



## Southern Shrimp Alliance

P.O. Box 1577 Tarpon Springs, FL 34688  
955 E. MLK Dr. Suite D Tarpon Springs, FL 34689  
727-934-5090 Fax 727-934-5362

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Dr. Roy Crabtree  
Regional Administrator

Dr. Michael Barnette  
Fishery Biologist

National Marine Fisheries Service  
Southeast Fisheries Regional Office  
263 13<sup>th</sup> Avenue South  
St. Petersburg, FL 33701

RE: Comments on Scoping Document for Preparation of a Draft Environmental Impact Statement to Reduce Incidental Bycatch and Mortality of Sea Turtles in the Southeastern U.S. Shrimp Fishery

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The Southern Shrimp Alliance (SSA) is a non-profit alliance of members of the U.S. shrimp industry in eight states committed to preventing the continued deterioration of America's shrimp industry and to ensuring the industry's future viability. SSA serves as the national voice for the shrimp fishermen and processors in Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Texas. SSA appreciates the opportunity to provide comments to the National Marine Fisheries Service ("Agency") on this very important action.

One decade ago, prior to the flood of imported farm-raised shrimp dumped on the US market, massively destructive hurricanes, soaring fuel prices, a recession of historic proportions and the largest oil spill in the history of man, the shrimp fishery was our Nation's most valuable. It remains the most valuable in the region; providing a crucial source of jobs for thousands who

lack many employment alternatives. It is a very important objective for the Agency to preserve the viability this fishery.

SSA has exceptional record of taking responsibility and addressing valid conservation issues associated with shrimp resources and bycatch species including sea turtles, red snapper, blacknose sharks and interactions with deep sea coral. In each case SSA has worked in a highly constructive manner with federal and state authorities, the regional fishery management councils, and other stakeholders to achieve the mutual objectives of improving resource conservation and minimizing adverse impacts on our industry.

As in any administrative procedure, SSA expects both the problems and the solutions addressed in this scoping and subsequent rulemaking process to be defined by solid science and the facts; not speculation or political agendas. SSA is committed to addressing any legitimate issues raised in the scoping and subsequent administrative process but will not tolerate unfair or unsubstantiated treatment of the shrimp industry.

With this in mind, SSA notes that the very first sentence of the scoping document states that it is the intent of the Agency to “promulgate regulations to reduce the mortality of sea turtles in the shrimp fishery of the southeastern United States.” While there may be legitimate issues to address, it is not clear that there is a valid scientific or legal requirement to “reduce the mortality of sea turtles in the shrimp fishery”, or a need to promulgate regulations to achieve that objective. Instead, the first purpose of this scoping process should be to determine *if* the scientific facts clearly support the need to reduce sea turtle mortality in the shrimp fisheries and if so, only then evaluate what measures, regulatory or otherwise, might be appropriate to implement to achieve that objective.

As explained below, there remain serious, unanswered questions and uncertainties concerning a range of issues pertinent to this scoping process. Perhaps most notable is the apparent lack of linkage between reported sea turtle strandings and shrimp fishing effort, and whether a long-term management response to what appears to have been a one-time event in June 2010—is warranted. Due to these uncertainties and lack of empirical data, it appears the ‘no action’ alternative may be the only viable option until the Agency is able to fill-in many of these gaps.

## **(1) Strandings**

### **(a) 2011 Strandings**

Disconnect. In 2011, there has been a profound disconnect between reported Kemp’s ridley turtle strandings in Mississippi and shrimp fishing effort in Mississippi and the vicinity.

As shown in Chart 1, the vast majority of strandings in 2011 occurred prior to the Mississippi season opening when shrimp effort was very low or non-existent. Fully 81% (226) of the 279 strandings reported through July 19, 2011, were during this period of very low fishing effort prior to Mississippi season opening on May 25, 2011. Further, and of extreme importance, strandings did not increase significantly after the fishery opening. This strongly suggests another cause for strandings in spring 2011.

