

# Overview of State Data Used in the Vertical Line Model



Prepared for Atlantic Large Whale Take Reduction Team  
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Funded by:  
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# Introduction and Objectives

- Vertical Line Model incorporates state-specific data to characterize certain fishing activity (primarily vessels in state waters)
- Objectives
  - Review assumptions
  - Gather suggestions for further refinement of model vessel parameters
  - Inform next round of data gathering
- More detail available in model documentation

# Summary of State Data

- Availability of data varies by state
  - Worked directly with state contacts to acquire data and refine estimation methods
  - Thanks for all the cooperation and support
- Two major categories of state data:
  - Activity data to characterize the number of vessels fishing in state waters
    - Focus on vessels holding only a state permit
    - Model incorporates data on activity in exempt waters
  - Gear configuration data to estimate the number of vertical lines typically fished by vessels in specific waters
    - Number of traps per vessel, traps per trawl, endlines per trawl
    - Number of nets per string, number of strings per vessel

# Vessels Active in State Waters (2008)

<b>State</b>	<b>Most Active Month</b>	<b>Lobster</b>	<b>Gillnet</b>	<b>OTP</b>
NY	July	83		
NJ	All	16		
DE	Sept		1	107
MD	Sept		25	670
VA	Sept		159	656
NC	Jan		279	2
SC	All			0
GA	Jan			25
FL	May			182

