1. The criteria for passage that counts towards recovery should be the same for dams and road crossings

Response: We chose to use performance standards at dams and design standards for culverts because there is not a clear set of design criteria that can be applied to all dams that will ensure survival and recovery of Atlantic salmon. Because we are not able to be prescriptive at dams we also require extensive monitoring of any project modifications to ensure that the modifications achieve the established performance standard. For road crossings, the path to passage effectiveness is more clear. In most circumstances, using stream simulation design methods when designing road crossing will ensure safe and effective passage of all life stages of Atlantic salmon. Furthermore, when the prescriptive approach at road crossings is followed, extensive monitoring most often will not be needed to ensure the project's effectiveness.

2. DOT does not feel that they are viewed as a stakeholder yet should be

Response: The best and most appropriate opportunity for stakeholder involvement in the salmon recovery effort is through the Atlantic salmon recovery framework. We have reviewed our distribution list to make sure that representatives from Maine DOT and Federal Highways are invited to these meetings. Furthermore, efforts are currently underway to establish SHRU based action teams that allow for greater stakeholder engagement in the recovery process. The agencies appreciate Maine DOT's efforts to enhance aquatic connectivity in the GOM DPS.

3. Information on ongoing restoration efforts, including stocking, fish assessments, redd surveys, need to be made more available

Response: On the Atlantic salmon recovery webpage, we have posted the Annual Atlantic Salmon Assessment Committee Reports that provide a comprehensive overview of annual stocking, fish assessments and redd surveys, as well as other information. These reports can be found at: http://atlanticsalmonrestoration.org/resources/documents

4. Several commenters stated that they did not feel the plan expressed a sense of urgency in the plan, especially in highlighting the urgency of dams and the threat of marine survival.

Response: We appreciate the comment. We did go back to the plan and in Part C: "Threats to the Species Viability", we elaborate on the threat *of dams and the threat of marine survival to emphasize the importance of these significant threats.*

5. A couple of commenters stated that greater emphasis needed to be put on dam removal

Response: Within the plan we did expand on our position of dams and what is necessary to address this threat. That being said, the recovery plan is drafted using the best available information that we have

before us to bring the species from critically endangered to recovery. We believe that there is general agreement among all parties that absent the constraints within the marine environment, that dam removal would likely provide the most certainty in achieving recovery. Within the threats abatement criteria we state that a combination of dam removal and fish passage improvements will be necessary for recovery to occur. The Endangered Species Act recovery planning provisions direct us to identify actions that may be necessary to ensure survival and recovery of Atlantic salmon. To this point, we do not have information indicating that dam removal is the only means to achieve recovery. Nor do we know which dams would be necessary to remove in order to achieve recovery.

6. Recovery Enhancement Vision does not work well because it leaves the plan weak to the point that it is difficult to support in aggregate

Response: The US Fish & Wildlife Service decided to use the Recovery Enhancement Vision process for the ATS Recovery Plan based on feedback that our recovery plan documents were too difficult to navigate and did not focus on the core requirements of recovery plans. In response, this plan focuses on the statutory requirements of the ESA, which are to identify, to the maximum extent practicable, recovery criteria, recovery actions, and time and cost estimates. It also provides relevant supporting information and guiding principles for the Atlantic salmon recovery program. More in-depth scientific information and analyses, as well as more specific implementation activities, are contained in other documents made available on the Atlantic salmon Web site. Hyperlinks to specific Web pages are provided throughout this plan. Note also that technical and management terms are defined in a glossary provided on Website.

7. A commenter noted that there is no analysis in the plan of how management actions could influence population trajectories' through a PVA analysis even though we have a PVA that could be used to do this.

Response: Although a PVA has not been used to analyze all possible management actions, PVA's or PVA like tools have been used to evaluate the two highest priority threats to Atlantic salmon (Dams and Marine Survival), and guide management actions that would help address those threats. A PVA was used in the Status Review (Fay 2006) to estimate the probability of extinction for the GOM DPS and found that the probability of extinction ranged from 19% to 75% within the next 100 years even with the continuation of the current levels of hatchery supplementation. The Dam Impact Analysis model is a PVA that was developed to help better understand the impacts of dams on the production potential of Atlantic salmon (Nieland et al. 2013) and is an important tool used in the consultation process with hydro developers that have dams within the range of the GOM DPS. The model can be used to compare alternative scenarios of changes in future abundance and identify parameters and information needs for recovery efforts. A PVA was also used in the development of the Recovery Criteria to assess the minimum population abundance necessary to withstand another period of low marine survival similar to what was experienced in the 15 year period between 1991 and 2006 (NOAA 2009(a)). In addition to using a PVA to evaluate the effects of the two major threats identified at the time of listing, the PVA was also used in 2006 to help assess the effects of acid rain on Atlantic salmon populations (USASC, 2006).

