



The Newsletter of Friends of Merrymeeting Bay • PO Box 233 • Richmond Maine 04357 • 207-666-1118 • [www.fomb.org](http://www.fomb.org)

Friends of Merrymeeting Bay (FOMB) is a 501(c)(3) nonprofit organization. Our mission is to preserve, protect, and improve the unique ecosystems of the Bay through:

## Education

## Conservation & Stewardship

## Research & Advocacy

## Member Events

Support comes from members' tax-deductible donations and gifts.

Merrymeeting News is published seasonally and is sent to FOMB members and other friends of the Bay. Article hyperlinks and color images are available in our [online edition](http://www.fomb.org) at [www.fomb.org](http://www.fomb.org)

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## Eaglets 2024

We again partnered with [Biodiversity Research Institute](http://Biodiversity Research Institute) (BRI) to band some eaglets in the Merrymeeting Bay area and gather some feather and blood samples for contaminant analyses.



Clipping a couple of feathers.  
Photo: Ed Friedman

Because of maintenance issues, we did not begin flying our annual nest surveys until really late in the season, so we didn't have the usual advantage of knowing when adult eagles first nested, when chicks hatched, and how many there were. These data are important when scheduling and carrying out sampling because there is a prime time for handling and sampling birds of 5–7 weeks old—after they feather out, but before they are too big and start becoming adept with their wings. Not having good starting points, we did some guessing with a



Eaglets are very accommodating patients.  
Photo: Ed Friedman

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*Eaglets 2024, continued from page 1*

little data from a couple of late-season flights and, as a result, with our late start we sampled only four area nests before the chicks were too large to safely catch and handle. Eaglets weather the process quite well and are generally quite calm throughout.

In the several flights we did make it was clear many of the usual nests were empty or gone. We believe storm damage in December and January took a toll on some nests, and avian influenza continues to impact the eagle population, as do lead bullet shards in coyotes or other hunter prey left behind and scavenged.



Back in the nest, none the worse for wear.  
Photo: Chris DeSorbo

Interestingly, despite record river herring runs on the Sebasticook River (6.5 million fish) and China Lake Outlet Stream (1.3 million fish), flush survey counts of eagles aggregating in these areas for “free lunch,” were down about 33% from last year (200+ instead of 300+), when we should have seen an increase.

*Ed Friedman*



This eaglet declined to participate in the study.  
Photo: Ed Friedman

# Brunswick Dam Relicensing

Using underwater sonar, FOMB continues documenting the presence of American shad below the dam, as they vainly attempt to pass upstream for spawning. More than 10,000 shad counted in a single incoming tide stand in sharp contrast to the 91 shad ascending the fish ladder for the entire season (only 13 in 2023!).

This is grim evidence for the fishway's ineffectiveness at moving shad successfully, but the ladder is also inefficient at passing river herring (alewives and blueback herring). Consider and contrast the 112,563 herring passed in Brunswick on the state's third largest river with 6.5 million through the fish lift at Benton Falls on the much smaller Sebasticook River, 1.3 million through three fish ladders on China Lake's Outlet Stream, over a million at tiny Damarascotta Mills' rustic pool-type fishway, 5.5 million at the Milford fish lift on the Penobscot, 610,000 at the Woodland inefficient fish ladder on the St. Croix, and 767,000 on the Union River in Ellsworth.

Safe and efficient upstream and downstream fish passages at Brunswick will be key issues raised by multiple parties during the relicensing process in which FOMB is an active participant. Brookfield, the multinational owner of this and most other Maine hydroelectric dams, has just filed their Proposed Study Plan (PSP), somewhat modified from their initial plan based on stakeholder feedback. We are posting their filings to the Federal Energy Regulatory Commission (FERC) as well as ours and those of other parties on the [Legal page](#) of our web Cybrary. A screen shot of these from 8/10/24 is shown below.

*Ed Friedman*

The screenshot shows the website interface for Friends of Merrymeeting Bay Cybrary. The navigation bar includes links for HOME, Biological, Chemical, Physical, Legal (highlighted), Management, Misc, Search, and NEW. A search bar contains the text: "Includes documents related to legal cases such as dam relicensing to protect the American eel, endangered species protections, the proposal to put hydroelectric turbines in the Chops, etc." with an "Expand All" button. Below the search bar, there are two main sections: "Lower Kennebec River Dredging" (expanded) and "Brunswick Dam Relicensing" (collapsed). The "Brunswick Dam Relicensing" section contains a list of document links with their respective file sizes:

- [2012 DEP Report appendices-final See pg 77 TMDL non-attainment](#) ( PDF File 2.02 MB )
- [Amended License 5-9-79](#) ( PDF File 164 KB )
- [Brookfield 3 Dam Lower Androscoggin SPP Report 3-28-24](#) ( PDF File 135 KB )
- [Brookfield Brunswick PAD 2-21-24\\_compressed 28mb](#) ( PDF File 29.53 MB )
- [Brookfield Proposed Study Plan 8-2-24 Compressed](#) ( PDF File 11.03 MB )
- [Brookfield to FERC Brunswick Upstream Fish Passage FOMB Logjam Complaint 5-12-23](#) ( PDF File 1.06 MB )
- [Brunswick Fishway 2022 Annual Report 3-31-23](#) ( PDF File 716 KB )
- [Brunswick FO&M Plan 4-7-21](#) ( PDF File 2.74 MB )
- [Brunswick FOMB Brookfield FERC Logjam Complaint 5-8-23](#) ( PDF File 350 KB )
- [Brunswick FOMB Final FERC Comment 6-20-24 compressed](#) ( PDF File 9.05 MB )
- [Brunswick FWS Study Requests FINAL 6-20-24](#) ( PDF File 467 KB )
- [Brunswick MDIFW comments 6-19-2024](#) ( PDF File 562 KB )
- [Brunswick Merrymeeting Bay TU Comments on FERC Docket 2284 NOI-PAD Study Scoping 6-20-24](#) ( PDF File 3.62 MB )
- [Brunswick NMFS PAD and Scoping Comments 6-18-24](#) ( PDF File 389 KB )
- [Brunswick NPS PAD SD1 Cmnts 6-20-24](#) ( PDF File 3.54 MB )
- [Brunswick Project License 02-09-79](#) ( PDF File 915 KB )
- [Brunswick Scoping Document 4-16-24](#) ( PDF File 1.64 MB )
- [Fish Kill 1-FOMB FERC Report Alewife Kill 10-28-16](#) ( PDF File 1.46 MB )
- [Fish Kill 2- Brookfield Response FERC 20161107-5221\\_Brunswick River Herring Issue - Nov 4, 2016 Comments](#) ( PDF File 680 KB )
- [Fish Kill 3- FERC Response to FOMB Complaint 11-10-16 20161110-3057\\_p-2284-045](#) ( PDF File 130 KB )
- [Fish Kill 4- Brookfield FERC Follow-Up 12-8-16](#) ( PDF File 974 KB )
- [Fish Kill 5- FERC Final Response 1-3-17 20170103-3006\\_p-2284-045](#) ( PDF File 129 KB )
- [Fishway Contract 12-30-77 Reduced](#) ( PDF File 1.25 MB )
- [Maine Shad Habitat Plan V2 9-16-2013](#) ( PDF File 1.11 MB )
- [Rizzo Notes April 1977 Reduced](#) ( PDF File 632 KB )

