

Eric Ham

Maine Department of Transportation

Environmental Office

Re: Machias Dike Bridge (#2466) project

June 30<sup>th</sup>, 2020

Dear Eric:

The Downeast Atlantic Salmon (*Salmo salar*) Habitat Recovery Unit (DESHRU) Coordination Committee (DCC) has been tasked with developing a 5-Year Work Plan of actions necessary to advance the DESHRU towards delisting criteria identified in the final recovery plan ([2019](#)).

DESHRU Work Plans initiated in [2015](#), identified the dike bridge in Machias as a connectivity threat (D10.1) to Atlantic salmon recovery. Specifically, the following action is identified: "Restore safe and effective passage for diadromous fish at the Machias Dike and at Marks Lake Dam on the Middle River."

Historically, the Middle River was accessible to a wide array of sea-run fish species, including Atlantic Salmon, Rainbow Smelt, Alewife, and Blueback Herring. The existing structure prevents upstream migration of sea-run fish, most notably, the endangered Atlantic Salmon. The lack of safe, timely, and effective passage at this site and its potential to disrupt efforts to recover Atlantic Salmon were recently highlighted by the National Marine Fisheries Service (attachment 1).

Securing fish passage into the Middle River would benefit recovery efforts for Atlantic Salmon in at least four ways. First, the Middle River may provide up to 259 units of rearing habitat for Atlantic Salmon. Opening this habitat would directly contribute to attaining the goal of 30,000 accessible and suitable habitat units in the DESHRU. Second, one of the essential features of [critical habitat](#) for Atlantic Salmon are migration corridors that include abundant, diverse native fish communities to serve as a protective buffer against predation. Once fish passage at Marks Lake is established, abundance of Alewives in the Middle River should soon exceed 56,000 adults if targets of 235 adults/acre are realized. Third, the Middle River should once again host a substantial population of Rainbow Smelt once passage is secured. Rainbow Smelt are a key prey item of post-spawn Atlantic Salmon (often referred to as "kelts"). The availability of anadromous Rainbow Smelt partially sustains the viability of this key life stage. Conversely, the broad declines in Rainbow Smelt populations may be partially responsible for the declining occurrence of repeat spawners in Maine's salmon rivers. Lastly, these anadromous species require a fully functioning estuarine ecosystem to maximize their life history requirements and enhancing tidal flow into the Middle River above the dike will help achieve that goal.

The DCC is aware that the current preferred alternative by Maine DOT would maintain the status quo and provide minimal, if any, fish passage, and will not make any improvements regarding the restoration of tidal flow into the Middle River. The preferred alternative is, in effect, a proposal to reconstruct a dam that will block fish access into the Middle River watershed for the next 75 years.

The DCC is keenly interested in working with you to find ways to improve the ecology of the Middle River for the benefit of salmon and their ecosystem. We urge you to consider a different alternative that would provide safe, timely and effective fish passage and we are interested in meeting with you to discuss potential alternatives. Thank you for your interest in helping the DCC preserve, protect and

enhance Critical Habitat within the Gulf of Maine Endangered Atlantic Salmon Distinct Population Segment.

DCC Chair:

Ernie Atkinson, Maine Marine Resource – Division of Sea-run Fisheries

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DCC Members:

Colby Bruchs, Maine Marine Resource – Division of Sea-run Fisheries

Denise Buckley, USFWS Craig Brook National Fish Hatchery

Scott Craig, USFWS Maine Fish and Wildlife Conservation Office

Rory Saunders, NOAA Fisheries, Maine-Orono Field Station



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
GREATER ATLANTIC REGIONAL FISHERIES OFFICE  
55 Great Republic Drive  
Gloucester, MA 01930

September 30, 2020

Bruce Van Note, Commissioner  
Maine Department of Transportation  
16 State House Station  
Augusta, ME 04333-0016

Todd Jorgensen, Administrator  
Federal Highways Administration, Maine Division  
Edmund S. Muskie Federal Building  
40 Western Avenue, Room 614  
Augusta, ME 04330

Dear Mr. Van Note and Mr. Jorgensen:

I am writing to express concern regarding a proposed construction plan for the Machias Dyke Bridge replacement project located on the Middle River along Route 1 in Machias, Maine. It is our understanding that this project will be carried out by the Maine Department of Transportation, be partially funded by the Federal Highway Administration, and will require permits from the U.S. Army Corps of Engineers. Please note that this letter follows a letter we sent to the Maine Department of Transportation on May 8, 2018 (Enclosure 1). This letter is also consistent with a letter sent to your agencies from the Downeast Coordination Committee (a group, including staff from NOAA's National Marine Fisheries Service, charged with coordinating local recovery efforts for Atlantic salmon in Downeast Maine) expressing concerns about the project's impacts to the Middle River (Enclosure 2). Both letters highlighted the project's potential negative impact on our ability to achieve our recovery goals outlined in the 2019 Atlantic Salmon Recovery Plan. The complete Recovery Plan can be found at <https://www.fisheries.noaa.gov/resource/document/recovery-plan-2019-gulf-maine-distinct-population-segment-atlantic-salmon-salmo>. The Machias Dyke Bridge is listed as site-specific threat number 10.0 in the existing work plan for the Downeast Coastal Salmon Habitat Recovery Unit (SHRU; Enclosure 3).

We appreciate your staff's willingness to discuss the matter with my staff and other agency representatives in a meeting on August 19, 2020. In particular, we are very appreciative of the leadership of Eric Ham and Eva Birk and their communication regarding the many challenging issues your agencies face with this project. At this meeting, we were concerned to learn that the preferred alternative remains a replacement in-kind. We have substantial concerns about the proposed alternative given that it would provide even less opportunity for fish passage than exists now and will not remedy ongoing impacts to our trust resources.

As you may be aware, the project site is within or near areas that support a number of NOAA trust resources, including designated critical habitat for the endangered Gulf of Maine Distinct



Population (GOM DPS) of Atlantic salmon, Essential Fish Habitat (EFH), and habitat for a range of diadromous fish species. In addition, this project area contains salt marsh, intertidal mudflats, and other important habitats that provide important ecosystem services. A replacement in-kind would negatively affect these public resources and would reduce opportunities to restore functions in the watershed.

### **Endangered Species Act**

Atlantic salmon are listed as endangered under the Endangered Species Act of 1973 (ESA), as amended. The Middle River is designated critical habitat for the GOM DPS and occurs within the Downeast Coastal SHRU.

Section 7(a)(2) of the ESA, as amended, requires that federal agencies ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or destroy or adversely modify any designated critical habitat. Based on the information currently available to us, the preferred alternative is likely to have detrimental effects on the following physical and biological features of designated critical habitat: Freshwater and estuary migratory sites free from physical and biological barriers that delay or prevent access of adult salmon seeking spawning grounds needed to support recovered populations; freshwater and estuary migration sites with abundant, diverse native fish communities to serve as a protective buffer against predation; and, freshwater and estuary migration sites free from physical and biological barriers that delay or prevent emigration of smolts to the marine environment. As such, we are concerned about the effects of the proposed in-kind replacement. We expect that many, if not all, of these negative outcomes could be avoided with selection of a different alternative that allows for fish passage and minimizes effects to sensitive habitats.

Section 7(a)(1) of the ESA directs federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. In other words, it is expected that federal action agencies will go beyond minimizing project effects and will proactively seek opportunities to contribute to the recovery of listed species. We encourage FHWA to pursue an alternative that would support the recovery of Atlantic salmon while also addressing regional transportation and infrastructure needs.

The in-kind replacement of the Machias Dyke Bridge would prevent fish passage into the Middle River for the foreseeable future. Our 2019 Recovery Plan for the GOM DPS identifies a number of recovery criteria that must be achieved before we can consider downlisting Atlantic salmon to threatened or removing the species from the endangered species list. One criterion for recovery is having 30,000 units of suitable rearing habitat fully accessible in the Downeast SHRU. If accessible, the Middle River would provide up to 259 units of rearing habitat for Atlantic salmon. An alternative design that allowed for fish passage would directly contribute to attaining the goal of 30,000 accessible and suitable habitat units in the Downeast SHRU.

