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I. INTRODUCTION

The Commonwealth of Massachusetts, which sits on the New England Fishery Management Council (“NEFMC,” “the Council”), now joins the Plaintiffs in asking this Court to overturn Amendment 16, although Massachusetts participated in the creation of that amendment and voted to approve it. Massachusetts joins several of the arguments that we have already responded to, including the claim that NMFS must ignore its obligation to rebuild overfished stocks in order to obtain “optimum yield” from the fishery as a whole, and the argument that NMFS failed to fully analyze the economic effects of Amendment 16. Massachusetts also relies extensively on extra-record evidence (including extra-record hearsay) that NMFS never had the opportunity to review before it approved Amendment 16, and which the Court cannot properly consider here. Massachusetts argues that NMFS has failed to update the catch limits for this fishery, even though NMFS has already revised these catch limits in response to new scientific information several times and the regulations define a process to update the catch limits regularly. Finally, Massachusetts argues that NMFS could have set higher catch limits here if it had ignored known errors in the data, if it had made assumptions that are overly-optimistic and likely to result in overfishing, and if it had ignored its obligations to rebuild overfished stocks. For the reasons discussed below, the Court should reject all of these arguments.

II. ARGUMENT

A. Massachusetts has relied on improper extra-record evidence.

Massachusetts has relied extensively on post-decisional, extra-record evidence to attack NMFS’s decision to partially approve Amendment 16, and the Court cannot properly consider that evidence here. In fact, Massachusetts’ brief is based almost entirely on a report prepared by its Division of Marine Fisheries, but that report was not completed until November 5, 2010, more than six months after the agency took the actions being challenged here, and after this action was

filed and the administrative record assembled. Massachusetts Marine Fisheries Institute, A Report on Economic and Scientific Conditions in the Massachusetts Multispecies Groundfishery, Docket No. 79-1 (*filed* Feb. 4, 2011) (“Mass. Rep.”). NMFS could not have considered that report when it took these actions, and it is not properly part of the record. As we already discussed at length in our oppositions to the Plaintiffs’ requests for discovery, this Court’s review of these agency actions is limited to the administrative record, and it cannot properly consider this report here. *See, generally*, Docket Nos. 28 (Sept. 23, 2010), 44 (Oct. 15, 2010), 48 (Oct. 28, 2010). For these reasons, the Federal Defendants hereby move to strike both the report and those portions of Massachusetts’ brief that rely on it.

For its part, Massachusetts does not argue that this report is (or should be) part of the administrative record. It does not deny that this is a record review case, but it does not explain why it believes that the Court may consider this extra-record evidence. It does venture, however, that it is not improper for the Court to consider this report because it relies “primarily” on “data that were available to the Secretary before he promulgated Amendment 16” Brief, *Amici Curiae*, Filed by Attorney General Martha Coakley on Behalf of Deval Patrick as the Governor of the Commonwealth of Massachusetts and Paul Diodati as the Director of the Division of Marine Fisheries for the Commonwealth, Docket No. 79 (Feb. 4, 2011) (“Mass. Br.”) at 7; *id.* at 17 n.15.

It is true that some of the data that Massachusetts relied on here is “pre-decisional” and was before the agency when it promulgated Amendment 16. Part of this report challenges the science that the Council and NMFS used to set catch limits for this fishery. Mass. Rep. at 12-16. As the Secretary of Commerce found, that part of the report does not present any “new scientific data,” but rather presents “alternative methods for evaluating the scientific data” that “were

previously considered and rejected by the Council.” Docket No. 79-3. But while that part of the report does not present new, post-decisional data, it is still inappropriate for the Court to consider it because it constitutes extra-record expert testimony interpreting that data and because it has been submitted to attack the validity of the agency’s decision. *See* Mass. Br. at 19 (noting that Massachusetts has submitted this report because it “corroborates” its arguments).

Extra-record evidence is **never** admissible to attack the “correctness or wisdom” of the agency’s decision.¹ *See, e.g., Northwest Env’tl. Advocates v. NMFS*, 460 F.3d 1125, 1144-45 (9th Cir. 2006); *Asarco, Inc. v. EPA*, 616 F.2d 1153, 1160 (9th Cir. 1980); *Environmental Def. Fund v. Costle*, 657 F.2d 275, at 286 (D.C. Cir. 1981) (holding that “a judicial venture outside the record” can “never, under *Camp v. Pitts*, examine the propriety of the [agency’s] decision itself.”). Under the standard of review that applies here, the Court is not called on to resolve a “battle of the experts” between the experts at Massachusetts’ Division of Marine Fisheries and the experts at NMFS. The Court is not called on to conduct its own *de novo* review or to hear the evidence and reach its own conclusions on these highly-technical scientific issues. Instead, the Court’s role is to determine whether the agency’s decision was rational based on the administrative record that was before the agency when that decision was made.

These are the fundamental principles of administrative law. In that context, the courts have repeatedly recognized that considering extra-record evidence that attacks the “correctness or wisdom” of the agency’s decision—like this report—would “inevitably lead[] the [reviewing] court to substitute its judgment for that of the agency.” *Asarco, Inc. v. EPA*, 616 F.2d 1153, 1160 (9th Cir. 1980). If the Court were to consider this report, it would be “obvious” that it was proceeding without “the proper deference to agency processes, expertise, and decision-making.”

¹ There are narrow exceptions to the record review rule, but this report does not fall within them and Massachusetts has not even tried to invoke them here.

