



**M A I N E**  
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Mary Colligan, Protected Resources  
ATTN: ALWTRP FEIS  
National Marine Fisheries Service  
NE Region  
One Blackburn Drive  
Gloucester, MA 01930

September 17, 2007

Dear Ms. Colligan:

This letter constitutes the comments of the Maine Lobstermen's Association (MLA) on the Final Environmental Impact Statement (FEIS) for the Atlantic Large Whale Take Reduction Plan (ALWTRP). The MLA has several major areas of concern with the preferred alternative in the FEIS:

1. The scientific basis of the location of the exemption line
2. The economic analysis
3. The social impacts analysis
4. The implementation date
5. Maine lobster industry's ability to comply
6. Inadequate data

The MLA is concerned with the location of the FEIS exemption because it is not based upon a thorough analysis of the existing whale sightings data. The analysis must consider where and when the whale sightings took place, both in terms of time of year (by month or season) and when the sighting took place (decade of the sighting); the overlap between fishing effort and whale sightings including a calculation of the probability of large whales encountering specific fishing gear; and the level of risk of entanglement of whales which are sighted (i.e. are they feeding aggregations or transiting whales).

The MLA is concerned with the economic and social impacts analyses due to the many flawed assumptions that drive it. The two most concerning items are NMFS' estimates on the life of sinking groundline which the MLA believes are off by several years causing NMFS to underestimate the both the initial and ongoing cost of compliance, and NMFS' assumptions of fishermen behavior with respect to choosing to fish inside the exemption line causing NMFS to grossly underestimate the number of affected lobstermen. These analyses must be reconsidered using the most current data and more accurate inputs.

The MLA is concerned about the implementation date because it simply will not work. NMFS contends that 23.9 million fathom of groundline will be converted. Rope

manufacturers have stated that they will not be able to meet this level of demand in 12 months.

The MLA is concerned about the Maine lobster industry's ability to comply with the preferred alternative. Maine is currently 98% compliant with existing regulations and would like to stay that way. However, the industry feels strongly that this preferred alternative will not be operationally feasible for the majority of the Maine lobstermen, and implementation of this alternative could cause widescale non-compliance by the industry.

The MLA is gravely concerned about the major economic impacts faced by the Maine lobster industry relative to the level of conservation that will be afforded to large whales. If large whales are not in the majority of waters fished by Maine lobstermen as this industry contends, these broad scaled regulations will have minimal conservation benefit on the whales but cause major economic hardship on the industry. It is therefore imperative that additional research be completed before these regulations are put in place. It is widely believed that there is an ecological basis for the lack of whale sightings close to shore along the Maine coast, namely that Maine's strong currents, tides and rocky bottom habitats do not support whale forage in sufficient densities for whales to feed here. Whale sightings along the Maine coast become more frequent where the bottom type transitions from rocky to gravel and mud. It appears that large whales and Maine lobstermen have different habitat preferences and therefore rarely overlap. The MLA will discuss each of these concerns in greater detail.

#### Scientific Basis of the Location of the Exemption Line

NMFS must reconsider the location of the FEIS exemption line. In the MLA's comments on the DEIS and Proposed Rule, we opposed any rule that banned the use of floating groundlines. However, since a major ban of floating line seemed imminent, the MLA endorsed the proposed "DMR exemption line" as a better alternative than the proposed "DEIS exemption line". The MLA supported this line with the understanding that a commercially viable gear alternative, namely low profile groundlines, would be available and allow the Maine lobster industry to fish successfully outside the exemption line. However, to date, this gear option has not materialized. No viable gear alternatives have evolved since this process began. The bottom line is that the industry would support a compromise if a commercially viable whale safe gear is available. With the promise of an operationally feasible and commercially viable rope, the MLA did not fully investigate the basis for determining the location of this line. In the absence of this, the MLA has now taken a closer look at the exemption line and the scientific basis for establishing it.

The MLA is concerned with the location of the FEIS exemption because it is not based upon a thorough analysis of the existing data. The line is based on a plotting of whale sightings from 1970 to 2005, as well as an examination of right whale tagging data. However, this analysis falls short of considering where and when the sightings took place in time and space both in terms of time of year (by month or season) and when the sighting took place (decade of the sighting). The exemption line should be based on

the interactions of whales and fishermen, with consideration of alternatives in areas of concern such as seasonal gear modifications.

An analysis conducted by researchers at the University of Buffalo for the MLA provides a series of maps for each whale species (right, humpback, finback) which break the whales down by decade of sighting, number of whales per sighting, and season of sighting (Appendix 1). There is also a series of maps that looks at these sightings over the most recent 15 year period (from 1990 to 2005) focusing on the number of whales within both the 3 mile line and 50 F curve along Maine's coast<sup>1</sup> (Appendix 2). The whale sightings database used for this analysis was provided by the Maine Department of Marine Resources.

