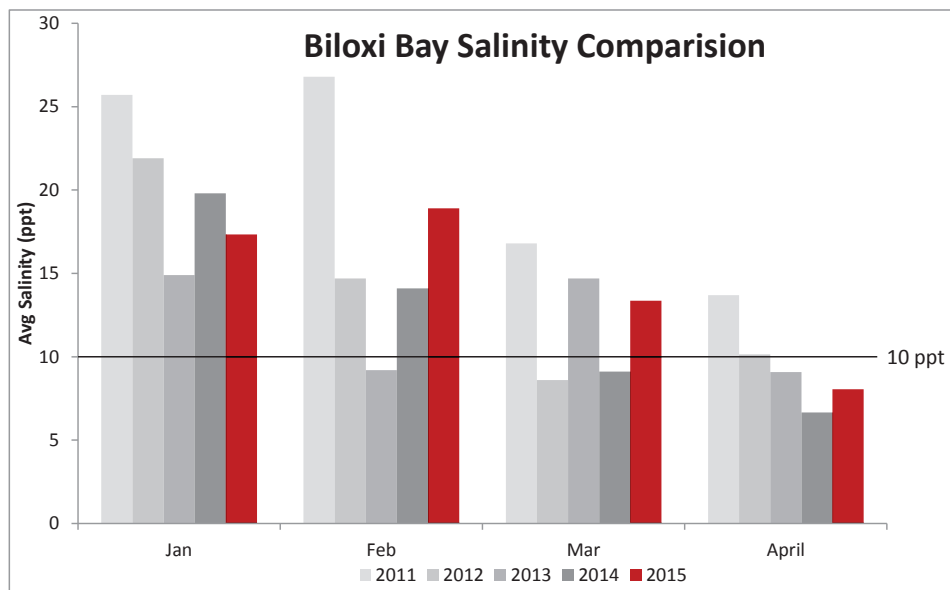


## MDMR Begins Sampling for the Annual Opening of Brown Shrimp Season

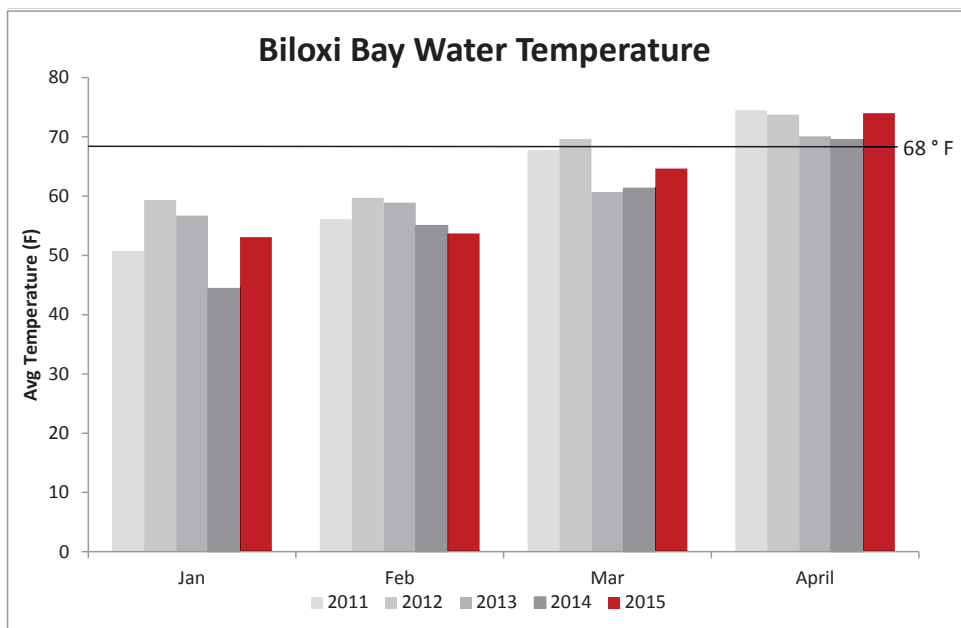
The Mississippi Department of Marine Resources (MDMR) Shrimp and Crab Bureau, along with the Gulf Coast Research Laboratory's (GCRL) Center for Fisheries Development, recently began extensive sampling for brown shrimp in the Mississippi Sound. The sampling is necessary for MDMR's fisheries scientists to determine the exact date for the opening of the 2015 shrimp season. GCRL pulls plankton tows in the Back Bay looking for brown shrimp post larvae, which is the stage of the shrimp's life cycle when it is extremely small (less than 25 mm or 0.98 inches), while MDMR staff pulls trawls Coastwide to find juvenile (26-40 mm or 1.02-1.57 inches) and adult brown shrimp (less than 41mm or 1.61 inches). In order for a shrimp to be of legal size (68 count per pound), it must be approximately 100 mm or 3.94 inches long. The brown shrimp season's opening date can be determined when the majority of the shrimp are of that legal size. Environmental factors such as salinity, water temperature, rainfall and moon phase are also considered when setting the opening of the season. It has been found that the optimum growing conditions for brown shrimp occur when the salinities are above 10 parts per thousand (ppt) and water temperatures are greater than 68 degrees Fahrenheit (°F).