Lands Council v. Powell, 395 F.3d 1019, 1030 (9th Cir. 2005); *Environmental Def. Fund*, 657 F.2d at 285-86 (holding that the court may not consider extra-record evidence to “determine the correctness or wisdom of the agency’s decision,” even if “the court has also examined the administrative record,” and that there is no exception that allows plaintiffs “to submit affidavits addressing the merits and propriety of the agency decision.”). So as Massachusetts notes, the scientific part of this report relies entirely on “data that were available to the Secretary before he promulgated Amendment 16.” But that fact is irrelevant—and the report is still inadmissible—because the report is extra-record expert witness testimony intended to challenge the validity of the agency’s decision.

The rest of the report describes Massachusetts’ analysis of the alleged economic effects of Amendment 16. Mass. Rep. at 5-12. That part of the report does not rely “primarily” on “data that were available to the Secretary before he promulgated Amendment 16.” To the contrary, it relies entirely on post-decisional, extra-record data. It uses landings and revenue data for the first five months of FY 2010 (that is, May through September). Mass. Rep. at 6. Because Amendment 16 was promulgated on April 9, 2010, the agency could not have considered any of that data. The report also relies on post-decisional hearsay from “interviews” that Massachusetts has conducted with various representatives of the fishing industry since Amendment 16 was adopted. *See, e.g.*, Mass. Rep. at 2-3 (citing “Northeast Seafood Coalition, Vito Giacalone pers. comm.”); *id.* at 4 (citing “interviews with Massachusetts sector managers and representatives.”); *id.* at 10 (“Interviews with some sector managers and administrators of the Northeast Seafood Coalition were conducted to determine 2010 fisheries performance under the sector program.”). This evidence is inadmissible and irrelevant because the Court’s role here is not to assess the economic effects of Amendment 16 (although, as Massachusetts itself concedes, revenues for the

first five months of this fishing year have actually increased over last year's revenues, Mass. Rep. at 2). Again, the Court's role is to review Amendment 16 and its administrative record and to decide whether NMFS had a rational basis for its promulgation of these regulations when that decision was made. For all of these reasons, Massachusetts has relied on improper extra-record evidence, and both this report and those portions of Massachusetts' brief that rely on it should be stricken.

B. NMFS's approval of Amendment 16 complies with the Magnuson-Stevens Act.

1. National Standard 1 does not allow NMFS to ignore its obligation to rebuild the remaining overfished stocks in this fishery.

Like the Plaintiffs and other *amici*, Massachusetts argues that the Magnuson-Stevens Act requires NMFS to set catch limits that achieve "optimum yield" for the fishery as a whole, even if those limits will allow prolonged overfishing to prevent the rebuilding of some stocks. *See* Mass. Br. at 11-16. Massachusetts argues that rebuilding what it calls "choke stocks"—which it defines as any stock that needs rebuilding—is preventing fishers from "fully pursuing healthy stocks . . . and thereby achieving [optimum yield]." Mass. Br. at 19; Mass. Br. at 9 (defining "choke stocks" as "the stocks that need to rebuild"). Massachusetts extends this argument somewhat by claiming that NMFS must achieve optimum yield not just for the fishery as a whole, but also for "Massachusetts commercial fishermen" in particular. Mass. Br. at 10 n.11. These arguments are wrong and ignore the rebuilding requirements of the Act, and we have already responded to them at length in our consolidated opposition (and incorporate those arguments by reference here). Docket No. 76 at 22-28. Massachusetts also suggests that NMFS should have invoked the "mixed-stock exception" here, but as we have already explained, both

the Council and NMFS considered and rejected the application of that exception to this fishery. *Id.* at 28 n.9.

2. NMFS has already updated these catch limits to address new scientific information and will continue to do so.

Next, Massachusetts argues that Amendment 16 is unlawful because it does not include “contingency plans for recalculating [annual catch limits (‘ACLs’)] as required by National Standard Six.” Mass. Br. at 21; *see, generally, id.* at 21-25. According to Massachusetts, NMFS “should have included plans for reassessing in a timely way whether [ACLs] and optimum yield [] needed to be recalculated as new scientific information became available.” Mass. Br. at 23.

These claims are without merit because they ignore both Amendment 16 and the Magnuson-Stevens Act itself. The Magnuson-Stevens Act requires NMFS to review these annual catch limits at least every two years, 16 U.S.C. § 1854(e)(7), and Amendment 16 creates a process to do just that. *See, generally*, AR 773 at 47844-46; AR 997 at 56573-77; 50 C.F.R. § 648.90(a). It requires the Council’s Plan Development Team (“PDT”) to develop new catch limits for the fishery “every other year” based on “the most current scientific information available,” including data on “[c]atch and landings, discards, [days-at-sea] allocations, [days-at-sea] use, sector operations, and other measures of fishing effort; survey results; stock status; current estimates of fishing mortality and overfishing levels; social and economic impacts; enforcement issues; and any other relevant information.” 50 C.F.R. § 648.90(a)(2). It also sets a strict schedule for the Council to review the Plan Development Team’s new catch limits and for NMFS to adopt regulations implementing the revised catch limits approved by the Council. 50 C.F.R. § 648.90(a)(2)(i)-(vii). Finally, it requires the Plan Development Team to prepare a “Stock Assessment and Fishery Evaluation” (“SAFE”) report every year. 50 C.F.R. § 648.90(a)(1). That SAFE report is “the primary vehicle for the presentation of all updated

biological and socio-economic information regarding the NE multispecies complex” and can be the basis for setting new ACLs. *Id.* Thus, contrary to Massachusetts’ claims, Amendment 16 does include “contingency plans for recalculating ACLs” every two years, just as the Magnuson-Stevens Act requires.