8. We had a couple commenters suggest the need for watershed planning/scenario planning in order to prioritize restoration efforts that provide the greatest conservation benefit to salmon.

Response: Recently NOAA-Fisheries hosted a scenario planning workshop to help further understand future possible scenarios for Atlantic salmon given climate forecasting models. We considered how climate change effects survival and recovery of Atlantic salmon considering four possible outcomes surrounding climate change and connectivity. As a result of this effort, many recovery actions have either been amended or have been added to help guide management actions given future climate scenarios.

In addition, there are tools already available that have been developed that can be, and are being used to inform scenario planning. These include the Interactive Catchment Explorer tool that USGS recently developed that allows managers and scientists to explore watershed characteristics under various climate scenarios. This tool, along with an introductory video can be found at: http://ice.ecosheds.org/; And The Nature Conservancy recently completed a road-stream crossing assessment within the Penobscot Basin that serves as a tool to identify problematic stream crossings, in order to understand the extent of habitat connectivity problems in watersheds, and identify candidates for retrofit or replacement. The hope is to expand this tool to encompass the rest of the DPS. Our hopes are that tools such as this will help with SHRU level watershed planning exercises.

9. There were a couple comments concerning that the cost estimates were not well supported, and, in particular, the costs associated with connectivity were too low.

Response: The costs in the recovery plan only reflect the estimated cost of recovery, but does not account for the economic value that a recovered population of Atlantic salmon would provide if they were recovered. Furthermore, the five-year cost projections are reflective of what we believe we can reasonably expect to achieve given resource limitations within the program, which helps us to inform the timeframe for anticipated recovery. We used previous restoration efforts to gauge both the cost of project implementation as well as anticipated capacity to effectively implement restoration efforts. But after a careful review of the cost estimates in the draft plan we recognized that we could do a better job of estimating costs and articulating how we came up with the cost estimates that we did. Therefore, we made several improvements to how we present the cost estimates as well as provide context for how those cost estimates were derived.

10. A commenter noted that identifying and prioritizing highest priority fish passage barriers for remediation does not ensure connectivity, it informs prioritization.

Response: Agency guidance and policy leaves a fair amount of discretion in terms of the types of actions that are included in a recovery plan and the level of detail that they provide. In this plan, many of the actions that are identified were carried forward from the Atlantic salmon recovery framework effort. In this particular case, the Connectivity Action Team believed that identifying and prioritizing priority passage barriers was an important step in the process of removing barriers to fish passage. We agree.

11. We had several comments asking for greater detail on the recovery actions. For example, in regards to removing dams, the commenter asked how many? At what rate? What will be the impact on population trajectories? What resources will be available for this work?

Response: Within each of the Salmon Habitat Recovery Units there are a number of different pathways and scenarios that could allow for salmon recovery to happen. We believe the Critical Habitat designation provides the appropriate scale in which to describe where priority restoration efforts need to occur. We do not believe that we can be specific in describing exactly where, how many and at what rate specific management actions need to happen to allow for survival and recovery though. Every dam removal or every restoration project will affect the population differently based on its position within the watershed, the level of impact that the activity is actually having on the population to begin with, and its relationship to other threats within the watershed. Subsequently, being prescriptive on what projects need to happen, where, and at what rate would be rather arbitrary given that the wide range of possible pathways and combinations of restoration actions that would allow for recovery to occur.

That being said, we did do a thorough review of all of the recovery actions and made an attempt to provide greater detail on recovery actions where we were able to do so. Furthermore, for the purposes of restoration planning, SHRU specific action plans have been developed that are available on the Atlantic salmon recovery plan webpage that do identify specific projects as well as SHRU specific goals. The projects in these work plans include projects that have been identified as being of greatest importance to salmon restoration as well as projects that present themselves as opportunities for which if the opportunity is not taken, the option to exercise the restoration effort may not be there in the future. The plans are intended to be dynamic and updated on a regular basis to make sure new opportunities and newly identified high priority threats are accounted for.