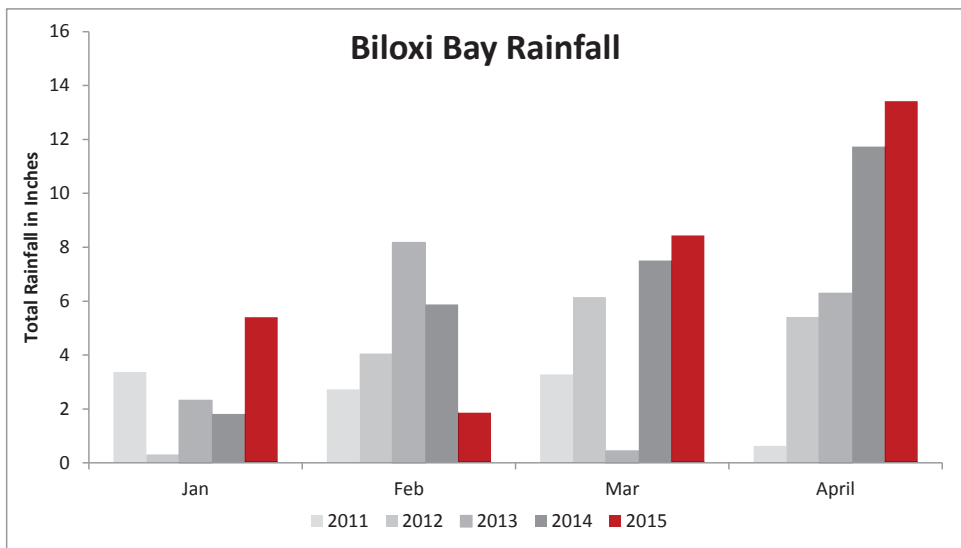
**Figure 1** Comparison of Brown Shrimp Post Larvae (2011-2015)



**Figure 2** Biloxi Bay Salinity (January-April)



**Figure 3** Biloxi Bay Water Temperature (January-April)



**Figure 4** Monthly Rainfalls for Biloxi Bay (January-April)

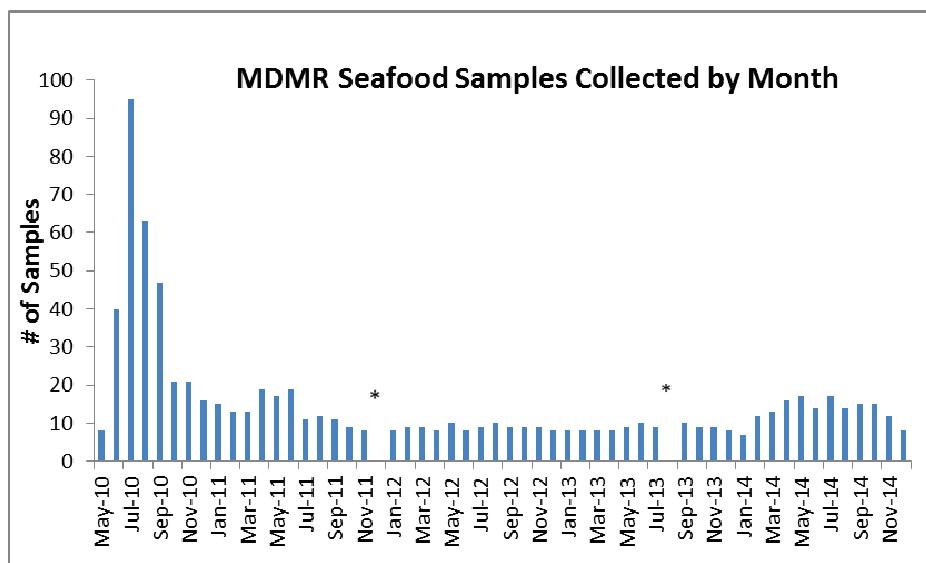


## Seafood Safety Update

Through the Mississippi Seafood Tissue Testing Program, the DMR along with the Mississippi Department of Environmental Quality sampled seafood from Mississippi waters each month (Table 1) in response to the Deepwater Horizon oil spill disaster. The safety of commercial seafood was determined by comparing tissue contaminant concentrations to FDA levels of concern. Toxicologists from federal and state agencies established criteria for polycyclic aromatic hydrocarbons (PAHs) in fish and shellfish using standard FDA and EPA risk assessment methods, which are protective of human health and applied consistently in each of the states and in federal waters.

For each of the four fishery categories—shrimp, crab, finfish and oysters (see Table 2)—0.5 pounds of edible tissue was needed for testing. The number of specimens needed to extract the required amount of tissue varied by species: 10 to 12 blue crabs, 1 pound whole shrimp, etc. Finfish species used for this type sampling include, but are not limited to, menhaden, mullet, cobia, croaker, white trout, spotted sea trout and red drum. Tissue samples were analyzed at the Mississippi State Chemical Laboratory located at Mississippi State University. All 820 Mississippi response samples collected from May 28, 2010, to December 31, 2014, were significantly below levels of concern. The results for each of Mississippi's four major fisheries are summarized in Table 2 below. All target PAH Compounds detected were trace amounts, well below levels of concern, as shown in Table 3. The Mississippi Seafood Tissue Testing Program ended December 31, 2014.

**Table 1** Seafood Safety Samples Collected Monthly



\* Samples Spoiled During Shipment

**Table 2** Response Sampling Mississippi Seafood Results

Sample Dates: 5/28/10-12/31/14	Total	Above Levels of Concern	Lab Results Pending
Shrimp	164	0	0
Crab	151	0	0
Finfish	344	0	0
Oysters	161	0	0
All Seafood	820	0	0