Moreover, in addition to this regular review, the Council “may, at any time, initiate action . . . to adjust management measures” through the “framework procedure”—indeed, as the title “Framework 44” suggests, the Council has already used that procedure more than 44 times in this fishery. *See* 50 C.F.R. § 648.90(c). And if the Council fails to act, or if there is not enough time to complete the framework procedure, NMFS also has emergency authority to reassess these catch limits as new scientific information becomes available and implement adjustments. *See* 16 U.S.C. § 1855(c).

In fact, NMFS has already exercised that emergency authority since Amendment 16 was adopted to significantly increase the catch limit for pollock. 75 Fed. Reg. 41,996 (July 20, 2010); *see also* 75 Fed. Reg. 74,661 (Dec. 1, 2010); 16 U.S.C. § 1855(c). Pollock was initially characterized as both overfished and subject to overfishing, but it was also recognized that there was a “high uncertainty” associated with that determination. 75 Fed. Reg. 41,997. When new scientific information became available on the status of the pollock stock (specifically, trawl survey data), the Council’s Scientific and Statistical Committee (“SSC”) promptly reviewed that data and concluded that the stock was neither overfished nor subject to overfishing. *Id.* NMFS then used its emergency authority to increase the catch limit for pollock to six times the level initially set by Amendment 16: from 2,748 metric tons to 16,553 metric tons. *Id.* That increase could mean as much as an additional \$15 million in revenues in FY 2010. *Id.* at 41,998.

As we discussed in our opening brief, NMFS also increased the catch limit for the Gulf of Maine winter flounder based on corrections to the landings history data. Docket No. 76 at 53; AR 1001 at 56725. NMFS has repeatedly reaffirmed that it is “prepared to respond quickly to new information on stock status” and that it “will work with the Council to make changes in the most expeditious manner possible.” AR 1010 at 56759. So contrary to Massachusetts’ claims, Amendment 16 does not need additional “contingency plans” to recalculate these catch limits as new scientific information emerges because such a mechanism is already built into the law.² *See* 16 U.S.C. § 1855(c).

But Massachusetts argues that it is not enough for the Council and NMFS to re-evaluate these catch limits every two years, or for the Council to use the framework procedure when needed, or for NMFS to use its emergency authority to revise catch limits in light of new scientific information (as it has already done). Instead, Massachusetts suggests that the Council and NMFS must do something more, although it does not explain exactly what it believes they must do. *See* Mass. Br. at 24.

Massachusetts’ argument, however, does not find any support in the law. Massachusetts relies heavily on National Standard Six, Mass Br. at 22, which simply states that “[c]onservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.” 16 U.S.C. § 1851(a)(6). Nothing in that standard addresses how frequently catch limits must be revised in light of new scientific information.

² NMFS also has other relevant tools at its disposal: for example, if it appears that these catch limits will not be met, Amendment 16 allows NMFS to permit more fishing by applying differential days-at-sea, that is, by allowing fishers to count each day-at-sea as only one-half of a day against their quota. AR 1001 at 56731-32 (codified at 50 C.F.R. § 648.82).

Similarly, Massachusetts cites the guidelines for National Standard Six, which state that “[c]ontinual data acquisition and analysis will help the development of management measures to compensate for variations and to reduce the need for substantial buffers.” Mass. Br. at 22 (citing 50 C.F.R. § 600.335(b)). Again, this language does not address how frequently catch limits should be revised. Moreover, Amendment 16 already includes regulations for “continual data acquisition and analysis,” as we discussed above. And in any event, this excerpt from the guidelines is merely a descriptive statement that does not impose any obligation on the agency. *See* 50 C.F.R. § 600.305(c)(6) (noting that the word “will” is “used descriptively, as distinguished from denoting an obligation to act . . .”).

The remaining provisions of the Act cited by Massachusetts describe general requirements for all fishery management plans (for example, that such plans must “assess and specify . . . the extent to which fishing vessels . . . will harvest the optimum yield . . .”), but none of these provisions suggests that the Council or NMFS have not met their obligations to reassess catch limits as new information and data become available. *See* Mass. Br. at 22-23 (citing 16 U.S.C. §§ 1853(a)(3), (4)(A), (8), (9) and (15)). To the contrary, these provisions of Amendment 16 are entirely consistent with the Act, which expressly state that NMFS must review Amendment 16, including its catch limits, “at routine intervals that may not exceed two years.” 16 U.S.C. § 1854(e)(7).

No court has ever adopted Massachusetts’ interpretation of the law. Massachusetts cites only a single case in support of this argument: *J.H. Miles & Co. v. Brown*, 910 F. Supp. 1138, 1155 (E.D. Va. 1995). But far from supporting Massachusetts’ arguments, that court actually rejected a challenge to a fishing quota brought under National Standard Six, and certainly did not hold that National Standard Six requires NMFS to make additional “contingency plans for

recalculating ACLs,” as Massachusetts claims.³ *Id.* at 1155 (noting that “[t]his count can be disposed of without much discussion.”).

As we have discussed above, NMFS is already engaged in “continual data acquisition and analysis” under Amendment 16 through its preparation of annual SAFE reports, through its biennial review of the amendment, and through its use of its emergency authority to respond to new scientific information. Massachusetts’ real complaint seems to be that NMFS did not recalculate these ACLs based on the report that Massachusetts submitted to the Secretary of Commerce (which, as Massachusetts concedes, is an issue that is not before this Court). *See* Docket Nos. 79-1, 79-2, and 79-3. But as the Secretary concluded, that report did not present “new scientific data that would justify increasing the catch limits,” but rather presented “alternative methods for evaluating the scientific data” that “were previously considered and rejected by the Council.” Docket No. 79-3. Thus, Massachusetts’ arguments fail because Amendment 16 defines a process to reassess these catch limits every two years, as the Magnuson-Stevens Act requires, and because NMFS has updated these catch limits to address new scientific information and will continue to do so.

