



The Newsletter of Friends of Merrymeeting Bay • PO Box 233 • Richmond Maine 04357 • 207-666-1118 • 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

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Genetically Engineered Salmon Dead in the Water

After 18 years of work and 5 years of litigation, genetically engineered (GE) Atlantic salmon, the only ever approved GE food animal, is now officially dead!

In 2016 Friends of Merrymeeting Bay (FOMB) joined with a broad coalition of environmental, consumer, commercial, and recreational fishing organizations in suing the U.S. Food and Drug Administration (FDA) for approving the first-ever GE food animal, an Atlantic salmon engineered to grow quickly. The man-made salmon was created by AquaBounty Technologies, Inc. with DNA from three fish: Atlantic salmon, Pacific king salmon, and Arctic Ocean eelpout. This marks the first time any government in the world has approved a GE animal for commercial sale and consumption.



Frankenfish
Cartoon: [Steve Greenberg www.greenberg-art.com](http://www.greenberg-art.com)

The plaintiff coalition, jointly represented by legal counsel from Center for Food Safety and Earthjustice, included Pacific Coast Federation of Fishermen's Associations, Institute for Fisheries Resources, Golden Gate Salmon Association, Kennebec Reborn, Friends of Merrymeeting Bay, Ecology Action Centre, Food & Water Watch, Center for Biological Diversity, Friends of the Earth, Cascadia Wildlands, and Center for Food Safety.

Thanks largely to years of work by Center for Food Safety (CFS) and Earthjustice, counsel to the plaintiffs, Aquabounty has just stopped *all* production of its GE salmon and [will close its last remaining facility](#).

The law requires agencies like FDA, who aren't fisheries biologists, to get review and approval from scientists with that expertise. FDA's refusal to do this before allowing commercialization of GE salmon was not only irresponsible, it violated the law.

Here's what happened: After a biotech company named AquaBounty got the first-ever GE food animal approved by the FDA in 2015, plaintiffs sued and organized two million

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Genetically Engineered Salmon Dead in the Water, continued from page 1

people to join the massive campaign demanding the FDA change course. The coalition led by CFS also pressured major food retailers like Walmart, Costco, Kroger, and major restaurants like Red Lobster and Legal Seafood, to make commitments not to sell GE salmon. In 2020 we won our lawsuit, and the court sent GE salmon back to the FDA for reassessment and a new decision. The court ruled FDA approval was unlawful and failed to comply with core environmental protection laws and that before FDA could approve a GE animal, it had to ensure its environmental safety. But rather than stop production right away, AquaBounty tried to shift its production to new facilities and keep up its commercial goals.

The GE lawsuit challenged FDA’s claim that it has authority to approve and regulate GE animals as “animal drugs” under the 1938 Federal Food, Drug, and Cosmetic Act. Those provisions were meant to ensure the safety of veterinary drugs administered to treat disease in livestock and were not intended to address entirely new GE animals that can pass along their altered genes to the next generation. The approval of GE salmon would have opened the door to other genetically engineered fish and shellfish, as well as chickens, cows, sheep, goats, rabbits and pigs, reportedly in development.

As the lawsuit worked its way through the courts, AquaBounty continued its push to bring its GE salmon to market. But the coalition didn’t let up either, and in the last year, thanks to the many setbacks and delays plaintiff’s work made possible, the company began to slowly scale down its operations, closing several facilities.

In December, AquaBounty announced it would stop production of all GE salmon.

The GE lawsuit highlighted FDA’s failure to protect the environment and consult wildlife agencies in its review process, as required by federal law. The FDA never satisfactorily answered crucial questions about the environmental risks posed by these fish or what can happen when these fish escape. The FDA must be held to a higher standard.

Ed Friedman

FOMB Preliminary 2024 Financial Statement

Although we have not yet received all the financial documents required to close the books on 2024, sufficient information is available to offer a preliminary summary of FOMB financial results for the prior year and current account balances.

In 2024 receipts exceeded expenses by \$60,300, with key revenue sources and expenses broken out in the schedule below. Total unrestricted liquid assets are approximately \$528,000 with an additional \$52,000 in restricted stewardship funds for a total of \$580,000. FOMB remains on firm financial footing.