### **Magnuson-Stevens Fishery Conservation and Management Act**

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Fish and Wildlife Coordination Act (FWCA) require federal agencies to consult with one another on projects such as this. Insofar as a project involves EFH, as this project does, this consultation process mandates the preparation of EFH assessments and generally outlines each agency's

obligations in this consultation procedure. Machias Bay is EFH for a number of federally-managed species, including all life stages of winter flounder, windowpane flounder, and Atlantic cod. In addition, Machias Bay and the Machias River are EFH for Atlantic salmon that may use the project area as a migratory pathway and for foraging before and after spawning. The Machias River is also one of eleven rivers in Maine designated as a Habitat Area of Particular Concern (HAPC) for Atlantic salmon because it supports some of the only remaining U.S. populations of naturally spawning Atlantic salmon that have historic river-specific characteristics. These river populations harbor an important genetic legacy that is vital to the persistence of these populations and to the continued existence of the species in the United States. Furthermore, the Middle River contains historic spawning habitat for a number of other diadromous fish species, including rainbow smelt, blueback herring, alewife, and American eel. These species are important prey for federally-managed species and, therefore, are considered a component of EFH pursuant to the MSA.

The Middle River and the Machias Bay contain important habitats that are critical to a healthy marine ecosystem, including salt marsh wetlands, intertidal mudflats and fringing salt marshes, subtidal habitats, and eelgrass beds. The proposed in-kind replacement would effectively eliminate passage of fish through the structure and convert tidal habitats, including intertidal mud flats and salt marsh wetlands, to freshwater habitats. An alternative design that allows for fish passage and tidal exchange would minimize the potential for these negative impacts.

### **Climate Change**

We are also concerned that an in-kind replacement would not adequately address concerns in regards to projected sea level rise (SLR) and flooding. We continue to question the efficacy and cost-benefit analysis of rebuilding the dyke as proposed with the explicit objective of preventing or reducing flooding of properties landward of the structure. In fact, it appears that flooding during high tides and storm surge events will not be reduced by the project as proposed and, as a result of SLR, these flooding occurrences will increase in frequency and intensity. Specifically, over the expected design life of the project (~75 years), sea level is projected to increase in this area (Eastport, Maine) under a 1.0 and 2.0 global SLR scenario by 2100 by about 4.0 and 8.9 feet, respectively (Sweet et al. 2017). According to information provided by the Maine Department of Transportation, the proposed finished grade of the causeway is between 11.1 feet and 11.9 feet NAVD 88, and the existing mean high high water line is 7.4 feet NAVD 88. This provides an approximate 4-foot freeboard on the highest average high tides in 2020. However, if the 4.0-foot SLR scenario occurs, the freeboard will be eliminated altogether, and under an 8.9-foot SRL scenario, the proposed structure would be inundated by almost 5 feet of water on the highest average high tides. Neither of these SLR projections accounts for higher water levels from spring tides or storm surge that occur multiple times per year. Furthermore, inland flooding of properties adjacent to the Middle River due to higher tides from areas on Route 1 beyond the Machias Dyke Bridge would continue unabated. As such, it does not appear that the in-kind replacement is an appropriate design to mitigate impacts of predicted SLR and flooding.

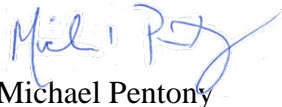
### **Potential Opportunities and Next Steps**

As you may be aware, we have previously worked collaboratively with the Maine DOT on road crossings to improve public infrastructure and restore fish passage and habitat. For example, NOAA contributed significant federal funding for the replacement of two crossings over

Muscongus Brook in Bremen, Maine. The NOAA Restoration Center is also currently engaged with the Maine DOT in an interdisciplinary, interagency team on a feasibility study to raise Route 1 in Woolwich and restore tidal flow to Back River Creek, an important tributary to the lower Kennebec River, in conjunction with a FHWA-funded replacement of the Station 46 Bridge. Both projects underscore the importance of interagency collaboration in order to leverage technical assistance and federal funding to help build safe, resilient infrastructure that supports coastal communities, like Machias.

We would like to continue to work collaboratively to achieve an ecologically sound and climate resilient approach to the replacement of the Machias Dyke Bridge and would strongly encourage the state and federal agencies involved to pursue alternatives beyond an in-kind replacement. We hope to work together to find a solution that improves the resilience of our coastal marine ecosystem, protects and conserves EFH, advances the recovery of endangered Atlantic salmon, and ensures the economic vitality of Downeast Maine.