These data show rare occurrences of whales off the Maine coast. From 1990 to 2005, only a small number whales have been sighted inside the 50F curve along the Maine coast and even fewer in state waters:

<b>Whale Sightings &lt;50F Curve Along Maine Coast 1990-2005</b>						
	<b># of Right Whales</b>		<b># of Humpbacks</b>		<b># of Fins</b>	
	<b>Total</b>	<b>w/in 3 mi.</b>	<b>Total</b>	<b>w/in 3 mi.</b>	<b>Total</b>	<b>w/in 3 mi.</b>
<b>Zone A</b>	-	-	3	0	4	1
<b>Zone B</b>	-	-	-	-	1	-
<b>Zone C</b>	1	1	-	-	1	-
<b>Zone D</b>	2	-	1	1	-	-
<b>Zone E</b>	-	-	-	-	27	2
<b>Zone F</b>	1	1	-	-	-	-
<b>Zone G</b>	3	-	3	3	-	-
<b>TOTALS</b>	<b>7</b>	<b>2</b>	<b>7</b>	<b>4</b>	<b>33</b>	<b>3</b>
Data from Maine Dept of Marine Resources. Sources include NOAA/URI, ferries, Marine Patrol, whale watch vessels, and fishermen						

Zone B and F have each experienced only one large whale sighting inside 50F over the past 15 years, Zone C has had only 2, Zone D has had only 3, Zone G has had only 6, Zone A has had only 7 and Zone E has had 27 in one concentrated area known as The Kettles. This demonstrates that the potential significance of whale and fishing gear interaction varies tremendously by zone. Compare this with the number of whale sightings in the Great South Channel, Cape Cod Bay or the Bay of Fundy where the whale sightings are significantly higher and it makes little sense that all lobstermen along the east coast will be regulated with similar broad-based gear modifications. An analysis of this nature is essential to providing context to the 35+ years of whales sightings data in the whale sightings database. But this is just the first step.

It is also important to assess the level of risk of the whales sighted. Are the whales simply transiting through or are they aggregating, feeding and remaining in one place

<sup>1</sup> These maps were produced for MLA by Chris Brehme, a Ph.D. candidate in the Geography Department at the University of Buffalo. Mr. Brehme holds a BA and MS degree in geography with more than 7 years professional GIS/IT experience.

for an extended period of time. It is difficult to determine the behavior of whales based on daily sightings, but NMFS has determined a methodology to determine whales which are most at risk of entanglement, namely that which is used to trigger a DAM zone.

An analysis conducted by Chris Brehme and Seth Spielman, GIS specialists at the University of Buffalo, reviewed the methodology developed in 2001 by Philip J. Clapham and Richard M. Pace (Defining Triggers for Temporary Area Closures to Protect Right Whales from Entanglement: Issues and Options). This analysis, which adopts the methodology outlined in this paper, was conducted to distinguish feeding or at risk sightings of right whales from isolated sightings using this methodology (Appendix 3).

To determine right whale aggregations the researchers looked for whales clustered in time and space. If there are 3 or more whales, they are considered an aggregation. More specifically, any whale sighting that was followed by another whale sighting within 10 days was considered for GIS analysis. In the GIS, circles were created around these events with radii that provided the same whales per unit area (i.e. if there were 30 whales, the circle had to be 10x larger than if there were only 3 whales in the sighting.)

If 2 circles touched, the total number of whales in these 2 circles was checked to see if it was equal to 3 or more which was considered an event. Any single whale sighting of 3 or more whales was considered an event.

If a whale was a participant in one of these events, it was considered part of an aggregation and drawn on the map with gray circles. If a whale sighting was not a participant in an event, it was considered an isolated location on the map and drawn with a black cross.

For the 35 years of right whales sightings, nearly all of these “events” assumed to be feeding aggregations fall outside the 50 fathom curve. There are two exceptions to this: an area near Jeffrey’s Ledge where whales are known to forage and Maine lobstermen are already 98% compliant with sinking groundline provisions due to repeated DAM zones in recent years, and the area where zone A meets the Bay of Fundy, where whales are known to spend their summers feeding. A third aggregation was identified with the sighting of whales in Penobscot Bay during the 1990’s .

