

Mapping Working Waters: Maine's Commercial Fisheries

The following maps are the result of a series of interviews with commercial fishermen with decades of experience fishing off Maine's shores. These maps were created through the Island Institute's Mapping Working Waters project to fill the gap in information on where and when commercial fishing occurs in Maine state and proximate federal waters. The Institute's fisheries mapping project arose out of discussions with partners in fishing communities along Maine's coast, and owes its success to date to fishermen who have willingly participated in order to document their communities' use of ocean space.

While some maps of offshore commercial fishing activity are available using data gathered by the Vessel Monitoring Systems (VMS) installed on fishing boats, these maps commonly under-represent fisheries' use of ocean space, because VMS are only mounted on some vessels. Most notably, according to the National Marine Fisheries Service (NMFS), only approximately 6.5% of lobstermen who hold federal permits report data via VMS.

Also of note is that VMS data captures fishing activity for a brief period in time. Many fisheries in the northern Gulf of Maine, including many of the groundfish species, are currently quite diminished and fishing is restricted while the stocks rebound. Since the return of the fishery is an explicit goal of NMFS and NOAA, we should be careful to interpret current-day VMS data as depicting a lack of fish and a lack of access, but not necessarily a lack of suitable groundfish habitat that may in the near future be rich fishing ground. Fishing grounds documented by fishermen are critical to provide this historical context.

The maps give a sense of the vast area fished off the coast of Maine as well as the complexity of fisheries and gear types across areas. They show areas of fishing from only selected harbors or regions, however, and represent an incomplete "snapshot" from an ongoing project. They should not be viewed as representing a complete data set for Maine's fisheries, but rather as one step towards understanding fisheries-use patterns offshore and methods for documenting them.

Some points worth taking away from these maps in the context of ocean renewable energy planning, and marine spatial planning more broadly, include the following:

- These maps demonstrate the complexity of fisheries interactions that commercial fishermen are constantly navigating – particularly between fixed and mobile-gear fisheries. There are fewer complexities in areas that are closed to some fisheries for habitat protection or mortality control.
- Since fishery areas are referenced to the harbors that participants are fishing from, the data links Maine's coastal and island communities to the marine areas on which their economies depend and vice versa.
- Finer-scale maps from this project are available for some areas. They show seasonal presence/absence and movement of gear.

Mapping Working Waters: OFFSHORE COMMERCIAL FISHING

This map represents the areas fished by the commercial fishing industries of lobster, groundfish, tuna, shrimp, and hagfish. Each of these industries is represented by the same grey fill; the darker the grey, the more fishing industries that fish in that area.

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Data is referenced to harbors, linking Maine's coastal and island communities to the marine areas on which their economies depend and vice versa.

Finer-scale maps from this project are available for some areas showing seasonal presence/absence and movement of gear.