Sincerely,



Michael Pentony  
Regional Administrator

Enclosures (3)

cc. Eva Birk (FHWA)  
Joyce Noel Taylor (MDOT)  
Patrick Keliher (MDMR)

### References

Sweet WV, Kopp RE, Weaver CP, Obeysekera J, Horton RM, Thieler ER, Zervas C. 2017. Global and regional sea level rise scenarios for the United States. National Oceanic and Atmospheric Administration, National Ocean Service. NOAA Technical Report NOS CO-OPS 083. p. 1-56



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GREATER ATLANTIC REGIONAL FISHERIES OFFICE  
55 Great Republic Drive  
Gloucester, MA 01930-2276

**MAY - 8 2018**

Michael Wight, P.E.  
Senior Project Manager  
Maine Department of Transportation  
Bridge Program – North Team  
16 State House Station  
Augusta, Maine 04333-0016

Re: Maine Department of Transportation's preferred alternative for the proposed Machias Dyke Bridge (#2466) project

Dear Mr. Wight:

In April of 2018 you held a public meeting at the University of Maine in Machias to present the details of the Maine Department of Transportation's (DOT) preferred alternative for the replacement of the Route 1 bridge over the Middle River in the town of Machias, Maine. The existing structure is comprised of four box culverts with flap gates that are designed to block tidal flow into the Middle River. In your presentation, you described alternatives ranging from an in-kind replacement to the construction of a 60-foot bridge span. You presented the DOT's preferred alternative as an in-kind replacement of the existing structure. Below, we provide our comments on this alternative.

The Middle River was historically accessible to diadromous fish species, including Atlantic salmon, rainbow smelt, alewife, and blueback herring. In addition, the Middle River estuary supported a functioning saltmarsh ecosystem. The existing structure significantly limits migration of diadromous fish, and inhibits the functioning of the saltmarsh. Your preferred alternative would perpetuate this condition through the installation of flap gates that will provide minimal, if any, fish passage, and will not make any improvements regarding the restoration of tidal flow into the river. The preferred alternative is, in effect, a proposal to reconstruct a dam that will block fish access into the Middle River watershed for the next 75 years.

The Middle River is designated critical habitat for the critically endangered Gulf of Maine Distinct Population Segment of Atlantic salmon, and occurs within the Downeast Coastal Salmon Habitat Recovery Unit (SHRU). Atlantic salmon has been designated as federally endangered under the Endangered Species Act of 1973 (ESA). It is one of the eight species managed by NMFS that are most at risk of extinction in the near future, and as such, is one of the species highlighted in our "Species in the Spotlight: Survive to Thrive" initiative. Addressing the impacts of dams on Atlantic salmon and the ecosystems on which it depends is highlighted in the Species in the Spotlight action plan, the ESA listing determination and recent draft recovery plan.



This project has been specifically identified as a restoration priority within the draft Atlantic salmon recovery plan. As with all dam projects, our expectation is that your project on the Middle River will provide safe, timely, and effective upstream and downstream passage for endangered Atlantic salmon. According to the draft recovery workplan, the restoration objective for the Machias Dike Dam is to “restore safe and effective passage for diadromous fish at the Machias Dike and at Marks Lake Dam on the Middle River” (USFWS and NMFS 2016). Therefore, we consider passage into the Middle River a restoration priority for our agency.

It is our understanding that this project will be partially funded by the FHWA, and will require permits from the Army Corps of Engineers (ACOE). Section 7(a)(2) of the Endangered Species Act of 1973 (ESA), as amended, requires that federal agencies ensure that any actions they authorize, fund or carry out are not likely to jeopardize the continued existence of any listed species or destroy or adversely modify any designated critical habitat. Furthermore, section 7(a)(1) of the ESA directs federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. In other words, it is expected that federal action agencies will go beyond minimizing project effects, and will proactively seek opportunities to contribute to the recovery of listed species.

We are concerned that the preferred alternative, as presented, will not achieve safe, timely, and effective passage for diadromous fish. We look forward to working with DOT and the federal action agencies during the section 7 process to develop minimization measures that will provide adequate fish passage for Atlantic salmon and other diadromous fish. If you have any questions concerning these comments, please contact Dan Tierney (207-866-3755 or [Dan.Tierney@noaa.gov](mailto:Dan.Tierney@noaa.gov)).