This analysis clearly demonstrates that the greatest conservation benefit to whales would be achieved by implementing sinking groundline provisions outside the 50 fathom curve along the Maine coast. A separate DMR analysis of DAM zones over the past 5 years indicated that the whale sightings occurred on average 31 miles from shore in the Jeffrey’s Ledge area and 57 miles from shore along the rest of Maine’s coast. Additional analysis should be conducted to determine the extent of seasonal modifications necessary to protect feeding aggregations identified within the 50 fathom line along the Maine coast.

Finally, it is important to consider the location of the at risk whales in relation to where a fishery is being executed. What is the overlap between fishing effort and whale sightings, and are there particular areas of concern where fishing effort overlaps with

high risk feeding aggregations of whales? This analysis should include a calculation of the probability of large whales encountering specific fishing gear; and the level of risk of entanglement.

Maps produced by Chris Brehme at the University of Buffalo look at fishing effort along the coast of Maine for 8 prime fishing months (Appendix 4). These maps draw from the whale sightings database and Maine fishing effort data collected by Maine DMR through electronic logbooks on board lobster vessels from 2000 to 2005. This period coincides with the most intense monitoring for whale sightings.

<b>Fishing Effort vs Right Whale Sightings 2000 to 2005 inside 50 Fathom</b>				
	Potential Trap Density/km <sup>2</sup>		# Whales*	
	Within 3 miles	3 miles to 50 fathom	Within 3 miles	3 miles to 50 fathom
April	.01 to 5	5 to 10	0	2
May	10 to 20	10 to 20	0	0
June	10 to 30	5 to 20	0	0
July	40 to 100+	0 to 40	0	0
August	75 to 100+	.01 to 50	0	0
September	20 to 100+	20 to 50	0	1
October	40 to 75	40 to 50	0	0
November	5 to 30	20 to 40	0	0

\* #'s approximated based on visualization of charts

Using a database of trap locations collected by approximately 40 fishermen from 2000-2004 (Thistle data, provided by Maine DMR and Gulf of Maine Lobster Foundation), trap densities were predicted by month for the entire coast. A sampling area that included approximately 200,000 trap locations (about half the dataset) over this time period was used to estimate trap density. It was determined that the area to the east of Isle au Haut and including much of the area fished by Stonington lobstermen is representative of high density fishing areas along the coast.

The trap density surface was combined with a bathymetric data in the sampling area as input to a linear regression in the statistical package SPSS. Trap density was the independent variable and depth was the only dependent variable. The results of the regression were then applied to a bathymetric surface of the entire Maine coast, in order to predict trap densities coastwide. This analysis is likely to overestimate trap densities in many areas of the coast because many do not experience as much fishing effort per unit area as the Stonington region<sup>2</sup>.

The data show Maine's fishing pattern with little effort in both state and federal waters in the early spring months, with the most intense fishing occurring in state waters during July to September, with the fishing effort lessening and shifting in intensity to federal

<sup>2</sup> For future work, multiple sampling areas should be used to seed the regression, and more accurate information should be gathered from fishermen to identify how they utilize their own fishing areas relative to those in their harbor/zone. This would allow for the elimination of those areas that are rarely or never fished, and account for trap density at various scales--individual, harbor, and zone. Information on the percentage of fishermen and traps present on the water for each month would also help refine the predictive maps.

waters in October and November. From the period of 2000 to 2005, there were no right whales sighted in state waters during any of Maine's prime fishing months, and only one whale sighted in Zone G during the month of September in federal waters between the 3 mile line and the 50 fathom curve.

This analysis shows virtually no interaction between right whales and Maine lobstermen from 2000 to 2005 within 50 fathom from shore, with a near zero probability of entanglement risk.

#### Operational and Safety Issues Associated with Fishing Sinking Groundline

The MLA has been on the record since the beginning of this process stating that Maine lobstermen need floating rope to fish in rocky bottom areas. The Maine lobster industry has worked with DMR over the years to host an ROV camera to film and document the behavior of ropes on Maine's rocky bottom, and especially to document the unique nature of Maine's rocky bottom habitat. The ROV footage clearly showed Maine's rocky bottom in southern Maine and documented the increase in rocky bottom and ledge along Maine's coast as you travel from west to east. The eastern-most part of the state was marked with massive bolder and ledge features. This footage also documented gear hang-downs in the rocks.

While this footage established that the Maine coast is unique and our lobstermen are challenged to fish bottom that does not exist in the other US lobster fishing states, the FEIS adopts the same management approach for all areas and all US fixed gear fisheries. This one size fits all approach simply will not work in Maine.