10 NM from Mainland & Habited Islands

90 Meter (295 foot) Contour

Lobster Zones

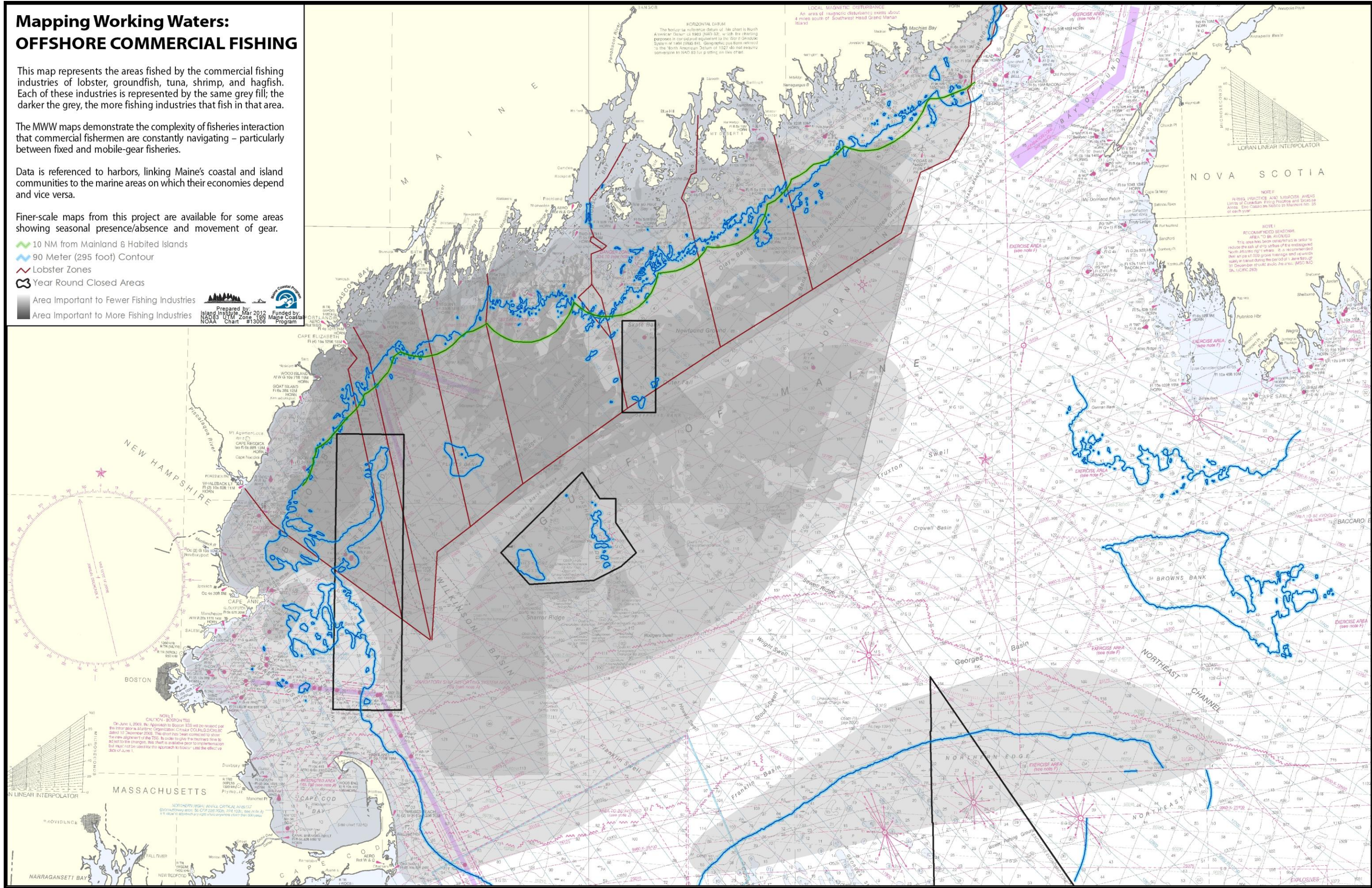
Year Round Closed Areas

Area Important to Fewer Fishing Industries

Area Important to More Fishing Industries

Prepared by:
NOAA Chart #13006

Funded by:
Maine Coastal Program



Mapping Working Waters: LOBSTER

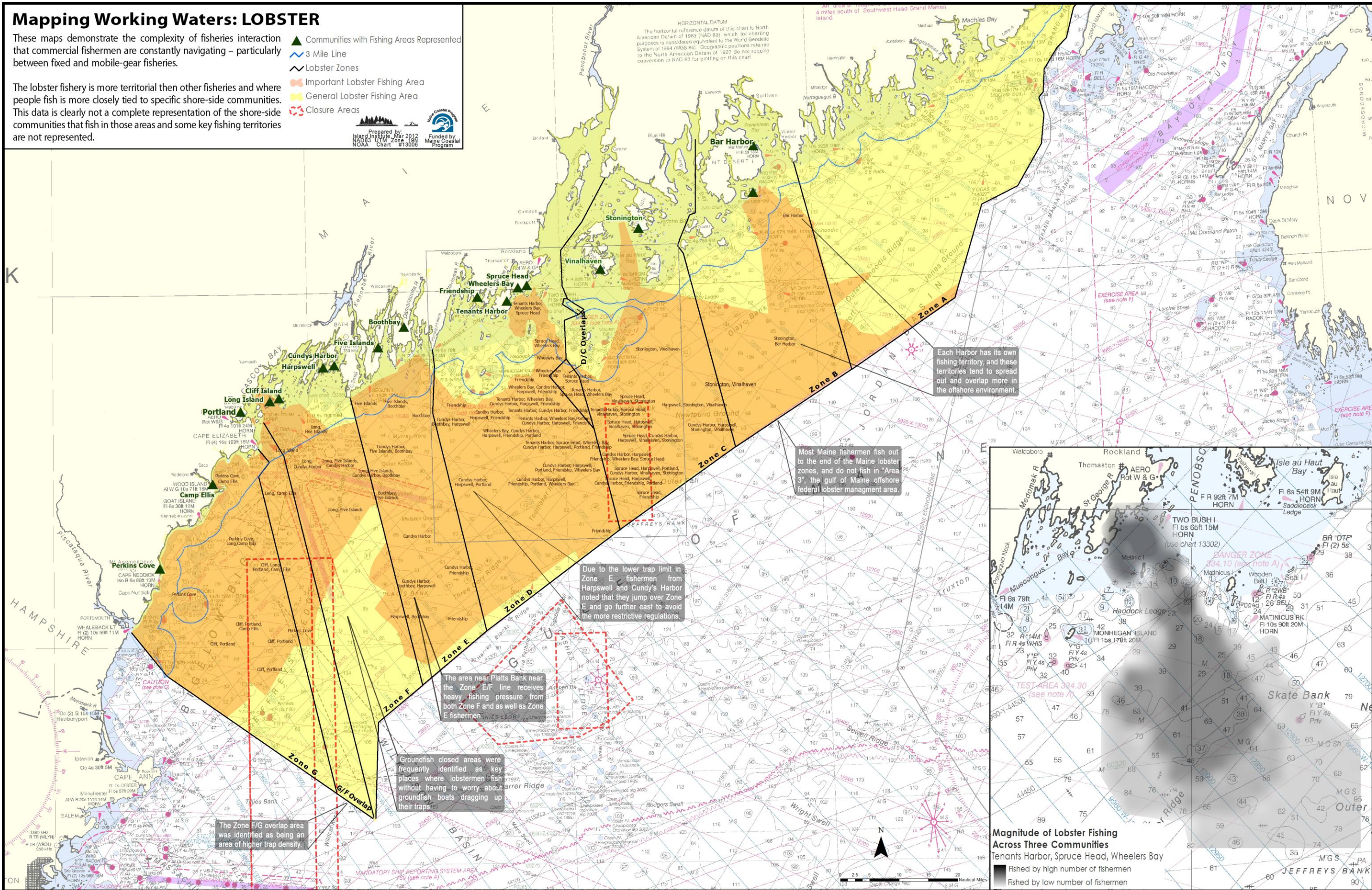
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The lobster fishery is more territorial than other fisheries and where people fish is more closely tied to specific shore-side communities. This data is clearly not a complete representation of the shore-side communities that fish in those areas and some key fishing territories are not represented.

