



Atlantic Mackerel Fishery Information Document

July 2020

This Fishery Information Document provides a brief overview of the biology, stock condition, management system, and fishery performance for Atlantic mackerel (“mackerel” hereafter), with an emphasis on 2019. Data sources for Fishery Information Documents include unpublished National Marine Fisheries Service (NMFS) survey, dealer, vessel trip report (VTR), permit, and Marine Recreational Information Program (MRIP) databases and should be considered preliminary. For more resources, including previous Fishery Information Documents, please visit <http://www.mafmc.org/msb>.

Key Facts

- Mackerel is in a rebuilding period.
- Like 2018, the mackerel fishery was closed early in 2019 due to the river herring and shad cap (March 12, 2019), so mackerel landings were constrained independent of the mackerel quota and/or mackerel availability.
- A mackerel assessment update was delayed until 2021 due to data delays associated with COVID-19. NMFS will be providing a data update instead.

Basic Biology

Mackerel is a semi-pelagic/semi-demersal (may be found near the bottom or higher in the water column) schooling species primarily distributed between Labrador (Newfoundland, Canada) and North Carolina. The stock is considered to comprise two spawning contingents: a northern contingent spawning primarily in the southern Gulf of St. Lawrence and a southern contingent spawning in the Mid-Atlantic Bight, Southern New England and the western Gulf of Maine. The two contingents mix during winter months on the Northeast U.S. shelf. The Canadian fishery likely primarily catches the northern contingent while the U.S. fishery likely catches both contingents.

Mackerel spawning occurs during spring and summer and progresses from south to north as surface waters warm. Atlantic mackerel are serial, or batch spawners. Eggs are pelagic. Post-larvae gradually transform from planktonic to swimming and schooling behavior at about 30-50 mm. Approximately 50% of fish are mature at age 2 and about 99% were mature at age 3 (for 2007-2016 fish) according to the recent benchmark assessment. Atlantic mackerel are opportunistic feeders that can ingest prey either by individual selection of prey organisms or by passive filter feeding. See <https://www.nefsc.noaa.gov/nefsc/habitat/efh/> for more life history information.

Status of the Stock

Based on a recent benchmark assessment (NEFSC 2018, available at <http://www.mafmc.org/ssc-meetings/2018/may-8-9>), the mackerel stock was declared overfished, with overfishing occurring in 2016 (the last year of data in the assessment). Rebuilding projections indicate that overfishing should have ended by 2018. The biomass target is the SSB associated with the FMSY proxy and is estimated to be 196,894 MT. The 2016 spawning stock biomass (SSB) was estimated to be 43,519 metric tons (MT), or 22% of the target so mackerel is “overfished” (below 50% of the target). Past assessments (which used different methods and data) appear to have been overly optimistic about the stock’s productivity. Once rebuilt, the MSYproxy (i.e. the proxy for maximum sustainable annual yield) is estimated to be only 41,334 MT (total catch, U.S. plus Canada combined). A mackerel assessment update was delayed until 2021 due to data delays associated with COVID-19.

Management System and Fishery Performance

Management

The Mid-Atlantic Fishery Management Council (the Council or MAFMC) established management of mackerel in 1978 and the management unit includes all federal East Coast waters. Expected Canadian landings are deducted from the total Acceptable Biological Catch (ABC) that is recommended by the Council’s Scientific and Statistical Committee (SSC).

Access is limited with several tiers having different trip limits. Stricter trip limits are triggered when the quota is approached. Additional summary regulatory information is available at <https://www.fisheries.noaa.gov/region/new-england-mid-atlantic>.

At its May 2019 meeting, the SSC considered preliminary results from the 2019 Canadian Atlantic mackerel assessment, which indicated lower than expected recruitment in 2016-2018. The SSC determined that it would not be appropriate to recommend the original higher 2020 ABC level based on recruitment levels in 2016-2018 that may be lower than those anticipated in the rebuilding plan. Instead, the SSC recommended maintaining the ABC for 2020 at the level established for 2019 (ABC = 29,184 mt). After accounting for Canadian landings, recreational catch, management uncertainty, and discards, the 2020 U.S. quota is 17,312 MT.

