

Framework Adjustment 53

Specifications and Management Measures
Multispecies (Groundfish) Fishery Management Plan

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Council Meeting
November 17-18, 2014



Outline

- **Overview:**
 - Timeline
 - Range of Alternatives
 - Status of Impacts Analysis
 - Documents
- **Goals for Meeting**
- **Alternatives:**
 - Section 4.1
 - Section 4.2



Timeline

2014	June	Council initiated FW53
	Jul-Sep	Develop specifications and measures
	Sep/Oct	Council selects measures to include in FW53
	Oct-Nov	Develop NEPA analysis
	Nov	Council takes final action on FW53



4.0 Range of Alternatives

4.1 Updates to status determination criteria, formal rebuilding programs and annual catch limits

- 4.1.1 Revised Status Determination Criteria
- 4.1.2 Annual Catch Limits
- 4.1.3 SNE/MA (southern) Windowpane Flounder Sub-ACLs for Groundfish Sectors and the Common Pool
- 4.1.4 GOM/GB (northern) Windowpane Flounder Sub-ACLs for Groundfish Sectors and the Common Pool
- 4.1.5 GOM/GB Windowpane Flounder Scallop Fishery Sub-ACL

4.2 Commercial and Recreational Fishery Measures

- 4.2.1 GOM Cod Spawning Area Closures
- 4.2.2 Prohibition on the Possession of GOM Cod
- 4.2.3 Observer Requirements in the Gulf of Maine
- 4.2.4 Rollover of Groundfish Specifications
- 4.2.5 Sector ACE Carryover



7.0 Environmental Impact Analysis

COMPLETED

Impacts of 4.1 and 4.2 Alternatives

- Biological (7.1)
- Essential Fish Habitat (7.2)
- Endangered and Other Protected Species (7.3)
- Economic Impacts (7.4)
- Social (7.5)



Documents

Draft Framework Adjustment 53

- Doc 6a - Draft FW 53, 11/7/14
- Doc 6b- Appendix II: Analytic Techniques; *Identifying location and times of spawning for GOM cod*, 10/31/14
- Doc 6c-Economic impact analysis for groundfish sectors, 11/11/2014
- Doc 6d- Staff memo to Committee, 11/10/14
 - Biological impacts, remaining analysis
 - Recreational fishery economic impacts
- Doc 6e-Economic impact analysis, 11/16/2014

Additional information

- Doc 7- PDT memo to Committee, 9/26/14
- Doc 8 - PDT memo to Committee, 11/5/14
- Doc 14- RAP Motion, 9/16/14
- Doc 15- GAP Motions, 9/16/14
- Doc 17- Groundfish Committee Motions, 11/12/14-11/13/14
- Doc 19- FW 53 Council Decision Document



Goals for Meeting

- 1) Work through decision document for FW 53
- 2) Questions/discussion on alternatives and impacts analysis
- 3) Motions on preferred alternatives and changes to measures



Discussion Order

(subject to change)

Day 1

- 4.1.1 Revised Status Determination Criteria
- 4.1.2 Annual Catch Limits
- 4.2.4 Rollover of Groundfish Specifications
- 4.2.5 Sector ACE Carryover
- 4.2.3 Observer Requirements in the Gulf of Maine

Day 2

- 4.2.1 GOM Cod Spawning Area Closures
- 4.2.2 Prohibition on the Possession of GOM Cod
- TBD GOM Cod Protection Measures
- 4.1.3 SNE/MA (southern) Windowpane Flounder Sub-ACLs for Groundfish Sectors and the Common Pool
- 4.1.4 GOM/GB (northern) Windowpane Flounder Sub-ACLs for Groundfish Sectors and the Common Pool
- 4.1.5 GOM/GB Windowpane Flounder Scallop Fishery Sub-ACL



4.1.1 Revised Status Determination Criteria

4.1.1.1 Option 1: No Action

4.1.1.2 Option 2: Revised Status Determination Criteria

- Reference points for GB yellowtail flounder would be unknown:
 - TRAC agreed to no longer use the VPA assessment model.
 - Lack of a stock assessment model framework means no historical estimates of biomass, fishing mortality rate or recruitment can be calculated.
- No changes to reference points for other stocks.
- Updated numerical estimates provided for all stocks assessed in 2014 for reference purposes.



Committee Motion

The Committee recommends that in Section 4.1.1. (Revised Status Determination Criteria), the Council select Option 2 (Revised Status Determination Criteria) as its Preferred Alternative.

The motion carried (9/0/1).



Questions?



4.1.2 Annual Catch Limits

4.1.2.1 Option 1: No Action

4.1.2.2 Option 2: Revised Annual Catch Limit Specifications

For eight groundfish stocks:

- GB yellowtail flounder FY 2015- FY 2016
- GB Cod FY 2015 (EGB)
- GB Haddock FY 2015 (EGB)
- GB Winter Flounder FY 2015- FY 2017
- Pollock FY 2015-FY 2017
- GOM Cod FY 2015- FY 2017
- GOM Haddock FY 2015- FY 2017
- GOM Winter Flounder FY 2015- FY 2017



Specifications

SSC 2014 RECOMMENDATIONS

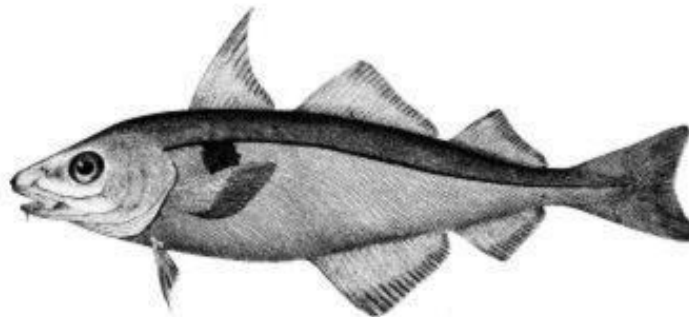
- **August** - GOM haddock and GB yellowtail flounder
- **September** -GOM cod
- **October** - GOM winter flounder, GB winter flounder, pollock, and GOM cod (revisit ABC)



Gulf of Maine Haddock

OVERVIEW

- Benchmark Assessment, SARC 59
- Stock is not overfished and overfishing is not occurring
- Recreational discards being accounted for at 50% mortality
- Recent year classes have been driving increases



Gulf of Maine Haddock

SSC ABCs/OFLs

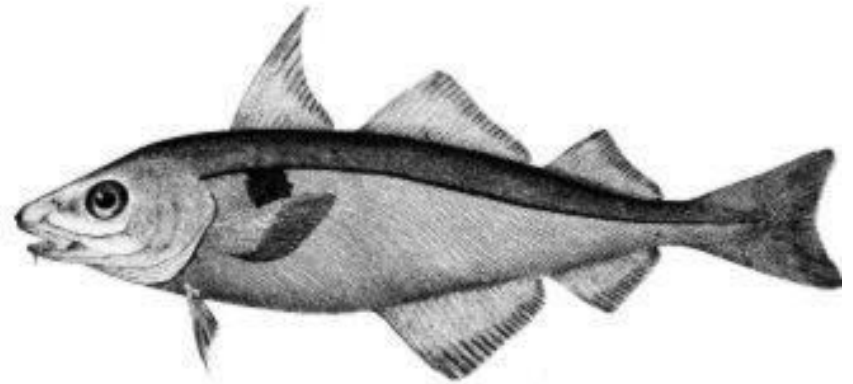
– Default control rule applied at 75%FMSY

– **ABCs**

- FY 2015: 1,454 mt
- FY 2016: 1,772 mt
- FY 2017: 2,125 mt

– **OFLs**

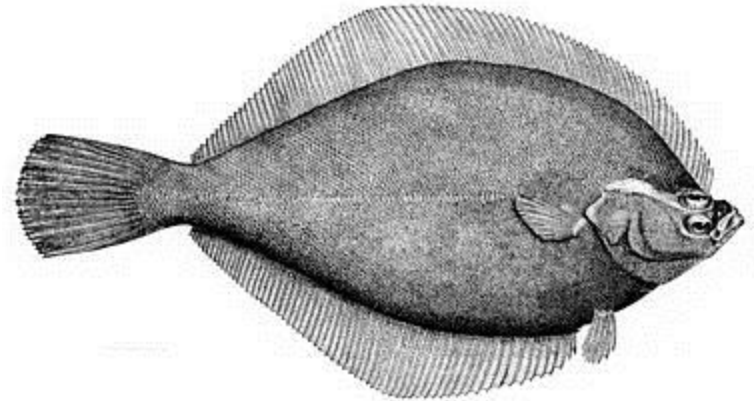
- FY 2015: 1,871 mt
- FY 2016: 2,270 mt
- FY 2017: 2,707 mt



Georges Bank Yellowtail Flounder

OVERVIEW

- Low productivity
- Historic low catches
- Low surveys indices
- Poor recruitment
- Declines in condition
- Assessment model rejected for catch setting and stock status
- Empirical approach developed at benchmark used for catch setting



Georges Bank Yellowtail Flounder

SSC ABCs/OFLs

- ABC for FY 2015 and FY 2016 354 mt, based on exploitation rate of 16%
- OFL remains unknown

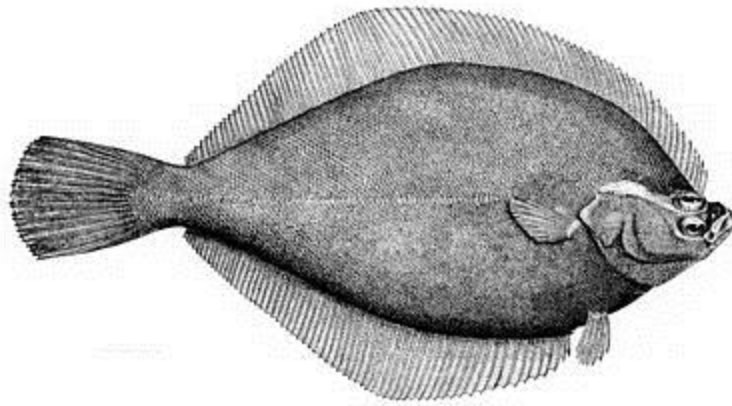


Illustration of a Yellowtail Flounder fish.



Gulf of Maine Winter Flounder

OVERVIEW



- No changes in stock status.
- The stock is not overfished, and overfished status remains unknown.
- The fall surveys show large declines in the past two years; while the spring surveys have been relatively constant.
- The fall survey is used within the assessment to determine catches.
- Most catches are from statistical area 514.



Gulf of Maine Winter Flounder

SSC ABCs/OFLs

– FY 2015- FY 2017 Constant

- OFL = 688 mt
- ABC = 510 mt



Georges Bank Winter Flounder

OVERVIEW

- No change in stock status.
- The stock is scheduled to rebuild by 2017 with a 75% probability of achieving the SSB target.
- In order to do so, a fishing mortality rate set at F_{rebuild} would be necessary for the next three years, FY 2015-FY2017.



Georges Bank Winter Flounder

SSC ABCs/OFLs

– Default control rule applied at F_{rebuild}

– **ABCs**

- FY 2015: 2,124 mt
- FY 2016: 2,221 mt
- FY 2017: 2,294 mt

– **OFLs**

- FY 2015: 3,242 mt
- FY 2016: 3,383 mt
- FY 2017: 3,511 mt



Pollock



OVERVIEW

- No change in stock status.
- Catches are well-below the recent quotas.
- The strong 2011 year class is the second highest in the recruitment series.
- The assessment findings indicate that total recreational catches (landings and discards) are becoming an increasing portion of the overall (i.e., commercial and recreational) catch.



Pollock

SSC ABCs/OFLs

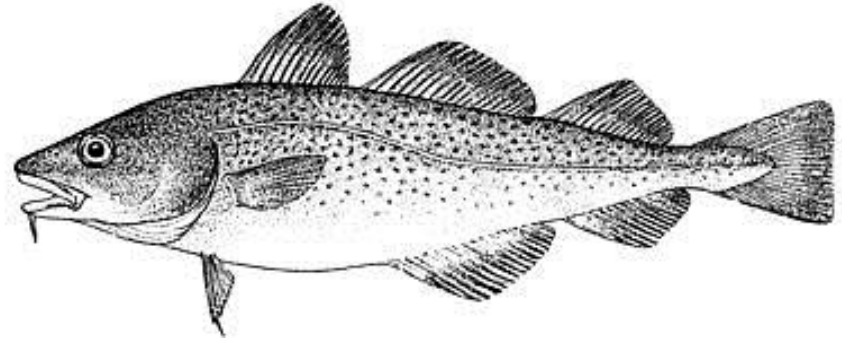
- **ABCs**- 16,000 mt (constant FY2015- FY2017)
- **OFLs**
 - FY 2015: 21,538 mt
 - FY 2016: 21,864 mt
 - FY 2017: 24,598 mt



Gulf of Maine Cod

OVERVIEW

- SSB is very low
- F is high
- Recruitment is poor
- Truncated age structure
- Stock is in very poor condition
- Surveys continue to decline and are at lows

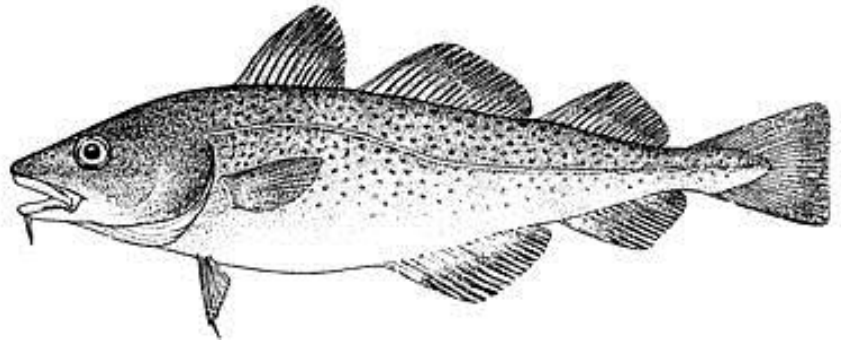


Gulf of Maine Cod

SSC ABCs/OFLs

– FY 2015- FY 2017 Constant

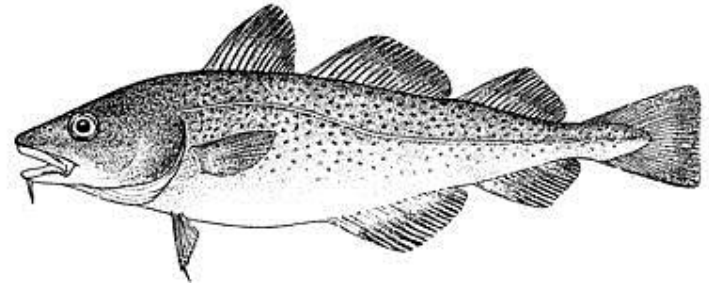
- OFL = 514 mt
- ABC = 386 mt



TRAC/TMGC

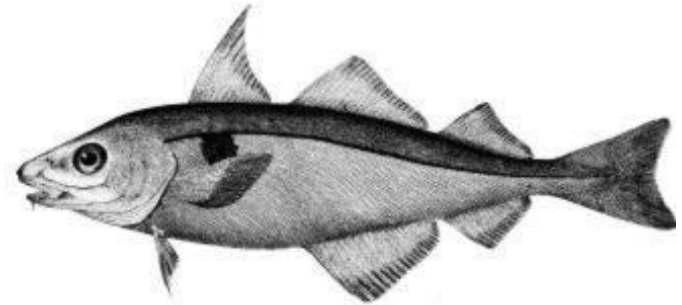
- **EGB cod**

- Total TAC: 650 mt
- US TAC: 124 mt



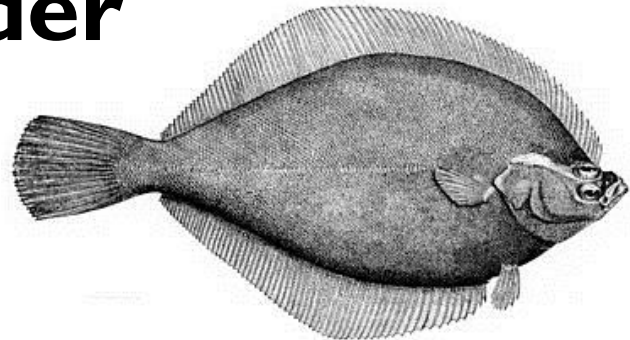
- **EGB haddock**

- Total TAC: 37,000 mt
- US TAC: 17,760 mt



- **GB yellowtail flounder**

- Total ABC: 354 mt
- US ABC: 248 mt



Sub-Components and State Waters

The ACLs in Option 2 are based on the PDT's state waters and sub-component analysis.

Does the Council concur with Committee's recommendations? (See *Document #8 for PDT's recommendations to the Committee*)

2014 RECOMMENDATIONS

- *GB Winter Flounder***
- *Halibut***
- *State waters and other sub-components***



Committee Motions

The Committee accepts the PDT's recommendations for state-water and other sub-components ABC distribution as described in Document 8 (PDT Memo to the Committee re FW 53, November 5, 2014) for FW 53 in Section 4.1.2 (Annual Catch Limits), Option 2 (Revised annual catch limit specifications).

The motion carried (8/0/1).

The Committee recommends that in Section 4.1.2. (Annual Catch Limits), the Council select Option 2 (Revised annual catch limit specifications) as its Preferred Alternative.

The motion carried (9/0/1).



Questions?



4.2.4 Rollover of Groundfish Specifications

4.2.3.1 Option 1: No Action

4.2.3.2 Option 2: Percentage Rollover Provisions for Specifications

- Sub-Option A: Rollover 35% of all groundfish stocks to the following FY.
- Sub-Option B: Rollover 20% of all groundfish stocks to the following FY.
- Sub-Option C: Rollover 10% of all groundfish stocks to the following FY.

Option 2 would not change the distribution or conditions of the commercial and recreational fishery allocations (e.g. trimester TACs and 20% holdback for groundfish sector ACE).



Committee Motions

The Committee recommends that in Section 4.2.4 (Rollover of Groundfish Specifications), to all sub-options sub Option 2 (Percentage rollover provisions for specifications) an additional provision be added that would specify that, in the event specifications are rolled over into the next fishing year, that Sectors would not be subject to the 20% holdback of current year's Sector Annual Catch Entitlement while the rollover specifications are in place.

The motion carried (9/0/1).

The Committee recommends that in Section 4.2.4 (Rollover of Groundfish Specifications), the Council select Sub-Option A (Rollover 35% of all groundfish stocks to the following FY) as its Preferred Alternative, with an end date no later than August 1.

The motion carried (9/0/1).



Questions?



4.2.5 Sector ACE Carryover

4.2.5.1 Option 1: No Action

4.2.5.2 Option 2: Modification to Sector ACE carryover

- This option would cap the maximum available unused sector ACE carried over from the previous fishing year (e.g., FY 2014) at the ABC level minus the ACL for the fishing year in which the carryover will be landed (e.g., FY 2015).
- In addition, this alternative includes the previously used accountability measure criteria developed for the June 2014 emergency action: sectors would continue to be required to pay back carried over catch used only when both the sector sub-ACL and total stock ACL are exceeded.



Committee Motion

The Committee recommends that in Section 4.2.5 (Sector ACE Carryover), the Council select Option 2 as its Preferred Alternative.

The motion carried (8/0/2).



Questions?



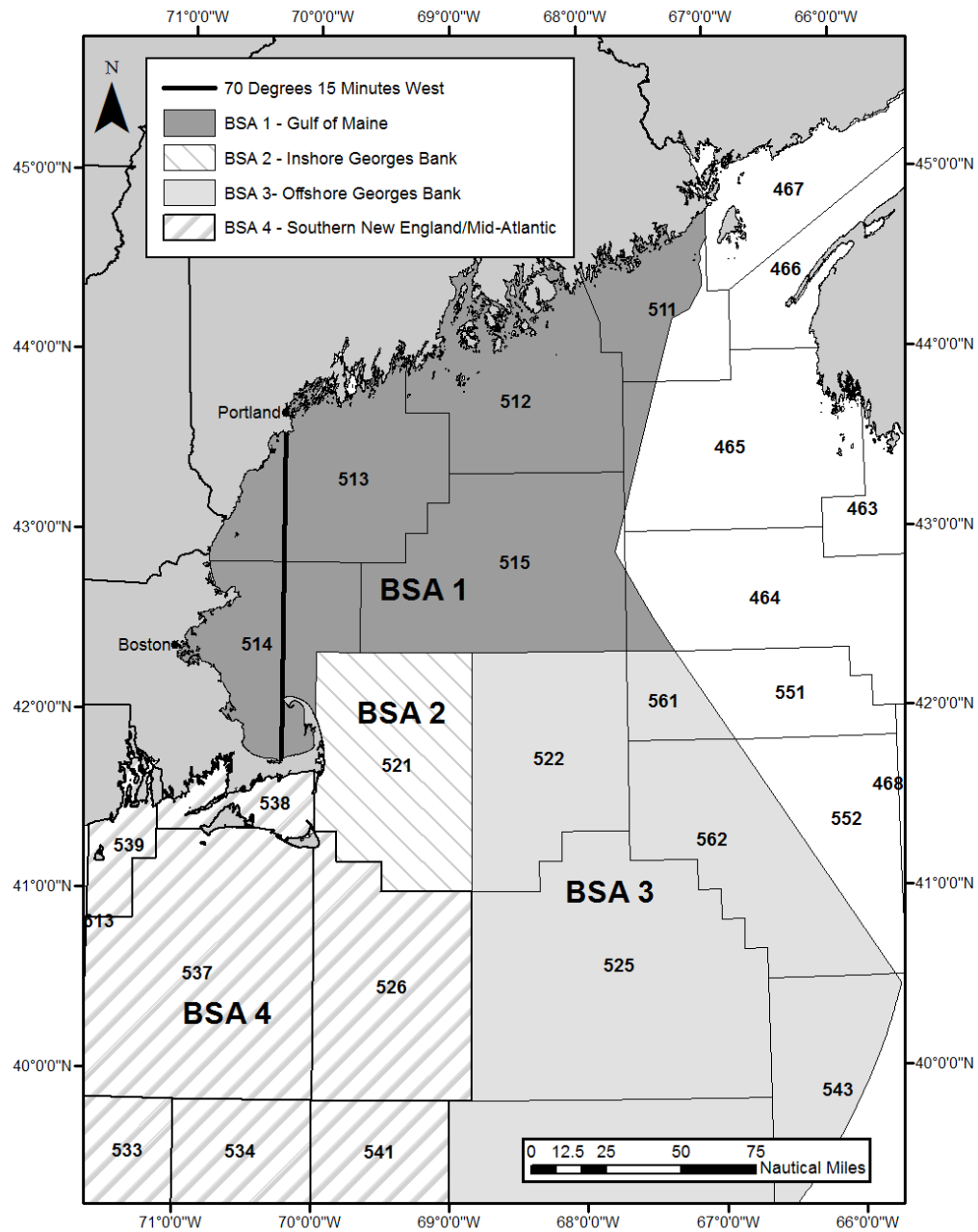
4.2.3 Observer Requirements in the Gulf of Maine

4.2.2.1 Option 1: No Action

4.2.2.2 Option 2: Revised observer requirements on trips in the GOM and GB cod broad stock areas

- Option 2 would prohibit commercial vessels from fishing in the GOM west of 70-15W and any other broad stock area on the same trip, unless carrying an observer.
- However, vessels fishing only in the GOM cod stock area would not be restricted by this measure.
- A vessel carrying an observer would not be restricted in where they could fish on a given trip.
- Trip declarations of the area that would be fished would be made to NMFS and the sector manager via the Trip Start Hail report through a vessel's VMS system.





Committee Motion

The Committee recommends that Section 4.2.3 (Observer Requirements in the Gulf of Maine) be moved to “Considered but Rejected”.

The motion carried (9/0/0).



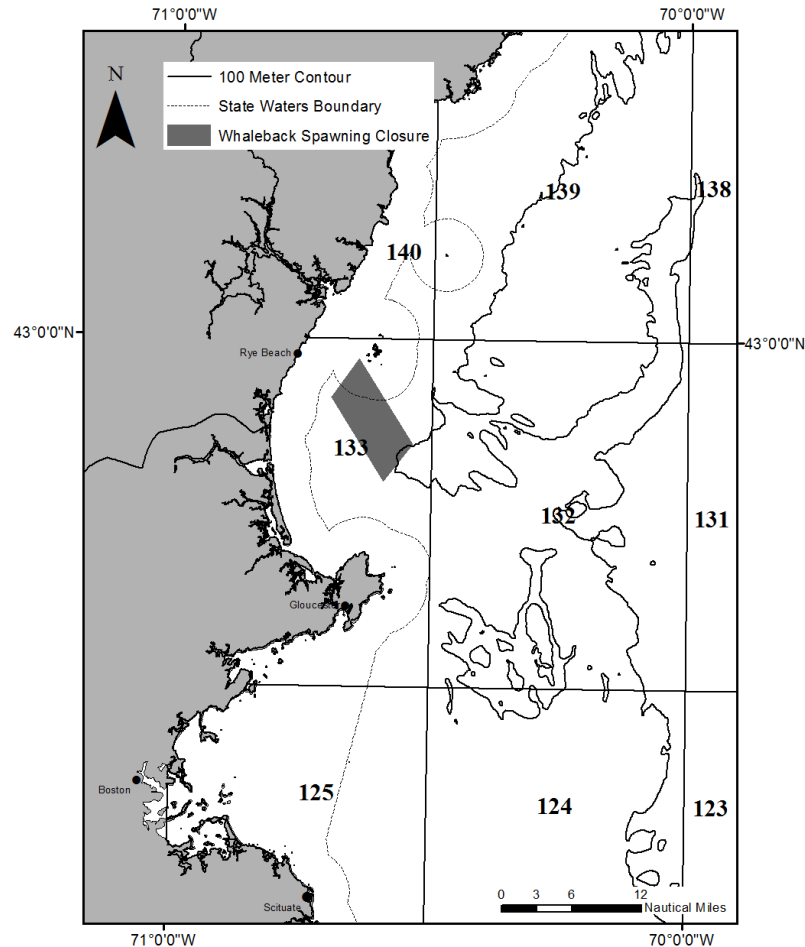
Questions?



4.2.I GOM Cod Spawning Area Closures

4.2.1.1 Option 1: No Action (Whaleback)

Gulf of Maine Cod Spawning Closure Area: Whaleback



4.2.1 GOM Cod Spawning Area Closures

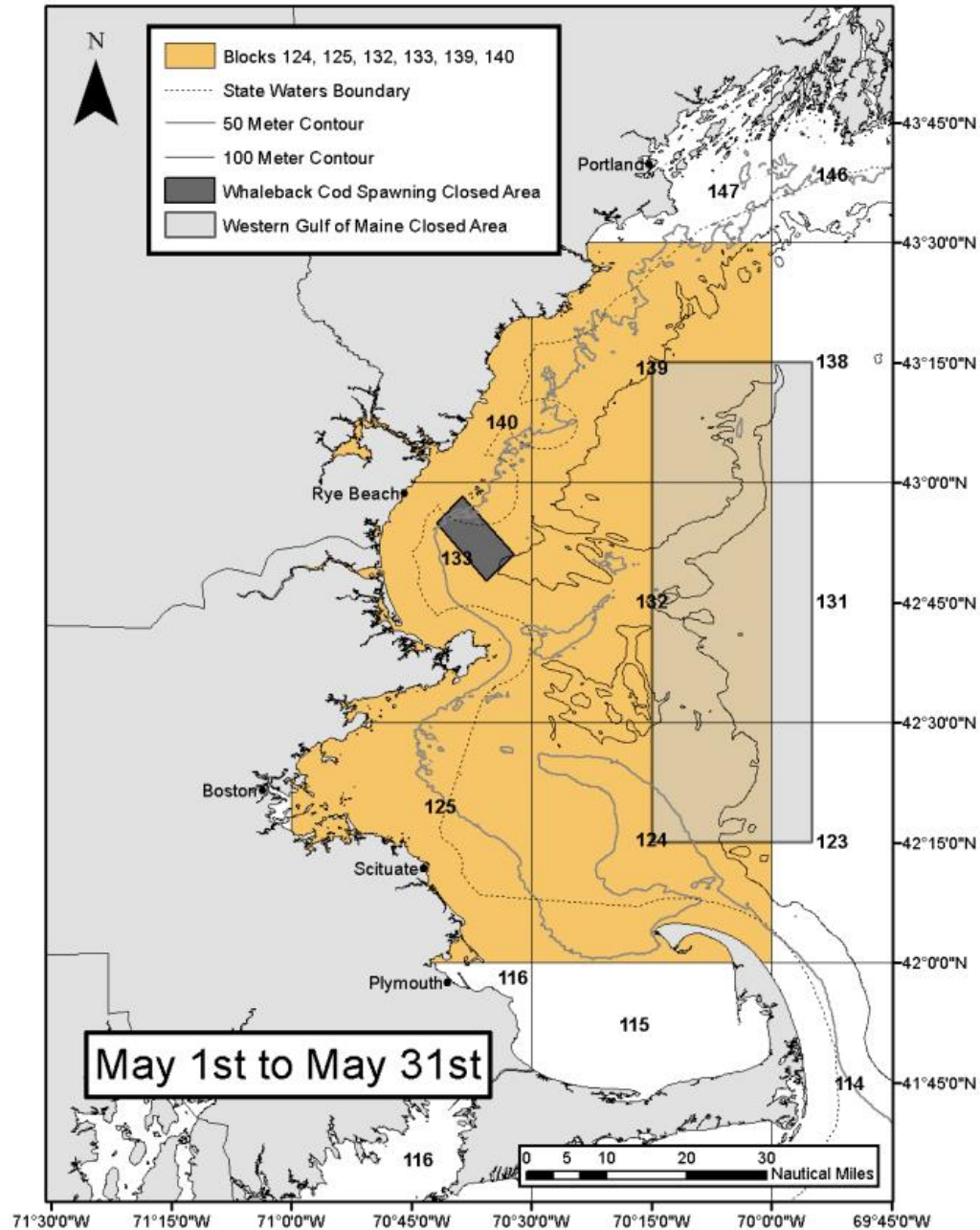
4.2.1.2 Option 2: Adopt additional inshore spawning closures for GOM cod

Sub-Option A: All commercial and recreational groundfish fishing would be prohibited:

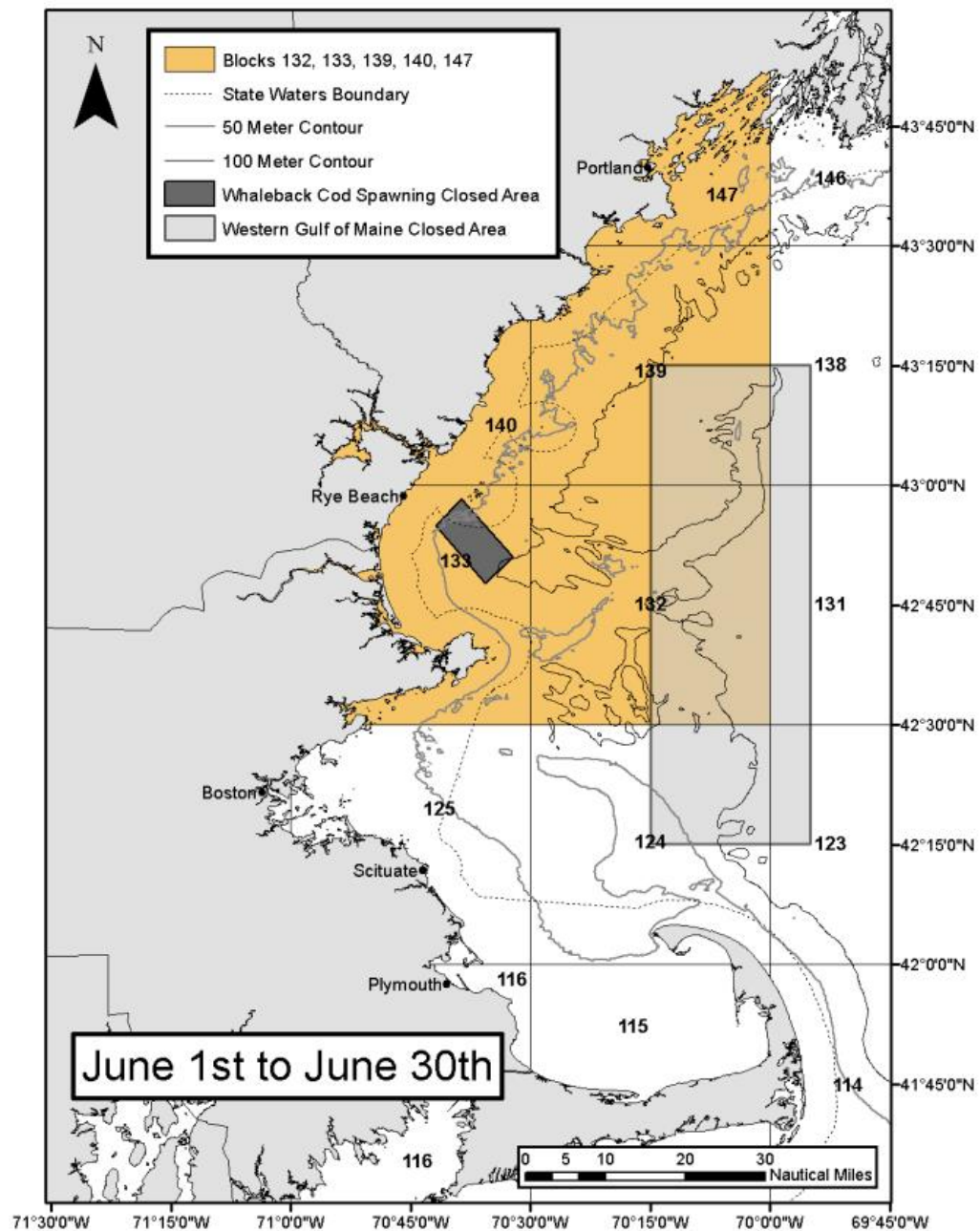
- Year-round in the WGOM Closed Area and;
- Seasonally in the following 30-minute blocks during these months:
 - May: 124, 125, 132, 133, 139, 140
 - June: 132, 133, 139, 140, 147
 - November – January: 124-125
 - March-April: 124, 125, 132, 133



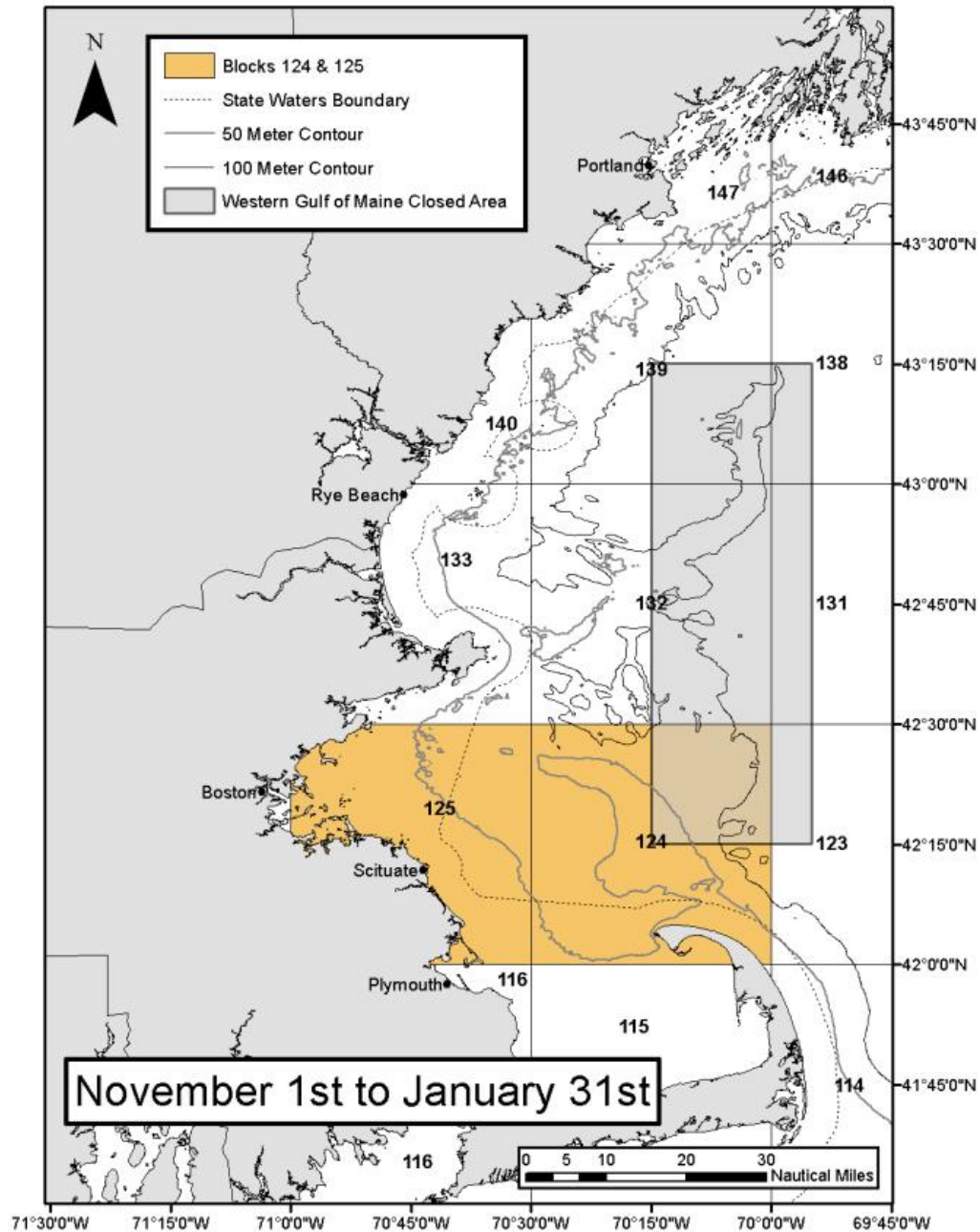
May 1- May 31



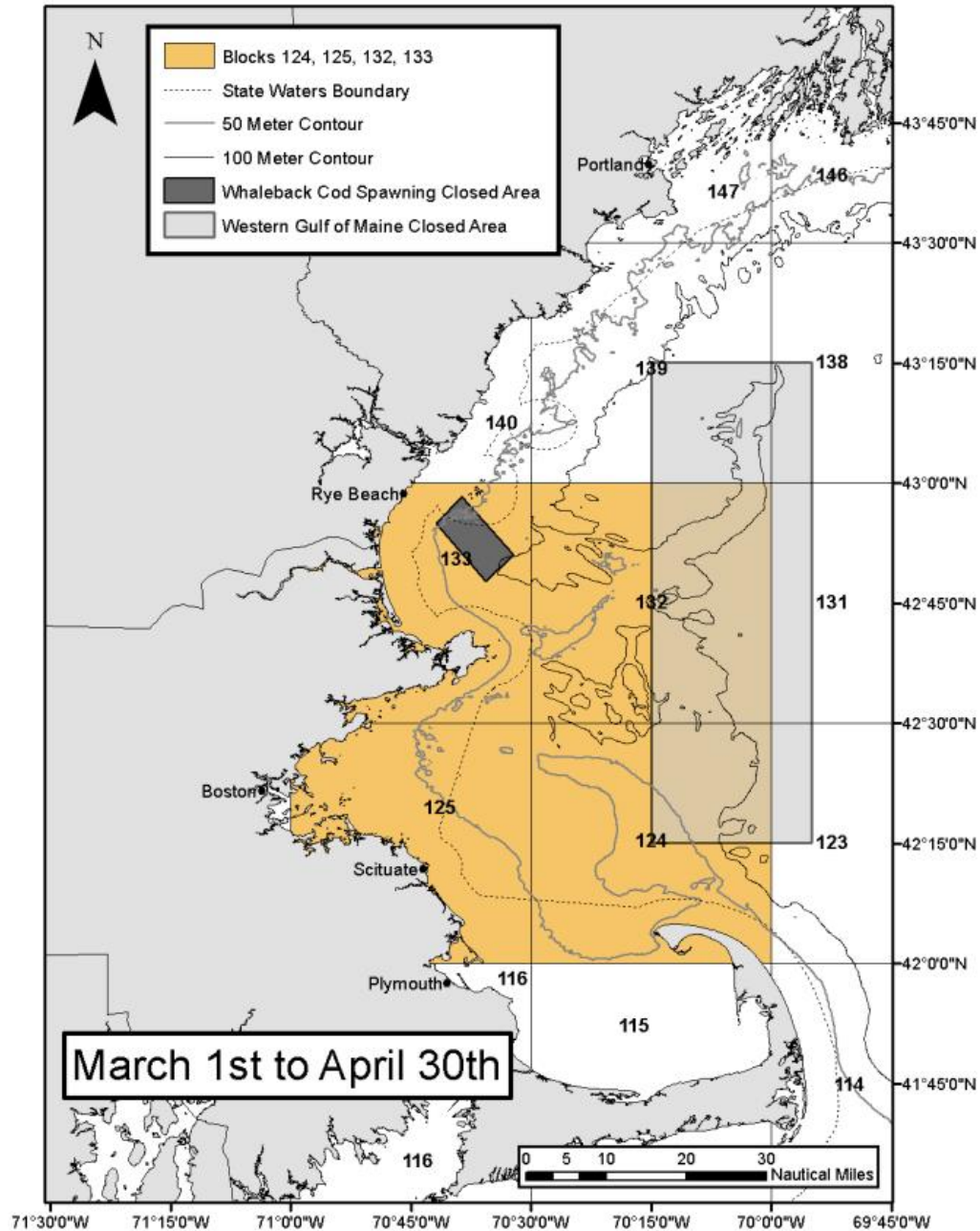
June 1- June 30



**Nov 1-
Jan 31**



**Mar 1-
Apr 30**



4.2.1 GOM Cod Spawning Area Closures

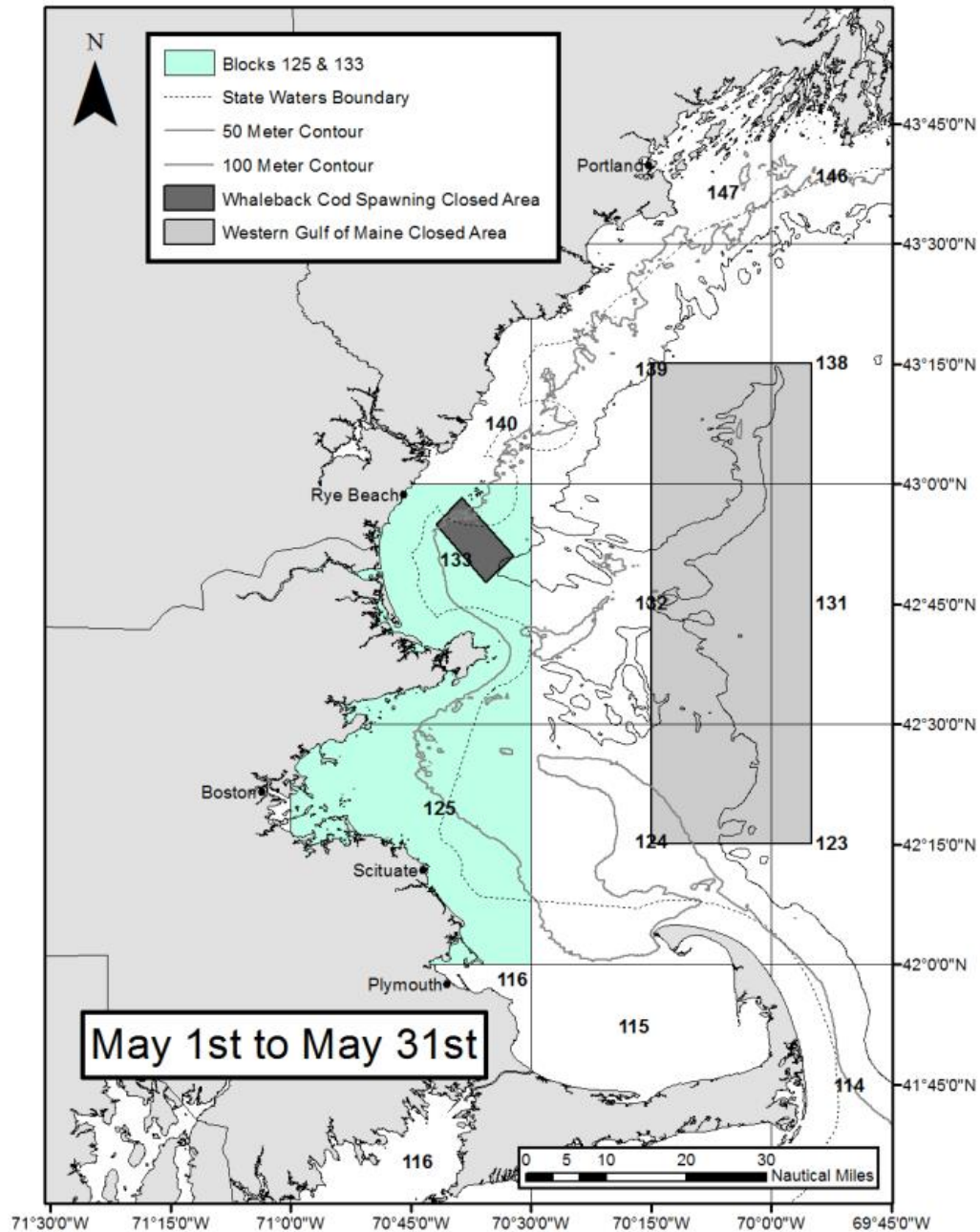
4.2.1.2 Option 2: Adopt additional inshore spawning closures for GOM cod

Sub-Option B: All commercial and recreational groundfish fishing would be prohibited in the following 30-minute blocks during these months:

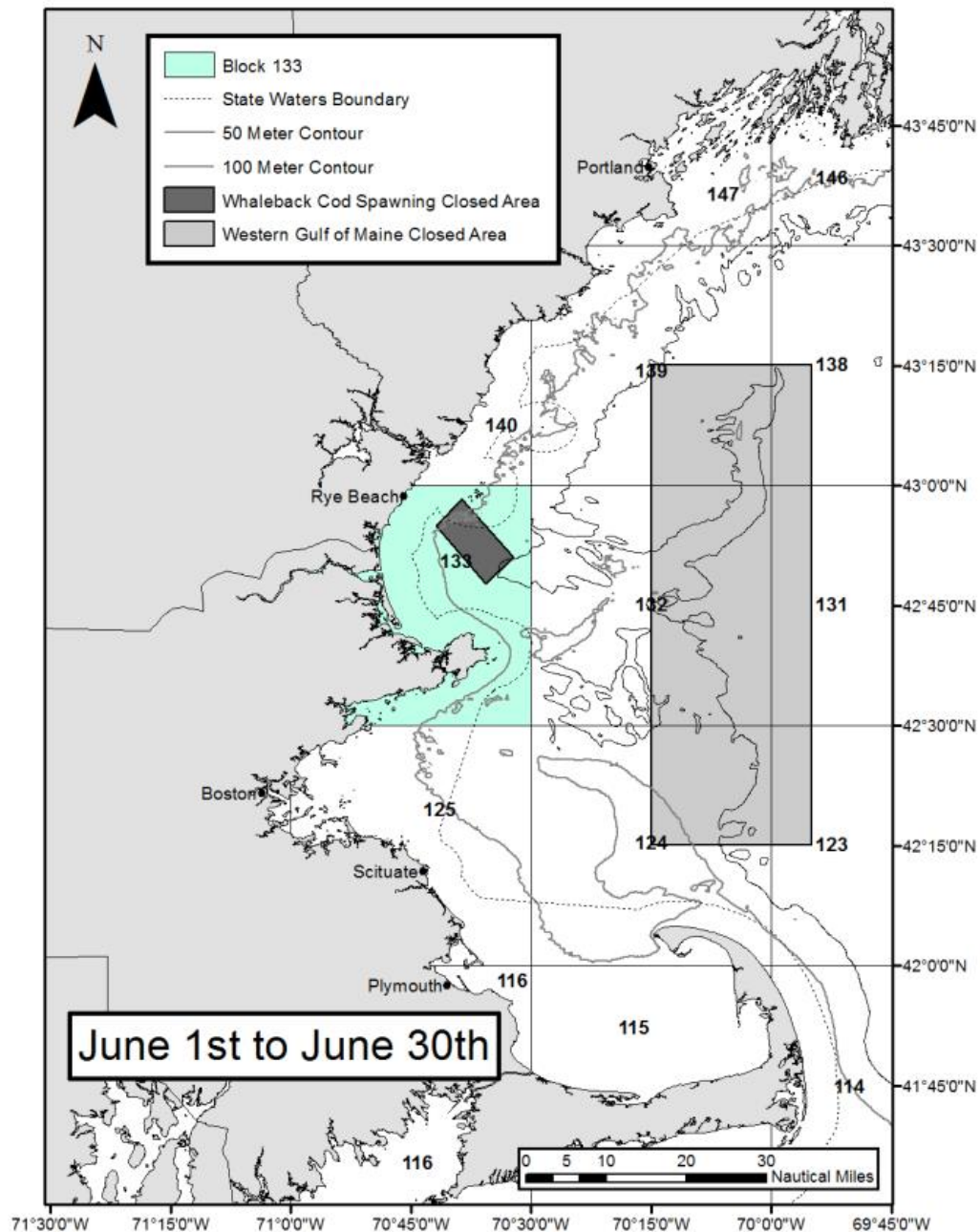
- May: 125, 133
- June: 133
- November – January: 124 with an eastern boundary defined at 70-15, 125
- March-April: 125, 133



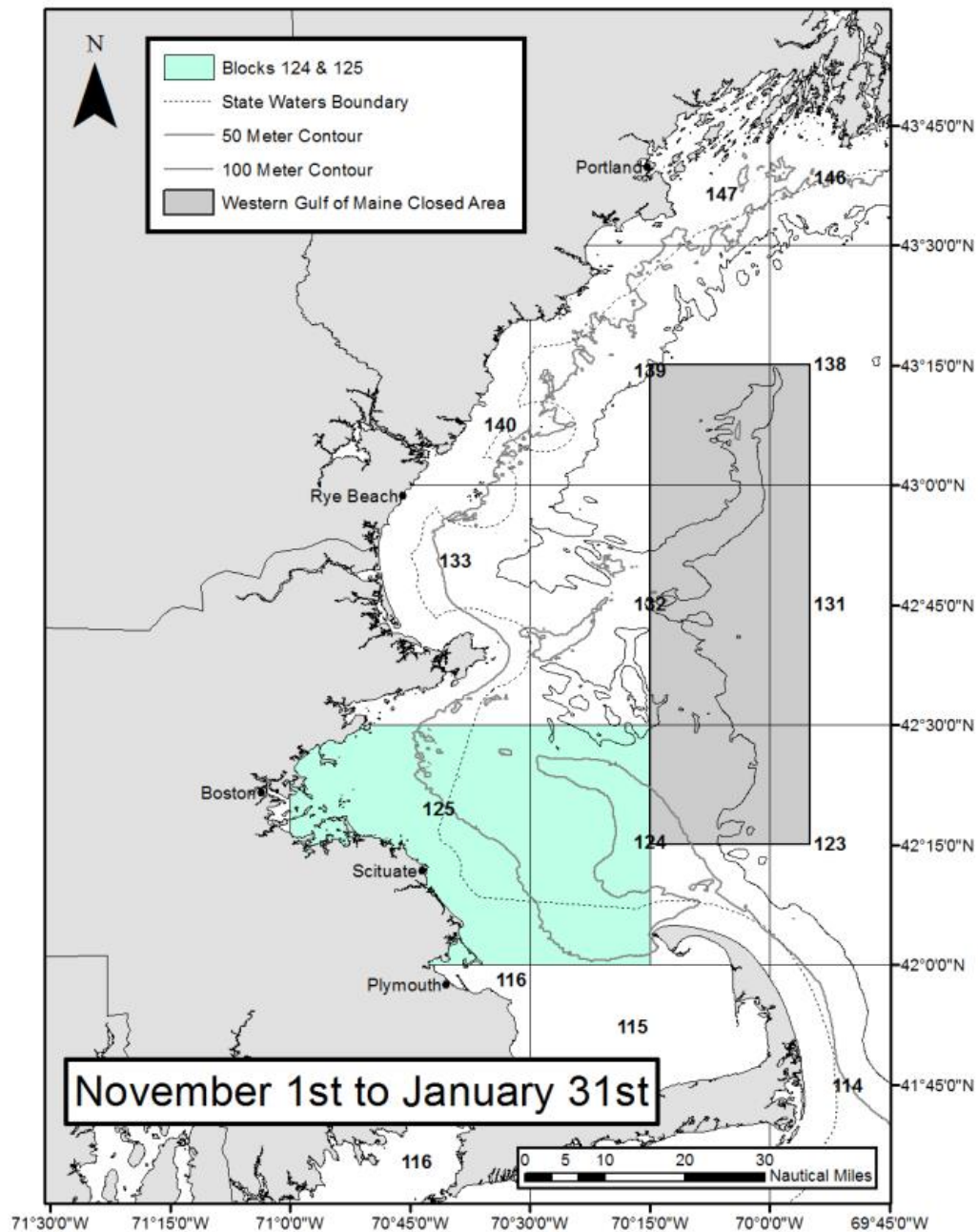
May 1- May 31



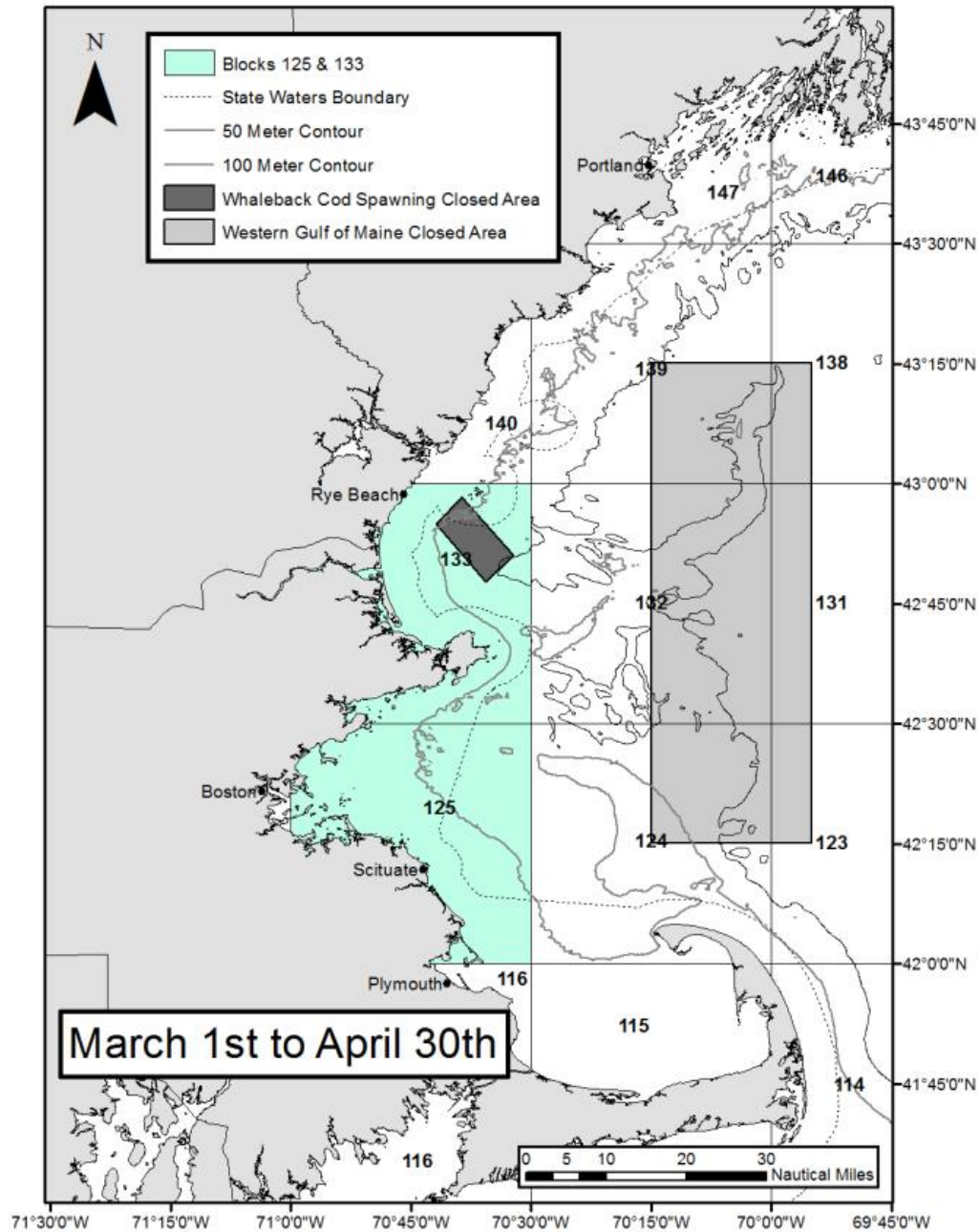
June 1- June 30



**Nov 1-
Jan 31**



**Mar 1-
Apr 30**



For Discussion

- Does the Council want to weigh in on which gears/fisheries these areas would apply to?
- *Exempted gear*, with respect to the NE multispecies fishery, means gear that is deemed to be not capable of catching NE multispecies, and includes: Pelagic hook and line, pelagic longline, spears, rakes, diving gear, cast nets, tongs, harpoons, weirs, dipnets, stop nets, pound nets, pelagic gillnets, pots and traps, shrimp trawls (with a properly configured grate as defined under this part), and surfclam and ocean quahog dredges.