- ▲ Communities with Fishing Areas Represented
- ~ 3 Mile Line
- ~ Lobster Zones
- Important Lobster Fishing Area
- General Lobster Fishing Area
- Closure Areas

Prepared by
Island Institute, Mar 2012
NAD83 UTM Zone 18N
NOAA Chart #13006

Funded by
Maine Coastal Program



Mapping Working Waters: GROUND FISH

These maps demonstrate the complexity of fisheries interaction that commercial fishermen are constantly navigating – particularly between fixed and mobile-gear fisheries.

The groundfish map is comprised of three separate data layers: current groundfish data layers broken down into gillnet and trawl and historic data representing a combination of gillnet, trawl, and hook fisheries.

3 Mile Line

Closure Areas

trawl

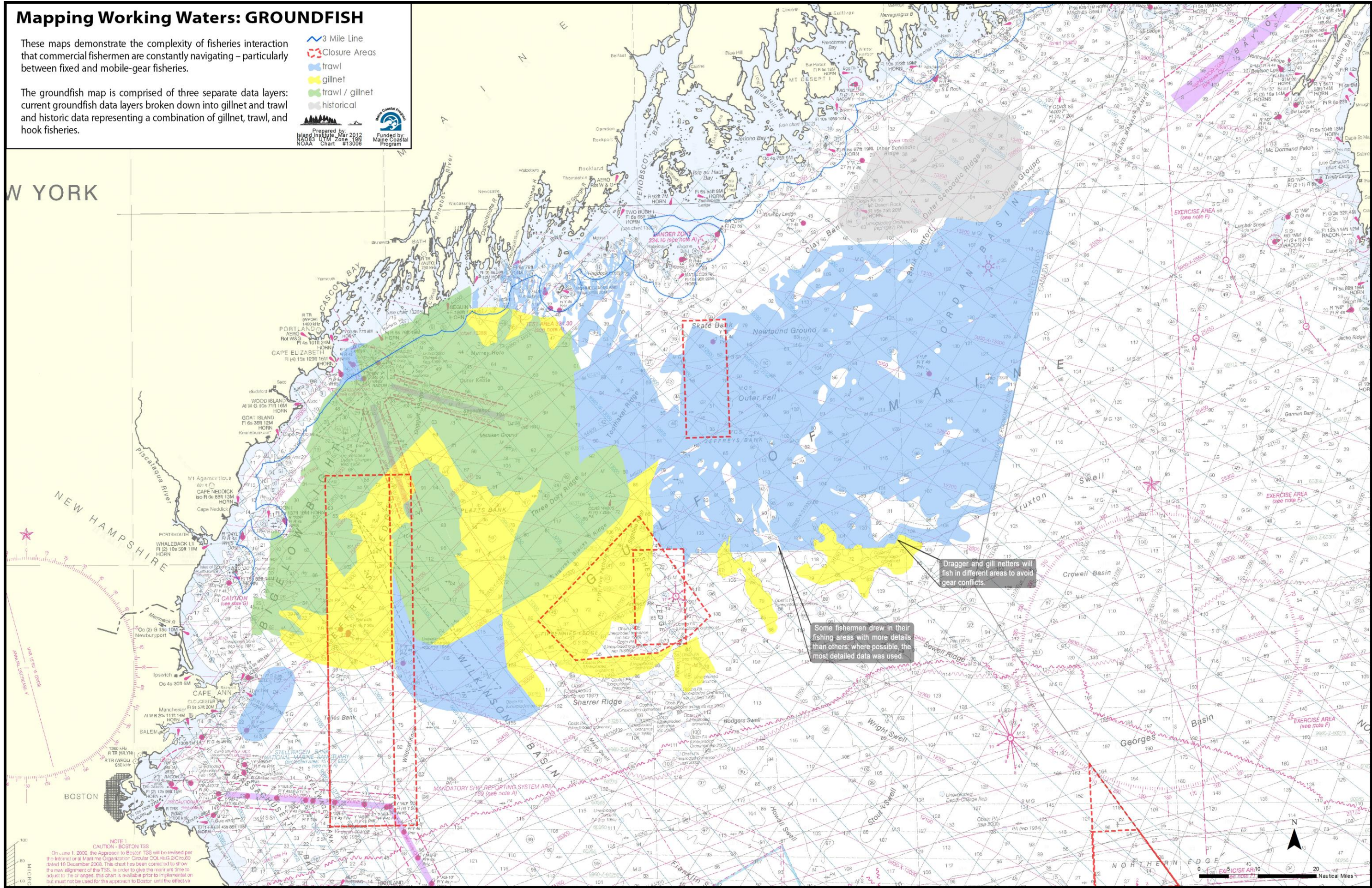
gillnet

trawl / gillnet

historical

Prepared by
Island Institute, May 2012
NAD83 UTM Zone 19N
NOAA Chart #13006

Maple Coastal
Program



Dragger and gill netters will fish in different areas to avoid gear conflicts.

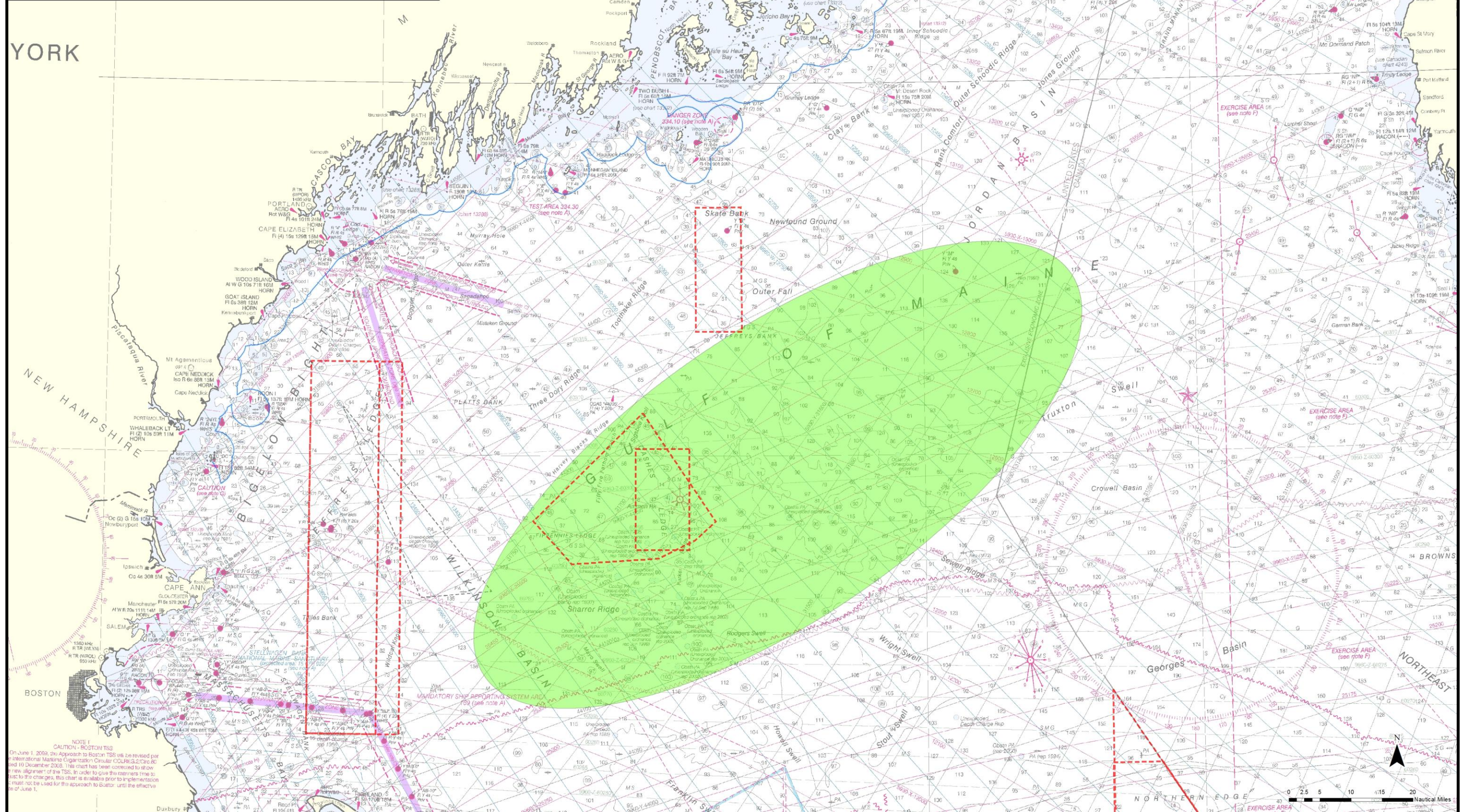
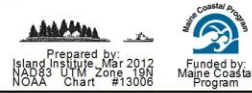
Some fishermen drew in their fishing areas with more details than others; where possible, the most detailed data was used.