Commercial Fishery

Figure 1 describes U.S. mackerel landings 1960-2019. Figure 2 describes total mackerel catch 1960-2019 including domestic landings, recreational catch, Canadian catch, and foreign landings, highlighting the scale of the early foreign fishery. Figures 3-4 describe domestic landings, ex-vessel revenues (nominal), and prices (inflation adjusted) since 1996. Figures 5-6 illustrate preliminary landings throughout the year for 2018-2020.

Table 1 describes 2019 Mackerel landings by state, and Table 2 describes 2019 Mackerel landings by gear type. Figures 7/8 describe the location of 2018/2019 mackerel landings.

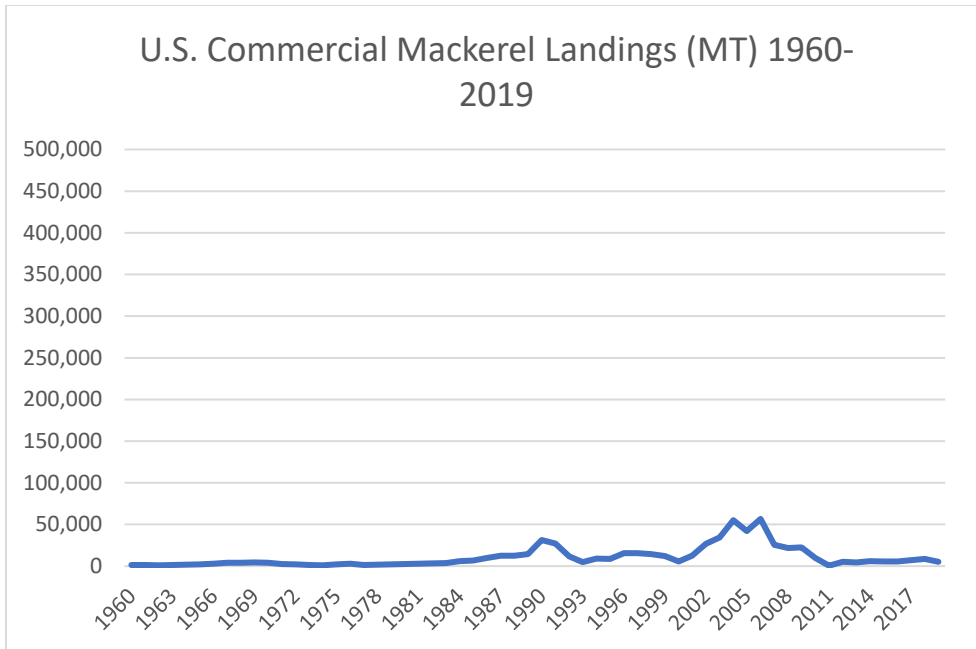


Figure 1. Total annual U.S. mackerel landings (mt) by the U.S. 1960-2019. Sources: NMFS unpublished dealer data.

