6.0 ENVIRONMENTAL IMPACTS OF ALTERNATIVES

6.5 IMPACTS ON HUMAN COMMUNITIES- ECONOMICS

Introduction

Consideration of the economic impacts of the changes made in this framework is required pursuant to the National Environmental Policy Act (NEPA) of 1969 and the Magnuson-Stevens Fishery Conservation and Management Act (MSA) of 1976. NEPA requires that before any federal agency may take "actions significantly affecting the quality of the human environment," that agency must prepare an Environmental Assessment (EA) or Environmental Impact Statement (EIS) that includes the integrated use of the social sciences (NEPA Section 102(2) (C)). The MSA stipulates that the social and economic impacts to all fishery stakeholders should be analyzed for each proposed fishery management measure to provide advice to the Council when making regulatory decisions (Magnuson-Stevens Section 1010627, 109-47).

The National Marine Fisheries Service (NMFS) provides guidelines to use when performing economic reviews of regulatory actions. The key dimensions for this analysis are expected changes in net benefits to fishery stakeholders, the distribution of benefits and costs within the industry, and changes in income and employment (NMFS 2007). Where possible, cumulative effects of regulations are identified and discussed. Non-economic social concerns are discussed in Section 6.6. The economic impacts presented here consist of both qualitative and quantitative analyses dependent on available data, resources, and the measurability of predicted outcomes. It is assumed throughout this analysis that changes in revenues would have downstream impacts on income levels and employment; however, these are only mentioned if directly quantifiable.

6.5.1 Action 1 – Formal Rebuilding Plan for Gulf of Maine Cod

6.5.1.1 Alternative 1 - No Action

Impacts to the Commercial Groundfish Fishery

Maintaining quotas under No Action would provide neutral or positive economic impacts relative to Alternative 2. The impacts of No Action relative to Alternative 2, Option C would be similar if quotas were set at 75%FMSY under No Action. Under Alternative 2, Options A and B, reducing quotas would negatively affect the groundfish fishery. Recent catches of GOM cod by the sector portion of the commercial groundfish fishery ranged from 171 to 304 mt in FY2015-2021 and utilization has been high (over 80% in all years except for 2019, when it was 72%)[1,2]. Inter-sector ACE lease prices have declined from almost $5.00/lb in 2015 but have remained steady at $1.50 – $2.50/lb since then. Given the high utilization of GOM cod and importance to the commercial fishery, ACLs for GOM cod may be least constraining under 75%FSMY in either No Action or Alternative 2 Option C.

Impacts to the Recreational Groundfish Fishery

The No Action alternative would result in neutral to positive economic impacts relative to Alternative 2 given the current GOM cod recreational effort. The average catch by the recreational fishery for the last three years has been 202 mt, with 67.6% of the catch limit taken[2], and preliminary in-season data shows a

[1] See page 7: https://s3.us-east-1.amazonaws.com/nefmc.org/10_211022-GF-PDT-memo-to-SSC-re-FY2022-FY2024-Cod-OFLs_ABCs_with_Appendices.pdf

[2] See GARFO Year-End Results: https://www.greateratlantic.fisheries.noaa.gov/ro/fso/reports/Sector_Monitoring/FY21_Mults_Catch_Estimates_for_HTML.htm

decline in angler effort targeting GOM cod in 2022[3].

6.5.1.2 Alternative 2 – Revised Rebuilding Strategy for Gulf of Maine Cod

Impacts to the Commercial Groundfish Fishery

Each of the Options may have neutral to negative economic impacts relative to a No Action alternative. The impacts of No Action relative to Option C would be similar if quotas were set at 75%FMSY under No Action.

No Action and Option C allows the largest fishing mortality rate (75%FMSY) while Option A would confer the lowest. When compared against each other, Option A is likely to have negative impacts relative to the status-quo Option (Option C and No Action), while Option B would have slight negative impacts relative to status-quo Option (Option C and No Action).

All the Options under Alternative 2 have the same target rebuilding date but have different probabilities of attaining the target. While Option C allows for the largest fishing mortality, if the Option fails to rebuild the GOM cod stock within the rebuilding period, long-term economic benefits might instead be optimized under either Option A or Option B. If the stock rebuilds sooner than the target rebuilding date of 10 years, mortality rates could be increased in subsequent years, which would decrease the differences economic benefits between the three Options.