Committee Motions

The Committee recommends that, due to the high bycatch of cod in the lobster fishery and potential disruption of spawning behavior, for FW53 that all options in Section 4.2.1 (GOM Cod Spawning Area Closures) include a restriction on fishing with or using lobster pot gear.

The motion carried (6/1/3).

The Committee recommends that March be eliminated as a closure from Sub-Options A and B in Section 4.2.1 (GOM Cod Spawning Area Closures), Option 2 (Additional GOM cod spawning protection measures).

The motion carried (9/0/1).



Committee Motions

The Committee recommends to the Council that in Section 4.2.1 (GOM Cod Spawning Area Closures) Option 2 (Additional GOM Cod Spawning Protection Measures), Sub-Option A, strike “Year-round in the WGOM Closed Area”.

The motion carried (8/0/1).

The Committee recommends to the Council that an additional sub-option as “Sub-Option C” be added to Section 4.2.1 (GOM Cod Spawning Area Closures) that would replicate Sub-Option B, except that for November – January, to open 30-minute block 124 with the exception of: $42^{\circ} - 70^{\circ}30'$; $42^{\circ}07' - 70^{\circ}24'$; $42^{\circ}16' - 70^{\circ}30'$ (30-minute block 125 would be closed, as well as this triangle in 30-minute block 124).

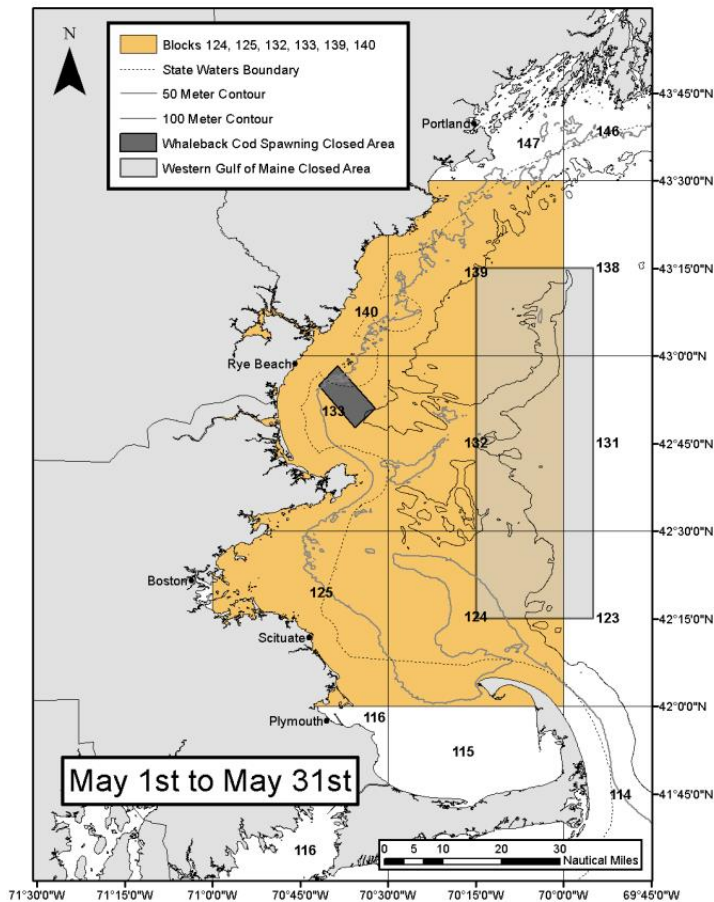
The motion carried (7/2/1).



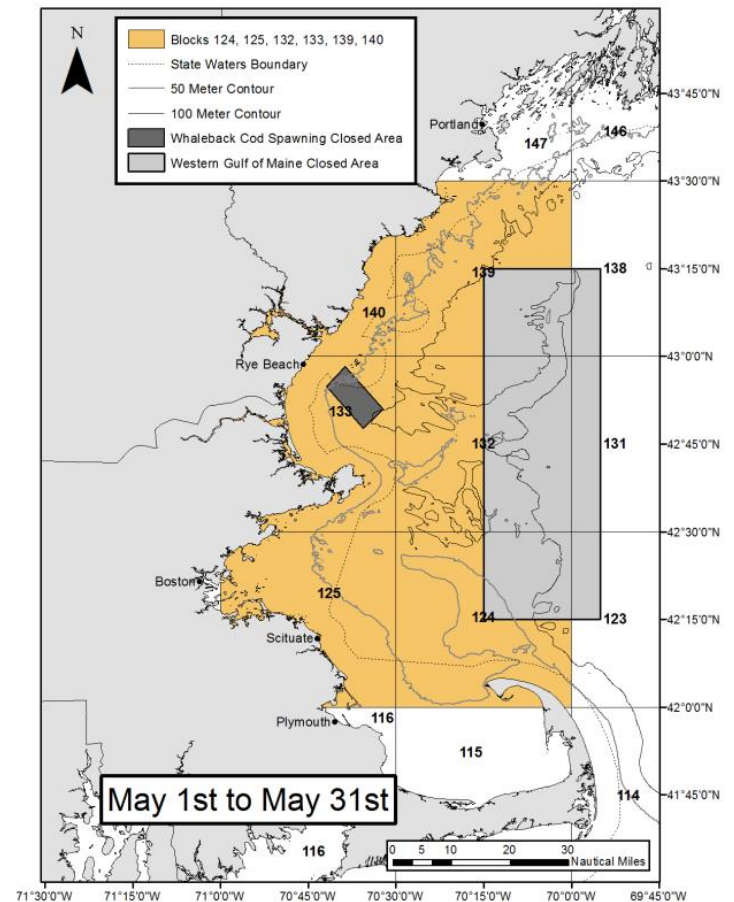
Committee Motions

Option 2\Sub-Option A

As Drafted



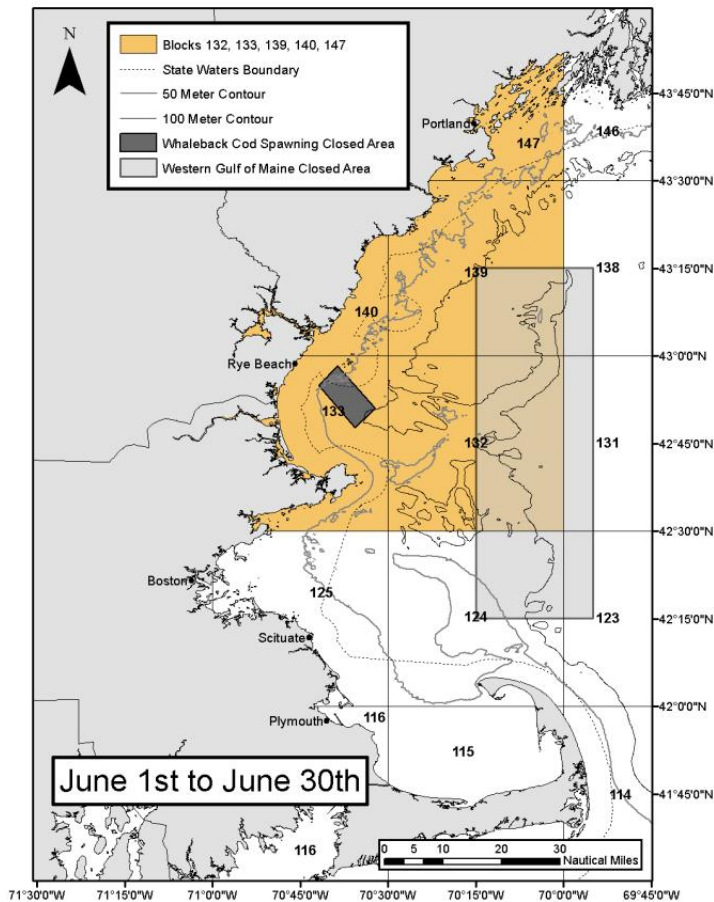
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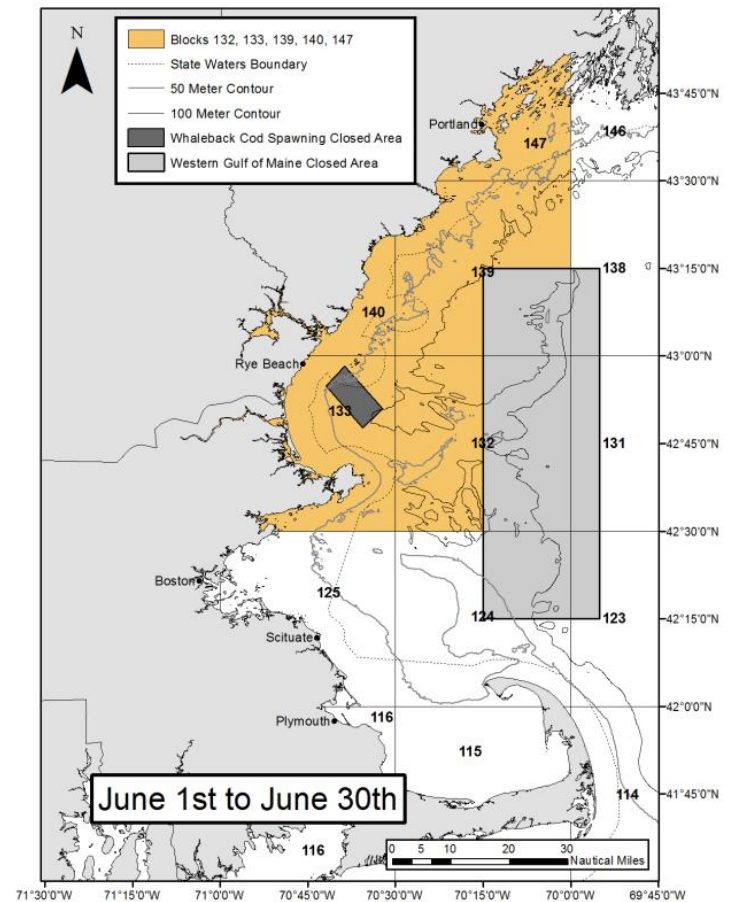
Committee Motions

Option 2\Sub-Option A

As Drafted



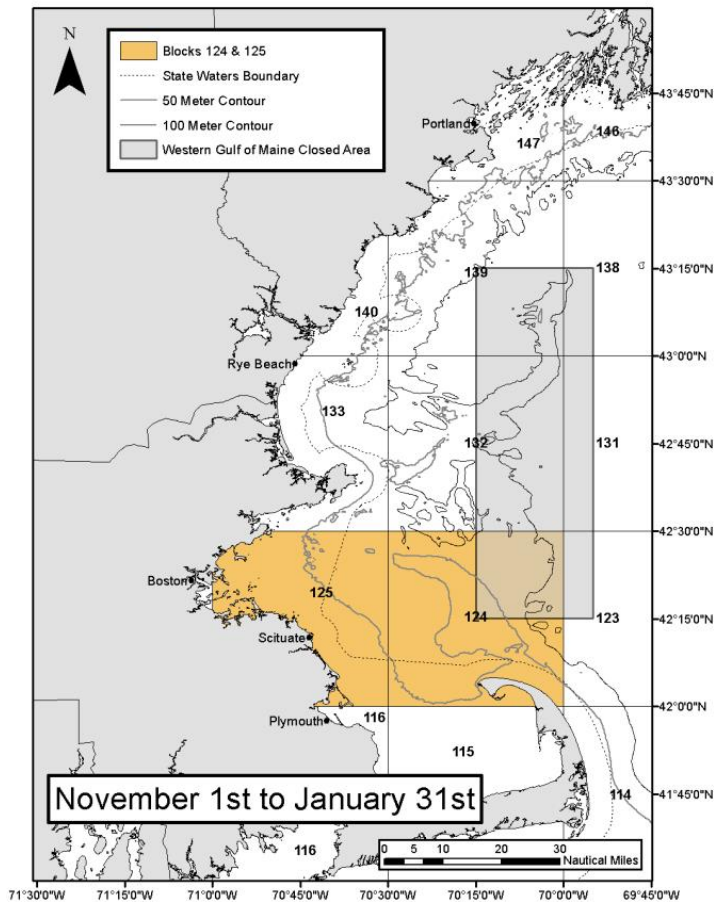
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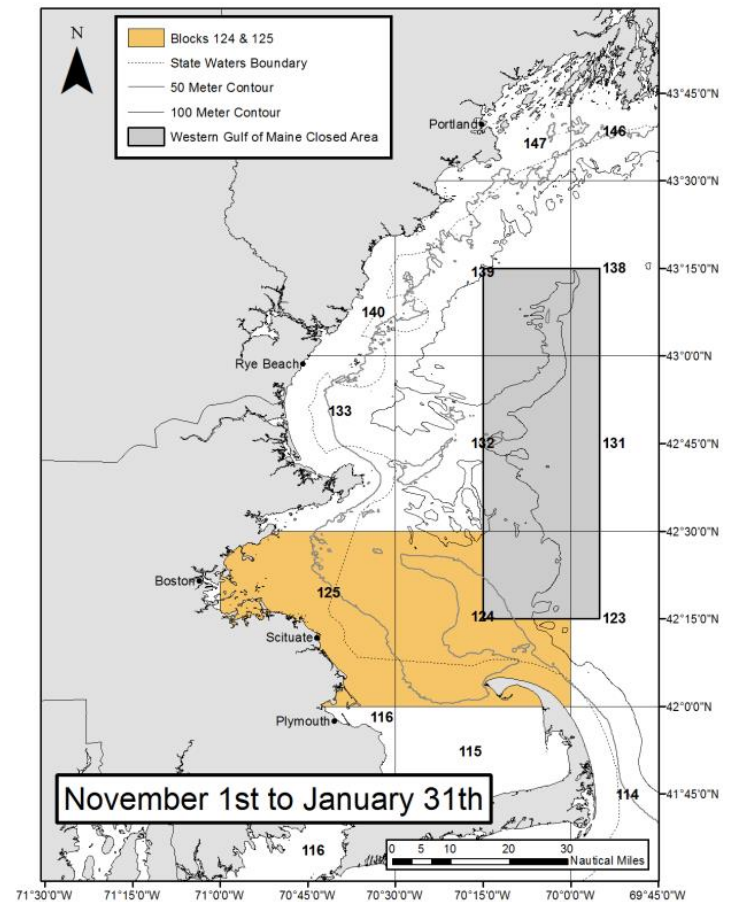
Committee Motions

Option 2\Sub-Option A

As Drafted



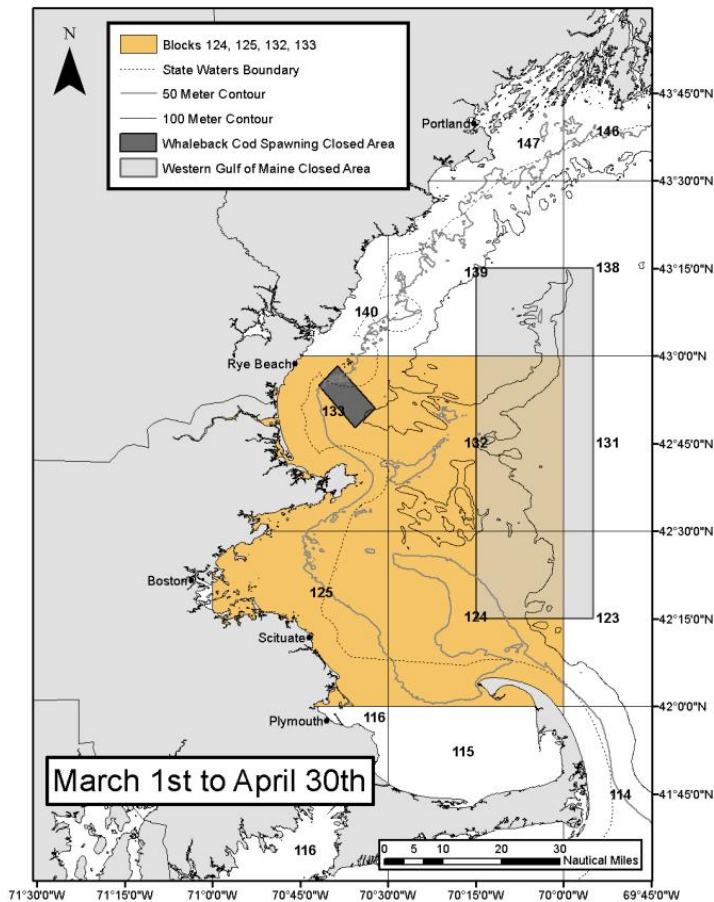
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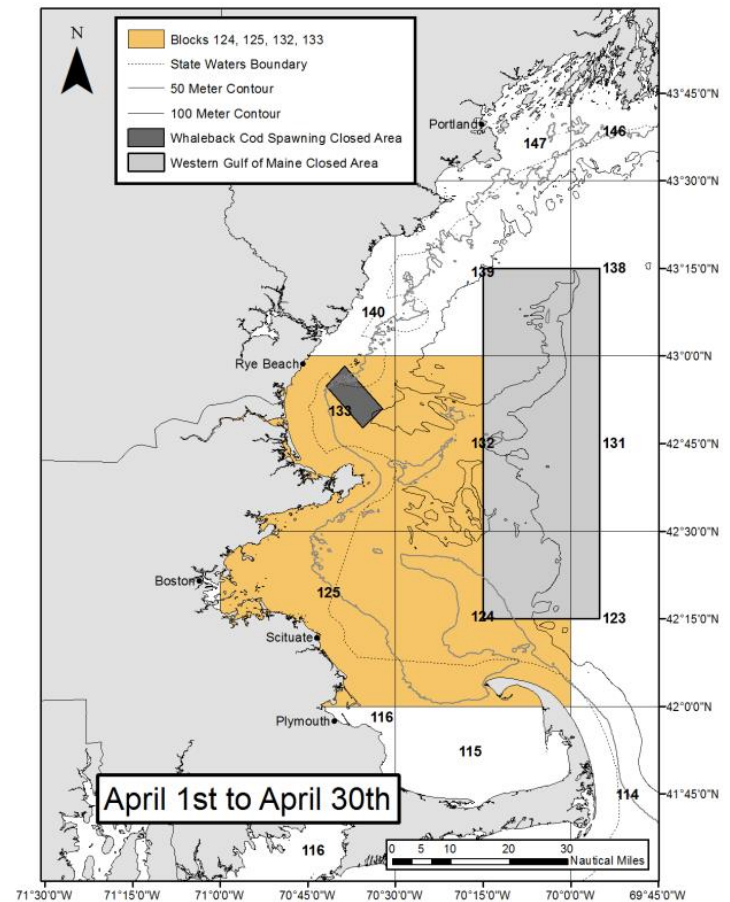
Committee Motions

Option 2\Sub-Option A

As Drafted



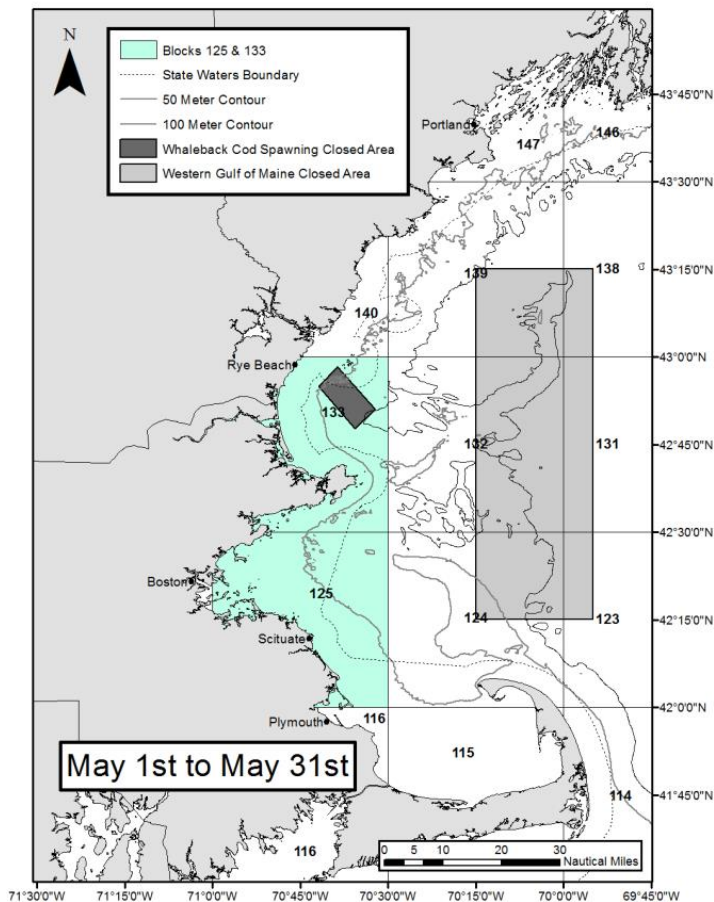
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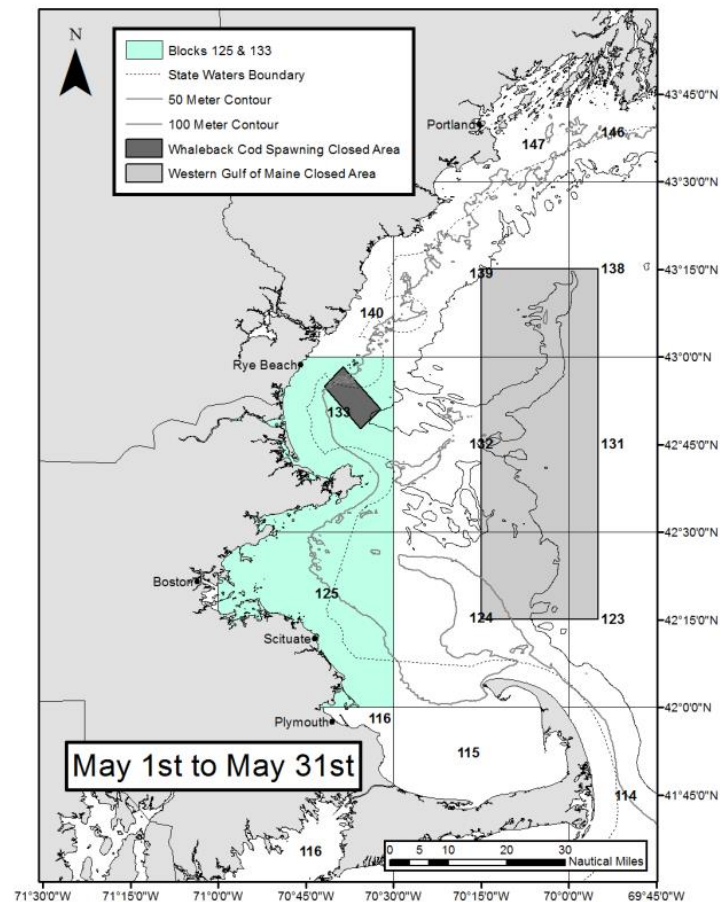
Committee Motions

Option 2\Sub-Option B

As Drafted



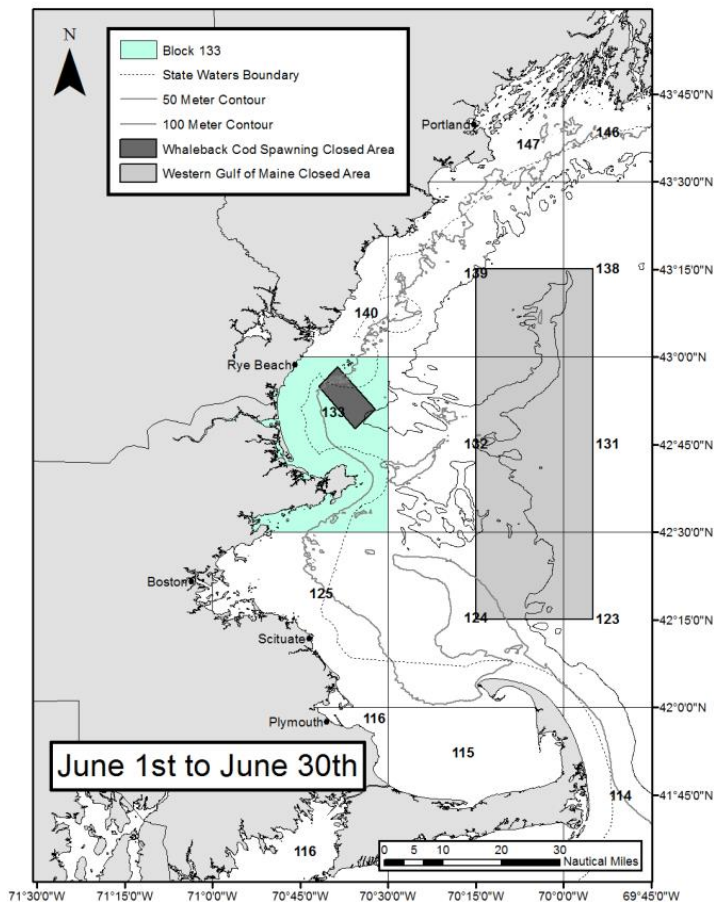
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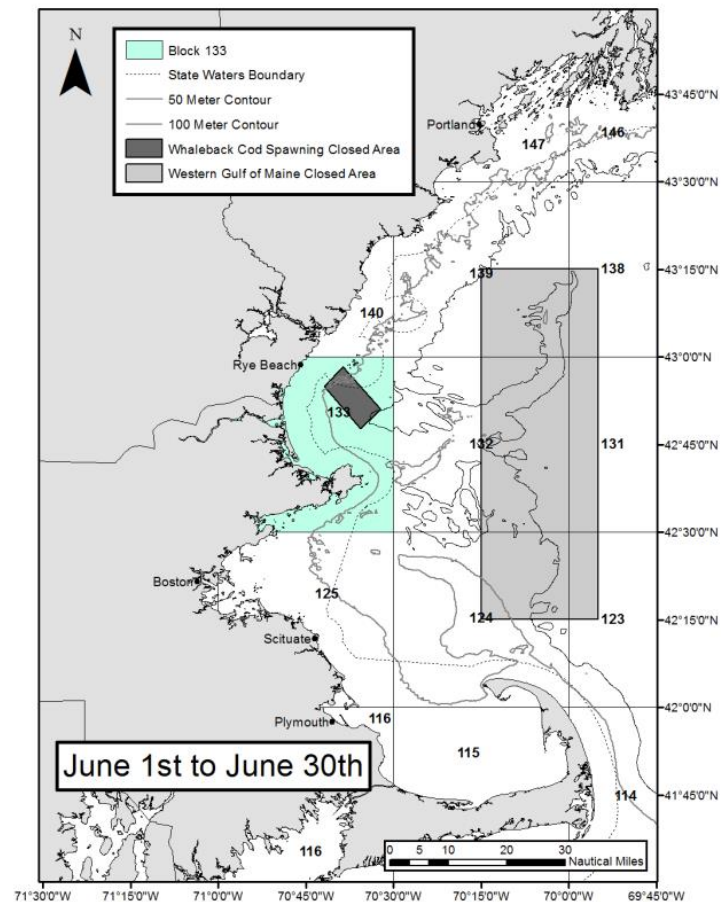
Committee Motions

Option 2\Sub-Option B

As Drafted



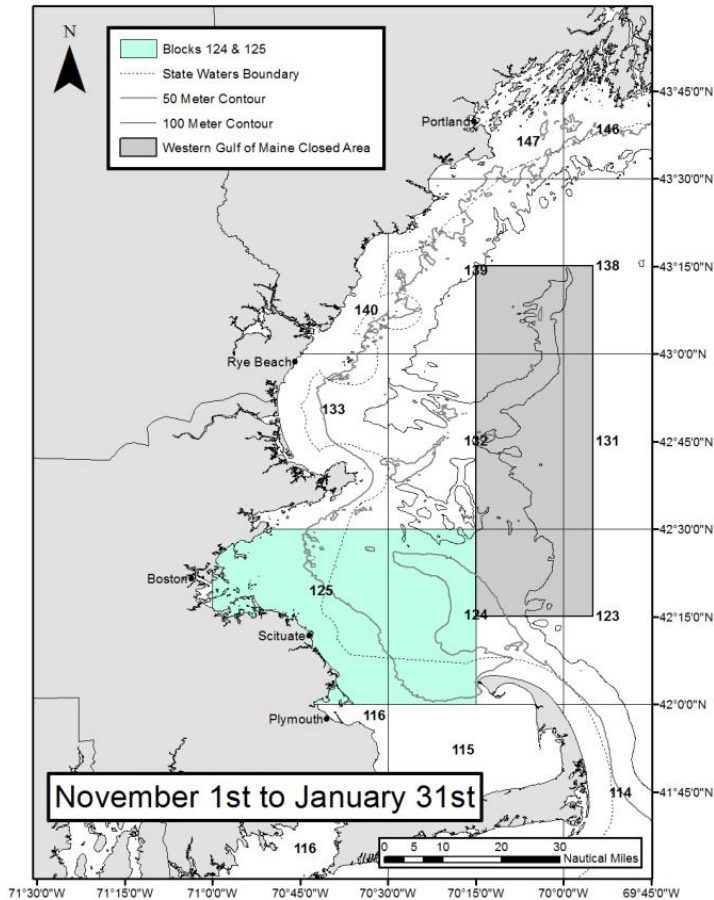
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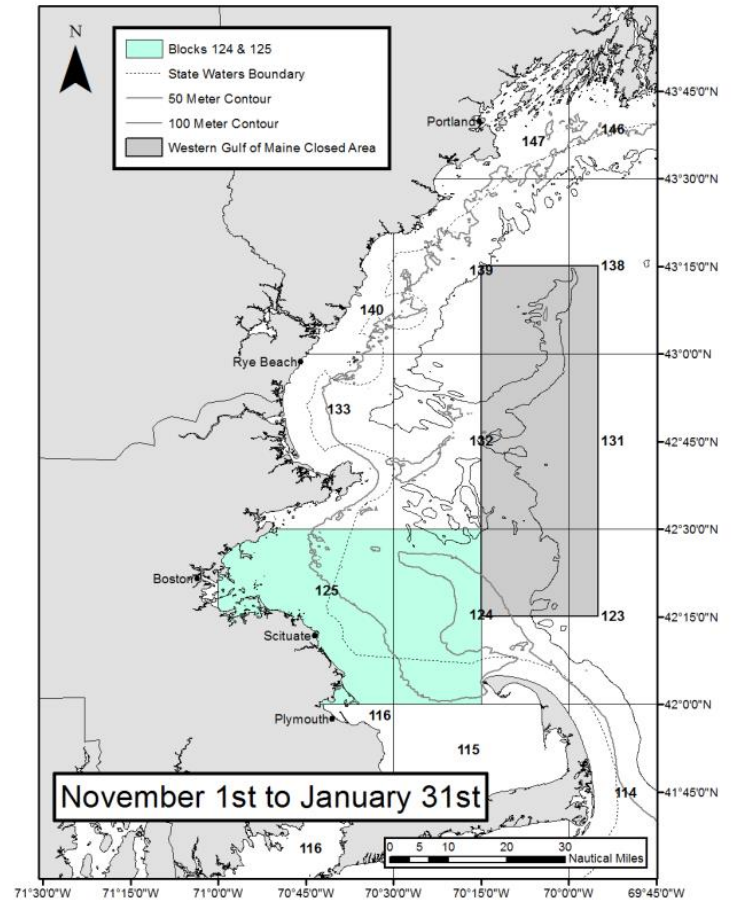
Committee Motions

Option 2\Sub-Option B

As Drafted



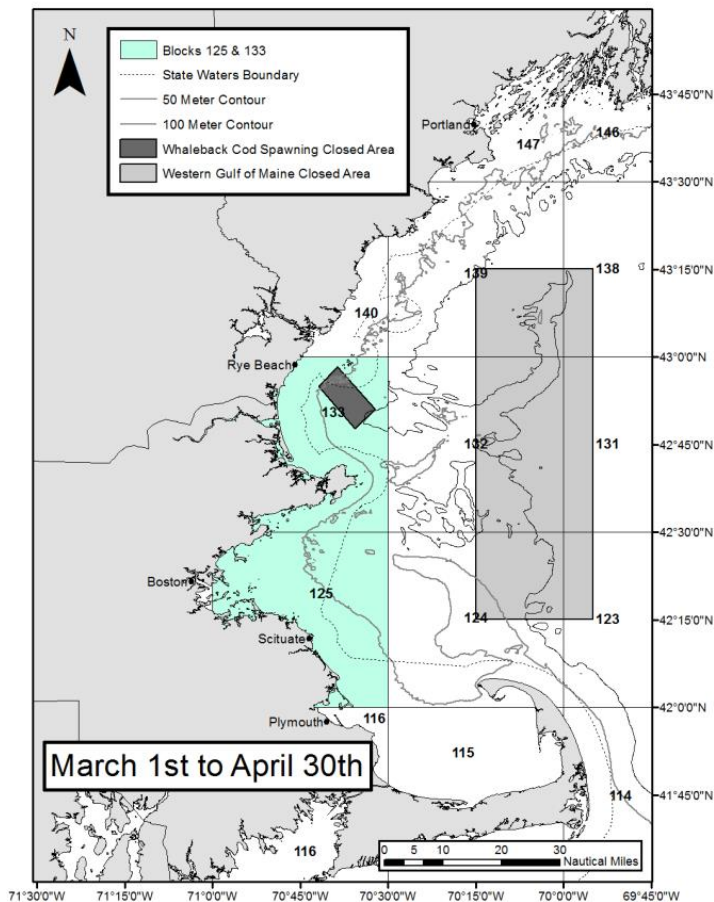
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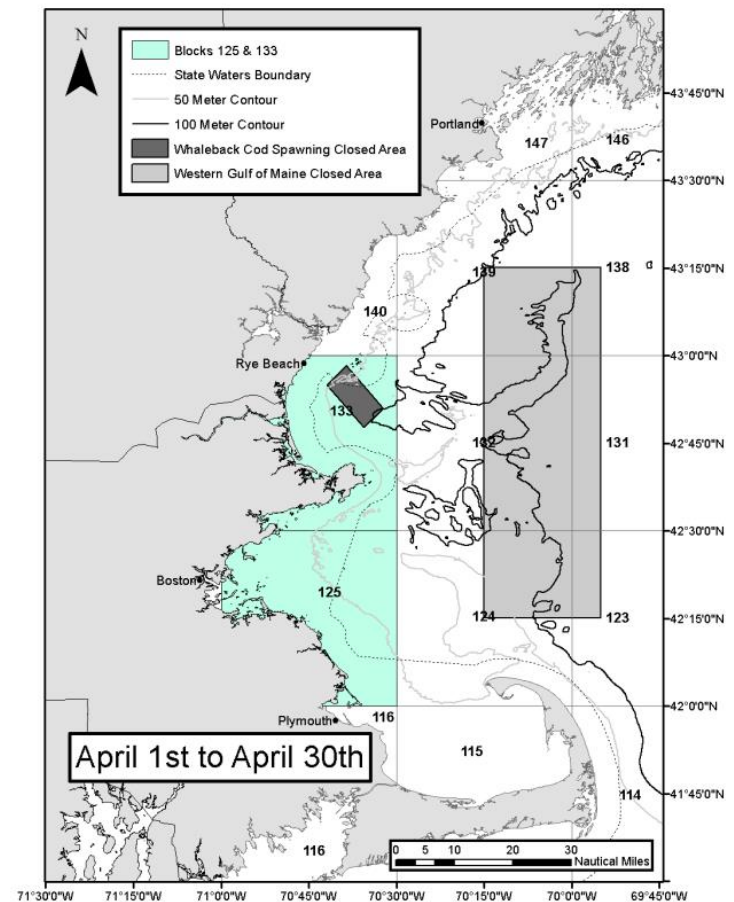
Committee Motions

Option 2\Sub-Option B

As Drafted

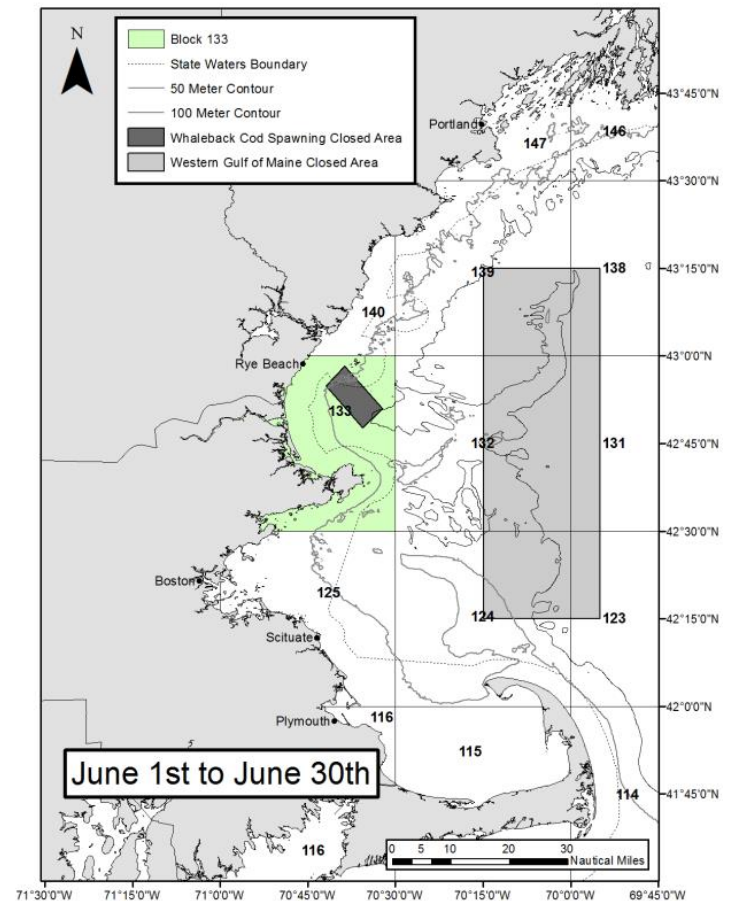
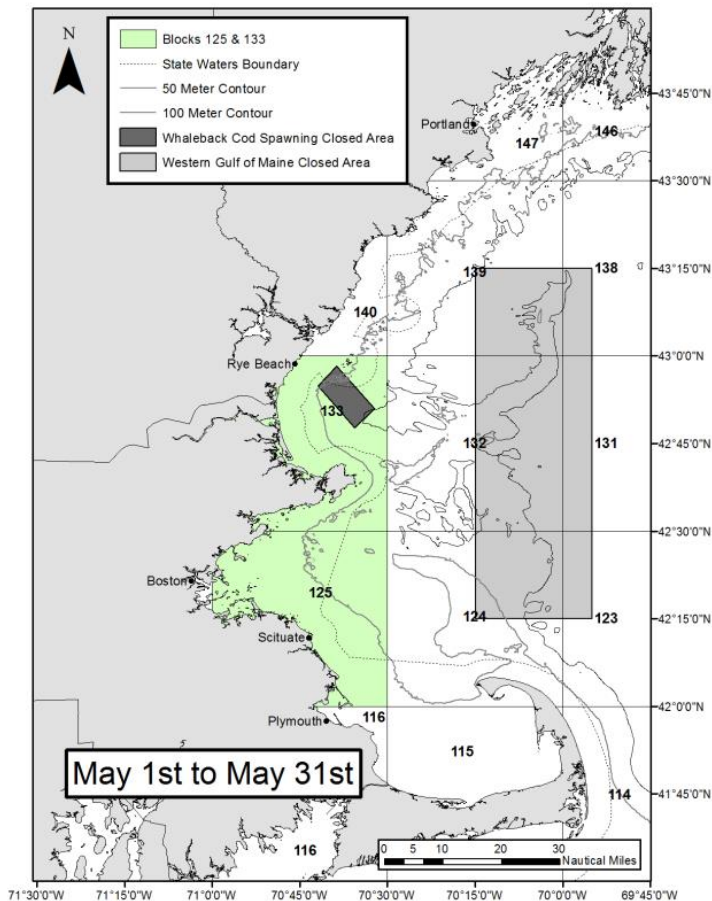


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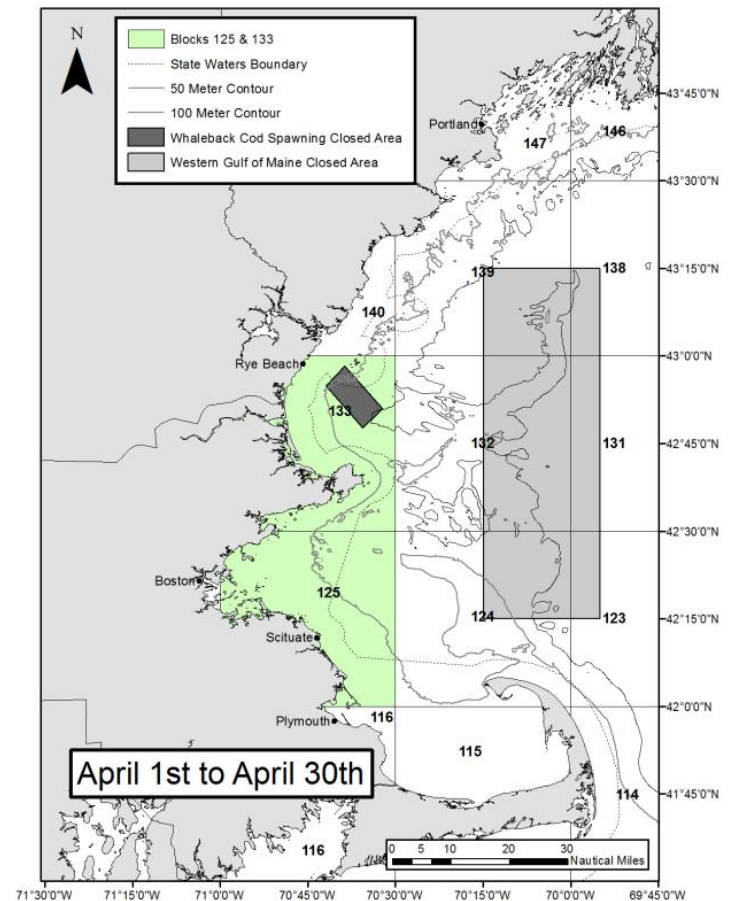
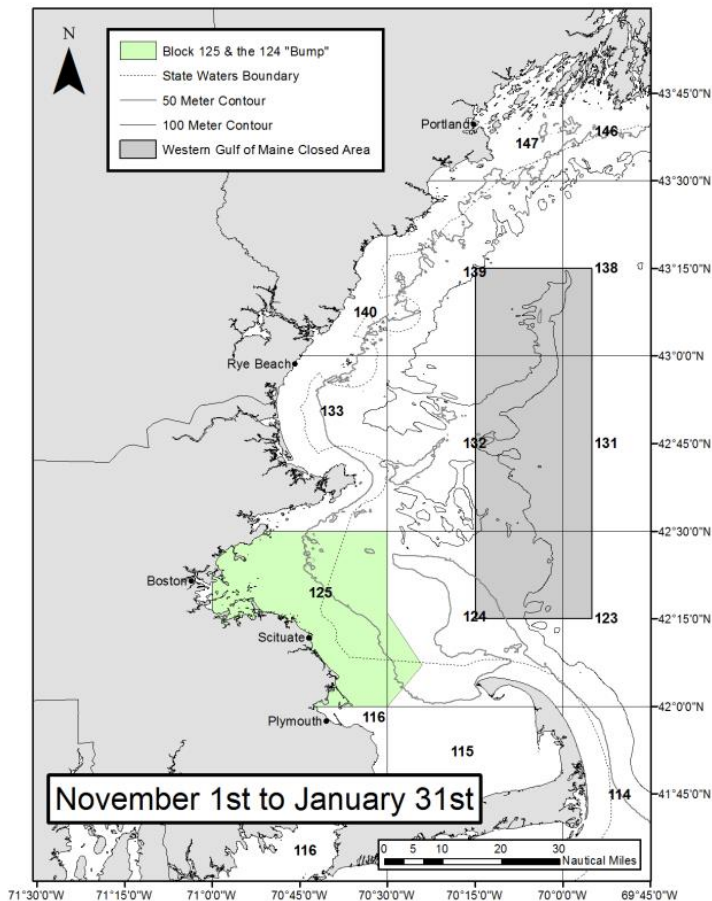
Committee Motions

Option 2\Sub-Option C



Committee Motions

Option 2\Sub-Option C



Questions?



4.2.2 Prohibition on the Possession of GOM Cod

4.2.2.1 Option 1: No Action

4.2.2.2 Option 2: Prohibition on the possession of GOM cod

The PDT remains concerned about the potential loss of information on GOM cod (i.e., collection of biological samples from landed fish) and zero possession increases uncertainty of catch estimates.



Questions?



Committee Motions

The Committee recommends to the Council that in FW 53, a new section in 4.2 (Commercial and Recreational Fishery Measures) be included titled “GOM Cod Protection Closures”:

- *Option 1: No Action*
- *Option 2: While the GOM cod SSB is below 25% of B_{MSY} , all commercial and recreational groundfish fishing would be prohibited in the following 30-minute blocks and months:*
 - April: 124,125,132,133
 - May: 125,132,133,138, 139, 140
 - June: 133, 139, 140, 146, 147
 - November - January block 125 would be closed and 30-minute block 124 would remain open except a bump out with the following coordinates:
 - 42° 00' 70° 30'
 - 42° 07' 70° 24'
 - 42° 16' 70° 30'
 - If the GOM cod SSB is above 25% of B_{MSY} , these closures would be reviewed.