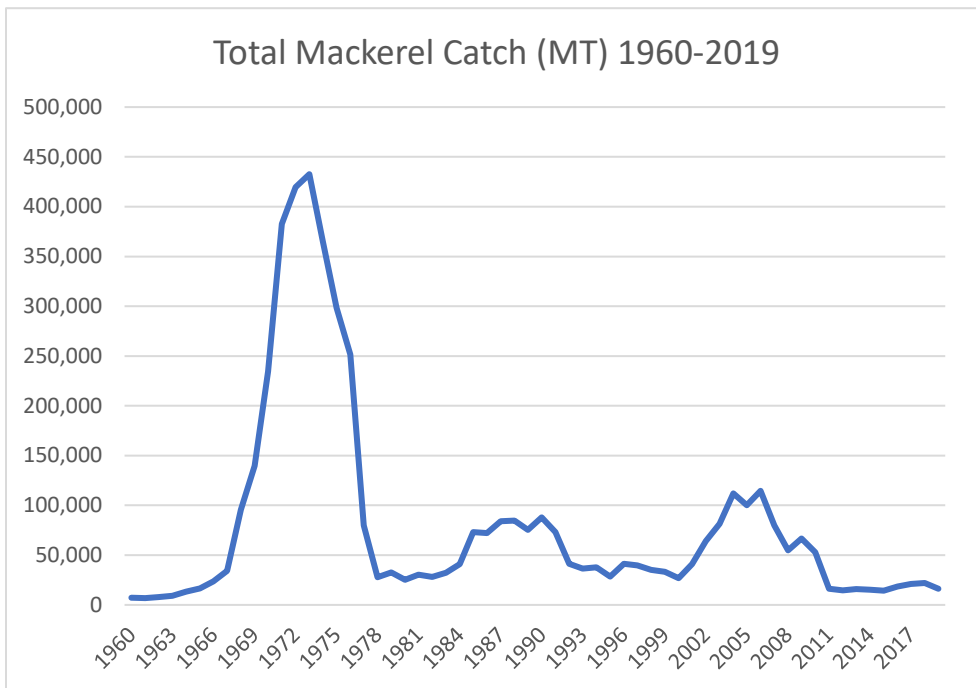


Figure 2. Total mackerel catch 1960-2019 including domestic landings, recreational catch, Canadian catch, and foreign landings.

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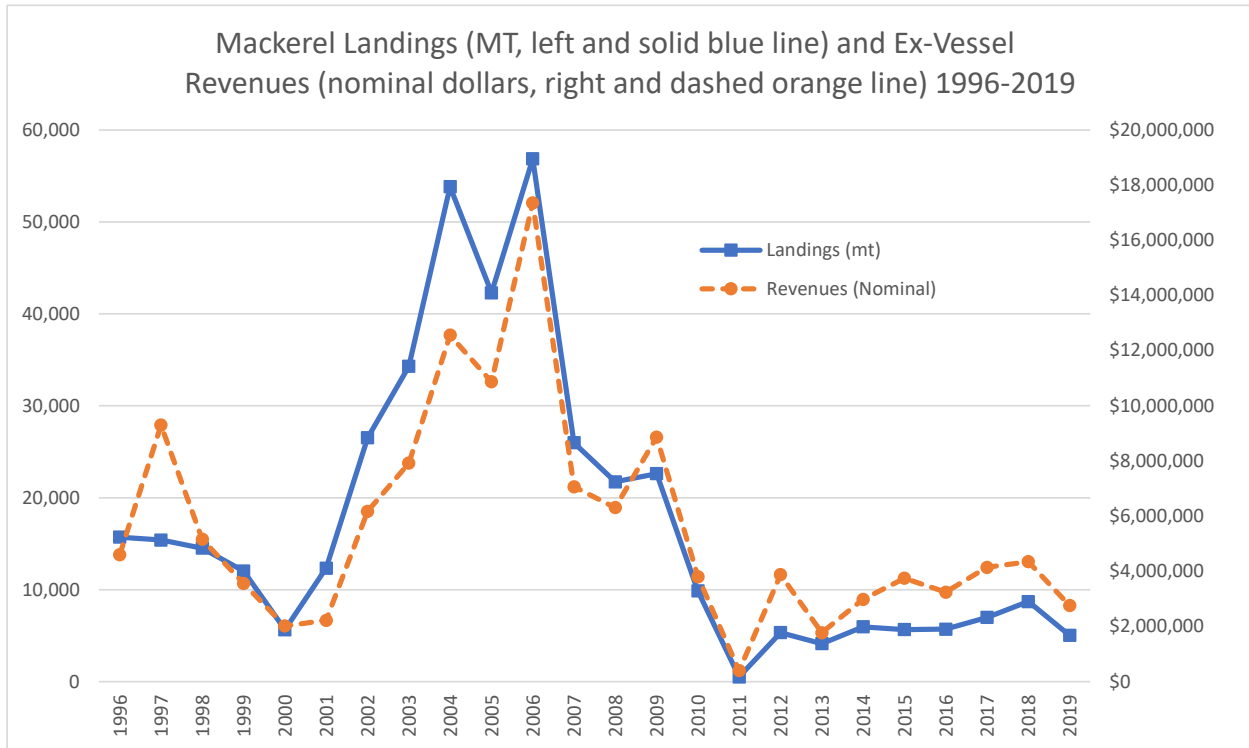