Impacts to the Recreational Groundfish Fishery

Each of the Options may have neutral to negative impacts relative to a No Action Alternative. The impacts of No Action relative to Option C would be similar whereas Option A is more likely to have negative impacts. However, if recreational angler effort targeting GOM cod remains low or continues to decline, the impacts of Option A may also be neutral.

6.5.2 Action 2 – Revised Specifications

6.5.2.1 Alternative 1 – No Action

Impacts on the Groundfish Fishery

Under No Action, default specifications would be put into place and result in neutral to negative impacts compared to Alternative 2. Specifications for the groundfish species that would otherwise be updated under Alternative 2 would be set to 75% of FY2022 specifications from May 1 until October 31. However, given that the GB haddock, EGB haddock, and GOM haddock specifications under Alternative 2 are less than 75% of the FY2022 specifications, ACLs would be set consistent with Alternative 2 but only for six months. After October 31, specifications would default to zero unless superseded by a final rule implementing FY2023 specifications.

[3] See NEFSC Preliminary Recreational Effort Estimates: https://s3.us-east-1.amazonaws.com/nefmc.org/3G_Updated-recreational-catch-and-effort-for-cod-and-haddock-NEFSC.pdf

Impacts on other fisheries

Atlantic Sea Scallop Fishery

Under Alternative 1/No Action, the following sub-ACLs would be allocated to the scallop fishery during FY2022: 19 mt of GB yellowtail flounder, 1.5 mt of SNE/MA yellowtail flounder, 129 mt of SNE/MA windowpane flounder, and 31 mt of GOM/GB windowpane flounder.

Under Alternative 1/No Action, the FY2023 sub-ACLs for GB yellowtail, GOM/GB windowpane flounder, and SNE/MA windowpane flounder would be unchanged from FY2022 levels. Alternative 1/No Action could have negative impacts to the scallop fishery relative to FY2022 since the sub-ACL for GOM/GB windowpane flounder would be less than the projected catch (106-126 mt) for and high enough to trigger AMs (>50% of the sub-ACL) (see Scallop PDT memo). Due to recent overages, the reactive large accountability measure for Georges Bank was triggered for FY2022 and is anticipated to be implemented for FY2023 as well. This means the gear restriction was required for all fishing occurring in Area II for the entirety of FY2022 and is expected to be required again in FY2023. The modified gear is expected to have a positive effect on bycatch of both Georges Bank yellowtail and northern windowpane flounder.

Under Alternative 1/No Action the sub-ACL for SNE/MA yellowtail flounder would be 1.2 mt less than under Alternative 2 (1.5 mt compared to 2.7 mt), potentially having negative economic impacts since FY2023 projected catch by the scallop fishery is estimated to be 3 mt (see Scallop PDT memo). Predicted catch would be high enough to trigger an AM under the No Action sub-ACL (>50% of the sub-ACL), but is unlikely that the total ACL would be exceeded for this stock since total utilization of the ACL has been very low in recent years. Impacts on the scallop fishery are likely neutral, but possibly negative, for SNE/MA yellowtail flounder under No Action/Alternative 1 compared to Alternative 2.

Under Alternative 1/No Action the sub-ACL for GB yellowtail flounder would be 2.5 mt more than under Alternative 2 (19 mt compared to 16.5 mt), potentially having positive economic impacts since FY2023 projected catch by the scallop fishery is estimated to be 32-45 mt (see Scallop PDT memo). This would be high enough to trigger an AM under No Action/Alternative 1 and Alternative 2 sub-ACL (>50% of the sub-ACL), but scallop catch may be reduced due to the gear restrictions in place in the GB area. It is unlikely that the total ACL would be exceeded for this stock since total utilization of the ACL has been very low in recent years. Impacts on the scallop fishery are likely neutral, but possibly positive, for GB yellowtail flounder under No Action/Alternative 1 compared to Alternative 2.

Midwater trawl directed Atlantic herring fishery

Alternative 1/No Action would have neutral impacts on the midwater trawl herring fishery. Sub-ACLs for GB haddock and GOM haddock would be the same under Alternative 1/No Action and Alternative 2. GB haddock catches by the herring fishery have been low in recent years – 10 mt in FY 2020 and 0.5 mt in FY 2021 due to lower herring ACLs (See Herring PDT Memo[4]).