Maine lobstermen can not fish sinking groundlines in rocky bottom habitat. The gear will chafe along the rocks and barnacles and break off causing significant gear loss of rope and traps. In addition to rope chafing, this gear is easily hung down under rocks causing significant safety hazards due to the tremendous strain on the rope when caught between the hauler and a rock. Gear that is hung down and rope that is weakened due to chafing takes additional time and care to fish. Lobstermen will also spend additional time searching for gear that has been lost and can not be recovered.

A recent article in Commercial Fisheries News reported on an incident of this nature out of Gloucester, Mass where lobstermen have already been mandated to fish sinking groundlines (Appendix 5). The area where this occurred is rocky bottom habitat, the size and scope of which are much less severe than what is found in midcoast and eastern Maine. The Gloucester vessel was fishing sinking rope that became hung down. Under the strain, the hung down gear tore out the davit, support post and corner of the cabin. The Captain and crew were fortunate that no one was hurt.

The recent Government Accountability Office (GAO) report release in July 2007 states that NMFS "has not resolved potential implementation challenges with using modified gear in rocky ocean bottom areas." (Appendix 6)

## Economic Analysis

The July 2007 GAO report also raises concerns with NMFS economic analysis and states NMFS “did not adequately represent the economic uncertainties associated with the costs of the proposed gear modifications and could not fully assess impacts on fishing communities.”

The MLA has carefully reviewed the economic and social impact analyses contained in the FEIS and have serious concerns about NMFS’ estimation that this rule will cost the industry \$13.4 million dollars of which \$12.1 million is attributed to the US lobster fisheries. Based on our intimate knowledge of the lobster fishery, the MLA believes that many of the assumptions driving the economic analysis are simply wrong. The net effect is the MLA estimates that NMFS’ economic impact may be off by up to a factor of 10.

With such a large discrepancy between assumptions made by the lobster industry and those made by NMFS, the MLA does not believe NMFS has made a defensible argument on the impact of these rules on Maine lobstermen and our communities.

The two most concerning items are NMFS’ estimates on the life of sinking groundline which are off by several years and cause NMFS to underestimate both the initial and ongoing cost of compliance, and NMFS’ assumptions of fisherme’s behavior with respect to fishing inside the exemption line. This further underestimates the number of affected lobstermen and therefore compounds the underestimation of costs. These analyses must be reconsidered using the most current data and more accurate inputs.

The MLA offers the following comparison of economic assumptions made by NMFS versus those suggested by the Maine Lobstermen’s Association. A complete explanation of each item is provided.

### *The Cost of Rope*

The MLA contacted 8 rope manufacturers or retailers in September 2007 to obtain the current prices of floating vs. sinking ropes (Appendix 7). The MLA gathered information on a variety of rope sizes and types, but focused our analysis on the most commonly used rope types and sizes. Lobstermen typically fish 3/8” floating line. If they were to change over to sinking line, lobstermen would go up a minimum of one size to 7/16” sinking line to try to offset some of the rapid wear and tear on the sinking rope. Maine lobster vessels that could safely handle 1/2” rope may chose to size up to that in order to maximize the potential life of the rope. It is unlikely that lobstermen would switch from 3/8” floating rope to 3/8” sinking rope because that size sinking rope simply would wear down too quickly on rocky bottom habitat.

A comparison of average rope costs obtained by MLA vs NMFS shows that NMFS underestimated the price of 3/8” floating line by 30%, the prices of 3/8” sinking line by 44%, and NMFS did not provide costs estimates for 7/16” sinking line, the most likely choice for Maine lobstermen to convert.

<b>Review of Cost Estimates in FEIS (NMFS vs MLA)</b>		
	<b>NMFS</b>	<b>MLA</b>
3/8" Float Rope/coil	\$55.20	\$71.74
3/8" Sink Rope/coil	\$85.20	\$122.43
7/16" Sink Rope/coil	Not specified	\$157.42
Lobster Trap	\$59	\$70
Life of float rope	9 years	9 years
Life of sink rope	6 years	2 years
↑ in annual rope replacement	6%	39%
Labor rate	\$10.58	\$10.58
Labor to change out rope	10 min/100 ft	14 min/100 ft
Labor to change out traps	10 min/trap	14 min/trap
↑ in annual trap loss due to chafe and hangdowns	10%	15%
↑ in annual trap loss due to weather	0%	5%
↑ ghost gear (traps) not retrieved	0	4% (32 traps)
↑ fishing time to fish sinking groundlines	0	120 hours
Loss of catch due to tag loss	0	\$3129
ME federal permit holders affected by FEIS exemption line	Not specified	1,270
ME state waters only permit holders affected by FEIS exemption line	1,079	3,347

### *The Cost of Lobster Traps*

The MLA spoke with Brooks Trap Mill located in Thomaston, Maine in September 2007 and was informed that the average price of a "basic 4' lobster trap" is \$60 and runs to \$70 depending upon the gauge of wire, number of runners, types of weights, etc purchased. The MLA used the conservative estimate of \$60 per trap plus \$10 per trap to outfit it with a bridle and tailor.