Figure 3. U.S. Mackerel Landings and Nominal Mackerel Ex-Vessel Values 1996-2019. Source: NMFS unpublished dealer data.

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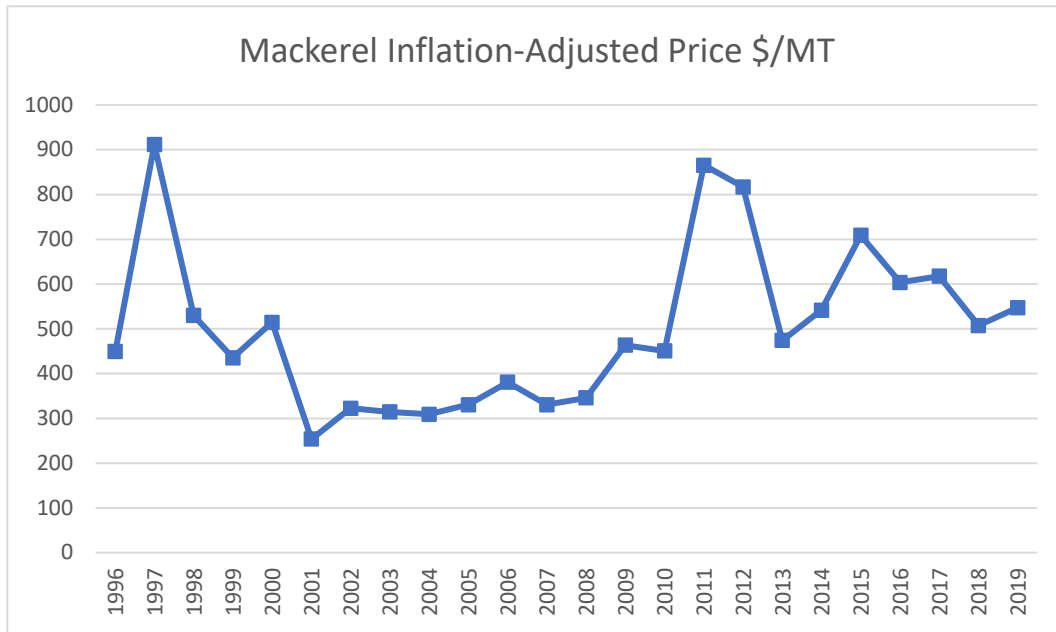


Figure 4. Ex-Vessel Mackerel Prices 1996-2019 Adjusted to 2019 Dollars Source: NMFS unpublished dealer data.

