

**Gulf of Maine Research Institute
Responsibly Harvested Seafood from the Gulf of Maine Region**

**Report on
Gulf of Maine and Georges Bank American Lobster**

- ☒ The fishery is managed by a competent authority and has a management plan in place that incorporates a science-based approach to ensure sustainability.
 - *The American lobster fishery is managed jointly through ASMFC, Maine, New Hampshire, Massachusetts, and NMFS. The fishery is managed under Amendment 3 to the Interstate Fishery Management Plan (ISFMP), which utilizes the best available science to set biological reference points and harvest restrictions.*

- ☒ If stock sizes are below management target levels, whether due to natural or man-made causes, management plans are established that enable rebuilding within a specified timeframe.
 - *The GOM and GB stocks of lobster are not depleted and overfishing is not occurring.*

- ☒ Sufficient data exists to determine harvest levels.
 - *The 2009 stock assessment set biomass and abundance indices utilizing fisheries dependent and independent data collected from state and federal sources. The ASMFC then uses these data to determine harvest levels. It is not considered a data poor fishery.*

- ☒ Monitoring and compliance measures are in place to ensure acceptable harvest levels.
 - *American lobster harvest is monitored by 100% federal dealer reporting, a minimum of 10% harvester reporting, in addition to state requirements.*

- ☒ Enforcement exists to ensure that harvesters follow regulations, and to prevent illegal practices and unreported harvest.
 - *U.S. Coast Guard, NMFS Office of Law Enforcement agents, and state marine patrol agents enforce the laws and regulations governing the harvest of American lobster.*

I. Definition of American Lobster

American lobster (*Homarus americanus*) is harvested from off the coast of Maine, south to North Carolina. Traps are the predominant gear type employed in the fishery and accounted for an average of 98% of the total landings from 1981 and 2007 (ASMFC 2009). Error! Bookmark not defined.

Three stock units have been identified based on regional differences in life history parameters: Gulf of Maine (GOM), Georges Bank (GBK), and Southern New England (SNE). Each stock supports both an inshore and offshore component; however, the GOM and SNE fisheries are primarily inshore while the GBK fishery is primarily offshore. This report covers the GOM and GBK stocks as these stocks occur within the harvesting area boundary for GMRI's *Gulf of Maine Responsibly Harvested* branding program.

II. Description of the Management Authority and Regulatory Process

The Atlantic States Marine Fisheries Commission (ASMFC) manages the lobster fishery in state waters, in conjunction with the respective coastal states, while the National Marine Fisheries Service (NMFS) (under the authority of the Atlantic Coastal Fisheries Cooperative Management Act) manages the fishery in federal waters.

The GOM and GBK biological stock units are subdivided into seven lobster conservation management areas (LCMAs) for management purposes. The LCMAs and stock assessment areas are depicted in Figure 1. In each of these areas, Lobster Conservation Management Teams (LCMTs), which are composed of industry representatives, advise the American Lobster Management Board and recommend changes to the Interstate Fisheries Management Plan (ISFMP) within their area. A 21-member Lobster Advisory Panel of lobstermen also participates in the ASMFC decision-making process. To determine appropriate harvest levels and review the health of the fishery, the ASMFC employs an 8-member Lobster Technical Committee comprised of state fishery managers. The management recommendations developed by this process are then forwarded to the federal and state governments with a recommendation that the government takes action on these measures in the form of regulations. The federal government is obligated by statute to support the ASMFC's ISFMP and overall fishery management efforts and in this capacity determines the regulations. Within NMFS, the State, Federal, and Constituent Programs Office coordinates this process.