Sincerely,



Julie Crocker  
Endangered Fish Recovery Branch Chief

Ec: Cheryl Martin-FHWA  
Jay Clement-ACOE  
Eric Ham-MDOT  
Mark Murray-Brown-NMFS  
Max Tritt-NMFS



Eric Ham

Maine Department of Transportation

Environmental Office

Re: Machias Dike Bridge (#2466) project

June 30<sup>th</sup>, 2020

Dear Eric:

The Downeast Atlantic Salmon (*Salmo salar*) Habitat Recovery Unit (DESHRU) Coordination Committee (DCC) has been tasked with developing a 5-Year Work Plan of actions necessary to advance the DESHRU towards delisting criteria identified in the final recovery plan ([2019](#)).

DESHRU Work Plans initiated in [2015](#), identified the dike bridge in Machias as a connectivity threat (D10.1) to Atlantic salmon recovery. Specifically, the following action is identified: "Restore safe and effective passage for diadromous fish at the Machias Dike and at Marks Lake Dam on the Middle River."

Historically, the Middle River was accessible to a wide array of sea-run fish species, including Atlantic Salmon, Rainbow Smelt, Alewife, and Blueback Herring. The existing structure prevents upstream migration of sea-run fish, most notably, the endangered Atlantic Salmon. The lack of safe, timely, and effective passage at this site and its potential to disrupt efforts to recover Atlantic Salmon were recently highlighted by the National Marine Fisheries Service (attachment 1).

Securing fish passage into the Middle River would benefit recovery efforts for Atlantic Salmon in at least four ways. First, the Middle River may provide up to 259 units of rearing habitat for Atlantic Salmon. Opening this habitat would directly contribute to attaining the goal of 30,000 accessible and suitable habitat units in the DESHRU. Second, one of the essential features of [critical habitat](#) for Atlantic Salmon are migration corridors that include abundant, diverse native fish communities to serve as a protective buffer against predation. Once fish passage at Marks Lake is established, abundance of Alewives in the Middle River should soon exceed 56,000 adults if targets of 235 adults/acre are realized. Third, the Middle River should once again host a substantial population of Rainbow Smelt once passage is secured. Rainbow Smelt are a key prey item of post-spawn Atlantic Salmon (often referred to as "kelts"). The availability of anadromous Rainbow Smelt partially sustains the viability of this key life stage. Conversely, the broad declines in Rainbow Smelt populations may be partially responsible for the declining occurrence of repeat spawners in Maine's salmon rivers. Lastly, these anadromous species require a fully functioning estuarine ecosystem to maximize their life history requirements and enhancing tidal flow into the Middle River above the dike will help achieve that goal.

The DCC is aware that the current preferred alternative by Maine DOT would maintain the status quo and provide minimal, if any, fish passage, and will not make any improvements regarding the restoration of tidal flow into the Middle River. The preferred alternative is, in effect, a proposal to reconstruct a dam that will block fish access into the Middle River watershed for the next 75 years.

The DCC is keenly interested in working with you to find ways to improve the ecology of the Middle River for the benefit of salmon and their ecosystem. We urge you to consider a different alternative that would provide safe, timely and effective fish passage and we are interested in meeting with you to discuss potential alternatives. Thank you for your interest in helping the DCC preserve, protect and

enhance Critical Habitat within the Gulf of Maine Endangered Atlantic Salmon Distinct Population Segment.

DCC Chair:

Ernie Atkinson, Maine Marine Resource – Division of Sea-run Fisheries

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Denise Buckley, USFWS Craig Brook National Fish Hatchery