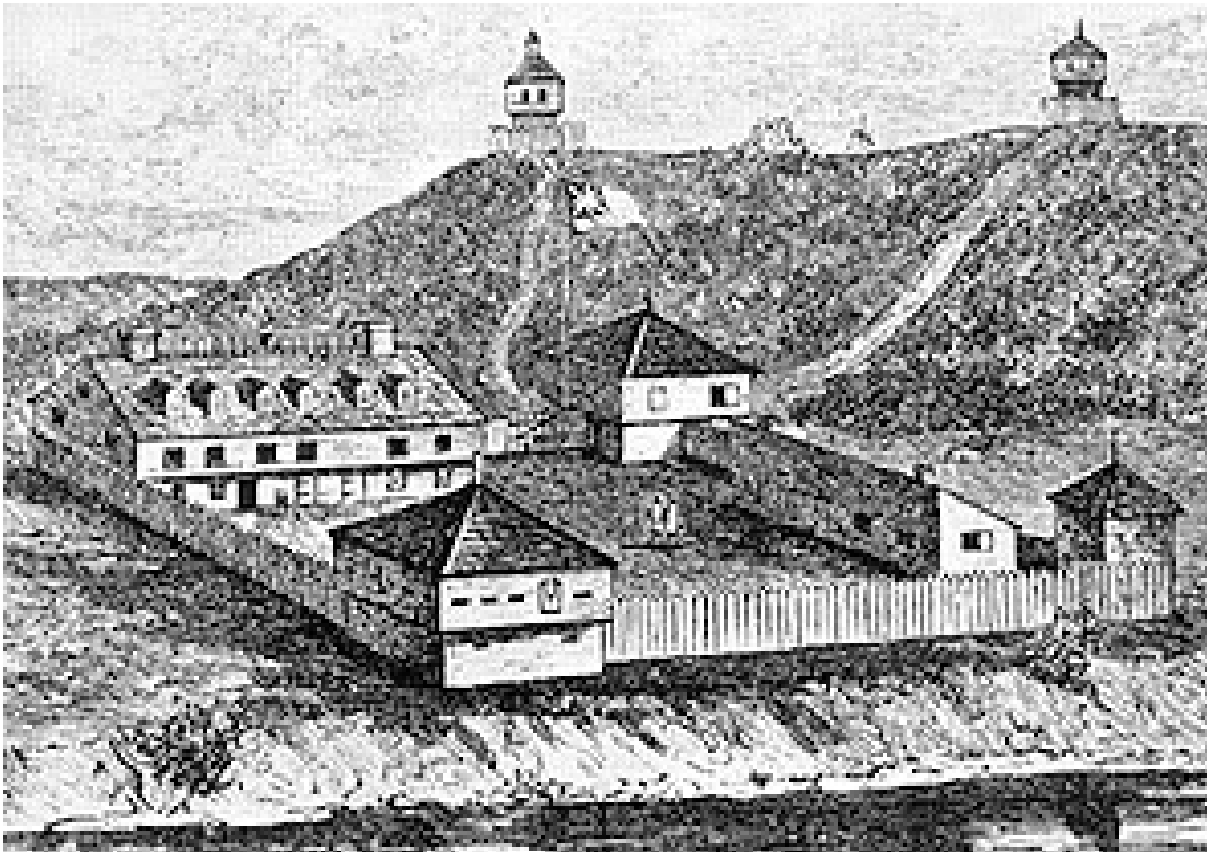
## Timing

A crowd of donors, residents, and federal and state employees stand before me. It's my turn to describe the project we've worked so hard on for the past 7 years. We all stand at the outlet dam of China Lake in Vassalboro, Maine. These folks are all keen to see the final project—a Denil fish ladder that allows river herring to ascend past the dam and to spawn in their natal waters. It's the first time the fish have been able to swim freely from the Gulf of Maine to China Lake since the year 1783, a 239-year forced hiatus. It was probably longer than that, but 1783 was the last year any record of the fish ascending "Mile Brook" was noted and not for a good reason.

Colonial residents had petitioned the General Court of Massachusetts in attempts to avoid the law requiring installation of fish passage into the many dams that now filled "Mile Brook." This petition was discovered in the Massachusetts state archives by an intern for Maine Rivers whose mission was to find some historical evidence that these fish did indeed access and inhabit China Lake prior to European contact. The archeological evidence unearthed at the Cates site in the form of calcined alewife bones from a fire pit feature dating back millennia was not enough to placate the naysayers. Even the written document was sniffed at suspiciously. Combined, the calcined bones and the petition were enough to see the final restoration effort proceed.

Outlet Stream, or "Mile Stream" or "Mile Brook" as it was originally known, fell victim to commerce like most, if not all, the coastal streams and smaller rivers in New England. That moving water was harnessed to make horsepower. In turn, that horsepower was used to grind grain, saw lumber, make shingles and axe handles, tan leather, and support any number of other labor-intensive pursuits you can imagine where horsepower could lessen the rigors of hard labor. The first dam on Mile Brook was most likely a military installation.

In July 1754, a detachment of 600 soldiers led by Major General John Winslow, namesake of the present-day town, arrived at the junction of the Sebasticook and Kennebec Rivers. Their mission: to build a fort that would protect English inhabitants of the Kennebec Valley from the French. The sheer size of this installation is a big clue as to why the first dam on the lower reach of Outlet Stream came to be. The volume of lumber required to build such a structure was enormous.



**Ft. Halifax as it stood when completed in 1755. Drawn from descriptions in official documents, tracings of the foundations and from the remaining flanker. By W.G.**

*Timing, continued from page 4*

Even with 600 men at his disposal, it's my guess that Winslow conscripted Mile Stream into the French and Indian war effort very early on. Because Mile Stream was a mile, hence the name, up the Sebec from its confluence with the Kennebec, the lumber was floated down the last mile of the Sebec River, retrieved, and then used in the construction of the fort, completed by 1755. Such a short time span seems incredible.

The first sawmill built in the New World was in the vicinity of York, Maine, in the early to mid 17th century. Previous to this and for those without the wherewithal to get a tidal or river mill going, producing boards for building purposes was a straightforward and back-breaking endeavor. First, a pit was dug in the ground deep enough for a man to stand in, plus a couple of feet. Then the log to be sawn was put over the pit. One man got in the pit while the other perched atop the log. The saw was drawn up and down through the log until a board was produced or the man in the trench suffocated on sawdust. Switching to waterpower, was, literally, a life-saver in some respects, although these mechanically driven saw blades posed their own hazards.

Fort Halifax was raided by native Americans in the fall of 1754 whilst under construction. By the time it was completed, a good number of the natives had fled the region into Canada. The fort was abandoned in 1766 and sold to private interests. The French and Indian War was over and, most likely, so was the run of river herring into China Lake. Meanwhile, the war on Mile Stream continued unabated. In its full development there were fourteen dams on this 7 1/2 mile long stream—a combined 4,000-shaft horsepower. Any migratory fish that had used this waterway were rapidly extirpated, which brings us back to the near present.