**Table 3** Amounts of Detected and Levels of Concern in parts per million (ppm)

	Shrimp		Fish		Crab		Oyster	
	Max Detected	Level of Concern	Max Detected	Level of Concern	Max Detected	Level of Concern	Max Detected	Level of Concern
Napthalene	0.0127	123	0.0121	32.7	0.0121	123	0.0196	133
Fluorene	0.0193	246	0.0199	65.3	0.0228	246	0.0198	267
Anthracene/Phenanthrene	0.0271	1846	0.0158	490	0.0305	1846	0.01595	2000
Pyrene	0.00366	185	0.006	49	0.077	185	0.0169	200
Fluoranthene	0.00477	246	0.006	65.3	0.0116	246	0.00294	267
Chrysene	ND	132	ND	35	0.000751	132	0.000547	143
Benzo(k)fluoranthene	ND	13.2	ND	3.5	ND	13.2	0.000703	14.3
Benzo(b)fluoranthene	ND	1.32	ND	0.35	0.000644	1.32	0.000727	1.43
Benz(a)anthracene	ND	1.32	ND	0.35	ND	1.32	0.000628	1.43
Indeno(1,2,3-cd)pyrene	ND	1.32	ND	0.35	ND	1.32	0.00189	1.43
Dibenz(a,h)anthracene	0.000505	0.132	0.0033	0.035	ND	0.132	0.00209	0.143
Benzo(a)pyrene	ND	0.132	ND	0.035	ND	0.132	0.00291	0.143
DOSS	0.17	500	0.25	100	0.127	500	0.083	500

ND = Non Detected at minimum detection limit of 0.01 ppm prior to July 1, 2010 and after July 31, 2010 or 0.0005 ppm for July 1 thru July 31, 2010 and after Jan 1, 2012

TR = Trace - greater than minimum detection limit of 0.0005 ppm but less than reporting limit of 0.010 ppm



# TED Enforcement Boarding Form\*

\*Please note: The following form was developed for law enforcement as a means of capturing the most frequent TED violations and is not a comprehensive guide to the TED regulations. There are still ways to violate the regulations not specifically listed on the form. The form is shared with shrimpers as a courtesy; however fishermen need to follow all of the regulations - not just the boarding form. For full TED regulations contact your local NOAA office at (228) 762-4591.

NMFS Ver. 1.6

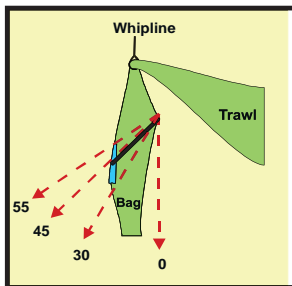
## TED Enforcement Boarding Form



Date / Time		
Vessel Name		
Doc Number/ Reg.		
COLREGS Line	Inshore	Offshore
Lat. / Dockside		N.
Long. / Port		W.

Federal Agency	NOAA OLE	GMT	USCG
State Agency			
Inspector			
Officer/ Witness			

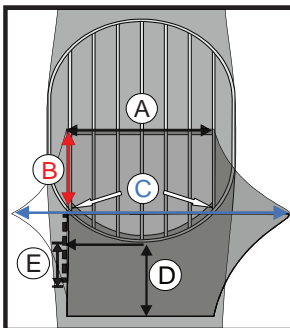
How to find angle



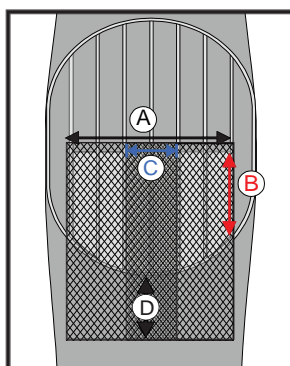
### Grid Measurements

	Port 1	Port 2	Stbd 1	Stbd 2
Angle (55° max)				
Bar Spacing (4" max)				
Grid length and width (32" min)				
Top shooter (TS) or bottom shooter (BS)				
SFSTCA Compliant (see 50 CFR 223.207 (a)(3)(ii))	Y / N	Y / N	Y / N	Y / N
Do all bottom shooters have proper flotation? (If NO Explain in Comment section)	Y / N	Y / N	Y / N	Y / N

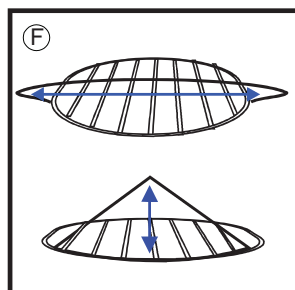
Single cover (71") TED



Double Cover (DC) TED



Inshore (44") TED



### Opening and Flap Measurements (all stretched except D)

Identify each TED as an Inshore, 71" or DC				
<b>A</b> Leading Edge of 71" must be $\geq 71"$ .				
<b>A</b> Leading Edge DC must be $\geq 56"$ .				
<b>B</b> Forward Cut of 71" must be $\geq 26"$ .				
<b>B</b> Forward Cut of DC must be $\geq 20"$ .				
<b>C</b> The 71" opening must be $\geq 71"$ of stretched flap between the 2 points where flap is sewn to grid				
<b>C</b> The DC overlap must be $\leq 15"$ .				
<b>D</b> Length of flap <b>not stretched</b> below grid $\leq 24"$ .				
<b>E</b> The 71"/44" flap can be sewn down the side no more than 6" from bottom of grid.				
<b>F</b> Inshore TED must be $\geq 44"$ wide with a vertical measurement $\geq 20"$ from the grid.				

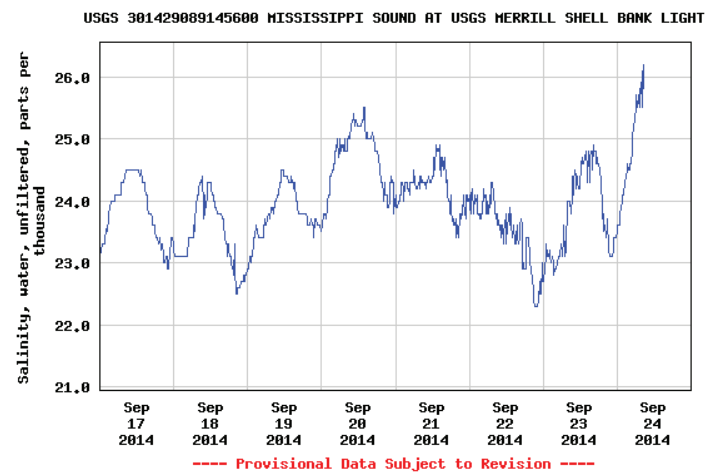
### Allowable Modifications

Accelerator Funnel must stretch $\geq 71"$ on the 71"/ DC or $\geq 44"$ for 44" opening.				
Chafing gear for 71"/44" is the proper size, sewn along Leading Edge only. <b>Not allowed on DC</b>				