### *Expected Life of Sinking Rope*

NMFS estimates the average life of sink rope between 5 to 7 years based on the opinion of their gear experts. It is simply a guess of how long the rope might last under certain conditions. The MLA estimates the life of sink rope to be between 0 to 4 years; less than a season in the eastern part of the state where the bottom conditions, tides and currents will quickly chafe and break the rope, and up to 4 years in the southern part of the state where sinking rope has been successfully tested for 2 lobster fishing seasons. This average of anticipated rope life is based on field trials of sinking groundline conducted by MLA through the Consortium for Wildlife Bycatch Reduction during which sinking groundline lasted from <1 set to a few months in midcoast and eastern Maine, but lasted 2 field seasons in southern Maine (Appendix 8).

The MLA also spoke with Glen Perini of Hyliner Rope based in St. George, Maine who stated that he did not believe that even his most durable sinking rope known as steel liner would hold up for a season on Maine's rocky bottom. NMFS estimates of expected rope life translates into a 6% increase in the amount of rope that would need to be

changed out annually, while MLA's estimates translate into a 39% increase in the amount of rope that would need to be changed out annually.

Also of note with regard to sinking groundlines is that NMFS contends that Maine lobstermen can successfully fish sinking groundlines by simply altering their fishing practices, more precisely landing traps and maneuvering the boat to haul this gear. Maine lobstermen can not simply alter their fishing practices to successfully fish sinking rope. There is no amount of technology and boat maneuvering that will allow lobstermen to land lobster traps in precise locations on the ocean bottom or hover directly above a trap. Given the conditions that lobstermen fish under including wind, weather, tides and currents, there are few days that lobstermen can maneuver a vessel directly above the gear in order to minimize or eliminate gear hang downs and chafing.

#### *Labor Rate*

NMFS uses an estimate of \$10.58/hour in 2007 dollars which is based on the mean hourly rate provided by the US Bureau of Labor Statistics. The MLA is unsure whether this is an accurate labor figure due to the fact that labor rates for the lobster industry are not based on a set schedule, but rather are generally determined by the volume of lobster landed and the price paid on any given day. Sternmen are usually paid a percent of the catch rather than a set wage. However, the labor rate of \$10.58 is probably a fairly accurate hourly wage for a sternman, but may be low for the owner/operator. Therefore, the MLA applied NMFS' estimate of \$10.58/hour.

#### *Labor to Change out Rope*

The MLA assumes that the cost of labor to change out rope includes purchasing and picking up rope, running it out and cutting to length, coiling, loading it on the boat and then setting it. The MLA's assumption of 14 minutes per 100 feet is based upon a load of 5 coils of rope with an estimate of 100 minutes to purchase and pick up (20 min/coil), 225 minutes to run out rope, cut and coil (45 min/coil), and 500 minutes to set (100 min/coil).

#### *Labor to Change out Traps*

The MLA assumes that the cost of labor to change out traps includes purchasing and picking up traps, unloading traps, rigging with bridle, tailor and tags, loading on boat and setting gear. The MLA's assumption of 14 minutes per trap is based on loads of 50 traps so the costs will be much higher if fewer traps are purchased at a time and include an estimate of 100 minutes to purchase and pick up (2 min/trap), 10 minutes/trap to rig bridle, tailor and tag, and 100 minutes to load onto boat and set (2 min/trap).

#### *Increase in Trap Loss: Due to Chafe and Hangdowns*

NMFS estimates the additional trap loss caused by the conversion to sinking groundlines to be 10%, which NMFS acknowledges can not be estimated with confidence. This figure is based on a best guess by NMFS' gear specialists since there is no field data available. The MLA also lacks data from field trials on this cost estimate. In the field trials conducted by the MLA for the Consortium for Wildlife Bycatch Reduction, the sinking rope was tested on a limited basis and therefore monitored this gear carefully. Many lobstermen removed the sinking

rope from the water when it showed signs that parting off was imminent, or the gear was placed in a spot that the lobsterman was confident it could be retrieved back by a second endline or grapple. However, the MLA has spoken with hundreds of lobstermen who all believe that an average additional gear loss of 10% due to chafe and handowns is too low, and estimate that it would be 15% which the MLA considers to be a “significant” gear loss.