*Respectfully submitted,
Vance Stephenson – Treasurer*

| 2024 Income \$98,500 | | 2024 Expenses \$38,200 | |
|-----------------------------|---------|-------------------------------|---------|
| Annual Appeal | 40% | Programs | 75% |
| Membership | 30% | Administration | 19% (2) |
| Grants | 10% | Membership & Fundraising | 6% |
| Other | 20% (1) | | |

1. We moved a lot of our liquid assets into CDs this year. Interest income represents roughly half of Other Income.
2. With much lower total expenses, our **fixed** administrative costs for monthly office rent (still a bargain), phone, and internet represented a larger percentage of total expense.

Cash Income less Cash Expense for 2024: \$60,300

FOMB 2024 Accomplishments and Partners

Volunteers

Approximately 2,848 volunteer hours
(356 days, 158 volunteers)

Membership

450 households
Newsletters (4 issues)

Advocacy

EMF health effects
Halted production of GE Atlantic salmon
Lower Androscoggin upgrade passed
Healthy Rivers/Healthy Gulf promoting safe fish passage
Successful Appeal of Pejepscot Dam water quality cert. issued for Class C
Various national efforts: NEPA, ocean plastics, ESA, climate, etc.
PFAS monitoring/detection at former Brunswick Naval Air Station, Androscoggin discharges
PFAS monitoring on Androscoggin and Kennebec for Bigelow/FOCB estuary project
Brunswick Dam relicensing (FERC proceeding)

Media

Print, TV, internet (over 35): PFAS, Richmond history project, Speaker Series, GE salmon, water monitoring, Bay Day, etc.

Grants

\$2,500 education
\$5,000 general operating
\$2,055 PFAS testing

Education

Speaker Series (415 registrants)
Marcia Buker Elementary School history/film/theater project
Speaker Series broadcasts on community cable TV
Two Bay Days
Website updates
Main St. Bath winter critter display

Conservation and Stewardship

Additional easement work
Continuous landowner outreach
Ongoing easement monitoring
Mowing of Pork Pt. Field
Control of Bowdoinham phragmites

Research

Water quality monitoring (17 sites)
Shad counting at Brunswick Dam
Prehistoric/historic fish weir photo documentation
PFAS sampling (Androscoggin, Kennebec, BNAS)
Archaeology phase 1 survey

Primary Partners

The Archaeological Conservancy

Aquaterrafilms

Maine Coalition to Stop Smart Meters

Maine Historic Preservation
Commission

Department of Inland Fisheries and
Wildlife

Department of Marine Resources

Bowdoinham Public Library

Maine Land Trust Network

Brunswick Sewer District

Main St. Bath

Country Farm Furniture

Friends of Sebago Lake

Department of Environmental
Protection

Downeast Salmon Federation

Native Fish Coalition

Piti Theatre

Earthjustice

Chop Pt. School

Biodiversity Research Institute

Point of View Helicopter Services

Native Plant Trust

Endangered Species Coalition

Marcia Buker Elementary School

Center for Food Safety

N. American Versatile Hunting Dog
Assoc.

Brunswick Citizens for a Safe
Environment

Bath Savings Institution

New England Foundation for the Arts

Bigelow Laboratory for Ocean
Sciences

Maine Master Naturalist Program

The Injured Eagle

I got a text on my phone saying there was an eagle in the pasture along with Jimmy the horse.

“Do you see the eagle now?” I asked. “Yeah,” he answered. “Jimmy-the-horse walked up to him and he hopped away. I don’t think it can fly.”

“OK, don’t chase it, and let me make a phone call. I’ll be over shortly.” I made a quick phone call to Avian Haven, the bird rehabilitation center in Freedom, Maine. I explained the situation to them. Avian Haven said they had a volunteer on the way and asked if I could meet the volunteer there. I said I’d be waiting.