### Comments:

Captain's Name (print)	Signature

## Follow Water Temperature and Salinity with the MDMR/USGS Hydrological Monitoring Program



With the addition of the new Graveline boat ramp monitoring station, MDMR currently funds 11 hydrological monitoring stations throughout the Mississippi Sound. The monitoring stations record and update every 15 minutes (water temperature, salinity, turbidity, and gauge height) throughout the Mississippi Sound with the use of constant recorder instrumentation and can be accessed at the MDMR website, [www.dmr.ms.gov](http://www.dmr.ms.gov), under the “Environment” heading using the interactive map that links to the USGS website for each station. Each monitoring station provides valuable real-time data that is used in monitoring and managing of commercial and recreational fisheries (shrimp, crabs, finfish, and oysters). A cooperative agreement between the Mississippi Department of Marine Resources (MDMR) and the United States Geological Survey (USGS) in 1998 provides funding for this project.



## Commercial Fishermen

Fresh Product Permit Required	No Permit Required	Dealers License Required
Sell your catch off your boat	Sell your catch to a Mississippi licensed seafood dealer	Buy and resell another fisherman's catch
Sell your catch to restaurants or individuals	Sell your catch to a Mississippi licensed seafood processor	Transport your catch or another fisherman's catch out of state
Sell your catch from a roadside stand	Not selling your catch	New dealers contact Seafood Technology for safe seafood handling guidelines 228-374-5000

### Trip Tickets – Monthly Submission Forms Required

A Fresh Product Permit is required if you sell your catch to anyone other than a licensed seafood dealer or processor. This is a reminder that while in possession of a Fresh Product Permit you must submit a Monthly Submission Form by the 10th of the following month indicating the number of trips taken even if that number is zero. If you sell your catch to anyone other than a licensed seafood dealer or processor you must fill out a trip ticket for each trip and send it in with your Monthly Submission Form. The important landing information you submit is strictly confidential and can only be viewed by you and employees of the MDMR designated as information confidentiality port reporters.

#### Title 22 Part 09 Chapter 06 Section 100 Seafood Reporting Requirements

All trip tickets shall be returned to the MDMR or electronically submitted on or before the 10th of each month for actual transactions from every commercial fisherman during the preceding month. A monthly summary form that states the total trips taken in a given month shall be submitted by the 10th of each month by the seafood dealer/processor or commercial fisherman.

#### Title 22 Part 09 Chapter 13 Section 100 Penalties

Any unlawful act under this Part committed by any person, firm, or corporation shall be deemed a violation of the provisions of this Part and shall constitute a misdemeanor and upon conviction, said person shall be punished in accordance with Mississippi Code Ann. § 49-15-63, as amended, unless a penalty is specifically provided elsewhere in the Mississippi Code Ann. of 1972, as amended.

If you have any questions please contact the Trip Ticket Office at 228-374-5000

### SHRIMP (Trip Ticket Instructions)

1. **FISHERMAN'S NAME:** Name on the commercial license
2. **FISHERMAN'S LICENSE:**  
License number, Must be a current Type 51, 52 or 53
3. **DATE LEFT DOCK:** Date when trip started
4. **VESSEL STATE REGISTRATION OR COAST GUARD NUMBER:**  
Doc – Reg No. as listed on commercial fishing license
5. **PRIMARY AREA FISHED CODES:**  
MS Sound – 113  
AL State Waters North of Dauphin Isl. – 112  
Federal Waters South of MS and AL – 119  
Breton, Chandeleur Sound and Marsh – 122  
Lake Borgne – 121
6. **PRIMARY GEAR USED CODES:**  
Regular Trawl – 095  
Skimmer Trawl – 116  
Chopsticks – 082
7. **FISHING TIME:** Number of Hours the net was in the water during the trip
8. **QUANTITY OF GEAR:** Number of trawls used on trip
9. **SEAFOOD DEALER OR FRESH PRODUCT PERMITTEE'S NAME:**  
Name of your business
10. **TRANSACTION DATE:** Date you purchased the seafood
11. **COUNTY LANDED CODES: (County where boat unloaded)**  
Jackson – 059  
Harrison – 047  
Hancock – 045
12. **DEALER'S LLC. or FRESH PRODUCT PERMIT No:**  
Dealers license number, Must be a current Type 16
13. **SPECIES CODES:**  
Brown Shrimp – 7310  
White Shrimp – 7340  
Pink Shrimp – 7320  
Seabob – 7338  
Asian Tiger Shrimp – 7382
14. **QUANTITY:** Weight of shrimp purchased in pounds
15. **UNIT CODES:** Pounds – LB
16. **CONDITION CODES:**  
Head On – 60  
Head Off – 61
17. **COUNT OR MARKET:**  
Number of Shrimp Per Pound (Examples) –  
U-15, 16-20, 21-25, 26-30, 31-35, 36-40, 41-50, 51-60, 61-70, 71-80  
Shrimp Sold as Bait – BT
18. **PRICE PER UNIT:**  
How much you paid the fisherman for each pound of shrimp

#### When Filling Out All Trip Tickets Reporting Reminders

- You must send in a monthly submission form at the end of every month, even if you did not buy any seafood from fishermen.
- Do not write messages in the squares. You may write notes in the white area or on a separate paper.
- It is important that you write legibly and stay within the outlined boxes.
- Do not use dashes, commas or periods.
- Use only one number per block.
- If a mistake is made liquid paper may be used or use a new trip ticket.
- Use only black ball point pen.