Small-mesh fisheries

Under Alternative 1/No Action the sub-ACL for GB yellowtail flounder for the small mesh fisheries (e.g., whiting and squid) would remain the same as FY2022 levels at 2.3 mt in FY2023. Under Alternative 2, the sub-ACL for FY2023 would decrease to 2 mt. Economic impacts on the small mesh fishery are expected to be negative to neutral since catches in recent years have generally been low.

Large-mesh non-groundfish fisheries

The southern windowpane flounder "other fisheries" sub-component is used to evaluate when an AM

[4] See Table 3, page 18: https://s3.us-east-1.amazonaws.com/nefmc.org/3E_221117-GF-PDT-memos-to-CMTE.pdf

could be triggered for large-mesh non-groundfish fisheries (e.g., summer flounder and scup trawl fisheries). Under Alternative 1/No Action, the other sub-component would remain at the FY2022 level of 177 mt in FY2023. The other sub-component for FY2023 under Alternative 2 would be 2% more (184.3 mt) than under No Action (PDT Memo – Sub-Component Review for FW65[5]). There would be negative economic impacts of the sub-ACL under No Action/Alternative 1 compared to Alternative 2.

The AM for southern windowpane for –large-mesh non-groundfish fisheries is implemented if the large-mesh non-groundfish fishery exceeds its sub-ACL (evaluated using the "other sub-component"), and if the total ACL is exceeded by more than the management uncertainty buffer (currently set at approximately 5%).

Based on recent catches (Table 3), the other sub-component of 184 mt may be exceeded. From FY2016-FY2020, annual catches of S. Windowpane by large-mesh non-groundfish fisheries ranged from 178.1 – 243.6mt but catch in FY2021 dropped to 100.7 mt.

The total ACL for S. Windowpane under No Action would be 371 mt. Based on recent catches (Table 4) this number may be exceeded in FY2023. From FY2016-FY2020, total annual catches of S. Windowpane ranged from 335.6 – 454.7 mt but catch in FY2021 dropped to 147.5 mt.

6.5.2.2 Alternative 2 – Revised Specifications

Comparison between FY2022 and proposed FY2023 commercial sub-ACLs, recreational sub-ACLs, and other fisheries sub-ACLs for groundfish are provided in Table 1 and .

Table 1 – Comparison of commercial (sector and common pool) groundfish sub-ACLs (mt) for FY2022 and proposed FY2023, including the percent change between years. Proposed FY2023 sub-ACLs as indicated under Alternative 2/Revised Specifications and includes the Council's proposal for the GB cod recreational catch target.

Commercial groundfish sub-ACL

Stock		FY2022	Draft FY2023	% Change
Allocated Stocks	GB Cod*	244	*See options.*	
	GOM Cod	270	304.3	13%
	GB Haddock	75,381	11,080	-85%
	GOM Haddock	7,056	1,149	-84%
	GB Yellowtail Flounder	97	84.3	-13%
	SNE/MA Yellowtail Flounder	16	33.3	108%
	CC/GOM Yellowtail Flounder	692	985	42%
	American Plaice	2,630	5,360	104%

[5]See Table 5, page 33: https://s3.us-east-1.amazonaws.com/nefmc.org/3D_211022-GF-PDT-memos-to-SSC-combined_with_Appendices.pdf

Commercial groundfish sub-ACL

	Stock	FY2022	Draft FY2023	% Change
	Witch Flounder	1,317	1,145	-13%
	GB Winter Flounder	563	1634	190%
	GOM Winter Flounder	281	607	116%
	SNE/MA Winter Flounder	288	447	55%
	Redfish	9,559	9,469	-1%
	White Hake	1,990	1,735	-13%
	Pollock	14,135	13,124	-7%
Non-allocated Stocks	GOM/GB Windowpane Flounder	108	105	-3%
	SNE/MA Windowpane Flounder	43	45	5%
	Ocean Pout	50	49	-2%
	Atlantic Halibut	73	56	-23%
	Atlantic Wolffish	86	86	0%

*Assuming no change in the GB Cod recreational catch target

–Table 2- Comparison of other fisheries sub-ACLs (mt) for FY2022 and proposed FY2023, including the percent change between years. Proposed FY2023 sub-ACLs as indicated under Alternative 2/Revised Specifications.