Scott Craig, USFWS Maine Fish and Wildlife Conservation Office

Rory Saunders, NOAA Fisheries, Maine-Orono Field Station

# Enclosure 3

## DOWNEAST SHRU SITE-SPECIFIC THREATS AND RECOVERY ACTIONS

SITE-SPECIFIC THREATS	SUB-BASIN	WATERSHED	THREAT NUMBER	RECOVERY ACTIVITY	ACTIVITY NUMBER	REPORTING ACTION TEAM	IMPLEMENTING ENTITIES	DATE LISTED	STATUS/DATE COMPLETED	RECOVERY ACTION IN THE RECOVERY PLAN THAT THE ACTIVITY ADDRESSES
The Denney River sock has much lower return rates than other rivers in the DPS that may be a function of natural or manmade conditions in the freshwater and/or estuary of the Denney, or may be a function of a loss of genetic fitness within the Denney River sock.	Denney River	Denney River	D1.0	Design and implement study to identify the cause for low return rates for the Denney River Sock	D1.1	CHAT	NMFS, MEDMR	2015		
The Greatworks Dam, Meddybemps Dam, and Calhoun Lake Dam impair habitat quality and impede access of alewives and salmon to habitat resources.	Denney River	Denney and Calhoun	D2.0	Conduct feasibility study of Greatworks Dam to enhance to improve habitat quality and habitat access for salmon and river herring	D2.1	CAT	NGO's, NMFS, MEDMR, MEDP&W	2015		
				Review EPM for the operations of Meddybemps Dam to assure that it accounts for climate change	D2.2	CAT	NMFS	2015		
				Maintain and improve passage at Meddybemps and Calhoun Dams to maximize passage efficiency of salmon and alewives	D2.3	CAT	MEDMR, MEDOT	2015		
Curry and Preston Brooks are important sources of cold water to the Denney River. Road crossings can impair access and water quality within these tributaries.	Denney River	Curry and Preston Brooks	D3.0	Work with landowners along Curry Brook to identify ways to minimize the impacts of road crossings on water quality and connectivity	D3.1	CAT	NGO's, USFWS	2015		
				Work with landowners along Preston Brook to identify ways to minimize the impacts of road crossings on water quality and connectivity	D3.2	CAT	NGO's, USFWS	2015		
Culverts and remnant dams in the tributaries of the East Machias, particularly Beaver Dam Stream, Chase Mill Stream and Northern Stream, reduce water quality and access to the most abundant and most suitable nursery habitat in the watershed, likely impacting survival of the East Machias sock.	East Machias River	Beaver Dam Stream, Chase Mill Stream, Northern Stream	D4.0	Identify and remove passage barriers in Beaver Dam Stream.	D4.1	CAT	NGO's	2015		
				Identify and remove passage barriers in Chase Mill Stream.	D4.2	CAT	NGO's	2015		
				Identify and remove passage barriers in Northern Stream.	D4.3	CAT	NGO's	2015		
The fishway at Pokay Dam, if not maintained, can impede or block passage to significant alewife spawning and nursery habitats as well as Atlantic salmon nesting and nursery habitats.	East Machias River	East Machias River	D5.0	Maintain, and if necessary, improve passage at Pokay Dam to maximize passage of salmon and alewives.	D5.1	CAT	MEDMR, Crawford Lake Association	2015		
The Gardner Lake Fish Hatchery on Chase Mill Stream may still be holding some fish from the hatchery that may pose a genetic risk to the East Machias locally adapted stock of Atlantic salmon.	East Machias River	Chase Mill Stream	D6.0	Gather genetic samples of parr in Chase Mill stream to look for escapes from the Gardner Lake Hatchery	D6.1	GDAT	MEDMR	2015		
Storm and waste water discharge from the town of East Machias may impair water quality that could affect Atlantic salmon.	East Machias River	East Machias River	D7.0	Assure storm and waste water discharge does not impair water quality necessary for salmon survival	D7.1	FWAT	Town of East Machias, USDA, USFWS, NMFS	2015		
The outlet dam at Sabao Lake on the West Branch Machias, Chain Lake Dam on Chain Lake Stream, and Wigg Dam on Old Stream block or impede access to nursery habitats for Atlantic salmon and alewives and affect water quality by reducing stream flow.	Machias River	West Branch Machias, Chain Lake Stream, and Old Stream	D8.0	Remove or improve passage at Sabao Lake Dam, to allow unimpeded passage of salmon and river herring.	D8.1	CAT	NGO's, dam owners	2015		
				Remove or improve passage at Chain Lake Dam, to allow unimpeded passage of salmon and river herring.	D8.2	CAT	NGO's, dam owners	2015		
				Remove or improve passage at the Wigg Dam to allow unimpeded passage of salmon and river herring.	D8.3	CAT	NGO's, dam owners	2015		
On 3rd lake stream in the Machias, wing dams were constructed on side channels during the log drive era in an effort to straighten the channel and prevent log jams.	Machias River	3rd Lake Stream	D9.0	Remove wing dams on 3rd lake stream and assess changes to water quality, sediment transport, and habitat use by salmon to determine its value towards salmon recovery.	D9.1	FWAT	DMR, NGO's, land owners	2015		
On the Middle River, the Machias Dike and Marks Lake Dam block access for migratory fish, particularly alewife.	Machias River	Middle River	D10.0	Restore safe and effective passage for diadromous fish at the Machias Dike and at Marks Lake Dam on the Middle River.	D10.1	CAT	MEDOT, NGO's, NMFS	2015		
Access to freshwater habitats and water quality are impaired by culverts, especially in Coloned Brook which has some of the more productive salmon habitats in the Pleasant River	Pleasant River	Coloned Brook	D11.0	Remove or improve passage at culverts and remnant dams, especially in Coloned Brook to improve passage and water quality	D11.1	CAT	NGO's, Landowners	2015		