12. We had several comments related to nonnative fish species and bag limits and in regards to the inadequacy of Maine's angling laws in respect to protecting large salmon parr and smolts. Their concern is that a large number of parr and smolts are unintentionally retained by anglers. There were some suggestions that there should be no bag limits on northern pike, largemouth and smallmouth bass, pickerel and other non-native fish species in any water within the DPS believing this will provide significant and meaningful benefits for Atlantic salmon, but also many other native fish species.

Response: We recognize that predation on Atlantic salmon is an important issue but is also a very difficult issue. We will continue to work with the state of Maine to implement management measures that minimize the effects of predation. The sub-actions under Recovery Action F4.0 commits us to identify ways to minimize impacts of predation on Atlantic salmon.

In respect to concerns about parr and smolts being unintentionally retained by anglers, the services acknowledge that Incidental harm of Atlantic salmon is still likely as a result of recreation angling, and as such, Recovery action F4.6 is intended to direct state and federal resource agencies in finding ways to address this threat. Though incidental harm of Atlantic salmon may be possible through recreational angling, Maine's fishing regulations are generally sufficient in preventing someone from inadvertently killing a juvenile salmon for consumption as a result of mistaken identity. Maine's minimum length limit of 6 inches on Brook Trout and other trout species throughout much of the area where Atlantic salmon live is protective of salmon parr, as parr's average length is between 3 and 4 inches. Upon reaching smolt stage, Atlantic salmon loses its parr markings and is no longer similar in appearance to a Brook

Trout. Although a salmon smolt may appear similar to a landlocked salmon, its size is far below the minimum size requirement of a landlocked salmon.

13. A commenter found the reclassification objective to "Maintain sustainable, naturally reared populations with access to sufficient suitable habitat in at least two of the three SHRUs..." to be confusing questioning whether this mean that two SHRUs could be reclassified to "threatened" with the remaining SHRU as "endangered" or even extinct? Or is the entire DPS reclassified?

Response: The only list-able entity is the DPS and subsequently only the DPS can be classified as endangered, or threatened. For down-listing, it might be possible to have one SHRU under- performing relative to the other two SHRU's, yet the reclassification would still apply to all three SHRU's since only the DPS can be down listed or delisted. Such a scenario, however, would need to be reviewed relative to the standards in ESA Section 4 and the facts at the time. We did attempt to clarify the wording of the downlisting criteria to address the confusion.

14. A commenter noted that in the recovery criteria that while 30,000 "accessible and suitable habitat units (HUs)" are a criterion for delisting, only 25% of this (7,500 HUs, in at least 2 of 3 SHRUs) are a criterion for reclassification. The commenter wasn't clear if this number was based on some calculation of biological productivity and noted that 7,500 habitat units appeared very low unless "suitable" is better defined.

Response: The habitat criterion is linked directly to the abundance criterion. The minimum abundance criterion for downlisting is 500 adults in at least two of the three SHRU's, but with a combined total of 1500 adults across all three SHRU's. The pathway to downlisting is much easier than the pathway to delisting. The difference between endangered and threatened is largely based on the probability of extinction now versus within the foreseeable future, whereas recovery assumes a population is reasonably expected to be self- sustaining and that all of the threats have been addressed such that the species is no longer endangered or threatened.

15. One commenter had several questions about the recovery action that called for the development of the in-lieu fee mitigation program. They had questions in respect to what authority the USFWS has for such a program and how and who would manage program. They also expressed concerns that the program could conceivably be used in place of avoiding and minimizing the adverse effects of a project when avoiding and minimizing is seen as being too inconvenient or too expensive.

Response:

Under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) the USFWS published a compensatory mitigation policy (81 FR 95316), on December 27, 2016. The USFWS' mitigation planning goal is to improve (i.e., a net gain) or, at minimum, to maintain (i.e., no net loss) the current status of affected resources, as allowed by applicable statutory authority and consistent with the responsibilities of action proponents under such authority.

An In-lieu fee program is in development to consolidate compensatory mitigation projects and resources to target more ecologically significant functions and prioritize efforts on a landscape or watershed scale. ILF programs consistently include scientific analysis, planning, implementation, and monitoring

for each project and the structure of an ILF program generally facilitates improved site selection and mitigation plan development, and provides scientific expertise and financial assurances that translate into a reduction in uncertainty for project success. Although ILF initially served as a way to mitigate wetland impacts, its principles can also apply to aquatic species and in-stream impacts.