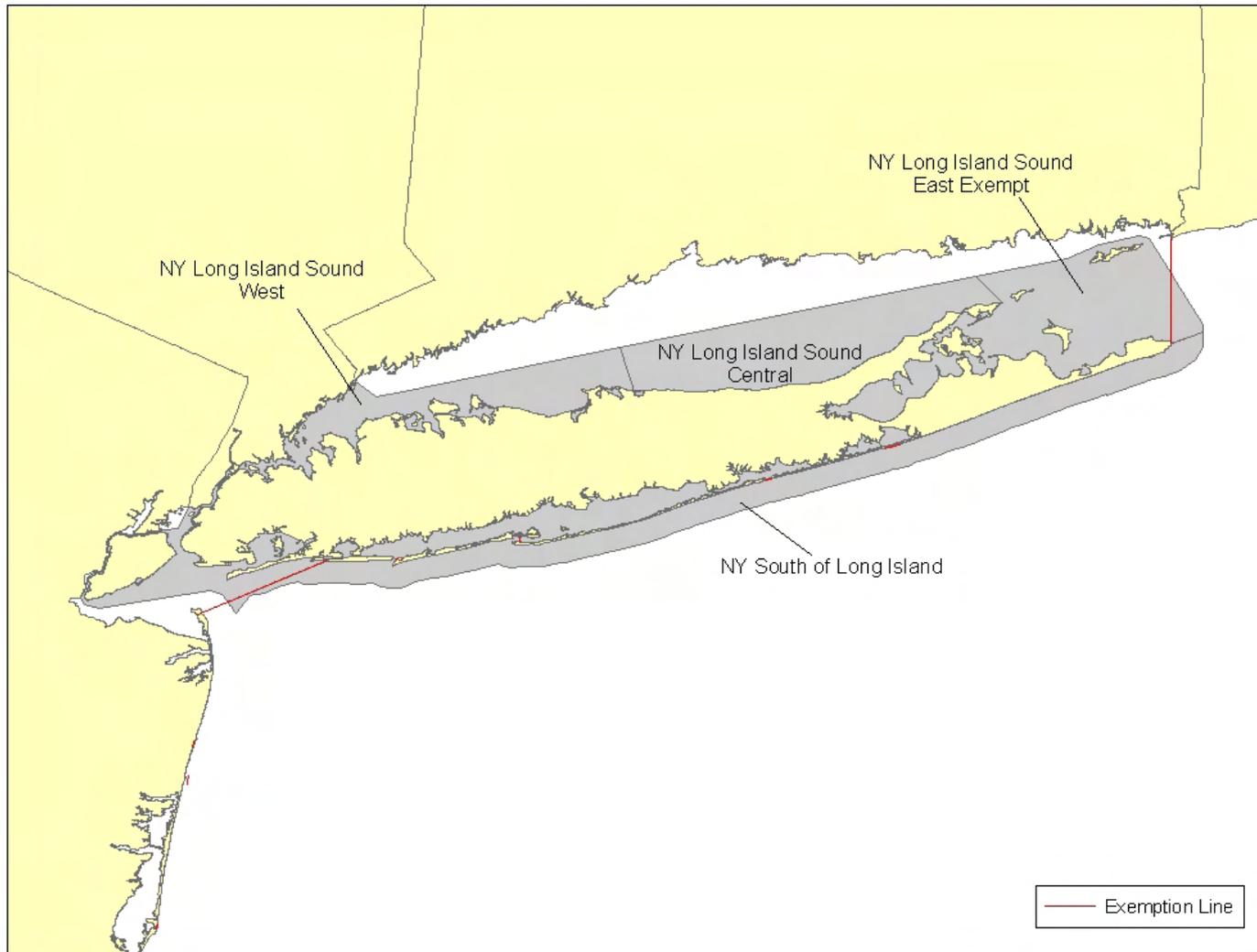
# Summary of State Data – Gear Config

	ACTIVITY		GEAR CONFIGURATION	
STATE	STATE LOGBOOK DATA	BPJ	LOGBOOK/SURVEY DATA	BPJ
NY	✓		✓	✓
NJ	✓	✓	✓	✓
DE	✓		✓	✓
MD		✓	✓	✓
VA	✓		✓	✓
NC	✓		✓	✓
SC		✓	✓	✓
GA	✓	✓	✓	✓
FL	✓		✓	✓

# New York

- Lobstering activity
  - NY DEC provided numbers of active state-permitted vessels in each of four areas, based on Recall Survey database
  - Seasonal variation estimated based on federally permitted vessels active in state waters
- Gear configuration
  - Recall Survey data for median number of traps fished per vessel (no seasonal adjustment)
  - Assume 7.5 traps per trawl based on NY DEC BPJ