Fishery	Stock	FY2022	Draft FY2023	% Change
Recreational Groundfish	GOM Cod	192	192	0%
	GOM Haddock	3,634	610	-83%
Sea Scallop	GB Yellowtail Flounder	19	16.5	-13%
	SNE/MA Yellowtail Flounder	2	2.7	35%
	GOM/GB Windowpane Flounder	31	31	0%
	SNE/MA Windowpane Flounder	129	129	0%
Midwater Trawl	GB Haddock	1,514	221	-85%
	GOM Haddock	107	18	-83%
Small-Mesh	GB Yellowtail Flounder	2.3	2	-13%
Other Sub-components – Large-Mesh Non-Groundfish[1]	SNE/MA Windowpane Flounder	177	184	4%

[1]The value for Other Sub-components for SNE/MA Windowpane Flounder includes the other sub-component value for Large-Mesh Non-Groundfish Trawl Fisheries.

Impacts of Alternative 2 ACLs on the commercial groundfish fishery

Depending on the recreational catch target and ABC for GB cod, the sector and common pool sub-ACL will vary. The sub-ACLs will be highest under recreational catch target No Action/Option 1 or Option 2 and lowest under Option 4. GB Haddock and GOM Haddock commercial draft FY2023 sub-ACLs are over 80% lower than in FY2022. GB yellowtail flounder, witch flounder, and white hake draft FY2023 sub-ACLs are 13% lower than in FY2022. SNE/MA yellowtail flounder, GB winter flounder, and GOM winter flounder draft FY2022 sub-ACLs are all over 100% higher than in FY2022.

Impacts on the recreational groundfish fishery

Impacts on the recreational groundfish fishery Alternative 2 would be negative relative to FY2022. The GOM cod recreational sub-ACL remains the same (193 mt sub-ACL), but the recreational sub-ACL for GOM haddock would decrease from 3,634 mt in FY202 to 610 mt in FY2023.

Impacts on other fisheries

Atlantic Sea Scallop Fishery

Under Alternative 2, the following sub-ACLs would be allocated to the scallop fishery during FY2022: 16.5 mt of GB yellowtail flounder, 2.7 mt of SNE/MA yellowtail flounder, 129 mt of SNE/MA windowpane flounder, and 31 mt of GOM/GB windowpane flounder.

Under Alternative 2, the FY2023 sub-ACL for GOM/GB windowpane flounder and SNE/MA windowpane flounder would be unchanged from FY2022 levels conferring neutral economic impacts for the scallop fishery relative to FY2022. Alternative 2 could have negative impacts to the scallop fishery relative to FY2022 but neutral to Alternative 1/No Action since the sub-ACL for GOM/GB windowpane flounder would be less than the projected catch (106-126 mt) and high enough to trigger AMs (>50% of the sub-ACL) (see Scallop PDT memo). Due to recent overages, the reactive large accountability measure for Georges Bank was triggered for FY2022 and is anticipated to be implemented for FY2023 as well. This means the gear restriction was required for all fishing occurring in Area II for the entirety of FY2022 and is expected to be required again in FY2023. The modified gear is expected to have a positive effect on bycatch of both Georges Bank yellowtail and northern windowpane flounder.

Projected catch of SNE/MA windowpane flounder is less likely to trigger the AM (less than 50% over the sub-ACL) and compared to No Action/Alternative 1, Alternative 2 would have neutral impacts on the scallop fishery since the sub-ACLS would remain the same.

Under Alternative 2 the sub-ACL for SNE/MA yellowtail flounder would be 1.2 mt more than under No Action/Alternative 2 (2.7 mt compared to 1.5 mt), potentially having positive economic impacts since FY2023 projected catch by the scallop fishery is estimated to be 3 mt (see Scallop PDT memo). Predicted catch would be high enough to trigger an AM under the No Action sub-ACL (>50% of the sub-ACL), but is unlikely that the total ACL would be exceeded for this stock since total utilization of the ACL has been very low in recent years. Impacts on the scallop fishery are likely neutral, but possibly positive, for SNE/MA yellowtail flounder under Alternative 2 compared to Alternative 1/No Action.