The USFWS has worked closely with NMFS in the development in this program and communication between agencies will continue. Currently the NMFS has opted out of this program because of the low number of NMFS consultations on road stream crossings.

In addition, the U.S. Army Corps of Engineers requires mitigation to offset unavoidable adverse impacts under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899.

16. The Draft Plan should include a detailed discussion on the amount of accessible and suitable habitat units that are currently accessible in each SHRU.

Response: We agree that this is important baseline information and as such, these values will be made available on the AtlanticSalmonRestoration.org website. We are not including them in the plan as it is expected the values will require updating on an annual basis. We have preliminary estimates of the amount of accessible and suitable habitats for each SHRU but they currently only account for the effects of dams. The estimates we have do not discount for the effects of road crossings. Furthermore, the suitable habitats are currently evaluated at a HUC 10 scale which does provide a broad overview of where the most suitable habitats are, but in terms of evaluating whether we have enough for recovery, this scale is too broad and needs to be evaluated at a smaller scale.

17. The Plan should more definitively state that, along with hydroelectric dams, the biggest driver to the continued existence and survival of Atlantic salmon in the U.S. is the marine environment.

Response: Thank you for calling our attention to this. In Part 1: Section C "Threats to the Species Viability", we elaborated on the significance of the threats to marine survival of Atlantic salmon.

18. A recommendation was made that the Plan should specifically state the need to successfully track salmon (acoustic and satellite) throughout their lifecycle with an established timeframe for doing this.

Response: NOAA Fisheries Service is currently an active partner in numerous marine telemetry initiatives with overall goals related to better understanding the factors affecting marine survival of salmon. We will continually look for opportunities to continue to expand these efforts both domestically and internationally. Domestically, we will work to investigate the migration dynamics of the species with a focus of developing telemetry programs that are coordinated with management opportunities that are designed to increased survival. The goal is providing scientific information to managers to improve survival (predator windows, smolt readiness, etc.). This integration of management programs and telemetry is in direct response to the comments received during the 2015 NEFSC Protected Species Science Review. Internationally we will work to increase our ability to track salmon further along their migration path into the Labrador Sea, to Greenland, and back to natal rivers, while also supporting the initiatives outlines within NASCO's SALSEA-Track program.

Marine tracking of Atlantic salmon is an expensive endeavor and NOAA Fisheries Service cannot do it alone. International migration routes are geographically broad and involve logistical challenges and partnership needs. Budgets are limited and there are numerous mandates to fund. However, we will continue to allocate available base funds to support an array of domestic and international telemetry initiatives. In addition, we will actively pursue competitive funding sources that are open to federal agencies to support salmon tracking efforts. We also work to continually develop partnerships to increase the efficacy of our tracking programs and the geographic range monitored. Domestically, NOAA Fisheries staff are involved in the developing US Animal Tracking Network that is supported by US Department of the Navy and Bureau of Ocean Energy Management to improve both the distribution of animal tracking data and the infrastructure deployed in US territorial waters. Internationally, NOAA Fisheries Service fully supports and is an active participant in NASCO's SALSEA-Track program. We are continually looking for opportunities to further implement this important initiative. NOAA Fisheries Service and the Atlantic Salmon Federation have initiated a 4-year (2017-2020) collaborative project to track Atlantic salmon capture at Greenland through their return migration to natal rivers. This project will include both pop-off satellite tagging as well as ultrasonic tagging to capitalize on the existing experience and infrastructure in these two areas of research. These are all new and existing initiatives that will greatly expanded the capacity and ability of NOAA Fisheries to further investigate the migration of salmon at sea. NOAA plays a key role in coordinating the international monitoring of salmon fisheries at West Greenland and with samplers on the ground is in a unique position to support this work.

We believe it is unrealistic to put a hard time frame on efforts such as these. The resources required to undertake such an effort are immense and can and will not be provided by a single agency or entity. Building partnership and collaborations take time and cannot be forced. In addition, there are significant technical and capacity limitations that are restricting our ability to accomplish this task. As technological advances continue, new opportunities and avenues will allow us to more efficiently track Atlantic salmon further into the ocean. NOAA Fisheries is committed to furthering our understanding of the marine migration of Atlantic salmon and we will continually pursue and work to build coordinated international tracking program through collaborative efforts across agencies and countries, but realistically this will not be accomplished within the next five years and tools beyond telemetry (trawling, gillnetting, and migration/habitat modelling) will likely be part of future integrative programs.