*Increase in Trap Loss: Due to Weather*

NMFS does not attribute any trap loss due to “bad weather”. However, the MLA estimates that there will be additional trap loss, above and beyond the amount of gear lost due to chafing and handowns due to bad weather. The amount of additional gear loss due to weather will vary tremendously depending on the annual wind and weather patterns. If gear is fished on hard bottom with sinking line, a single bad storm could wipe out a good portion of a lobsterman’s gear. For example, the Patriot’s Day storm in April 2007 was devastating for many lobstermen along the coast who had their gear set in hard bottom with floating line. The amount of gear lost would have been much higher had the gear been rigged with sinking groundline. However, since this storm occurred in April, many lobstermen did not have a lot of gear set. The impacts would have been much worse if the storm had occurred in September. Lobstermen try to shift gear in anticipation of a storm, but are sometimes unable to move all their gear in time. Therefore, gear loss due to poor weather is likely to result in a high percentage of gear loss for big storms, and lesser amounts for lesser storms. The MLA assumed that additional gear loss above what would normally be lost in a storm if one were fishing floating groundlines to be 5%, which is a very conservative estimate.

*Increase in Trap Loss: Due to Ghost Gear not Retrieved*

During the normal course of fishing, lobstermen lose at least 5% of their gear due to chafing, handowns, vessel traffic, gear conflicts and weather. However, over the course of the fishing year, they are able to retrieve the majority of that gear back because the floating line gets caught on other lobstermen’s gear and is hauled up and returned to its owner. Under the new sinking groundline provision these traps will not be recovered because there will be no floating line to snag up in other gear. The MLA estimates that this will result in an additional 4% permanent loss of traps.

*Increase in Fishing Time to fish Sinking Rope*

Lobstermen haul on average 200 traps with floating groundlines in 7 hrs. If they convert to sinking groundlines, it will take longer to work through their gear due to the need to try to position the boat more strategically in relation to the gear, dealing with minor chafing and handdown issues and attempting to locate gear that may have been lost. The MLA estimates that lobstermen will haul on average 200 traps with sinking groundlines in 8 hrs. The net increase in fishing time is 1 hr/day over the course of 100 fishing days (average lobstermen fish for approximately 35 weeks from May through December and haul an average of 3.5 days/week for a total of 120 days).

### *Loss of Catch due to Tag Loss*

Under the new sinking groundline regulations, lobstermen are at risk of losing a quarter of their traps (15% due to chaffing and hang downs, 5% due to weather, 4% traps usually lost but then recovered by other lobstermen). Maine only allows a 10% overage of tags, so traps lost beyond this amount can not be replaced without claiming a catastrophic loss and replacing all tags. Tags cost .30 (\$57) and it takes a few weeks on average to reissue tags in a catastrophic loss (192 traps average 2lbs/trap x 2 weeks @ \$4.00/lb = \$3072 + 57 = \$3129). Only 800 tags will be reissued with a catastrophic loss, so lobstermen will continue to lose the revenue as traps are lost after replacement tags. The MLA estimates the cost of loss catch due to tag loss to be \$3129/boat.

### *Impact on Maine's Federal Permit Holders*

To determine which federal permit holders would be impacted by the ban on floating groundlines, NMFS plotted vessel trip report (VTR) data and identified vessels that reported 50% or more of their trips in the exempted areas and then assumed that under the new whale rules, these vessels make all future trips within exempted areas rather than invest in the required gear modifications. According to NMFS' data only 57% of federal lobster permit holders submit VTR Data because 43% of lobstermen did not hold another permit and therefore are not required to report.

The MLA believes that this assumption is wrong and that the majority, if not all, of Maine federal permit holders will fish on both sides of the exemption line and therefore will be affected. The MLA was not able to determine how many Maine lobstermen were excluded by NMFS in this analysis as no data on the number of Maine federal permit holders or Maine federal permits holders who fish >50% of their time inside the exemption area were included in the FEIS.

However, the Maine lobster fishery follows a natural seasonal migration which would support that more than 50% of a lobsterman's fishing time would be spent inside the exemption line. It is a well known fact that lobsters migrate from offshore waters to coastal waters in the late spring and summer, and then begin their migration back offshore during the fall and winter. The most intense fishing takes place close to shore during those summer months. It is likely that these federal permit holders could spend 75 to 100% of their trips inside the exemption area during the summer months, and then follow the lobsters back offshore during the fall months. This pattern is demonstrated in the lobster fishing effort charts supplied by the MLA (Appendix 4).