EXAMPLE



**TRIP TICKET**  
**MONTHLY SUBMISSION FORM**  
Mississippi Department of Marine Resources  
Trip Ticket Coordinator  
1141 Bayview Avenue  
Biloxi, MS 39530  
(228) 374-5000 or (800) 374-3449

This report must be submitted monthly in order to comply with the requirements of MS Title 22 Part 9 and rules and regulations adopted pursuant to those statutes. Completed trip tickets for the time period should accompany this form. DO NOT STAPLE TRIP TICKETS.

USE BLUE OR BLACK INK ONLY

Fresh Product or Dealer License Number

License No.

Current Date:

Reporting Period

From:

To:

No of tickets

By signing this document I hereby certify the following:

the attached trip tickets represent all transactions of fish and shellfish obtained from anyone other than a licensed dealer for the reporting period described above.

all records (receipts) submitted in this report constitute all transactions required to be reported by law.

all the attached information is accurate and accounts for all actual business transactions required to be submitted in this report.

I understand that providing false information may result in criminal consequences.

PRINT  
Dealer/Processor or  
Fisherman Name:

John Doe

SIGNATURE  
Licensed  
Dealer/Processor or  
Fisherman:

John Doe



## [FORM 100]

Please print all characters legibly inside the boxes with either *blue* or *black* ink ONLY. The following will serve as an example:

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Continuation Ticket No.

--	--	--	--	--	--	--

**Void Ticket**

VESSEL NAME Mad Max

John Doe

7	5	2	1	2	3	4				
---	---	---	---	---	---	---	--	--	--	--

OR

$$\boxed{\phantom{0}}\boxed{\phantom{0}} - \boxed{\phantom{0}}\boxed{\phantom{0}}\boxed{\phantom{0}}\boxed{\phantom{0}} - \boxed{\phantom{0}}\boxed{\phantom{0}}$$

a		1	1	9
---	--	---	---	---

095

[illegible]

		2
--	--	---

Date Left Dock 02 / 04 / 14

## Seafood Dealer or Fresh Product Permittee's Name (Please Print)

ABC Seafood

Transaction Date 02 / 06 / 14

County Landed 47

Dealer's Lic. or Fresh Product Permit No. 1000321

[illegible]

ITEM	DEDUCTIONS	COST

Total Purchases	
Total Deductions	
Total Paid	

SEAFOOD DEALER OR FRESH PRODUCT PERMITTEE SIGNATURE

Modified 11/01/11



## Please Report Asian Tiger Shrimp Sightings

The MDMR is asking fishermen and seafood processors to be on the lookout for exotic Asian tiger shrimp (*Penaeus monodon*). This species, native to South East Asia, Australia and the Philippines has been found recently in Mississippi waters and could pose a threat to native shrimp species.

Commercial shrimp fishermen reported landing 16 Asian tiger shrimp from Mississippi waters in 2012 and 15 in 2013. Tiger shrimp were captured in the Mississippi Sound near Pascagoula, Bellfountaine Point, Round Island, east of Cat Island, south of Horn Island and near the Chandeleur Islands. The first recorded Mississippi Sound sightings occurred near Pascagoula in 2009. Tiger shrimp have also been found in the waters of Louisiana, Alabama, Florida, Texas and the Carolinas.

These exotic shrimp are presumed to have escaped from aquaculture facilities in the Caribbean and carried here by ocean currents. Although no tiger shrimp are currently being raised commercially in the United States, past aquaculture facilities have operated in Texas, Alabama, Florida and South Carolina. Potential environmental threats from exotic shrimp introductions include diseases and aggression affecting native shrimp, including competition for food and habitat.

Asian tiger shrimp can easily be identified by the distinctive black and white “tiger” striping pattern on the shell and their large size compared to native shrimp. These giant crustaceans can grow to more than 10 inches long and weigh more than half a pound. When cooked, the meat turns white and the stripes turn red.

**\*\*Asian Tiger Shrimp can be reported on your shrimp trip tickets using the Species Code 7382.\*\***



# WANTED

## Tiger Shrimp (*Penaeus monodon*)



Photo above of Captain Benjamin Lopez, F/V Lady Monica, by Tony Reisinger.



Photos above courtesy Laurence Evans, © Ecotao Enterprises

Look for their distinct dark and light stripes.

Smaller juveniles are also wanted. They may occur in the bays and near the shore.

If you catch any tiger shrimp in your nets, please:

1. Write down the trawl information
  - Captain's Name and/or Vessel Name
  - Date and Time
  - Location (Latitude/Longitude)
  - Water Depth
2. Put each shrimp (with head on) in a separate Ziploc® bag with the trawl information and freeze it
3. Contact Mississippi Department of Marine Resources to arrange for pick-up:

**Phone: 228-374-5000**

**Email: [report.invasive@dmr.ms.gov](mailto:report.invasive@dmr.ms.gov)**



## 2015 Marine Mammal Authorization Certificate

The shrimp fishery has been reclassified from a Category III to a Category II fishery under the Marine Mammal Protection Act by NOAA's National Marine Fisheries Service. This means all commercial shrimp vessels must be registered and have an authorization certificate on-board. Commercial shrimpers with valid federal permits are automatically registered for the program. Commercial fishermen who believe they should be registered but have not been, or who want to verify they are registered in the NMFS Southeast Region should contact the [NMFS SERO MMAP Hotline](http://sero.nmfs.noaa.gov/protected_resources/marine_mammal_authorization_program/) at 727-209-5952. For convenience, a copy of the certificate follows this article.