The motion carried (6/2/2)



Committee Motions

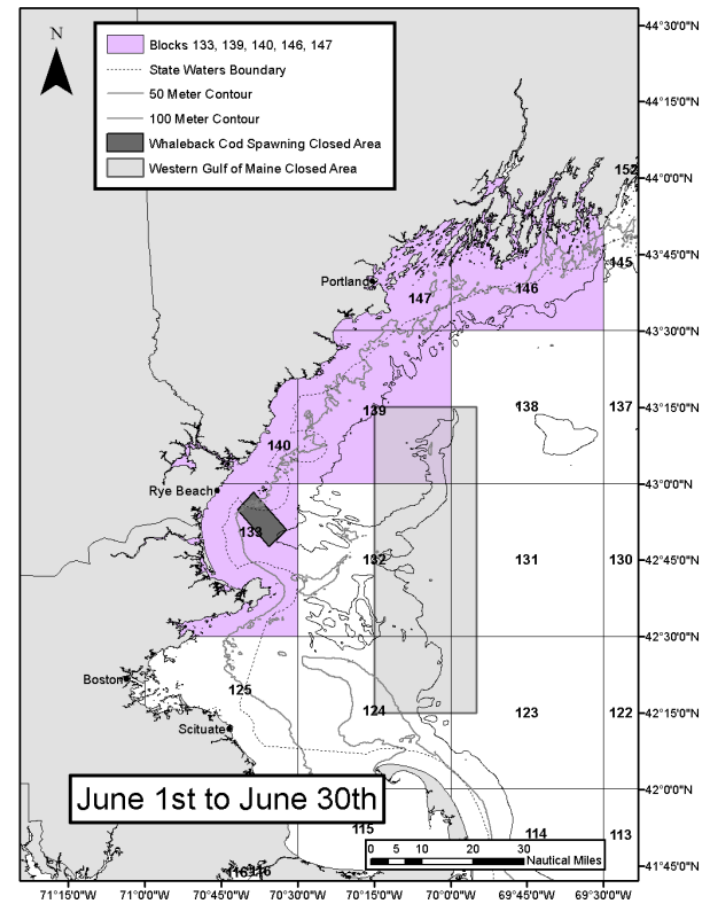
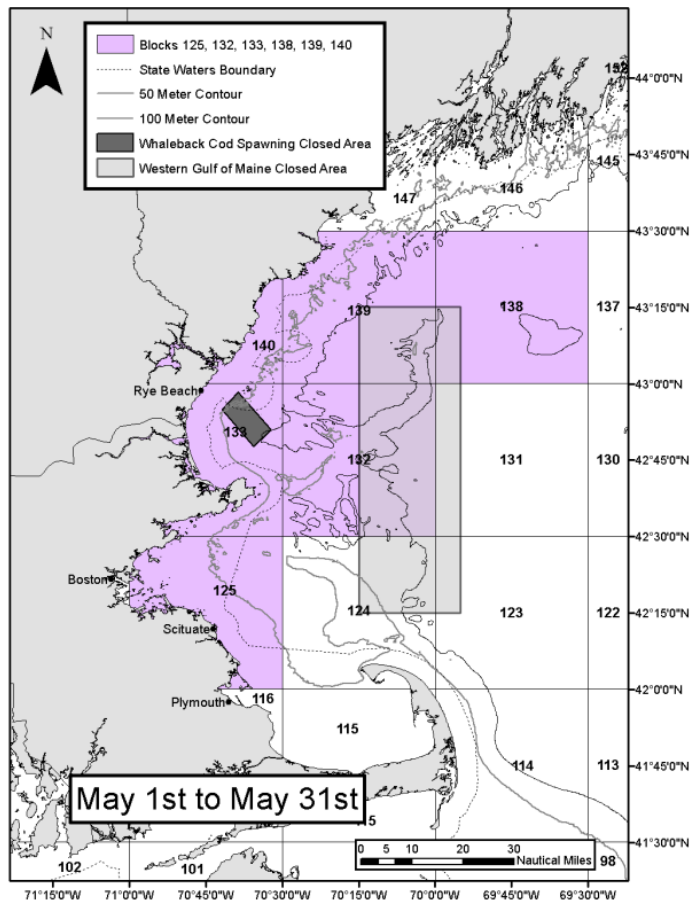
The Committee recommends to the Council that in the new section (GOM Cod Protection Closures), add a sub-option (Option 2, Sub-Option B) to exempt the recreational fishery from the WGOMAC year-round with a zero cod possession limit within the WGOMAC.

The motion carried (6/0/2).



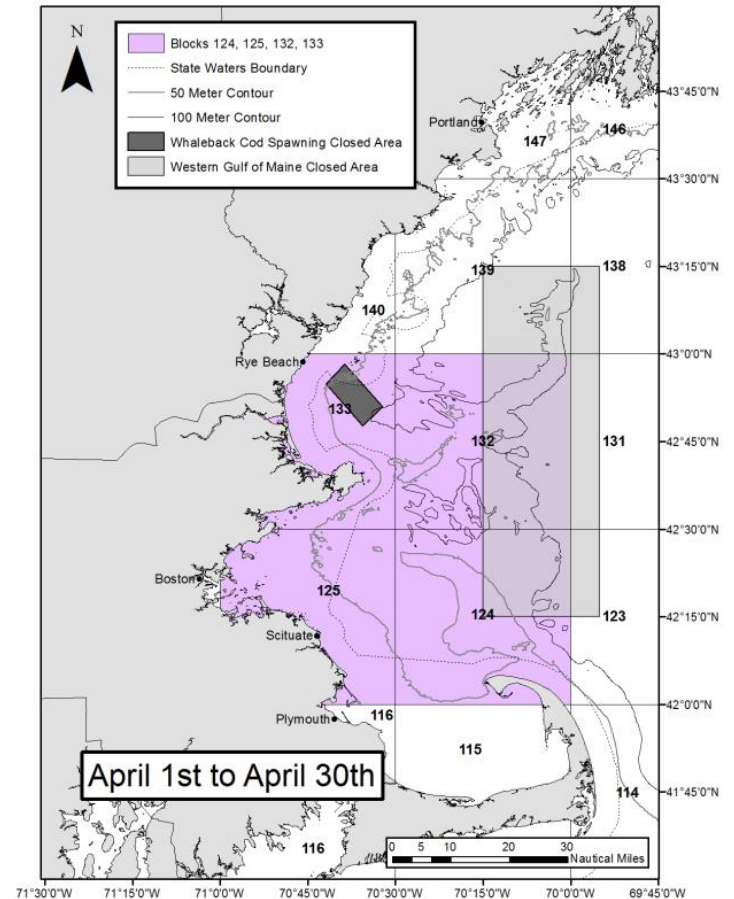
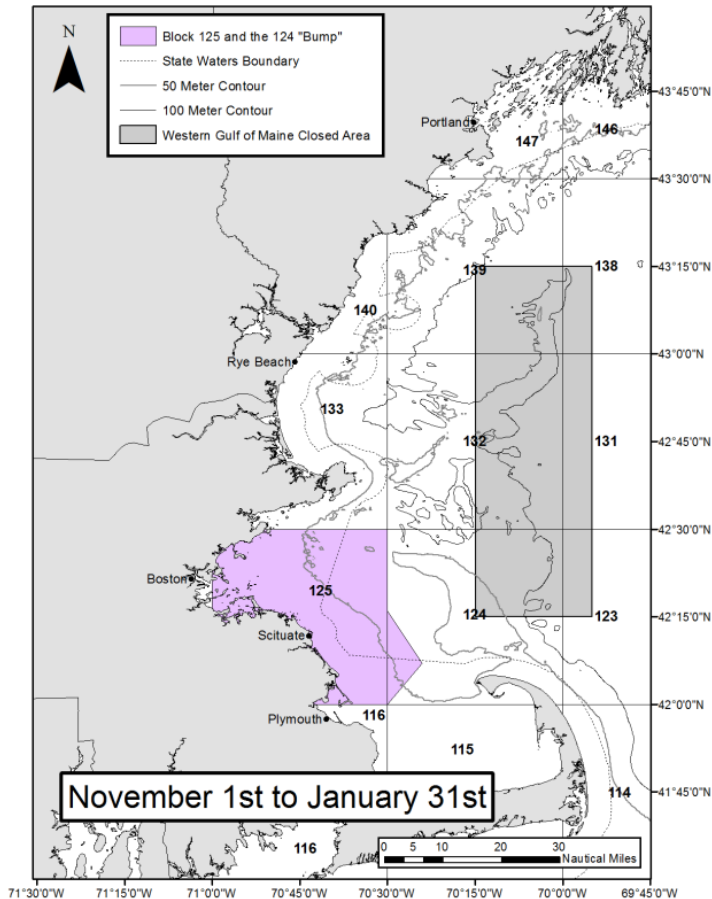
Committee Motions

Option 2\Sub-Option C



Committee Motions

Option 2\Sub-Option C



Questions?



4.1.3 SNE/MA (southern) Windowpane Flounder Sub-ACLs for Groundfish Sectors and the Common Pool

4.1.3.1 Option 1: No Action

4.1.3.2 Option 2: Create SNE/MA Windowpane Flounder sub-ACLs for Groundfish Sectors and the Common Pool

- Option 2:
 - Option 2 needs further development including how to split the sub-ACL between sectors and the common pool and any associated AMs.
- Impacts Analysis:
 - All impacts analysis for this section are considered placeholder, pending additional Committee feedback on Option 2.
 - As such, the impacts analysis have been striked through to represent placeholder status.



Committee Motions

The Committee recommends that Section 4.1.3. (SNE/MA Windowpane Flounder Sub-ACLs for Groundfish Sectors and the Common Pool) be moved to “Considered but Rejected”.

The motion carries (9/0/1).



4.1.4 GB/GOM (northern) Windowpane Flounder Sub-ACLs for Groundfish Sectors and the Common Pool

4.1.4.1 Option 1: No Action

4.1.4.2 Option 2: Create SNE/MA Windowpane Flounder sub-ACLs for Groundfish Sectors and the Common Pool

- Option 2:
 - Option 2 needs further development including how to split the sub-ACL between sectors and the common pool and any associated AMs.
- Impacts Analysis:
 - All impacts analysis for this section are considered placeholder, pending additional Committee feedback on Option 2.
 - As such, the impacts analysis have been striked through to represent placeholder status.

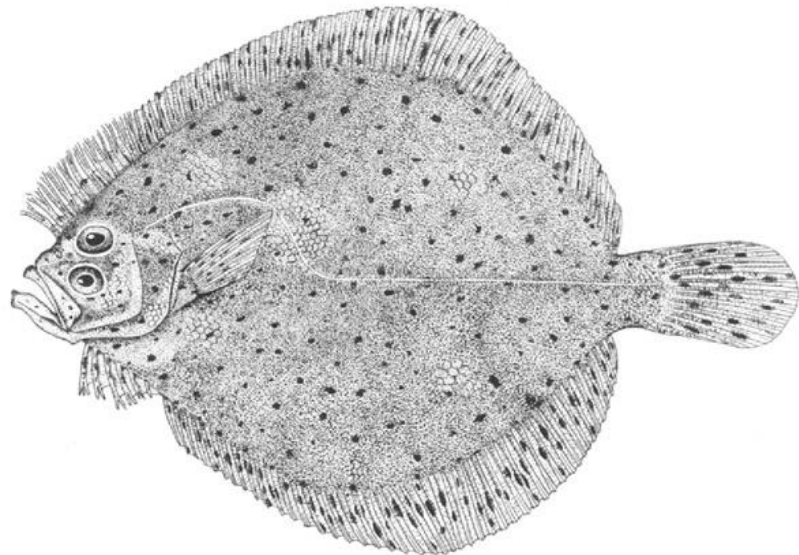


4.1.5 GOM/GB Windowpane Flounder Scallop Fishery Sub-ACL

4.1.5.1 Option 1: No Action

4.1.5.2 Option 2: Create a Scallop Fishery GOM/GB Windowpane Flounder Sub-ACL

If selecting a preferred alternative as Option 2, the Committee should recommend a percentage between 2% and 14% for the sub-ACL.



Committee Motions

The Committee recommends that in Section 4.1.5. (GOM/GB Windowpane Flounder Scallop Fishery Sub-ACL), Option 2 (Create a scallop fishery GOM/GB windowpane flounder sub-ACL) include a sub-ACL of X% for the scallop fishery, and in Section 4.1.4. (GOM/GB Windowpane Flounder Sub-ACLs for Groundfish Sectors and the Common Pool), Option 2 (Create GOM/GB windowpane flounder sub-ACLs for Groundfish Sectors and Common Pool) include a sub-ACL of X% for Common Pool and other sub-components and X% for Sectors.

The main motion carried (8/0/2).



Questions?



Additional Slides

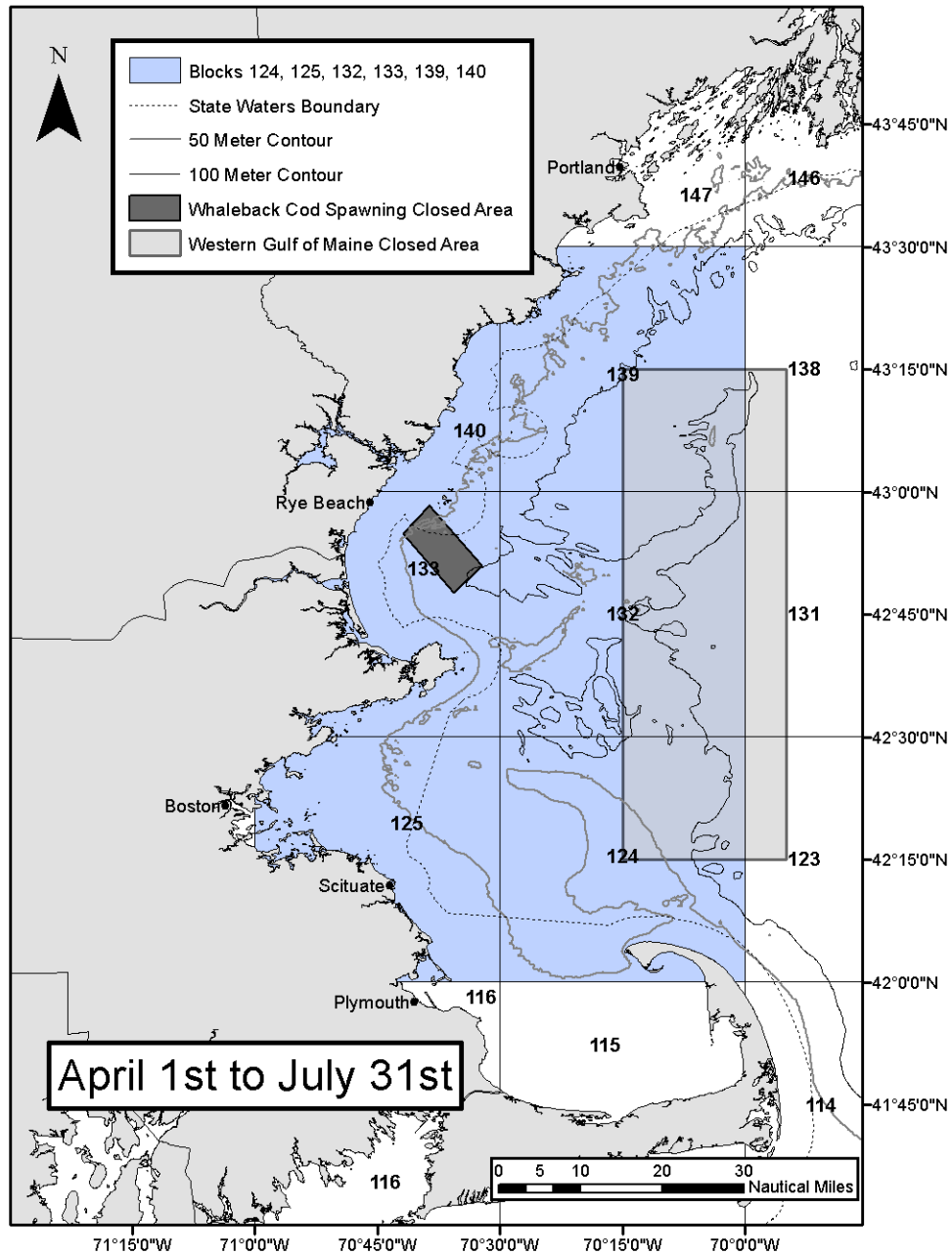


PDT Recommendation Sub-Option C

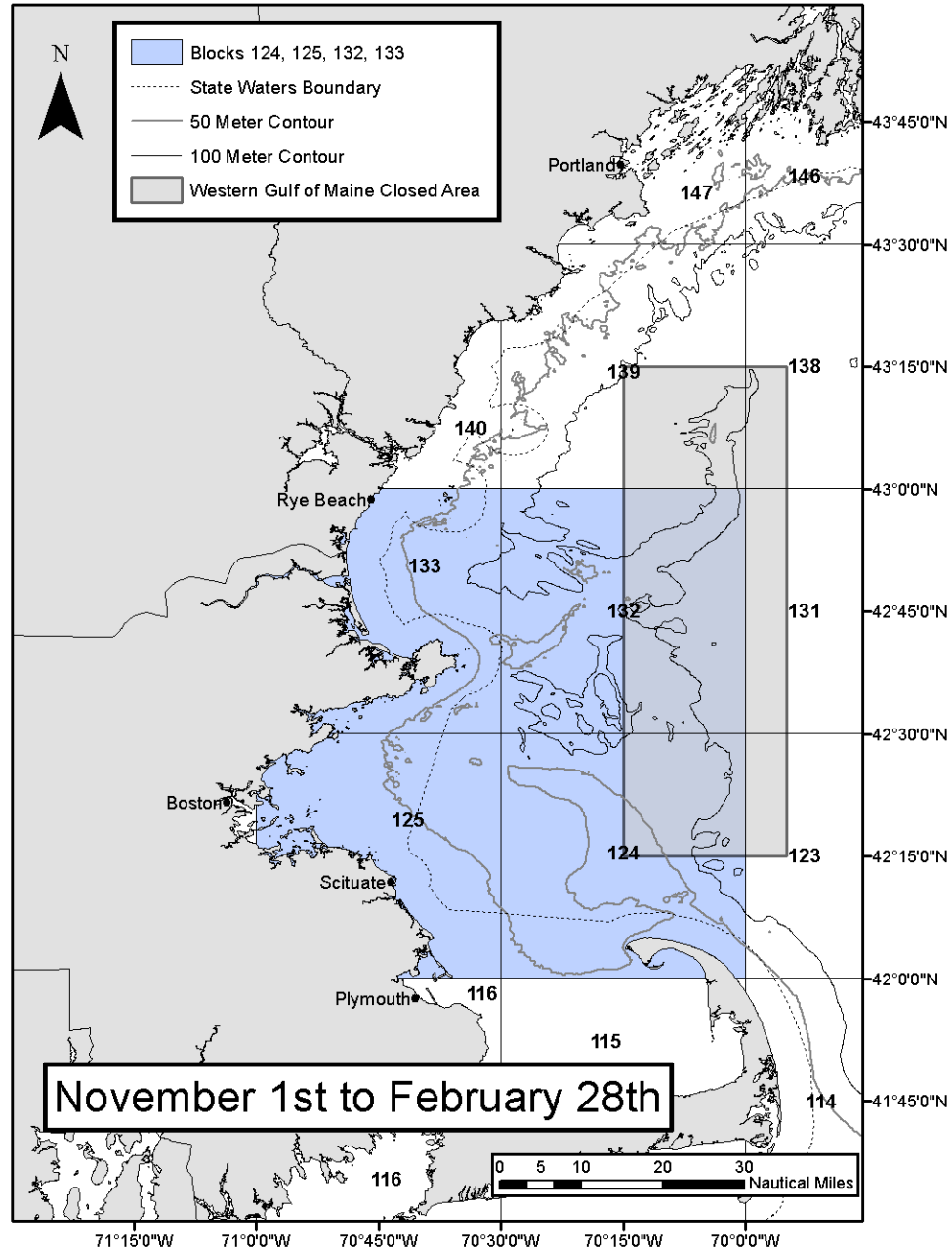
The PDT recommends that the Committee add an additional alternative for consideration as “Sub-Option C” in Section 4.2.1 (GOM cod spawning closures) , that would include 30 minute blocks in April- July (124, 125, 132, 133, 139, and 140) and November- February (124, 125, 132 and 133).



April 1- July 31

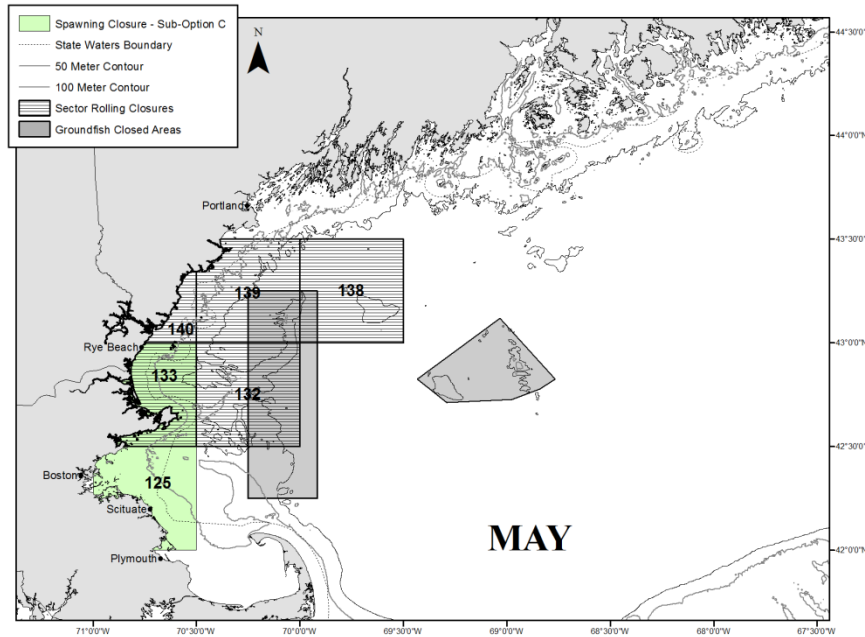
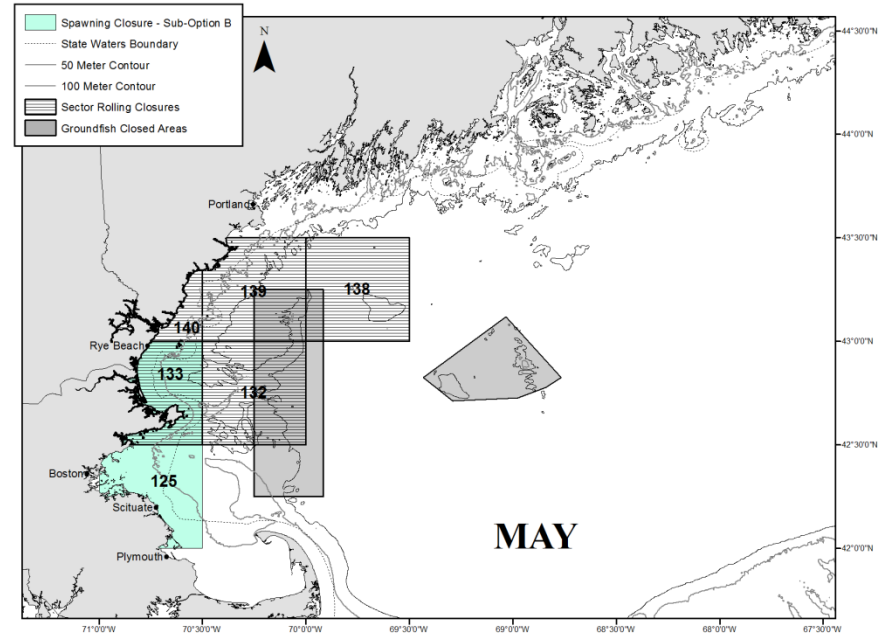
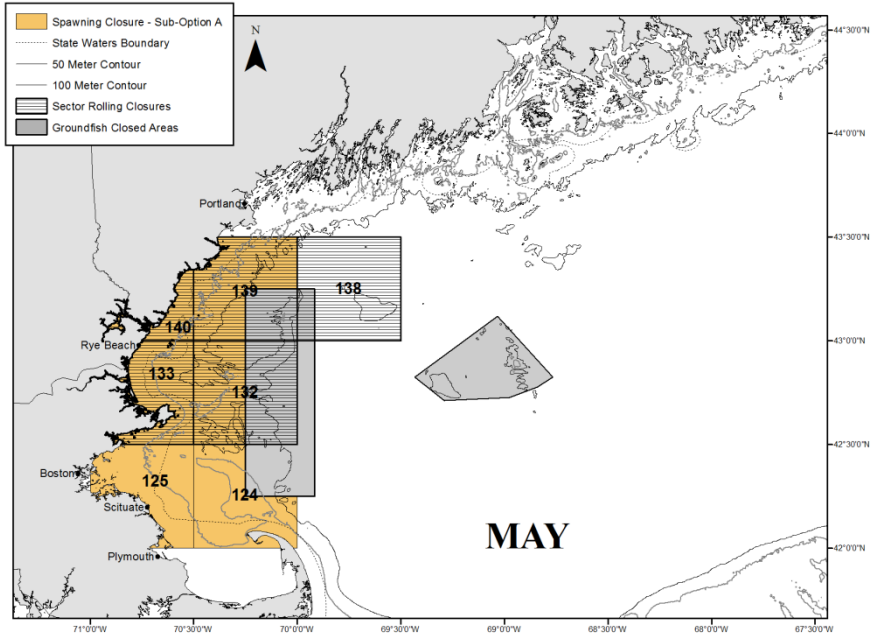


**Nov 1-
Feb 28**

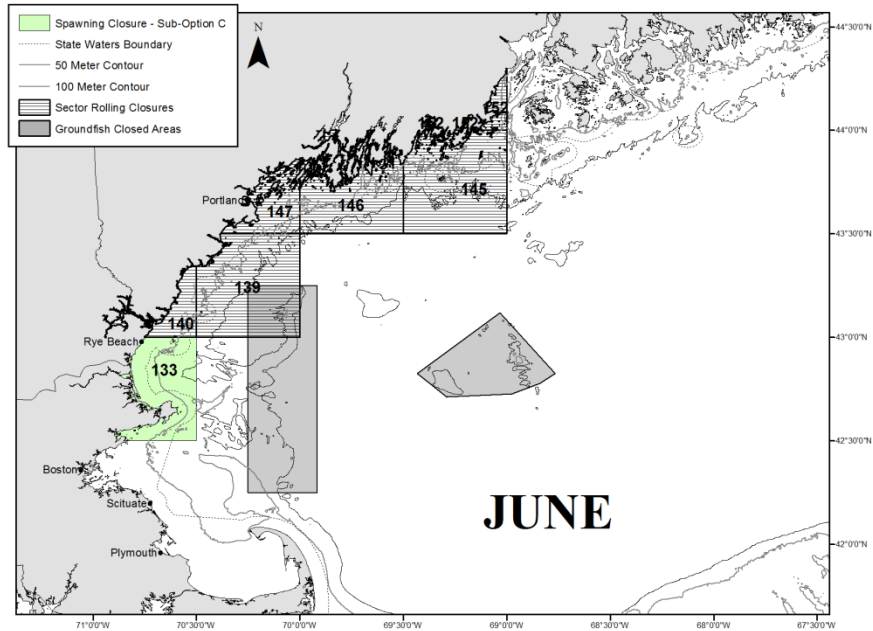
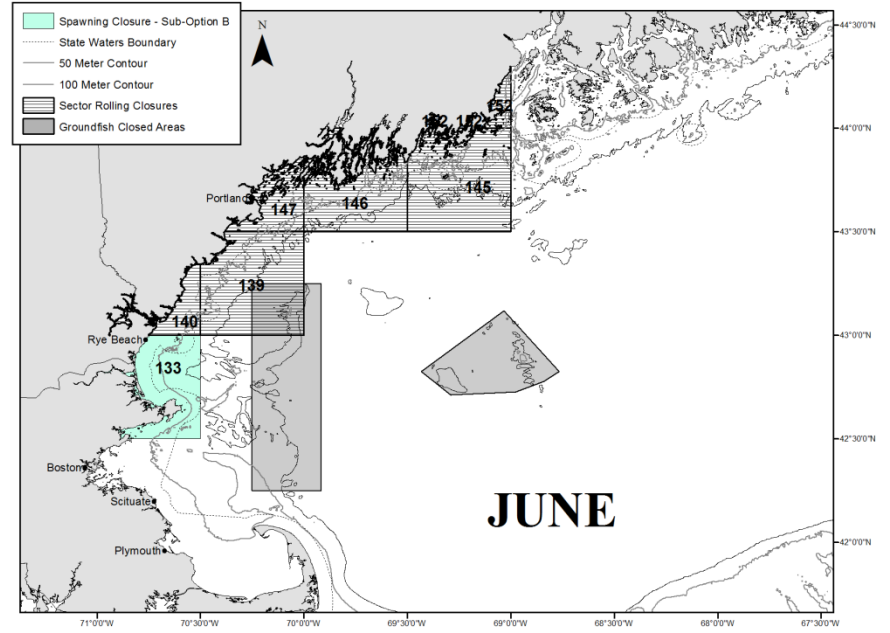
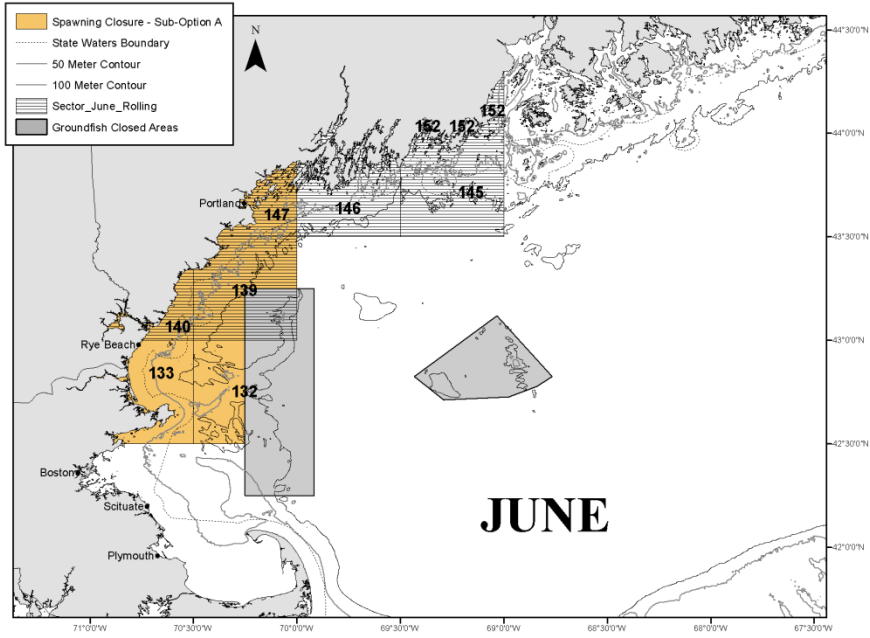


Comparison of GOM Cod Spawning Closures (4.2.1) and Sector Rolling Closures

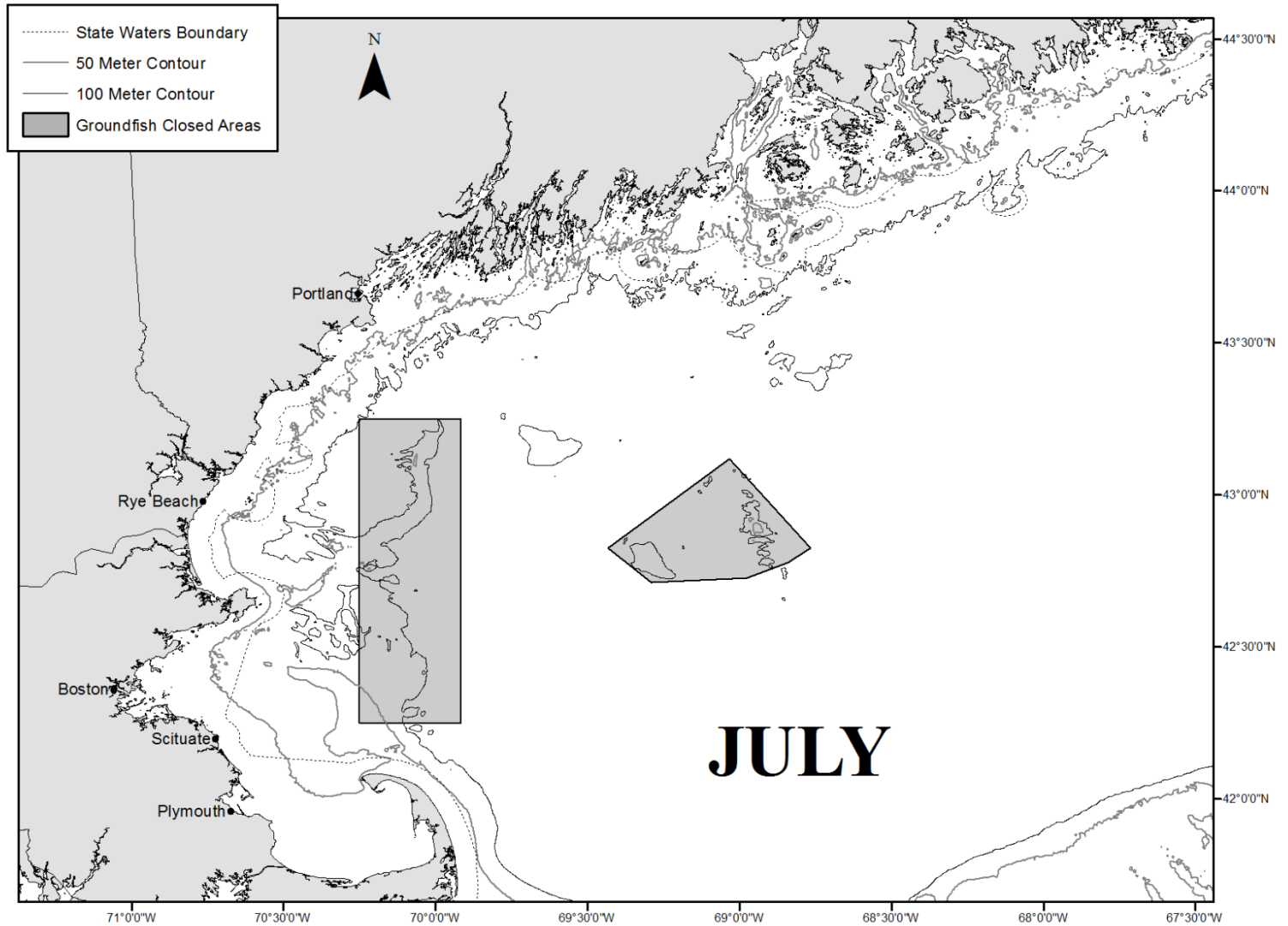
MAY



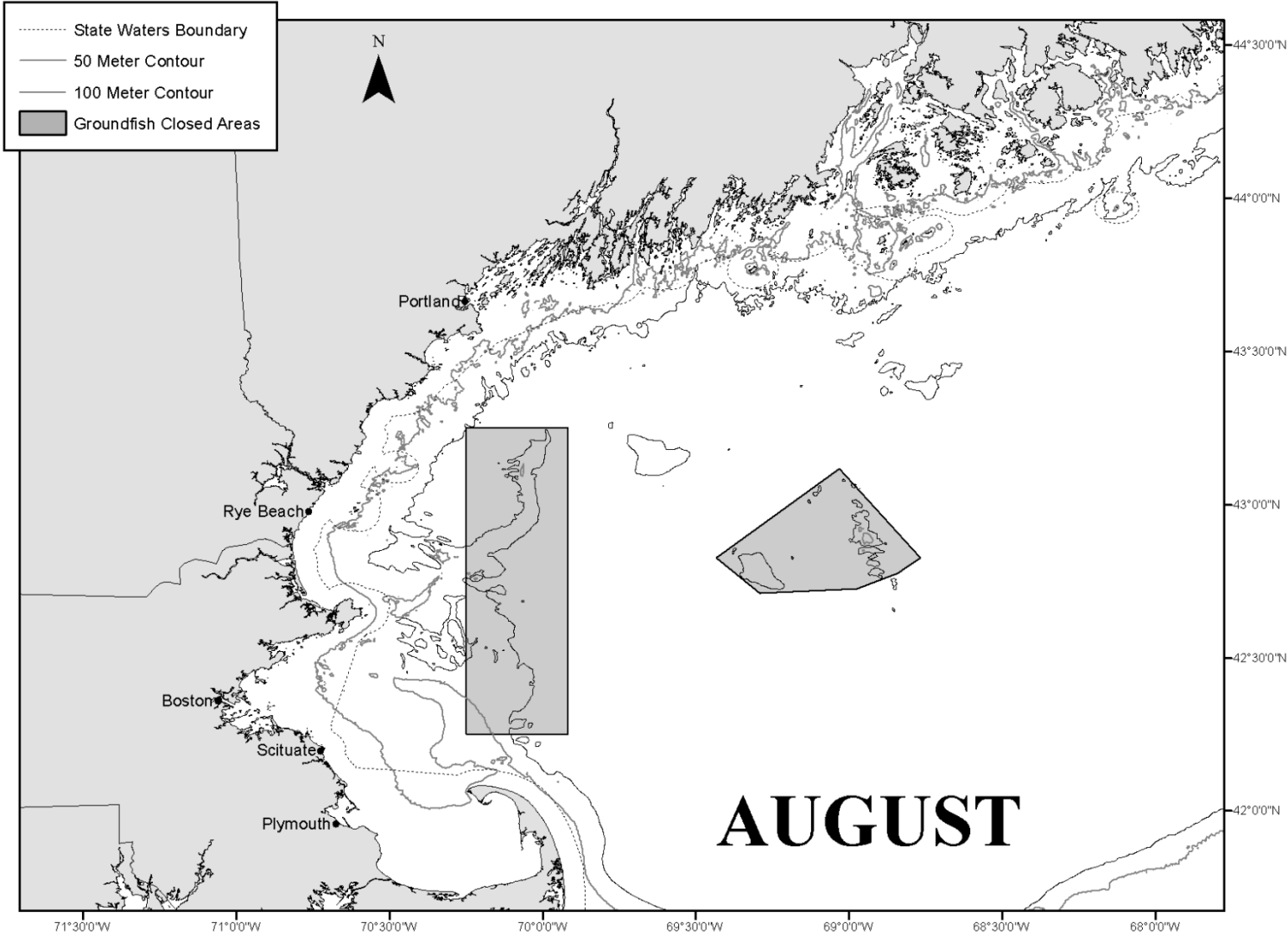
JUNE



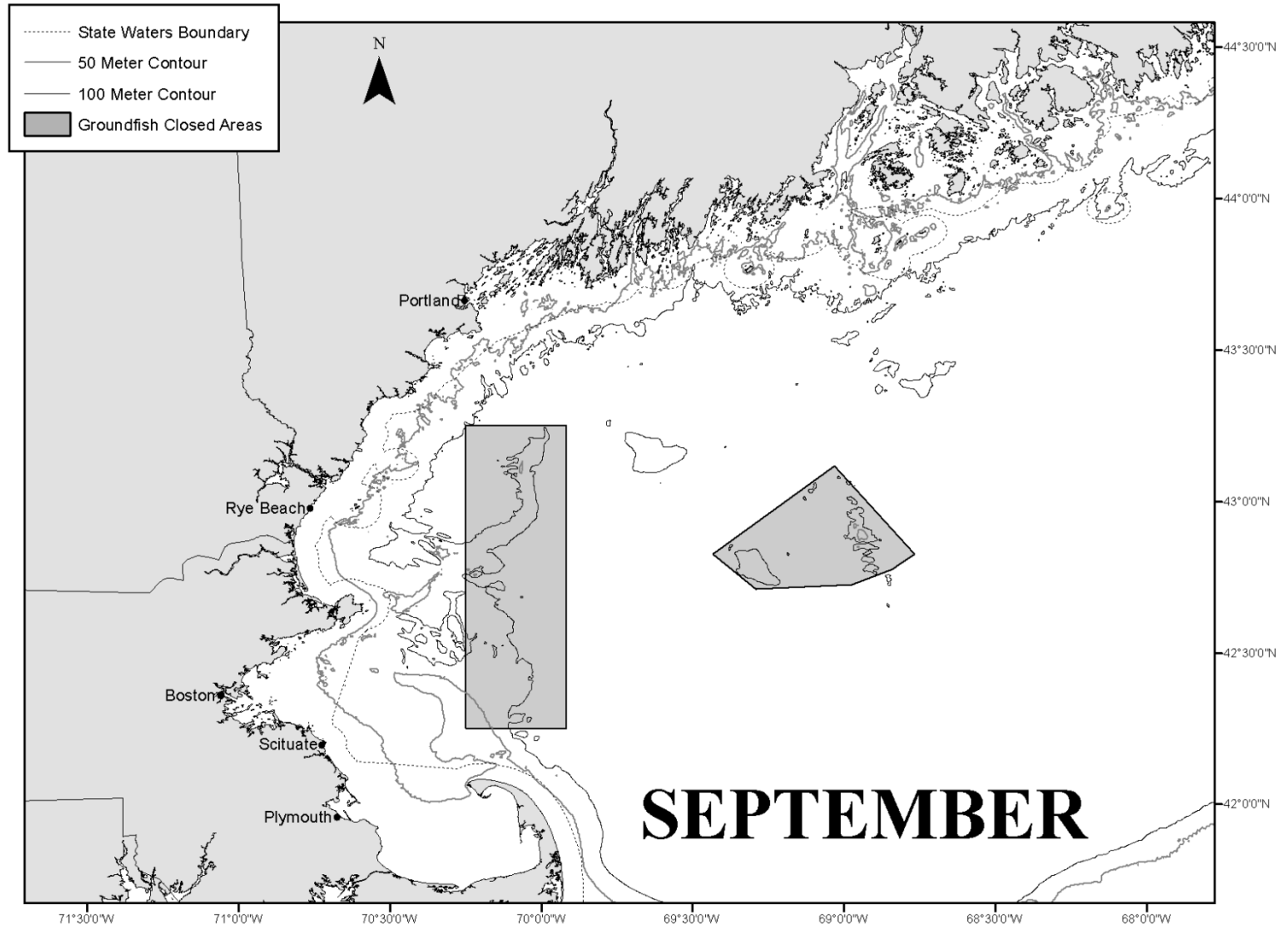
JULY



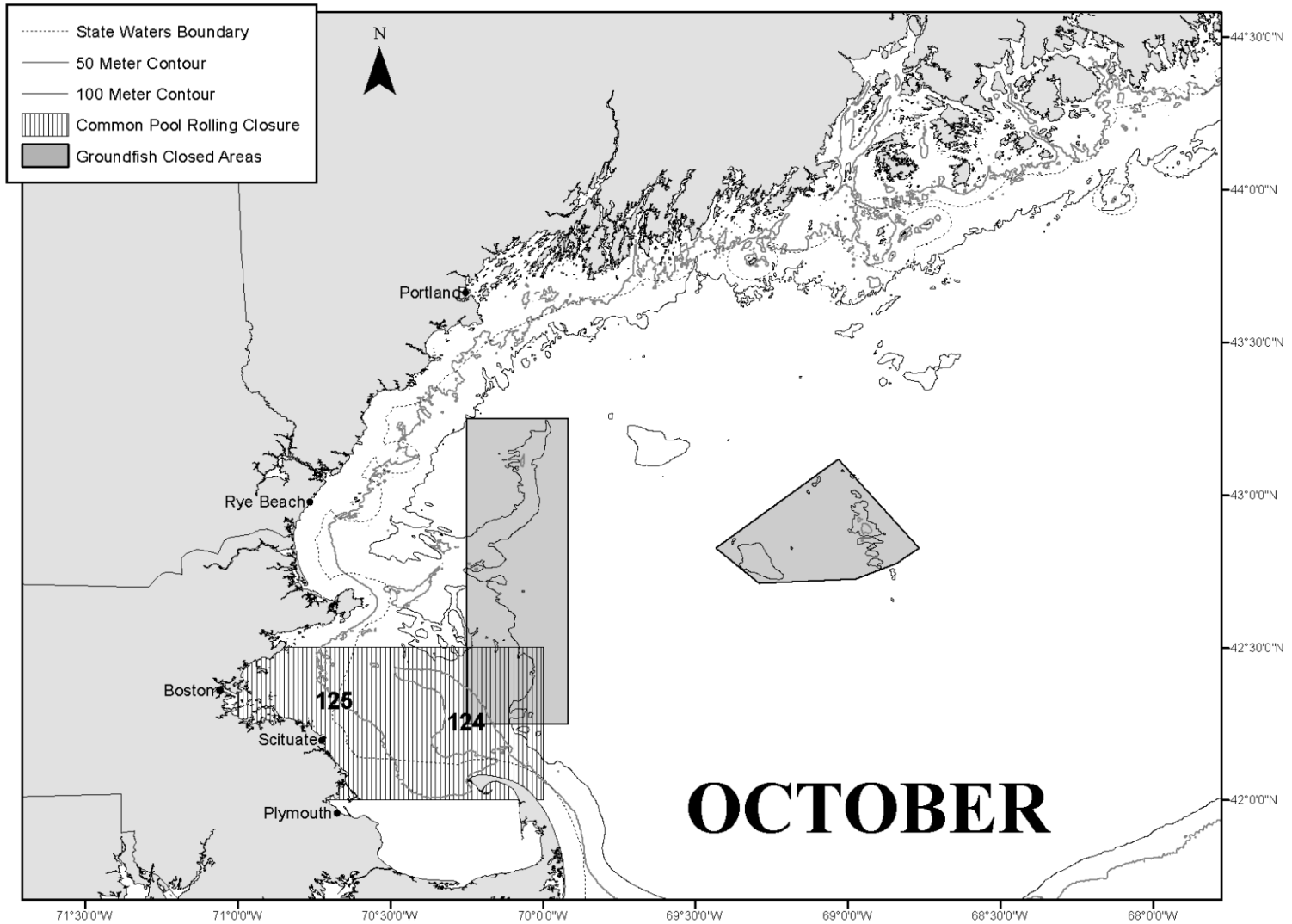
AUGUST



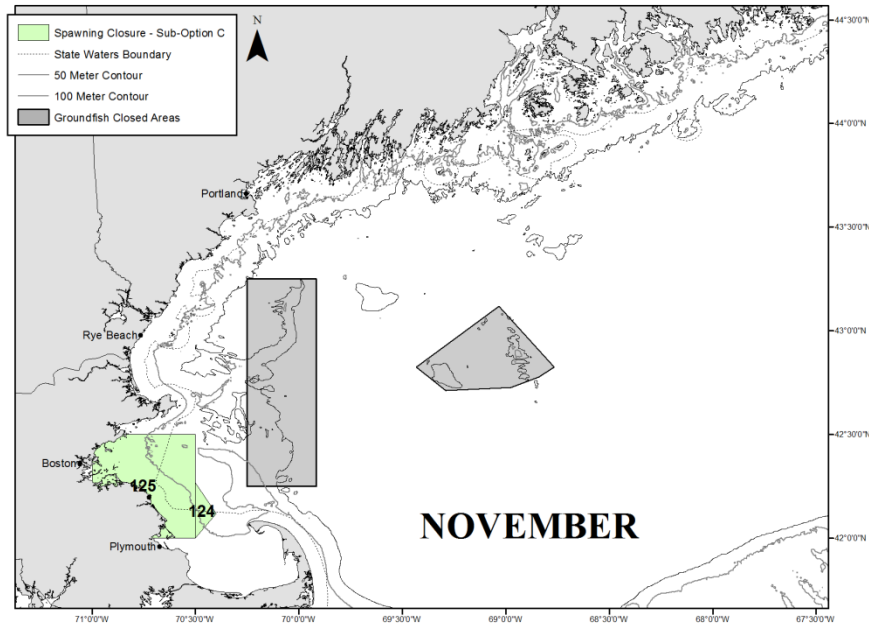
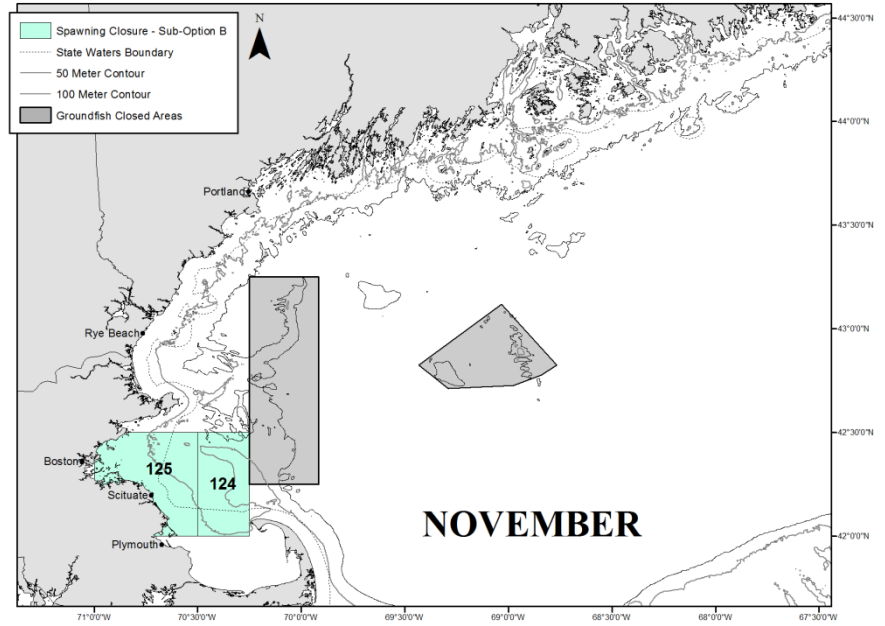
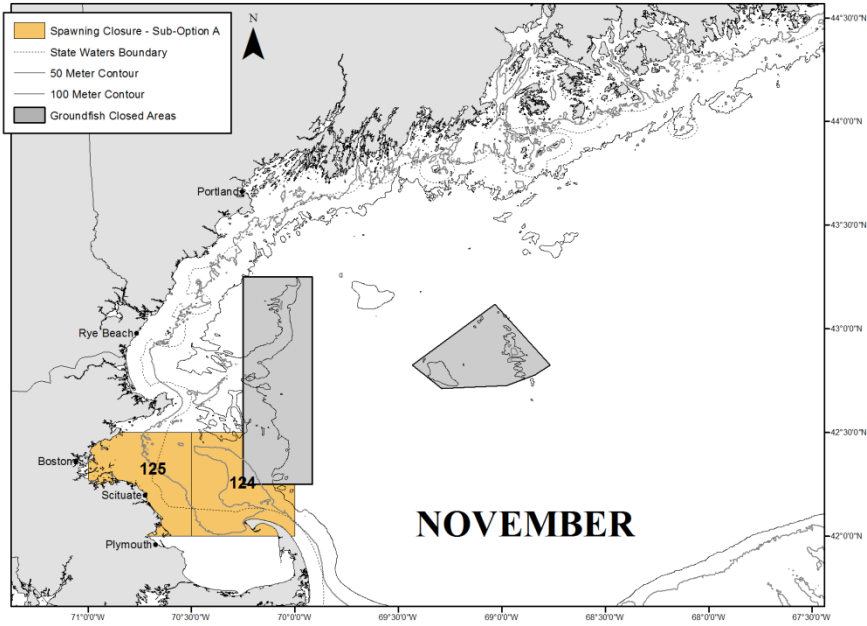
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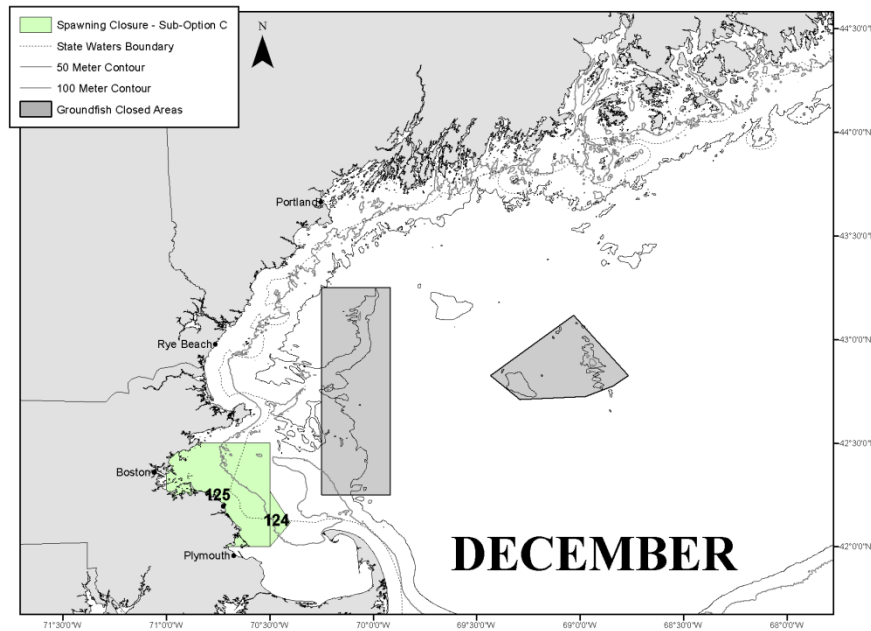
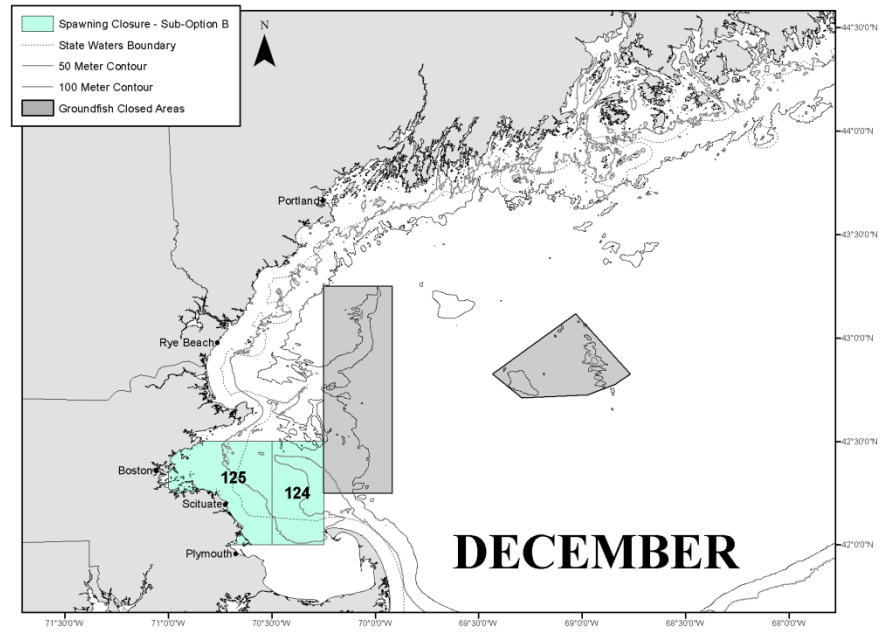
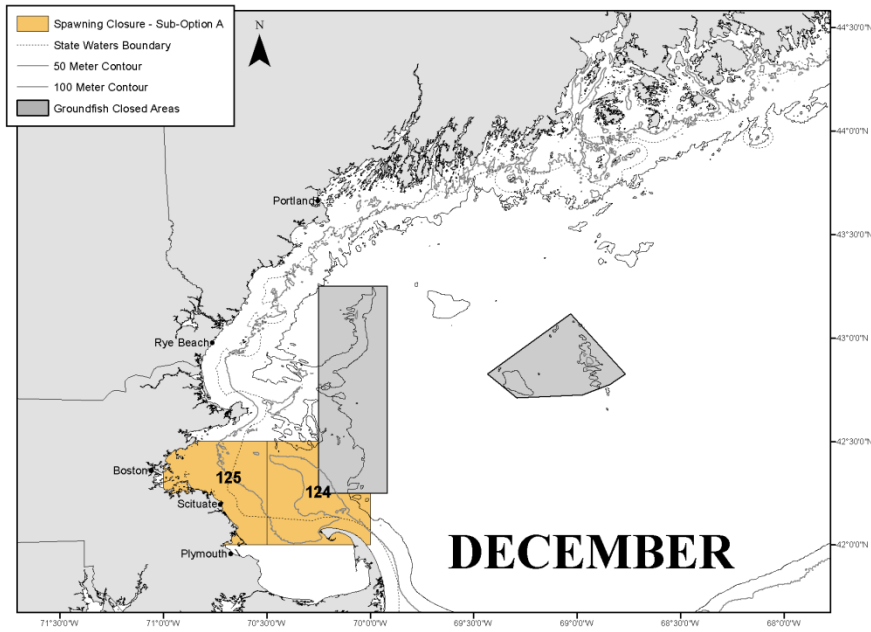
OCTOBER