It's funny when you stand before a large crowd that expects you to orate. You have no script, no PowerPoint presentation, and certainly no teleprompter. All you have is a mental rolodex of experience. I stand before the crowd and say, "Follow me please" and walk toward the dam. The area is tight, but they all crowd in. We stand at the dam gate house.

It's early August so they will not see the frantic May upstream efforts of the river herring coming into China Lake to spawn from the stream below. I quickly point out the Denil fishway as I spy something in the lake headed our way. I'm struck by an epiphany. I launch into a description of river herring and ask the crowd, "When does the alewife run typically begin in Maine"? I look expectantly at the gathering.

"In the spring!" comes a chorus from the crowd.

"Wrong!" I reply, and the crowd stares at me as if I've taken leave of my senses. Of course it begins in the spring, they're all thinking. In May, that's when the river herring run. I glance over my shoulder, and they've arrived. My epiphany has arrived. The timing was impeccable. "Behold! I present you with the beginning of the river herring run!"

I turn and point, for behind me is a school of river herring numbering in the hundreds of thousands. A school so dense they blacken the water. Nervous ripples of fish. Tiny replicas of their much larger parents. Each perhaps 60 mm long (2 1/4 inches). A largemouth bass explodes on the school from below. Tiny river herring leap from the water in droves.

"This is the beginning, the starting point, and the finish line all in one," I say.

The best part is the impromptu nature of the whole thing and the fact that it was true, AND I'd never even thought of it that way before this very moment. These fish continue to teach and humble me simultaneously.

I barely had to speak after that. The juvenile river herring began to pour out of the lake to escape the bass only to fall into the stream below where more bass waited. The gauntlet is continuous in the life of a river herring. They'll run that gauntlet for 4 years until the adult urge to spawn drives them from the mighty Atlantic to the Kennebec to the Sebec to Outlet Stream to China Lake. Then the run will begin anew.

Not since the days of Ft. Halifax has the river been alive like this!

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*Behind me is a school of river herring numbering in the hundreds of thousands. A school so dense they blacken the water.*

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## *Heronries*

Years ago there was a heron breeding colony (also called a rookery or, more specifically, a heronry) near the junction of Alna, Pittston, and Dresden above the Eastern River. I used to see herons fly down from the north to hunt the Bay regularly. Now, the closest heronries I know of are:

- On the west side of Cobboseecontee Lake (about 25 nests)
- A small stick pond north of Cobboseecontee (about 11 nests)
- Outer White Island between East Boothbay and Damariscove Islands (11 nests)
- 26-acre Flag Island off the mouth of the New Meadows River with a hectic colony of about 150 heron nests mixed in with probably 100 cormorant nests, 30 snowy egret nests, and several osprey nests

Flag Island is a new one for us, where apparently cormorants have been encroaching on the herons for some years. The island, owned by the Maine Department of Inland Fisheries and Wildlife (IF&W), is just crazy with these bird colonies at its south end. Their density and constant movement makes counting quite a challenge when flying by.

Along with our long-term eagle nest surveys, FOMB has been working with IF&W to keep their heron biologist Danielle D'Auria abreast of local heronry status. On a flight over Flag this spring, a good cobble landing site was seen on the north end away from the big bird colonies, and we thought if we could land there and fly a drone systematically down over the colonies we could probably get some good counts and photos.

With the help of outstanding wildlife photographer Mauricio Handler of [Aquaterra Films](#), we did this on July 9. The drone is never close to the nesting birds and has a good zoom on it, but the colony activity is so busy that any drone/bird proximity was a non-event, as with all the other hubbub, the drone seemed to go totally unnoticed. We thought readers would enjoy some photos from that morning (photographs are in color, in newsletter issues posted to the website).

If anyone knows of more local heronries, please let us know.

*Ed Friedman*



Flag Island

Photo: Mauricio Handler, Aquaterra Films

*Continued on next page*

*Heronries, continued from page 6*



**Heron on Flag Island**  
 Photo: Mauricio Handler, Aquaterra Films



**Mauricio's drone returns.**  
 Photo: Ed Friedman

## WE NEED YOU! PLEASE SUPPORT OUR IMPORTANT WORK

### FOMB Leadership

Our accomplishments are due to the hard work of dedicated volunteers, especially those who serve on our committees. If you want to get involved and serve, please contact the committee chair or Ed Friedman. We always welcome member input and we'd love for you to join us!

#### Steering Committee

- Ed Friedman, Chair (Bowdoinham)
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\$7 Enclosed (optional) for a copy of Conservation Options: A Guide for Maine Land Owners [\$5 for book, \$2 for postage].

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Thanks to Rebecca Bowes for newsletter layout.



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*Herons on Flag Island  
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