3. NMFS used the best scientific information available to set these catch limits.

Massachusetts argues that NMFS has set annual catch limits (“ACLs”) that are “not supported by [its] own data or ‘the best scientific information available’ in violation of National Standard Two.” *Mass. Br.* at 10; *see, generally, id.* at 16-21. Specifically, Massachusetts claims that NMFS did not “adequately consider[] data that would have allowed [it] to set . . . higher [annual catch limits],” *Mass. Br.* at 17, although Massachusetts does not actually identify any

³ In fact, this case did not address the role of new scientific information at all, because the survey data at issue was before the agency when it set the challenged fishing quota. *J.H. Miles*, 910 F. Supp. at 1155 (noting that the agency had considered the cited data).

data that NMFS failed to consider. Instead, Massachusetts appears to be arguing that NMFS could have set higher catch limits if it had interpreted the data differently. Massachusetts is not arguing that NMFS interpreted the data incorrectly, but simply that NMFS's interpretation was more conservative than Massachusetts claims that the science required (which, even if it were true, is irrelevant under the "arbitrary and capricious" standard of review that applies here). To support this claim, Massachusetts presents three highly-technical arguments:

- It claims that NMFS consistently underestimated the level of fishing mortality that could be allowed in this fishery (that is, the rate of fishing mortality at the maximum sustainable yield, or F_{msy}) by relying on "calculations of a proxy" to estimate F_{msy} instead of "direct estimates [based] on extant 2002 data" Mass. Br. at 18.
- It argues that NMFS underestimated the "stock size for some stocks" by using "more conservative 'GARM III' stock assessments instead of the alternative 'base case' assessments." Mass. Br. at 18.
- And it contends that the Council was "doubly-precautious" when it applied a 25% buffer to account for scientific uncertainty because doing so allegedly "accounts for the same variable at least twice." Mass. Br. at 18.

Taking all three of these arguments together, Massachusetts claims that NMFS might have been able to set catch limits that were between 69% and 236% higher for some stocks. Mass. Br. at 20.

Massachusetts is wrong for several reasons. First, Massachusetts ignores the fact that it is the Council, not NMFS, that developed and recommended these catch limits, and NMFS must approve the Council's recommendations unless they are inconsistent with applicable law. *See* 16 U.S.C. § 1854(a). Importantly, the Council considered—and rejected—all of the interpretations of the data advanced by Massachusetts here. The first two issues (the F_{msy} proxy and "base case" assessments) were resolved by the Third Groundfish Assessment Review Meeting ("GARM III"), a year-long effort by 22 of the world's leading fishery scientists to undertake the "most comprehensive review" of these stocks ever conducted. Those scientists held four meetings,

each lasting a week, that were attended by nearly 200 people (including experts representing the fishing industry), and during which 140 working papers were presented by more than 80 scientists. The GARM III's final report and its appendices fills more than 2,000 pages. AR 320 at 18984, 19881; *see, generally*, AR 320 (report of the GARM III); AR 342 (appendices).

The Council adopted the work done by the GARM III, AR 773 at 47831, as did NMFS, AR 914 at 54859, which concluded that it “represents the best scientific information available” AR 997 at 56487. The third issue (the 25% buffer for scientific uncertainty) was resolved by the Council itself, based in part on its conclusion that this management strategy has “been evaluated for many worldwide fisheries, and consistently perform[s] well for avoiding overfishing and producing nearly maximum long-term yield” AR 615 at 43348. The argument that NMFS “did not adequately consider” these issues or that there is “almost no explicit explanation” for their resolution in the administrative record is meritless. *See Mass. Br.* at 20-21.

Second, there are limits on how much discretion the Council and NMFS have in setting these catch limits. The Magnuson-Stevens Act expressly states that the annual catch limits adopted by the Council “may not exceed the fishing level recommendations of its scientific and statistical committee” 16 U.S.C. § 1852(h)(6); *see also* 50 C.F.R. § 600.310(b)(2)(v)(D) (stating that “[e]ach Council shall develop ACLs for each of its managed fisheries that may not exceed the ‘fishing level recommendations’ of its SSC or peer review process”). Once the Scientific and Statistical Committee had recommended the “acceptable biological catch” (“ABC”) levels used here, the Council could not adopt annual catch limits higher than those ABCs as a matter of law, and it could not have adopted the catch limits that Massachusetts advocates in its brief. AR 997 at 56490 (“As required by the Magnuson-Stevens Act, the

Council must adopt ACLs that are equal to or lower than the ABC recommended by the SSC, taking into account management uncertainty.”); AR 1001 at 56717.

Third, even if Massachusetts’ claims were true, the Plaintiffs would still not be entitled to summary judgment. Massachusetts does not appear to argue that NMFS’s approval of these catch limits was “arbitrary and capricious,” only that the agency “might” have been able to set higher catch limits if it had interpreted the data differently. *See, e.g.*, Mass. Br. at 17 (arguing that NMFS “could have made different more scientifically supportable analytical choices for acceptable biological catch”); Mass. Br. at 19 (arguing that NMFS “could have made less conservative, but still scientifically-sound and conservation minded decisions”); Mass. Rep. at 3 (claiming that “there are alternatives within the best available science for calculating and setting higher than current ACLs for 2010.”); Mass. Rep. at 15 (claiming that “reconsideration of ACLs may be justifiable”).