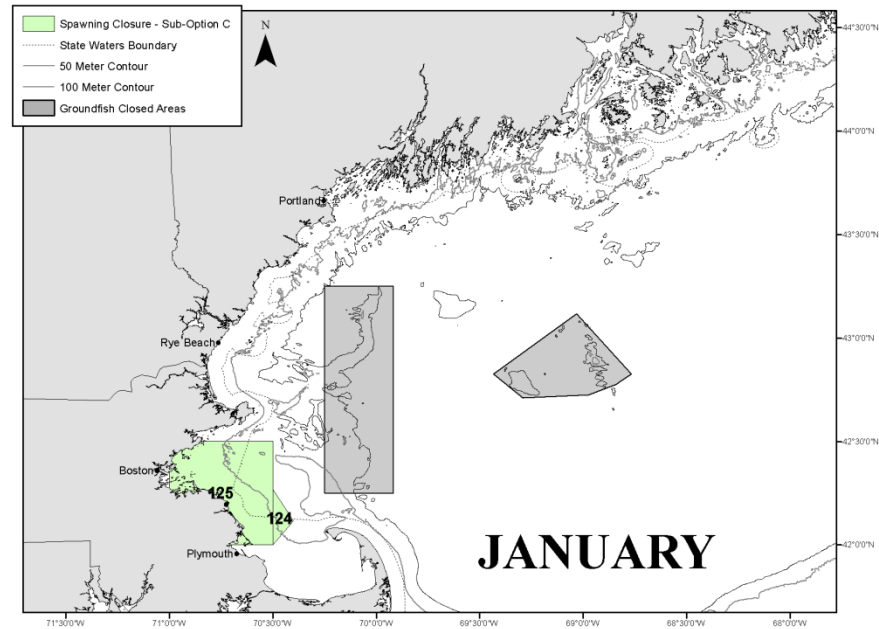
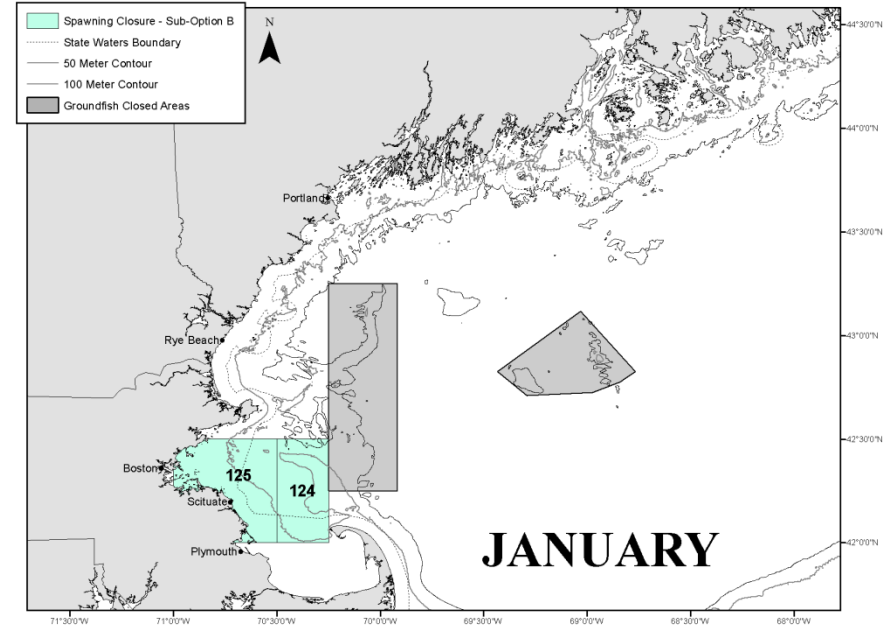
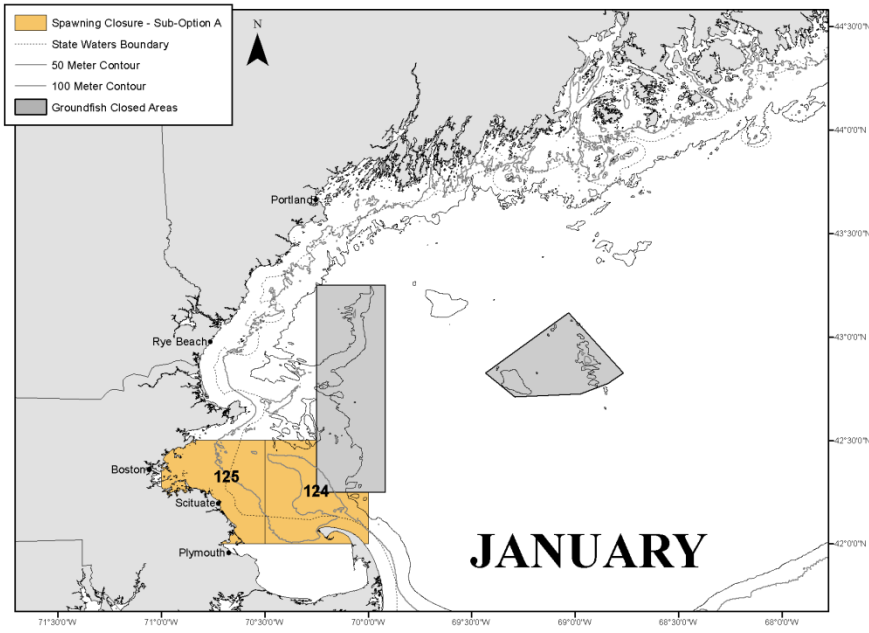
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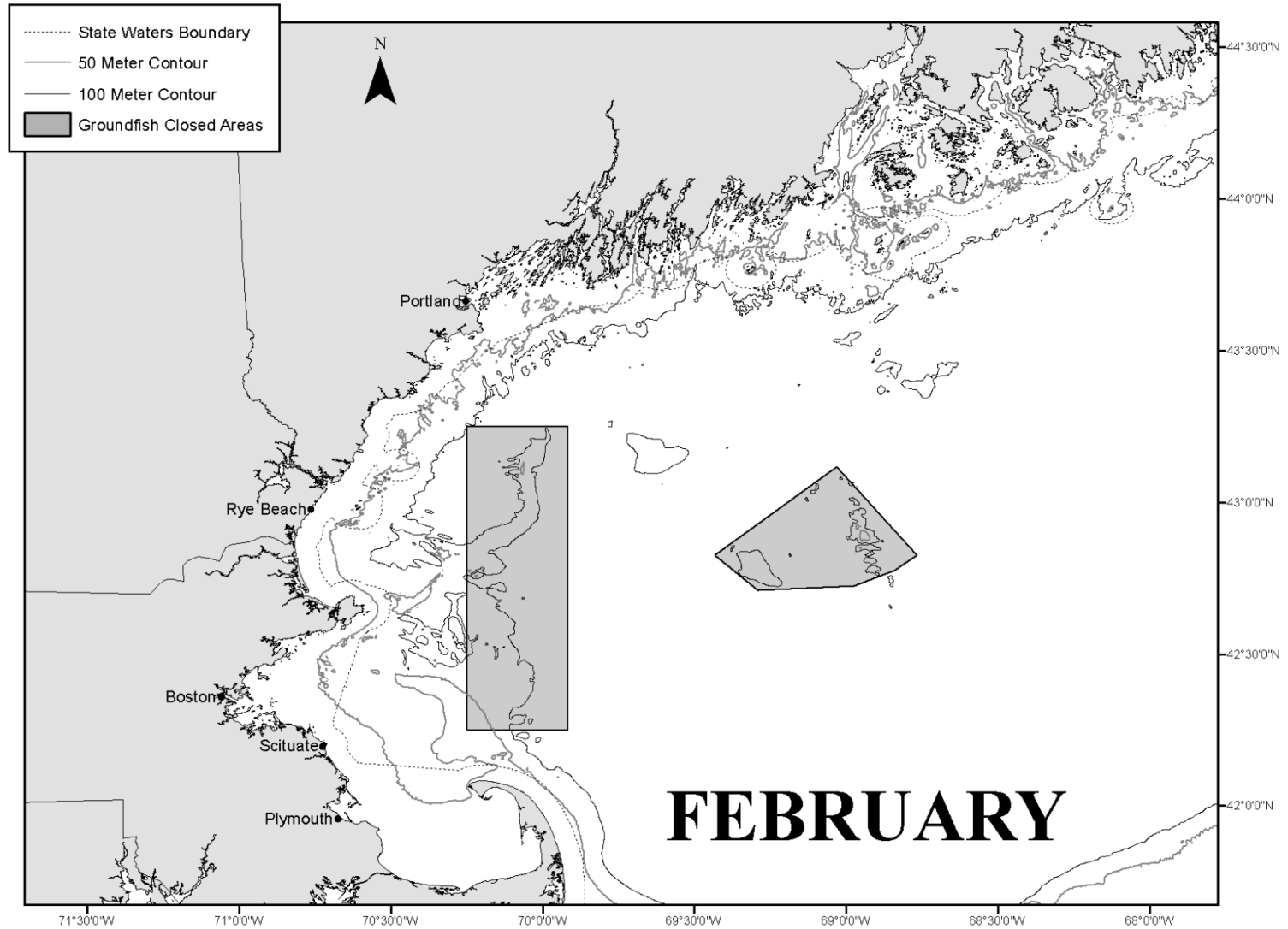
DECEMBER



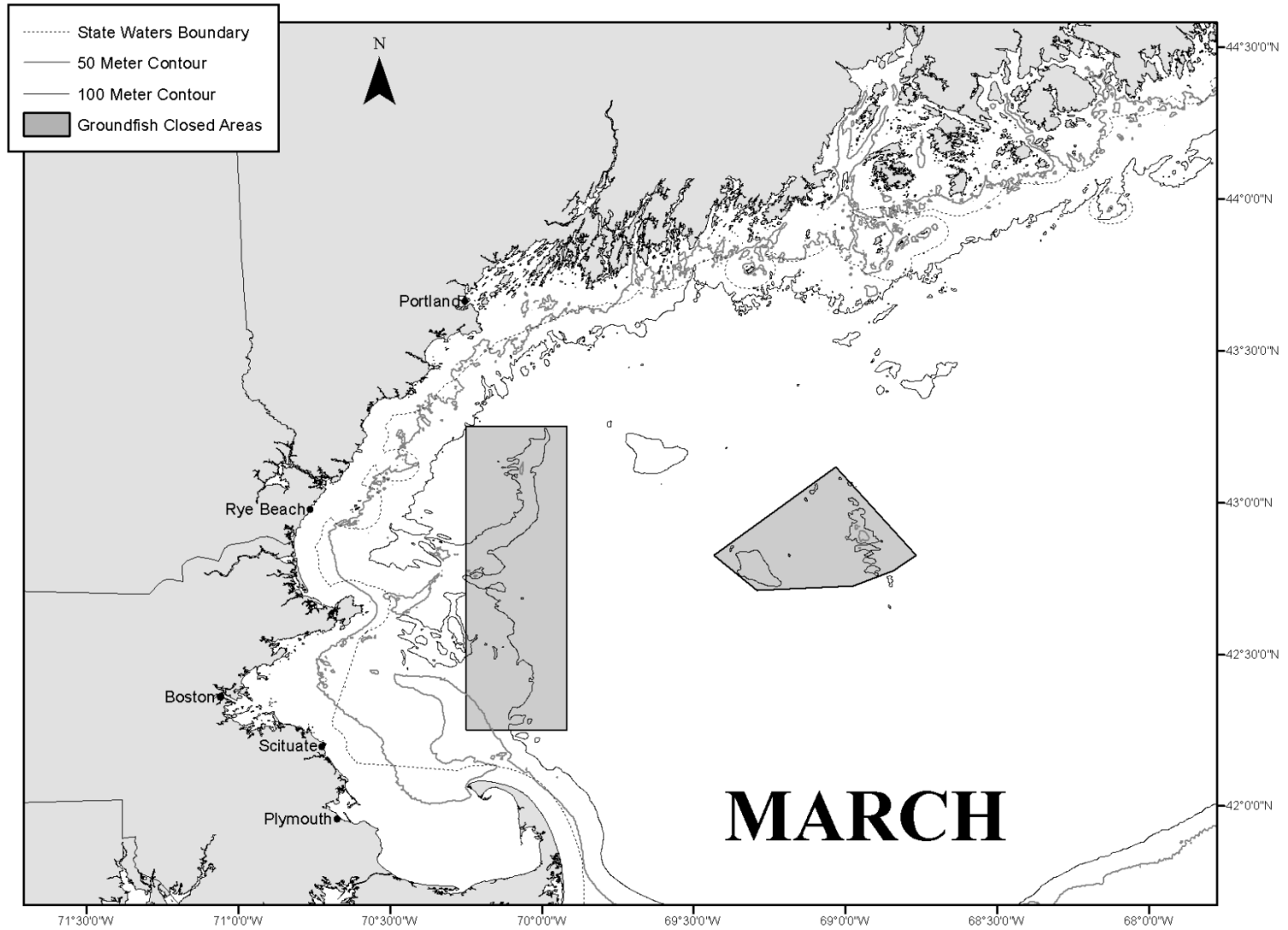
JANUARY



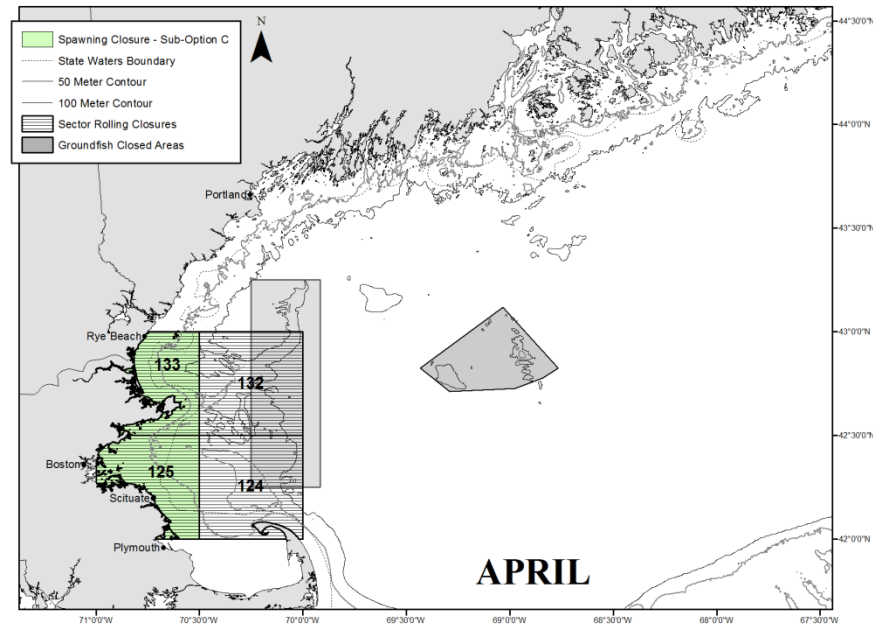
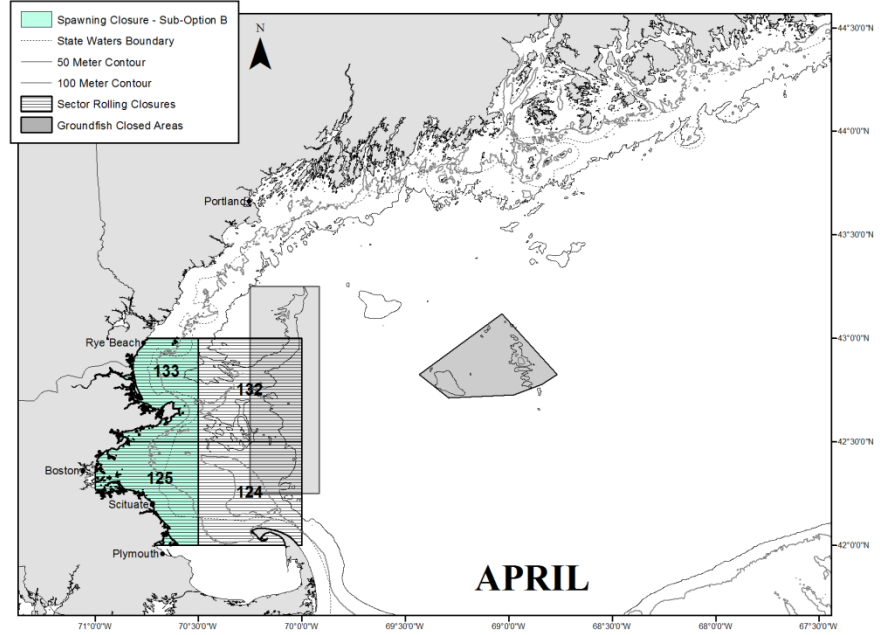
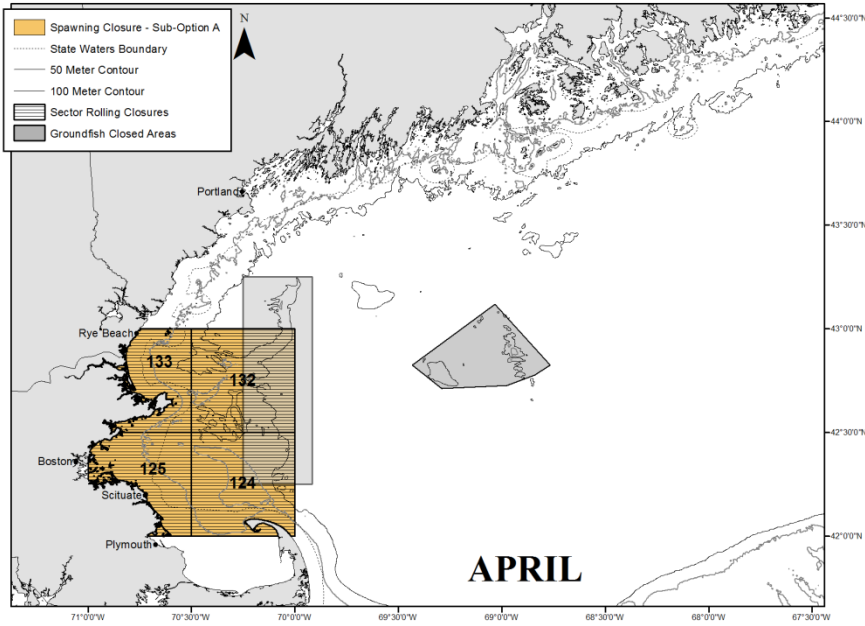
FEBRUARY



MARCH

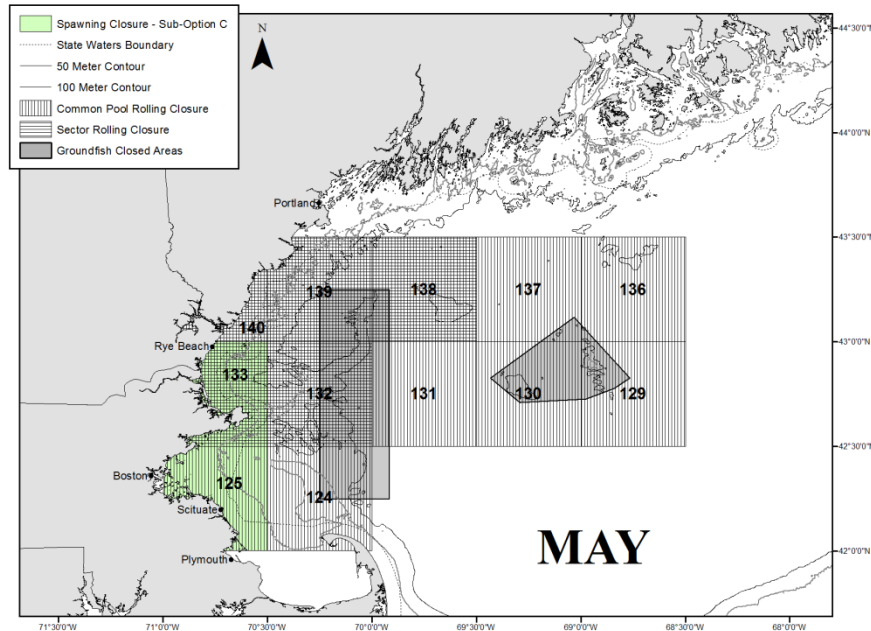
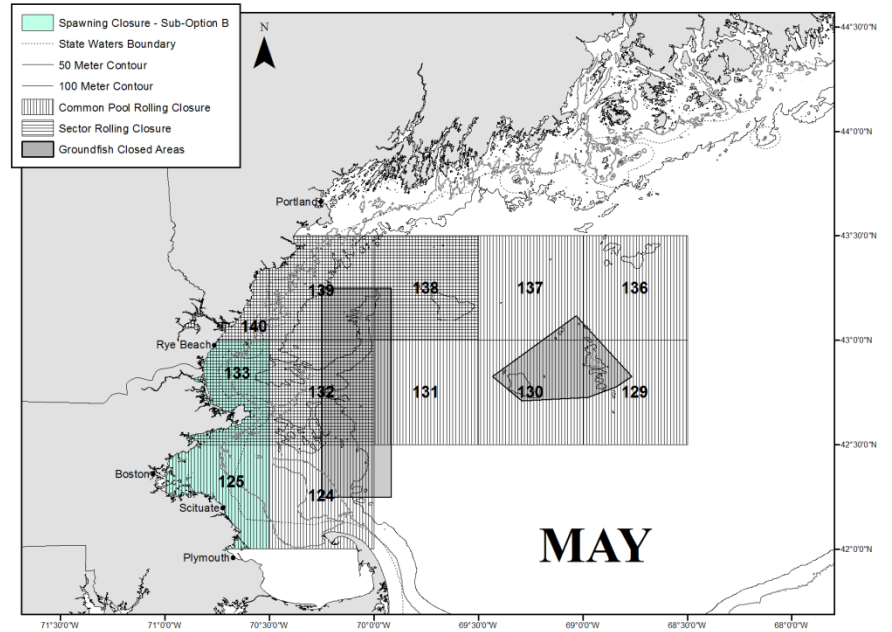
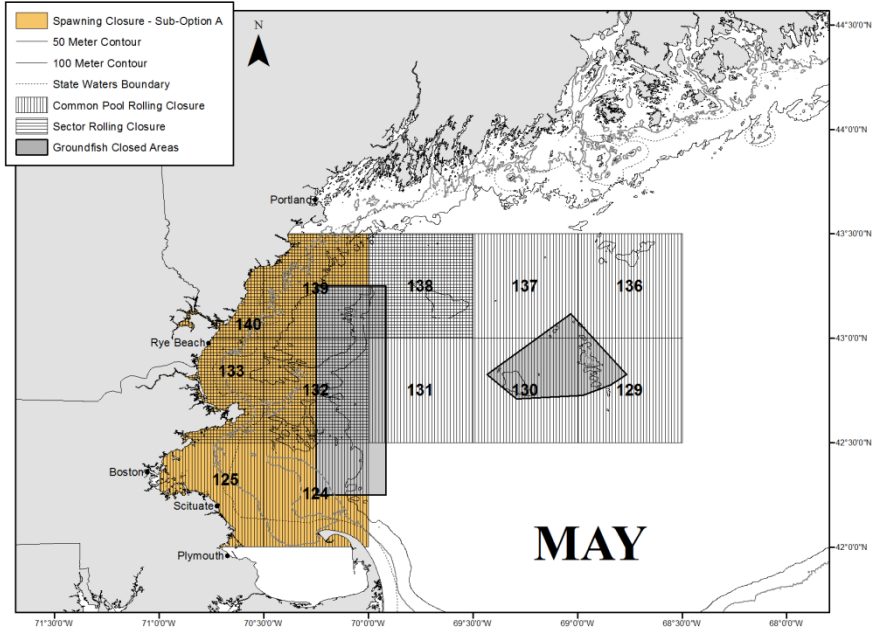


APRIL

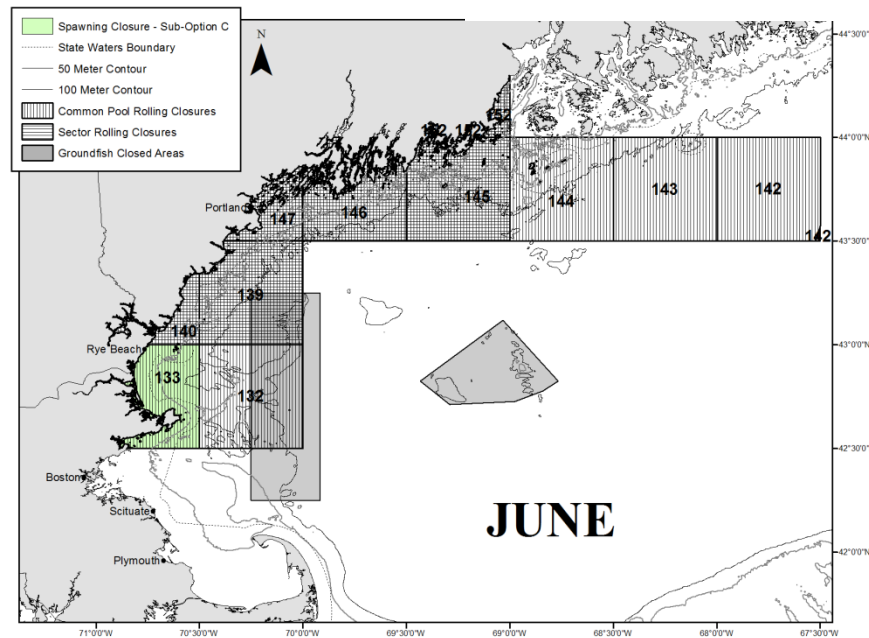
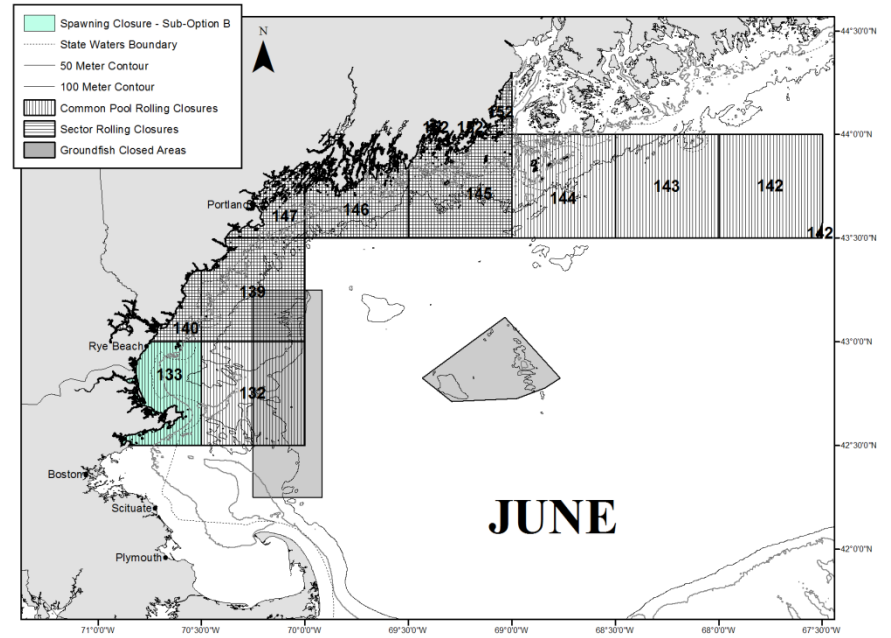
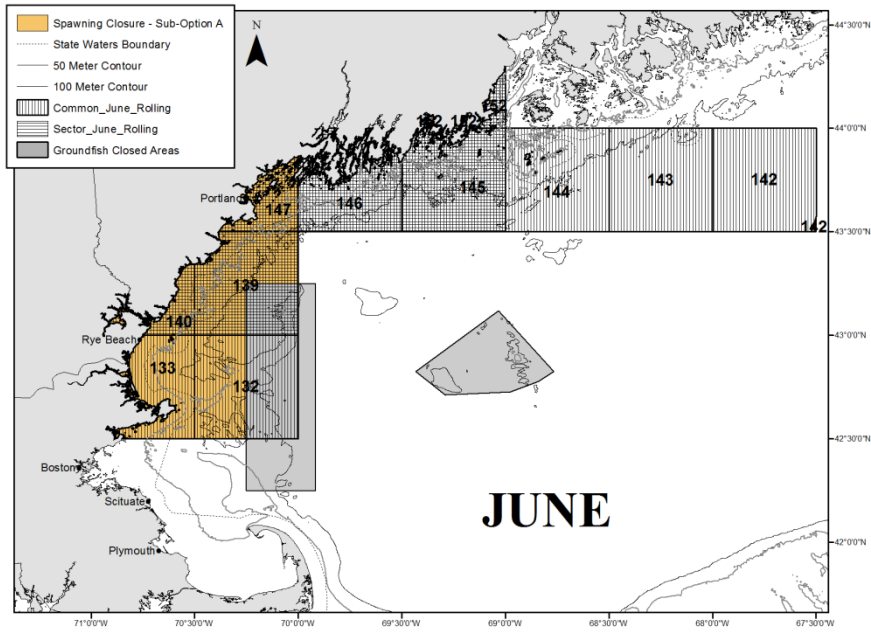


**Comparison of GOM Cod Spawning Closures and All
Existing Rolling Closures (Sector and Common Pool)**

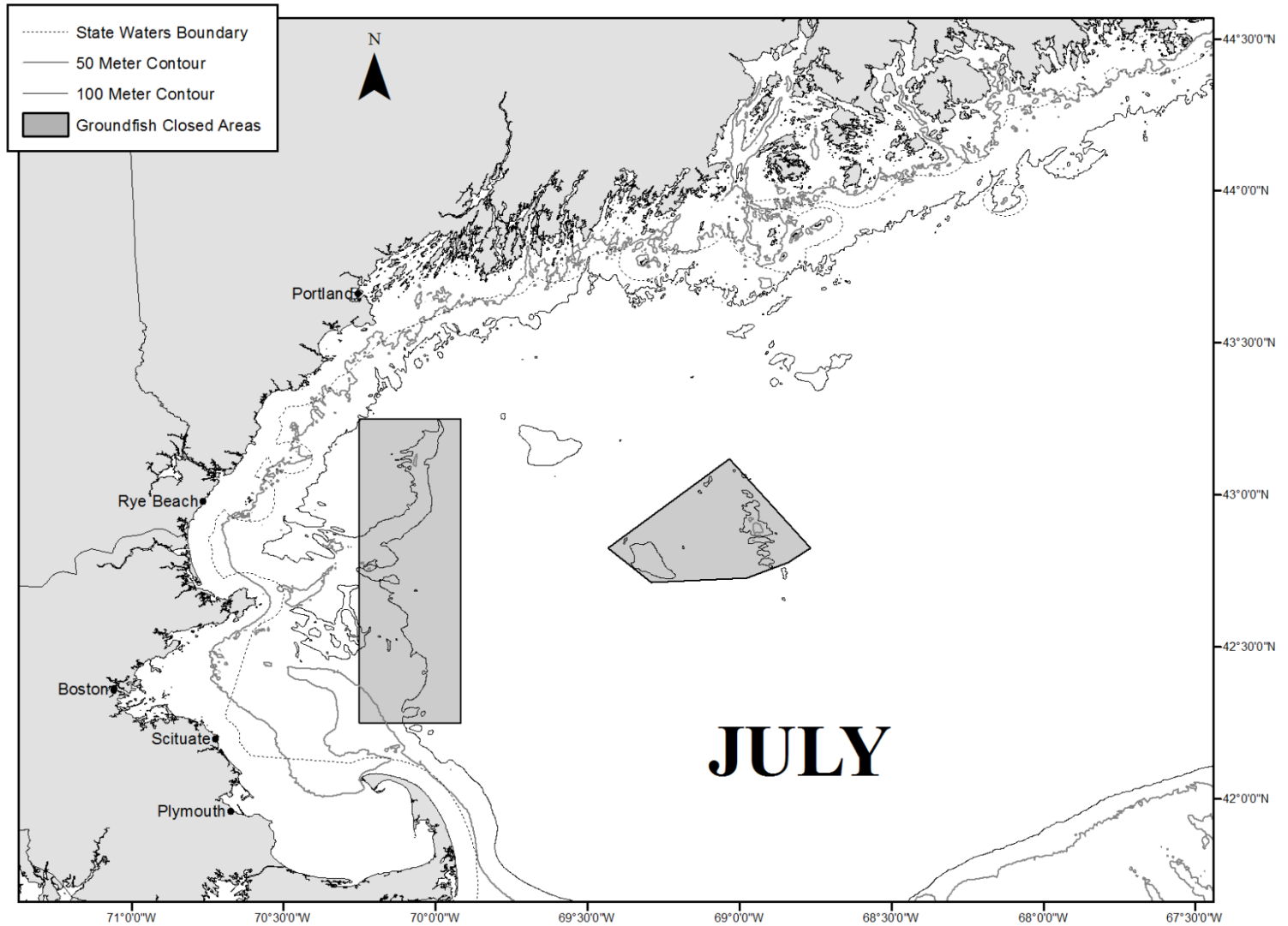
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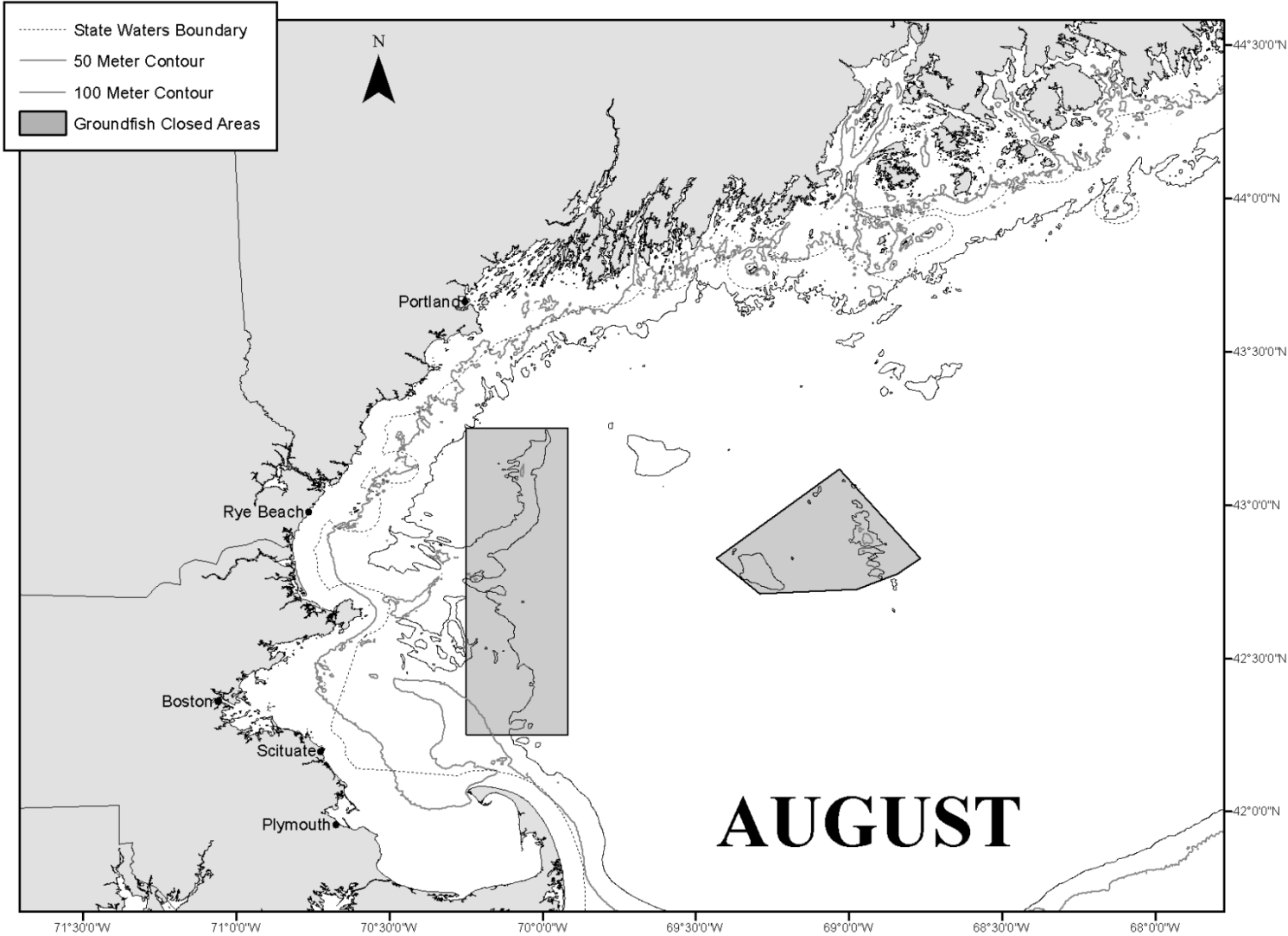
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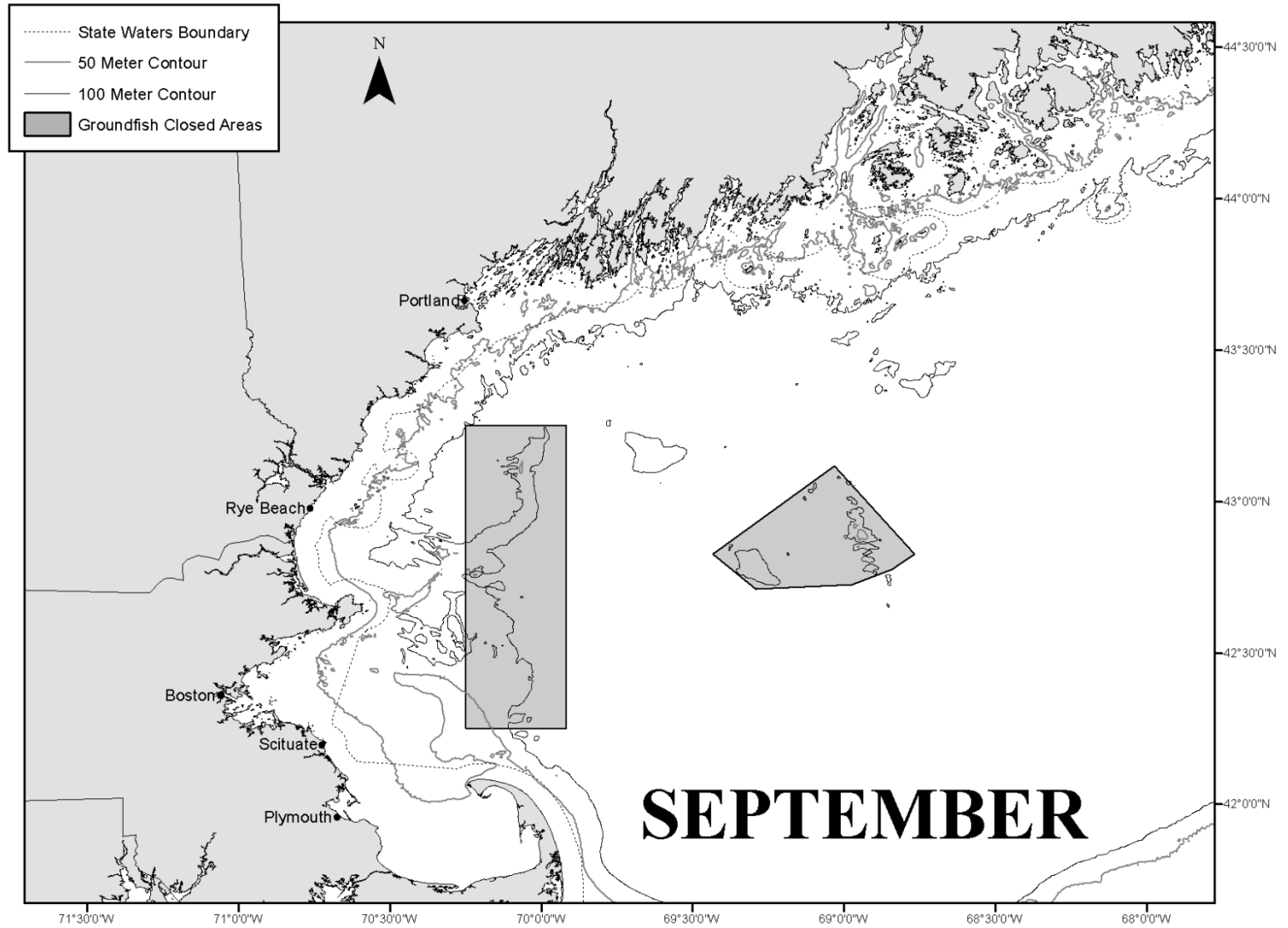
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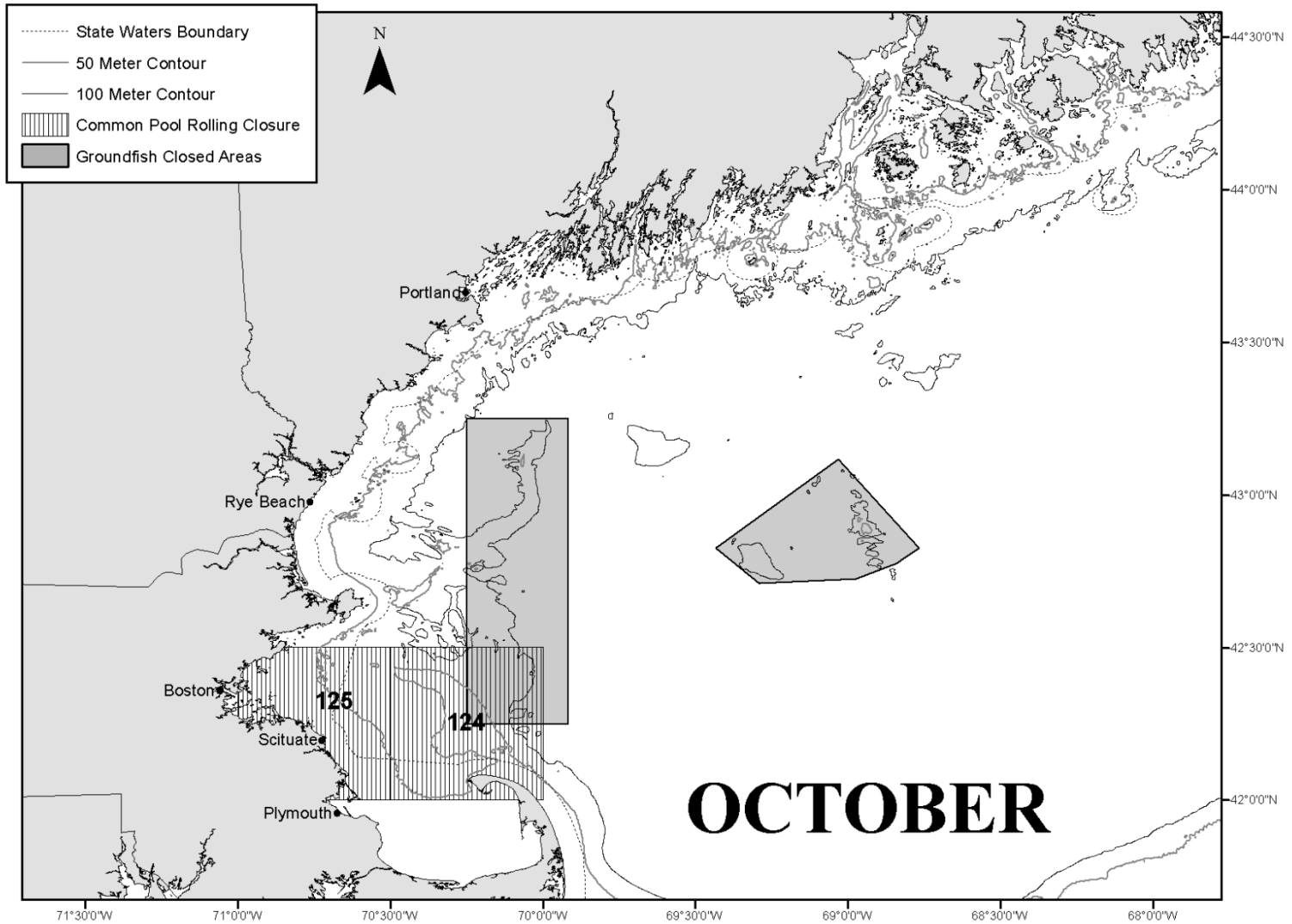
AUGUST



