

# **Machias Dyke Bridge, Virtual Public Meeting WIN 16714.00 March 29 – April 30, 2021**

## **Summary Comments and Questions with MaineDOT response:**

### **1. Atlantic Salmon will not recover. They are below the threshold for recovery.**

Though Atlantic salmon population levels are well below historical and sustainable population numbers, the United States Fish and Wildlife Service and the National Marine Fisheries Service have published a recovery plan that outlines the plan to recover the species. The plan can be found here <https://www.fisheries.noaa.gov/resource/document/recovery-plan-2019-gulf-maine-distinct-population-segment-atlantic-salmon-salmo>

### **2. Machias and Middle Rivers are not critical habit for Atlantic Salmon.**

We understand that there are different opinions on the critical nature of the Middle River/Machias River for Atlantic salmon; however, the both rivers are officially listed as Critical Habitat for Atlantic salmon and are afforded certain regulatory protections. The critical habitat listing can be found here: <https://www.fisheries.noaa.gov/action/critical-habitat-gulf-maine-dps-atlantic-salmon>

### **3. Did MaineDOT consult with IF&W on this project?**

Yes, MaineDOT has consulted with several state and federal agencies, including IF&W. Consultation will continue as the alternatives are refined.

### **4. Have the fisheries agencies prepared an Environmental Impact Statement on their proposal for the Middle River?**

We are working with the Federal Highway Administration to determine the level of NEPA required for the Dyke Bridge project. We do not anticipate preparing an EIS. MaineDOT is not aware of any reason for National Marine Fisheries Service (NMFS) to be completing an EIS for this project.

### **5. Please tell me which studies are used to determine impacts on fish species.**

There will be multiple resources used when completing the biological assessment for the project, including studies found in the programmatic biological assessment and biological opinion. Those documents can be found here <https://www.maine.gov/mdot/maspc/>.

The biological assessment is not due to be completed until later in the year.

**6. The former racetrack is a historic landmark. It cannot be flooded.**

A Section 106 review under the National Historic Preservation Act is required because the project is funded by a Federal Agency (FHWA). Section 106 requires federal agencies to consider the effects of their undertaking on historic properties. It requires consultation with the Maine Historic Preservation Commission (MHPC), Towns, Federally recognized Native American Tribes, and other interested parties. The goal of consultation is to identify historic properties that may be potentially affected; assess effects; avoid and minimize effects; and mitigate any adverse effects.

Through consultation with the Maine Historic Preservation Commission, MaineDOT has identified the following historic properties within the Project Area (Area of Potential Effect):

- Machias Railroad Station - listed on the National Register of Historic Places
- Machias/Riverside Park Trotting Track - eligible for listing on the National Register of Historic Places

While the track may be considered a local landmark, it is not on the list of National Historic Landmarks maintained by the National Park Service:

<https://www.nps.gov/subjects/nationalhistoriclandmarks/list-of-nhls-by-state.htm#onthisPage-19>.

MaineDOT will continue consultation and seek ways to avoid and minimize impacts to these historic properties. MaineDOT will consider the potential effects of each alternative, including the potential effects from flooding. If the project is found to have an adverse effect on historic properties, additional consultation and possible mitigation will be required.

For more information regarding Section or to request official consulting party status, please contact MaineDOT's Historic Coordinator, Julie Senk, at [Julie.Senk@maine.gov](mailto:Julie.Senk@maine.gov).

**7. Fish passage occurred when the gates were working properly.**

There have been multiple reports of sea run fish on the upstream side of the dyke making it evident that some fish passage is available currently. It is unknown how large the window available for fish passage is during the tide cycle.

**8. The roadbed is collapsing because the gates have not been fixed correctly.**

The settlement of pavement is unrelated to the condition of the tide gates. The settlement occurs as fine material (sand and/or gravel) is lost through joints and openings in the timber culverts.

MaineDOT's bridge inspector made the following comment in the 4-28-2020 inspection: "The westbound and parking are sagged 8-12" over the bridge and previously patched, suggesting continued loss of fines through the timber culvert." MaineDOT is monitoring the pavement condition as part of the bridge inspections done every two years. In 2008, MaineDOT constructed a concrete slab over part of the bridge to minimize the loss of fine material (sand and/or gravel) through joints and openings in the timber culvert.

**9. Two landfills would be backwashed if the sea is allowed to return.**

MaineDOT is aware of the possibility of landfills and other waste disposal sites located upstream of Dyke Bridge. MaineDOT will investigate the possible impacts of additional flooding on landfills and other waste disposal sites.

**10. Do the presented maximum water level rises take into account sea-level rise predicted over the next 50 years?**

The landward water levels presented in the alternative's tables in the presentation and in the aerial flooding graphic only depict normal daily tide and river flows. They do not include storm tides, peak river flows, storm surge, or raises in sea level rise.