The fishway at Saco Falls is in need of maintenance which may impair fish passage	Pleasant River	Pleasant River	D12.0	Make improvements at the Saco Falls fishway to ensure safe and effective passage of salmon and river herring.	D12.1	CAT	MEDMR	2015		
Agricultural practices and irrigation may be affecting water quality, water temperature and water quantity in the Pleasant River.	Pleasant River	Pleasant River	D13.0	Assess the effectiveness of the WUMP in protecting the Pleasant from the effects of water withdrawal	D13.1	FWAT	MEDEP, USGS	2015		
The Addison tide gate impairs access to the West Branch Pleasant River and significantly reduces the ecological function of the adjacent salt marsh	Pleasant River	West Branch Pleasant River	D14.0	Remove the Addison Tide gate to restore diadromous fish access to the West Branch Pleasant River and restore the ecological function of the salt marsh	D14.1	CAT	MEDOT, NGO's	2015		
The Stillwater Dam in Cherryfield delays and sometimes blocks passage of Atlantic salmon, shad and river herring. Passage delays increase opportunities for predation by birds. The dam may also affect water quality and its head pond covers a historically important holding pool for adults.	Naragansus River	Naragansus River	D15.0	Conduct a feasibility study/alternatives analysis for the Stillwater Dam	D15.1	CAT	ACOE, USGS, NOAA, MEDMR, NGO's, Town of Cherryfield	2015		
				Implement the best fit alternative at the Stillwater Dam that results from the feasibility study	D15.2	CAT	ACOE, USGS, NOAA, MEDMR, NGO's, Town of Cherryfield	2015		
The Naragansus River estuary has deposits of wood chips and saw dust from 19th and early 20th century saw mills that, in areas, is several feet deep. These deposits alter benthic habitats and may alter stream flow and morphology that may affect salmon.	Naragansus River	Naragansus River estuary	D16.0	Research the benthic habitats in the Naragansus estuary and the role that dredging might play in estuary restoration.	D16.1	MEAT	NOAA	2015		
Birds observed in the Naragansus estuary are known to prey on emigrating smolts. Manmade features, such as bridges, piers and dams can give predators a competitive advantage by creating obstructions that slow fish migrations causing fish to congregate, or creating resting sites that increase opportunities for birds to spot and feed on prey.	Naragansus River	Naragansus River estuary	D17.0	Identify and remove artificial barriers or features that increase opportunities for predation.	D17.1	CAT	NGO's, NOAA	2015		
Thermal issues appear to be a problem in the mainstem Naragansus. This may be a function of clearing of nearby forests for agriculture, irrigation, problems with stream channel morphology, climate change, and remnant dams, culverts and culverts that slow down water.	Naragansus River	Naragansus River	D18.0	Remove dams, culverts and remnant dams, especially in the upper Naragansus, Shory, and Hampbuck Brook to improve water quality.	D18.1	CAT	NGO's, MEDMR	2015		
				Assess the effectiveness of the WUMP in protecting the Naragansus from the effects of water withdrawal	D18.2	FWAT	USFWS, USGS, MEDEP	2015		
				Ensure land managers implement BMP's that are protective of Atlantic salmon and salmon habitat.	D18.3	FWAT	MEDEP, USFWS, Land Managers	2015		
Portions of the Naragansus appear to be over wide and void of structure including boulders and large wood. Despite abundant glacial erratics in the riparian area, there are long stretches of mainstem habitat with very few if any large boulders or large wood features that would help support habitat features that juvenile salmon select for.	Naragansus River	Naragansus River	D19.0	Design and implement a large wood/boulder project in the Naragansus around RI, 9 and assess its benefits to fish and water quality	D19.1	FWAT	NGO's, land managers, MEDMR, USFWS	2015		
The Edsworth Dam impairs upstream and downstream passage efficiency of both salmon, smolts, and other diadromous fish, and decreases water quality above the dam. Graham Station does not have an upstream fishway blocking all upstream migratory fish. Current operations block upstream migration of diadromous fish and may delay or block downstream migration of emigrating smolts and other diadromous fish	Union River	Union River	D20.0	Continue to provide by to the Union River Salmon Association to support stock rebuilding efforts in the Union River	D20.1	CHAT	USFWS, MEDMR	2015		
				Ensure hydro operations at the Edsworth Dam minimizes harm to Atlantic salmon and adverse effects to their Critical Habitat	D20.2	CAT	NMFS, USFWS, FERC, Hydro-Developers	2015		
				Ensure hydro operations at the Graham Station minimizes harm to Atlantic salmon and adverse effects to their Critical Habitat	D20.3	CAT	NMFS, USFWS, FERC, Hydro-Developers	2015		
				Develop a stock rebuilding and management plan for the Union River	D20.4	CHAT, GDAT	MEDMR, USFWS, NMFS	2015		
Limited resources restrict our ability to evaluate habitats within these areas to check for occupancy and ensure protection of those fish and the habitats that they occupy	Boise Bubert, Chandler River, Grand Manan, Lamouche Coastal, Mt. Desert, Roque Bluff, and Tunk Stream	Boise Bubert, Chandler River, Grand Manan, Lamouche Coastal, Mt. Desert, Roque Bluff, and Tunk Stream	D21.0	Every five years monitor areas that have accessible and suitable habitats where straying might occur to check for occupancy.	D21.1	FWAT	MEDMR	2015		
				In areas with suitable habitats, implement proactive restoration when opportunities arise (e.g. a dam owner willing to remove his/her dam).	D21.2	FWAT, CAT	NGO's, MEDMR, USFWS, MEDOT, NMFS, Landowners, Municipalities.	2015		



STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
16 STATE HOUSE STATION  
AUGUSTA, MAINE 04333-0016

Janet T. Mills  
GOVERNOR

Bruce A. Van Note  
COMMISSIONER

October 20, 2020

Michael Pentony, Regional Administrator  
United States Department of Commerce  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
55 Great Republic Drive  
Gloucester, MA 01930

Dear Mr. Pentony:

Thank you for your letter dated September 30, 2020, regarding the Maine Department of Transportation's (MaineDOT) Machias Dyke Bridge project located on the Middle River along Route 1 in Machias.

MaineDOT values NOAA's willingness to have on-going communication with our staff and the Federal Highway Administration (FHWA). MaineDOT understands your concern that the in-kind replacement will have detrimental effects on the physical and biological features of Atlantic salmon critical habitat; and a negative impact on Atlantic salmon recovery goals, which would be contrary to federal agency responsibility under Section 7(A)1 and 7(A)2 of the Endangered Species Act. MaineDOT also understands your concerns with Essential Fish Habitat under the Magnuson-Stevens Fishery Conservation and Management Act and the effects of projected sea-level rise on the project and surrounding area.

MaineDOT has considered NOAA's concerns and decided to move the project from our Bureau of Project Development to our Bureau of Planning. This will pause design work on the in-kind alternative. Planning will work closely with our Office of Environmental Services and FHWA to re-evaluate the project purpose and need and reconsider a larger range of alternatives through the National Environmental Policy Act (NEPA) process. MaineDOT staff will continue to work closely and collaborate with NOAA as well as other state and federal agencies and the community to meet the purpose, need, and goals of the project.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Bruce A. Van Note'.

Bruce A. Van Note, Commissioner

cc. Todd Jorgensen (FHWA)  
Eva Birk (FHWA)  
Patrick Keliher (ME DMR)