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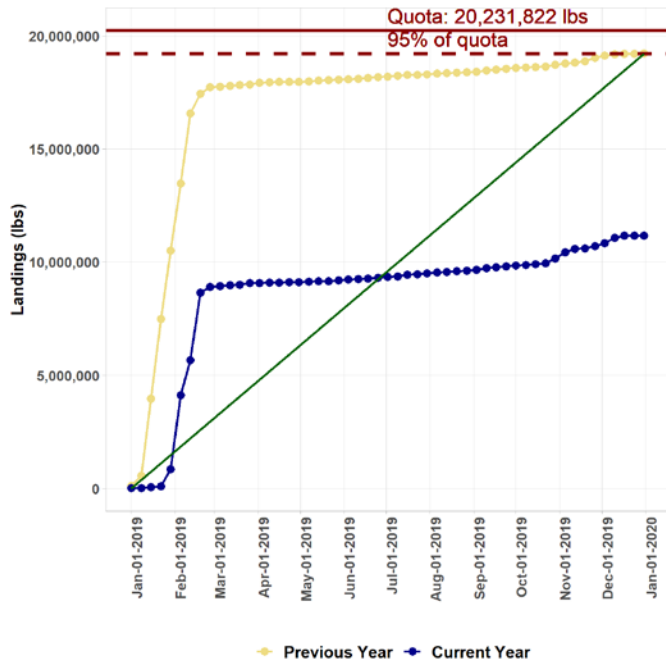


Figure 5. U.S. Preliminary Mackerel landings; 2019 in blue, 2018 in yellow-orange. Source: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/commercial-fishing/quota-monitoring-greater-atlantic-region>. (note different scale than Figure 5 due to quota change)

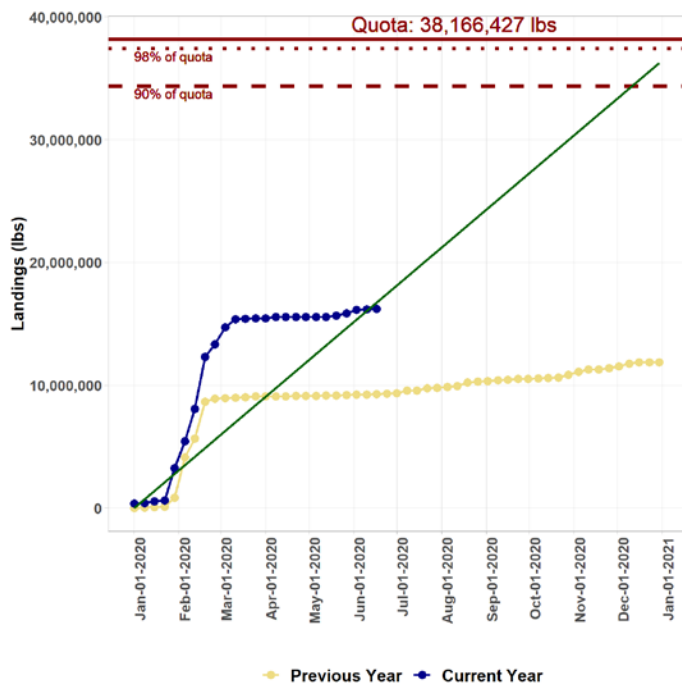


Figure 6. U.S. Preliminary Mackerel landings; 2020 in blue, 2019 in yellow-orange. Source: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/commercial-fishing/quota-monitoring-greater-atlantic-region>. (note different scale than Figure 4 due to quota change)

Table 1. Commercial Mackerel landings (live weight) by state in 2019. Source: NMFS unpublished dealer data.

State	Metric_Tons
NJ	2,501
MA	1,622
RI	587
ME	254
NY	49
CT	22
Other	13
Total	5,047

Table 2. Commercial Mackerel landings (live weight) by gear in 2019. Source: NMFS unpublished dealer data.

GEAR	Landings (MT)
TRAWL,OTTER,BOTTOM,FISH	3,313
TRAWL,OTTER,MIDWATER PAIRED	857
LONGLINE, BOTTOM	223
UNKNOWN	203
HAND LINE, OTHER	168
TRAWL,OTTER,MIDWATER	143
HANDLINE,AUTO JIG	75
Other	64
Total	5,047