A lobsterman's ability to move with the lobsters is essential to successful lobstering. The MLA assumes that most federal permit holders must fish on both side of the exemption line, and conservatively estimate that 10% of federal permit holders will fish exclusively inside the exemption area. The MLA assumed that there are 1400 Maine federal permit holders, leaving 1,260 who would be affected by the ban on floating groundline outside the exemption line.

### *Impact on Maine's State Waters Only Permit Holders*

To determine which state waters only permit holders would be impacted, NMFS looked at 2003 state of Maine license data, and removed those who hold federal permits

because they are already accounted for (as explained above). This equaled 4,183 lobstermen minus those who purchased less than 100 traps to ensure they were targeting active lobstermen, leaving 3,719 lobstermen. Because the proposed NMFS exemption line exempts 71% of Maine state waters, NMFS assumes that only 29% of Maine state waters only lobstermen would be affected by the new whale rules (1,079 lobstermen).

The MLA argues that this is a gross underestimation of the number of state waters only lobstermen who would be affected by the ban on floating line. Assuming that 71% of Maine state waters only lobstermen would not be affected by this rule because 71% of state waters are exempted simply does not account for the actual behavior of lobstermen. Maine lobstermen must set gear where the lobsters are and will continue to fish on both sides of the exemption line according to where they are catching lobster.

NMFS has incorrectly interpreted the Maine traditional fishing territories and fundamentally misunderstands how the Maine lobster fishery works. The territories keep lobstermen from moving east to west or along the coast, for example lobstermen do not cross into the next harbor's area. But, most lobstermen move freely in an inshore/offshore direction. The FEIS exemption line could in fact prove to be more costly because lobstermen may need two sets of gear to rotate in and out of the exemption areas. The MLA assumes that only 10% of state waters only lobstermen will fish exclusively inside the exemption line for a total of 3,347.

The MLA has put forward these estimates in order for NMFS to reconsider the inputs and assumptions that went into its economic model. We do not pretend that this is a comprehensive economic analysis, or that all of our estimates will prove to be the most representative for the Maine lobster industry. It is our best estimation given the time we had to respond. Based on the MLA assumptions, the cost of complying with the Preferred Alternative in the FEIS could reach more than \$130 million (Appendix 9).

### Social Impacts Analysis

Due to the poor assumptions that went into the economic analysis, the MLA believes that the results of the social impacts analysis are also incorrect and do not accurately predict whether costs will be significant enough to cause behavioral change. NMFS did not achieve "environmental justice" by addressing the disproportionately high and adverse human health and environmental effects on minority and low income populations.

NMFS has determined that there will be a total of 231 "heavily affected vessels" or vessel segments for which vessel compliance costs exceed 15% of mean annual revenues. All of these vessels are Class I vessels which are those < 28 feet.

The MLA estimates that the majority of Maine vessels will be "heavily affected" by the sinking groundline requirement. As outlined in our comments on the economic analysis, NMFS did not account for a majority of the Maine vessels that will be affected.

Furthermore, a recent study conducted by the Gulf of Maine Research Institute found that the mean lobster revenue that is profit after expenses are paid to be \$25,379. This ranges from \$21,500 in Zone F to \$31,500 in Zone B (Appendix 10).

<b>Lobster Revenue that is profit after all expenses are paid (GMRI 2006)</b>	
Zone A	\$22,940
Zone B	\$31,517
Zone C	\$27,085
Zone D	\$30,423
Zone E	\$21,867
Zone F	\$21,466
Zone F	\$22,356

This study entitled the *Lobster Socioeconomic Impact Survey* was funded by NMFS and conducted by Market Decisions, a well respected market research firm based in Portland, Maine. The MLA contacted Eric Thunberg, a NFMS economist who worked on the study and was informed that the data from this study has been used in a yet unpublished FEIS for the Area 3 lobster fishery and serves as the basis of a technical paper that has been submitted for publication by NMFS.

Based on these “revenue that is profit” figures, on average, all Maine vessels affected by the sinking groundline will be heavily affected as vessel compliance costs will exceed 15% of mean annual revenue. Therefore the MLA estimates that there will be more than 4,400 “heavily affected” vessels. Lobstering is a prominent component of the regional economy in all of Maine’s coastal counties, and it is primary component of the local economy for many of Maine’s coastal communities and islands. Therefore, the MLA strongly disagrees with NMFS’ conclusions that the number of heavily affected vessels are few in number and small in size, therefore employ a few number of fishermen and account for a relatively small share of landings. On the contrary, there will be many heavily affected vessels which could have a significant impact on employment, associated businesses and the regional economy.