Necropsies. According to the Agency's necropsy report, sediment was found in the lungs of moderately to severely decomposed turtles stranded in March 2011 when shrimp effort was nearly non-existent. As Chart 1 shows, there were only 2 shrimp trawl vessels observed operating at this time and the TEDs were inspected and found to be in full compliance. This strongly suggests that the presence of sediment is not a valid indicator or evidence that shrimp fishing caused the strandings. The same holds true for the presence of fish in the gastrointestinal tract or fluids in the lungs which were found in turtles stranded during periods when shrimp fishing effort was both non-existent and relatively high.

Drawing inferences from necropsies on turtles, especially those in poor condition as was the case, are by definition circumstantial and highly subjective. In fact, the inferences drawn by the Agency staff from these necropsies are directly refuted by empirical data drawn from direct observation of the fishery and so should be considered with extreme caution in the context of any management response. When such inferences and realities collide, good science demands a search for alternative, credible explanations. Notwithstanding this fundamental principle of good scientific practice, the Agency continues to disseminate the same unsupported conclusion from the necropsy results—even in recent testimony to the United States Senate—that the shrimp fishery was responsible for the majority of strandings—even in 2011. This is unacceptable and we look forward to an intervention by the Agency's leadership with the appropriate staff to stop this practice. We also urge the Agency to devote some attention and resources to researching other sources of mortality during the spring months as further discussed below.

Catch rates. In recent discussions with Agency staff, the suggestion was made that even two small shrimp trawl boats operating with compliant TEDs could account for the high number of reported strandings in March 2011; pointing to the relatively high catch rates of turtles in the Agency-sponsored turtle relocation efforts associated with dredging operations. We note that these relocation operations are typically conducted in deeper water shipping channels where unusually high concentrations of turtles have been observed; although the reason for such behavior may not be well understood.

Nevertheless, even if one assumes that sea turtle abundance on the shrimp fishing grounds in Mississippi are as high as in the areas where turtle relocation efforts occur, the simple math does not support even a remote possibility that two, TED-compliant shrimp trawl

vessels could account for the spike in reported strandings in March 2011 (and April) –or the inferences drawn from the necropsies for that matter.

Specifically, according to STSSN data there were 52 Kemp’s ridley turtle strandings reported in Mississippi during the 5 week period of February 27 through April 2, 2011—roughly the month of March when those two vessels were observed operating. Although SSA questions this assumption (see below) according to the current 2002 Biological Opinion (BiOp), the number of reported strandings represents only 5 to 6 percent of actual mortalities attributable to shrimp trawling. Thus, 52 reported strandings would equate to a total mortality of between 867 and 1,040 turtles. Further, a compliant TED is at least 97 percent effective in excluding sea turtles; meaning that only up to 3 percent are captured. If we assume a worst possible case of 100 percent mortality rate for those 3 percent that are captured, then those two vessels would have had to interact with between 28,900 and 34,667 turtles during that 5 week period in March to cause between 867 and 1040 total mortalities and 52 reported strandings. Obviously, nothing approaching that turtle catch rate occurred and so again, this strongly points to a different cause for the strandings during this period.

As noted below, Dr. Benny Gallaway has presented an alternative preliminary analysis suggesting the stranding rate for turtles drowned in shrimp trawls may be as high as 70 percent instead of 5 to 6 percent as set forth in the 2002 BiOp. If Dr. Gallaway’s assumption is used, then the 2 shrimp trawl vessels operating in March would have had to interact with 2,476 turtles during that period to cause the 52 reported strandings; also a highly implausible event. SSA looks forward to the Agency and Dr. Gallaway finalizing this analysis to resolve an updated estimate of the strandings rate since this is fundamental to any incidental take projections as they relate to the Incidental Take Statement (ITS).

Annual Spring Strandings. The existence of relatively high strandings during periods of low shrimp effort was not unique in 2011. As shown on Chart 2, in each of 2009, 2010 and 2011--before, during and after the oil spill-- there is a consistent period (approximately mid-March through mid-May) when reported strandings increase but shrimp effort is relatively low or nonexistent. This strongly suggests that some annual phenomenon other than shrimp fishing is causing an increase in reported strandings during this period each year.

Furthermore, this pattern of ‘springtime’ strandings disconnected from shrimp fishing effort is consistent in other states. As illustrated on Chart 3, from approximately mid-March through mid-May 2011, reported strandings increased to varying degrees in Texas, Louisiana, Mississippi and Alabama when shrimp effort is relatively very low. This also strongly suggests that some annual phenomenon other than shrimp fishing is causing an increase in reported strandings during this period throughout the region.