**11. Will the high-water impacts extend further north than the Middle river bridge on Route 192? Will it affect the bridge on Ingalls Lane?**

Several of the alternatives presented at the meeting would restore tidal exchange at the Dyke Bridge on Route 1. These alternatives will impact the typical (daily) and storm surge tidal water levels at Stride Bridge on Route 192.

The Middle River at Marshfield Flats Road is approximately 30 feet higher than the river adjacent to Stride Bridge. The Marshfield Flats Road and Ingalls Road bridges would not be subject to higher water surface levels from the potential restoration of tidal exchange at Dyke Bridge.

**12. Would MaineDOT dredge the Machias and Middle Rivers as part of the project?**

All of the bridge alternatives and some of the culvert alternatives would require some amount of sediment removal in the Middle River on the upstream side of the Dyke. Dredging of the Machias River is beyond the scope of this effort.

**13. Could the flea market be relocated from the Route 1 causeway?**

The relocation of the community flea market away from the Route 1 causeway is a local decision and not within the scope of the project. However, we will be examining potential safety improvements to improve the current parking condition.

**14. An open span structure is the only way to go if fish migration is to be considered.**

Several open span structure alternatives are being considered to enhance fish migration. We recognize that open span options are the alternatives that likely allow the most opportunity for fish passage. However, alternatives that include culverts and variations of tide gates are also important to analyze to meet some of the secondary project goals. All options are also being weighed for increases in landward water levels, potential for transport of deposited sediment from the area landward of the dyke, and several other factors.

**15. If a bridge alternative is selected, where would the bridge portion begin?**

The size and location of the bridge alternatives has not been determined yet, but all bridge alternatives will be located within the limits of the existing causeway area. Shifting the location east of the existing culvert location may pose several advantages such as improved constructability while water flows are maintained in the existing culvert, gaining clearance to the boat launch area, and an easier interface with the planned Town sea level rise project.

**16. Would parking remain if the culverts were replaced by a bridge?**

We are considering parking and safety in our alternatives analysis for all the alternatives presented at the meeting. However, the bridge options may not have parking on the structures due to the resulting expanded width and how that would affect constructability, future maintenance, construction cost, and public safety.

**17. Why not more than 4 culverts that are open all the time? Couldn't a design with more open culverts achieve volitional fish passage without building an expensive bridge?**

Project studies have identified that providing volitional landward/upstream fish passage with culverts would require hydraulic capacity similar to the hydraulic capacity of a bridge. Construction of a large number of culverts would not necessarily be less expensive than building a bridge at Dyke Bridge due to complex subsurface conditions with timber cribbing and boulder infill and tidal exchange through the causeway itself that greatly complicates dewatering to work in the dry.

**18. Why were the 2 sea level rise scenarios chosen, why not include a larger sea level rise?**

The Sea Level Rise (SLR) scenarios were selected in accordance with Maine's Climate Action Plan developed by the Maine Climate Council. The Scientific and Technical Subcommittee recommends the State commit to manage for 1.5 feet of relative sea-level rise by 2050 and 3.9 feet of relative sea-level rise by 2100. The Plan, entitled *Maine Won't Wait, A Four-Year Plan for Climate Action*, can be found here: <https://www.maine.gov/future/initiatives/climate/climate-council/reports>.

**19. What is the projected lifespan of culverts versus the lifespan of a bridge?**

Highway structures such as bridges and concrete box culverts are designed for a 75-year design life. Culverts generally require less maintenance than bridges.

**20. Will there be movement of sediment with more water moving up Middle River, and what would the consequences of that be?**

MaineDOT intends to quantify the volume and composition of sediment in the Middle River landward of the Dyke Bridge that could be mobilized by the bridge and culvert alternatives. The analyses would evaluate potential impacts to the Machias River seaward of the Dyke Bridge.

**21. The return of full tidal flow to the Middle River should be considered a top priority for this project.**

The primary purposes of the project are to improve the condition of the Machias Dyke Bridge and to preserve the Calais Branch Rail Corridor. Other secondary goals of the project include improving fish passage through the structure and minimizing inundation of land upstream from Dyke Bridge that may result from increased tidal exchange.

**22. Will the project accommodate The Downeast Sunrise Trail?**

The Calais Branch Rail Corridor is preserved under the State Railroad Preservation Act. All alternatives presented at the meeting accommodate the Calais Branch Rail Corridor and the associated Downeast Sunrise Trail.

**23. Would full tidal restoration of the Middle River provide flood protection for downtown Machias?**

Current Federal Emergency Management Agency (FEMA) flood hazard information indicates that the base flood elevations (BFE) is at a NAVD88 elevation of 11 feet (ft) in the Middle River landward (upstream) from Dyke Bridge and at an elevation of 10.7 ft in the Machias River seaward (downstream) from Dyke Bridge.

