

7.0 Environmental Consequences – Analysis of Impacts

7.2 Essential Fish Habitat Impacts

The Essential Fish Habitat impacts discussions below focus on changes in the amount or location of fishing that might occur as a result of the implementation of the various alternatives. This approach to evaluating adverse effects to EFH is based on two principles: (1) seabed habitat vulnerability to fishing effects varies spatially, due to variations in seabed substrates, energy regimes, living and non-living seabed structural features, etc., between areas and (2) the magnitude of habitat impacts is based on the amount of time that fishing gear spends in contact with the seabed. This seabed area swept (seabed contact time) is grossly related to the amount of time spent fishing, although it will of course vary depending on catch efficiency, gear type used, and other factors.

The area that is potentially affected by the proposed TACs has been identified to include EFH for species managed under the following Fishery Management Plans: NE Multispecies; Atlantic Sea Scallop; Monkfish; Atlantic Herring; Summer Flounder, Scup and Black Sea Bass; Squid, Atlantic Mackerel, and Butterfish; Spiny Dogfish; Tilefish; Deep-Sea Red Crab; Atlantic Surfclam and Ocean Quahog; Atlantic Bluefish; Northeast Skates; and Atlantic Highly Migratory Species. The Preferred Alternative action makes relatively minor adjustments in the context of the fishery as a whole, and, for the reasons stated above, is not expected to have significant additional adverse impact on EFH relative to no action. Furthermore, the Preferred Alternatives do not allow for access to the existing habitat closed areas on GB that were implemented in Amendment 13 to the Multispecies FMP and Amendment 10 to the Scallop FMP and therefore they continue to minimize the adverse impacts of bottom trawling and dredging on EFH. Overall, there are likely to be only minor differences between the EFH impacts of the preferred alternatives and those of the No Action alternative.

7.2.1 Updates to Status Determination Criteria, Formal Rebuilding Programs and Annual Catch Limits

7.2.1.1 Revised Gulf of Maine cod Rebuilding Strategy

7.2.1.1.1 Option 1: No Action

This option would maintain the current rebuilding strategy which has a target end date of 2014. Projections indicate that rebuilding will not occur within this timeframe. If this option was adopted, fishing mortality would be based on incidental bycatch starting in 2015, which would set it as close to zero as possible. This may reduce groundfish fishing activity in the GOM area compared to Option 2.

7.2.1.1.2 Option 2: Revised Rebuilding Strategy for Gulf of Maine Cod

Two options are being considered for a revised rebuilding strategy for GOM cod. Overall, when compared with the No Action alternative, Option 2 would result in more fishing activity targeting GOM cod because the fishing mortality would be set higher than 75% F_{MSY} . It is difficult to compare Option 2 to Option 3, as Option 3 is an administrative alternative that may not directly impact EFH.

Sub-Option A:

This option would revise the rebuilding strategy to a target date of 2022 with a median probability of success. This approach would allow for a slightly higher fishing mortality rate. This measure would probably lead to increased fishing effort and therefore impacts to EFH in GOM when compared to the No Action alternative. However, targeting fishing effort will be limited by ACLs for associated species, such as GOM haddock, which has a lower ACL compared to GOM cod. Thus, it is difficult to estimate how much a change in the rebuilding plan would indirectly contribute to increased fishing effort in GOM.

Sub-Option B:

This option would revise the rebuilding strategy to a target date of 2024 with a median probability of success. This approach would allow for a slightly higher fishing mortality rate. This measure would probably lead to increased fishing effort and therefore impacts to EFH in GOM when compared to the No Action alternative. However, targeting fishing effort will be limited by ACLs for associated species, such as GOM haddock, which has a lower ACL compared to GOM cod. Thus, it is difficult to estimate how much a change in the rebuilding plan would indirectly contribute to increased fishing effort in GOM.

Overall, impacts of Option 2 on EFH are probably slightly negative to neutral relative to Option 1, No Action.