19. The Plan should recognize that over the past decade in a time when marine survival has declined, the harvest of salmon in Greenland as well as Canada has increased.

Response: We agree that the harvest of interceptory fisheries remains a substantial concern for U.S. origin salmon. We have augmented the text in the recovery plan to include new information on the harvest of U.S. origin fish in the Labrador fishery in particular.

20. NOAA Fisheries and the U.S. State Department need to act bi-laterally with Canada, as well as the European Union, to identify and pursue other issues that could be tied into reducing the salmon harvest, such as access to the arctic and polar regions for fishing rights, natural resources and shipping

routes. The U.S. needs to put far stronger pressure on Canada to control their harvests, otherwise achieving needed reductions in the Greenland fishery will be extremely difficult.

Response: We are working through all channels within and outside NASCO that are available to the United States government. We have amended sub-action under recovery action M1.0 to address these concerns.

21. The Plan should identify the need to reassess the role of NASCO. An independent review conducted in 2013 by three highly respected external experts reported to NASCO that the Treaty should be changed to strengthen salmon conservation in the jurisdictions of all parties to the NASCO treaty and provide balance between controlling distant water fisheries for salmon and controlling those within the jurisdictions of other Parties. The U.S. and all Parties (except Greenland and Faroes) rejected the recommendation. NASCO instead has contended that the "Next Steps" reporting and review process provides the needed transparency and "carrot" to parties to conform to agreements. This process is a bureaucratic, stilted one, where it seems many parties are simply doing as they please but now are reporting on it. The Plan should recommend the re-opening of the NASCO treaty. This carries some risks, but given that U.S. salmon are not very far away from extinction, it is clearly evident the status quo is not working.

Response: We strongly disagree with the perspective that NASCO is not working well as a means to conserve Atlantic salmon across the North Atlantic and within the United States. For many years, NASCO has received scientific advice that there should be no Atlantic salmon fishery in West Greenland, a mixed stock fishery that takes endangered U.S. origin salmon and other depleted stocks. Despite this, Denmark (in respect of Faroe Islands and Greenland; DFG) began expanding this fishery. Reported landings in 2002 were 9 t, but have increased to over 55 t since that time. This increase is likely due to two factors: increased reporting and increased harvest, although it is unknown to what extent each factor has contributed. In terms of accurate reporting, the United States was a strong advocate for improving the monitoring and control of this fishery, and it effectively used its position within NASCO to encourage DFG to improve its management of the fishery to be more in line with international standards. Because of these efforts, we now have much more accurate picture of the harvest of Atlantic salmon at Greenland and the impacts to home-water stocks. In terms of the harvest itself, we agree that the harvest of Atlantic salmon has certainly increased as noted by the re-introducing commercial factory landings in 2012. By 2015, reported catches had increased to about 60 t, excluding unreported catch. The United States and other NASCO parties have expressed significant concern regarding the increase in catch. During regulatory negotiations for the fishery in 2015, consensus on a quota could not be reached. The parties were, however, able to reach consensus on a 2015-2017 multi-year regulatory measure that strengthened fishery monitoring, reporting and control, required DFG to repay any overharvest of its annual 45 t autonomous quota, and retained an export ban. Concurrently, Canada has substantially improved monitoring of the Labrador fishery and enhanced control measures for Food, Social and Ceremonial (FSC) fisheries through the issuance of a communal license by Fisheries and Oceans Canada (DFO) which includes carcass tags. Carcass tags are required for all harvested salmon in FSC fisheries and an allocation of tags is provided to each group which limits the harvest which can be taken. In 2015, the total number of carcass tags issued was 16,200 tags. These recent changes to the monitoring and control of these fisheries are evidence that the enhanced openness and transparency embraced by NASCO Parties continues to be an effective means to reduce the effects of these fisheries.