Atlantic Mackerel

Scomber scombrus

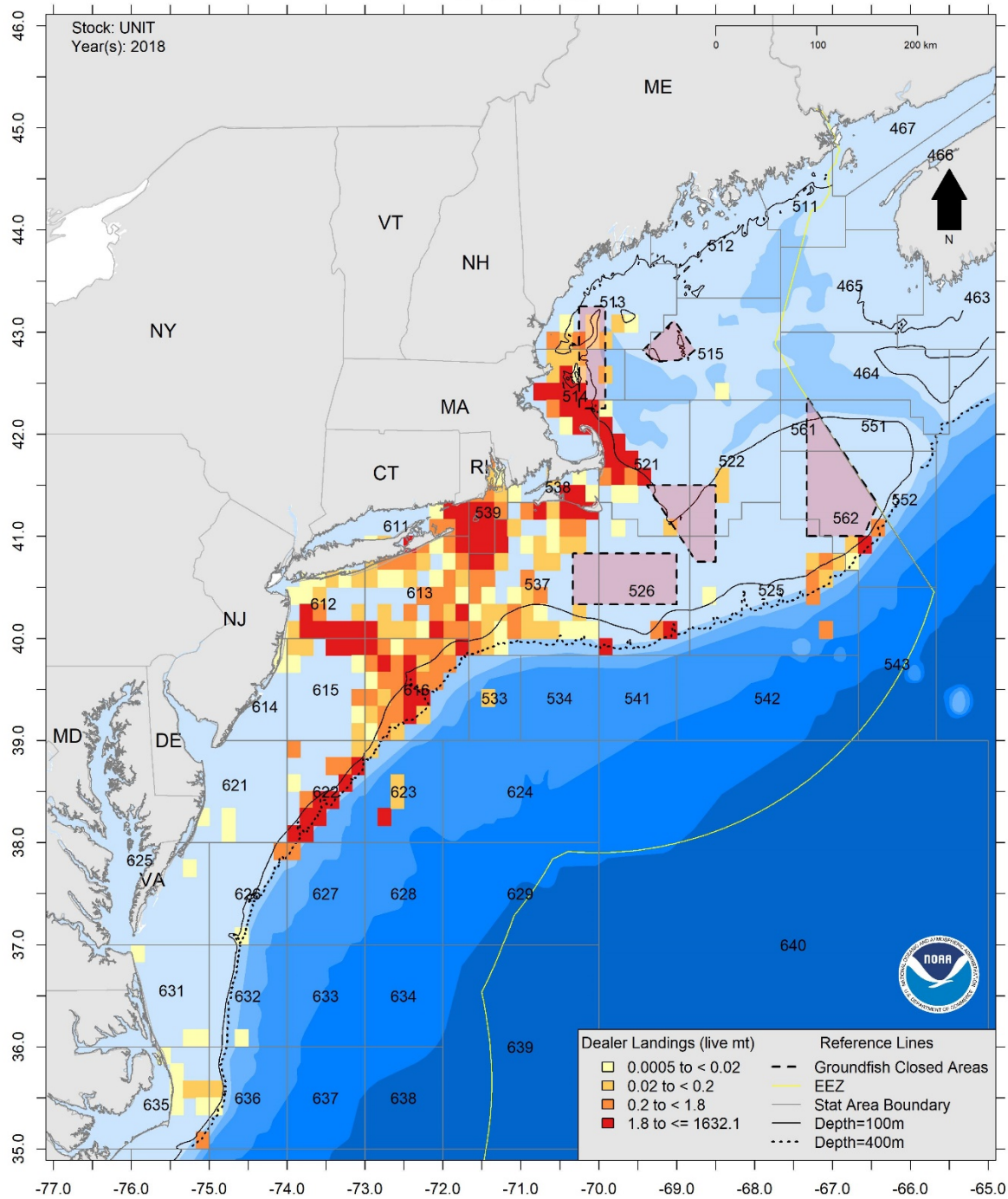


Figure 7. Approximate Primary 2018 Mackerel Catch Locations (from dealer and VTR data)