Under Alternative 2 the sub-ACL for GB yellowtail flounder would be 2.5 mt less than under Alternative 1/No Action (16.5 mt compared to 19 mt), potentially having positive economic impacts since FY2023 projected catch by the scallop fishery is estimated to be 32-45 mt (see Scallop PDT memo). This would be high enough to trigger an AM under No Action/Alternative 1 and Alternative 2 sub-ACL (>50% of the sub-ACL), but scallop catch may be reduced due to the gear restrictions in place in the GB area. It is unlikely that the total ACL would be exceeded for this stock since total utilization of the ACL has been very low in recent years. Impacts on the scallop fishery are likely neutral, but possibly negative, for GB yellowtail flounder under No Action/Alternative 1 compared to Alternative 2.

Midwater trawl directed Atlantic herring fishery

Alternative 1/No Action would have neutral impacts on the midwater trawl herring fishery. Sub-ACLs for GB haddock and GOM haddock would be the same under Alternative 1/No Action and Alternative 2, but default specification would expire on October 31, 2023, under No Action. After which, Alternative 2 would have positive impacts compared with Alternative 1 as a sub-ACL would be specified for the full fishing year. GB haddock catches by the herring fishery have been low in recent years – 10 mt in FY 2020 and 0.5 mt in FY 2021 due to lower herring ACLs (See Herring PDT Memo[6]).

Small-mesh fisheries

Under Alternative 2 the sub-ACL for GB yellowtail flounder for the small mesh fisheries (e.g., whiting and squid) would decrease from FY2022 levels, from 2.3 mt to 2 mt in FY 2023. This is expected to have neutral to positive economic impacts on the small mesh fishery since catches in recent years have been low.

Large Mesh non-groundfish fisheries

The southern windowpane flounder "other fisheries" sub-component is used to evaluate when an AM could be triggered for large-mesh non-groundfish fisheries (e.g., summer flounder and scup trawl fisheries). Under Alternative 2, the other sub-component would increase from 177 mt to 184 mt compared

[6] See Table 3, page 18: https://s3.us-east-1.amazonaws.com/nefmc.org/3E_221117-GF-PDT-memos-to-CMTE.pdf

to FY2022 and Alternative 1/No Action. The triggering of an AM implements gear-restricted areas (GRAs) to reduce incidental catch of windowpane flounder. If bycatch of southern windowpane flounder is low in FY2023, there would be neutral economic impacts of the sub-ACL under Alternative 2 compared to FY2022. The bycatch of southern windowpane flounder declined in FY2021, but if the catch is more in line with previous years AMs may be triggered.

The AM for southern windowpane for large-mesh non-groundfish fisheries is implemented if the large-mesh non-groundfish fishery exceeds its sub-ACL (evaluated using the "other sub-component"), and if the total ACL is exceeded by more than the management uncertainty buffer (currently set at approximately 5%).

Based on recent catches (Table 3), the other sub-component of 184 mt may be exceeded. From FY2016-FY2020, annual catches of southern windowpane by large-mesh non-groundfish fisheries ranged from 178.1 – 243.6mt but decline to 100.7 mt in FY2022.

The total ACL for S. Windowpane under No Action would be 371 mt. Based on recent catches (Table 4), this number may be exceeded in FY2022. From FY2016-FY2020, total annual catches of S. Windowpane ranged from 335.6 – 454.7mt but declined to 147.5 mt in FY2022.

Table 3. SNE/MA windowpane flounder other sub-component limits and catch (mt) and utilization rates, fishing years 2016-2021.

FY	S. Windowpane sub-ACL	S. Windowpane "other" catch	Utilization
2016	249	178.1	71.5%
2017	249	201	80.7%
2018	218	205	94.0%
2019	218	243.6	111.7%
2020	196	211.5	107.9%
2021	177	100.7	56.9%

Table 4- SNE/MA windowpane flounder total ACLs and catch (mt) and utilization rates, fishing years 2016-2021.