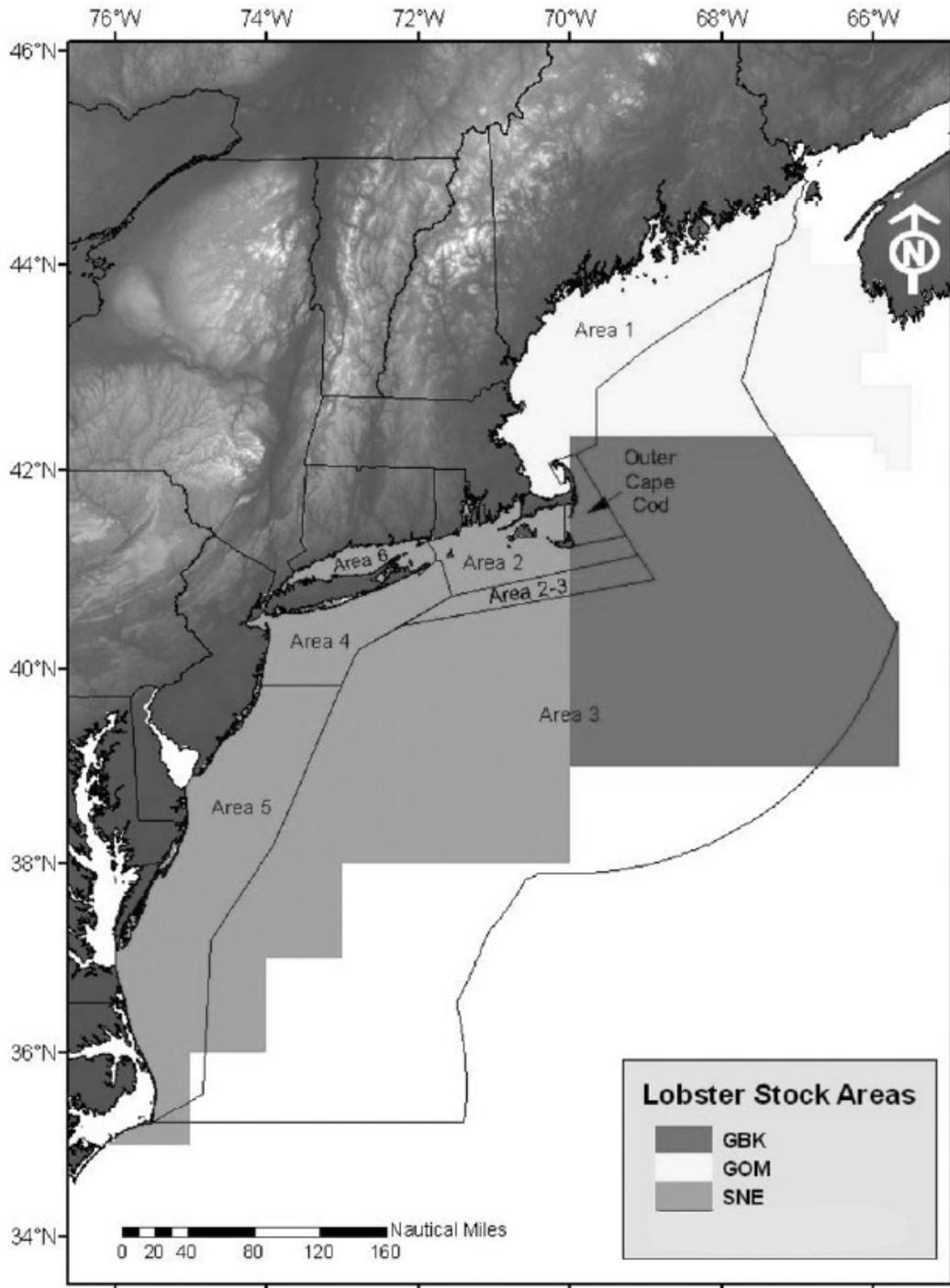


Figure 1. American lobster conservation management areas and biological stock assessment areas.

The scope of this report is limited to the GOM and GBK stocks, which include both state (0-3 nautical miles [nm]) and federal waters (3-200 nm) within LCMA 1 and 3, as well as the Outer Cape Cod Management Area. Therefore, both federal and state regulations are described. It should be noted, however, that if a fisherman holds both a state and

federal license, he is required to operate under the most restrictive regulation, referred to as “the most restrictive rule.”