**(b) 2010 was an aberration.**

One time event. As shown in Chart 2 appended to this document, an unusual spike in reported strandings of Kemp's ridley turtles in Mississippi occurred immediately after the June 3, 2010, opening of the shrimp season. Though circumstantial, this evidence prompted the reasonable decision to close the fishery again on July 1, 2010, after which reported stranding again decreased. However, as clearly shown on Chart 2, this pattern of reported strandings did not occur in the previous year (2009) and was not repeated this year in 2011 when the season opened on May 25, 2010. This appears to have been a one-time event.

Distribution of shrimp fishing effort and turtles. During June, 2010, vast areas of state and federal waters were closed to fishing due to the oil spill. This had the effect of concentrating shrimp fishing effort into small inshore areas including particularly Mississippi Sound and the vicinity. The impacts of the oil spill and dispersants on the behavior and distribution of sea turtles is not well understood. It is plausible that Kemp's ridley turtles were also concentrated into the same area of high shrimp fishing effort. These circumstances separately or in combination may account for what was a one-time spike in strandings reported in this region in June 2010. For whatever reason, however, it is clear from Chart 2 that the unusually high number of reported strandings in June 2010 was an aberration from 2009 and 2011.

Strandings Coverage. As noted in the Scoping document, the level of stranding coverage "has increased considerably due to the Deepwater Horizon spill event." While important to note, such a qualitative treatment of this issue is insufficient and unfair to the shrimp fishery. Instead, strandings coverage must be evaluated statistically to determine what portion of the increase in reported strandings since the oil spill, including during the June 2010 spike, is accounted for by the 'considerable' increase in coverage, and what portion represents an increase in actual strandings. Just like with fishery observer data regarding catch, strandings data must be standardized to reflect the rate of coverage before it can be correctly used to support any management conclusions or regulatory decisions. SSA looks forward to the Agency correcting the strandings data to reflect this critical statistical anomaly --and making the public and stakeholders fully aware of the results and implications of this correction.

In summary, the only spike in reported strandings that has occurred at a time of relatively high shrimp fishing effort took place when the distribution of shrimp fishing effort and perhaps sea turtles was very abnormal, and the level of strandings coverage had "increased considerably". These circumstances simply do not support a long term management or

regulatory response and should inspire the Agency to seek other explanations for higher numbers of reported strandings such as in spring 2011.

**(c) Stranding rates.**

As noted above, the current 2002 Biological Opinion assumes that strandings represent only 5-6 percent of the total turtle mortalities caused by shrimp trawls. This assumption has been used by the Center for Biological Diversity to support their petition for the Agency to close the shrimp fishery as well as their 60-day notice of intent to file suit. This discussion was also incorporated by reference into a similar petition and notice filed more recently by Oceana. In both cases, this assumption is used in an analysis suggesting that the shrimp fishery has exceeded its annual Incidental Take Statement (ITS).

SSA is advised that in a letter to the Agency dated July 6, 2011, Dr. Benny Gallaway has presented a preliminary analysis which challenges the 5-6 percent assumption and suggests that the stranding rate of turtles drowned in shrimp trawls may be closer to 70 percent. Consequently, Dr. Gallaway further suggests that the shrimp fishery has not exceeded its ITS and is actually far below that limit.

SSA strongly urges the Agency to incorporate the concepts of Dr. Gallaway's preliminary analysis into its various considerations of the petitions, the new Biological Opinion and this rulemaking. SSA looks forward to the Agency and Dr. Gallaway finalizing this analysis to resolve an updated estimate of the strandings rate since this is fundamental to any incidental take projections as they relate to the Incidental Take Statement (ITS).

**(d) Increased abundance of turtles.**

The current draft Kemp's Ridley Recovery Plan confirms that "exponential growth" of the Kemp's Ridley nesting population has been ongoing for years and is approaching the down-listing criteria.

According to data from the Gladys Porter Zoo in Galveston, TX, at about the time of the current BiOp in 2001 and 2002, there were 11,878 (5,939 avg.) nests and 720,096 (360,048 avg.) hatchlings observed on Mexico beaches in 2001 and 2002.