# New York State Waters



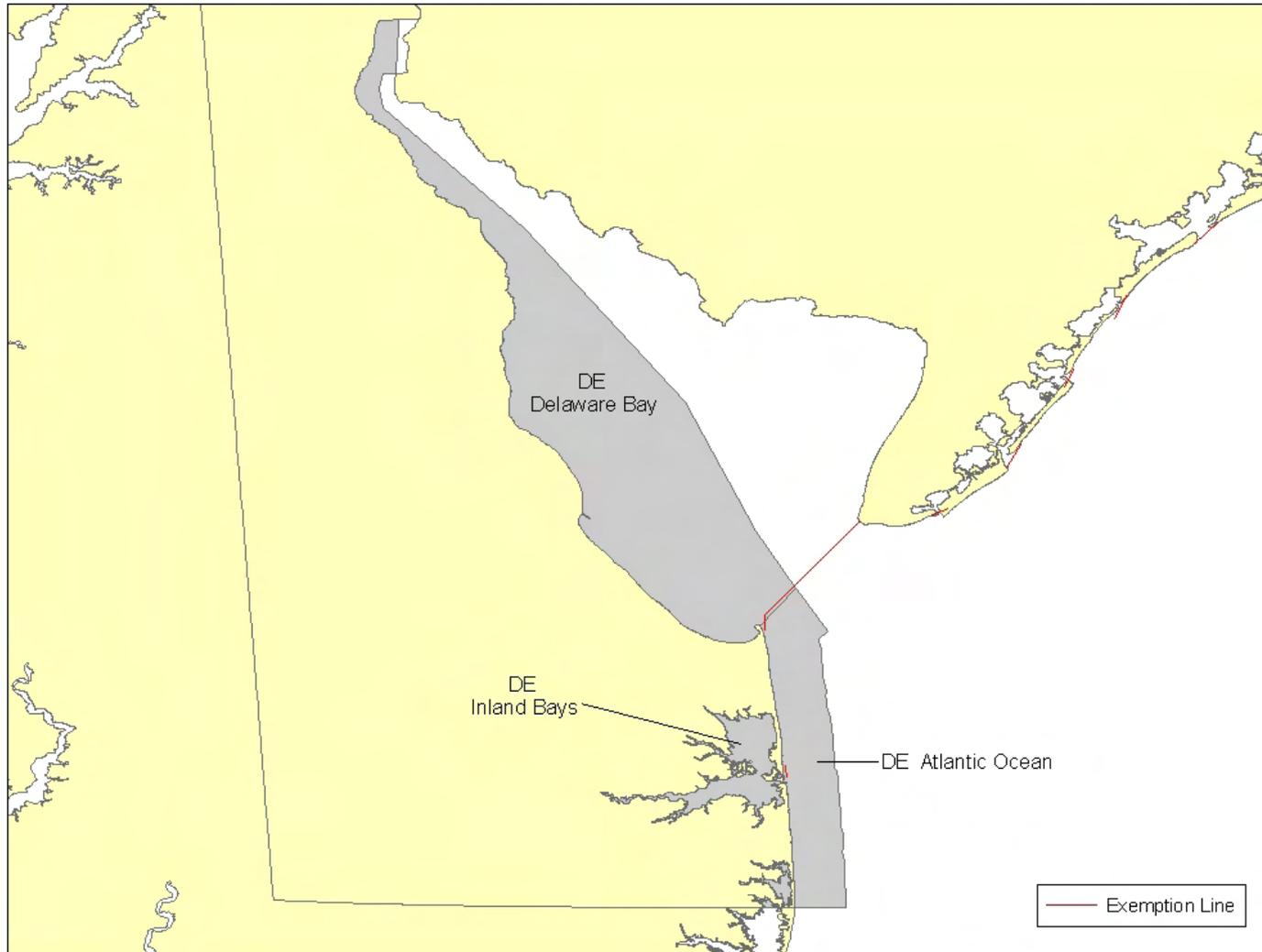
# New Jersey

- NJ DEP estimates 16 active lobster vessels in state waters
- NJ DEP officials suggest large number of traps per vessel (1,500) fished in long trawls (20 traps per trawl)
- Contacts suggest gillnet vessels operate outside state waters

# Delaware

- Activity
  - Several OTP fisheries (blue crab, eel pot, fish pot, conch) as well as gillnet fishery
  - Monthly activity based on 2008 logbook data provided by DFW
  - Three model vessel areas (DE Bay, inland bays, Atl. Ocean)
  - Activity almost exclusively in exempt waters
- Gear configuration
  - OTP
    - DFW analysis of logbook data provides estimate of pots per vessel; limited seasonal and geographic variation, so model employs a single estimate for all active vessels in given fishery
    - All pots fished as singles
  - Gillnet
    - Strings per vessel based on DFW analysis of net feet and nets fished per vessel
    - One net per string
    - Limited seasonal and geographic variation