7.2.1.1.3 Option 3: Rebuilding Plan Review Analysis

Option 3 would require an analysis of the rebuilding plan using the described criteria. This is an administrative alternative and is not expected to impact EFH directly.

7.2.1.2 Revised American Plaice Rebuilding Strategy

7.2.1.2.1 Option 1: No Action

This option would maintain the current rebuilding strategy which has a target end date of 2014. Projections indicate that rebuilding will not occur within this timeframe. If this option was adopted, fishing mortality would be based on incidental bycatch starting in 2015, which would set it as close to zero as possible. This may reduce groundfish fishing activity in the American plaice stock area (GOM and GB) compared to Option 2.

7.2.1.2.2 Option 2: Revised Rebuilding Strategy for American Plaice

Three options are being considered for a revised rebuilding strategy for American plaice. Overall, when compared with the No Action alternative, Option 2 would result in more fishing activity targeting American plaice because the fishing mortality would be set higher than 75% F_{MSY} . It is difficult to compare Option 2 to Option 3, as Option 3 is an administrative alternative that may not directly impact EFH.

Sub-Option A:

This option would revise the rebuilding strategy to a target date of 2021 with a median probability of success. This approach would allow for a slightly higher fishing mortality rate. This measure would

probably lead to increased fishing effort and therefore impacts to EFH in the American plaice stock area (GOM and GB) when compared to the No Action alternative. However, targeting fishing effort will be limited by ACLs for associated species, such as witch flounder. Thus, it is difficult to estimate how much a change in the rebuilding plan would indirectly contribute to increased fishing effort in the American plaice stock area (GOM and GB).

Sub-Option B:

This option would revise the rebuilding strategy to a target date of 2022 with a median probability of success. This approach would allow for a slightly higher fishing mortality rate. This measure would probably lead to increased fishing effort and therefore impacts to EFH in GOM when compared to the No Action alternative. However, targeting fishing effort will be limited by ACLs for associated species, such as witch flounder. Thus, it is difficult to estimate how much a change in the rebuilding plan would indirectly contribute to increased fishing effort in the American plaice stock area (GOM and GB).

Sub-Option C:

This option would revise the rebuilding strategy to a target date of 2024 with a median probability of success. This approach would allow for a slightly higher fishing mortality rate. This measure would probably lead to increased fishing effort and therefore impacts to EFH in the GOM when compared to the No Action alternative. However, targeting fishing effort will be limited by ACLs for associated species, such as witch flounder. Thus, it is difficult to estimate how much a change in the rebuilding plan would indirectly contribute to increased fishing effort in the American plaice stock area (GOM and GB).

7.2.1.2.3 Option 3: Rebuilding Plan Review Analysis

Option 3 would require an analysis of the rebuilding plan using the described criteria. This is an administrative alternative and is not expected to impact EFH directly.

7.2.1.3 Annual Catch Limits

7.2.1.3.1 Option 1: No Action

Under No Action, stocks with FY 2014 specifications from previous actions would be maintained at that level. However, GB yellowtail flounder and white hake do not have FY 2014 specifications defined in previous actions. This option would not set specifications for these stocks in FY 2014. Without specification of an ACL, catch would not be allocated to the groundfish fishery and targeted groundfish fishing activity would not occur for these stocks. In addition, certain provisions of the sector management system make it likely that fishing activity could be constrained even for stocks with an ACL. Current management measures require that a sector stop fishing in a stock area if it does not have ACE for a stock. Fishing can continue on stocks for which the sector continues to have ACE only if the sector can demonstrate it would not catch the ACE-limited stock. What these provisions mean is that in most cases there would be little opportunity for sector vessels to fish on stocks that have an ACL under no action, and the only area that most groundfish fishing activity could occur is the SNE area. As a result, in general this option would be expected to result in dramatically lower fishing mortality and dramatically lower impacts to EFH and benthic habitats in the GB and GOM regions as compared to the alternative specifications (Option 2).

