

Omnibus Essential Fish Habitat Draft Amendment 2

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**New England Fishery
Management Council
February 25-26, 2014
Danvers, MA**

Purpose of meeting

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- **Review the Omnibus EFH Amendment 2 draft EIS and amendment document, select preferred alternatives, and approve the DEIS for initial submission to NOAA**
- **Note that final alternatives may vary from any preferred alternatives identified at this meeting**

EFH-driven goals and objectives

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- Identify and implement mechanisms to protect, conserve, and enhance the EFH of those species managed by the Council to the extent practicable.
- Integrate and optimize measures to minimize the adverse impacts to EFH across all Council managed FMPs:
 - Develop analytical tools for designation of EFH, minimization of adverse impacts, and monitoring the effectiveness of measures designed to protect habitat.
 - Modify fishing methods and create incentives to reduce the impacts on habitat associated with fishing.
 - Develop criteria for establishing and implementing dedicated habitat research areas. Design a system for monitoring and evaluating the benefits of EFH management actions including DHRAs.

Practicability

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- **Practicability can be viewed as the tradeoff between habitat and resource benefits vs. economic and social costs**
- **Positive habitat and resource benefits are expected to translate into economic benefits over the long term, but these benefits cannot be estimated in dollars.**
- **Conversely, short-term economic costs, especially in currently open areas, are easier to estimate in dollars.**

Groundfish-driven goals and objectives

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- Enhance groundfish fishery productivity.
- Maximize societal net benefits from the groundfish stocks while addressing current management needs:
 - Improved groundfish spawning protection; including protection of localized spawning contingents or sub-populations of stocks.
 - Improved protection of critical groundfish habitats.
 - Improved refuge for critical life history stages.
 - Improved access to both the use and non-use benefits arising from closed area management across gear types, fisheries, and groups. These benefits may arise from areas designed to address the other three groundfish closed area objectives.

Groundfish-driven alternatives

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- Alternatives were not developed to reduce mortality per se
 - Age 0/1 juveniles appear to have a different distribution vs. older juveniles; likely not be well retained in fishing gear
- Habitat alternatives that focus on juvenile groundfish are located in areas that have concentrations of age 0/1 fish AND have vulnerable habitat types
- Whether primarily juvenile groundfish-driven or SASI-driven, the goal of all the habitat alternatives is to reduce the adverse effects of fishing on EFH

Document structure

Volume 1:

1. Executive summary
2. Contents
3. Background and purpose
4. Affected environment

- Need & purpose linked to goals & objectives
- Affected environment describes four Valued Ecosystem Components (VECs):
 - Physical and biological environment/benthic habitats
 - Managed species
 - Human communities and the fishery
 - ✦ Note new analysis describing VTR coverage by gear type
 - Protected resources

Document structure

Volume 2:

1. Contents
2. EFH and HAPC designation alternatives
3. EFH and HAPC env. impacts

Not planning to take any action today

- EFH Designations were approved by Council as final preferred alts following spring 2007 public hearings
- Habitat Areas of Particular Concern
 - Overlap with some existing and potential spatial management areas described in Volume 3
 - Meet various criteria defined in EFH regulations and by NEFMC
- Largely administrative, few impacts

Document structure

Volume 3:

1. Contents
2. Spatial management alternatives
3. Considered and rejected alternatives
4. Environmental impacts

- Alternatives are grouped by topic:
 - Habitat management
 - Groundfish spawning
 - Dedicated Habitat Research Areas
 - Framework adjustments and monitoring
- Organized by region, and in some cases sub-region
- Impacts organized by topic and then by VEC
- Separate species/fishery specific impacts at the end (Section 4.5)

Document structure

Volume 4

Will be completed for initial submission or FEIS as appropriate

- Contents
- Cumulative effects
- Compliance with MSA
- Compliance with NEPA
- Other applicable law
- References

Document structure

Volume 5

Appendices

- EFH designation methods
- EFH supplementary tables
- EFH designation maps as approved in 2007
- Swept Area Seabed Impact approach methods and results
- Groundfish hotspot analysis methods
- Modeling juvenile cod and yellowtail flounder distribution

Discussion plan

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- **Goal: select preferred alternatives**
- **Staff will review alternatives and impacts analysis by region and type of alternative**
- **For habitat management and spawning alternatives, select a preferred set of areas and fishing restrictions for each area**

1. **Gulf of Maine**
 - A. **Habitat**
 - B. **Spawning**
 - C. **Research**
2. **Georges Bank**
 - A. **Habitat**
 - B. **Spawning**
 - C. **Research**
3. **Framework and monitoring alternatives**