More information can be found through this link:

[http://sero.nmfs.noaa.gov/protected\\_resources/marine\\_mammal\\_authorization\\_program/](http://sero.nmfs.noaa.gov/protected_resources/marine_mammal_authorization_program/)

### NOAA's NATIONAL MARINE FISHERIES SERVICE (NMFS) 2015 MARINE MAMMAL AUTHORIZATION CERTIFICATE

#### Authorization:

Pursuant to Section 118 of the Marine Mammal Protection Act (MMPA) (16 U.S.C. 1387), the implementing regulations at 50 CFR Part 229, and subject to the terms and conditions below, NMFS issues this Authorization Certificate, which, when presented in combination with a current and valid federal fishing permit, authorizes the taking of non-endangered marine mammals incidental to commercial fishing in Category I or II fisheries.

#### Terms and Conditions:

- All incidental mortality or injury of marine mammals occurring in the course of v fishing operations must be reported to NMFS within 48 hours after the end of each fishing trip in which the incidental mortality or injury occurred.
- This Authorization Certificate, or a photocopy, must be on board the vessel during commercial fishing operations.
- Authorization Certificate holders must comply with any applicable take reduction plans and emergency regulations.
- If requested to do so by NMFS or a designated contractor providing observer services to NMFS, an Authorization Certificate holder must take aboard an observer to accompany the vessel on fishing trips.
- When necessary to deter a marine mammal from damaging fishing gear, catch, other private property, or from endangering personal safety, the vessel owner, operator, or crew members may use measures which do not result in serious injury or mortality of the animal, as required by the deterrence provisions of the MMPA.
- A marine mammal may not be intentionally killed in the course of commercial fishing operations except where imminently necessary in self-defense or to protect the life of a person in immediate danger. Such lethal taking must be reported to NMFS within 48 hours. Any marine mammal incidentally taken must be immediately returned to the sea
- unless NMFS directs otherwise.
- This Authorization Certificate, or copy, must be made available upon request to any state or federal enforcement agent authorized to enforce the MMPA, any designated agent of NMFS, or any contractor providing observer services to NMFS.
- This certificate is not transferable. In the event of a change in vessel ownership, the Authorization Certificate is void and a new Authorization Certificate must be obtained by the new owner.
- If the registered vessel is sold or destroyed or is replaced by a new designated vessel, an authorization must be obtained for the new vessel.
- Any person who violates these Terms and Conditions, regulations under 50 CFR Part 229, or any provisions of Section 118 of the MMPA shall be subject to the penalties set forth in the MMPA.
- If there are changes in your mailing address or vessel ownership, notify the NMFS Southeast Region Protected Resources Division at 263 13th Avenue South, St. Petersburg, FL, 33701, (727) 209-5952, within 30 days.
- This certificate is valid from January 1, 2015 through December 31, 2015

## **Anchors Aweigh: Maritime and Seafood Industry Museum Reopens**



The Maritime and Seafood Industry Museum was destroyed by Katrina nearly 10 years ago, but the Coast icon was rebuilt, and the three-story building reopened in August 2014 at Point Cadet, the Gateway to Biloxi.

The museum originally opened in 1986 to preserve and interpret the maritime history and seafood heritage of Biloxi and the Mississippi Gulf Coast. The new 20,000-square-foot museum carries on the mission with an array of galleries, exhibits and artifacts. The museum recently was named a “Southern Travel Treasure” by AAA’s magazine.

One of the main features of the \$10-million museum is the “Nydia,” a gaff-rigged cabin sloop built in Biloxi in 1898, displayed in the Grand Hall, with her mast stepped and sails raised. Also included is a timeline that ranges from the first Indian settlements through the present, telling the tale of more than 300 years of maritime history.

Other exhibits feature wooden boat building, schooners, shrimping, oystering, recreational fishing, marine wetlands, charter boats, the Barrier Islands, recreational fishing, hurricanes and a priceless collection of historical photographs.

The museum is open from 9 a.m. to 4:30 p.m. Monday through Saturday and from noon to 4 p.m. Sundays. Admission is \$10 for adults, \$8 for AAA members and seniors and \$5 for students 5-15.

For more information, go to [www.maritimemuseum.org](http://www.maritimemuseum.org) or call (228) 435-6320.



## Knot Orientation and Effect on TED Flaps

### NOAA Fisheries, Harvesting Systems Unit, Pascagoula, MS

Gear researchers from the NMFS Harvesting Systems and Engineering Branch, Mississippi Laboratories in Pascagoula, Mississippi recently conducted evaluations on the effect of webbing knot orientation on the performance of TED flaps, BRD funnels, and trawl codends. The results of the evaluations were dramatic as was demonstrated in a video presentation at the Industry Workshop on Bycatch Reduction in the Shrimp Fishery sponsored by the Gulf and South Atlantic Foundation in Tampa, Florida in October, 1999.

The effect that webbing knot orientation has on gear performance was first reported by researchers at the Australian Maritime College in an article published in June 1991 by Lyndal Wilson. The discovery was made during flume tank experiments with model trawls. Identical model trawls had very different fishing configurations when demonstrated in the flume tank. After a lot of head scratching, Dave Sterling, then a student at the Australian Maritime College in Tasmania, Australia reasoned that the hydrodynamic forces associated with webbing knots might be the cause of the difference in net performance. Tim Paice later confirmed this theory through a series of flume tank experiments. What he found was that the shape of webbing knots creates hydrodynamic lift in either an upward or downward direction depending on the angle of the webbing knots relative to the direction of the water flow. Tim Paice's research determined that downward lift is generated when webbing knots have a negative angle of attack in both the top and bottom panels of a trawl. Overall trawl performance i.e., how hard a trawl fishes and how high a trawl opens, is influenced by webbing knot orientation.