Mapping Working Waters: HAGFISH

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Hagfish, also known as “Slime Eels,” are caught using barrels in the mud east of Cashes Ledge.

- 3 Mile Line
- Closure Areas
- General Area Fished for Hagfish



NOTE 1
CAUTION - BOSTON TSS
On June 1, 2009, the Approach to Boston TSS will be revised per
International Maritime Organization Circular CP.165.2.010 and
dated 10 December 2008. This chart has been corrected to show
the alignment of the TSS. In order to give the mariners time to
become familiar with the changes, this chart is available prior to implementation
and must not be used for the approach to Boston until the effective
date of June 1.

Mapping Working Waters: TUNA

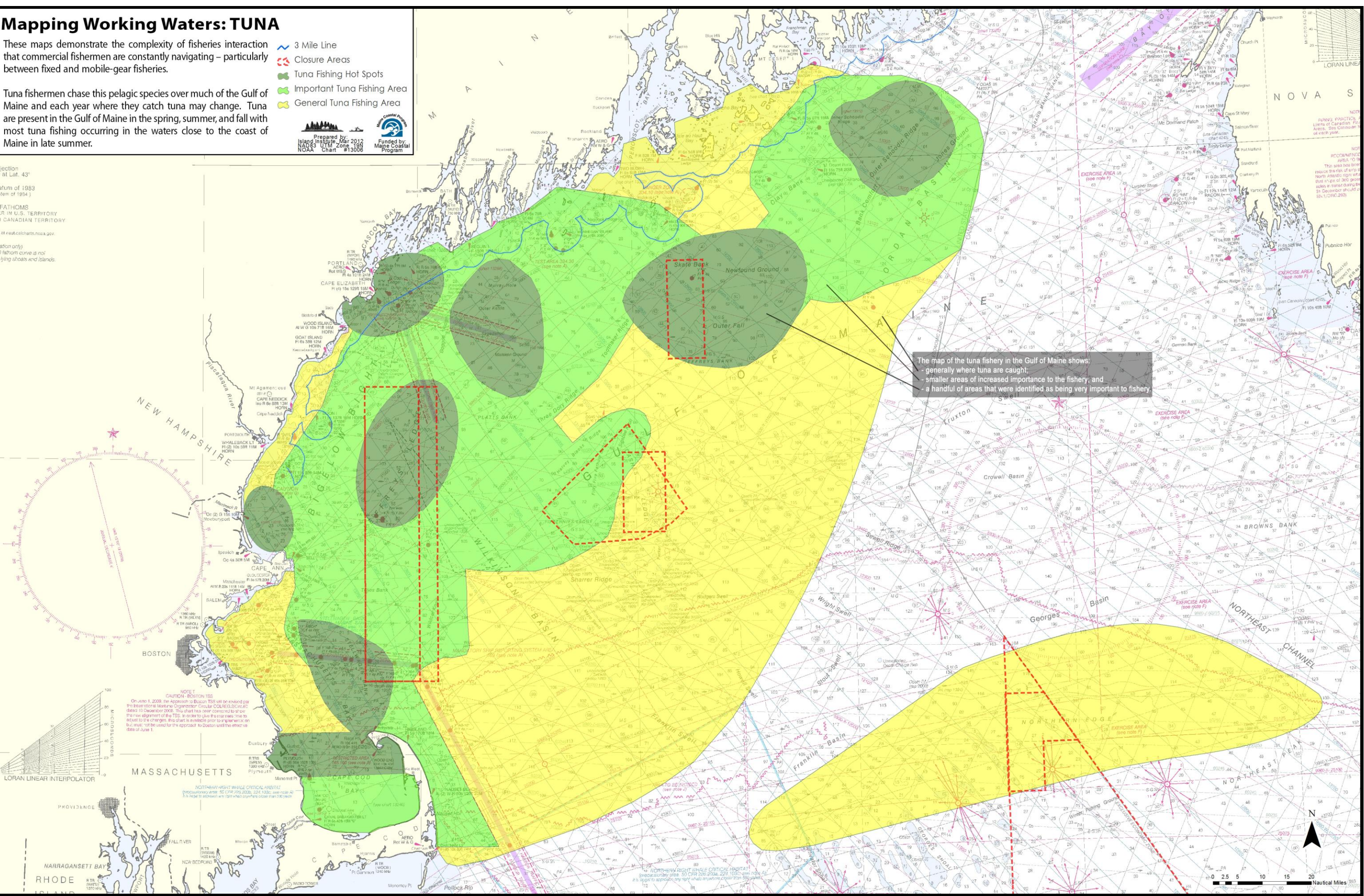
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Tuna fishermen chase this pelagic species over much of the Gulf of Maine and each year where they catch tuna may change. Tuna are present in the Gulf of Maine in the spring, summer, and fall with most tuna fishing occurring in the waters close to the coast of Maine in late summer.