So I drove over to Outlet Stream in Vassalboro to scope out the eagle while awaiting the volunteer. Meeting with the fellow that texted me, he told me where he had last seen the bird. I headed across the field. Sure enough, Jimmy-the-horse walked over curious about my presence. I gave him a pat, and he went back to trimming the grass. There was no eagle visible in the field. I slowly circled, looking off the edge of the field. It was hot out. Well into the 80s and humid. Before long I was sweating profusely. I continued around and spied a small patch of white in the trees off the field. I stopped and watched. Moving slowly, I confirmed it was, indeed, the eagle, standing in the trees watching me. I walked back to the driveway crossing the bridge over Outlet Stream and awaited the volunteer.

We Try Plan A

It didn’t take long for him to show up. A retired UPS driver from New Jersey. His mission: to capture the eagle and bring it to Avian Haven for assessment. We briefly discussed the position of the bird and how best to go about capturing it. I advised not letting the eagle get in the field as it could easily outrun us. I’ve seen it happen. Even when unable to fly, eagles get around amazingly well on foot. The volunteer had a decent sized pole net with him. We got to where we could see the eagle and watched it for a while. It stood in the trees watching us.

Our plan was to approach the grounded raptor from both sides thereby forcing it further into the woods. Brush and trees would hamper the eagle’s ability to run away, and its capture would be swift and sure.

At first the plan worked flawlessly right up until the eagle exercised its own plan. It sprinted with amazing speed past the net, squirting between the two of us and hit the field at full blast. Not quite flying, not quite running. A speedy cross between the two. Far faster than we could run.

The eagle headed straight for the stream. It crossed the marshy ground and hit the water. It continued to flop its way through the stream and stopped mid-way across.



The eagle stopped midway across the stream.
Photo: Michael Robinson

We both arrived at the marshy juncture of the stream and field. I stopped and assessed the eagle’s new position and wiped the sweat out of my eyes. I stood there panting with my hands on my knees. The eagle floated on the water watching us.

I was very familiar with this section of stream. It was once an impoundment behind a dam that had fallen into extreme disrepair. Now the remainder of the dam was so leaky that the impoundment was mostly gone but the mud wasn’t.

The volunteer, having recovered, steeled himself for the next move. He advanced into the marsh heading straight for the eagle. He made it three steps before sinking to his knees in primordial ooze.

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The Injured Eagle, continued from page 4

Had I had the strength I would have laughed. Instead, I wiped sweat from my eyes and helped him back out of the mire. One of his sandals fell off somewhere in one of his foot holes. We fished it out with a stick. We laughed together as he had to put the goop-laden sandal back on his foot because we couldn't get near the water in the stream without sinking in the mud yet again.

We Try Plan B

I came up with a new plan, which I dreaded. "I'll go get my chest waders on and wade out into the stream and drive the eagle to you." As I walked over to get my waders, the phone rang; it was the chief volunteer from Avian Haven. He asked if we needed assistance as he was only a few minutes away. I said we surely do. He arrived a few minutes later and carried two large, handled hoop nets. He gave me one and then joined his junior volunteer on the far side of the stream. His plan was to hide in the tall marsh grasses and wait for me to push the eagle back out onto dry land whereupon they would spring their trap.

I waded into the stream and slowly advanced through the muck. By the time I broke out of the weeds, the water was already up to my waist. The eagle watched me warily and then began flopping its way back across the stream. I could see no signs of the volunteers in their grassy hide. I waded a little further. The eagle remained still. I waded some more and now the bottom was coming up. It was actually pretty firm.

I called out "Hey! The bird is about ready to hop out. Be ready." I advanced some more. The eagle hopped out of the water and disappeared into the tall marsh grasses. I waited expectantly. Nothing. No volunteers, no eagle. Silence.

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The Eagle Has Other Plans

I pressed forward and came to where the eagle had departed the stream. I listened. I peered very carefully and then, as silently as possible, I crawled out of the water onto the mud and into the grasses. It was blazingly hot out. I was slowly boiling to death in my waders. "I'm on land and will slowly advance." Or so I kept reminding myself as I remained hunched over.

The ground was mostly liquid with marsh grass holding me up. One cautious step at a time. I tried to keep the net ready. I looked carefully, but the grass was so thick I could easily pass by the bird two feet away and not see it.

Silence. I crept forward a few steps, and the eagle exploded out from under my feet! It lunged through the grass with amazing speed.