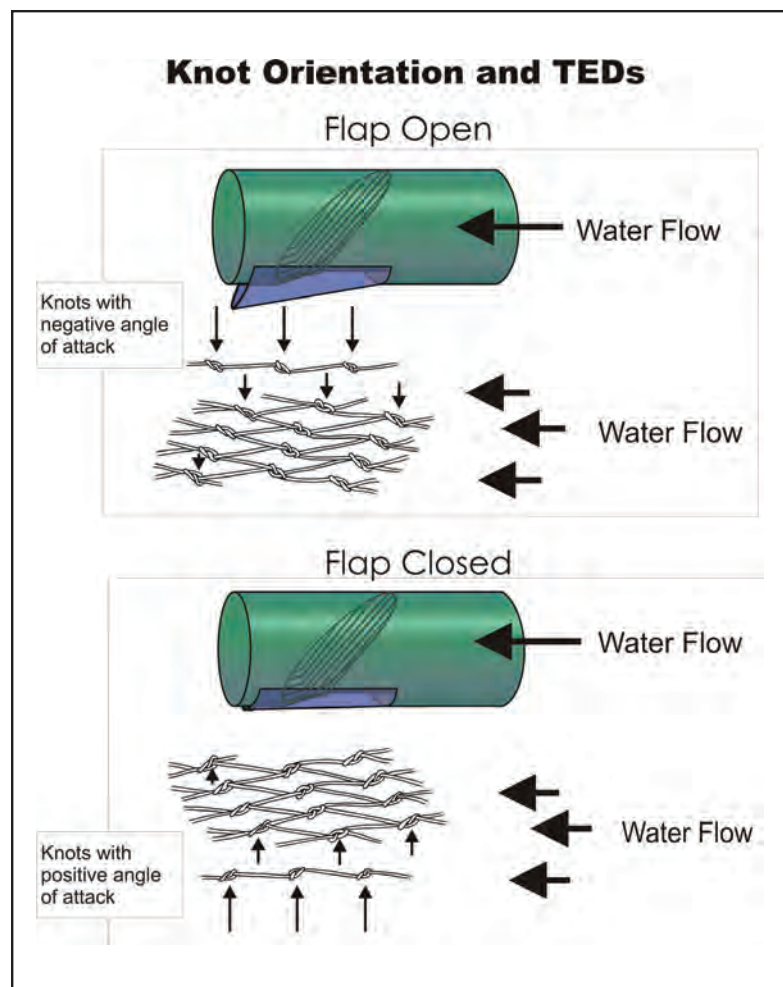
For several years, gear researchers have observed differences in the configuration of TED exit flaps and BRD and TED funnels when evaluating gear performance. The difference in performance was attributed to different webbing materials and quality and stretching of webbing with use. In the summer of 1999, Kendall Falana, a gear specialist with the Harvesting Systems and Engineering Branch, proposed that the Harvesting Team investigate the effect of webbing knot orientation on the performance of TED exit flaps while conducting BRD diver evaluations. The result of the evaluations was immediately obvious and dramatic. Poly flaps were evaluated on a TED with a leatherback sea turtle exit hole modification, which was required at the

time on shrimp vessels operating in the southeast Atlantic. When the poly flap was installed with the webbing knots in a negative (downward) angle of attack to the water flow, the flap gaped open 1-12 inches when the trawl was towed at 2.5 knots. Subsequent tests off of the Mississippi coast, with different TED designs, have confirmed these results. When tested with a standard size TED opening, the flap gaped open 3-5 inches or was closed tightly depending on the knot orientation.

Knot orientation also had a dramatic effect on codend shape and BRD funnel shape and performance. Knots, which were oriented with an outward angle of attack on a 120-mesh codend, resulted in a codend diameter of 13 inches. When the knots were oriented with an inward angle of attack, the opening diameter was 10 inches. Similar results were seen with a BRD funnel.

The Harvesting Systems and Engineering Branch has produced a videotape demonstrating the effects of webbing knot orientation. Copies of this video may be obtained by calling (228) 762-4591 or writing:

National Marine Fisheries Service  
Harvesting Systems Unit  
P.O. Drawer 1207  
Pascagoula, Mississippi 39568-1207  
USA







# Marine Safety Information Bulletin

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U.S. Coast Guard  
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MSIB Number: 18-14 (cor)  
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## Implementation of New Requirements for Commercial Fishing Vessels

The purpose of this Bulletin is to remind the commercial fishing industry about safety and equipment requirements established by the *Coast Guard Authorization Act of 2010* and the *Coast Guard and Maritime Transportation Act of 2012*. The Acts made significant changes to Chapters 45 and 51 of Title 46 United States Code (USC) that will be reflected in amended regulations (Parts 28 and 42 of Title 46 Code of Federal Regulations (CFR)). These new requirements are scheduled to go into effect by the date(s) set forth under the law. The specific provisions to be implemented are discussed and explained in this Bulletin.

**Mandatory Dockside Safety Examinations:** Both Acts mentioned above amended 46 USC §4502(f) and directed that both State-registered and Federally-documented vessels that meet the following criteria, receive a safety examination no later than October 15, 2015, the date this requirement is scheduled to take effect. The criteria includes: operating beyond 3 nautical miles of the baseline of the U.S. territorial sea or the coastline of the Great Lakes, operating anywhere with more than 16 individuals on board (either inside 3 miles of the baseline or beyond 3 miles of the baseline), and fish tender vessels engaged in the Aleutian trade. These vessels will need to complete this dockside safety examination at least once every 5 years, however, some vessels, depending on their operation or areas of service, may be subject to a more frequent examination schedule.

If you have had your vessel examined recently, but the safety decal that was issued expires before the new requirement takes effect, you should have your vessel re-examined prior to October 15, 2015 if the above criteria applies. If you do not have a valid safety decal after October 15, 2015, you could be subject to operational controls that may be directed by a Captain of the Port Order. To help alleviate last minute exam scheduling backlogs, do not wait until the last minute to request an examination as there will likely be a rush on examination requests closer to the scheduled October 2015 deadline.