Management options for HMAs

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- No action measures for existing groundfish closure areas and habitat closure areas; latter is closure to MBTG
- Options for action alternatives:
 1. Closed to mobile bottom tending gears
 2. Closed to mobile bottom tending gears, except hydraulic clam dredges
 3. Maximum ground cable length of 45 fathoms per side with elevating disks
 4. No ground cables, maximum bridle length of 30 fathoms per side

Management options for spawning

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- No action - existing areas and measures
- Options for action alternatives:
 - A. Generally, commercial gears capable of catching groundfish (largely based on existing measures)
 - B. Generally, commercial and recreational gears capable of catching groundfish (again, largely based on existing measures)

Measures vary between individual management areas; details provided in DEIS Volume 3, Section 2.2

Analytical approaches and general conclusions by Valued Ecosystem Component

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- ❖ **Physical and biological habitats**
 - ❖ **Managed species (groundfish, scallops)**
- ❖ **Human communities and the fishery**
 - ❖ **Protected resources**

Physical and biological habitats

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- **Approach to analysis – focus on seabed habitats:**
 - Describe habitat types within areas
 - Compare seabed vulnerability between areas and alternatives
 - Evaluate historical realized adverse effects by gear type for areas currently fished
 - Assess redistribution of fishing effort and potential changes in area swept

Managed species – large mesh groundfish

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- **Approach to analysis:**
 - Compare number of hotspots between areas for different species and groups of species
 - ✦ Age 0/1 juveniles focus for analysis of habitat alternatives
 - ✦ Large fish (top 20% biomass) focus for spawning alternatives
 - Assess potential for redistribution of fishing effort and how this might affect fish concentrated outside of the areas included in a particular alternative

Managed species - scallops

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- **Approach to analysis:**
 - Evaluate short-term and long-term potential scallop yield by management area
 - Evaluate specific area closure scenarios using Scallop Area Management Simulator model – this has not been done for all scenarios
 - Evaluate seasonal variation in meat weight to evaluate impacts of spawning closures

Managed species – other stocks

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- Includes small mesh multispecies, monkfish, skates, herring, red crab, clams, bluefish, mackerel/squid/butterfish, dogfish, summer flounder/scup/sea bass, tilefish, shrimp, and lobster
- Consider overlap between stocks and management areas, as well as stock status
- Assess potential for redistribution of fishing effort by gear type and how this might affect each species

Economic impacts analysis

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- Evaluate potential displacement of effort in currently open areas with VTR data:
 - At the gear and individual (i.e. permit) level
 - Commercial revenue distribution estimated with a cumulative distribution function to provide a more realistic picture
 - Recreational revenue distribution based on a simple inside/outside approach
 - VMS data provided for comparison when available
- To indicate potential fishing activities inside existing closures, evaluate observed catch by species in adjacent areas

Economic impacts analysis

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- **Potential displacement of fishing effort by area and alternative**
 - VTR analysis of revenue distribution; VMS used where possible
 - Use observer data from adjacent areas to indicate potential fishing activities inside existing closures
 - Analysis is at the gear and individual (i.e. permit) level
- **Will qualitatively estimate the potential costs and benefits of fishing in any reopened areas**

Economic impacts analysis

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- Impacts are disaggregated by gear type. In some cases, one or two gears dominate displaced revenue and overall impacts
- Short-term and long-term impacts often vary.
 - If habitat/groundfish conservation outcomes estimated to be poor, long-term impacts may be negative despite short-term revenue gains.
- Estimating displacement in areas currently open to fishing is more straightforward than forecasting expected revenues in areas that are currently closed.
- Statements about net benefits relative to No Action or other alternatives attempt to balance impacts across gears, short vs. long term, and currently open vs. currently closed.

Social impacts analysis

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- **Approach to analysis:**
 - Determine affected communities based on economic analysis
 - Qualitative discussion of impacts considering:
 - ✦ Sustained participation
 - ✦ Community vulnerability
 - ✦ Attitudes, beliefs, and values of fishermen and other stakeholders

Protected resource impacts analysis

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- Qualitative evaluation of redistributed effort on protected resources (turtles, marine mammals, and Atlantic sturgeon):
 - Evaluated species distributions relative to management areas
 - Identified fishing gears that have interactions with protected resources
 - Discussed relationship to other management approaches (e.g. pingers)