7.2.1.3.2 Option 2: Revised Annual Catch Limit Specifications

Option 2 would adopt new ACLs for GB yellowtail flounder, and white hake (total ACLs summarized in Table 64). The ACLs for other stocks were set in previous actions.

The GB yellowtail flounder ACL is a reduction from FY 2012, which would potentially reduce fishing effort on GB. White hake has an increased ACL; in FY2012 less than 70% of the white hake ACL was caught by the groundfish fleet, so the ACL changes alone are not likely to result in increased fishing effort and increased impacts to EFH. However, compared to the No Action alternative, the specifications will likely have greater impacts to EFH since these two stocks are not allocated under No Action. It is difficult to predict how fishing effort may change in later years of the specifications, i.e. fishing years 2015 and 2016, because ACLs for some key stocks (GB cod, haddock, and yellowtail) have not yet been determined. Fishing effort would be expected to be higher than if Option 1/No Action is adopted, but will probably be lower than the status quo.

7.3 Commercial and Recreational Fishery Measures

7.3.1.1 Small-Mesh Fishery Accountability Measures

7.3.1.1.1 Option 1: No Action

FW48 established a sub-ACL for GB yellowtail flounder for the small mesh fishery. This option would continue current management where there is no AM for the small-mesh fishery for GB yellowtail flounder. Fishing effort would not be modified if the sub-ACL is exceeded, for example through gear restricted areas or a reduction in the sub-ACL the following year. GB yellowtail flounder is a TMGC stock; if the US exceeds its negotiated TAC there is a pound for pound payback under the U.S./Canada Resource Sharing Understanding. The small-mesh fishery is prohibited from landing GB yellowtail flounder; the pound for pound payback may not correct an overage thus fishing effort may remain at current levels under the No Action alternative and would not be expected to result in changes to impacts on EFH. Compared to Option 2, the No Action alternative could have more impacts on EFH as no changes in current fishing effort would be expected.

7.3.1.1.2 Option 2: Accountability Measure for the Small-Mesh Fishery Georges Bank Yellowtail Flounder Sub-ACL

Two options are being considered for the small-mesh fishery AM. Overall, Option 2 would have positive impacts on EFH when compared to the No Action alternative.

Sub-Option A:

If adopted, this sub-option prevents fishing in the GB yellowtail flounder stock area if the sub-ACL for the small-mesh fishery was zero. A zero sub-ACL would result from repayment of pound for pound overages under the US-Canada Sharing Agreement. This AM option would reduce fishing effort on Georges Bank, for example whiting fishing in the Cultivator Shoal Area and squid/mackerel/butterfish trawling along the southern flank of Georges Bank, but could increase fishing in other area, which would be a positive impact in that area. It is unclear if this would shift effort to other areas, which would negatively impact EFH in those areas. Compared to the No Action alternative, Sub-option A has fewer impacts on EFH as it restricts trawl gear effort on GB.

Sub-Option B1:

If adopted, this sub-option would establish an AM that would require the use of approved selective trawl gear, when the AM was triggered, that is designed to reduce the catch of yellowtail flounder. The AM is only triggered if the total ACL and small-mesh sub-ACL for GB yellowtail flounder are exceeded; this is less conservative than sub-option B2. Switching to a different type of trawl gear could reduce seabed impacts. In particular, along the footrope, the contact of a raised footrope trawl with the seabed is likely very low (estimated at 5% for the Swept Area Seabed Impact model, NEFMC 2011). Trawls used in the squid fishery are also relatively low contact along the sweep; estimated at about 50% (NEFMC 2011). Thus, if the AM is triggered, a shift from gear that uses cookie or roller sweeps to gear that uses a raised footrope or chain sweeps could lead to a reduction in impacts to EFH. This assumes that gear efficiency is maintained such that overall bottom fishing time does not increase.

Sub-Option B2:

If adopted, this sub-option would establish an AM that would require the use of approved selective trawl gear, when the AM was triggered, that is designed to reduce the catch of yellowtail flounder. The AM is triggered if the total ACL for GB yellowtail flounder is exceeded; this is more conservative than sub-option B2. As above, switching to a different type of trawl gear could reduce seabed impacts.