Maine

In Maine, the Maine Department of Marine Resources (DMR) implements the ISFMP in state waters, in addition to developing state-specific regulations and governance structure. State laws are located in *Title 12: Conservation, Part 9: Marine Resources* and regulations are codified in *Chapter 25: Lobster and Crab*. Maine state waters are divided into seven lobster management zones, labeled as Zones A to G from east to west (see Figure 2). These zones are established by the DMR Lobster and Crab Regulations, and each zone is represented by a Lobster Management Policy Council (or zone council). They are chartered to execute referenda on specific fishing policies to reduce fishing effort. Fishing effort reductions may include a maximum number of lobster traps that may be fished by an individual license holder or two or more lobster license holders who fish from the same boat; the maximum number of traps on a trawl line; the time of day when lobster fishing may occur; limited entry (exit/entry ratios); and controlled entry with options to specify requirements for apprentice fishermen. The results of the referenda are submitted to the Commissioner of ME DMR for promulgating as regulations. The Commissioner is obliged to promulgate successful referenda without alteration assuming that the proposal meets a “reasonableness” test.

The Lobster Advisory Council (LAC), which is separate from the seven Lobster Management Policy Councils but comprised in part of representatives from those councils, has specific statutory responsibilities related to advising the commissioner on activities of the department that relate to the lobster industry. It may review lobster research programs and make recommendations, and it may consider disputes between the zone councils and make recommendations. It also makes recommendations regarding the use of specific funds.