- 3 Mile Line
- Closure Areas
- Tuna Fishing Hot Spots
- Important Tuna Fishing Area
- General Tuna Fishing Area



Projection
00 at Lat. 43°
Datum of 1983
System of 1984
N FATHOMS
TER IN U.S. TERRITORY
IN CANADIAN TERRITORY
ed at neakcharts.noaa.gov
igation only
10 fathom curve is not
off lying shoals and islands



Mapping Working Waters: SHRIMP

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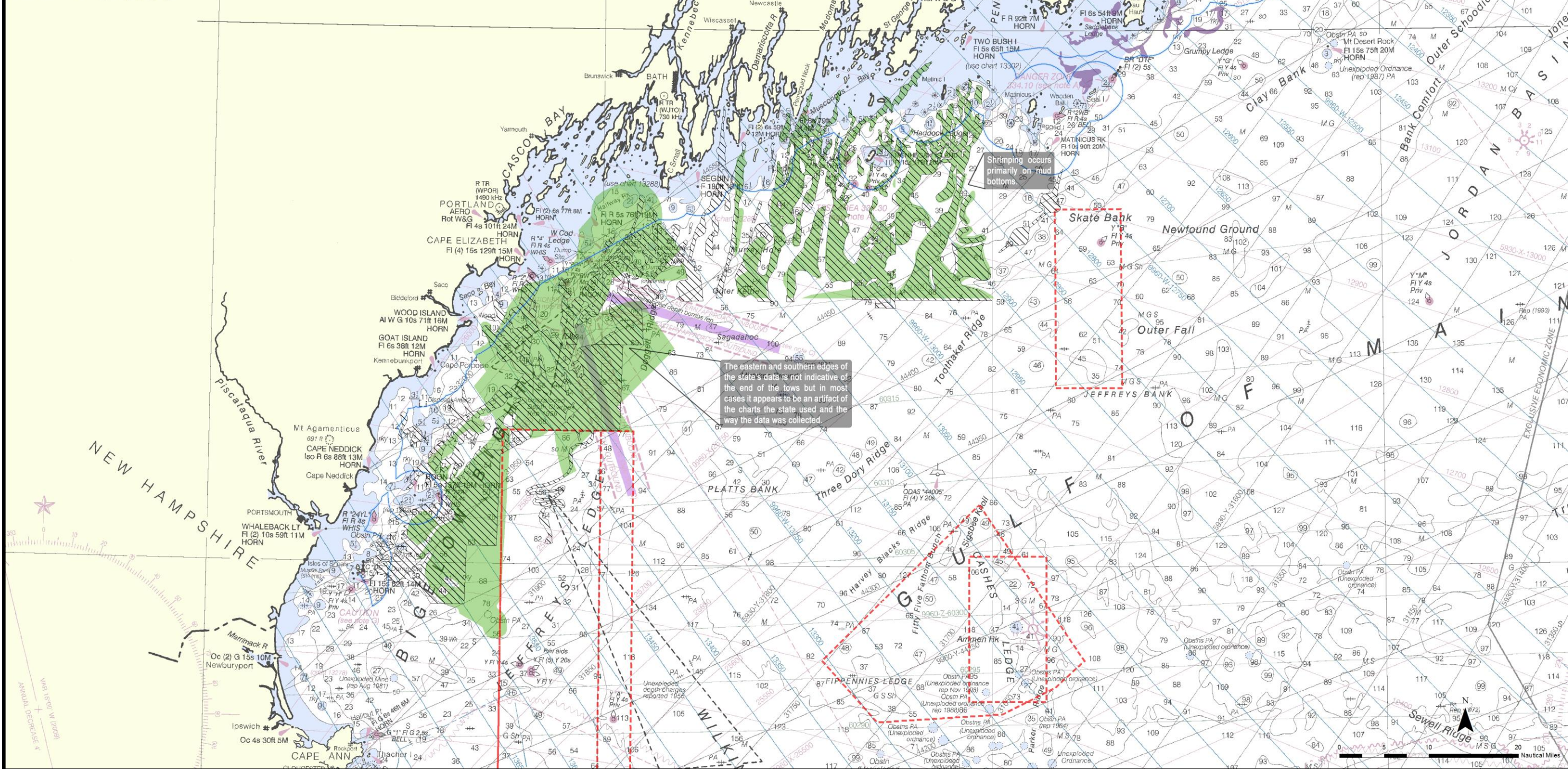
Shrimping occurs in the winter, typically from December to March but in recent years the season has been shortened considerably. The presence or absence of shrimpers impacts where lobstermen fish during these months.