In contrast, those numbers increased to 34,446 (17,223 avg.) nests and 1,812,517 (906,259 avg.) hatchlings in 2009/2010. Thus, there were 2.9 times more nests and 2.5 times more hatchlings in 2009/2010 than in 2001/2002. And, given these large and ever increasing hatchling numbers, there must be a very large number of sub-adult turtles in the population.

With these points in mind, and given the near-shore habitat preference of the species, the Agency should expect a similar rate of increase in the number of interactions (takes) with

the inshore shrimp trawl fisheries over the past decade or more. However, SSA notes that nothing approaching this exponential increase in incidental takes has been observed onboard shrimp vessels or in the strandings data. This suggests that the fishery's performance in turtle protection (TED exclusion rate) must far exceed expectations (97% exclusion).

In any case, the sustained exponential growth in the Kemp's ridley population should result in some significant increase in the number of incidental takes. SSA strongly urges the Agency to evaluate these abundance and interaction data and ensure that the projected number of takes is properly reflected by the Incidental Take Statement in the new BiOp now under development.

Finally, the well documented exponential growth in the Kemp's ridley nesting population that is now approaching the delisting criteria also calls into question the presumption of this scoping process that additional regulations to reduce the mortality of sea turtles in the shrimp fishery are needed and justified. Normally, this conclusion would be based on the results of a new BiOp, and so SSA strongly urges the Agency to defer any consideration of additional management measures until after the results of the new BiOp as fully understood and considered.

## **(2) Compliance**

SSA notes that the Scoping document states that "because of TED compliance issues, NOAA fisheries is considering management measures for the otter trawl component of the shrimp fishery". SSA strongly objects to this notion that recent compliance issues in the shrimp fishery should or even can be addressed effectively through management measures for otter trawl vessels.

Cooperative efforts to address compliance issues. As an alternative to a regulatory approach, SSA has embarked on a comprehensive effort to work cooperatively with the Agency and industry to increase awareness of the need for compliance and to improve compliance through industry self-policing and by working with Agency gear specialists and law enforcement personnel to ensure TEDs are fully compliant before leaving the dock. These efforts have also resulted in an increased presence of enforcement and gear specialists on the docks, at-sea and in net shops as the most effective means to deter non-compliance, and this needs to be sustained year-round.

Indeed, as set forth in the Agency's July 25, 2011, letter to the Center for Biological Diversity and Turtle Island Restoration Network rejecting their petitions to close the shrimp fishery, "observed compliance has been improving substantially". As further stated, "as a result of the increased TED enforcement and outreach, and we have noted an immediate difference in the industry approach to TED training and compliance as a result of these efforts. In early May the

observed compliance rate rose quickly to approximately, 60%, then to about 68% at the beginning of June. Mid-July inspection data shows an observed compliance rate of nearly 87%.”

These results clearly document that TED compliance problems are readily and quickly solvable, and that the solutions are, with the possible exception of net shops, completely non-regulatory in nature with respect to shrimp vessels. Again, SSA reiterates its objection to the notion that this Scoping process should consider or result in additional management or regulatory measures for otter trawl vessels to regain the high levels of compliance this fishery has long been known for. SSA strongly urges the Agency to commit the resources necessary to continue and sustain year-round the extremely positive results of our cooperative efforts to improve compliance in the past few months.

Flawed Oceana Analysis. SSA also has evaluated the analysis of compliance information used by Oceana to justify their petition to close the fishery and found it to be fundamentally flawed. This analysis improperly attempts to use the results of ‘courtesy inspections’ performed by the Agency’s Gear Management Team (GMT) and Office of Law Enforcement (OLE) to work cooperatively with fishermen to identify technical problems with their TEDs. These inspections are typically performed in advance of the fishing season or during the first few weeks thereof. The entire purpose of this voluntary system is to help fishermen ensure that they will be in full compliance when they leave the dock to go fishing.

By definition, there will be problems found during such inspections, but that does not translate to these same problems occurring on the water when those fishermen are actually fishing throughout the season. On the contrary, each vessel that completes a courtesy inspections can be expected to leave the dock in full compliance—and that is, in fact, what is being observed in the fishery as reflected in the Agency’s July 25, 2011, letter to Center for Biological Diversity discussed above. As indicated, compliance rates have risen sharply to 87 percent.