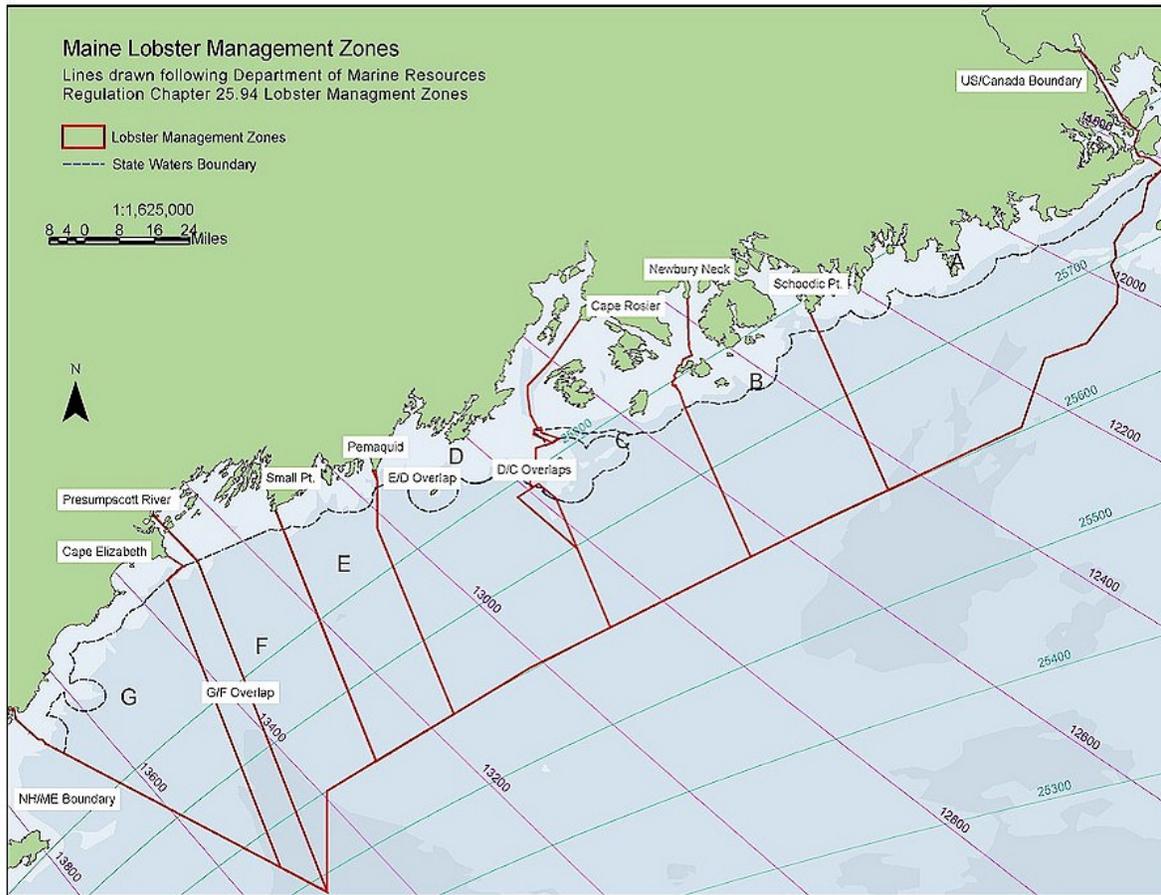
New Hampshire

In New Hampshire, the Department of Fish and Game (DFG) implements the ISFMP in state waters, and develops state-specific regulations. Additional regulations for harvesting lobsters in state waters are codified in *Title XVIII, Chapter 211: Fish, Shellfish, Lobsters, and Crabs*. Unlike Maine, New Hampshire does not have an additional management infrastructure other than the ASMFC process.

Massachusetts

In Massachusetts, the Division of Marine Fisheries (DMF) implements the ISFMP in state waters, and develops state-specific regulations. Additional regulations for harvesting lobsters in state waters are codified in *CMR 322: Division of Marine Fisheries*. While not specific to the lobster fishery, the Massachusetts Marine Fisheries Advisory Commission, which is a nine member board that represents recreational and commercial fishing interests from various parts of the Massachusetts coast, promulgates these state regulations. Commissioners are appointed by the governor to three-year terms, and attend monthly business meetings as well as quarterly public hearings. Regulatory changes and

public proposals are approved or disapproved by a majority vote at the Commission's monthly business meetings.



C. Rubicam, 8/9/02, DMR Maine Whale Plan

Figure 2. Maine Lobster Management Zones

III. American Lobster Data

The most recent 2009 American lobster stock assessment utilized the University of Maine statistical catch-at-length model to estimate abundance and mortality of male and female lobster by size for each stock unit (ASMFC 2009). The Collie-Sissenwine model (CSM) used in the 2006 assessment was updated as well for continuity purposes. Other stock status indicators of mortality, abundance, and fishery performance were taken into consideration. Biomass and abundance indices are calculated using fisheries dependent and independent data collected from state (Maine, New Hampshire and Massachusetts) and federal sources.

Current abundance of the GOM stock is at a record high, and recruitment has steadily increased since 1997; however, recent effort levels are the highest observed since 1982. According to ASMFC, GOM constituted approximately 76% of the U.S. landings between 1981 and 2007, and approximately 87% of landings since 2002. Landings in the GOM between 1981 and 1989 averaged 14,600 mt, then increased from 1990 (19,200 mt)

to a peak in 2006 (37,300 mt). Landings averaged 33,000 mt from 2000-2007.**Error! Bookmark not defined.**

Current abundance of the GBK stock is also at a record high, and recruitment is high, yet exploitation rates are at a record low. This stock constituted an average of 5% of the landings from 1981 to 2007. Between 1981 and 2002, landings from the GBK fishery remained stable (average 1,300 mt). Landings almost doubled between 2003 and 2007 with a high of 2,400 mt landed in 2005 and have remained well above the time series mean.**Error! Bookmark not defined.**

The following excerpt from the 2009 *American Lobster Stock Assessment Report* provides background information on the process for determining stock status and the actual status of the GOM and GBK stocks of American Lobster.

This assessment recommends revisions to the set of reference points used in the previous assessment (ASMFC 2006) for management of American lobster stocks (Table 1 below). Revised reference points include median reference abundance and median exploitation rate thresholds for sexes combined over the fixed time period of 1982-2003 in GOM and GBK...The assessment further recommends that stock status be determined by comparing the average reference abundance and average exploitation rate for sexes combined during the most recent three years to stock-specific threshold values.