Implementation Date

The MLA does not believe that NMFS’ proposed implementation date of 12 months from the date of the Final Rule (anticipated to be October 2008) is realistic. The MLA has consulted with rope manufacturers who do not believe that the 30 million fathom of rope that NFMS estimates will be replaced can happen over the course of 12 months. There are several reasons for this including that rope manufacturers must continue to meet existing demand for their businesses and therefore can not dedicate a lot of additional manufacturing capacity to producing sinking ropes. Further, the majority of polyester yarns necessary to manufacture sinking rope now come from Asia and it takes a minimum of 3 months to get a container to the US. They also anticipate that if there is a sudden demand for polyester yarns in the US, the price will go up resulting in an increase in the cost of sinking rope.

The implementation date should also occur in June, not October, when lobstermen are already rigging and tagging gear. NMFS had originally proposed a 3 year implementation schedule when the rule was drafted and should consider something more reasonable along those lines.

Inability to Comply

The MLA is concerned about the Maine lobster industry’s ability to comply with the preferred alternative. The Maine lobster industry is well known for our stewardship of natural resources, and the large whale issue is no different. According to enforcement

officials from Maine DMR, the Maine lobster industry is currently over 98% compliant with whale rules and the industry would like to continue this stellar record of compliance.

However, the industry feels strongly that this preferred alternative will not be operationally feasible for the majority of the Maine lobstermen, and implementation of this alternative could cause widescale non-compliance by the industry. As has been stated previously, Maine lobstermen can not fish sinking line in hard rocky bottom habitats. Maine has rocky bottom habitat along its entire coast, although the problem gets more severe in a west to east direction along the Maine coast. This is exacerbated by an increase in tides and currents as well.

Maine lobstermen will attempt to cope with the new rules by either fishing singles inside state waters where feasible which would negate any perceived conservation benefit of this rule from the exemption line out to the 3 mile line. Or they may continue to fish floating groundlines in areas where singles are not feasible and in the rocky bottom habitat outside the exemption line because currently, there is no other economically and operationally feasible way to fish their gear.

#### Inadequate Data

The Preferred Alternative outlined in the FEIS should not move forward before further research is conducted on several fronts. The Maine lobster industry is comfortable recommending that NMFS consider an immediate implementation of the sinking groundline provision somewhere outside the 50F curve based on the University of Buffalo's analysis of whale sightings, whale aggregations and lobster fishing effort. This line should be based on providing the most at risk whales with the most immediate protection while the issues of where an actual exemption line should be located are ironed out. Additional data is needed to determine the final location of the exemption line. The most pressing research needs include:

- Continue the analysis put forward by the University of Buffalo on better understanding the whale sightings data by time and location and the level of entanglement risk faced by those whales.
- Continue the analysis put forward by the University of Buffalo to better understand the interaction of fishing effort and large whales and establish the probability of certain gear types interacting with large whales.
- Research the ecological basis for the lack of overlap between Maine lobstermen and large whales, namely the availability of whale forage over rocky bottom habitat and in strong tides and currents.
- Tag right whales to determine their transiting and feeding behaviors.
- Conduct an improved economic analysis that takes into account that true costs of compliance and more accurately represents the numbers of affected fishermen.
- Allow the fishing industry to study the gear removed from disentangled whales to allow them to weigh in on the type and origin of the gear, and provide input on the nature of the entanglement.
- Continue gear research work
  - Better understand the properties of floating rope in areas of strong tides and currents. DMR pressure sensor data demonstrated that floating rope

in downeast Maine had an arc which ranged from 1 to less than 2 feet (.3 to .5 meters) off the bottom. The Gulf of Maine Lobster Foundation is now conducting a pilot study to determine the extent to which the downeast current keeps floating rope hovering just above the bottom. This research may indicate that there is no need to ban floating groundline in downeast, Maine.

- Better understand the potential for modifications to existing gear to reduce the risk of entanglement, for example, shortening the length of groundline between traps.
- Continue to look for operationally feasible, commercially viable alternatives to sinking rope such as low profile rope.

In closing, the MLA does not believe that NMFS' Preferred Alternative should move forward until additional research is conducted. The location of the exemption line should not be determined until NMFS has completed a probability analysis demonstrating the potential interaction between at risk large whales and fishing gear. Further, the Preferred Alternative should not move forward until NMFS completes a more accurate economic and social impact analysis which more accurately reflects the costs that will be incurred by the fishing industry and the number of affected vessels.

In the meantime, the MLA believes that the analysis conducted by the University of Buffalo makes a strong case to implement a ban on floating line somewhere outside the 50 fathom curve where whales spend the majority of their time transiting and foraging in order to provide immediate protection to those whales most at risk.

Thank you for your consideration of these comments.

Sincerely,



Patrice McCarron  
Executive Director

attachments