Further, in SSA’s meetings with the Agency’s gear specialists and enforcement personnel involved, it became clear there is no scientific sampling protocol employed for conducting courtesy inspections and that the data gathered is not intended for any scientific purposes whatsoever. Consequently, as affirmed by Agency personnel, there is no valid statistical basis to use this data to extrapolate what compliance rates are when vessels are actively fishing, or to extrapolate the number of actual turtle mortalities in the fishery—as Oceana has attempted to do. This data is simply not representative of actual compliance in the fishery and cannot be used for the purposes of Oceana’s analysis.

### **(3) Alternatives to reduce sea turtle mortality**

Alternative 1: No Action. SSA reiterates its opening point that the information presented in these comments call into serious question the very premise of this Scoping process—that there

is a need to promulgate regulations to reduce the sea turtle mortality of sea turtles in the shrimp fishery. These comments have set forth a number of critical issues for the Agency to consider including, among others, the prevailing disconnect between strandings and shrimp effort, the unique circumstances surrounding the June 2010 strandings, the exponential growth in Kemp's ridley sea turtle abundance as that relates to the projected number of takes under a new Incidental Take Statement, and the vast improvements already achieved in TED compliance. Thus, until such time as the Agency is able to improve the scientific empirical information needed to answer many of these questions and uncertainties, and to adequately justify new regulations, the no-action Alternative 1 appears to be the only viable option at this time.

Alternative 2: TEDs in skimmer trawls. Given the discussions above, especially in section 2 concerning strandings, SSA is concerned that, to our knowledge, there is insufficient empirical data to support a legal requirement for requiring TEDs in skimmer trawls. While it may be intuitive that skimmer trawls interact with sea turtles and may present an important source of mortality, the strandings and necropsy data discussed above provide only a weak set of circumstantial inferences that do not support a long term management or regulatory response.

Further, unlike when TEDs were developed and required in otter trawls, we are unaware of sufficient (if any) observer data on the catch rates of turtles in skimmer trawls and how those catch rates vary in time and space. Such data would be critical to determine where and when TEDs in skimmer trawls might be useful.

Further, according to the data set forth in the Scoping document, a requirement for all skimmer trawls to use TEDs would affect approximately 3,600 vessels and require as many as 11,000 new TEDs (3 per vessel). At an approximate cost of \$375 each, the total economic impact of this requirement would likely exceed \$4,000,000 on a fishery characterized by small vessels and small businesses. Again, it may be intuitive, but the absence of empirical data and analyses needed to clearly document the conservation benefit of this requirement makes it very difficult to justify the regulatory (economic cost) impact on this sector of the fishery. SSA believes the Agency would need to vastly improve the scientific rationale for taking this management action before proceeding.

Alternative 3: Time/area fishery closures.

As set forth above, there is inadequate empirical data or other information to support time/area closures in the shrimp fishery for either skimmer or otter trawls. At this point, given the strandings/effort disconnect in 2011, and that it appears the June 2010 strandings were an aberration, it remains unclear that there actually exists a long term problem that would justify a long term regulatory response. SSA is unaware of the existence of observer turtle catch and shrimp effort data at the level of resolution that would be needed to support a legitimate

time/area management approach. Further, annual reported strandings data suggests that spikes in spring strandings do not occur at the same time each year (see Chart 2). Thus, there likely may be biological or environmental parameters affecting the seasonality of turtle behavior that would make it very difficult if not impossible to develop a sufficiently precise time/area management response. For these reasons, SSA strongly objects to the development of any time/area closures under this Scoping process.