# Delaware Model Vessel Areas



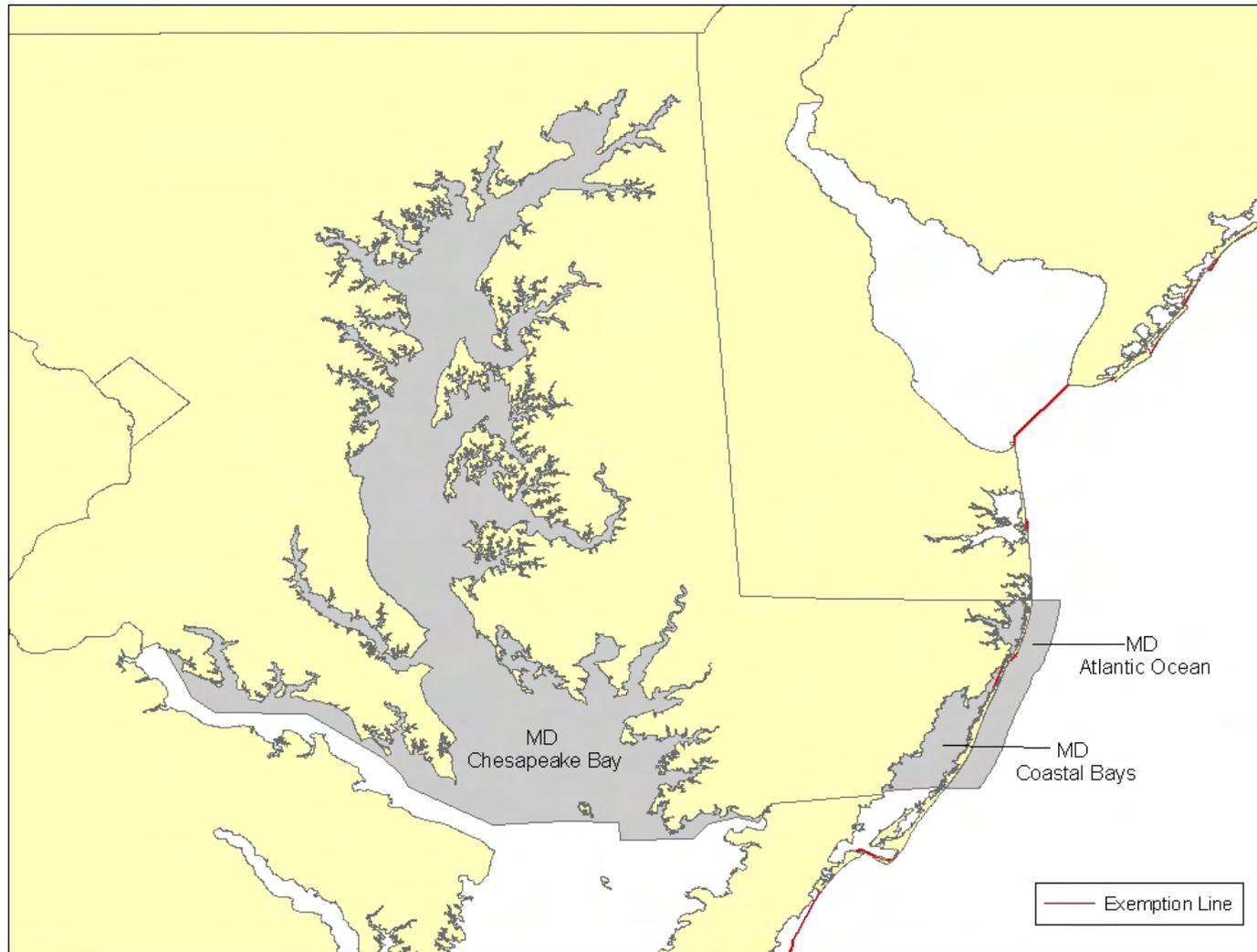
# Maryland

- Activity
  - Several OTP fisheries (blue crab, eel pot, fish pot) as well as gillnet fishery; blue crab dominates
  - Estimated monthly fishing activity based on vessel counts developed for MFS's sea turtle determination
  - Activity allocated to three areas (Chesapeake Bay, coastal bays, Atlantic Ocean); nearly all activity in exempt waters
- Gear configuration
  - Blue crab:
    - MFS license data used to estimate average traps fished per vessel (400)
    - MFS used BPJ to estimate balance of vessels fishing singles (75%) versus “long lines” (25%) in Chesapeake Bay
    - Estimate that half of long lines fished with two endlines; half with four

# Maryland (cont.)

- Base number of pots fished per eel and fish pot vessel on VA data; all fished as singles
- MFS BPJ suggests two strings per gillnet vessel