7.3.1.2 Small-Mesh Fishery Measures

7.3.1.2.1 Option 1: No Action

This option would not change existing pre-trip call-in requirements for small-mesh fisheries. This is an administrative alternative, as such is not expected to affect fishing effort or behavior and therefore EFH would not be impacted. Similar to Option 2, the No Action alternative would have no impact on EFH.

7.3.1.2.2 Option 2: Call-in Requirement for Small-Mesh Fisheries

This option would establish a pre-trip call-in requirement for small-mesh fisheries. This is an administrative alternative, as such is not expected to affect fishing effort or behavior and therefore EFH would not be impacted. Similar to the No Action alternative, Option 2 would have no impact on EFH.

7.3.1.3 Management Measures for US/CA TACs

This section considers changing fishery management measures as necessary to adjust catches of US/CA stocks. More than one option can be selected.

7.3.1.3.1 Option 1: No Action

This option would not alter how the US/CA TACs are administered. Any impacts to EFH would be dependent on the magnitude of the negotiated TACs, which is unknown for FY beyond 2014. The No Action option would have limited impacts on EFH.

7.3.1.3.2 Option 2: Revised in-season adjustment for US/CA TACs

If this option was adopted, the Regional Administrator would be authorized to adjust the US/CA quotas (in the form of a quota trade with Canada) after the initial negotiations. The traded quota would be distributed according to the current ABC distribution quota; EFH impacts would vary depending on the magnitude of quota received by the various fisheries (and gear types) harvesting the quota. The trade would be dependent on the current needs of fisheries in each country and the resource allocation distribution, both of which cannot be predicted. The stocks that could be potentially traded have the same stock area; depending on the magnitude of the traded quota, this option may not alter the impacts on EFH as it would all potentially occur in the same stock area. Option 2 would have limited impacts on EFH. It is difficult to rank the various options in terms of their potential impacts.

7.3.1.3.3 Option 3: Revised in-season adjustment for US/CA TACs

If this option was adopted, the Regional Administrator would be authorized to adjust the US/CA quotas (in the form of a quota trade with Canada) after the initial negotiations. The traded quota would be distributed consistent with the sector sub-ACL distribution. The trade would be dependent on the current needs of fisheries in each country and the resource allocation distribution, both of which cannot be predicted. The stocks that could be potentially traded have the same stock area; depending on the magnitude of the traded quota, this option may not alter the impacts on EFH as it would all potentially occur in the same stock area. Option 3 would have limited impacts on EFH. It is difficult to rank the various options in terms of their potential impacts.

7.3.1.3.4 Option 4: Revised in-season adjustment for US/CA TACs

If this option was adopted, the Regional Administrator would be authorized to adjust the US/CA quotas (in the form of a quota trade with Canada) after the initial negotiations. The traded quota would be distributed amongst the components of the fishery that traded away their quota. The trade would be dependent on the current needs of fisheries in each country and the resource allocation distribution, both of which cannot be predicted. The stocks that could be potentially traded have the same stock area; depending on the magnitude of the traded quota, this option may not alter the impacts on EFH as it would all potentially occur in the same stock area. Option 4 would have limited impacts on EFH. It is difficult to rank the various options in terms of their potential impacts.

7.3.1.3.5 Option 5: Distribution of US TACs in Eastern/Western Georges Bank

Sub-Option A:

If this sub-option was adopted, the Regional Administrator would be authorized to adjust the portion of U.S. TAC for EGB haddock that is available in the EGB stock area. The GB haddock stock is one unit stock; the EGB and WGB stock areas are administrative. However, the expected high quotas for EGB haddock may concentrate fishing effort in EGB if this sub-option is not selected; this would increase impacts on EFH in that area. Compared to the No Action alternative and Options 2, 3, and 4, Option 5 Sub-Option A would have negative impacts on EFH if the quota transfer leads to an increase in fishing effort overall.