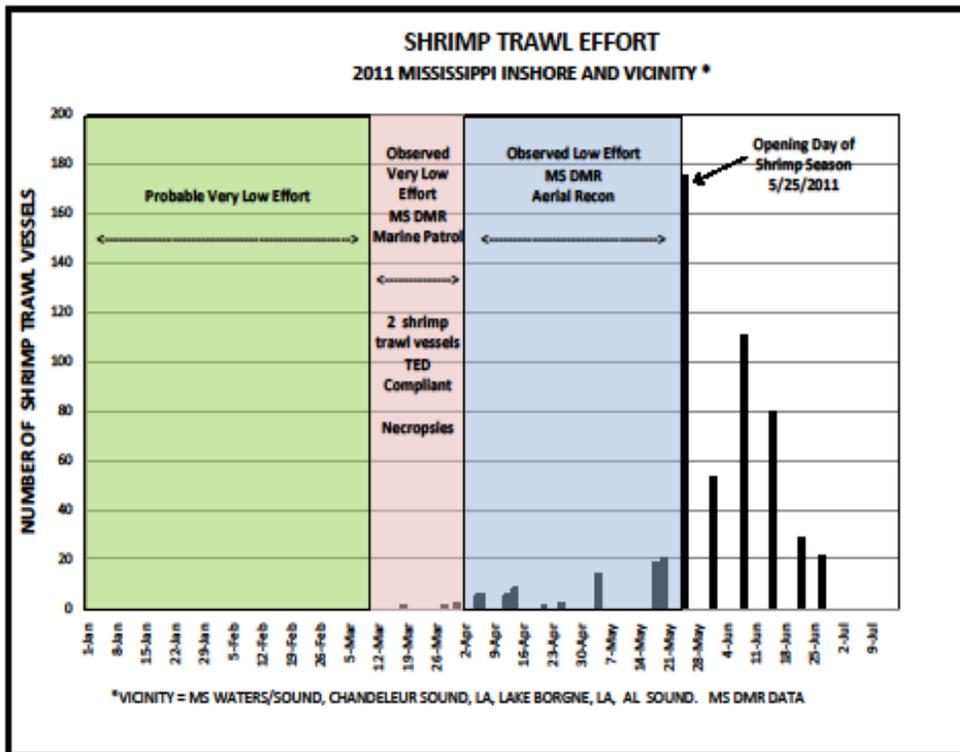
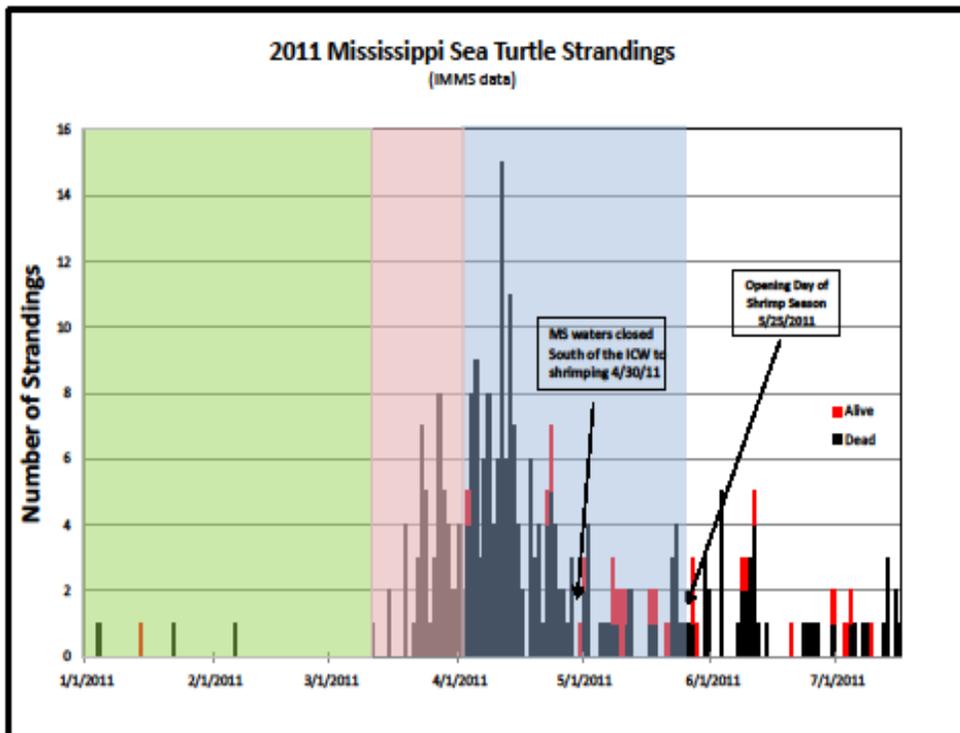