Under the standard of review that applies here, however, the question is not whether the Council and NMFS could have set different catch limits, but whether the catch limits that NMFS approved are rational and supported by the administrative record. The fact that there could be some other plausible interpretation of this data is irrelevant—even if the Court itself might somehow find such an interpretation more persuasive. *See, e.g., Greenpeace Action v. Franklin*, 14 F.3d 1324, 1332 (9th Cir. 1992) (holding that “an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive.”). Thus, even if Massachusetts were right that there were other, less conservative interpretations of this data, that would still not show that NMFS’s approval of these catch limits was “arbitrary and capricious.”⁴ These arguments also again ignore the fact

⁴ Massachusetts claims that NMFS “consistently opted for the most conservative calculus,” Mass. Br. at 18, but, as we discuss below, each of these technical issues was resolved by the Council, and the Council made its decisions

that it is the Council, not NMFS, that recommends catch limits, and it was the Council, not NMFS, that adopted these interpretations of the data. NMFS was required to approve them as long as they were consistent with applicable law, and it did not have the authority to unilaterally adopt its own interpretations of the data.

We turn now to the three technical arguments made by Massachusetts in its brief:

a. NMFS rationally used $F_{40\%msp}$ as a proxy for F_{msy} .

As Massachusetts notes, the Council and NMFS used a proxy to estimate F_{msy} for many of these stocks and not a “direct estimate.” Mass. Br. at 18. The GARM III considered this issue at length. *See, e.g.*, AR 320 at 19011-12; AR 342 at 22238-41. It recommended the use of direct estimates to compute F_{msy} (which it referred to as the “parametric approach”) where “the stock-recruitment relationship derived from an assessment was informative” AR 320 at 19012. That is, the GARM III recommended using direct estimates, but also explained that scientists can only make such estimates when they have enough data to accurately define the “stock-recruitment relationship” for the stock. AR 342 at 22239-40.

Unfortunately, the GARM III reviewed the available data and found that “most of the groundfish assessments did not display compelling support for any particular functional form of stock recruitment (SR) relationship, and the SR parameters were generally poorly determined.” AR 320 at 19012. Because the stock-recruitment models did not fit the data very well, the GARM III concluded that they were not likely to provide accurate direct estimates of F_{msy} . *See* AR 320 at 19011-12.

based on the science and not simply to set conservative catch limits. As NMFS has explained, these reduced catch limits were compelled by “(1) [t]he status of the stocks in the fishery and the fishing mortality rates; (2) the multispecies nature of the fishery; and (3) the selectivity of the fishery,” and not by “an overly precautionary interpretation” of the Act. AR 1001 at 56725. Moreover, even if NMFS had adopted a “conservative calculus,” that would not have rendered its decision unlawful or “arbitrary and capricious”—Congress has given the agency the discretion to choose from the range of permissible alternatives.

Because accurate stock-recruitment relationships could not be identified, the GARM III recommended the use of a proxy to estimate F_{msy} instead of a direct estimate. AR 320 at 19012; AR 342 at 22240. That is consistent with NMFS’s guidelines for National Standard 1, which require the use of “reasonable proxies for . . . F_{msy} ” when “data are insufficient to estimate MSY directly”⁵ 50 C.F.R. § 600.310(e)(1)(iv). Here, the GARM III recommended the use of $F_{40\%msp}$ as a proxy for F_{msy} . AR 320 at 19012; AR 342 at 22240. As we discussed in our opening brief, F_{msy} is the rate of fishing mortality at the “maximum sustainable yield,” which is the basis for fisheries management under the Magnuson-Stevens Act. Docket No. 76 at 5-6; 50 C.F.R. § 600.310(b)(2)(i); 50 C.F.R. § 600.310(e)(1)(i) (defining MSY).

$F_{40\%msp}$ is not simply 40% of the maximum sustainable yield. Rather, it is an entirely different concept. The “msp” stands for “maximum spawning potential,” which is an estimate of the amount of fish that would be spawned by the stock if there were no fishing (and the stock was in “equilibrium”). $F_{40\%msp}$ means the fishing mortality rate that would produce a stock biomass that is 40% of that maximum spawning potential. $F_{40\%msp}$ is not necessarily less than F_{msy} —as we discussed in our opening brief, a fishery will always produce a greater yield at some level of biomass less than the maximum spawning potential because fishing thins out the population of slow-growing “older, larger fish” that would otherwise prevent “all but a small percentage of the [fast-growing] young fish produced each year from surviving” *See* Docket No. 76 at 5; Docket No. 76-1 at 2.

⁵ Massachusetts tries to reverse this language, claiming that a proxy may be used “**only** [w]hen the data are insufficient to estimate MSY directly” Mass. Br. at 18 (emphasis added). In fact, the regulations say that a proxy “should” be used “[w]hen data are insufficient,” not that those are the “only” circumstances when a proxy may be used. 50 C.F.R. § 600.310(e)(1)(iv). But it does not matter, in any event, because the GARM III, the Council, and NMFS all rationally concluded that the data here are “insufficient to estimate MSY directly” and that it was therefore necessary and appropriate to use a proxy.