Protected resource impacts analysis

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- Negative impacts on marine mammals or sturgeon related to increases in gillnet use, either because a closed area is reopened to gillnets (e.g. WGOM reopens), or because a mobile bottom-tending gear closure would facilitate increased gillnet fishing (e.g. Bigelow Bight closes)
- In general, protected resource impacts are not expected to be significant (most neutral, negligible, or slightly negative overall):
 - Turtles: limited overlaps between species distributions and management areas
 - Mammals and sturgeon: overlapping management approaches such as pingers or seasonal closed areas mitigate impacts

Review of management alternatives

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❖ **GOM**

- ❖ Habitat management
- ❖ Groundfish spawning management
- ❖ Dedicated Habitat Research Areas

❖ **Georges Bank**

- ❖ Habitat management
- ❖ Groundfish spawning management
- ❖ Dedicated Habitat Research Areas

❖ **Framework and monitoring alternatives**

Western GOM Habitat Management

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1. No action: WGOM groundfish and habitat closures
2. No Habitat Management Areas
3. Large Bigelow Bight, Large Stellwagen
4. Large Bigelow Bight, Small Stellwagen, Jeffreys Ledge
5. Small Bigelow Bight, Small Stellwagen, Jeffreys Ledge
6. Large Stellwagen
7. Make roller gear area a habitat measure (7a), or apply in an alternative area (7b)

Western GOM Habitat Management

Alternative	Physical and biological environment	Large mesh groundfish	Economic	Social	Protected resources
Alt. 1 (No action)	++	++	++	0	0
Alt. 2 (No area)	---	--	-	-	-
Alt. 3 Options 1 and 2	0	+++	++	--	--
Alt. 3 Options 3 and 4	--	--	--	--	-
Alt. 4 Options 1 and 2	++	++	++	-	--
Alt. 4 Options 3 and 4	--	--	--	-	-
Alt. 5 Options 1 and 2	+	+	++	--	--
Alt. 5 Options 3 and 4	--	--	--	--	-
Alt. 6 Options 1 and 2	-	-	--	+	-
Alt. 6 Options 3 and 4	--	--	--	+	-
Alt. 7A	Negl	0	Negl	Negl	0
Alt. 7B	+	+	Negl	Negl	0

Central GOM Habitat Management

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- 1. No action: Cashes Groundfish and Habitat, Jeffreys Bank Habitat**
- 2. No Habitat Management Areas**
- 3. Modified Cashes, Modified Jeffreys Bank, Ammen Rock, Fippennies Ledge, Platts Bank**
- 4. Modified Cashes, Modified Jeffreys Bank, Ammen Rock**

Central GOM Habitat Management

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Alternative	Physical and biological environment	Large mesh groundfish	Economic	Social	Protected resources
Alt. 1 (No action)	++	++	++	0	0
Alt. 2 (No area)	---	--	--	+	-
Alt. 3 Options 1 and 2	+++	-	-	Negl	-
Alt. 3 Options 3 and 4	--	--	--	Negl	-
Alt. 4 Options 1 and 2	+	-	-	Negl	-
Alt. 4 Options 3 and 4	--	--	--	Negl	-

Eastern GOM Habitat Management

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1. No action (there are currently no habitat management areas)
2. Large Eastern Maine and Machias
3. Small Eastern Maine, Machias, and Toothaker Ridge

Eastern GOM Habitat Management

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Alternative	Physical and biological environment	Large mesh groundfish	Economic	Social	Protected resources
Alt. 1 (No action)	--	--	0	0	0
Alt. 2 Options 1 and 2	+	++	+	-	Negl
Alt. 2 Options 3 and 4	Negl	Negl	-	-	Negl
Alt. 3 Options 1 and 2	++	++	+	-	Negl
Alt. 3 Options 3 and 4	Negl	Negl	-	-	Negl

Gulf of Maine Groundfish Spawning

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Alternative 1 (no action)

- Year-round Cashes Ledge, WGOM groundfish areas
- Sector rolling closures
- Common pool rolling closures
- GOM Cod Spawning Protection Area

Alternative 2

- Sector rolling closures
- GOM Cod Spawning Protection Area
- Massachusetts Bay Spawning Area (new)

Gulf of Maine Groundfish Spawning

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Alternative	Physical and biological environment	Large mesh groundfish	Economic	Social	Protected resources
Alt. 1 (No Action)	-	++	++	0	0
Alt. 2A	-	0	--	-	Negl
Alt. 2B	-	+	--	--	Negl