22. A couple commenters stated that we should do more to acknowledge the role of the East Machias and Pleasant River hatcheries in the Atlantic salmon program and also be more specific of plans to increase capacity to support hatchery programs in the Kennebec and Androscoggin Rivers

Response: The Service recognizes and appreciates the efforts of partners like the Downeast Salmon Federation to establish and operate their flow-through hatcheries on the Pleasant and East Machias. The current production levels of the two USFWS conservation hatcheries is limited by physical space and limits on phosphorous discharge determined by Maine Department of Environmental Protection. Currently, the USFWS supports the use of eggs from the Atlantic salmon domestic brood line, maintained at Green Lake NFH, for filling vacant habitat in the Kennebec and Androscoggin rivers. The Maine Department of Marine Resources is responsible for management decisions related to the use of hatchery products from the USFWS conservation hatcheries. Currently, the MDMR plants between 200,000 and 1,000,000 eyed eggs from the Penobscot domestic line into suitable spawning habitat in the Sandy River (tributary to the Kennebec River). There currently is no known plan to use hatchery products from the USFWS conservation hatcheries to stock Atlantic salmon in the Androscoggin River. A small number of Atlantic salmon raised as part of the USFWS Salmon in Schools Program are stocked annually into the Androscoggin River. The current focus of the USFWS conservation hatcheries is to prevent the extinction of the species (*Salmo salar*) by focusing on population genetic parameters such as heterozygosity and effective population size of our river-specific brood lines. The Service supports working collaboratively to prioritize the use of existing hatchery products and to strategically work with partners to identify opportunities to expand the range and diversity of Atlantic salmon within the Gulf of Maine DPS. The Service also agrees that stocking alone will not produce recovery and they commit to continue to work collaboratively with their partners to identify the most effective tools for recovering Atlantic salmon.

23. A commenter stated that we need the State of Maine, with assistance from the Services, to make a substantial re-investment of staff and fiscal resources with DMR so that they focus more on Atlantic salmon and diadromous fish within the DPS.

Response: NOAA - Fisheries currently supports most of Maine's programs within DMR that are focused on Atlantic salmon restoration. We have also made an increased effort to connect the state of Maine to opportunities for additional resources available through NOAA, specifically NOAA Fisheries' Section 6 program that can provide funding resources directly to state programs that support the conservation and restoration of threatened and endangered species. Similar programs are also available through the USFWS, although the USFWS partnership is with Maine's Department of Inland Fisheries and Wildlife. Regardless, there are opportunities available to the State of Maine for additional resources to support programs that benefit these species.

24. The Action Team structure should be redefined to align with the SHRU concept and SHRU-level workplans.

Response: An effort to restructure the action teams to align with the SHRU concept is currently being evaluated. The goal of the restructuring would be to assemble SHRU teams that include agency and stakeholder representatives. These teams would undertake much of the proactive restoration planning and implementation efforts within the SHRU.

25. We are very concerned about Recovery Action 3.9: As necessary, produce Atlantic salmon necessary to implement upstream and downstream passage studies at hydroelectric and other fish

passage structures/barriers within the GOM DPS. We find it completely absurd that up to $1 million will be spent raising salmon for fish passage studies. No tax payer money should be spent providing salmon for studies at hydroelectric dams. This should be the responsibility of the dam owner. Dam owners should also be required to contribute annually to a fisheries restoration and management fund in any watershed where they operate a dam.

Response: The agencies agree that the hatchery program should not be cutting into the restoration program to support survival studies at hydro-electric dams. We also acknowledge that these studies must be done to ensure that hydro-electric operators' are meeting their performance standards. The agencies continue to discuss various options to address these issues, including a requirement that the Hydro Industry be responsible for the fish that are required to support fish passage studies. Currently though there is not final agreement on a path forward.

26. A couple commenters noted that we need to provide a citation to the modeling effort that support the statement that the overall analysis results indicate that a minimum of 2,000 adult wild salmon must return in each SHRU to achieve range-wide population viability. This is a crucial statement that is the foundation for the delisting criteria. The section heading does link to the Atlantic salmon restoration website and a document titled, Rationale for Population Viability Recovery Criteria for the Gulf of Maine DPS of Atlantic Salmon; however, there is no literature citation section in the linked document.

Response: Noted. We added the citation.

27. There were a couple comments in regards to the need to increase efforts for land protection around areas of highly suitable Atlantic salmon habitats as well as improve land management practices that afford protections to Atlantic salmon

The USFWS has established a new partnership with the National Alliance of Forest Owners (NAFO) that could lead to habitat improvements in the headwaters and tributaries on privately owned forest in Maine. Many forest products companies participate in third-party certification programs that include requirements for sustainable levels of harvest in shoreland areas. These requirements go beyond what state law requires with respect to riparian buffer zones and timber harvest in the shoreland zone. Commitment to working with private landowners in the state of Maine helps to ensure ecological function of riparian habitats throughout the GM DPS. Action F3.0 tasks us with identifying areas for riparian habitat improvement and management recognizing that this was something that needs to be done. Through this action areas for riparian habitat improvements will be identified in conjunction with habitat surveys and modeling efforts. The threats abatement criteria has been amended in "2m" to address this threat.