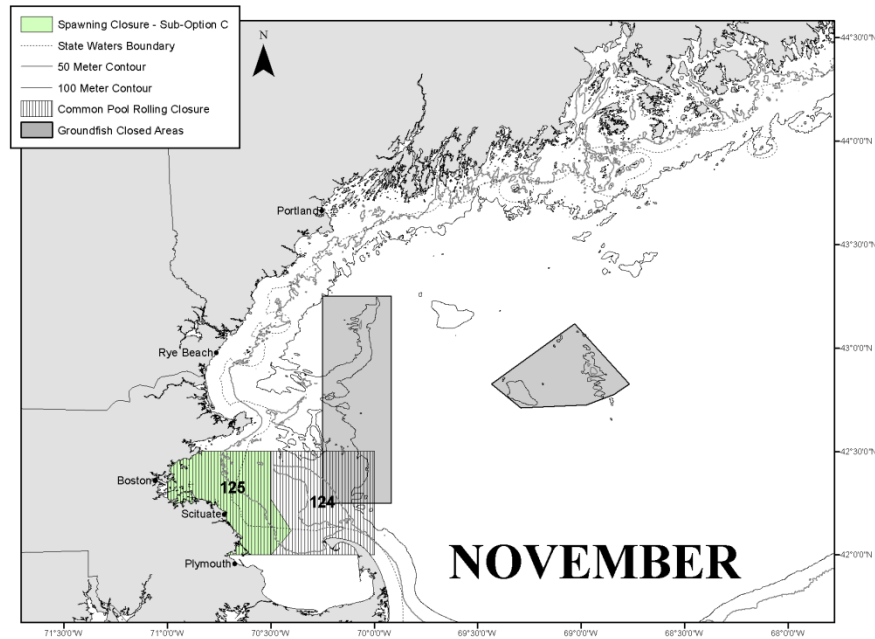
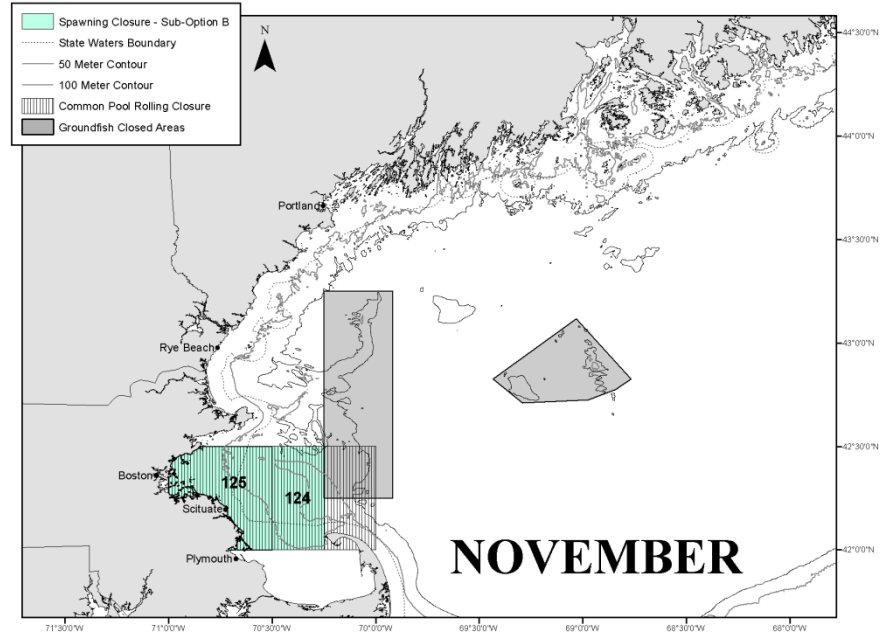
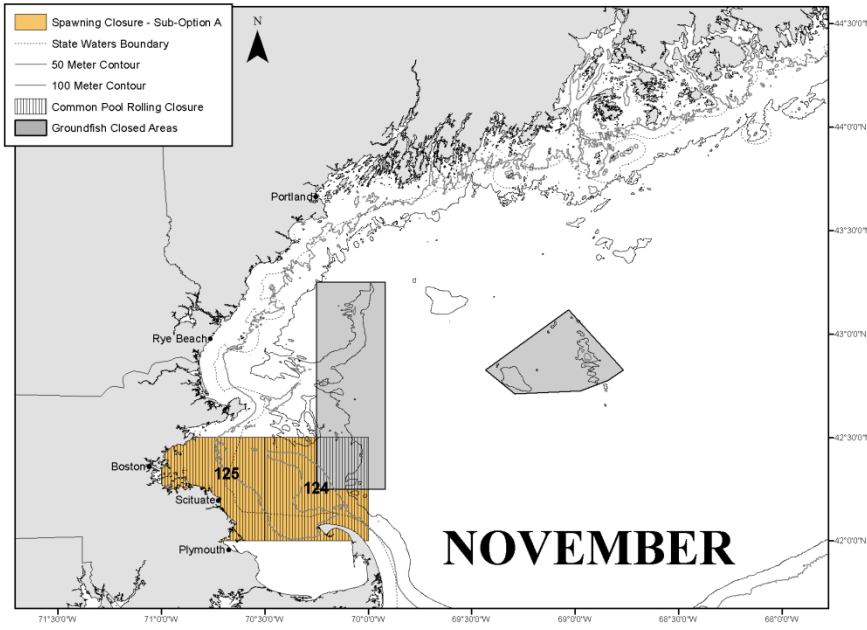
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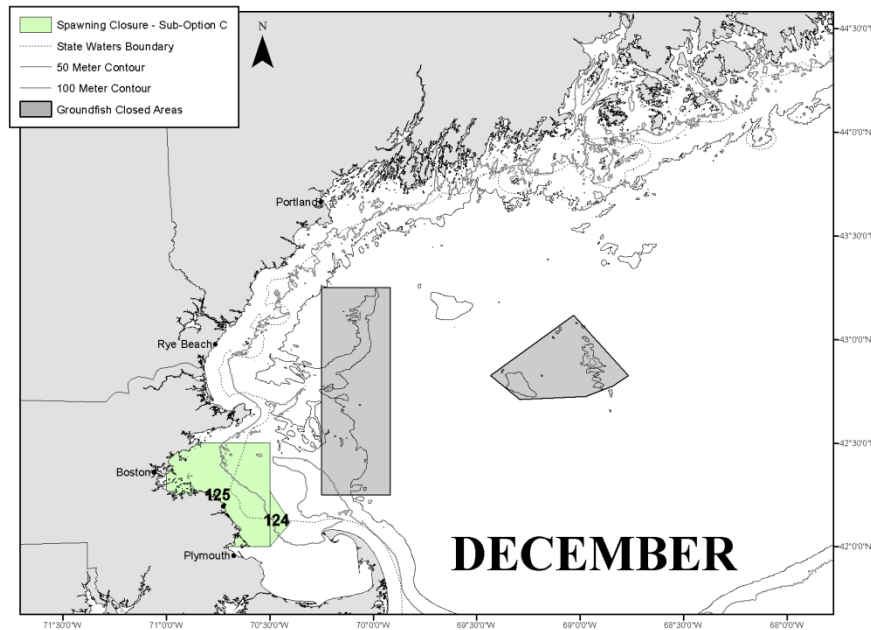
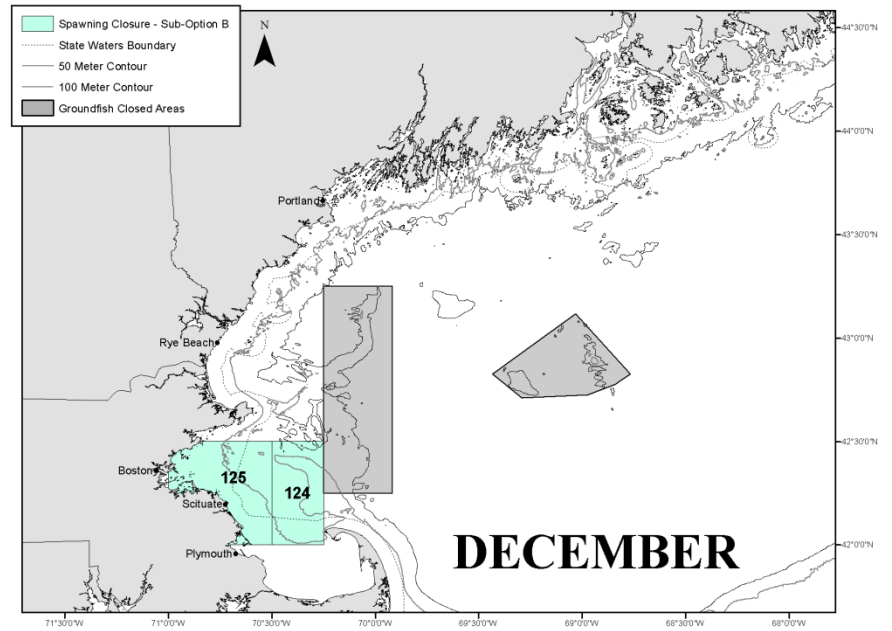
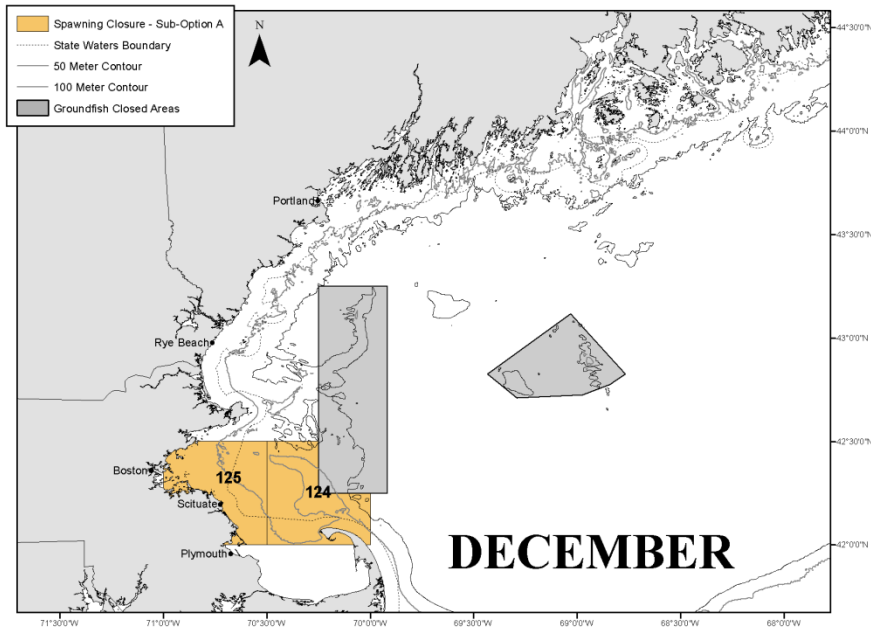
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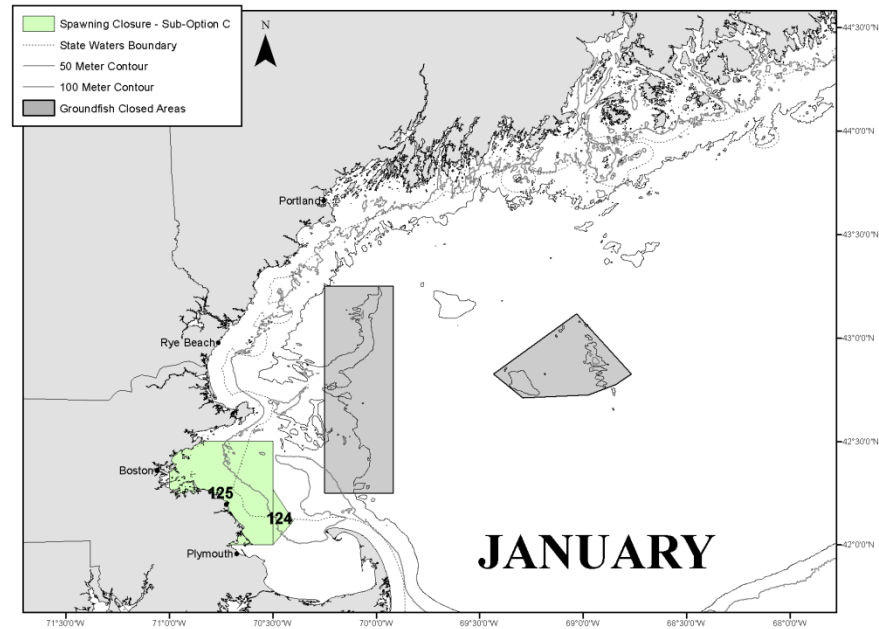
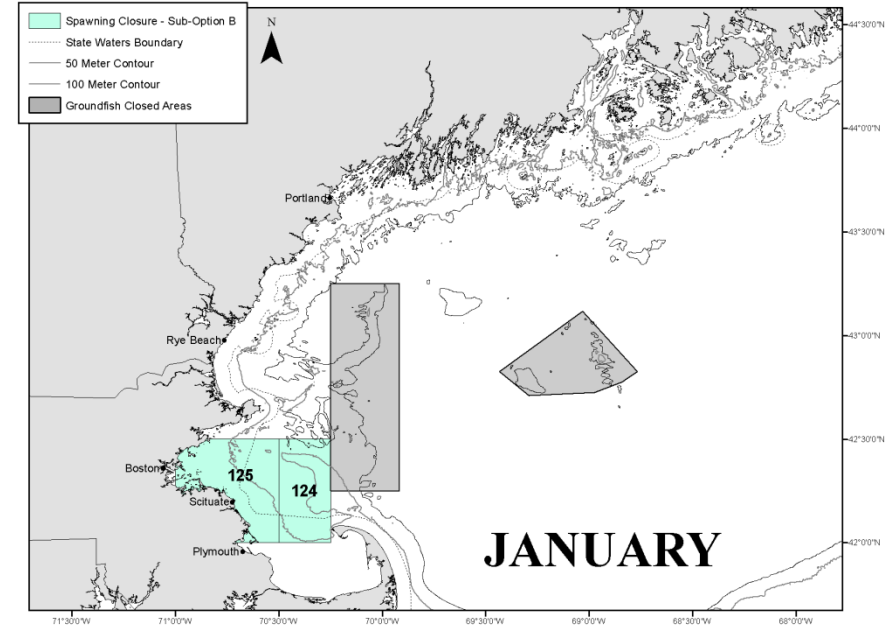
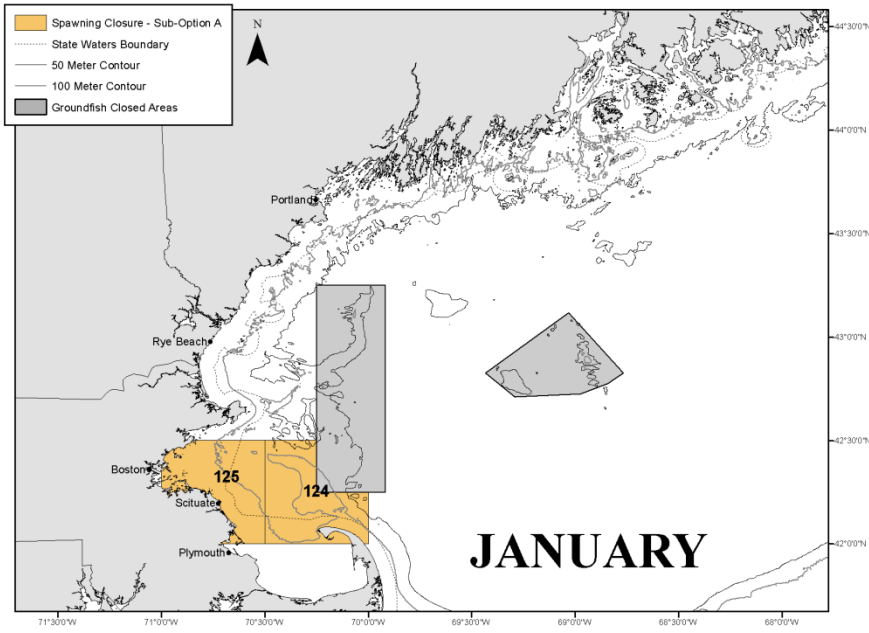
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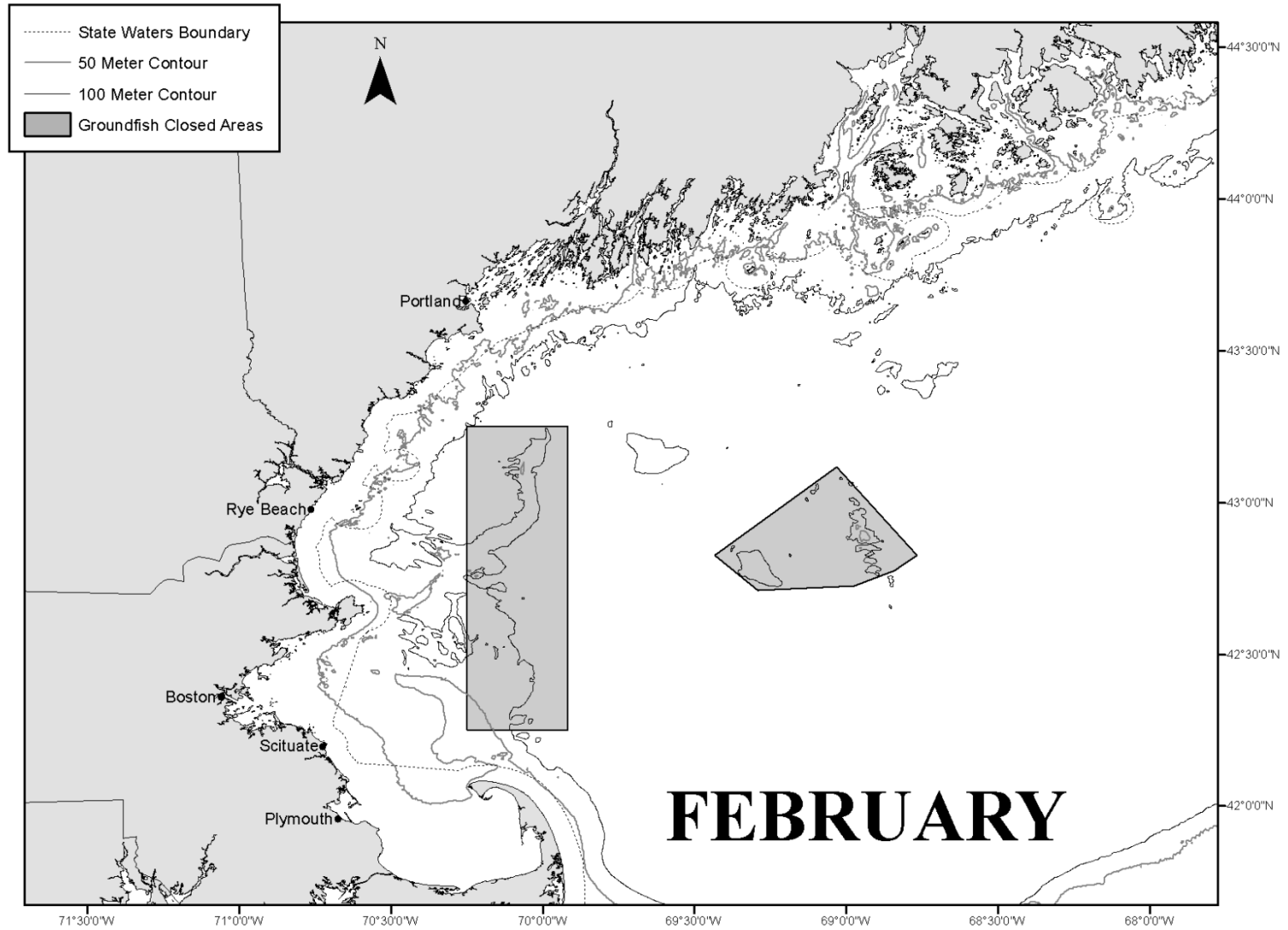
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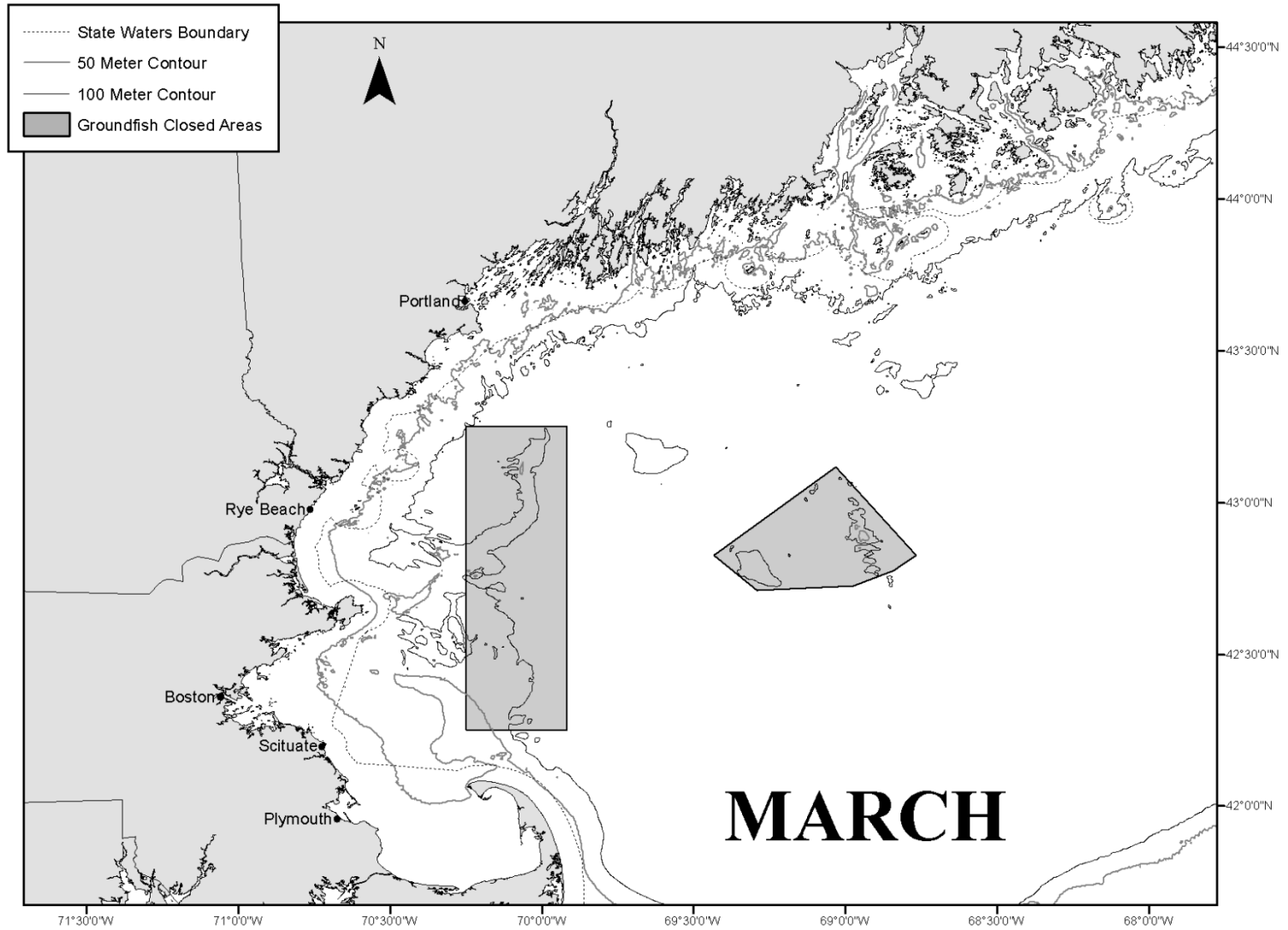
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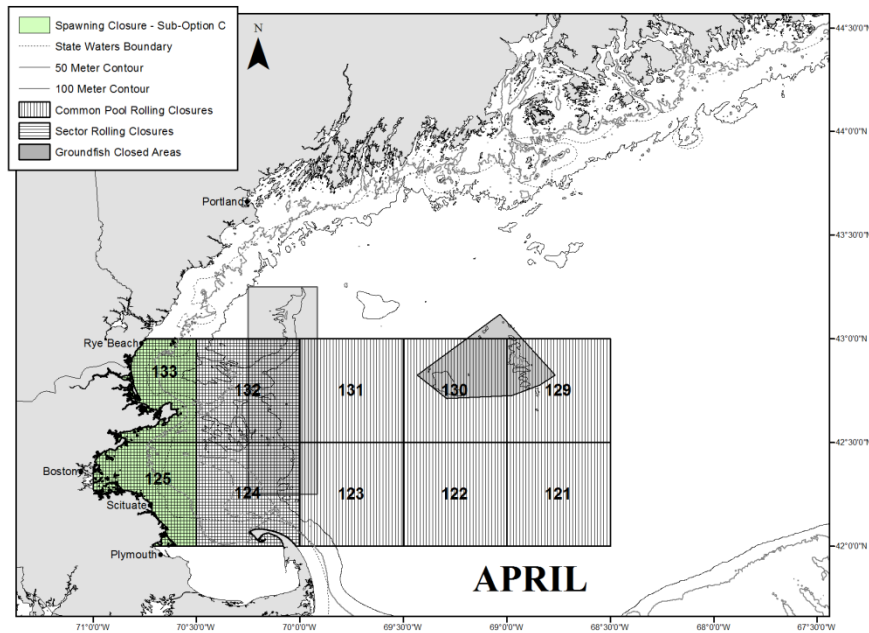
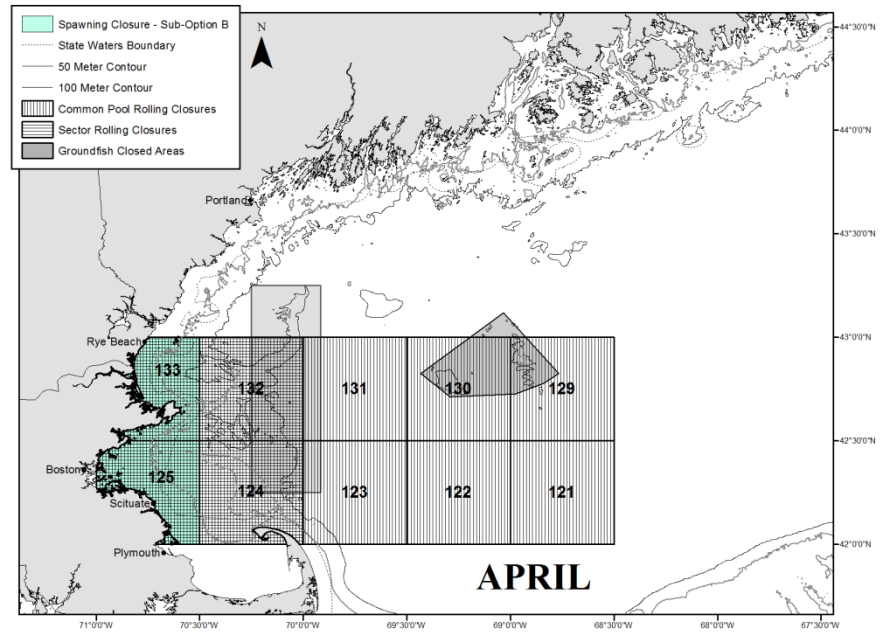
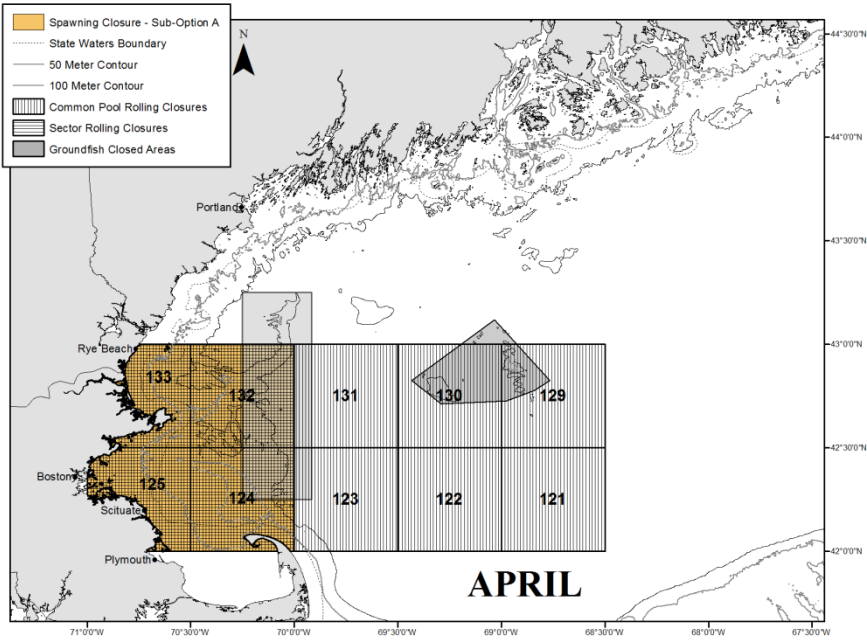
FEBRUARY



MARCH



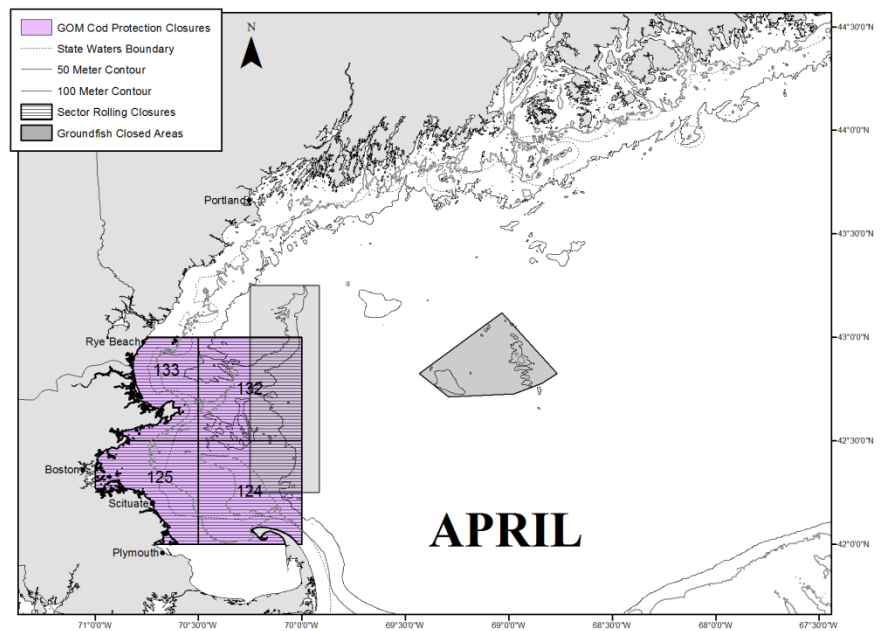
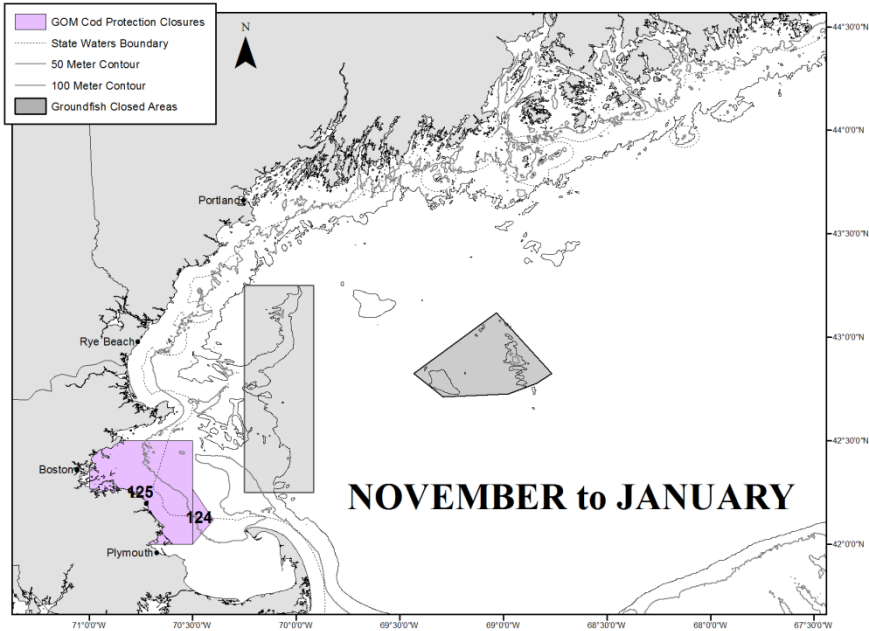
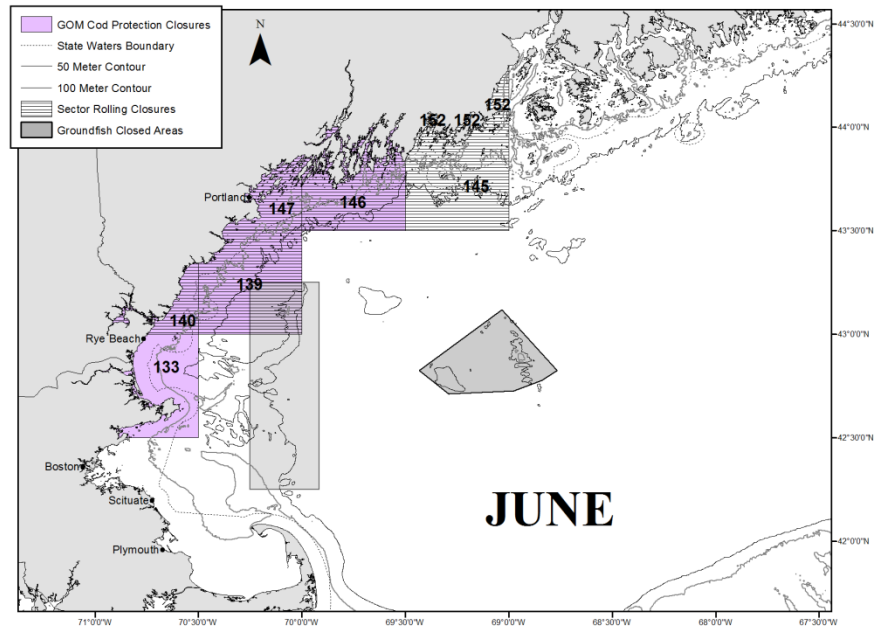
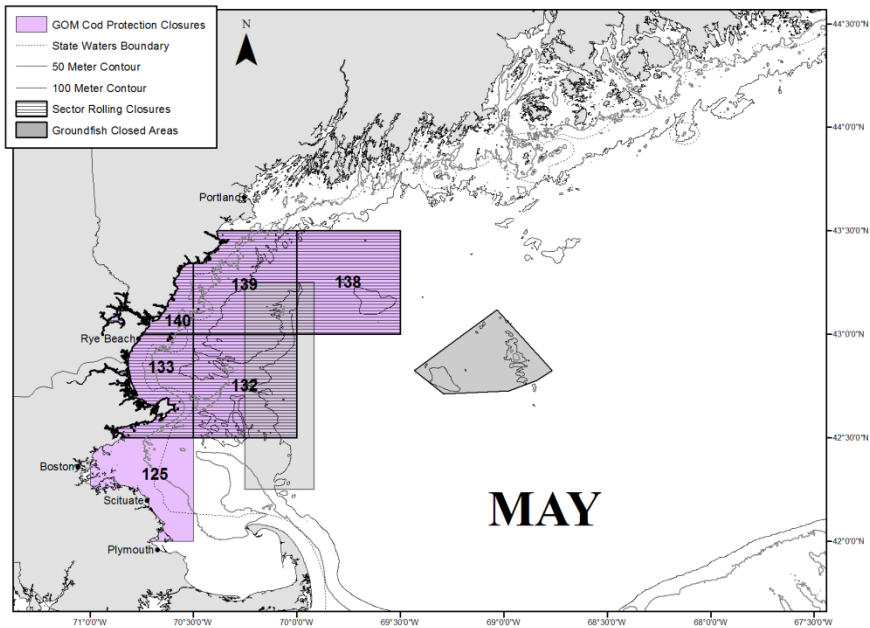
APRIL



Committee Motion:
Create GOM Cod
Protection Closures

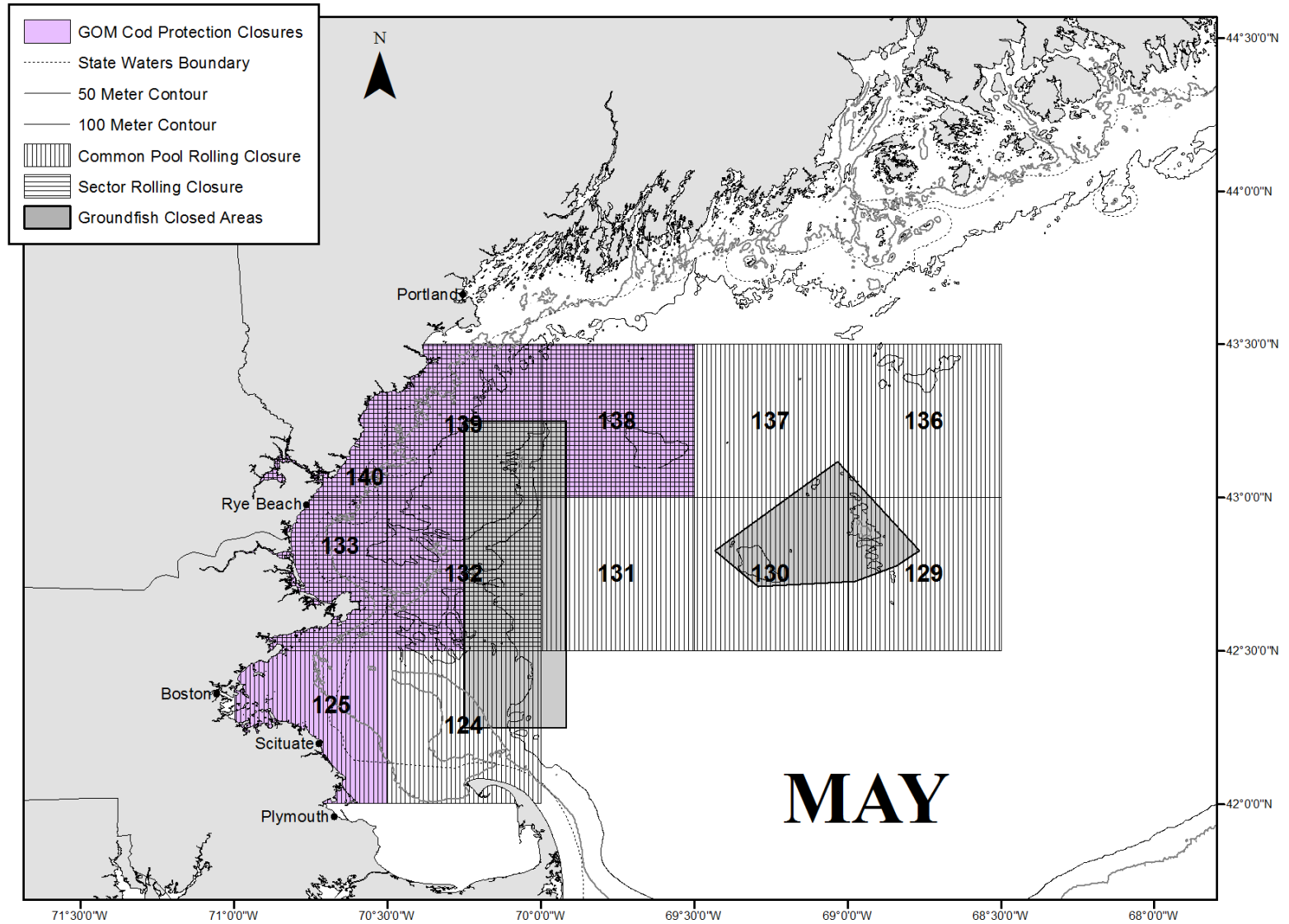
GOM Cod Protection Closures: SECTOR COMPARISON

GOM Cod Protection Closures: SECTOR COMPARISON

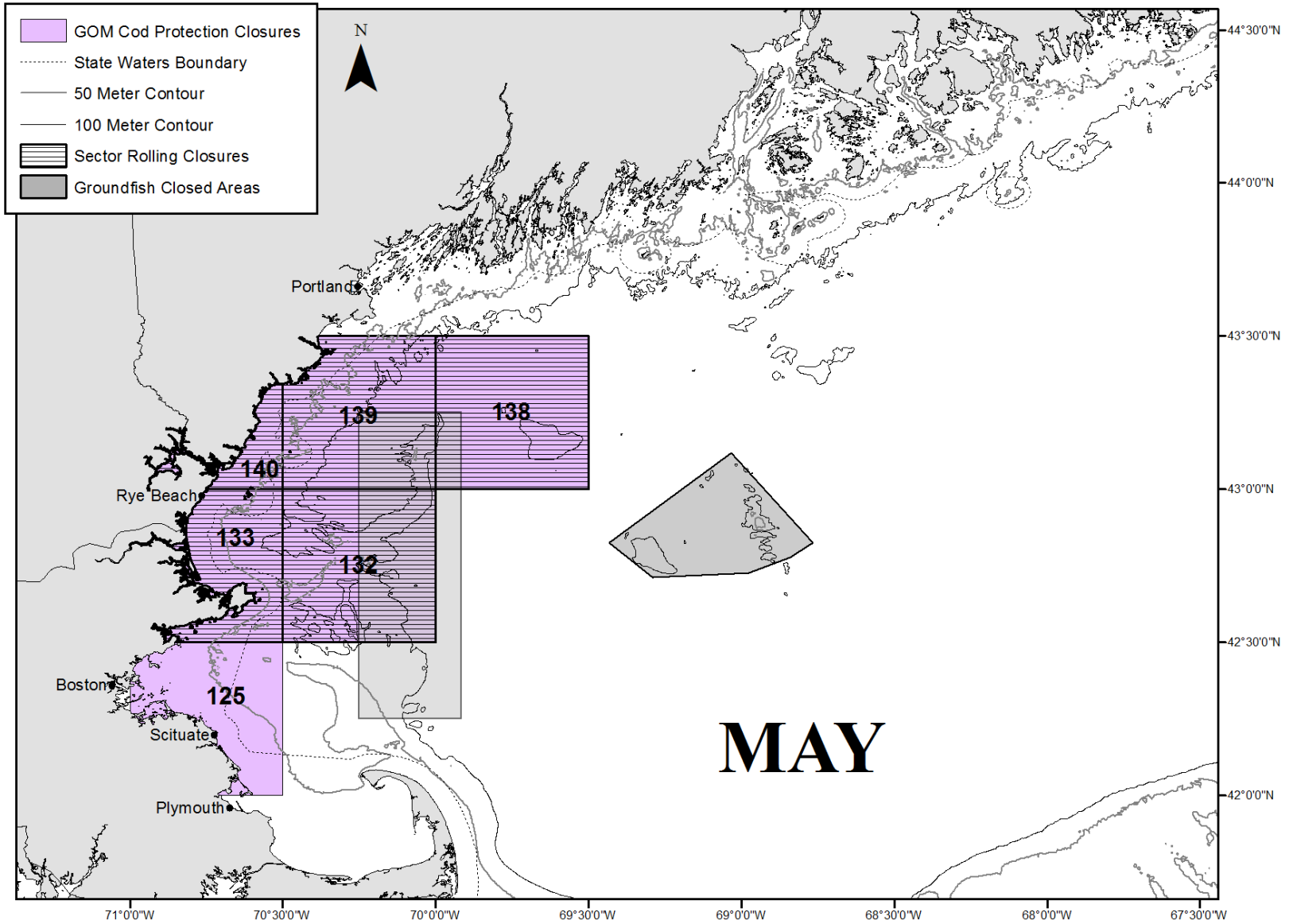


GOM Cod Protection Closures: MAY

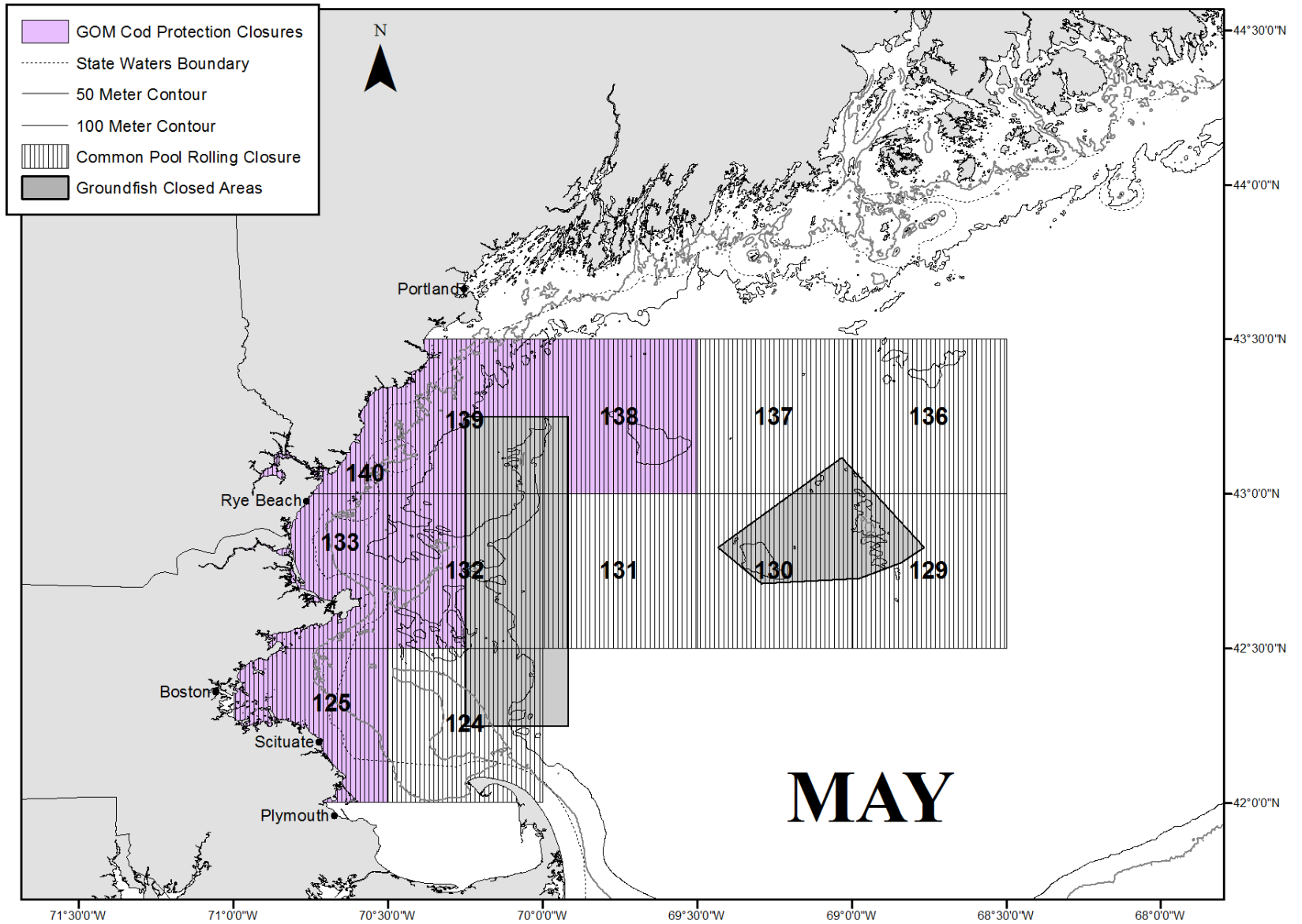
MAY: Overlaid with Common Pool and Sector Rolling Closures