FY	S. Windowpane total ACL	S. Windowpane total catch	Utilization
2016	599	417.2	69.7%
2017	599	440.9	73.6%
2018	457	454.7	99.5%
2019	457	350	76.6%
2020	412	335.6	81.5%
2021	371	147.5	39.8%

6.5.2.3 Alternative 3 – Recreational Catch Target for Georges Bank Cod

6.5.2.3.1 Option 1 – No Action

Option 1 would result in no recreational catch target and therefore no change in recreational management measures . The Regional Administrator has temporary authority for FY2023 and FY2024, established through FW63, based on what the Council set for its recreational catch target in those years. Presently, there is no GB cod recreational cod catch target for FY2023 and FY2023. Therefore, the sub-component analysis of state waters and other fisheries catch components would be used on its own. These components would be combined 230.4 mt for FY2023 and FY2024 in each year, based on the recent 3-year average of state/other fisheries catch.

Impacts to the commercial groundfish fishery

Option 1/No Action is expected to have negative economic impacts on the commercial fishery, relative to Options 2-5 because the alternative would maintain the GB cod catch target management measures developed for a 75 mt catch target but shift more catch into the sub-components for state and other fisheries Option 1/No Action would result in a smaller commercial fishery quota relative to Options 2-5. Unless recreational management measures are made considerably more constraining, incoming recreational catch data may easily exceed the catch target and possibly lead to overages in the fishery, which may directly affect commercial allocations in subsequent fishing years.

Impacts to the recreational groundfish fishery

Option 1/No Action is expected to have neutral economic impacts on the recreational fishery, relative to Option 2 because the alternative would maintain the GB cod catch target management measures developed for a 75 mt catch target unless measures are adjusted by the Regional Administrator. The impacts of any adjustments made by the Regional Administrator are uncertain. Impacts relative to Options 3-5 are expected to be negative because more restraining recreational measures would be in place relative to measures developed under the higher catch target options, Options 3-5. Negative economic impacts would be incurred if management measures are more restrictive under Option 1/No Action compared with Options 3-5 as both for-hire fishery revenues and private angler welfare would be expected to be lower.

6.5.2.3.2 Option 2 – Maintain the Status Quo

Option 2 would maintain the current recreational catch target for GB cod of 75 mt for FY2023-FY2024.

Impacts to the commercial groundfish fishery

Option 2 is expected to have neutral economic impacts on the commercial fishery, relative to No Action/Option 1 because the alternative would maintain the GB cod catch target management measures developed for a 75 mt catch target unless measures are adjusted by the Regional Administrator. The impacts of any adjustments made by the Regional Administrator are uncertain. Impacts relative to Options 3-5 are expected to be positive because Option 2 would result in a greater commercial fishery quota relative to Options 3-5. Unless recreational management measures are made considerably more constraining, incoming recreational catch data may easily exceed the catch target and possibly lead to overages in the fishery, which may directly affect commercial allocations in subsequent fishing years.

Impacts to the recreational groundfish fishery

Option 2 is expected to have neutral economic impacts on the recreational fishery, relative to Option 1/No Action because the alternative would maintain the GB cod catch target management measures developed for a 75 mt catch target unless measures are adjusted by the Regional Administrator. The impacts of any adjustments made by the Regional Administrator are uncertain. Impacts relative to Options 3-5 are expected to be negative because more restraining recreational measures would be developed to attempt to constrain fishing efforts within the target. Negative economic impacts would be incurred if management measures are more restrictive under Option 2 compared with Options 3-5 as both for-hire fishery revenues and private angler welfare would be expected to be lower.

6.5.2.3.3 Option 3 – Revised Recreational GB Cod Catch Target Based on Recent Catches

Option 3 would revise the current recreational catch target for GB cod to be 92 mt for FY2023-FY2024.

Impacts to the commercial groundfish fishery

Option 3 is expected to have negative economic impacts on the commercial fishery, relative to Option 2, but positive economic impacts relative to Option 1/No Action, Option 4 and Option 5. Option 3 would result in a greater commercial fishery quota relative to Option 1/No Action, Option 4 and Option 5. Unless recreational management measures are made considerably more constraining, incoming recreational catch data may easily exceed the catch target and possibly lead to overages in the fishery, which may directly affect commercial allocations in subsequent fishing years.