Variable	GOM	GBK	SNE
Effective exploitation			
Effective exploitation threshold	0.49	0.51	0.44
Recent effective exploitation 2005-2007	0.48	0.3	0.32
Effective exploitation below threshold?	YES	YES	YES
Reference abundance			
Abundance threshold	72,030,500	1,912,355	25,372,700
Recent abundance 2005-2007	116,077,000	4,698,670	14,676,700
Abundance above threshold?	YES	YES	NO

Table 1. Revised threshold reference points with stock status variables for lobster in each stock area (annual effective exploitation rate and reference abundance in number of lobster).

Based on these reference points, “overfishing” would occur if the average effective exploitation rate during 2005-2007 were higher than the stock-specific median threshold. A stock would be “depleted” if average reference abundance during 2005-2007 fell below the median threshold level. In either of these cases, corrective management action should be implemented.

The GOM stock is in favorable condition based on the recommended reference points. The stock is above the reference abundance threshold and slightly below the effective exploitation threshold. Therefore the GOM lobster stock is not depleted and overfishing is not occurring.

The GBK stock is in a favorable condition based on the recommended reference points. The stock is above the reference abundance threshold and below the effective exploitation threshold. Therefore the GBK lobster stock is not depleted and overfishing is not occurring.**Error! Bookmark not defined.**

IV. Interstate Fishery Management Plan for American Lobster

Currently, American lobster is managed under Amendment 3 to ISFMP and Addenda I-XV. The plan is designed to minimize the chance of population collapse due to recruitment failure. According to the 2009 *American Lobster Stock Assessment Report*, “The goal of Amendment 3 is to have a healthy American lobster resource and management regime, which provides for sustained harvest, maintains appropriate opportunities for participation, and provides for cooperative development of conservation measures by all stakeholders.” Amendment 3 develops the overarching goals and objectives for management of the fishery, as well as management measures like trap specifications, trap limits, minimum size limits, and v-notching requirements. The addenda revise or replace these specific measures as needed. For example, Addendum X established an expanded coast-wide mandatory reporting and data collection program, and Addendum XV maintains the historic level of trap fishing effort and curtails an increase of new federal lobster vessels fishing within the federal waters of LMCA 1 by limiting the entry of vessels which have not fished with traps in Area 1 in the past from fishing in Area 1 with traps in the future. As mentioned above, specific management measures developed in the Amendment and addenda are implemented by NMFS through rulemaking.

The most recent federal regulations for the American lobster fishery were published on July 29, 2009 (74 FR 37530) and implemented 30 days later. These management measures include regulations which implement a mandatory federal lobster dealer electronic reporting requirement, minimum and maximum carapace length limits in several LCMAs, a modification of the v-notch definition for protection of egg-bearing females, gear restrictions (trap size, gear marking requirements, escape vents, and ghost panels), trap limits, and several area-specific limited entry programs.

Additional state-specific regulations are referenced in Section II; however, as mentioned above, if a fisherman holds both a state and federal license, he is required to operate under the most restrictive regulation, referred to as “the most restrictive rule.”

V. Monitoring

NMFS requires Federal dealers to report 100% of landings per trip on a harvester basis. As of January 1, 2010, all Federal lobster dealers are required to provide trip-level electronic reports on a weekly basis (74 FR 37530; July 2009). There is a minimum requirement for 10% of harvesters to report effort data (trap hauls, soak time, etc.) through logbook returns. The Atlantic Coastal Cooperative Statistics Program (ACCSP), in partnerships with Atlantic coast marine fisheries agencies, developed a trip-by-trip

reporting standard so data collected by the states and the federal government could be pooled together. The remainder of this section describes the state-specific monitoring and reporting requirements.

Maine

In Maine, DMR administers a Commercial Lobster Port Sampling Program, which collects catch and effort data directly from lobstermen as they land their catch. Ten lobster dealers are selected at random each month, from April through December. The Sea Sampling Program places trained observers onto commercial lobster boats. Catch and effort information is collected and biological data is recorded for each lobster caught. The number of legal, sublegal and illegal lobsters are counted, measured and sexed (DMR 2010). Ten percent of permit holders are selected each year for monthly catch and effort reporting on a trip-level basis. Dealers are required to report landings to the state on a monthly basis.