MAY: Overlaid with Sector Rolling Closures

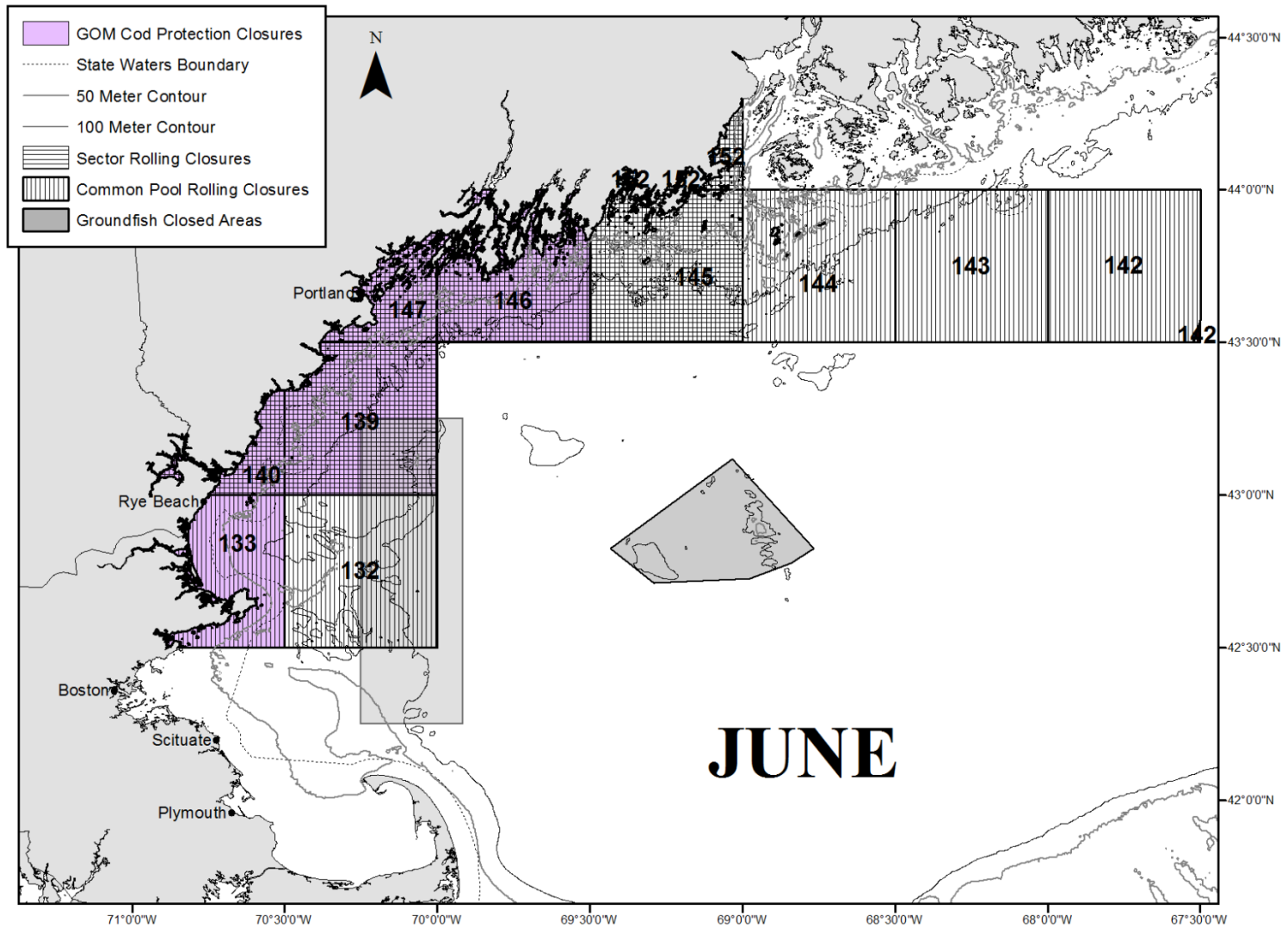


MAY: Overlaid with Common Pool Rolling Closures

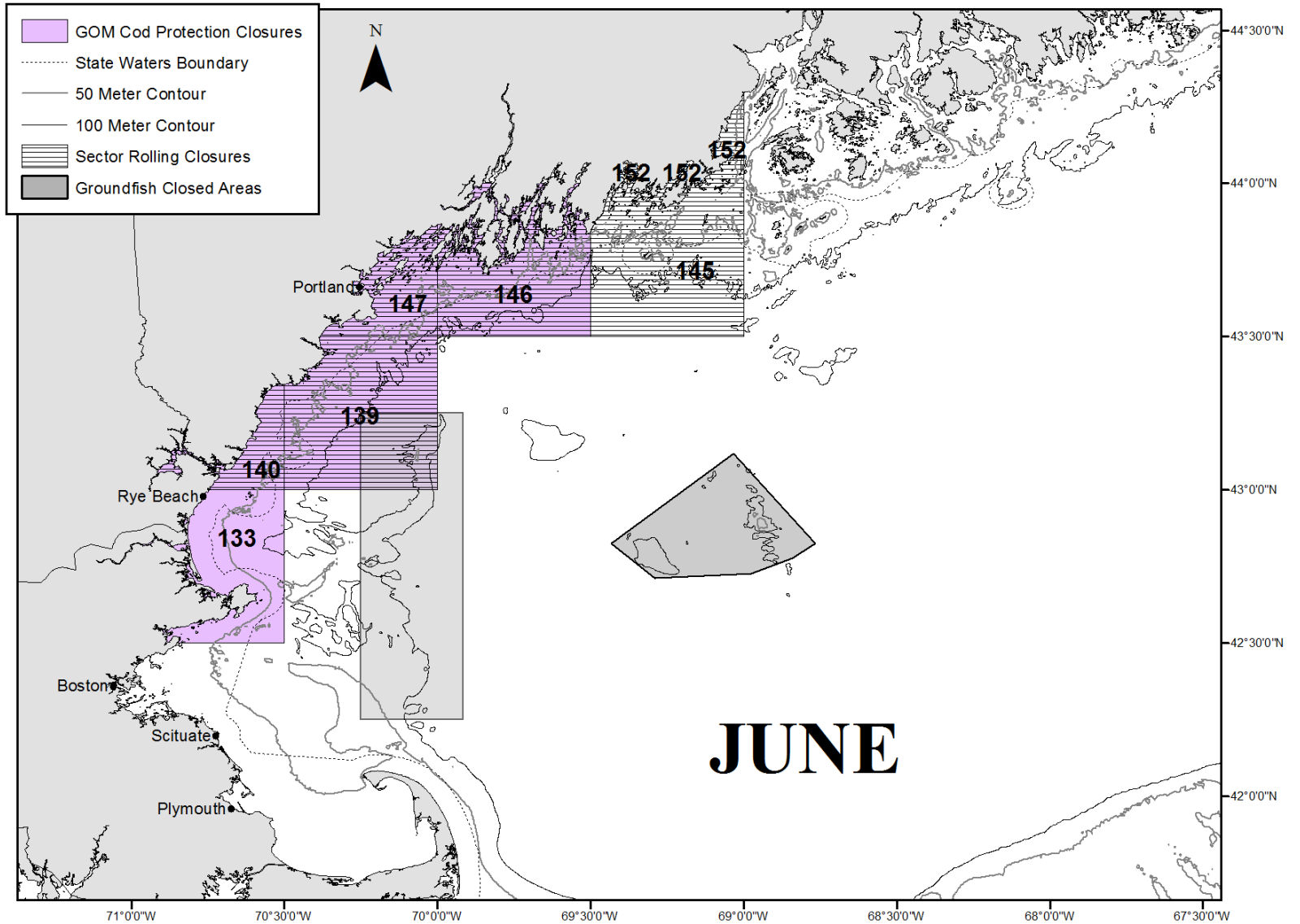


GOM Cod Protection Closures: JUNE

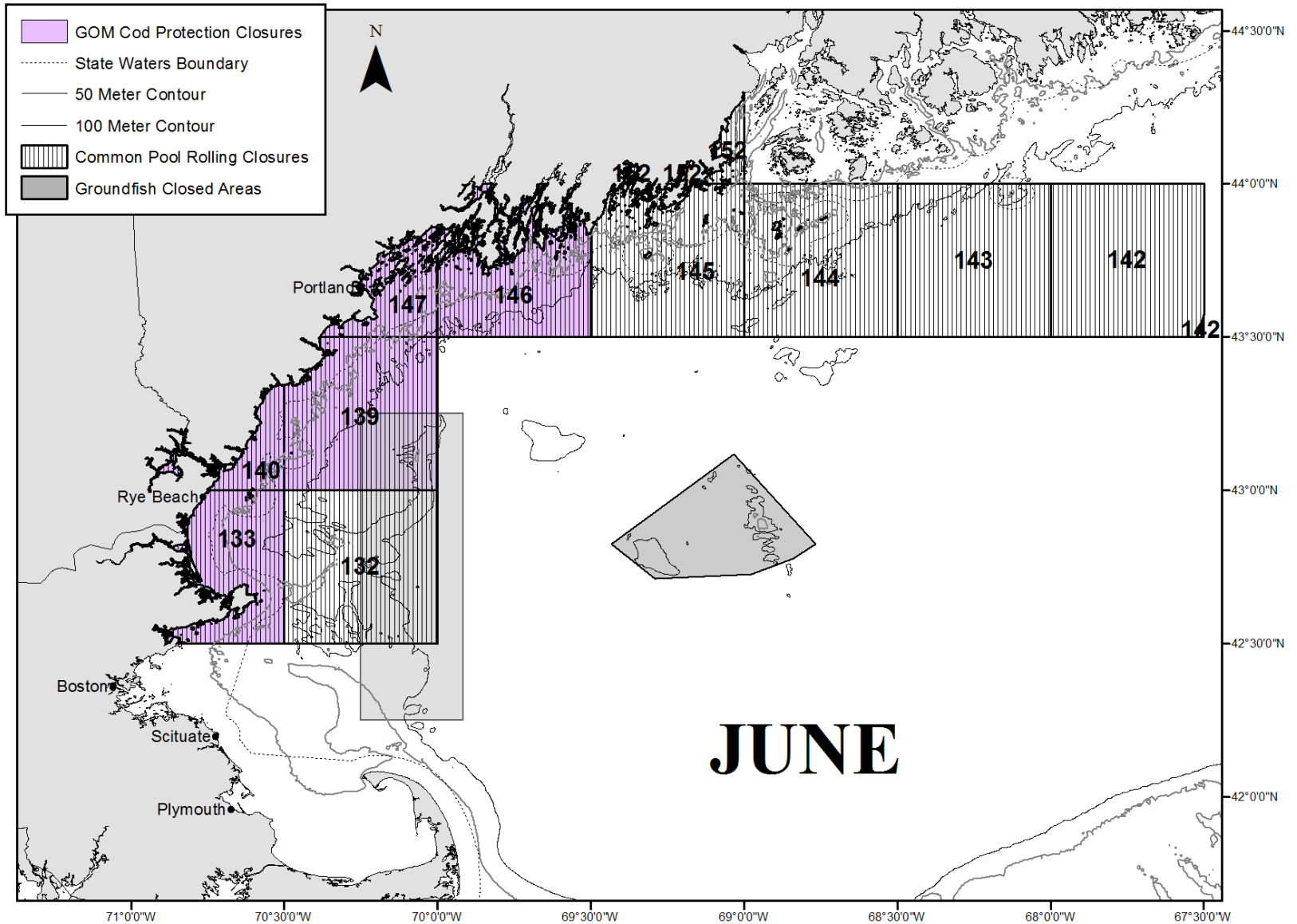
JUNE: Overlaid with Common Pool and Sector Rolling Closures



JUNE: Overlaid with Sector Rolling Closures



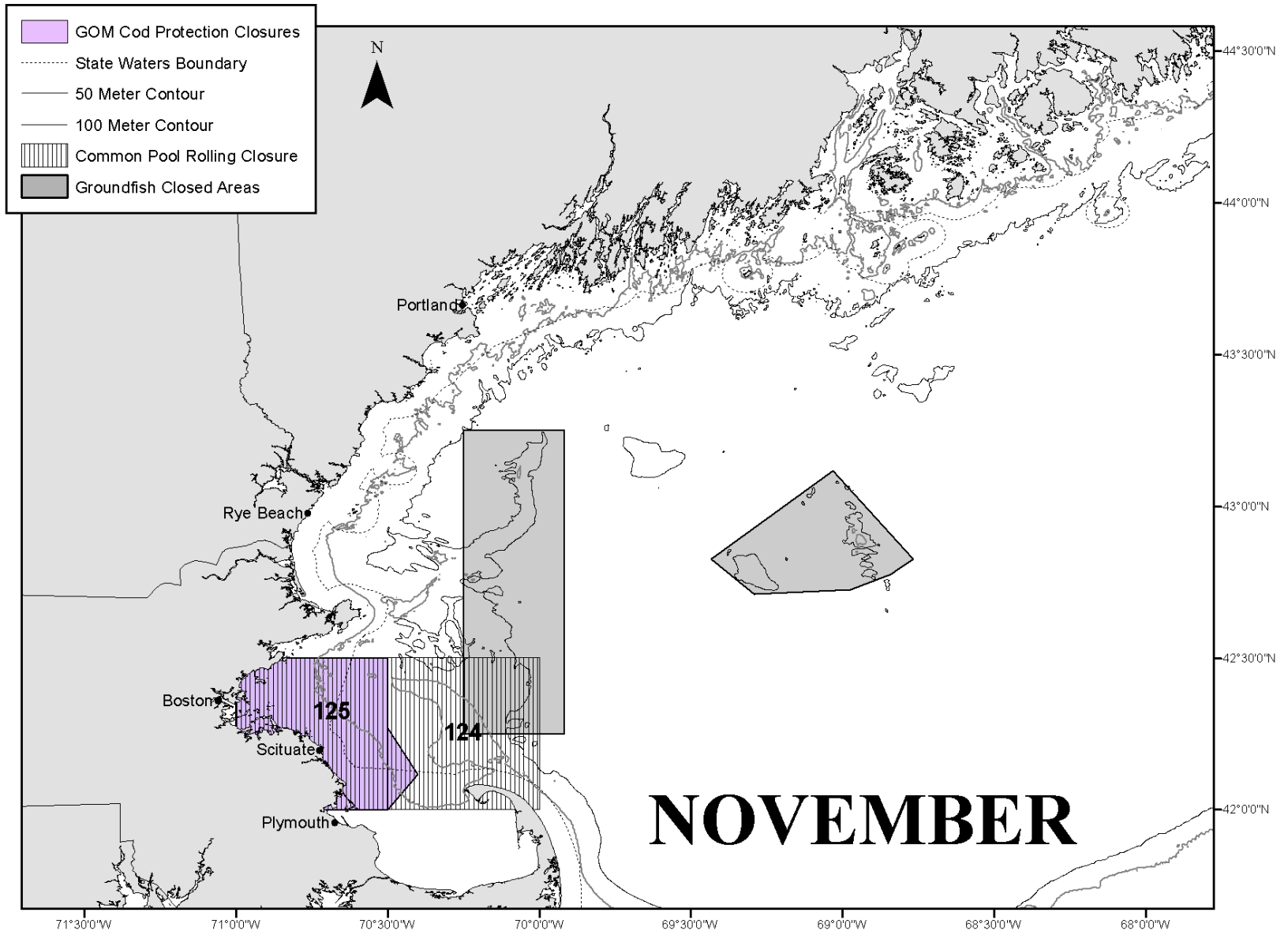
JUNE: Overlaid with Common Pool Rolling Closures



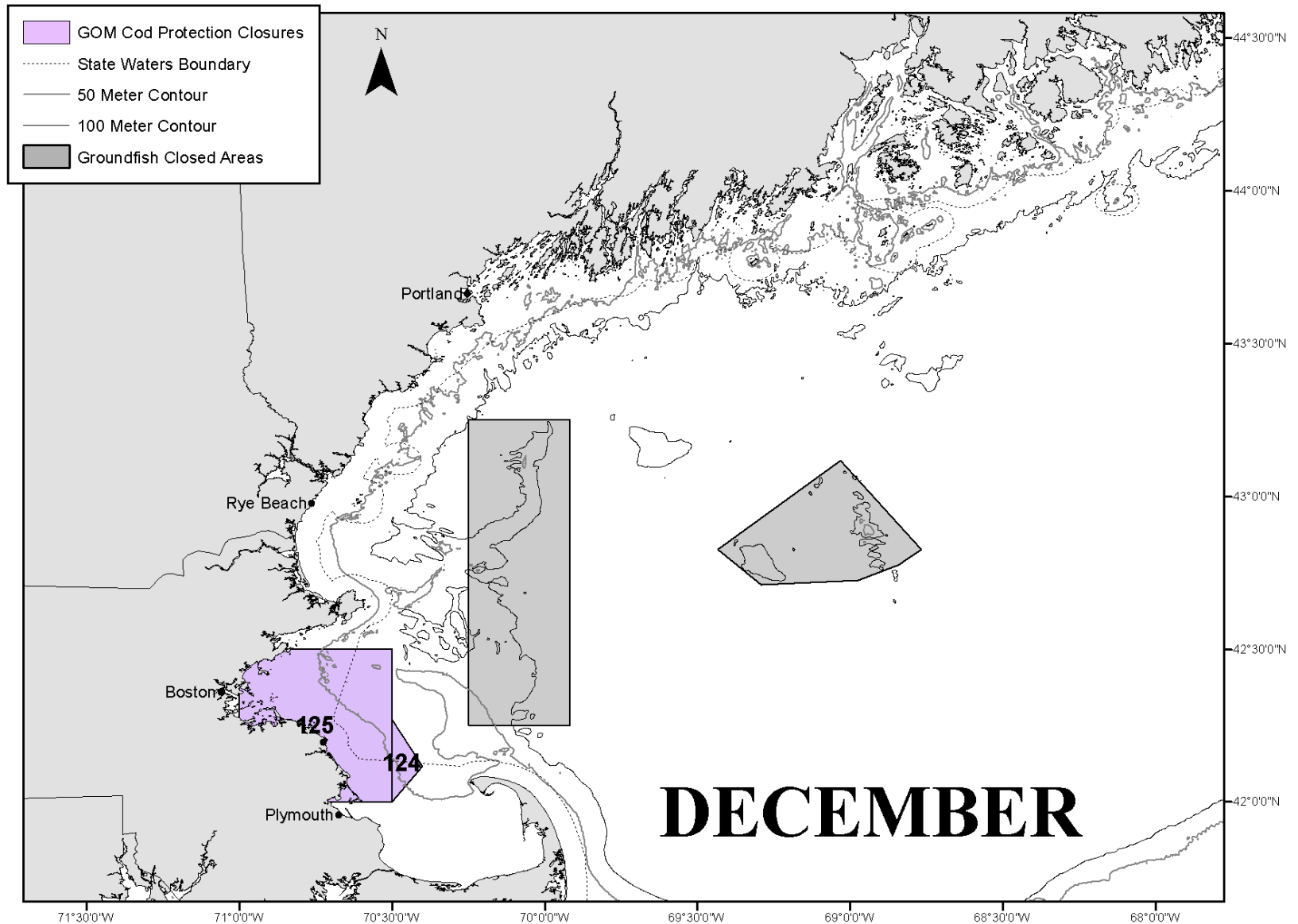
GOM Cod Protection Closures: NOVEMBER - JANUARY

NOVEMBER: Overlaid with Common Pool and Sector Rolling Closures

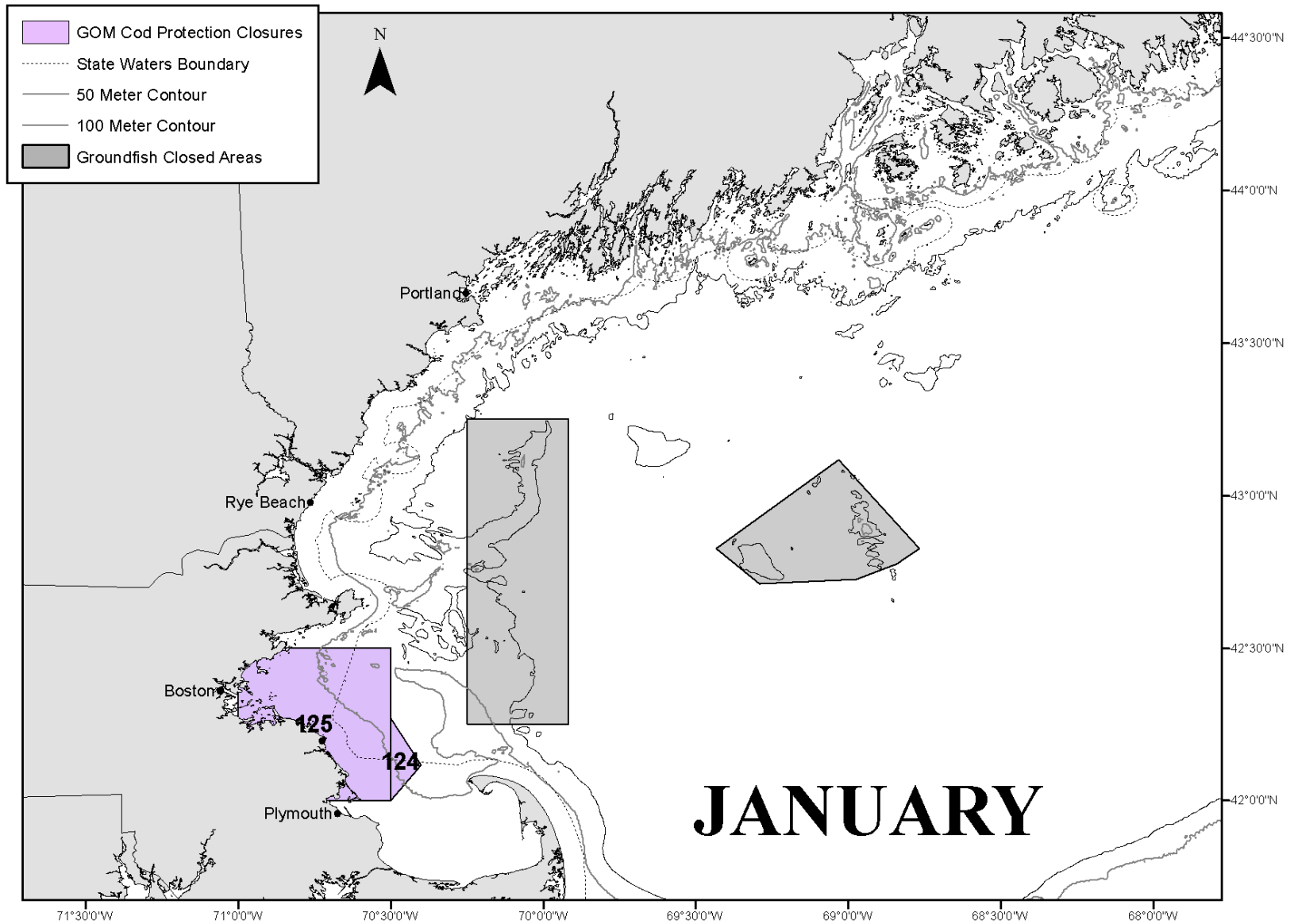
No Sector Rolling Closures in November



DECEMBER: NO SECTOR OR ROLLING CLOSURES IN DECEMBER

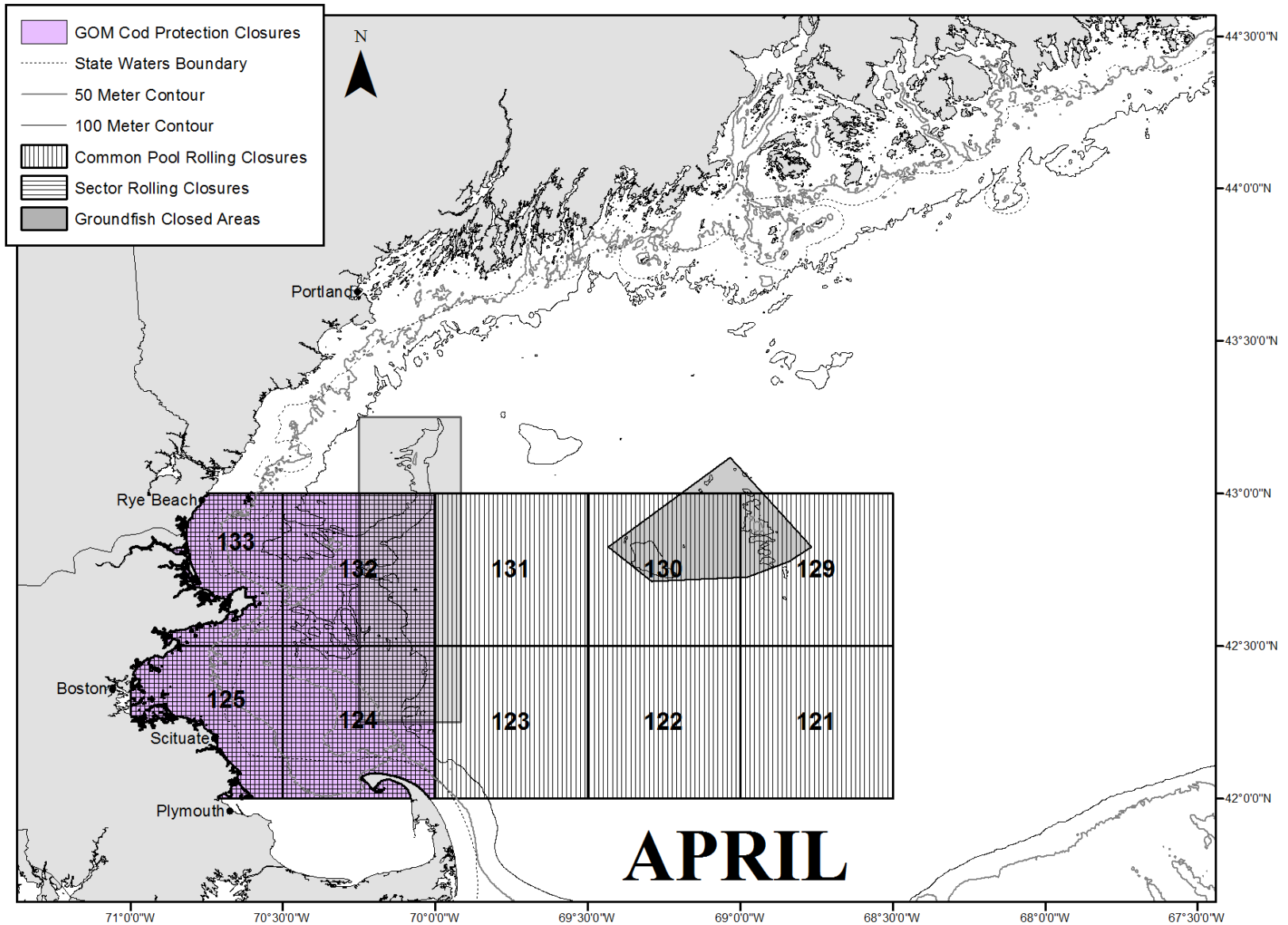


JANUARY: NO SECTOR OR ROLLING CLOSURES IN DECEMBER

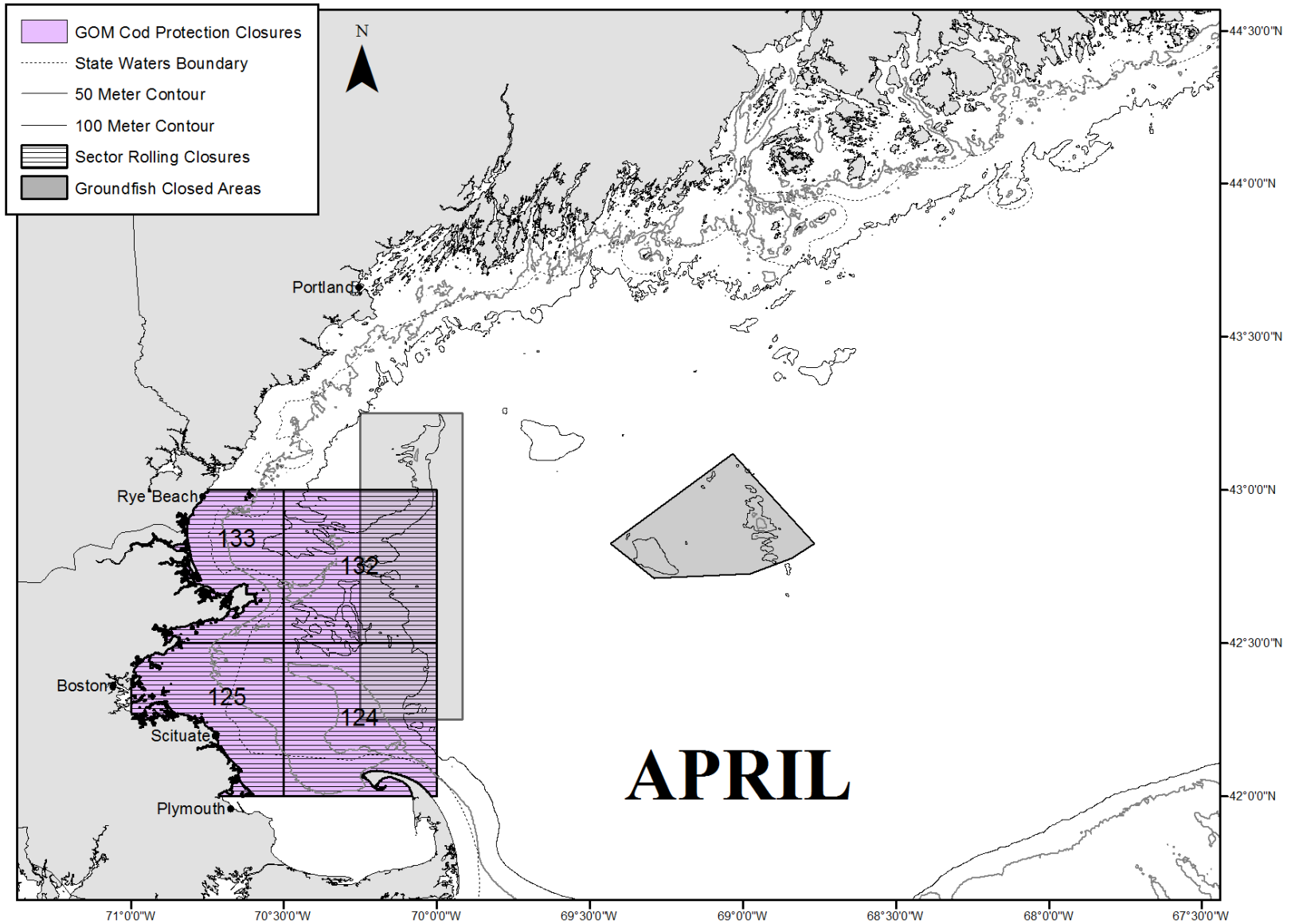


GOM Cod Protection Closures: APRIL

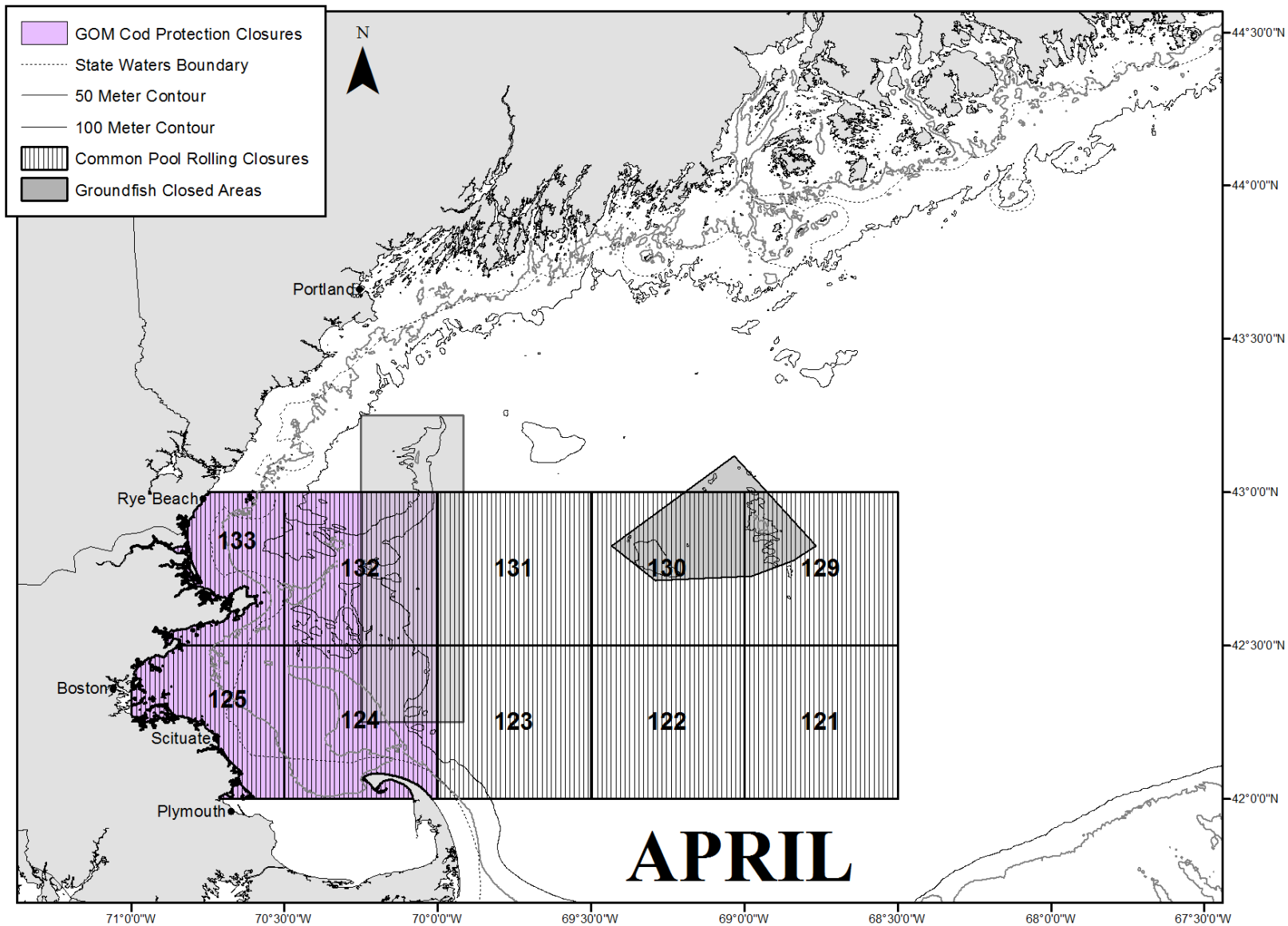
APRIL: Overlaid with Common Pool and Sector Rolling Closures



APRIL: Overlaid with Sector Rolling Closures

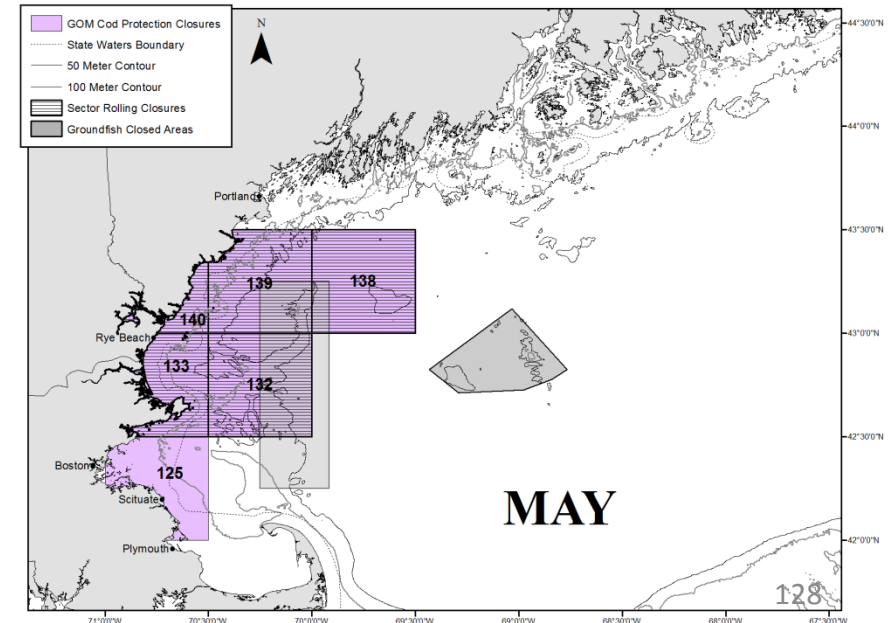
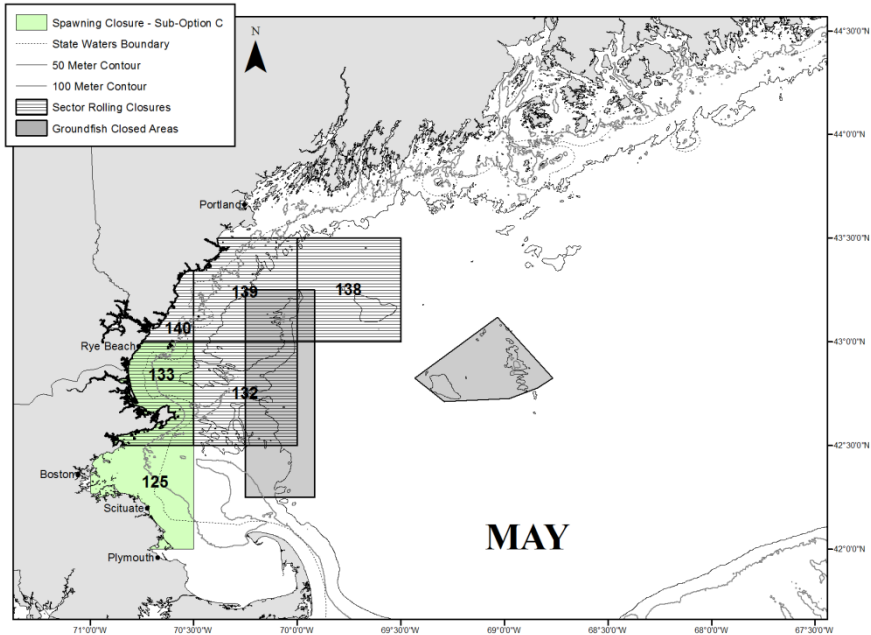
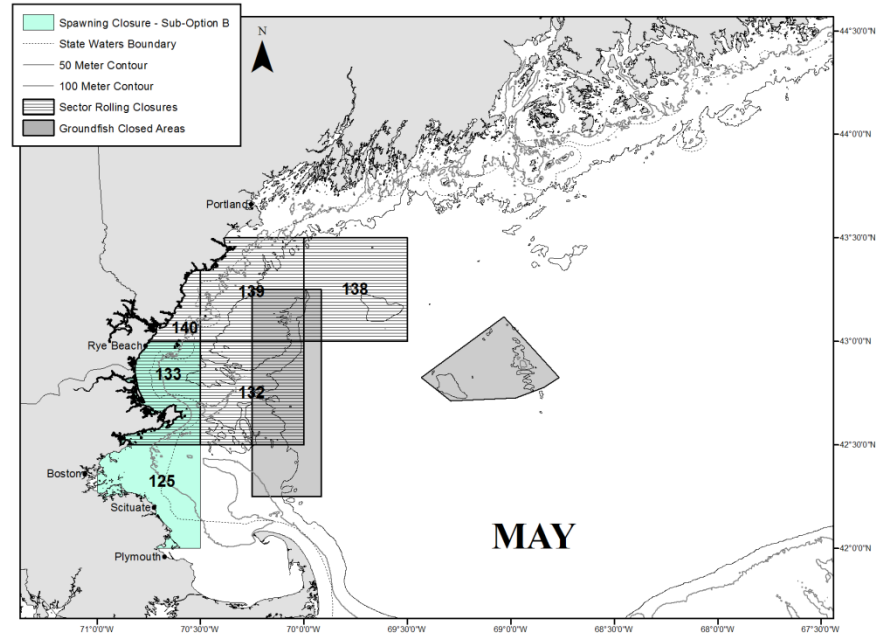
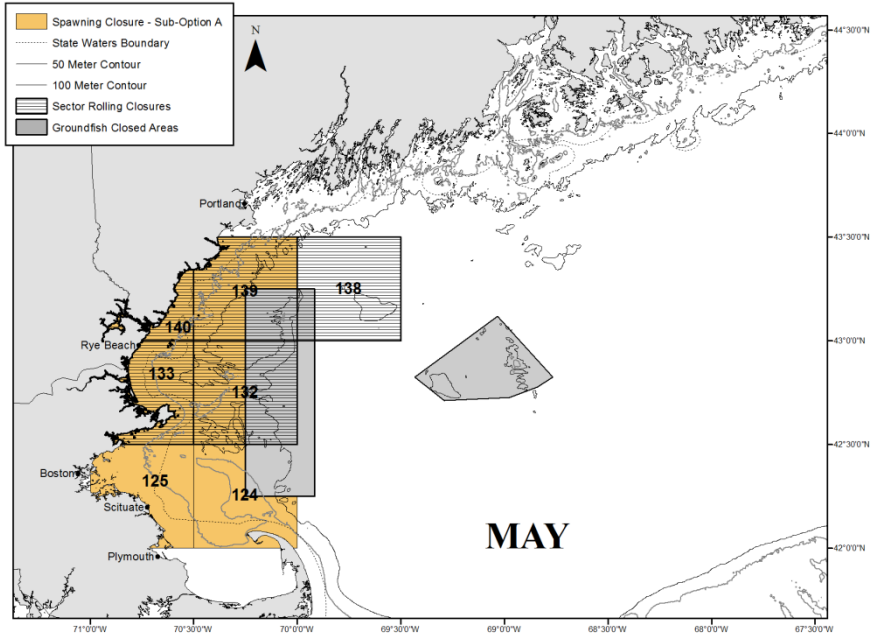


APRIL: Overlaid with Common Pool Rolling Closures

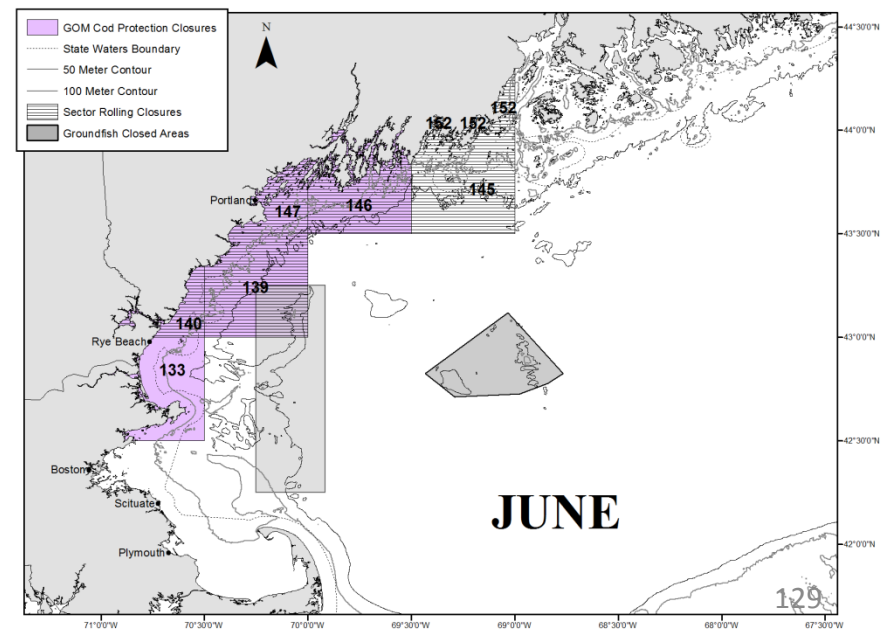
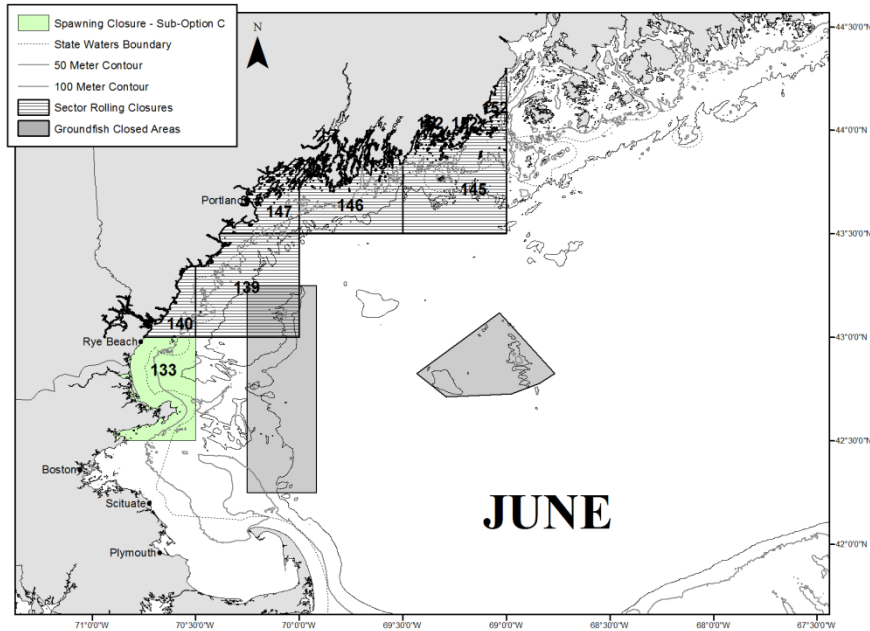
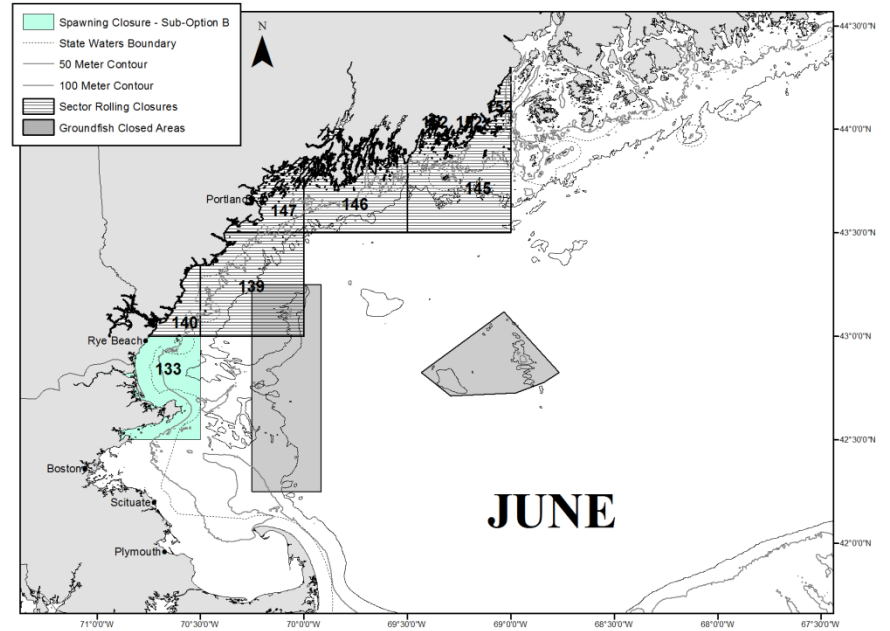
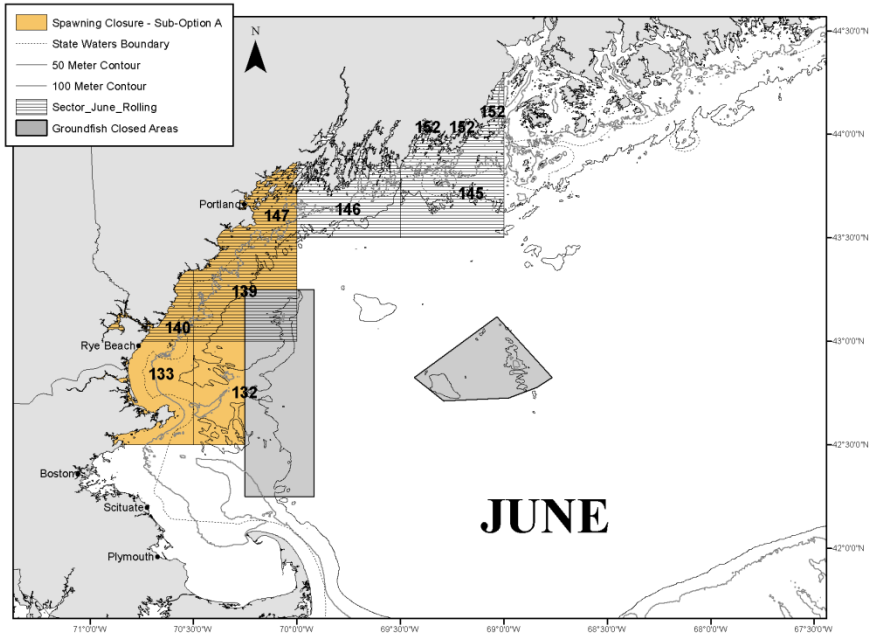


Comparison of GOM Cod Spawning Closures, GOM Cod Protection Closures, and Sector Rolling Closures