The GARM III chose $F_{40\%msp}$ as a proxy for F_{msy} based on a study prepared by NMFS's Northeast Fisheries Science Center (the "Science Center").⁶ AR 342 at 22240, 22256 (citing National Marine Fisheries Service, Re-Evaluation of Biological Reference Points for New England Groundfish, Northeast Fisheries Science Center Reference Document 02-04 (Mar. 2002) ("NEFSC Rep.") (attached hereto as Exh. 1). In that study, the Science Center developed a "model-free (empirical non-parametric) approach" for estimating F_{msy} . NEFSC Rep. at v. It chose $F_{40\%msp}$ as a proxy "based on several published studies of spawning potential requirements associated with sustainable fisheries."⁷ *Id.* at v.; *see, generally, id.* at 15-16. As the Science Center explained, several scientific studies support the use of $F_{40\%msp}$ as a proxy and, based on its review of those studies, it concluded that higher rates of fishing "may be too high to sustain stocks in the long term" (and thus would be inconsistent with providing the maximum **sustainable** yield). *Id.* at 15-16.

Of course, Massachusetts argues that $F_{40\%msp}$ "consistently underestimate[s]" F_{msy} , but it does not explain that argument or even provide any basis for it (except to note that " F_{msy} is the legal definition of overfishing . . .").⁸ *See* Mass. Br. at 18; Mass. Rep. at 13-14. For the reasons discussed above, a direct estimate of F_{msy} may or may not be more conservative than an estimate made using $F_{40\%msp}$ as a proxy depending on the exact status of the stock at issue. But in any event, the GARM III, the Council, and NMFS all reviewed this issue and concluded that,

⁶ This report was not included in the administrative record because, while it addresses this fishery, it was not specific to the development of Amendment 16 and because it is one of a great many scientific papers that make up the general fisheries science that underlies Amendment 16. Nonetheless, the Court may properly consider it here because it is part of the science that NMFS relied upon in developing Amendment 16. The report is also available at <http://www.nefsc.noaa.gov/publications/crd/crd0204/>.

⁷ The GARM III used $F_{50\%msp}$ as a proxy for one stock—redfish—because that species is long-lived and slow-growing.

⁸ Massachusetts also appears to be relying on an analysis done in 2002 (based on data from 2001) for its estimates of F_{msy} . Mass. Rep. at 13. There have been significant changes in many of these stocks since then and that analysis is now outdated.

because they could not define an accurate stock-recruitment relationship for most of these stocks, it was more appropriate to use a proxy to estimate F_{msy} than a “direct estimate.” In the end, the F_{msy} for all of these stocks except halibut were estimated using a proxy. AR 320 at 19012; AR 342 at 22240. For all of the reasons discussed above, NMFS’s decision to use that proxy is rational and supported by the “best scientific information available.”

b. NMFS rationally relied on the GARM III stock assessments, which correct for “retrospective patterns.”

Massachusetts argues that NMFS underestimated the “stock size for some stocks” by using “more conservative ‘GARM III’ stock assessments instead of the alternative ‘base case’ assessments.” Mass. Br. at 18. The issue here is that the GARM III, after considering this question at length, decided to correct for “retrospective patterns” in its assessments of many of these stocks. *See, generally*, AR 320 at 18995-96; AR 342 at 22234-35; AR 346 at 22356-69, 22405-6. A “retrospective pattern” is a “consistent change in estimated quantities that occurs when additional years of information are added to a model.” AR 346 at 22356. This kind of retrospective pattern can be seen in the charts at AR 346 at 22357-58, for example, where as each year of additional data is added to the model, its estimates of the stock’s biomass—even its past estimates of the stock’s biomass—are revised lower. A retrospective pattern tell us that something is happening in the fishery that is not accounted for in the model: the GARM III scientists concluded that these patterns might be caused by “unrecorded changes in catches,” a “change in natural mortality,” or a “change in fishery selectivity.” AR 320 at 18995; AR 346 at 22367.

For each stock, the GARM III quantitatively assessed the strength of the retrospective patterns by comparing the “base case” assessment with an assessment that corrected for the pattern. *See, e.g.*, AR 320 at 19023-29 (comparing “base model” to “split model” for Georges

Bank cod); *see also* AR 346 at 22346, 22359, 22368. For seven stocks, the GARM III concluded that the retrospective pattern was “severe enough that an adjustment to the population numbers and fishing mortality in 2007 was deemed necessary before determining current stock status and subsequently conducting projections.” AR 346 at 22407; AR 320 at 18995; *see also, e.g.*, AR 320 at 19028 (addressing retrospective pattern for Georges Bank cod).

In each case where the GARM III corrected for the retrospective pattern, the new estimates of biomass for the stock were lower: in some cases, half as much as the original estimates. AR 346 at 22357. Correcting these assessments also resulted in higher estimates of fishing mortality. AR 346 at 22358; AR 320 at 18996. In fact, the status of four of the seven stocks changed as a result of these corrections: they were reclassified as being overfished or subject to overfishing. AR 320 at 18995. After carefully reviewing the models and data for each stock, the GARM III made these corrections not because they would result in more “conservative” assessments, as Massachusetts suggests, but rather because they would result in more **accurate** assessments. *See, e.g.*, AR 320 at 19296 (concluding that the corrected data “more accurately characterizes the witch flounder population” because of “(1) the contraction of the age structure observed in the survey indices at age and the commercial catch at age; (2) the low NEFSC survey abundance and biomass indices in recent years; and (3) the magnitude of the 2004 year class at age 3 relative to the age 3 abundance indices over the entire time series . . . [which] indicates a strong 2004 cohort but not exceptional year class . . .”).