Information developed by FEMA indicates that these BFEs were developed using detailed study methods. FEMA flood hazard mappings suggest that flooding in downtown Machias results from high water surface elevations in the Machias River seaward from Dyke Bridge and full tidal restoration in the Middle River is therefore not anticipated to provide flood protection to downtown Machias.

Higher flood elevations in the Machias River due to sea level rise would result in increased flood risks to downtown Machias regardless of future actions at Dyke Bridge.

**24. Does MaineDOT intend to restore the tidal marsh to compensate for impacts to wetlands at another location?**

Transportation projects often result in unavoidable impacts to wetland and the functions and values they provide. State and federal wetland regulations require mitigation, which refers to a project or effort to restore lost functions and values (e.g., fish and wildlife habitat, water quality improvement, etc.). There are several tools MaineDOT and other developers use to provide mitigation when it is required. Sometimes wetlands can be restored, enhanced, or created close to the project area. In some cases, wetlands can be restored, enhanced, or created off-site but within the same region.

Maine also has the Maine Natural Resources Compensation Program (MNRCP), which allows applicants to pay a fee for wetland impacts. The funds are managed by DEP and the Nature Conservancy and put towards projects that create, enhance, restore, or preserve resources in the same region as the impacts. Wetland mitigation banking refers to an effort to complete wetland restoration, enhancement, creation, or preservation project not associated with a development project to obtain

“credits”. The credits are put into a bank available for use or purchase to meet regulatory mitigation requirements for future projects that are located in the same geographic region.

MaineDOT is not currently pursuing wetland mitigation bank sites. MaineDOT is not considering banking of any wetland creation that may occur from increased tidal exchange. The Machias Dyke Bridge project will require review of all potential natural resource impacts. Project-specific mitigation, if it is required for the preferred alternative, will need to occur in close to the project area (for example, sites in the immediate vicinity or in the same watershed).

**25. The proposed project would result in the loss of agricultural land.**

MaineDOT is aware of the potential inundation of land, including agricultural land, upstream from Dyke Bridge that may result from increased tidal exchange. The secondary goals of the project were developed to balance the competing needs of the transportation asset including improving fish passage through the structure and minimizing inundation of land upstream from Dyke Bridge that may result from increased tidal exchange. These alternatives and potential changes to water levels will be explored further as the study progresses. If necessary, we will work with property owners to compensate for substantial impacts after we have identified a preferred alternative and the environmental review is complete.

**26. What impact does brine and/ or brackish water have on beavers and other mammals and birds living there now?**

The introduction of saline water may have an effect on the wildlife using the marsh currently. The saline water is likely to cause some changes in vegetation community, which in turn is likely to cause some changes in wildlife uses. The introduction of more sea run fish may also attract different bird species to the area. Beaver’s generally live in freshwater habitats; however, they are able to survive in salt water.

**27. Only alternatives that provide volitional fish passage adequately address Section 7 of the Endangered Species Act for endangered Atlantic salmon. (Volitional fish passage means that fish may swim landward against flows, similar to natural free-swimming conditions.)**

MaineDOT and our federal partners have had multiple discussions regarding the Endangered Species Act and the Machias Dyke project. The department will continue to explore methods to improve fish passage through the structure. We understand that Endangered Species Act consultation is very important in the direction of the project.

**28. Is Replacement-in-Kind (i.e. 4 culverts with tide gates) still being considered?**

Currently all options are under consideration. However, in September 2020, MaineDOT received comment from the National Marine Fisheries Service (NMFS). The NMFS administers the Endangered Species Act for Coastal Species as well as other laws that guide marine conservation and management. NMFS stated that the agency had substantial concerns about the in-kind replacement alternative

stating that it would provide even less opportunity for fish passage than exists now and would likely have detrimental effects on physical and biological features of critical habitat for Endangered Atlantic salmon.

The Endangered Species Act requires federal agencies to ensure that their actions do not jeopardize the continued existence of any listed species. Actions may not destroy or adversely modify any designated critical habitat.

In response to these comments, MaineDOT and FHWA are re-considering alternatives that include options to improve fish passage.

**29. Are fish ladders being considered?**

Installation of fish ladders (technical term is “fishways”) are not being evaluated as a component of the evaluated alternatives at Dyke Bridge. Previous studies identified that design and operation of a fishway at Dyke Bridge was not practical due to regular variations in water surface elevations seaward and landward from Dyke Bridge and range of swimming capabilities for fish species that could be targeted for upstream passage. Previous studies also evaluated whether “fish-friendly” self-regulating tide gates (SRTs) could be a potentially feasible alternative to manage flow and water levels while providing upstream fish passage. It was determined that SRTs, including fish friendly SRTs, were not feasible at Dyke Bridge.

**30. Emergency services response times will be impacted by construction of the project.**

Emergency service response times will be considered in the maintenance of traffic assessment and design for this project. MaineDOT will coordinate with local emergency response and Town officials on this matter once the construction phasing and maintenance of traffic alternatives are more known.