**Survival Craft:** The Acts also amended 46 USC §4502(b)(2)(B) by deleting the words “lifeboats or liferafts,” and replacing them with, “a survival craft that ensures that no part of an individual is immersed in water...” This means that all commercial fishing industry vessels operating beyond 3 nautical miles of the base line or the coastline of the Great Lakes will be required to carry a survival craft that keeps you out of the water (i.e., a lifeboat, inflatable liferaft, or inflatable buoyant apparatus) in the event of an abandon ship need. Current life floats and buoyant apparatus are not designed to keep an individual out of the water when used in an emergency. This requirement for a survival craft, such as a lifeboat, inflatable liferaft, or inflatable buoyant apparatus that keeps one out of the water, is scheduled to go into effect on February 16, 2016.

**Newly-Built Vessels:** Note – The 2012 Act amended 46 USC §4503 by adding a new subsection (e) that states, “For the purposes of this section, the term “*built*” means, with respect to a vessel, that the vessel’s construction has reached any of the following stages: (1) The vessel’s keel is laid. (2) Construction identifiable with the vessel has begun and assembly of that vessel has commenced comprising of at least 50 metric tons or one percent of the estimated mass of all structural material, whichever is less.” Also note that, “overall in length,” means the horizontal distance of the hull between the foremost part of the stem and the aftermost part of the stern excluding fittings and attachments, which is different from the “registered length.”

*This release has been issued for public information and notification purposes only.*

With this in mind, and with regard to vessels at least 50 feet overall in length, the 2010 Act amended 46 USC §4503 to add a requirement that commercial fishing vessels at least 50 feet overall in length, built after July 1, 2012 that operate beyond 3 nautical miles of the baseline must be designed, constructed, and maintained to the standards of a recognized classification society. The 2010 Act also required that vessels classed before July 1, 2012 shall remain subject to the requirements of a classification society and have on board a certificate from that society. The 2012 Act extended that “built after” date to July 1, 2013. So, after July 1, 2013, if a vessel 50 feet or more overall in length was, or is, built, it must meet survey and classification requirements. A vessel 50 feet or greater overall in length built after July 1, 2013, but not built to class, will be ineligible to commercially fish beyond 3 nautical miles of the baseline under a Fishery endorsement on its Certificate of Documentation.

Vessels less than 50 feet overall in length: The 2010 Act, also amended 46 USC §4502 by adding a new subsection (h) that requires commercial fishing vessels less than 50 feet overall in length, built after January 1, 2010, to be constructed in a manner that provides a level of safety equivalent to the minimum safety standards established for recreational vessels. The standards/requirements for recreational vessels can be found in 33 CFR Parts 181 and 183.

**Load Lines:** The 2010 Act amended 46 USC §5102(b) to require commercial fishing vessels 79 feet or greater in length (and that will operate beyond the Boundary Line) to have a load line assigned. Per the 2010 Act, this provision applied to commercial fishing vessels built after July 1, 2012, however, the 2012 Act changed the effective date to July 1, 2013. Generally, most commercial fishing vessels were previously exempt from load line requirements. A load line indicates the minimum safe freeboard to which a vessel may be loaded. Conditions evaluated when calculating and assigning a load line include watertight integrity of the vessel, subdivision, and loading capacity. To be consistent with the definition for determining length for load line purposes already accepted and in use for other vessels, the registered or documented length of a commercial fishing vessel will be used for load line applicability as set forth in Subchapter E of 46 CFR Part 42.

**Alternate Safety Programs:** The 2010 Act added a new Subsection (d) to 46 USC §4503. This provision requires the Coast Guard to prescribe and develop, in cooperation with the commercial fishing industry, an Alternate Safety Compliance Program for commercial fishing vessels that operate beyond the 3 nautical mile line, if the vessel is: (1) at least 50 feet overall in length; (2) was built before July 1, 2012; and (3) is 25 years of age or older (in 2020); or, was built on or before July 1, 2012, and undergoes a substantial change to the dimension of, or type of vessel, completed after July 1, 2012, or a later date set by the Coast Guard. The 2012 Act changed the date of applicability from July 1, 2012 to July 1, 2013. In general, the Alternate Safety Compliance Programs must be prescribed by 2017 and implementation beginning by 2020. The Coast Guard is in the process of finalizing draft criteria and requirements for the Programs and the Commercial Fishing Safety Advisory Committee has been consulted on the draft. Prior to final promulgation, the fishing industry will be offered an opportunity to review, comment, and make recommendations as to how to apply the requirements based on risk, vessel operations, and operating areas. The 2010 and 2012 Acts also amended 46 USC §5103 by adding a requirement for vessels that undergo a major conversion after July 1, 2013, or a date set by the Secretary, to comply with an Alternate Load Line Compliance Program. This Program will be developed in cooperation with the fishing industry. The Alternate Load Line Compliance Program will apply to vessels 79 feet or greater in length, and the criteria is expected to be included in the Alternate Safety Compliance Program guidelines for consideration by the industry.

Questions regarding these requirements should be forwarded to the Coast Guard Office of Commercial Vessel Compliance, Fishing Vessels Division (CG-CVC-3) at **202-372-1249** or by email at [CGCVC@uscg.mil](mailto:CGCVC@uscg.mil). Or, you may also contact your local Coast Guard District Fishing Vessel Safety Coordinator or local Sector Fishing Vessel Safety Examiner. The points of contact for these individuals can be found on the web site, [www.fishsafe.info](http://www.fishsafe.info), and click on the “Locate Examiners” tab.

-uscg-



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## *Shrimping the Sound*

is a publication of

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### **COMMENTS OR SUGGESTIONS?**

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