New Hampshire

New Hampshire has two separate reporting categories for permit holders based on landed pounds from the previous fishing year. Permit holders who harvest less than 1,000 lbs are required to submit annual reports that summarize catch and effort data by month. Permit holders who harvest more than 1,000 lbs are required to submit monthly catch reports on a trip-level basis. If permit holders are submitting a federal fishing vessel trip report (FVTR), then they can submit the FVTR to the New Hampshire DFG in lieu of a state report. Dealers are required to submit monthly transaction reports unless they are joint state and federal dealers, in which case they are required to report weekly under federal regulations (Zobel, R., personal communication, June 2010).

Massachusetts

In the Commonwealth of Massachusetts, commercial permit holders must report trip-level information monthly for all marine species landed under the authority of their Massachusetts commercial permit. These reports are submitted to the Massachusetts DMF unless the permit holder also has a federal permit and is already reporting under a separate program, such as the federal FVTR program. Dealers buying from state permit holders are required to submit weekly reports to DMF for all transactions with harvesters. Federal dealers are required to comply with the federal weekly reporting guidelines and are exempt from submitting a state weekly report to DMF (DMF 2010).

VI. Enforcement

In general, enforcement of Amendment 3 of the ISFMP for American lobster and federal regulations are coordinated through NOAA's Office of Law Enforcement (OLE). OLE Special Agents and Enforcement conduct complex criminal and civil investigations, board vessels fishing at sea, inspect processing plants, and conduct patrols on land, in the air and at sea. In addition to this enforcement work, the OLE administers the Cooperative Enforcement Program (CEP), which authorizes certain coastal state and territorial marine conservation law enforcement agencies to enforce federal laws and regulations in the Exclusive Economic Zone (EEZ). OLE also partners with the U.S. Coast Guard (USCG)

and various other federal agencies, fishery management councils, and non-governmental organizations. Federal and state law enforcement agents ensure compliance with minimum and maximum size requirements, gear restrictions, trap limits, and dealer reporting requirements.

VII. Other

Depending on the dealer, it could be difficult to distinguish between lobster harvested by traps or pots and those harvested incidentally by trawlers or gillnetters. Therefore, this section of the report provides information and rationale for the inclusion of lobsters harvested by legal, non-trap methods (commonly referred to as *dragged lobsters*) in this review.

Federal and state management of lobster focuses on the directed lobster pot/trap fisheries. While there are no targeted trawl fisheries for lobster within the GOM and GBK stock areas, trawl vessels in Massachusetts and New Hampshire are permitted to land a limited number of lobsters per trip. Provided that fishermen in these states have a federal commercial lobster permit, they may land up to 100 lobsters per day or 500 lobsters for any fishing trip five days or longer. This incidental catch must be harvested in federal waters by legal, non-trap methods, including trawl gear and gillnets. Maine prohibits the landing of offshore dragged lobsters for sale in the state.

Because these lobsters are harvested by legal, non-trap methods in federal waters, they are managed under Amendment 3 to the Interstate Fishery Management Plan (ISFMP) for American Lobster, and federal regulations apply. Addendum X to the ISFMP requires 100% mandatory dealer reporting. Therefore, all lobsters landed, even if they were not harvested by traps or pots, are reported by dealers. In Massachusetts, state law requires all vessels landing lobsters to have a Massachusetts landings permit, and all landings (state and federal) are reported by dealers. These reports are utilized in the stock assessments for lobster, and thus are taken into consideration when the ASMFC determines the status of the stock. Finally, the same protocols are adhered to for monitoring and compliance with federal regulations, regardless if the lobster was harvested by a directed trap/pot fishery or by a dragger or gillnetter.

VIII. References

- Atlantic States Marine Fisheries Commission (ASMFC). 2009. American Lobster Stock Assessment Report for Peer Review. www.asmfc.org/speciesDocuments/lobster/annualreports/stockassmtreports/2009LobsterStockAssessmentReport.pdf
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