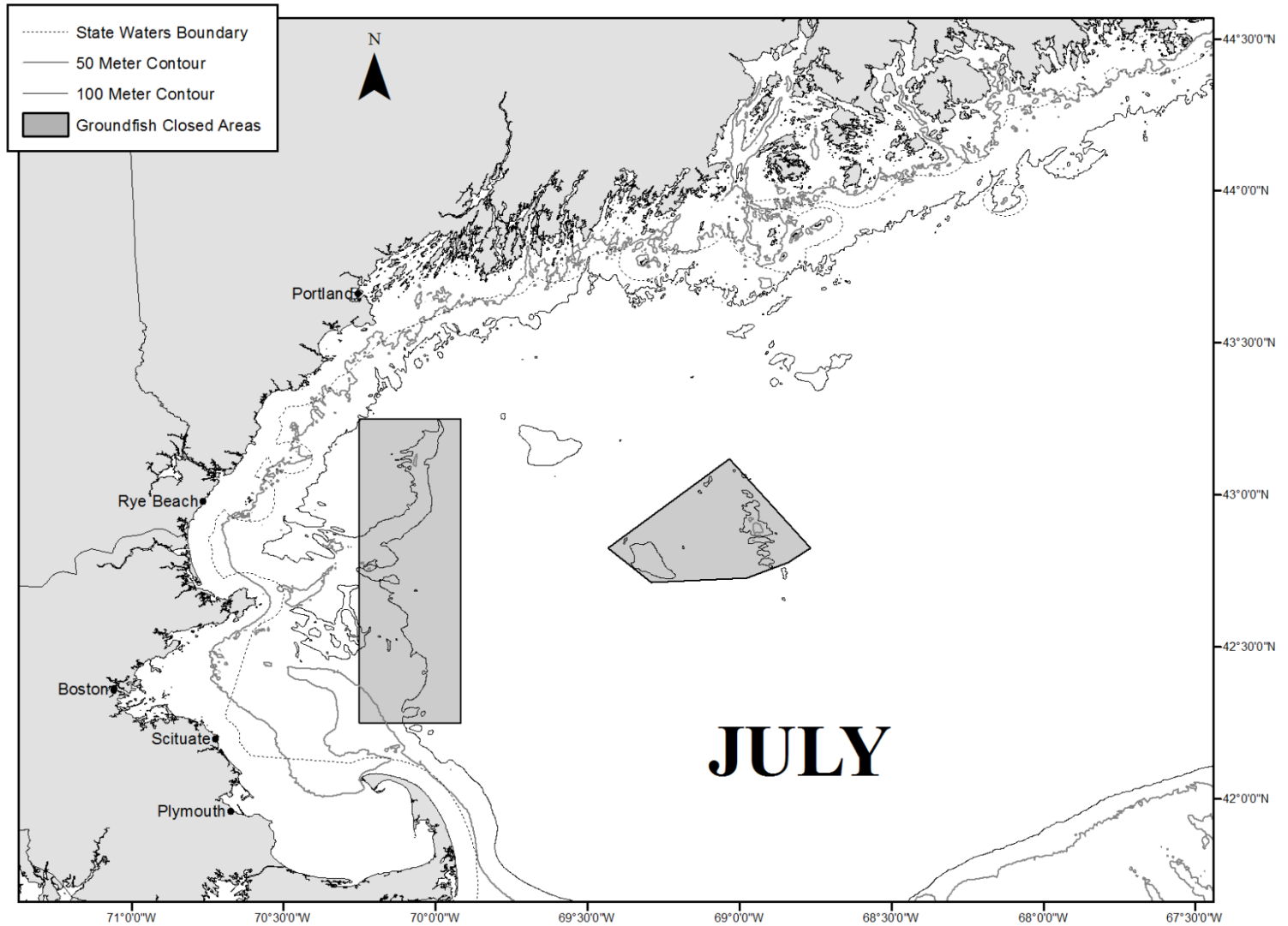
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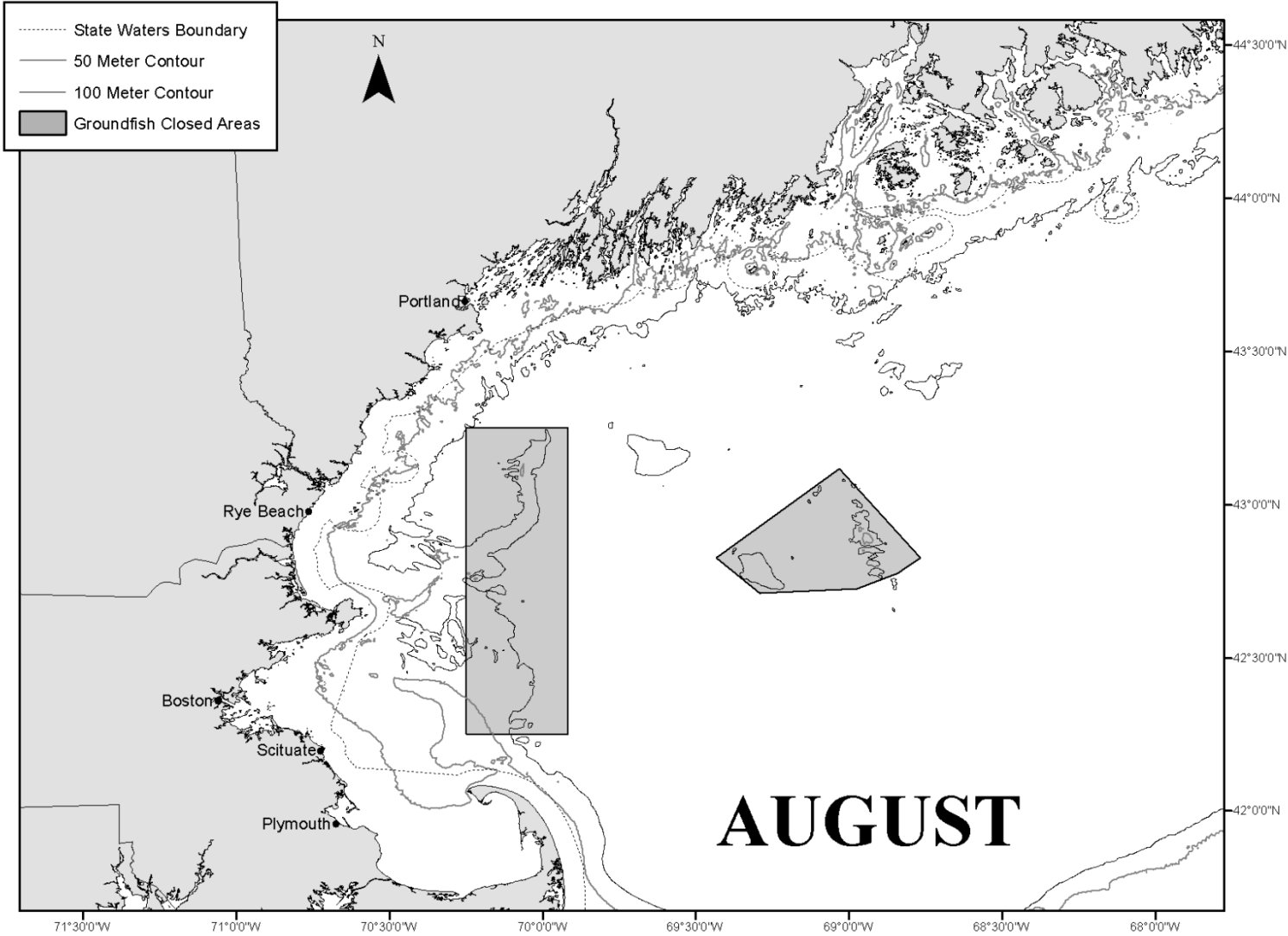
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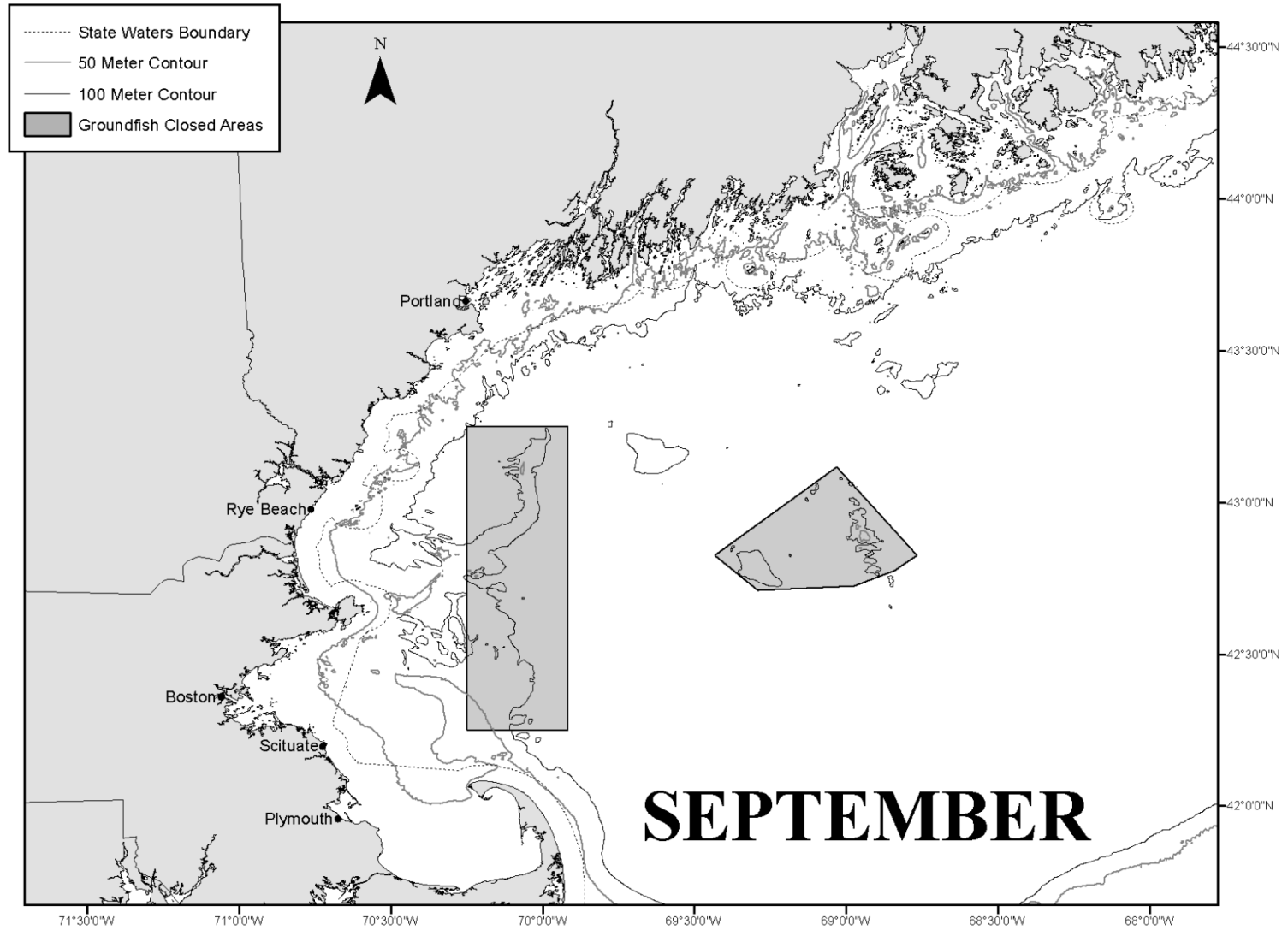
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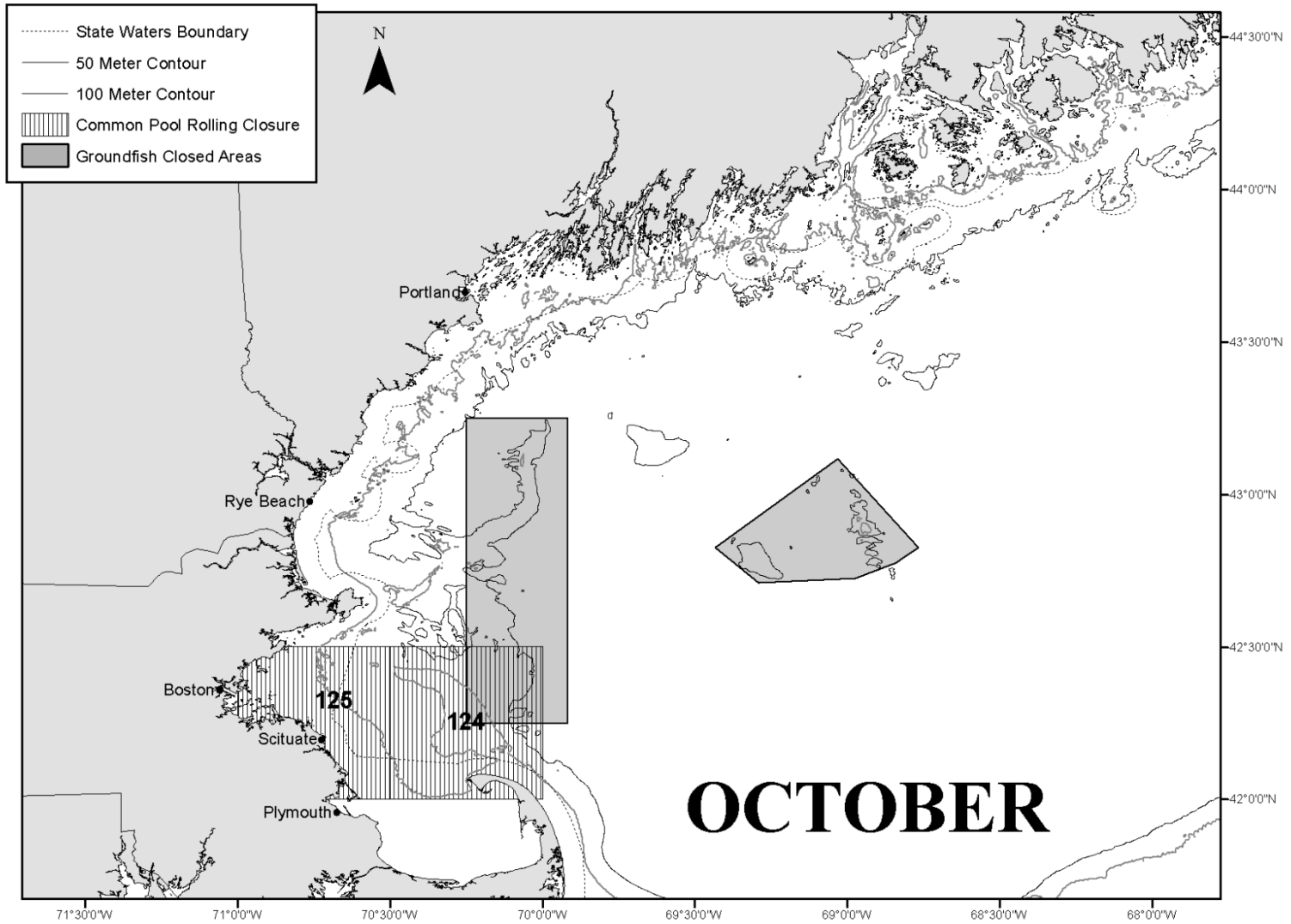
AUGUST



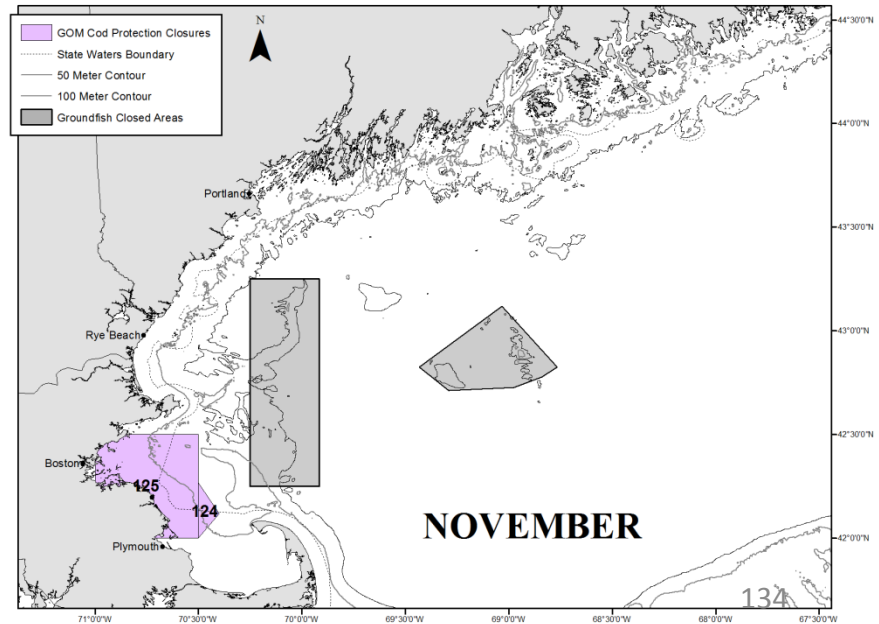
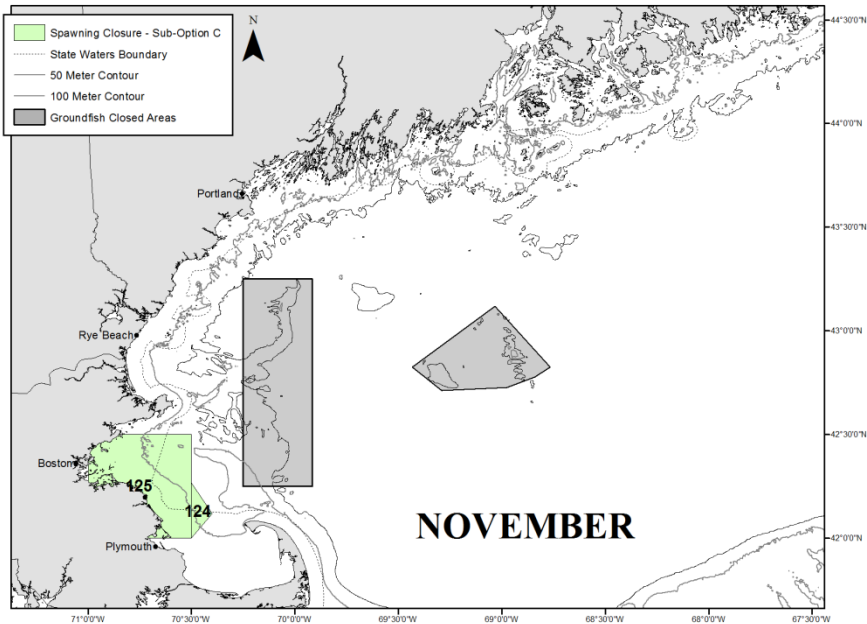
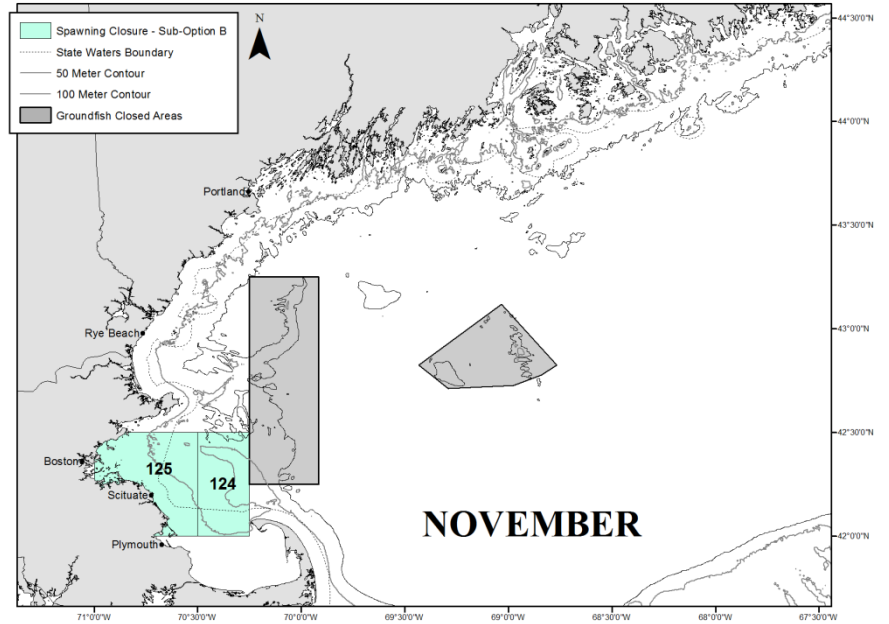
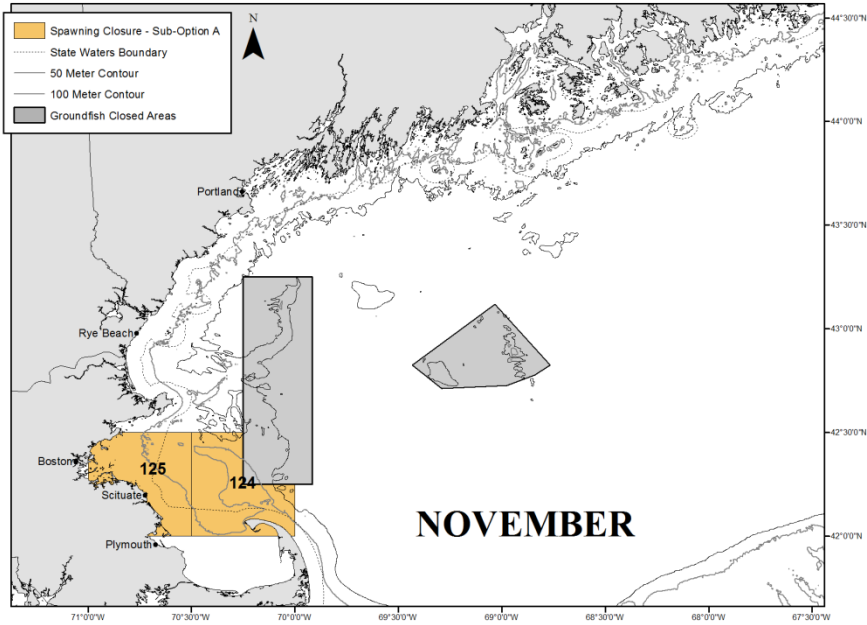
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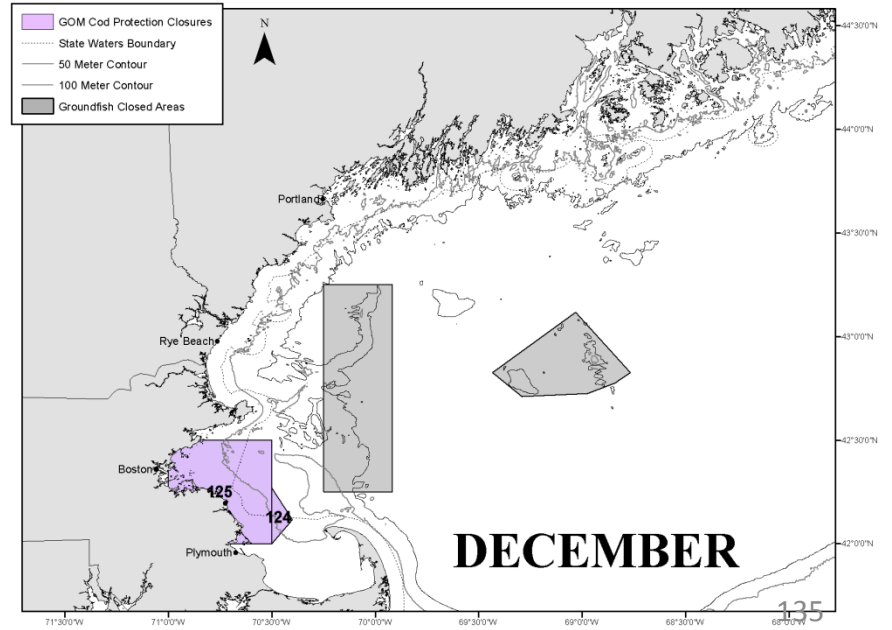
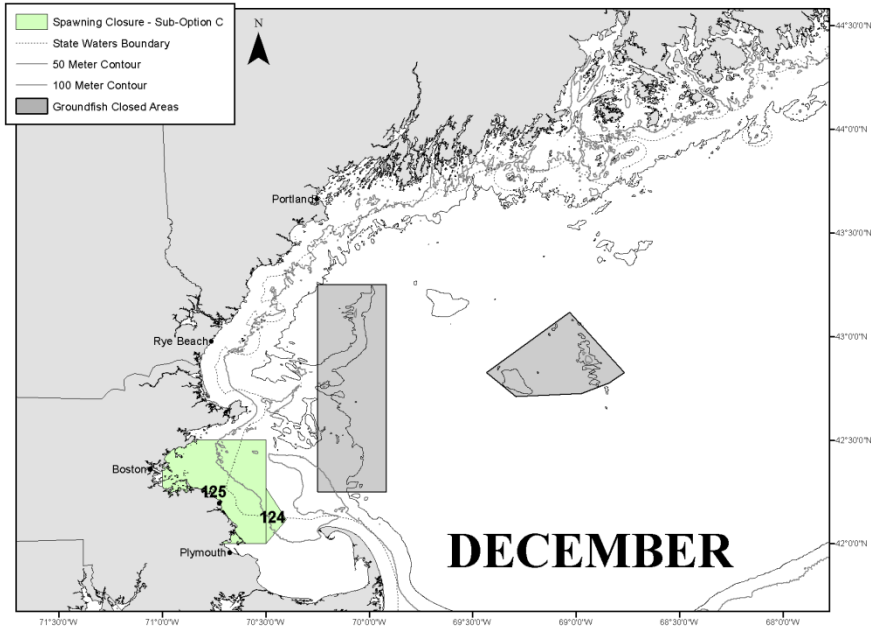
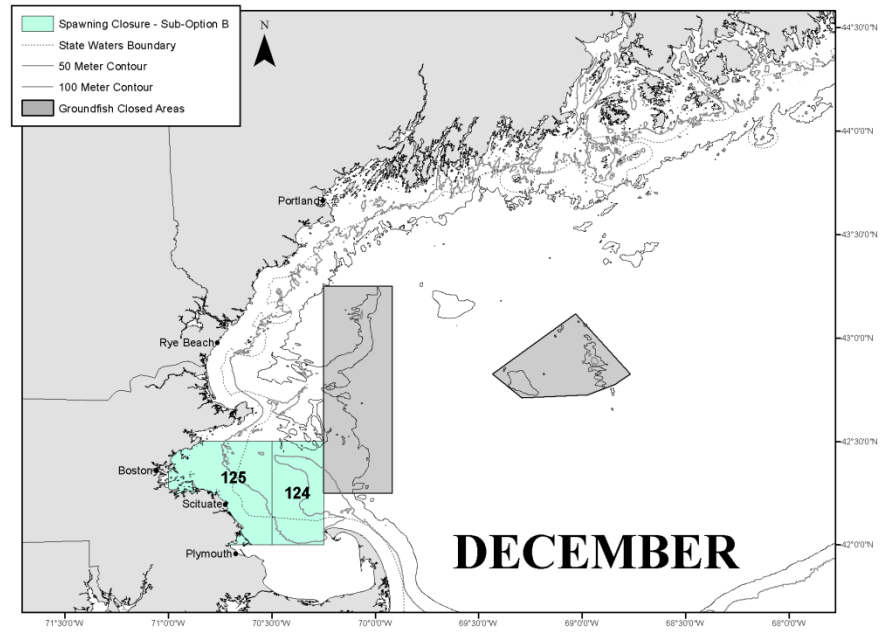
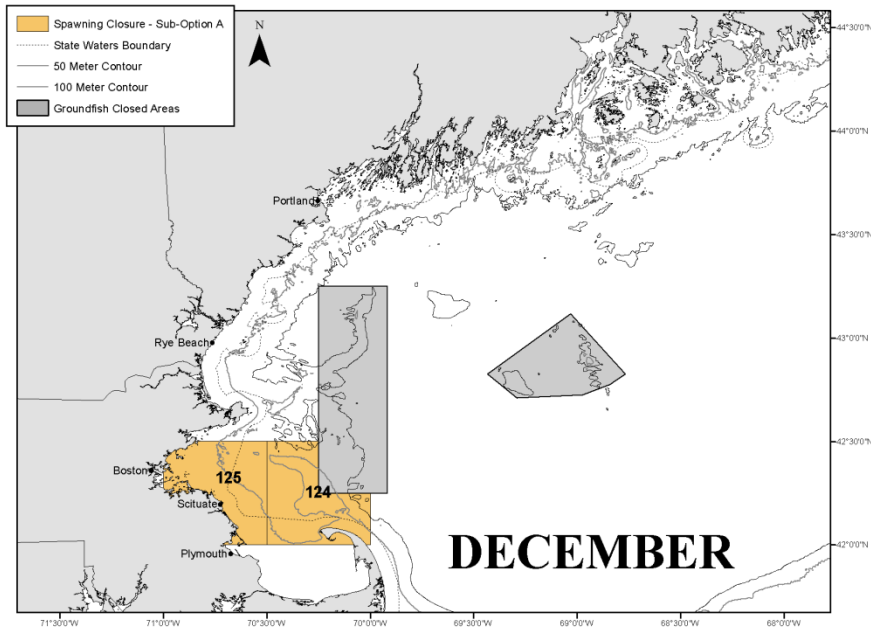
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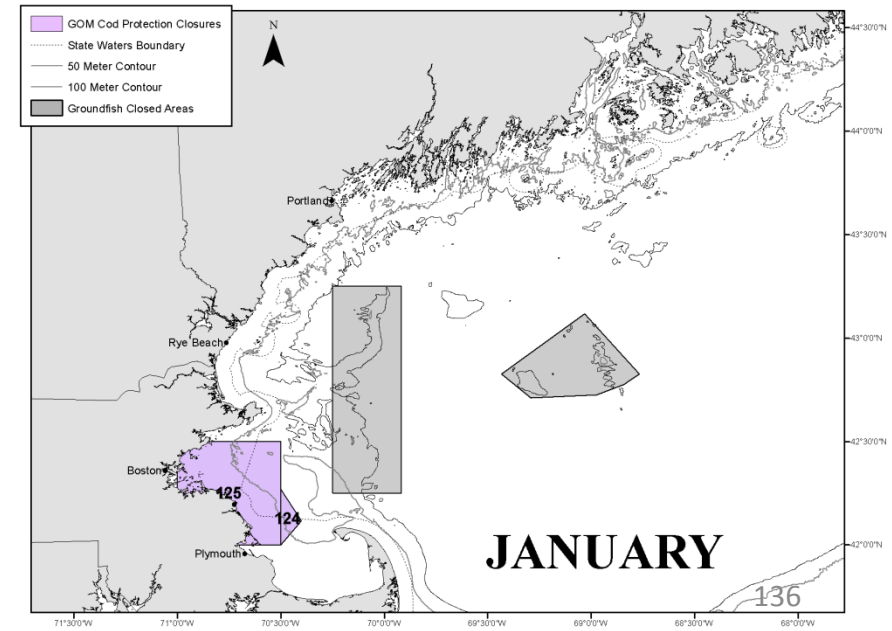
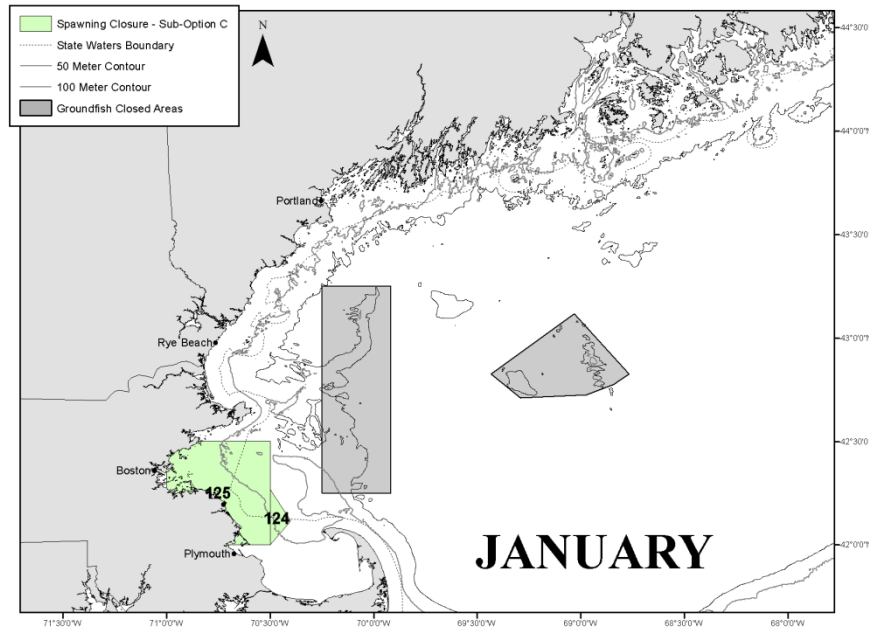
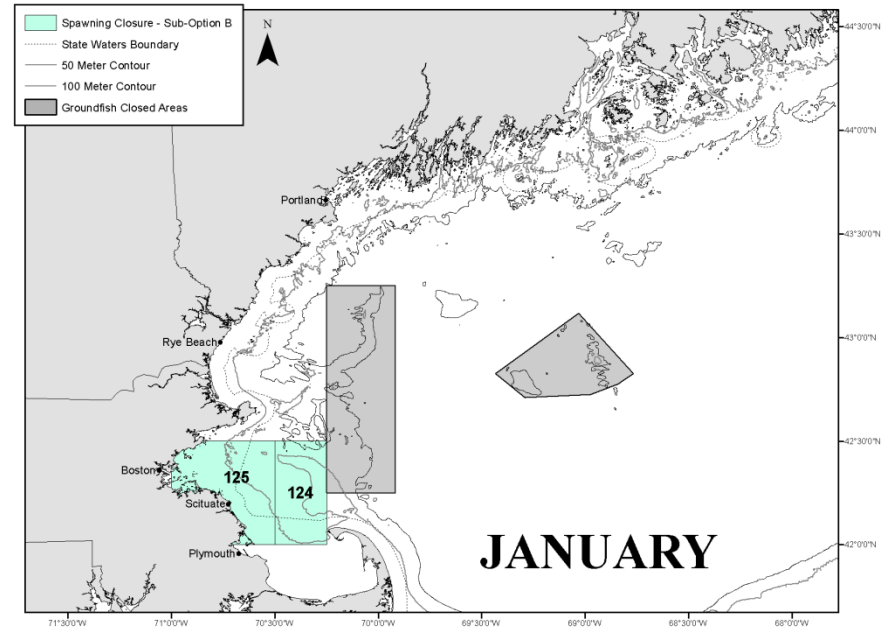
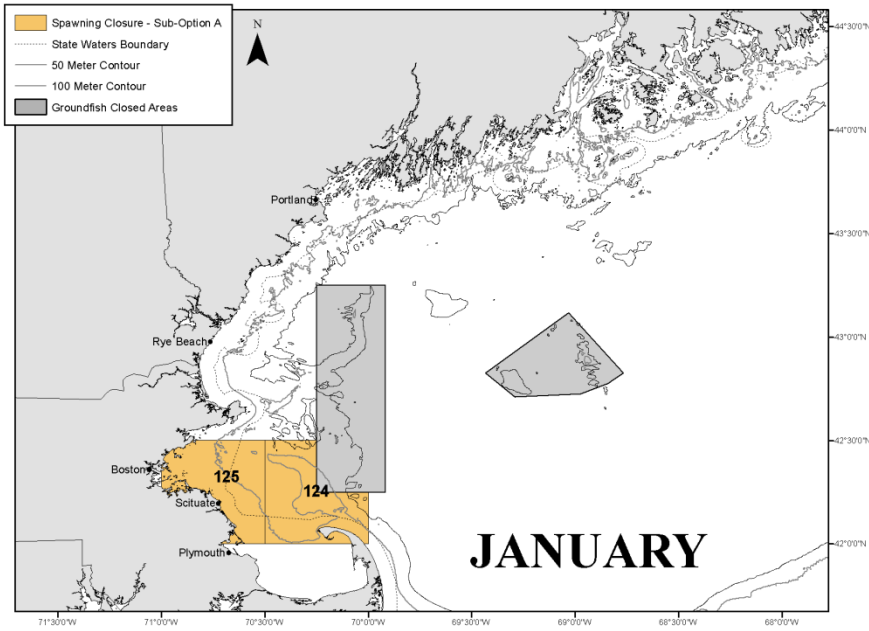
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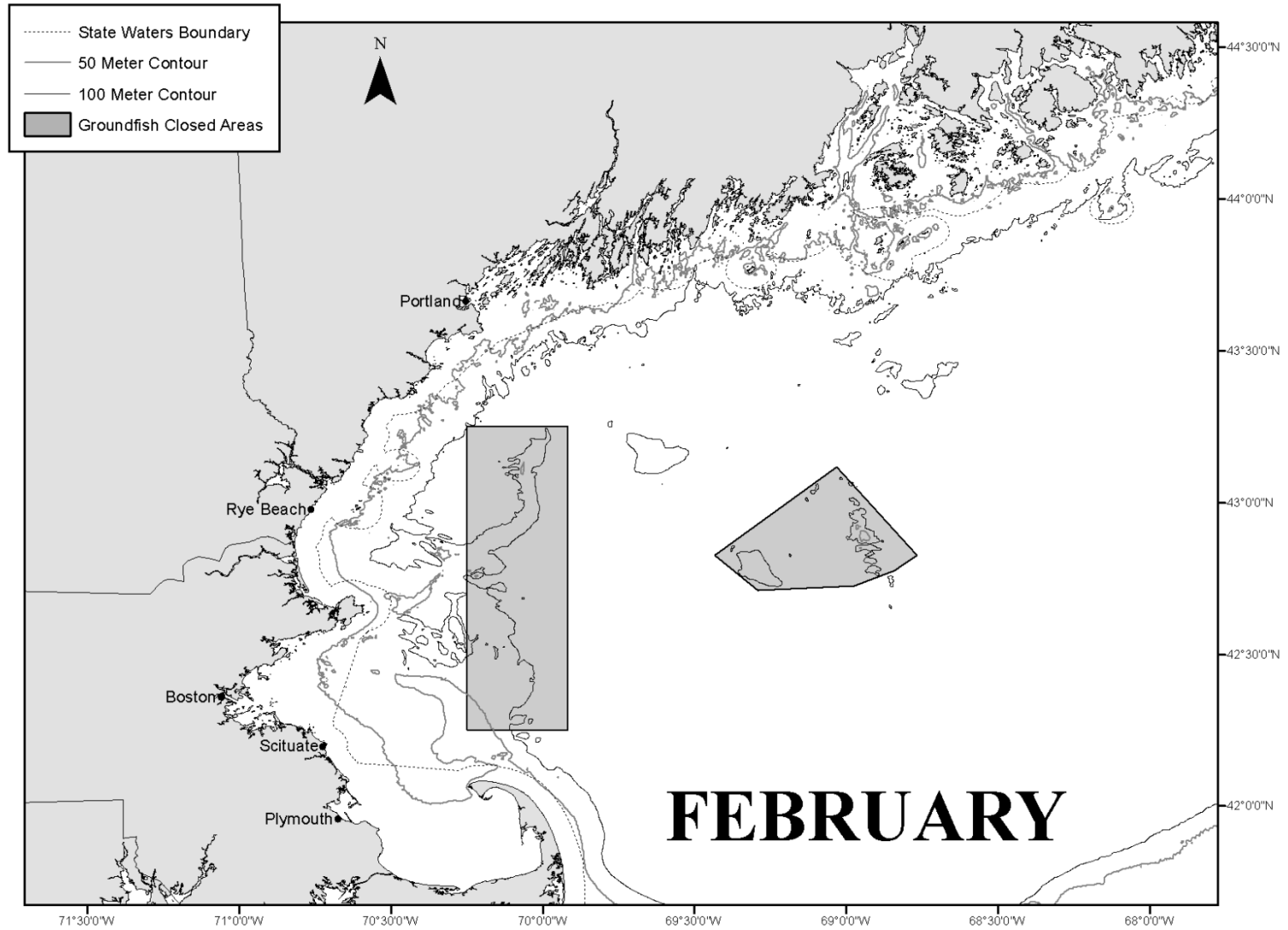
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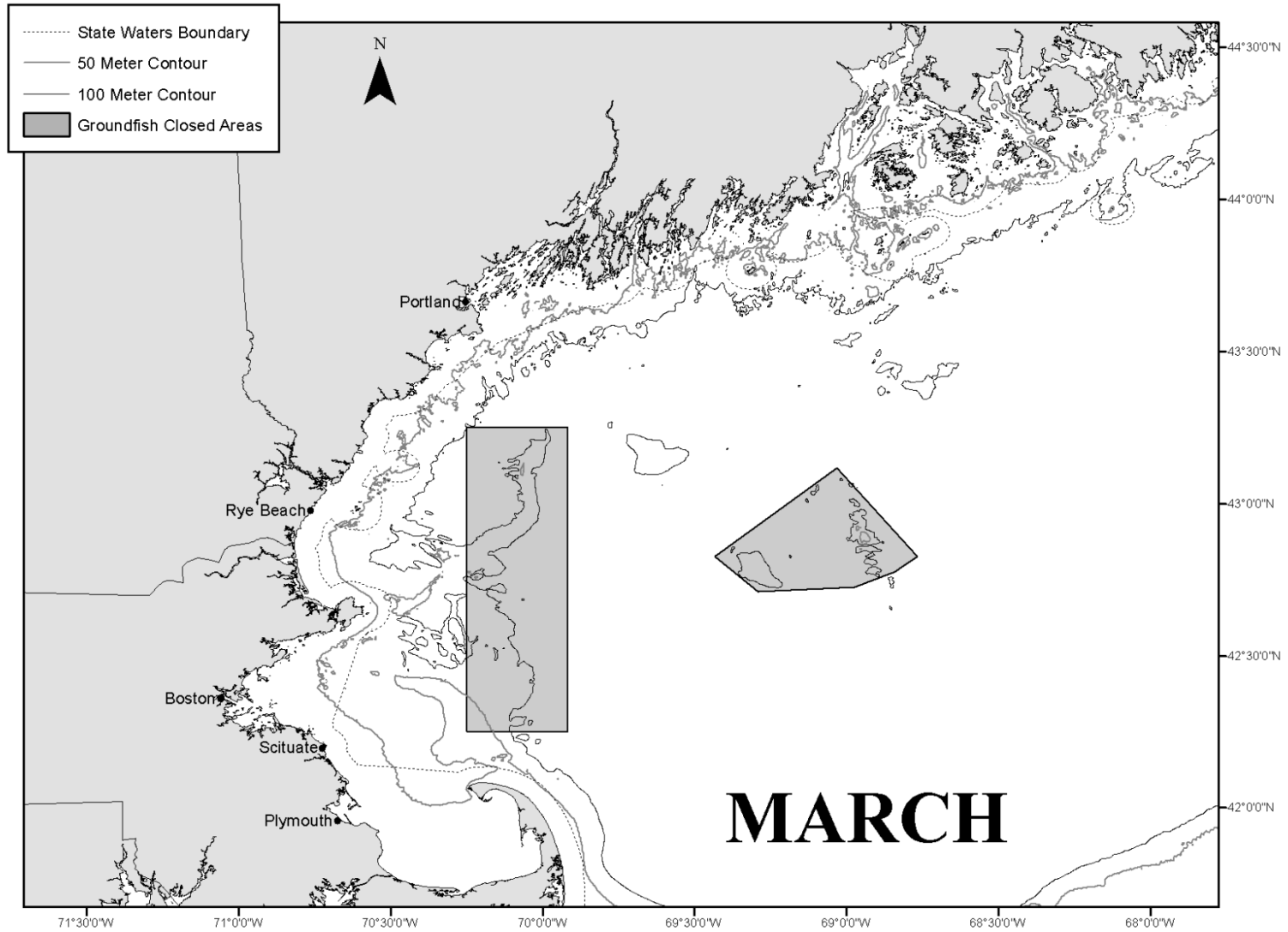
JANUARY



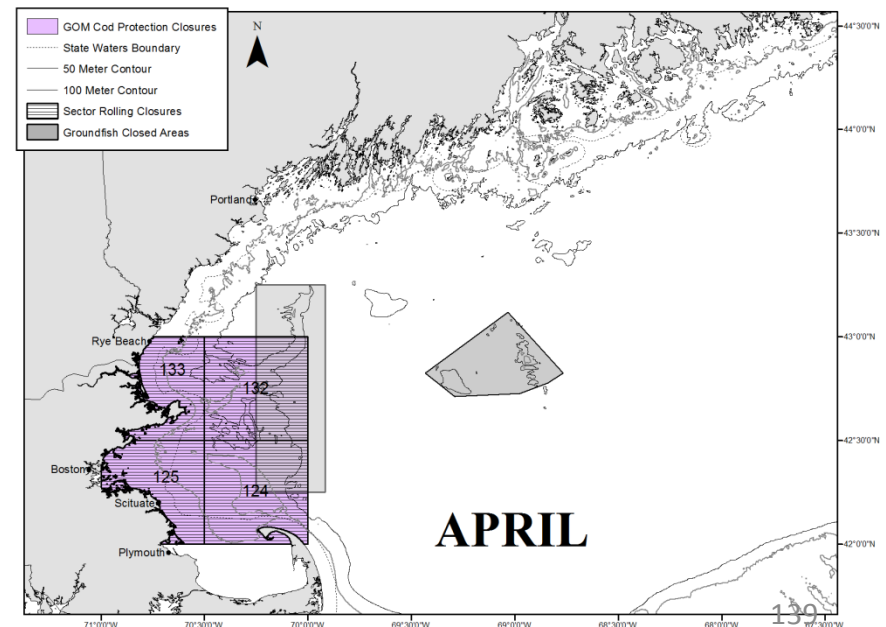
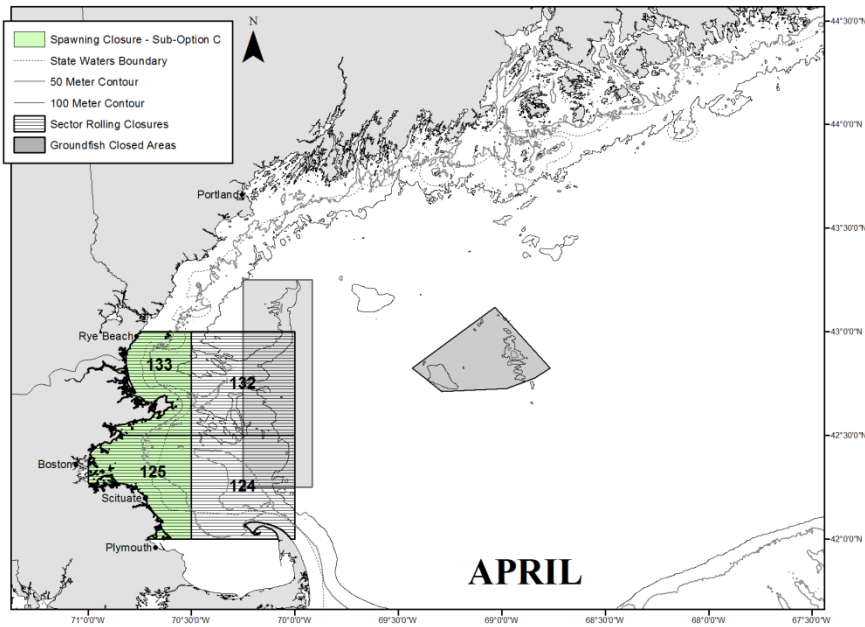
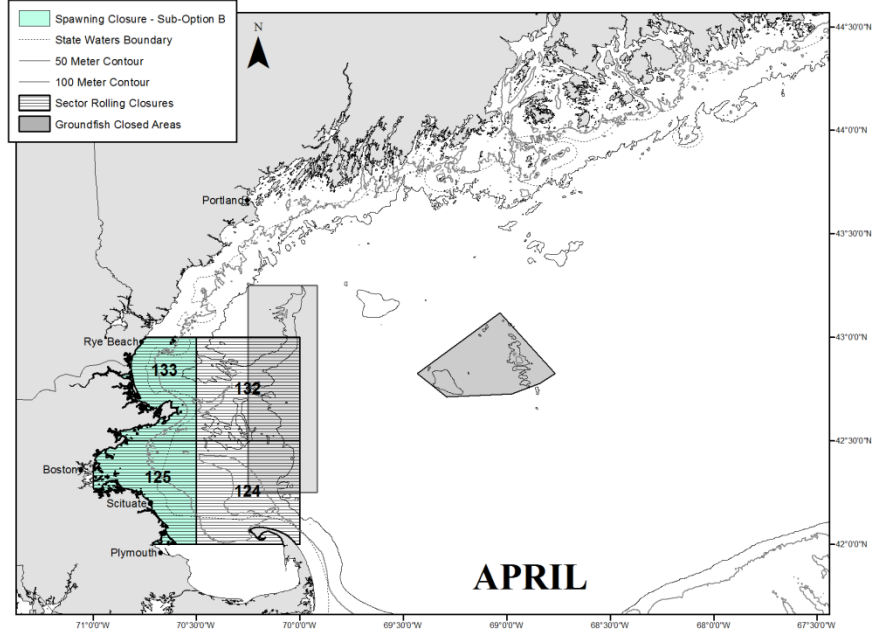
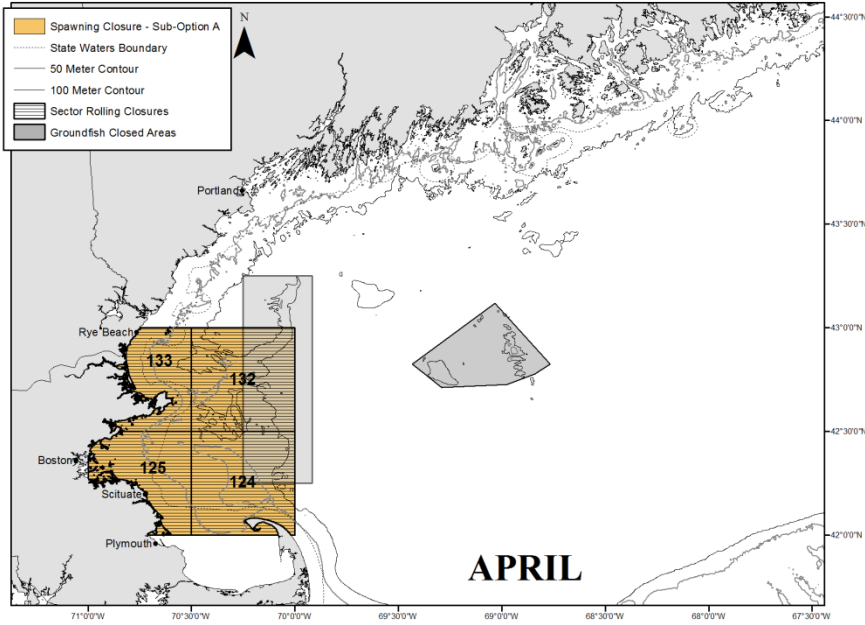
FEBRUARY



MARCH

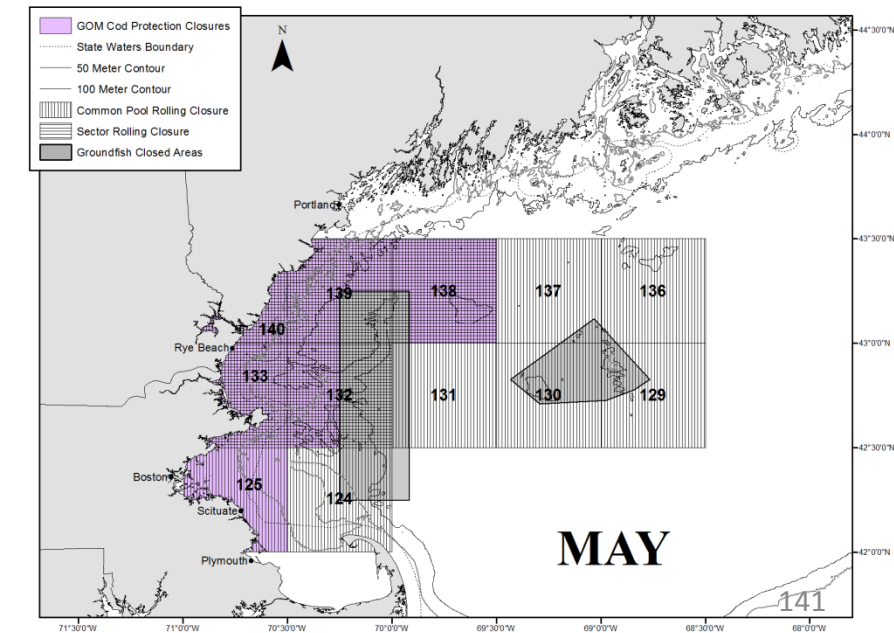
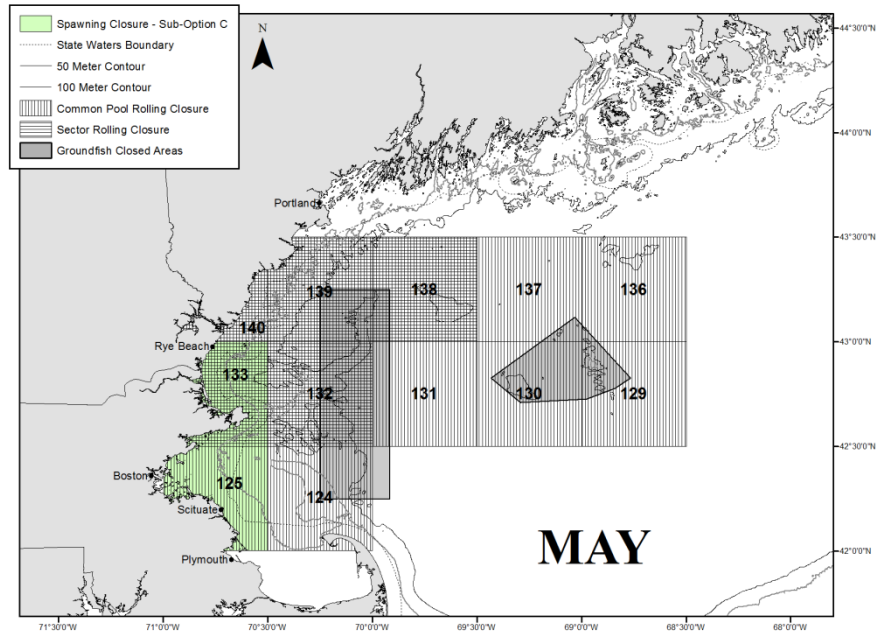
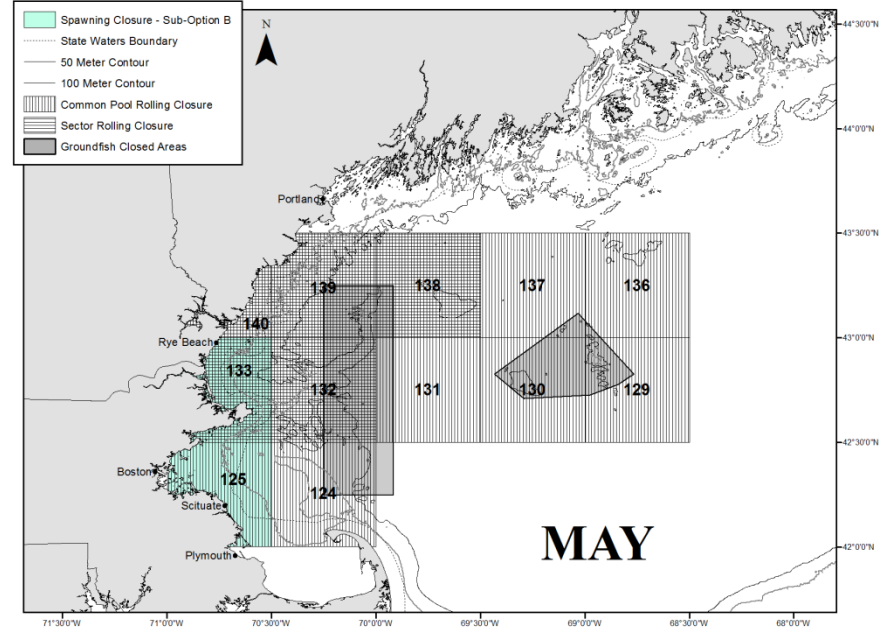
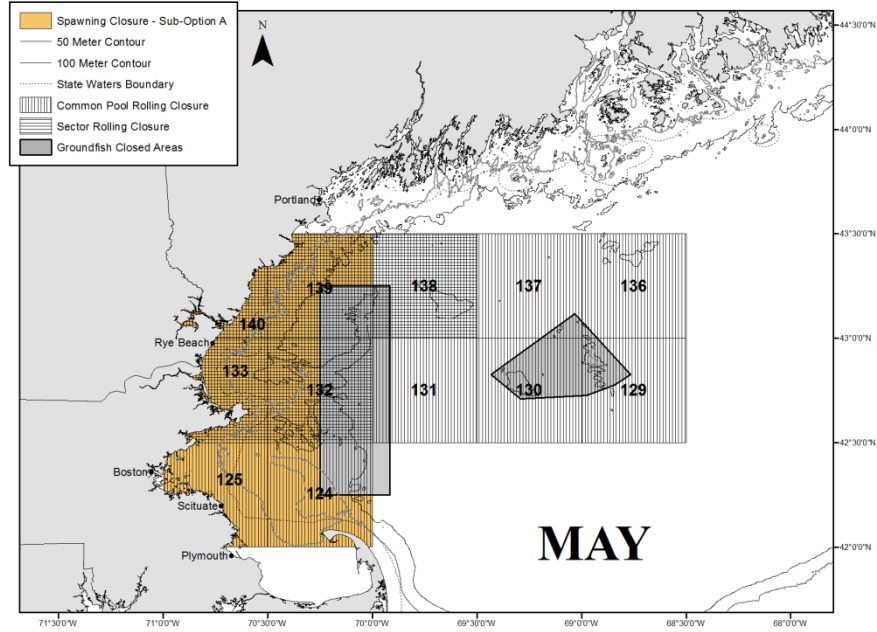