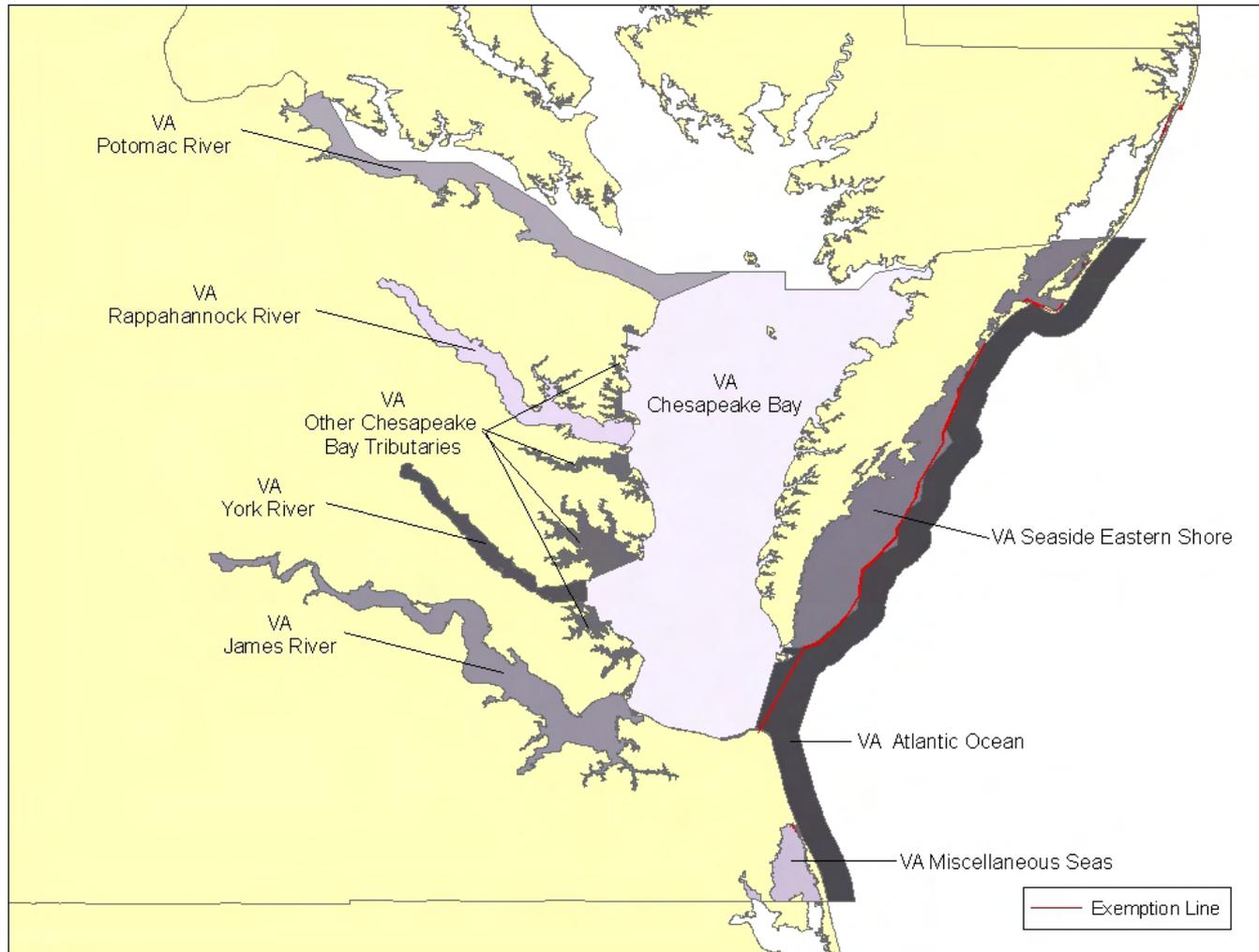
# Maryland Model Vessel Areas



# Virginia

- Activity
  - Several OTP fisheries – blue crab (hard and peeler), eel, fish – as well as gillnet fishery; blue crab dominates
  - Monthly activity based on MRC’s harvest reporting system data
  - Activity compiled for nine areas (“systems”); most activity in exempt waters
- Gear configuration
  - All pots fished as singles
  - Number of pots fished per vessel:
    - Separate averages by area for hard crab (blue crab) vessels
    - Simple averages for all other pot fisheries
  - Gillnet:
    - Between 2 and 4 strings fished per gillnet vessel; varies by area
    - Single net panel per string

# Virginia Model Vessel Areas



# North Carolina

- Activity
  - Gillnet is major fishery; black sea bass (pot) fishery exists but almost exclusively in federal waters
  - Monthly activity based on NC DENR/DMF trip ticket data
  - Model incorporates data in two areas (state waters north of Cape Hatteras and state waters south of Cape Hatteras)
  - Activity primarily in exempt waters
- Gillnet gear configuration
  - Gear configurations for different segments of gillnet fishery provided by NMFS gear specialist and reviewed by DENR/DMF
  - Configuration fished in Oct-May based on mix of small mesh and spring mackerel segments
  - Configuration fished in June-Sept based on mix of large mesh and summer mackerel segments

# South Carolina

- SC DNR indicates that black sea bass (trap) and gillnet vessels operate exclusively outside of state waters