28. In the "New and Emerging Threats" section you mention "two stressors". However, later in that section you list three stressors (Road Stream Crossings, Intercept Fisheries and Climate Change). I think you need to change the first paragraph to "three stressors" and add "Intercept Fisheries" to the paragraph.

Comment noted and has been addressed.

29. **A commenter recommended that programmatic consultations for dam removal and culvert replacements would help streamline the regulatory process and enable recovery efforts to proceed more efficiently.**

    We appreciate the comment. Currently work is under way to complete programmatic consultations that would streamline the regulatory process for both dam removals and culvert replacements. The programmatic consultation for dam removals is being handled by NOAA-Fisheries whereas the programmatic consultation for road crossings is being handled by the USFWS. We have added recovery actions to the recovery plan to account for these activities.

30. **A commenter stated that for the recovery action "Identify and prioritize highest-priority fish passage barriers for remediation") that the action is not "Complete" but is still Ongoing calling attention that The Nature Conservancy, for example, just completed their barrier prioritization tool for the Penobscot SHRU, which is only one of the three SHRUs.**

    Comment noted and addressed.

31. **A commenter noted that at the current productivity level of many of Maine's freshwater streams that we would be unable to achieve our recovery goals of 6,000 returning adults.**

    We agree. Among the factors identified as reasons for listing we identify dams as a significant threat to the species because dams not only block or impede access of migrating fish but can directly affect the productivity of rivers and streams by altering sediment transport, flow and other channel forming mechanisms. In this recovery plan, we go on to identify culverts as a significant threat for many of the same reasons that dams constitute a significant threat. We also identify climate change as an emerging significant threat that could have direct effects on productivity of freshwater rivers and streams that salmon depend on. Furthermore, we identified numerous secondary stressors that we stated that in their entirety constituted a significant threat to the species. Among these are numerous stressors that have direct effects on productivity. These include the secondary stressors of Factor A that includes Habitat Complexity, Water Quality, and Water Quantity. Secondary stressors of Factor C that includes Predation. And secondary stressors of Factor E that includes Depleted Diadromous Fish Communities and Competition. In the threats abatement criteria we describe how we believe each of these threats will need to be addressed in order to allow for the conservation of Atlantic salmon.

32. **A commenter stated that the Threats- abatement Criteria are subjective and there is uncertainty to the extent that each threat factor must be reduced. Reclassification and delisting should be based solely on the Biological Criteria.**

    We acknowledge that the threats abatement criteria are subjective. The threats abatement criteria are linked directly back to the five listing factors that were used to analyze whether or not Atlantic salmon warranted listing as an endangered species under the ESA. Because the five factor analysis is used not only making the listing determination, but also in making a determination of whether a species is eligible for delisting, we describe to the best of our ability, how we believe the threats identified in the five factor analysis must be addressed in order allow for "conservation" or recovery of Atlantic salmon. The objective, measurable criteria that constitute the delisting criteria are the quantitative population metrics that will be used in conjunction with the five factor analysis to assess whether the species can be removed from the list of endangered species.

33. **A commenter stated that predation on Atlantic salmon is not limited to nonindigenous species as its stated in the threats abatement criteria (2p). They went on to state that extensive avian and mammalian predation has been documented. The delisting criteria addressing secondary threats should consider all sources of predation.**

    Noted and addressed. We removed the reference to nonindigenous species from the language.

34. **A commenter noted a previous criticisms of the 2005 NOAA plan that called to our attention the lack of River Specific Plans and how it appears that in this plan that there is even less river specific details.**

    The Recovery Plan does not explicitly detail river specific conservation efforts for Atlantic salmon. However, river specific information can be found in the supporting information for the Atlantic salmon recovery plan in the **Recovery Activity Workplans** found at: http://atlanticsalmonrestoration.org/atlantic-salmon-recovery-project/resources/documents/atlantic-salmon-recovery-plan-2015 . And further river specific information can be found in the supporting documents to the Atlantic salmon critical habitat designation located at: https://www.greateratlantic.fisheries.noaa.gov/protected/atlsalmon/