Atlantic Mackerel

Scomber scombrus

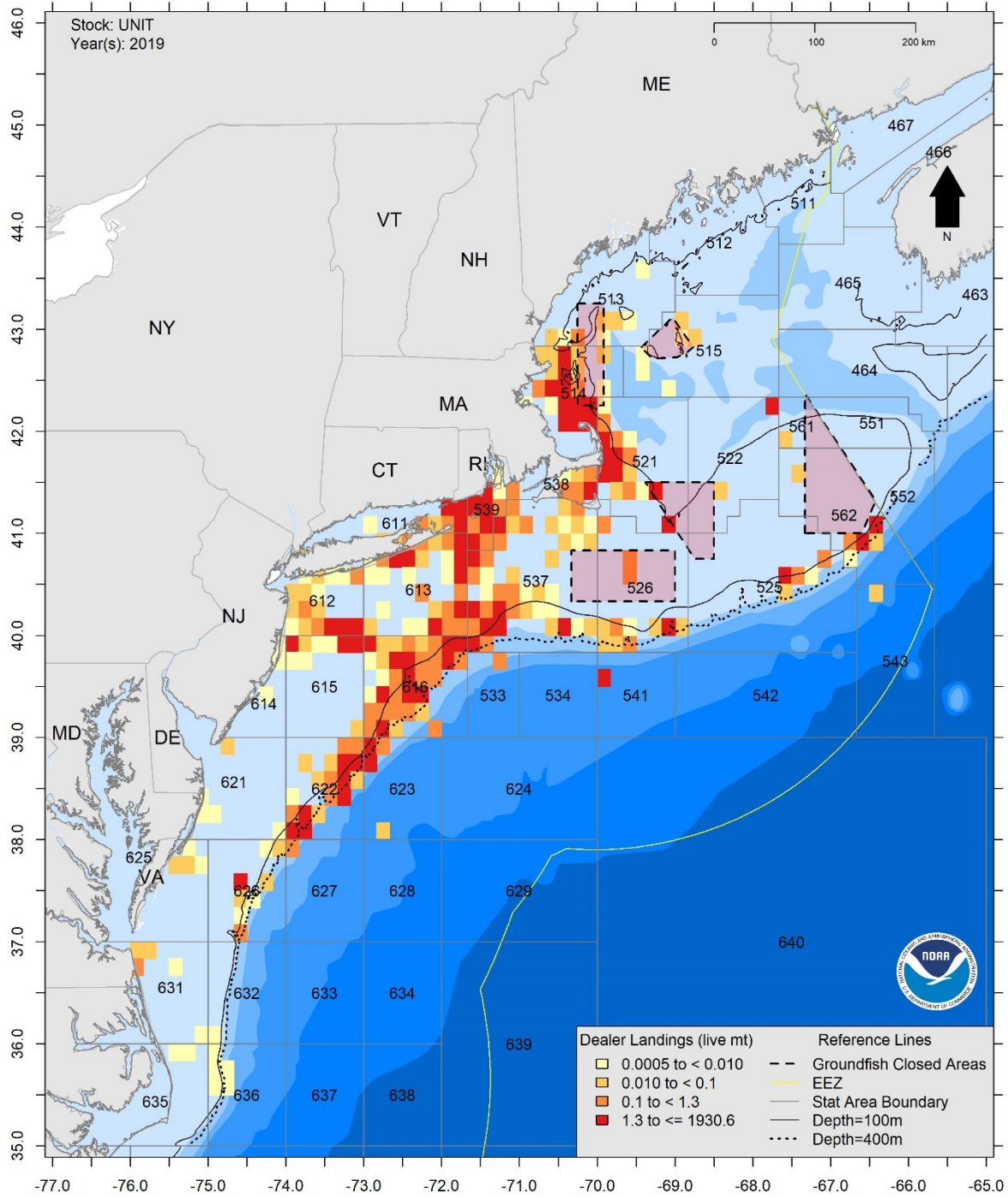


Figure 8. Approximate Primary 2019 Mackerel Catch Locations (from dealer and VTR data)

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