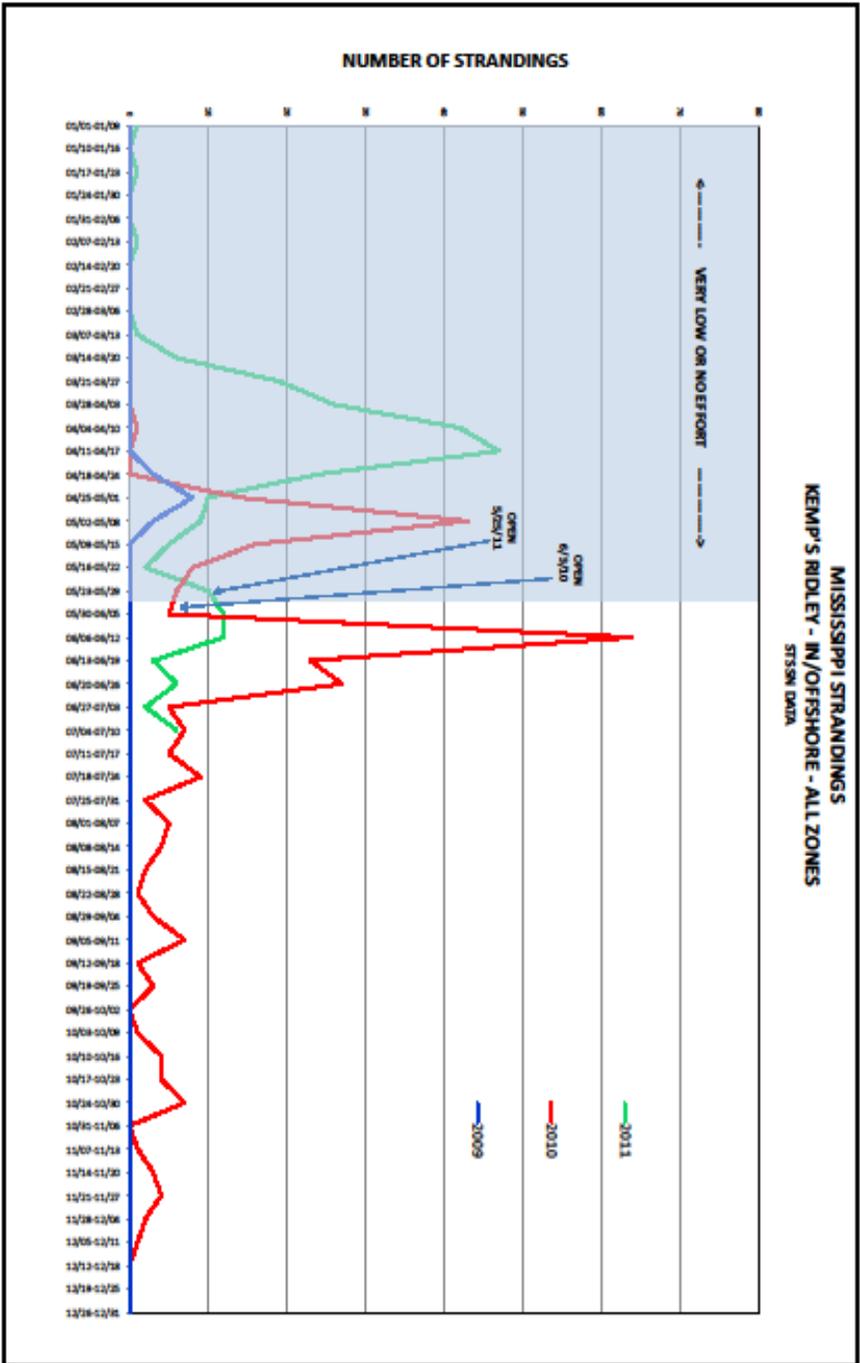