Success!

"Bird!" I shouted. I already couldn't see it, but I could see the volunteers' heads rushing towards me. They were not far away—maybe 10 feet.

A flash of white and brown eagle and the first volunteer went down. The senior volunteer dove with his net trying to pin the eagle to the ground. The eagle shot out from beneath the net running for the stream. I lunged forward a few steps, instantly finding a hole in the mud. As I fell, I swung the net and pinned the eagle. It rolled on its back and grabbed the net with its formidable talons.

"You got him?" the senior volunteers voice came. "I got him!" I croaked. The grass rustled, and the volunteer half paved in mud staggered into view. "Pin him some more, so I can extract myself." I crawled out of the mud.

The first volunteer came in, and we bundled up the eagle to get it to hard ground and into a crate for transport.

Jimmy-the-horse sauntered over to watch.

Nate Gray

BNAS Hangar 6 Discharges to the Androscoggin River

In recent history there have basically been two flavors of Aqueous Film-Forming (firefighting) Foam or AFFF: *bad and worse*. All are fluorinated surfactants containing assortments of PFAS chemicals that do an excellent job of smothering fires but, because of their strong fluorine/carbon bonding, persist in the environment for years. Older legacy or “worse” foams used the highly toxic PFOS (one of the approximately 14,000 PFAS chemicals) as a main ingredient. The primary AFFF culprit of this type, manufactured by 3M beginning in the 1960s and marketed as 3M Light Water, was pulled from the markets in 2002 when its harmful environmental and health consequences could no longer be ignored. Later in the 1960s, legacy fluorotelomer AFFFs were developed without PFOS but still containing PFOS precursors. Ansilite, the most common of these, contains 6:2 fluorotelomer sulfonate (6:2 FTS), which is identical with PFOS except for the replacement of 4 fluorines with 4 hydrogens. The PFAS chemicals used in these typically have shorter molecular weight chains and fewer fluorines with the hope they would break down more readily. They were made by an assortment of manufacturers, excluding 3M, and production of these ceased in 2016. Modern fluorotelomer AFFFs with *only* short-chain polymers began production in 2006 and became the dominant AFFF in use by 2015. Now there are also “green” foams available with no PFAS chemicals in them. Ansilite, manufactured by Ansul (ranked by the EPA in 2002 as amongst the dirtiest/worst facilities in the US for cancer and non-cancer risks from air and water releases) is typical of the newer “bad” vs. “worst” iterations of AFFF.



Original Ansilite label on Hangar 6 tank
Photos: Ed Friedman



3M Light Water added to hangar 6
by MRRA

Hangar 6 was built by the Navy in 2006 when there was no more 3M Light Water available (since 2002). The hangar fire suppression system used Ansilite. Primary AFFF PFAS signatures are PFOS for Light Water and 6:2 FTS for Ansilite. The bulk of Brunswick’s Naval Air Station (BNAS) was transferred to civilian authority (the Midcoast Regional Redevelopment Authority [MRRA]) in 2011, although MRRA was chartered in 2005 when the base closure process began.

In 2012, now under MRRA control, about 2,000 gallons of Ansilite AFFF spilled from the Hangar 6 AFFF storage tank when a valve

was broken off. Once repaired, MRRA refilled the tank in large part from tanks in Hangar 4 (still owned by the Navy) and other sources with the old “worse” 3M PFOS Light Water they still contained. When DEP tested the Hangar 6 tank in 2019, they found mostly 3M Light Water.

FOMB and Brunswick Sewer District (BSD) samplings of the Hangar 6 BSD pump station have consistently found elevated levels of PFOS and 6:2 FTS. The presence of elevated PFOS levels indicates this material has entered the sewer system after 2012 when MRRA first introduced PFOS Light Water into the fire suppression system of Hangar 6 from Hangar 4. Our most recent sampling on November 26, 2024 went upstream of the pump station and included two oil/water separator pits (inside manholes) just outside of the hangar. Waste water from the hangar flows through these before going to the BSD Pump Station.