Sub-Option B:

If this sub-option was adopted, sectors would be authorized to transfer a portion (or all) of their U.S. TAC for EGB haddock to the WGB stock area. The GB haddock stock is one unit stock; the EGB and WGB

stock areas are administrative. However, the expected high quotas for EGB haddock may concentrate fishing effort in EGB if this sub-option is not selected; this would increase impacts on EFH in that area. A redistribution of effort across the whole bank would not have a positive impact on EFH overall, but may reduce concentration of fishing effort in one portion of the bank. As above, compared to the No Action alternative and Options 2, 3, and 4, Option 5 Sub-Option B would have negative impacts on EFH if the quota transfer leads to an increase in fishing effort overall.

7.3.1.4 Georges Bank Yellowtail Flounder Management Measures

7.3.1.4.1 Option 1: No Action

This option would not change management measures for GB yellowtail, specifically there would be no stratification of discard estimates by any elements besides sector, gear, and mesh, and also no gear modification requirements imposed on small-mesh trawling activities (this mainly applies to the squid and whiting fisheries). This measure would not be expected to have any direct impacts on EFH. It could, however, indirectly lead to shifts in the distribution of fishing effort when compared to Option 2. Because of the expected low ABC for GB yellowtail flounder in the short term, if discard estimates are not stratified as proposed in Option 2, it is possible that fishermen may more rapidly catch their sector's allocation for this stock. This would prevent them from fishing on most of GB. While if this occurs it may reduce impacts to EFH when compared to Option 2, it is difficult to predict with certainty if this would actually occur. It is possible fishermen would modify fishing practices to reduce catches of yellowtail flounder in order to avoid exceeding the ACE and continue fishing in the area.

7.3.1.4.2 Option 2: Revised Discard Strata for GB Yellowtail Flounder

This option would impose additional stratification criteria for the purpose of estimating in-season progress towards catching the GB yellowtail flounder quota. Specifically, Statistical Area 522 catches would be separated out from catches from other Statistical Areas (561, 562, 525). Because catch rates of GB yellowtail flounder in the deeper portions of Statistical Area 522 tend to be lower than in the other statistical areas, this stratification would likely allow trawl vessels targeting other species, particularly haddock, to fish more in this area without exceeding GB yellowtail flounder allocations. Assuming that fishing effort on Georges Bank would be limited by yellowtail flounder catch limits, this stratification could lead to additional fishing activity in Area 522 and elsewhere when compared to Option 1. This increased effort could increase seabed impacts, but catches would also be expected to more closely approach targets for stocks such as GB haddock.

7.3.1.5 Prohibition on Possession of Yellowtail Flounder by the Limited Access Scallop Fishery

7.3.1.5.1 Option A: No Action

Under No Action, limited access scallop vessels are required to land all legal-sized yellowtail flounder (GB and SNEMA) catch. Fishing effort may change based on the distribution of yellowtail flounder, if limited access scallop vessels are actively trying to avoid yellowtail flounder bycatch. However, if an AM is triggered it may limit or change the distribution of scallop fishing effort. The No Action alternative would restrict fishing effort if the sub-ACL is low and could have more positive impacts on EFH when compared to Option 2 due to this reduction in effort. However, the GB yellowtail flounder ACL is negotiated annually; it is impossible to predict if it will increase or decrease, and thus it is not

clear what the effects on habitat would be because it is difficult to predict how constraining the sub-ACL might be.

7.3.1.5.2 Option B: Prohibition on possession of yellowtail flounder

If this option is adopted, limited access scallop vessels would not be prohibited from landing all legal-sized yellowtail flounder (GB and SNEMA). This would reduce the incentive to target yellowtail flounder but would not restrict fishing effort for scallops if the limited access scallop vessel sub-ACL for yellowtail flounder was reached. If the sub-ACL restricted scallop fishing, this could lead to increased fishing effort and increased impacts on EFH when compared to the No Action alternative.