CHART 1



POINT 1: The vast majority of strandings in 2011 occurred prior to the MS season opening when shrimp effort was very low or non-existent and strandings did not increase substantially after the opening. This strongly suggests another cause for strandings.

POINT 2: Sediment was found in the lungs of necropsied turtles stranded in March 2011 when shrimp effort was nearly non-existent and TEDs were in compliance. This suggests that the presence of sediment is not valid evidence that shrimp fishing caused strandings.



**POINT 1:** The spike in strandings following the shrimp season opening in 2010 did not occur in 2009 and was not repeated in 2011. This strongly suggests that 2011 was an aberration—it is not representative of the fishery's performance and should not be the basis for fundamental, long-term management decisions.

**POINT 2:** Each year there is a period (approximately mid-March through mid-May) when strandings increase but shrimp effort is relatively low or nonexistent. This strongly suggests that some annual phenomenon other than shrimp fishing is causing strandings during this period.

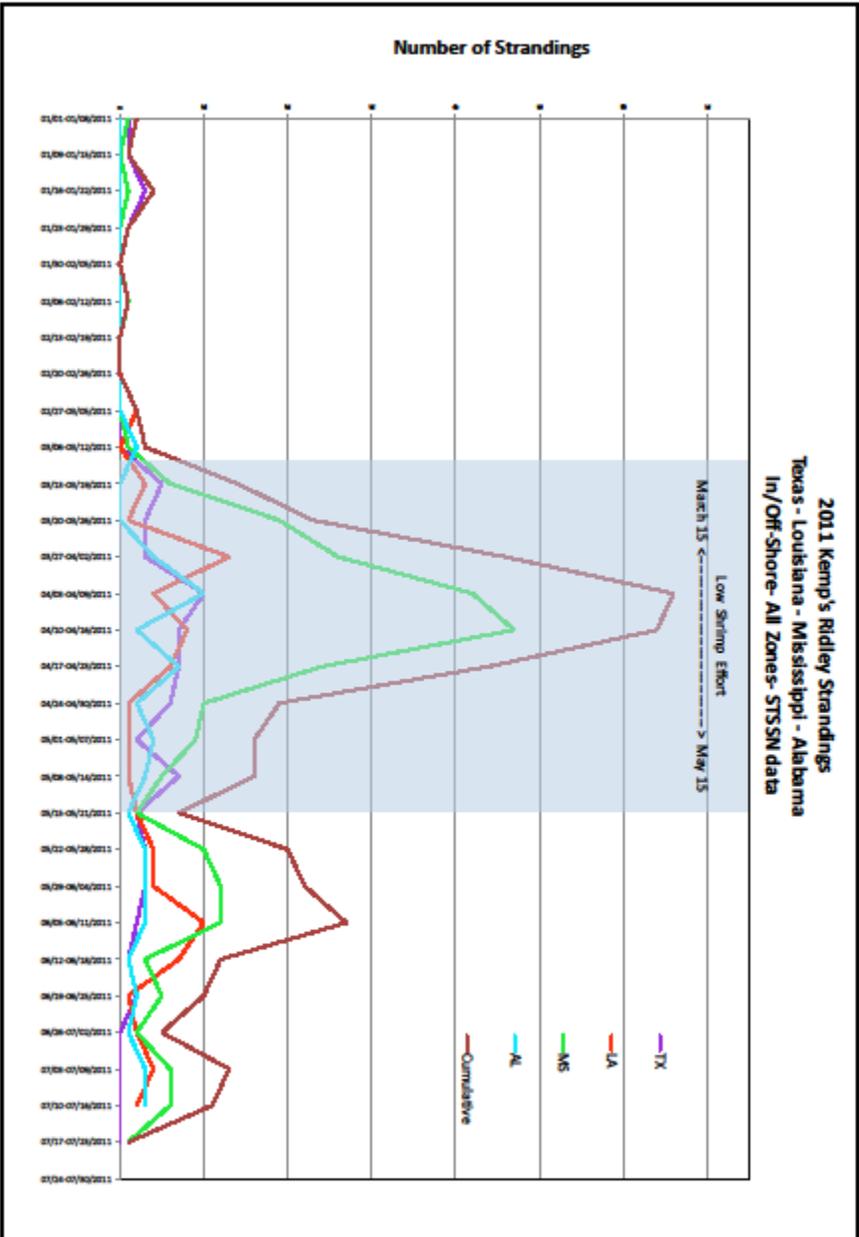


CHART 3

POINT: Each year there is a period (approximately mid-March through mid-May) when strandings increase in all states but shrimp effort is relatively low. This strongly suggests that some annual phenomenon other than shrimp fishing is causing strandings during this period.