APRIL

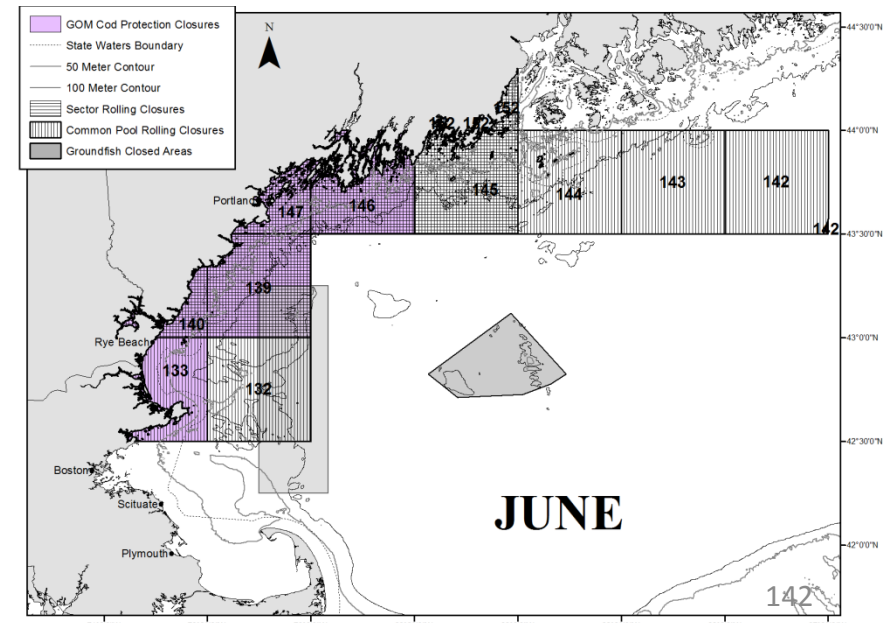
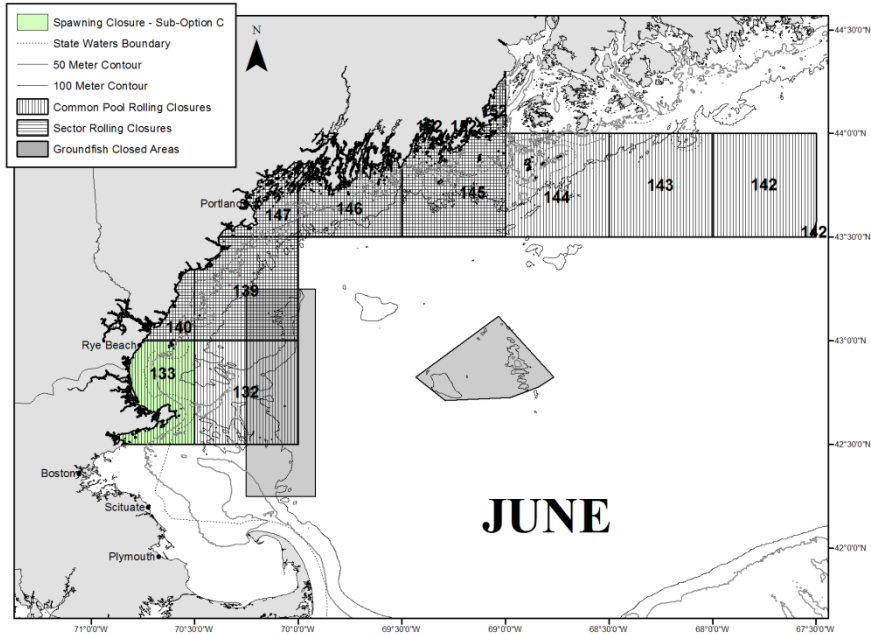
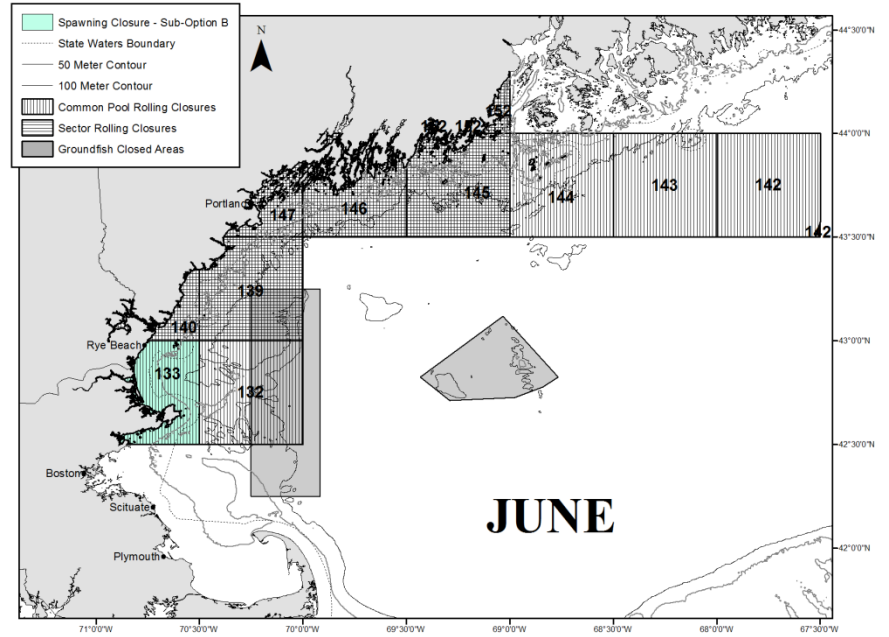
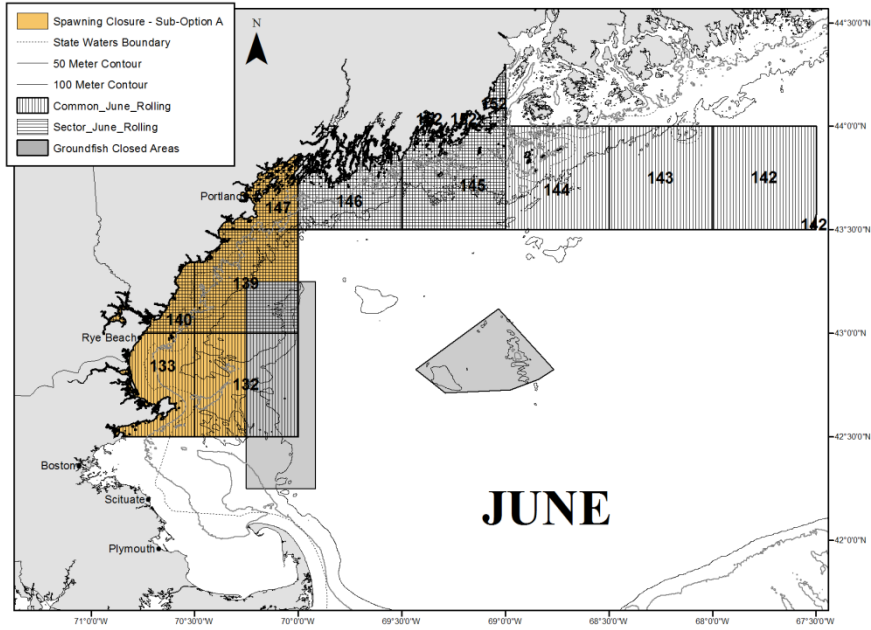


Comparison of GOM Cod Spawning Closures, GOM Cod Protection Closures, and All Existing Rolling Closures (Sector and Common Pool)

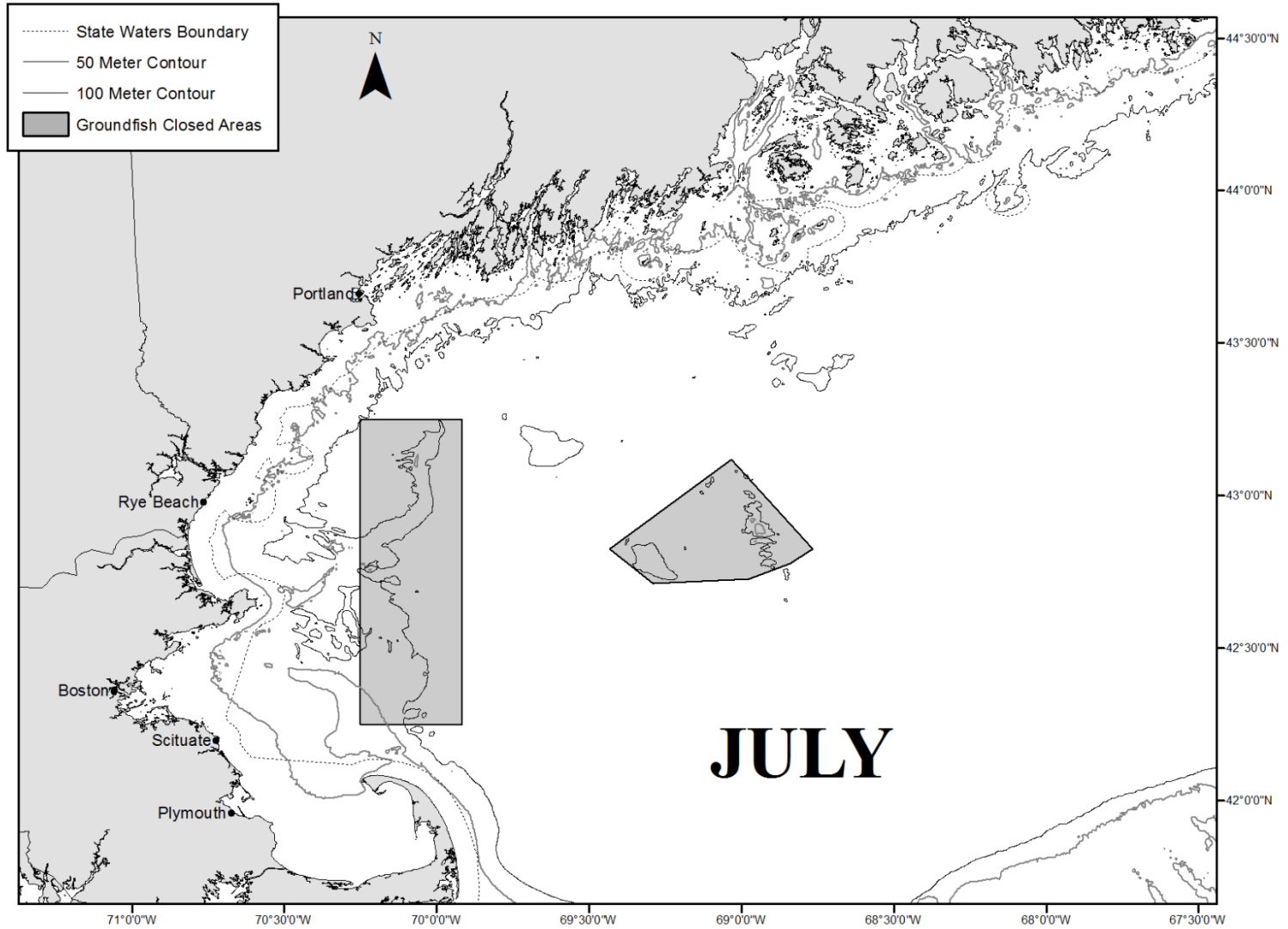
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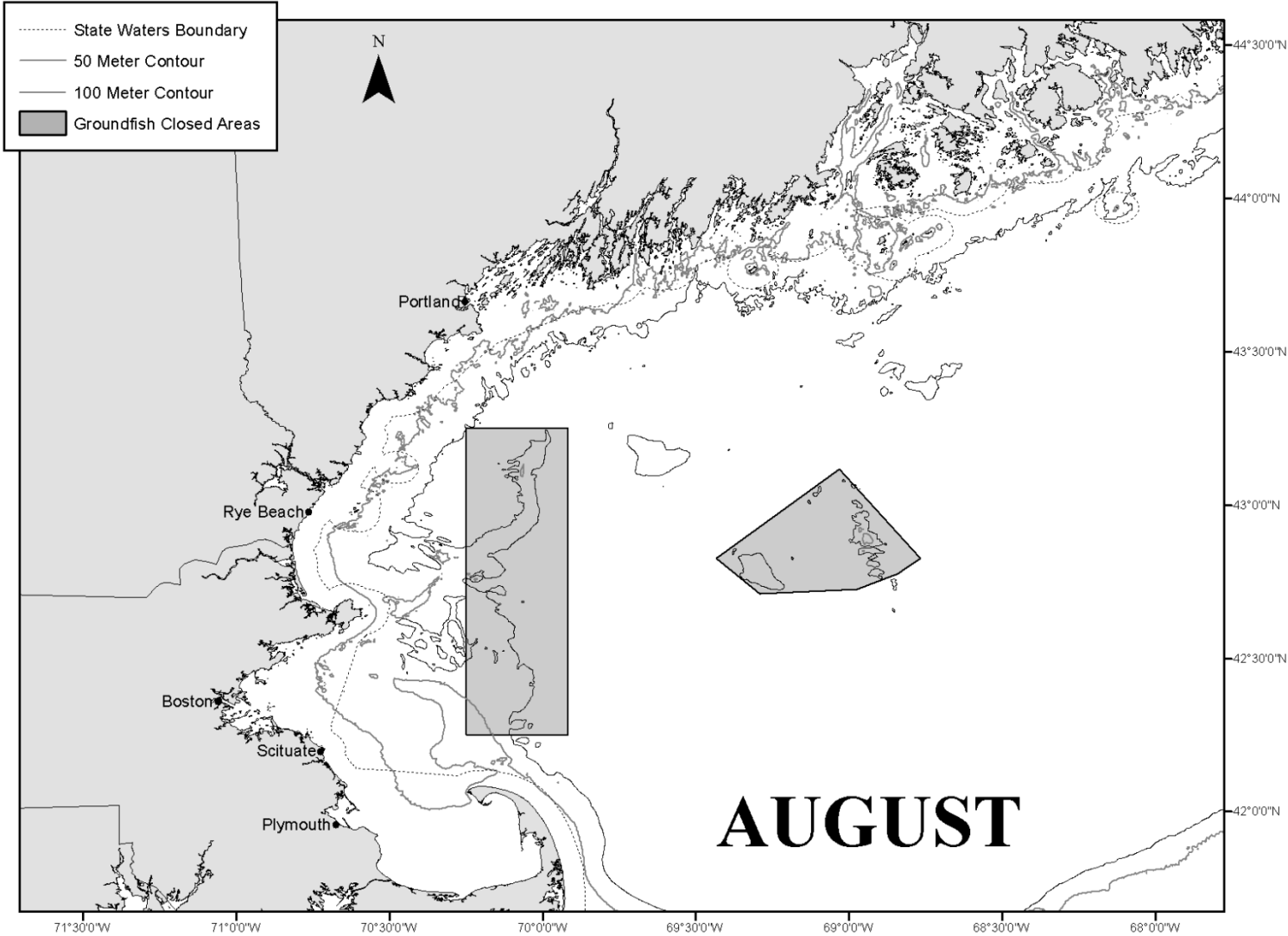
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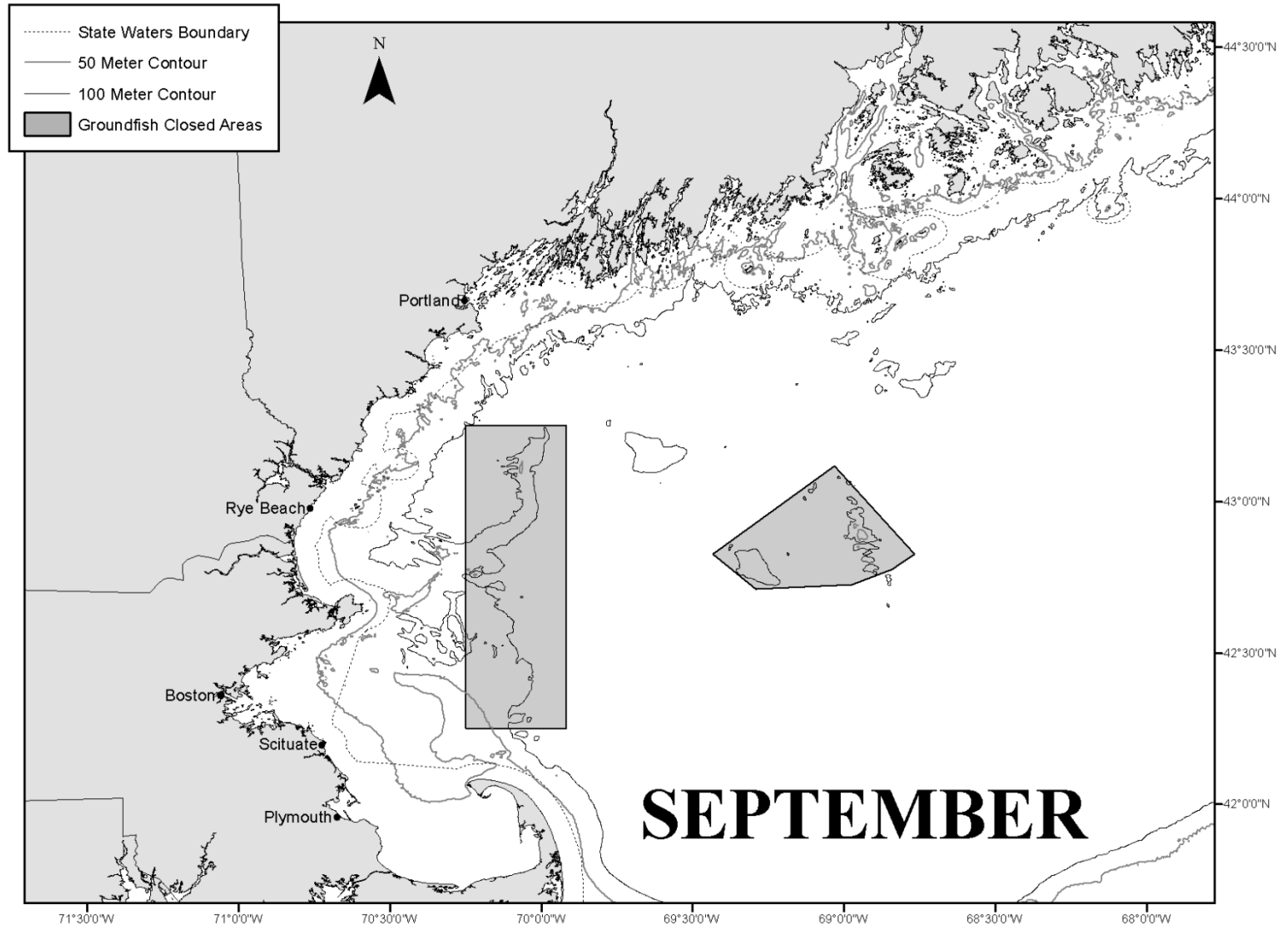
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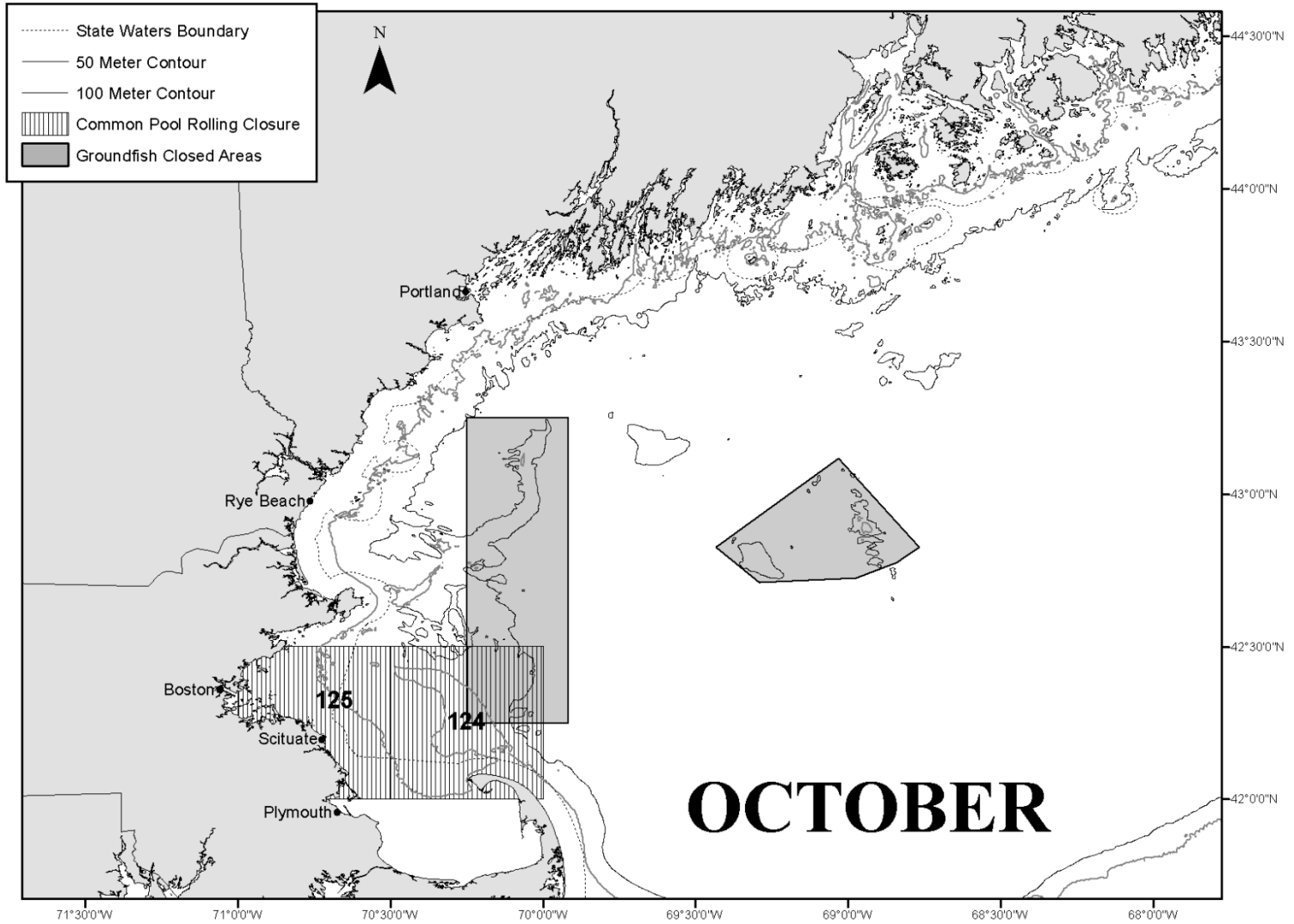
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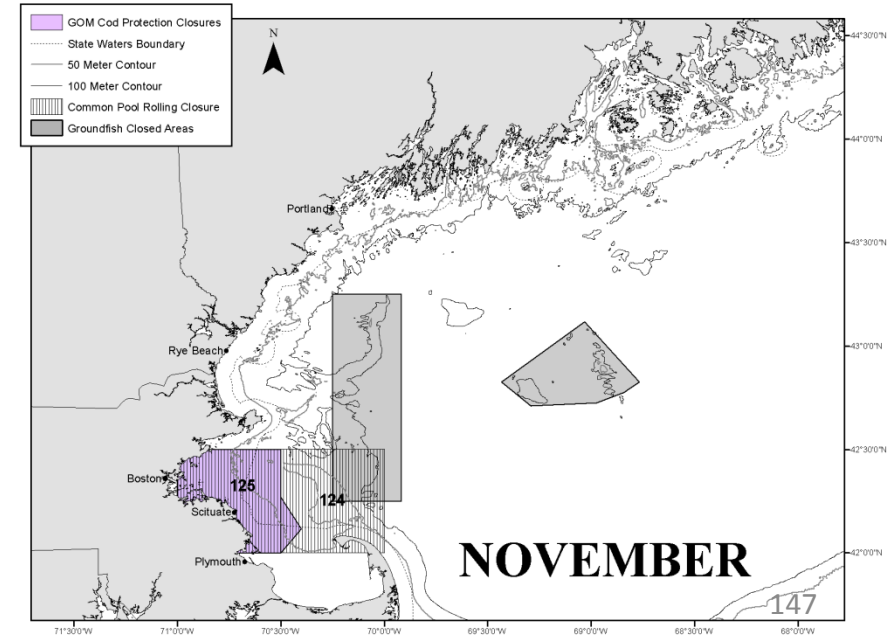
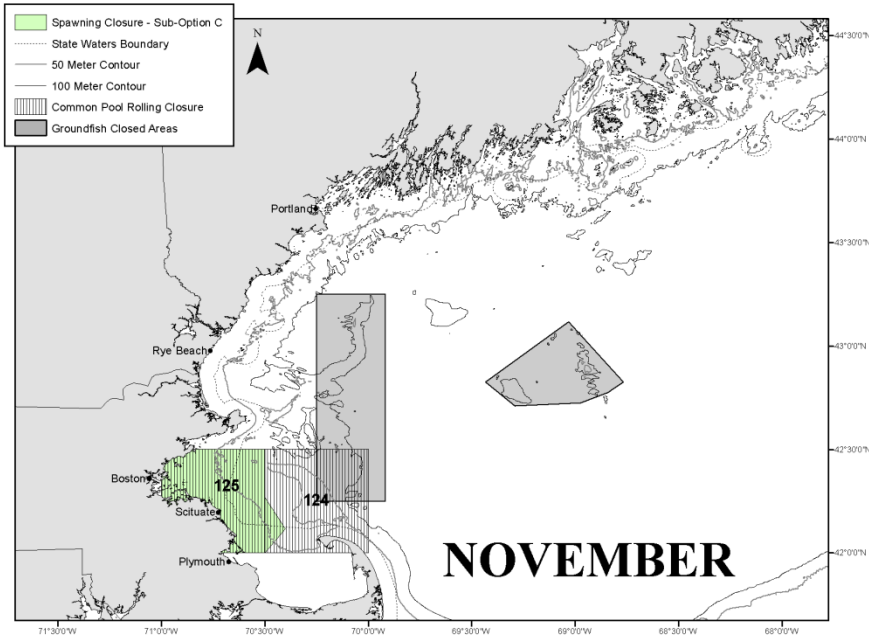
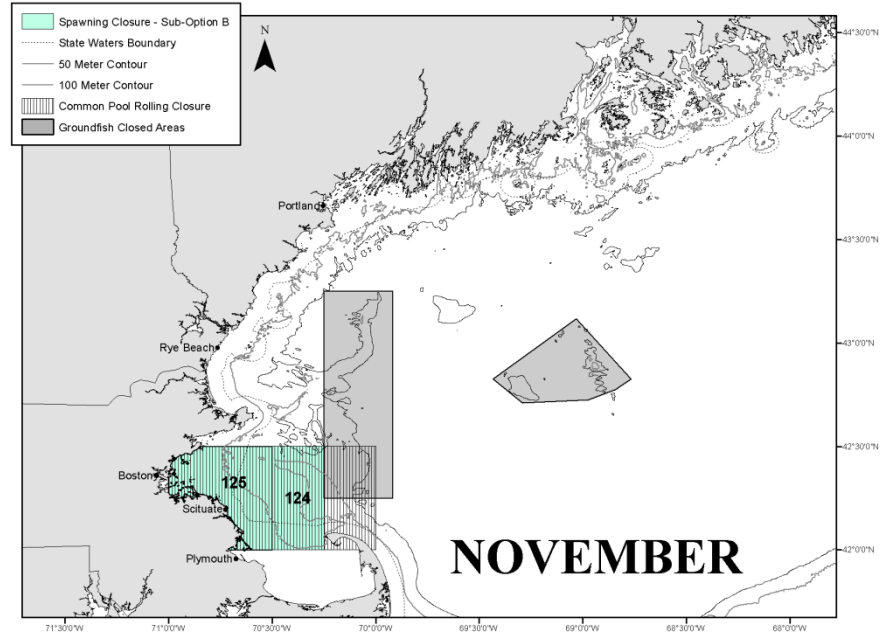
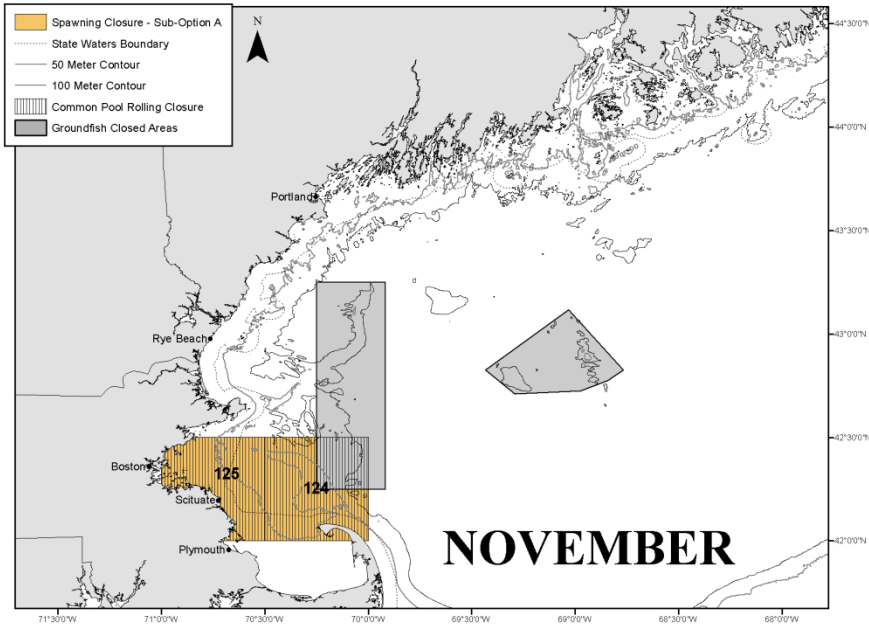
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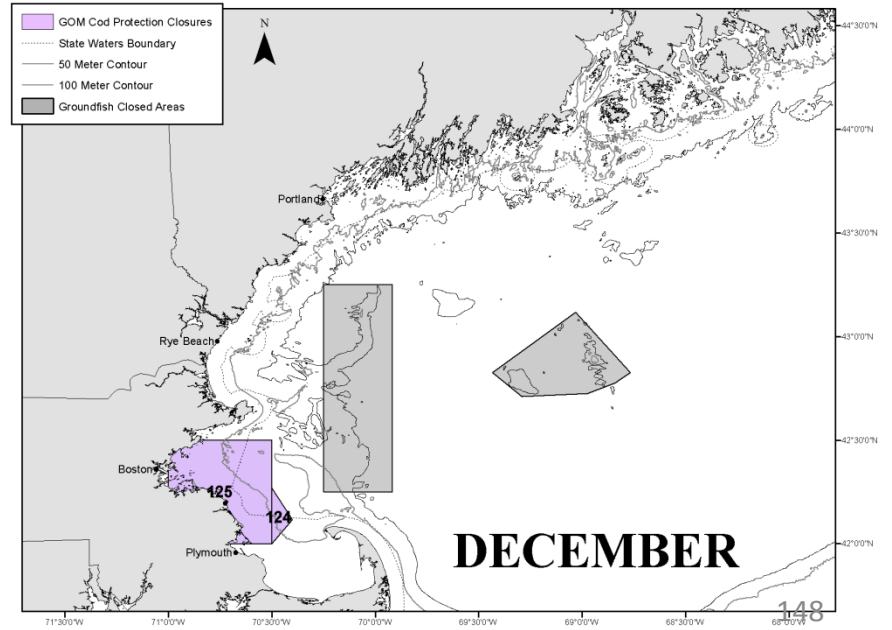
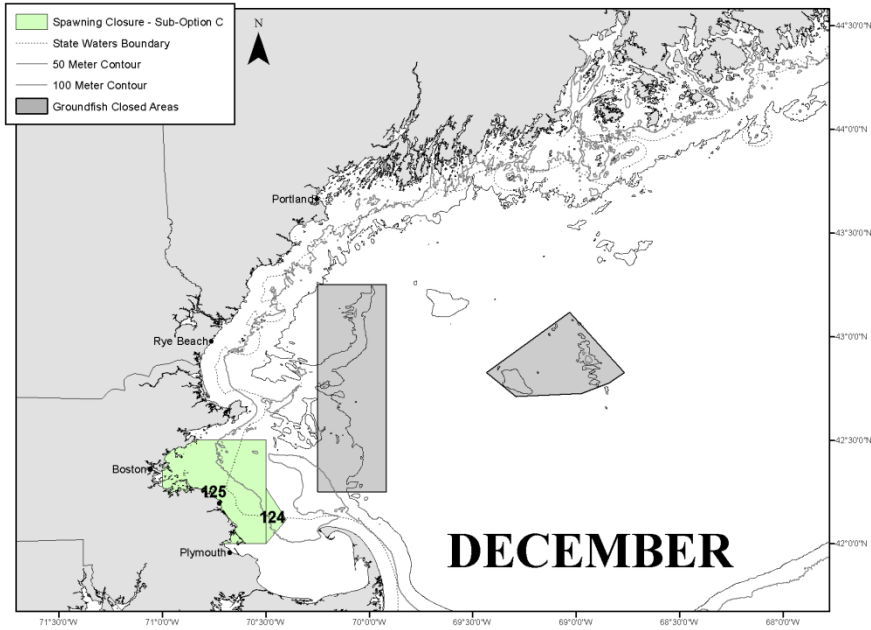
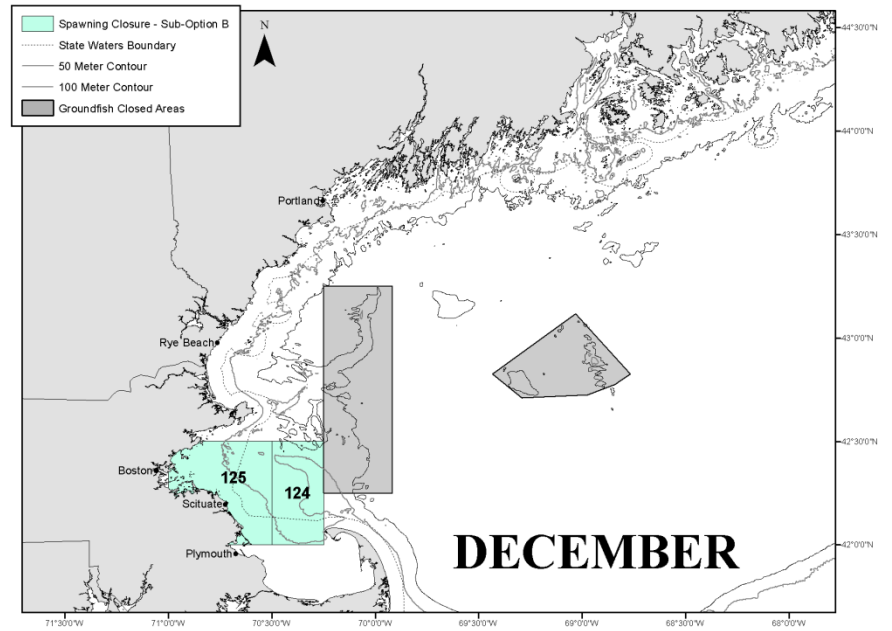
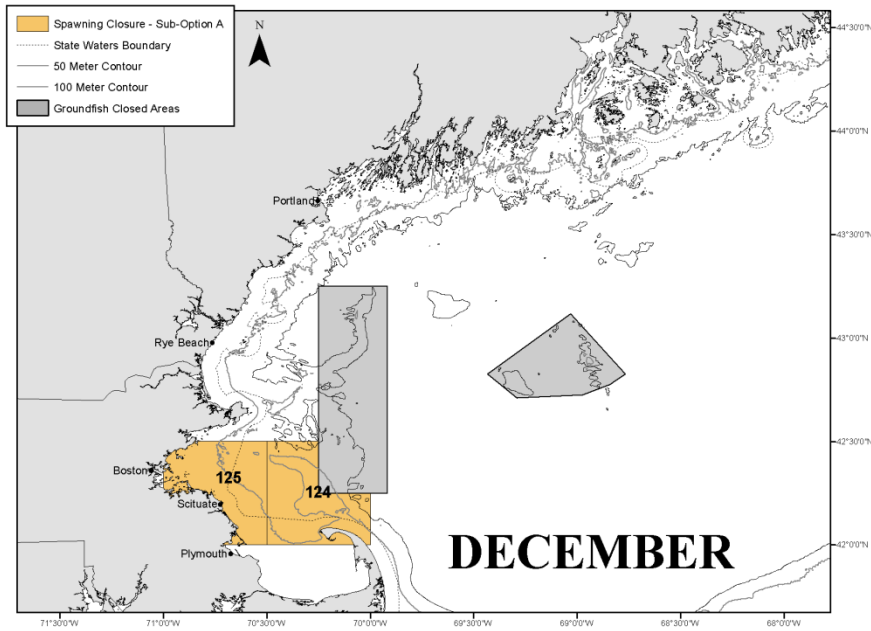
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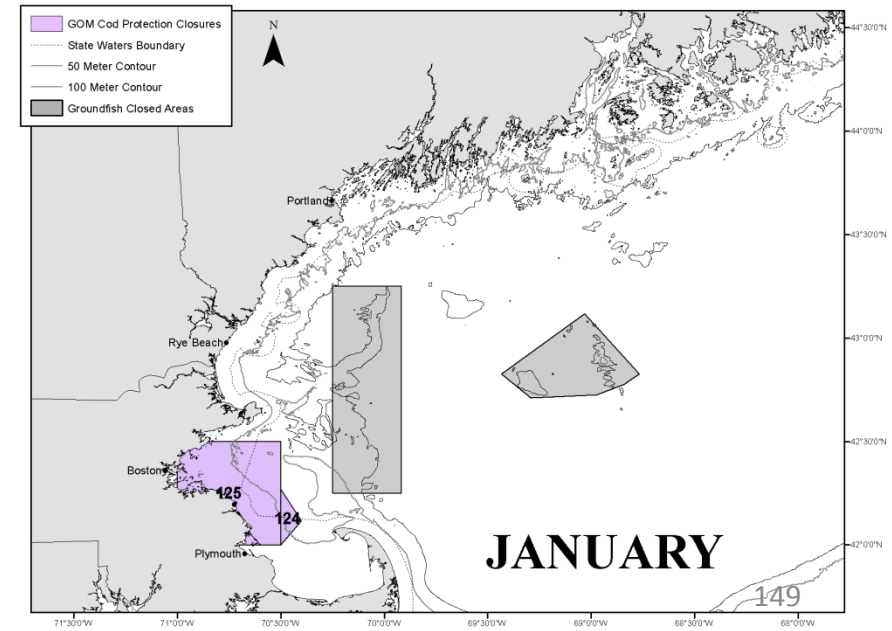
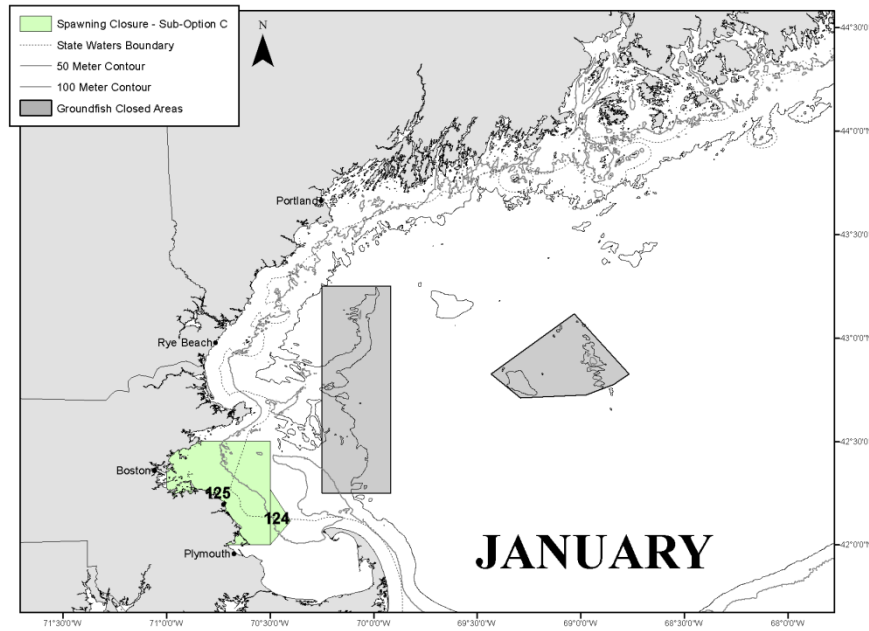
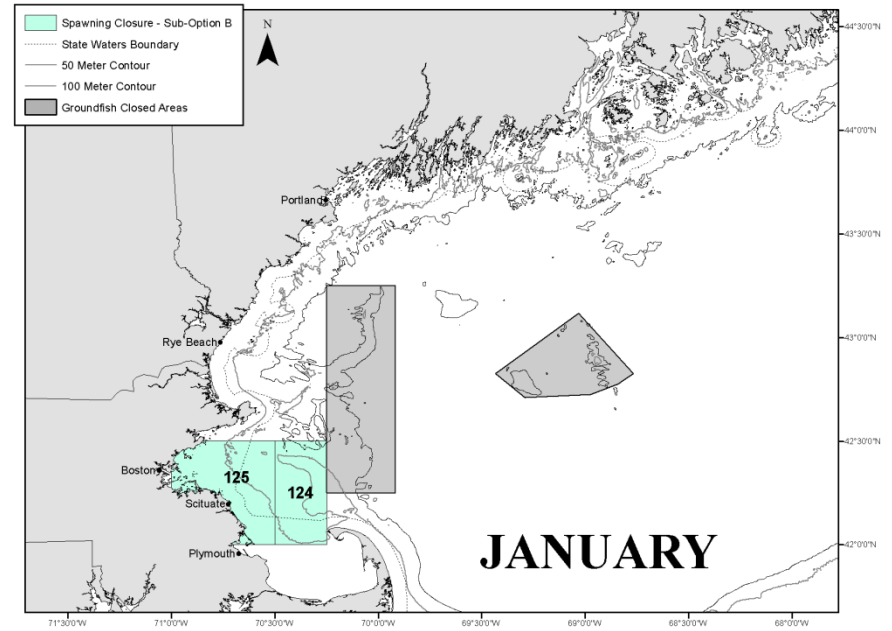
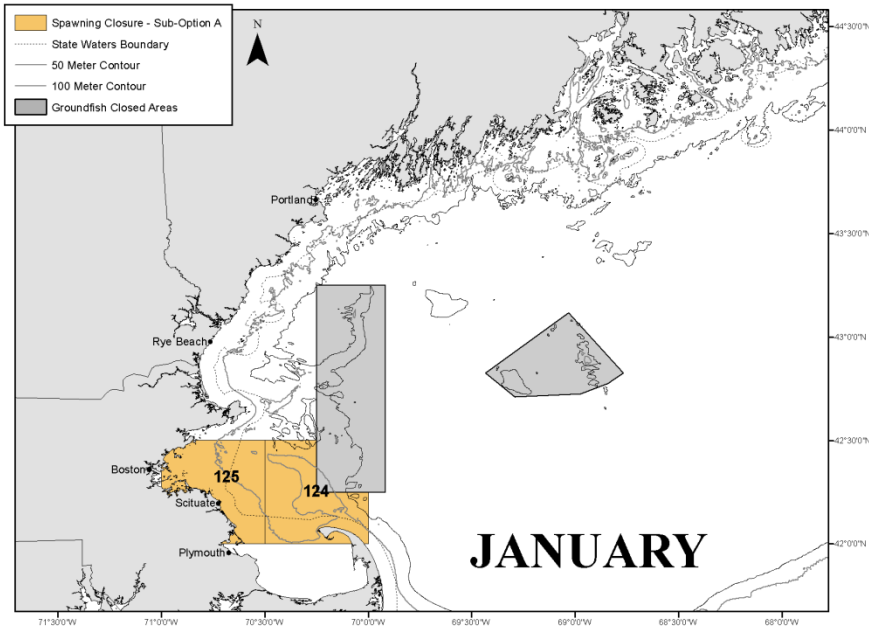
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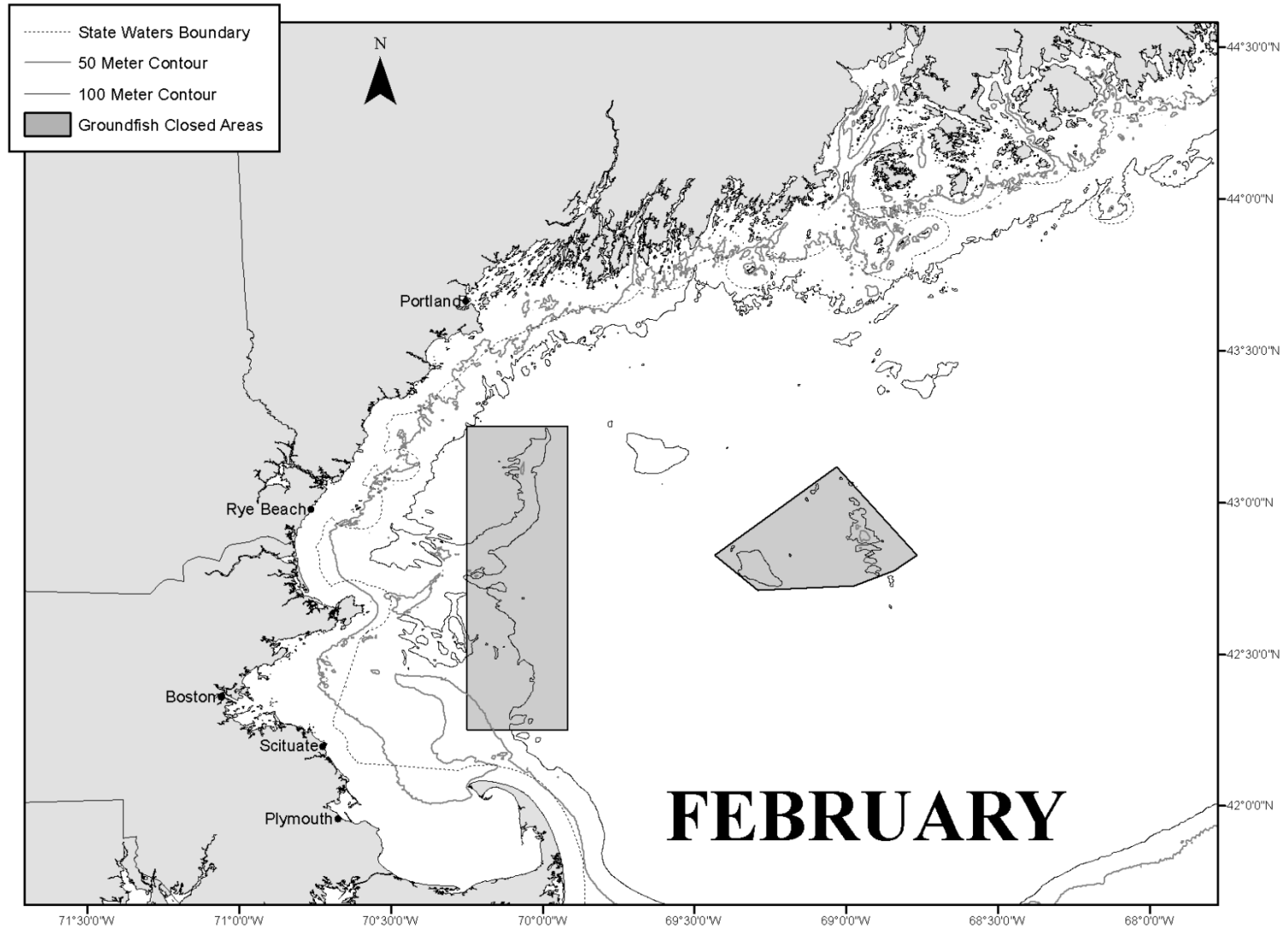
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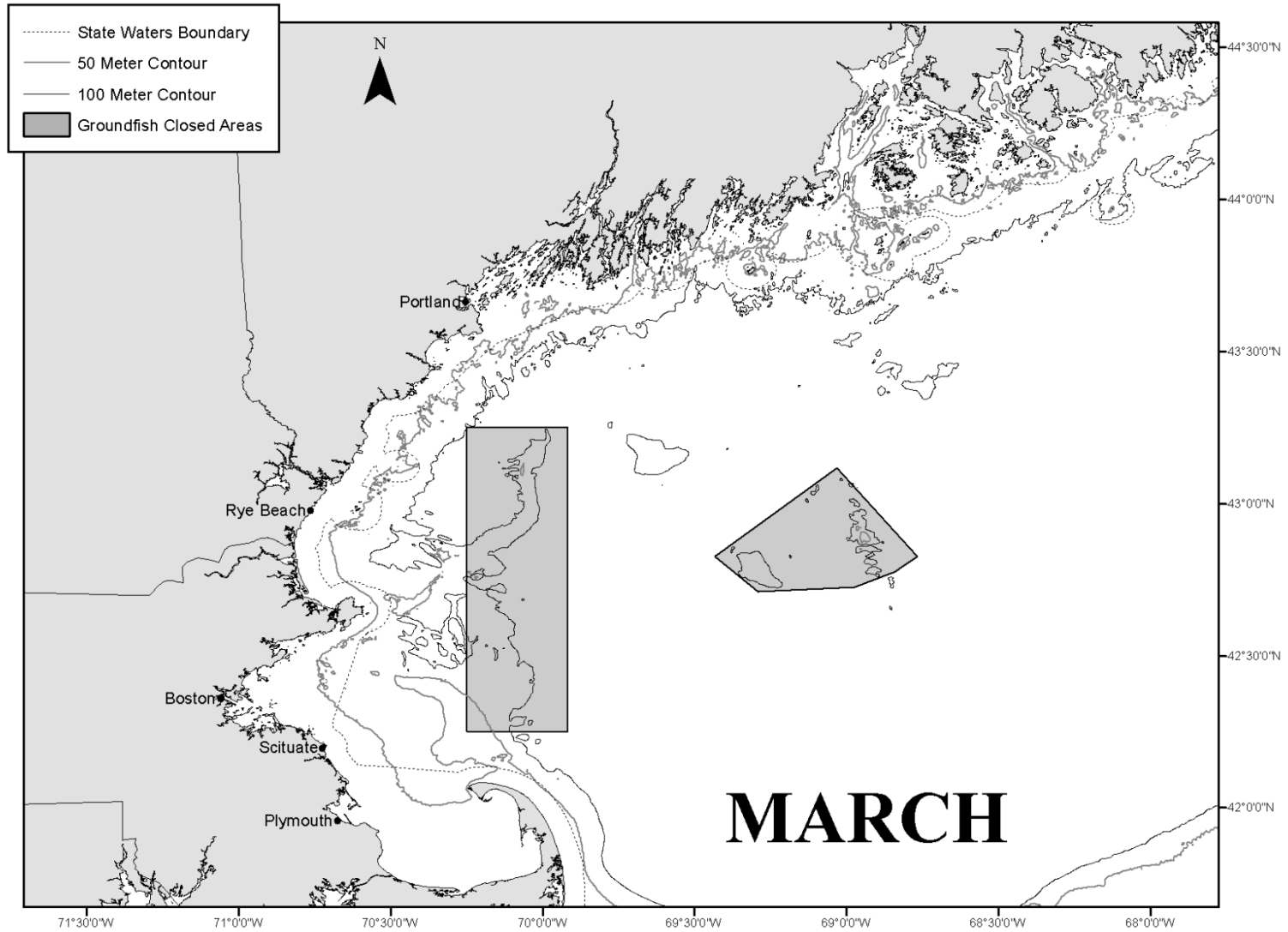
JANUARY



FEBRUARY



MARCH



APRIL