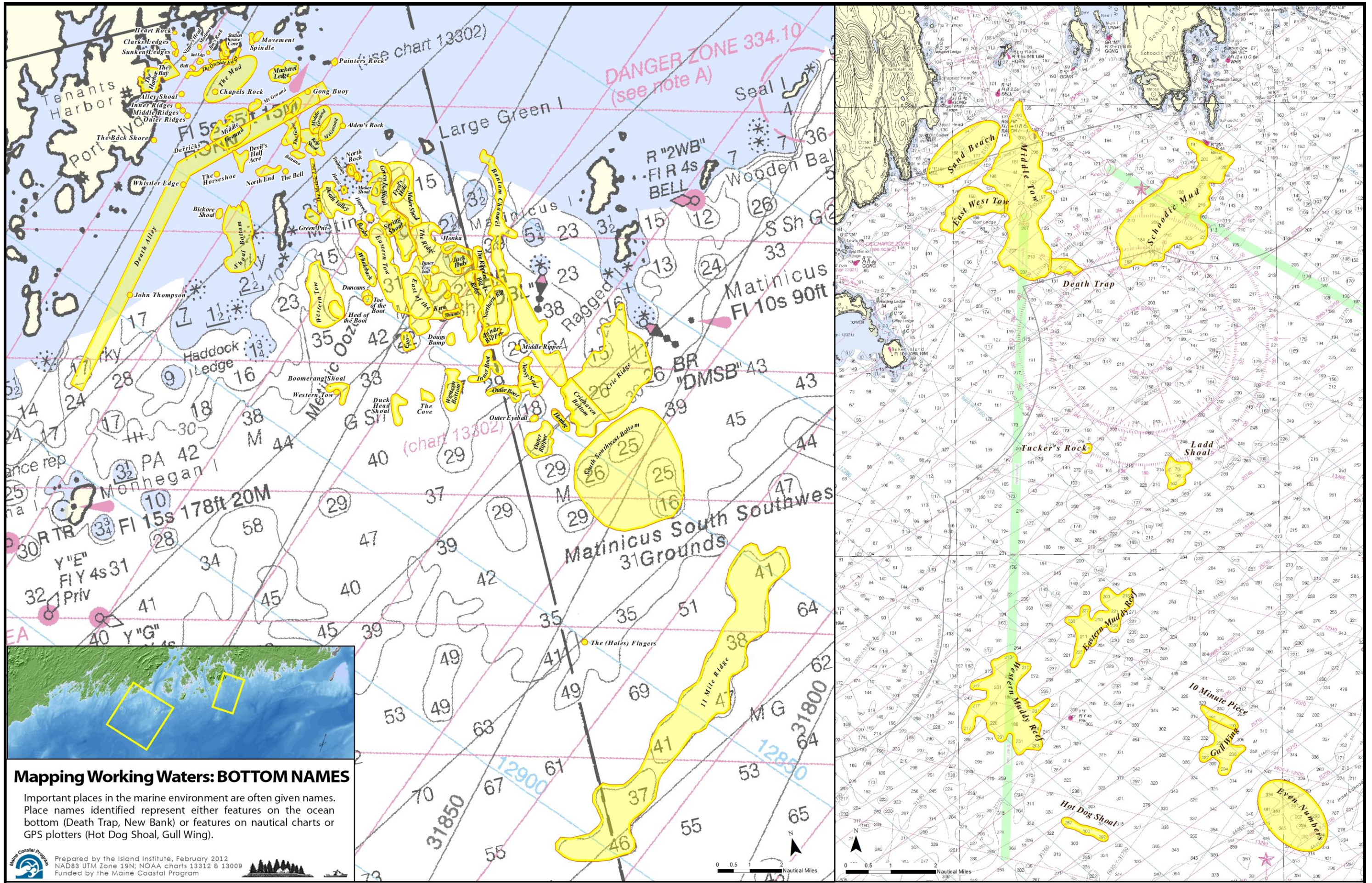
- 3 Mile Line
- Closure Areas
- Shrimp Tows (data from Maine DMR)
- Stonington Shrimp Tows (data from PERC*)
- Shrimp Tows (data from Island Institute)

*Data gathered from Stonington area shrimp trawlers, prepared by Penobscot East Resource Center



NEW YORK





Mapping Working Waters: BOTTOM NAMES

Important places in the marine environment are often given names. Place names identified represent either features on the ocean bottom (Death Trap, New Bank) or features on nautical charts or GPS plotters (Hot Dog Shoal, Gull Wing).



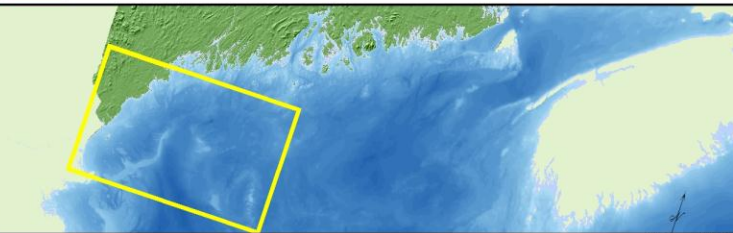
Prepared by the Island Institute, February 2012
NAD83 UTM Zone 19N; NOAA charts 13312 & 13009
Funded by the Maine Coastal Program



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NOTE E
er vessels should exercise caution while
floor within a 6.7 - mile radius of Isles
ce it is known that JATO racks and
ist in the area.