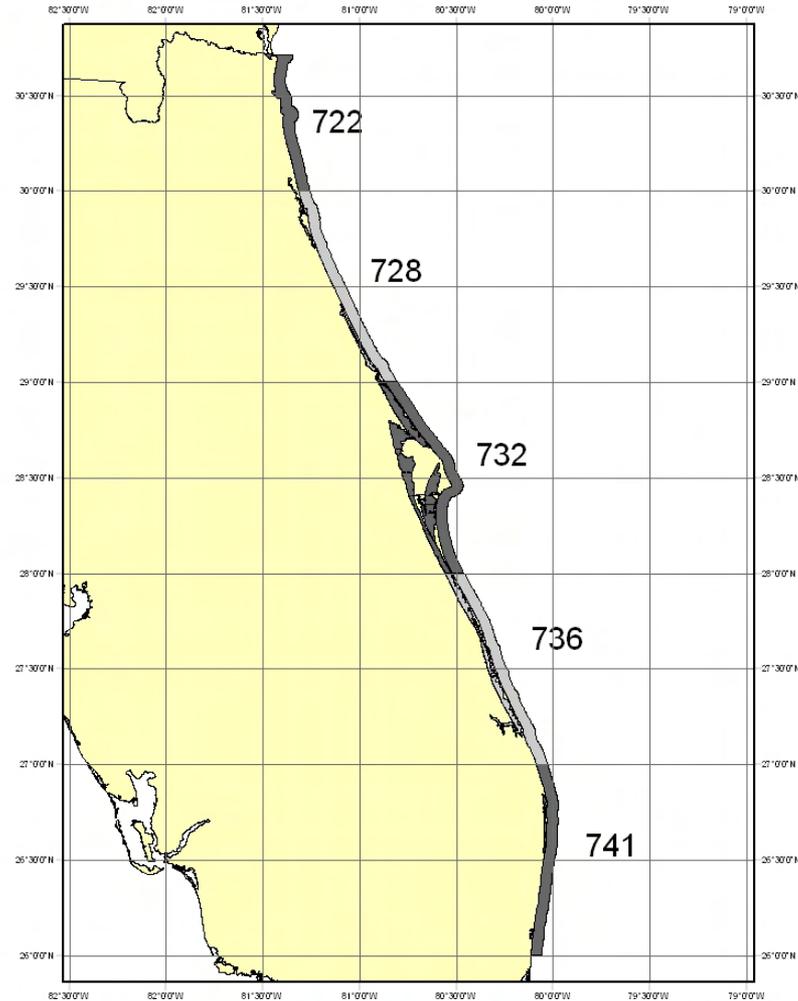
# Georgia

- Activity
  - Blue crab fishery operates in state waters
  - Max of 25 vessels fishing in any given month (Dec to March)
- Gear configuration
  - GA DNR/WRD conducted survey (Dec 2009 to Feb 2010) to characterize the fishery
  - Average of 83 pots per vessel
  - All pots are fished as singles (trawls prohibited)

# Florida

- Activity
  - Trap fishery primarily harvesting blue crab in state waters
  - FWS provided trip ticket data on active vessels in five areas of eastern FL (monthly)
  - Much of activity concentrated in exempt waters (rivers, bays and estuaries); working with SERO and FL to refine location of active vessels
- Gear configuration
  - Number of traps per vessel
    - Estimated based on trap haul data
    - Separate estimates by area; apply year-round
  - All traps fished as singles

# Florida Model Vessel Areas



# Northeast Overview

- Major fishery is lobster, particularly in ME and MA state waters
  - Diverse configurations
- Research activities:
  - Collecting 2009/2010 activity and configuration data
  - Major refinements to ME model parameters; analyzing survey data to define multiple model vessel configurations for a given area, allowing more precise scenario modeling
  - Model calibration based on MA buoy line data

# Active State-Only Vessels (July, 2008)

<b>State</b>	<b>Lobster</b>	<b>Gillnet</b>	<b>OTP</b>
ME	2,887		
NH	205	0	
MA	790	23	51
RI	150	16	59
CT	106	20	19

# Next Steps

- Possible refinements in data and assumptions
- Collection of 2009/2010 state data