Impacts to the recreational groundfish fishery

Option 3 is expected to have positive economic impacts on the recreational fishery, relative to Option 2. Impacts of Option 3 relative to Option 4 and Option 5 are expected to be negative because more restraining recreational measures would be developed to attempt to constrain fishing efforts within the target. Negative economic impacts would be incurred if management measures are more restrictive under Option 3 compared with Option 4 and Option 5 as both for-hire fishery revenues and private angler welfare would be expected to be lower.

6.5.2.3.4 Option 4 – Revised Recreational GB Cod Catch Target Based on a Recent Percentage of US Fisheries Catches

Option 4 would revise the current recreational catch target for GB cod to be 159 mt for FY2023-FY2024.

Impacts to the commercial groundfish fishery

Option 4 is expected to have positive economic impacts on the commercial fishery, relative to No Action/Option 1, and negative impacts when compared with Option 2, Option 3, and Option 5. Option 4 would result in the lowest commercial fishery quota relative to Options 2, 3 and 5. Unless recreational management measures are made considerably more constraining, incoming recreational catch data may easily exceed the catch target and possibly lead to overages in the fishery, which may directly affect commercial allocations in subsequent fishing years.

Impacts to the recreational groundfish fishery

Option 4 is expected to have positive economic impacts on the recreational fishery, relative to Option 1/No Action, Option 2, Option 3, and Option 5. Impacts relative to all other Options are predicted to be the least constraining. The recreational measures developed under Option 4 would be less constraining than measures developed for all other Options but would still attempt to constrain fishing efforts within the target. Positive economic impacts would be incurred if management measures are less constraining under Option 4 compared with Option 1/No Action, Option 2, Option 3, and Option 5 as both for-hire fishery revenues and private angler welfare would be expected to be higher.

6.5.2.3.5 Option 5 – Revised Recreational GB Cod Catch Target Based on a Reduction from Recent Catches

Option 4 would revise the current recreational catch target for GB cod to be 113 mt for FY2023-FY2024.

Impacts to the commercial groundfish fishery

Option 5 is expected to have positive economic impacts on the commercial fishery, relative to No Action/Option 1 and Option 4, but negative relative to Option 2 and Option 3. Option 5 would result in a greater commercial fishery quota relative to Option 4. Unless recreational management measures are

made considerably more constraining, incoming recreational catch data may easily exceed the catch target and possibly lead to overages in the fishery, which may directly affect commercial allocations in subsequent fishing years.

Impacts to the recreational groundfish fishery

Option 5 is expected to have positive economic impacts on the recreational fishery relative to No Action/Option 1, Option 2, and Option 3. Impacts relative to Option 4 are expected to be negative because more restraining recreational measures would be developed to attempt to constrain fishing efforts within the target. Negative economic impacts would be incurred if management measures are more restrictive under Option 5 compared with Option 4 as both for-hire fishery revenues and private angler welfare would be expected to be lower.

6.5.3 Action 3 – Acceptable Biological Catch Control Rules

6.5.3.1 Alternative 1 – No Action

Impacts to the Commercial Groundfish Fishery

Impacts to the Recreational Groundfish Fishery

6.5.3.2 Alternative 2 – Revised Acceptable Biological Catch Control Rules

Impacts to the Commercial Groundfish Fishery

Impacts to the Recreational Groundfish Fishery

6.5.4 Action 4 – Commercial and Recreational Fishery Management Measures – Gulf of Maine Cod

6.5.4.1 Alternative 1 – No Action

Impacts to the Commercial Groundfish Fishery

Impacts to the Recreational Groundfish Fishery

6.5.4.2 Alternative 2 – Additional Measures to Promote Gulf of Maine Cod Stock Rebuilding

Impacts to the Commercial Groundfish Fishery

Impacts to the Recreational Groundfish Fishery

6.5.5 Action 5 – Commercial and Recreational Fishery Management Measures – Georges Bank Cod

6.5.5.1 Alternative 1 – No Action

Impacts to the Commercial Groundfish Fishery

Impacts to the Recreational Groundfish Fishery

6.5.5.2 Alternative 2 – Additional Measures to Promote Georges Bank Cod Stock

Rebuilding

Impacts to the Commercial Groundfish Fishery

Impacts to the Recreational Groundfish Fishery