NOTE J
GATEWAY DEEPWATER PORT
slaway Deepwater Port is encompassed
including an Area to Be Avoided, No
ated Navigation Areas, and Safety and
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TEF
a 15 CFR 922)
es are prohibited within
fine Sanctuary:

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r details of Sanctuary

W
HIRE

River

port
5s 50ft 10M

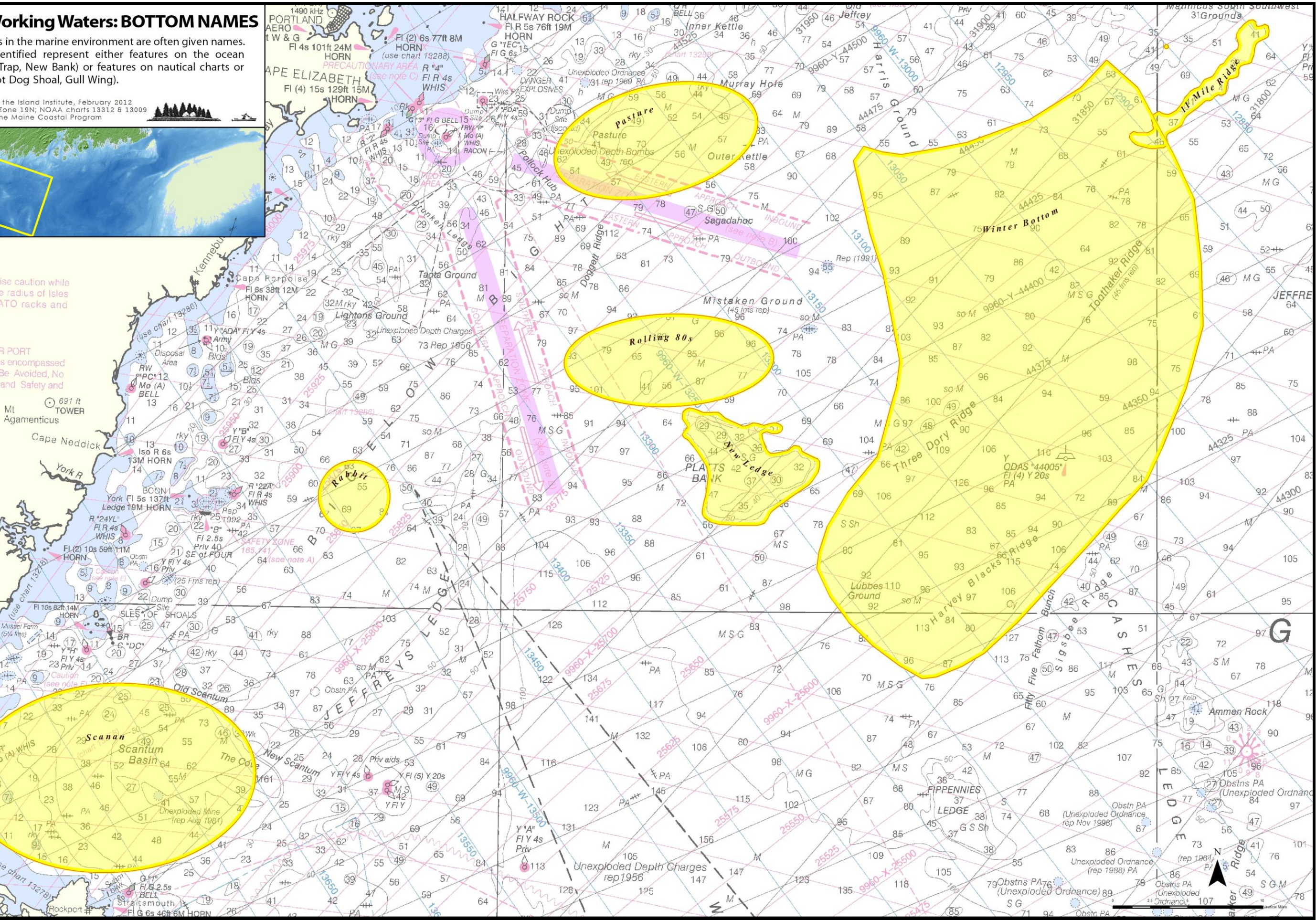
ITS

Oc 4s 30ft 5M

Rockport

Straitmouth

FI G 6s 46ft 6M HORN



G

CASHES

Ammen Rock

Obstns PA

(Unexploded Ordnance)

Obstns PA

(Unexploded Ordnance)

Obstns PA

(Unexploded Ordnance)

Obstns PA