Samples from both pits were quite hot for PFOS (H6 West 11,277 ng/l and H6 East 925 ng/l) and for 6:2 FTS (H6 West 20,978 and H6 East 8,199 ng/l). Levels in the actual pump station were down considerably from our previous sampling on July 29, 2024, this time at 667 ng/l for PFOS and 2,622 ng/l for 6:2 FTS (whereas in July the two levels were: 12,222 ng/l for PFOS and 3,375 ng/l for 6:2 FTS). This seems to indicate episodic higher discharge flows from the hangar could be flushing elevated concentrations from the separation pits down the sewer line, through the pump stations to the BSD plant, and then into the Androscoggin River.

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BNAS Hangar 6 Discharges to the Androscoggin River, continued from page 6



Sampling H6 West
Photo: Ed Friedman

FOMB’s sole visit to the Hangar 6 fire suppression room on November 16, 2023 revealed no obvious signs of leakage and neither did a very recent inspection by an independent fire system contractor. While origins of the concentrated PFAS levels in these contaminated separators remain a mystery, clearly the first order of business is for MRRA to have these toxic reservoirs emptied and cleaned. Then, we can monitor to see whether or not there remains an ongoing (vs. legacy) PFAS discharge from the hangar.

Ed Friedman

References:

- <https://pfas-1.itrcweb.org/3-firefighting-foams/>
- <https://en.wikipedia.org/wiki/Ansul>

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)
- Vance Stephenson, Treasurer (Beavercreek, OH)
- Tom Walling, Secretary (Bowdoinham)
- Becky Bowes (Brunswick)
- Phil Brzozowski (Brunswick)
- Nate Gray (Vassalboro)

Education Committee

- Betsy Steen, Co-Chair, 666-3468
- Tom Walling, Co-Chair, 666-5837

Conservation and Stewardship Committee
Chair Vacancy

Membership and Fundraising Committee

Nate Gray, Chair, 446-8870

Research and Advocacy Committee

Ed Friedman, Chair, 666-3372

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Membership Levels

- | | | |
|---|---|-------------------------------------|
| <input type="checkbox"/> \$1,000+ Sturgeon | <input type="checkbox"/> \$250 Striped Bass | <input type="checkbox"/> \$20 Smelt |
| <input type="checkbox"/> \$750 American Eel | <input type="checkbox"/> \$100 Shad | <input type="checkbox"/> Other |
| <input type="checkbox"/> \$500 Wild Salmon | <input type="checkbox"/> \$50 Alewife | |

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

Name

Address

Town/State/Zip

Phone

Email

- | | |
|-------------------------------------|---|
| <input type="checkbox"/> Renewal | <input type="checkbox"/> Send information about volunteer opportunities |
| <input type="checkbox"/> New Member | <input type="checkbox"/> I would like a sticker |



Thanks to Rebecca Bowes for newsletter layout.



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In Case You Missed It

On December 11, ***Our Town! Adventures in Richmond History*** premiered as part of our Winter Speaker Series. To watch online, go to www.fomb.org, scroll down the right side to **Education**, click **Speaker Series Video List**, and then select the production.

Here is some audience feedback:

“It was just awesome!! I had no idea what to expect, and I just loved the playful way that the students were. I loved the scenes in the mill. Even when they were asleep, working in the mills was on their minds, and it really called attention to the hard lives and incredible overworking that was the life of so many, especially young women. I was really, really impressed.”

—Viewer (and retired environmental educator)



Richmond students going back in time
 Photo: Ed Friedman

Bath’s Woodland Wonderland

From late November to early January about a dozen of FOMB’s taxidermy critters took a field trip to the large storefront windows of our great hosts at Country Farm Furniture in Bath.

They were on exhibit as part of Bath’s Woodland Wonderland themed Winterfest organized by [Maine St. Bath](#) with various local businesses. The critters were viewed by over 10,000 passers-by. The lucky kids were our great blue heron, barred owl, raven, American widgeon, blue jay, snowy owl, bobcat, coyote, snowshoe hare, red fox, porcupine, and fisher.

Thanks to Country Farm Furniture and Main St. Bath Director Amanda McDaniel!



Country Farm Furniture, Bath
 Photo: Ed Friedman