Dedicated Habitat Research Area Alternatives

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1. No DHRA designations
2. Eastern Maine DHRA closed to MBTG
3. Stellwagen DHRA: maintain current restrictions throughout, i.e. no MBTG, no longlines, gillnets; additionally no recreational groundfishing in reference sub-area.
 - Option A: Southern Ref Area
 - Option B: Northern Ref Area
 - Option C: No Ref Area
4. Georges Bank DHRA closed to MBTG*
5. Sunset provision

** Will come back to this alternative later under Georges Bank*

Dedicated Habitat Research Area Alternatives

Alternative	Physical and biological environment	Large mesh groundfish	Economic	Social	Protected resources
Alt. 1 (No Action)	-	-	0	0	0
Alt. 2	+	++	+	+	Negl
Alt. 3A	++	++	+	+	Negl
Alt. 3B	++	++	+	+	Negl
Alt. 3C	+	++	++	++	Negl
Alt. 4	+	+	++	++	
Alt. 5	Negl	+	++	++	0

Georges Bank habitat management

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1. No action: CAI and CAII groundfish and habitat closures
2. No Habitat Management Areas
3. Northern Edge
4. Northern Edge and Small Georges Shoal gear modification area
5. Georges Shoal Large gear modification area, Georges Shoal MBTG closure
6. Extended CAII habitat closure: (6A) larger area (6B) smaller area with an 8 nm wide area along the EEZ removed

Georges Bank habitat management

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Alternative	Physical and biological environment	Large mesh groundfish	Economic	Social	Protected resources
Alt. 1 (No action)	+	+++	---	0	0
Alt. 2 (No area)	---	---	++	+	-
Alt. 3 Option 1	+	--	++	+	-
Alt. 3 Option 2	+	--	++	+	-
Alt. 3 Options 3 and 4	--	--	+	+	-
Alt. 4 Option 1	+	--	++	+	-
Alt. 4 Option 2	+	--	++	+	-
Alt. 4 Options 3 and 4	--	--	++	+	-
Alt. 5	--	--	++	-	-
Alt. 6A Option 1	+++	-	--		-
Alt. 6A Option 2	+++	-	--		-
Alt. 6A Options 3 and 4	-	--	--		-
Alt. 6B Option 1	-	---	++		-
Alt. 6B Option 2	-	---	++		-
Alt. 6B Options 3 and 4	--	---	+		-

Great South Channel/SNE habitat management

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- 1. No action: NLCA and NL habitat closure**
- 2. No Habitat Management Areas**
- 3. Great South Channel and Cox Ledge**
- 4. Great South Channel East and Cox Ledge**
- 5. Nantucket Shoals and Cox Ledge**
- 6. Nantucket Shoals West MBTG closure, GSC gear modification area, Cox Ledge**

Great South Channel/SNE habitat management

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Alternative	Physical and biological environment	Large mesh groundfish	Economic	Social	Protected resources
Alt. 1 (No action)	-	0	--	0	0
Alt. 2 (No area)	--	-	++	++	-
Alt. 3 Option 1	++	+	---	--	-
Alt. 3 Option 2	+	+	--	--	-
Alt. 3 Options 3 and 4	0	--	--	--	-
Alt. 4 Option 1	+	Unk	--	--	-
Alt. 4 Option 2	+	Unk	-	-	-
Alt. 4 Options 3 and 4	0	--	-	-	-
Alt. 5 Option 1	+	Unk	--	--	-
Alt. 5 Option 2	+	Unk	-	-	-
Alt. 5 Options 3 and 4	-	--	-	-	-
Alt. 6	0	Unk	-	+	-

Georges Bank/SNE Groundfish Spawning

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Alternative 1 (no action)

- CAI, CAII, NLCA year round
- May seasonal closed area

Alternatives 2 and 3

- CAI (Alternative 2)
- CAI North (Alternative 3)
- CAII (Alternatives 2 and 3)
- All areas Feb, Mar, Apr

Georges Bank/SNE Groundfish Spawning

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Alternative	Physical and biological environment	Large mesh groundfish	Economic	Social	Protected resources
Alt. 1 (No Action)	-	++	--	0	0
Alt. 2A	+	--	++	+	-
Alt. 2B	+	--	++	+	-
Alt. 3A	+	--	++	+	-
Alt. 3B	+	--	++	+	-

Framework adjustments and monitoring

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Alternative 1 (no action)

- Ad-hoc approach to area management revisions in terms of strategy and timing
- No additional monitoring data requested

Alternative 2

- Planned approach to area management revisions
- Additional monitoring data requests identified
- Specific additional frameworkable items identified