The data simply show that this fishery is less productive than expected from previous assessments. AR 228 at 18317. The Council’s Scientific and Statistical Committee (“SSC”) agreed, noting that, “[b]ecause of a retrospective pattern in the assessments, historical stock size estimates in the 2008 assessments are lower than those estimated in the 2005 assessments.” AR

615 at 43347. That “unfortunate result,” the Committee concluded, “is a reflection [of] the fact that the 2005 assessments now appear to have been optimistic.” AR 615 at 43347.

For these reasons, the GARM III corrected several of these stock assessments for retrospective patterns, and the Council and NMFS set catch limits based on those corrected assessments. Massachusetts acknowledges that several of the “base case” assessments “have diagnostic problems,” but argues that NMFS should have used them anyway (and not tried to correct for the retrospective patterns) because they are “the simplest analyses of all available data” and “were the method used to assess . . . stocks for decades.” Mass Rep. at 14. These are not convincing reasons to rely on data that even Massachusetts concedes is less accurate.

More transparently, Massachusetts argues that NMFS should have used the “base case” assessments because they “estimated greater stock sizes” and would have resulted in higher catch limits. *Id.* While that is true, the Magnuson-Stevens Act requires NMFS to rely on the “best scientific information available,” not the scientific information that lets NMFS set the highest catch limits. And as the Council’s Scientific and Statistical Committee found, using outdated, overly “optimistic” assessments to set catch limits would not have ended overfishing as required by the Act. AR 615 at 43347. For all of these reasons, the Council decided to rely on the GARM III assessments of these stocks, including the assessments corrected for retrospective patterns, NMFS approved that decision, and that decision is rational and supported by the “best scientific information available.”

c. NMFS rationally included a 25% buffer to account for scientific uncertainty.

Finally, Massachusetts argues that NMFS was “doubly-precautious” and accounted “for the same variable at least twice” when it applied a 25% buffer to these catch limits to account for scientific uncertainty. Mass. Br. at 18. This 25% factor is the result of the new “acceptable

biological catch” (“ABC”) control rule that the Council adopted as part of Amendment 16. AR 773 at 47833-35. Under that rule, the acceptable biological catch for each stock is set at the catch associated with either 75% of the F_{msy} or with the F that will allow the rebuilding of the stock under the deadlines set by the Act, whichever is lower. AR 773 at 47834-35. This 25% reduction accounts for the scientific uncertainty in the assessment of these stocks. After this control rule was applied, the Council then used the acceptable biological catch to calculate the annual catch limits (“ACLs”) for this fishery (as further reduced to account for management uncertainty).⁹

The National Standard guidelines state that fishery management plans and amendments like Amendment 16 “should provide a suitable buffer in favor of conservation” and that “[a]llowances for uncertainties should be factored into [their] various elements” 50 C.F.R. § 600.335(c)(2). They expressly state that optimum yield should be reduced to account for the “[l]ack of scientific knowledge about the condition of a stock” 50 C.F.R. § 600.335(c)(2)(i). Toward that end, the guidelines require the Council to “establish an ABC control rule based on scientific advice from its [Scientific and Statistical Committee].” 50 C.F.R. § 600.310(f)(4). That control rule “must articulate how ABC will be set compared to the [overfishing level] based on the scientific knowledge about the stock or stock complex and the scientific uncertainty in the estimate of [the overfishing level] and any other scientific uncertainty.” *Id.* The control rule must account for “uncertainty in factors such as stock assessment results, time lags in updating assessments, the degree of retrospective revision of assessment results, and projections.” *Id.*

⁹ The ABCs for five stocks were not set at the catch associated with 75% of F_{msy} either because that level of catch would not have rebuilt the stock under the schedule required by the Act or because the status of the stock was unknown (due to a lack of data). AR 733 at 47189.

Here, the Council adopted this control rule to comply with the requirements of the National Standard guidelines and based on the recommendations of its Scientific and Statistical Committee. AR 773 at 47834. The Committee recommended this “relatively simple” control rule because it found that a 25% buffer has “been evaluated for many worldwide fisheries, and consistently perform[s] well for avoiding overfishing and producing nearly maximum long-term yield” AR 615 at 43348. It also based that buffer “on a NOAA technical memorandum that determined through deterministic simulations [that] this value generally over time will result in small sacrifices in yield for large gains in stock size.” AR 154 at 11879. Most importantly, the Council and NMFS concluded that this control rule—unlike the Council’s previous control rule—would “always result in ABCs with at least a 50-percent probability of avoiding overfishing.” AR 997 at 56506; AR 773 at 47834 (noting that the existing control rule “would not have ended overfishing”).

Massachusetts argues that this 25% buffer is “doubly precautionous” because it is applied to “an overfishing limit that is based on an underestimate of F_{msy} or stock size” Mass. Rep. at 3. But that argument fails because, as discussed above, there is no reason to believe that NMFS has underestimated F_{msy} or stock size here—to the contrary, the best scientific information available supports both NMFS’s decision to use $F_{40\%msp}$ as a proxy for F_{msy} and the GARM III’s efforts to correct these stock assessments for retrospective patterns. Moreover, this 25% buffer is meant to account for a range of other scientific uncertainties, including uncertainties in “stock assessment results” and “projections,” and also “time lags in updating assessments.” 50 C.F.R. § 600.310(f)(4). Massachusetts does not contend that catch limits set without this buffer would have an acceptable risk of avoiding overfishing—it simply asserts that “[s]maller buffers **may have** [] acceptable levels of risk” Mass. Rep. at 14 (emphasis added). For all of these

reasons, NMFS's approval of the Council's decision to apply this 25% buffer is rational and supported by the "best scientific information available."

4. NMFS thoroughly analyzed the economic effects of Amendment 16.

Like the other Plaintiffs and *amici*, Massachusetts argues that NMFS did not "adequately consider critical social and economic impacts of the sector system prior to implementing Amendment 16, as required by National Standard Eight." Mass. Br. at 10-11; *see, generally*, Mass. Br. at 26-29. In fact, the Council and NMFS thoroughly analyzed the economic effects of Amendment 16, including whether the expanded sector program would drive consolidation, and we have already responded to many of these arguments in our opposition. *See, generally*, Docket No. 76 at 28-48; *id.* at 42-43 (responding to the consolidation arguments). We incorporate those responses here by reference.

Massachusetts raises only one new argument: it is concerned that "reports about sector activity indicate the market for catch trading and leasing is non-functioning." Mass. Rep. at 2. Based on extra-record "interviews" with representatives of the fishing industry, Massachusetts claims that, while NMFS "acknowledged the 'critical' importance of the trading of allocation, [] economically-strained Massachusetts commercial fishermen cannot trade quota or acquire additional quota." Mass. Br. at 27. Massachusetts complains that NMFS "did not adequately consider . . . the ability to trade (or sell) catch-share allocation, *i.e.*, quota" and that the agency "did not take any regulatory action to ensure that such a market actually developed . . ." Mass. Br. at 28.

In fact, NMFS did take action to promote the trading of "annual catch entitlement" ("ACE") by promulgating regulations that allow such trading. AR 997 at 56567 (codified at 50 C.F.R. § 648.87(b)(1)(viii)). There are also regulations that allow the trading of "days-at-sea" by

vessels in the common pool. 50 C.F.R. §§ 648.82(k), (l). Massachusetts does not explain what else NMFS could have done—NMFS cannot force fishers to trade their allocations and the Magnuson-Stevens Act does not require NMFS to somehow “ensure” that a “market actually developed.”¹⁰

Moreover, despite the fact that Massachusetts sits on the Council and voted to approve Amendment 16, it never raised these concerns while the amendment was being developed. For example, when Massachusetts submitted comments on Amendment 16, it did not raise this issue or propose any additional measures to “ensure” that “a market actually developed,” even though it was commenting specifically on the ACE trading provisions of the amendment.¹¹ AR 591 at 32673, 32682.

Most importantly, the economic analyses done by the Council and NMFS did not assume that a vigorous market would alleviate the effects of the reduced catch limits included in Amendment 16. *See, e.g.*, AR 773 at 48457 (explaining that, despite trading, it is likely that some vessels will not have access to sufficient quota to break even). Thus, even if Massachusetts were right and the “market for catch trading and leasing” were “non-functioning,” that would still not show that NMFS’s economic analysis was inadequate.

The rest of Massachusetts’ economic arguments, as we have already discussed, are based entirely on extra-record, post-decisional evidence and should be stricken. But even if the Court were to consider that evidence, it does not support Massachusetts’ claims. As Massachusetts concedes, the revenues in this fishery for the first five months of this fishing year have actually

¹⁰ The Federal Defendants do not concede that the market is “non-functioning.” The only evidence that Massachusetts presents to support this claim is the second-hand summary of extra-record hearsay that it presents in its report (that is, its summary of interviews with representatives of the fishing industry). The Federal Defendants obviously have no way to evaluate this evidence, and it should be stricken for all the reasons discussed above.

¹¹ At one point, Massachusetts’ representative on the Council also proposed that sectors should be required to publish information on their ACE trading, but that motion failed. AR 220 at 13851-52.

increased over last year's revenues and show "potential economic health in the groundfishery as a whole." Mass. Rep. at 2, 6. And while Massachusetts contends that this increase in revenues "masks unforeseen significant economic impacts that are happening at more local levels," Mass. Rep. at 2, it bases that conclusion on its claim that an additional 17 vessels out of the 500 in the Massachusetts groundfish fleet are "inactive" this year. Mass. Rep. at 7-8 (claiming that 253 vessels are inactive this year, up from an average of 236 inactive vessels from 2005 through 2009). From that, and the extra-record hearsay of its interviews with the fishing industry, Massachusetts concludes that "a substantial number of fishermen who were active in the fishery in 2009" have "become insolvent." Mass. Rep. at 11.

But even if this evidence were admissible, and even if it showed that some fishers in Massachusetts have become insolvent, that would still not show that NMFS failed to analyze the economic effects of Amendment 16. To the contrary, as we have already explained, both the Council and NMFS recognized that Amendment 16 would have "severe" economic effects, but they concluded that those effects were "unavoidable" because the Magnuson-Stevens Act expressly requires NMFS and the Council to rebuild the overfished stocks in this fishery. Docket No. 76 at 33-35. In their analysis, the Council and NMFS found that rebuilding this fishery would have long-term economic benefits, but they also found that it was likely that some fishers would not be able to break even this year. *See, e.g.*, AR 773 at 48452-57, 47772. Thus, even if Massachusetts were right and some fishers have become insolvent this year (despite the overall increase in revenues), that would still not show that NMFS's economic analysis was inadequate.

III. CONCLUSION

For all of the reasons discussed above, Massachusetts has not shown that NMFS's decision to partially approve Amendment 16 was "arbitrary and capricious," and summary judgment on all of the Plaintiffs' claims should be entered on behalf of the Federal Defendants.

Respectfully submitted this 2nd day of March, 2011,

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing was served today via the Court's CM/ECF system on all counsel of record.

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