Testimony in Opposition of LD 1596 An Act to Support Maine's Sea Farmers
Before the Joint Standing Committee on Marine Resources April 24, 2025

Honorable Senator Tepler, Representative Hepler, and distinguished members of the Joint Standing Committee on Marine Resources, I am Trey Angera, the Executive Director of the Maine Seaweed Exchange and a member of Springtide Seaweed, LLC, both located in Gouldsboro Maine. The Maine Seaweed Exchange is a 501(c)(3) non-profit that provides education and advocacy programs for seaweed and other aquaculture species. Springtide Seaweed, LLC is a fully integrated organic seaweed farm operating the largest seaweed farms, seaweed nursery, and urchin hatchery in Maine.

I am writing in opposition to the above captioned bill as currently drafted.

My key points on the bill are:

1. There is no benefit to restricting types of gear on a lease site. In fact, such restrictions will discourage smaller farmers because they would need to lock into one type of gear/species, when they may need diversification to be successful. Only larger monoculture type farms would benefit from this proposal. This restriction will stifle innovation. DMR is we'll equipped to evaluate and approve of the appropriate types of gear on an aquaculture lease and should not be artificially restricted in this process.
2. DMR should not permit 3rd party site dives. Recognizing that DMR is often limited by available resources to get these site evaluations completed, the solution is not to outsource the process which will invite inequities into the leasing process and diminish the value of the data obtained from these dives. Alternatives to this proposal could be that DMR charge an "expedited survey" fee and if DMR wishes to outsource some evaluations to third parties, they could do so. DMR must retain control of the site evaluation data and data collection, with assurances they are done in a fair and equitable manner.
3. I am supportive of a path to the creation of state hatcheries, or hatcheries that are created by non-profits. The takeover of the selfish hatchery system by large companies from outside the state and country limits access to new and existing farmers; and calls into question the integrity of the supply chain. Alternatives to large privately owned commercial hatcheries will preserve access to all.
4. I support the goal of a subcommittee of the aquaculture advisory committee to address equity issues. The aquaculture advisory committee is largely composed of large aquaculture companies and members that have been on the committee for decades. The committee itself lacks diversity, and only recently recognized the need to have members from throughout the state. Such a subcommittee would encourage self-evaluation by existing members, and compel the consideration of equity issues in future decisions and recommendations.

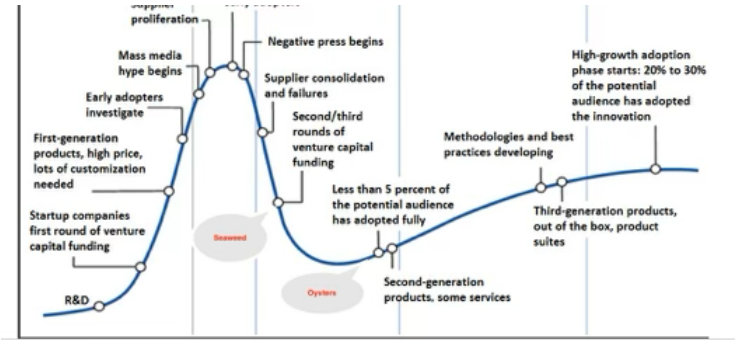
This bill cannot be seen as freestanding— it must reflect the context the aquaculture industry in Maine operates as a whole.

Aquaculture in Maine is largely focused on a few species: salmon, oysters, mussels, and seaweed. Recently other shellfish, such as scallops, as well as sea urchins are starting to be cultivated. Land based aquaculture is also getting traction, such as eels, urchins, salmon, kingfish, and seaweeds.

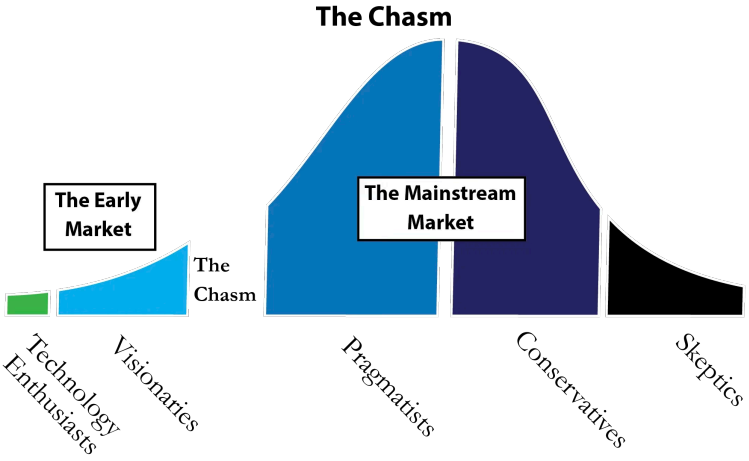
Focusing on the big four, all reflect headwinds and structural weakness, including:

- Salmon: This species was originally raised by small Maine owned farmers. Now 100% of the salmon raised in Maine is done by Canadians. Cook aquaculture processes all Maine salmon in Canada. A small amount is returned to Maine for filleting to fill "domestic" order requirements. There is very little social license for this industry now. Salmon farming is the continued exploration of Maine as a natural resource and does not support a homegrown industry.
- Oysters: This industry is deeply challenged. Canadian ownership is growing rapidly and includes two of the largest hatcheries, quite a few farms, and one of the largest shellfish distributors. Smaller Maine farmers are leaving the industry in increasing numbers with high turnover. Wholesale pricing is stagnant. The Canadians are here because they can access our resource at bargain rates and have a significant supply chain advantage. Again, this is not a sustainable model unless the model is to support the Ontario Teachers' Pension Fund and other investors.
- Mussels: There are a handful of Maine mussel companies that are doing well. These farms require substantial capital investment and have substantial gear in the water. Certainly not a segment that is accessible to beginning or small farmers.
- Seaweed: One of the largest number of farmers. This segment is on the verge of collapse. There is no real market for seaweed and the market that exists is not for the species of seaweed grown in Maine. Many of these farmers are part of the Atlantic Sea Farms network which was designed to have access to low priced raw materials and not to truly support local farmers. If Atlantic Sea Farms either fails or reduces its purchasing, this will leave a significant number of farmers with no market whatsoever.

These two graphs highlight the challenges facing both oyster and seaweed farmers. The Gartner Hype Cycle graph shows how initial hype leads to an inevitable reality check. Not all products survive the trough— this will depend on crossing the chasm. The chasm represents the leap from early adopters to mainstream customers. Few products successfully make this leap.



The Hype and Acceptance Curves



The take-away here is that both oysters and seaweed are in the same boat. They both have sales, however neither has shown to be able to cross the "chasm"— although oysters seem more likely to do so to a limited extent. The cost of both seaweed and oysters virtually assure they will never achieve significant market share. There are not many buyers of seaweed at $45-$90 per pound or oysters at $4-$5 per oyster. These are luxury foods similar to caviar and wagyu beef.

In the case of Springtide Seaweed, LLC, we have positioned ourselves to be "the last man standing" in these scenarios. We develop specialty products and develop aquaculture technologies. We grow over 5 species of seaweed, oysters, clams, and urchins. We utilize surface, submerged, and bottom gear on our sites year-round. We are not a seasonal farm like many oyster and seaweed farms. Our goal has always to be to utilize the entire water column to maximize productivity while minimizing conflicts with other uses and to minimize environmental impacts. This bill would essentially shut our business down by eliminating our ability to continue the diversified product mix we feel is essential to surviving and supporting local Maine companies and communities such as ours.

Keep in mind, that our farm sites are some of the lowest impact farms in existence. Since we utilize the full water column, we have very little visual impacts and co-exist with recreational and commercial users of our shared waters. We are in over 100 feet of water and far from any inhabited land bodies. We have never had opposition in our communities for our farms— which exceed 50 acres. We are responsible stewards, and we make a significant contribution to our working waterfront and communities. See this photo of our farm:

Springtide Seaweed Farm Site

Frankly, I find oyster farms to be far more troubling than any other aquaculture ventures. They are close to shore, utilize incredible amounts of gear (almost all plastic), require the most on site husbandry, and generally do not generate enough revenue to be worth the wick. No wonder the Canadians are gobbling up this industry. Maine permits intensive oyster farming in a way few other states do— a fact not lost on our Canadian friends that for the most part prohibit such intensive exploration of the resource with PEI being a rare exception. The irony is that oyster farming could be more successful, however that would require larger and even more intensive farms to achieve economies of scale.

Maine Oyster Farm

So how does this bill benefit Maine Sea Farmers? It seems to me that it stifles innovation, penalizes responsible players, and dilutes equitable access. Below are some questions and comments that track the bill language. The gist of these are:

- Why limit leases to one type of gear? Obviously, this notion comes from somewhere, but where? This will virtually eliminate Integrated Multi-trophic Aquaculture (IMTA) and essentially legislate monocultures. The real impact here could be increased disease and degradation of the environment. The bill is contradictory in that it allows bottom gear for overwintering oysters without acknowledging this is different gear yet excludes other species from such flexibility.
- The idea of 3rd party site dives was promoted by Atlantic Sea Farms and others at the Aquaculture Advisory Council because it felt that the approval of its cookie cutter farms was being stalled by DMR. This proposal will serve no purpose except to reward the wealthy and investor funded entities and penalize small farmers.
- These is value in the idea of exploring equity issues. Unfortunately, I am pretty sure we will confront the fact that the bulk of equity issues in aquaculture derive from inequity in the existing commercial fishing industry as the bulk of new farmers are current lobstermen, and that funders often have an inherent bias.
- Hatcheries are already highly regulated, yet any path to making smaller state or non-profit supported hatcheries viable will improve access to smaller farmers.

If the goal is to help Maine sea farmers, I can envision alternatives that would truly benefit small sea farmers, such as:

1. Pro-rating lease rents. If you are limited by DMR to using your site to 10 months, why are we required to pay for a 12-month lease?
2. DMR should be able to amend lease terms and conditions without limitation. Of course, substantial amendments should involve a hearing, however the current amendment process makes no sense.
3. Clarification of what happens to abandoned leases. If you sign a lease who is responsible if lease rents are not paid. These leases should be auctioned off by the DMR to preserve rental income, and reflect the investment made to obtain these leases.
4. Recognizing that “sharecroppers” such as Atlantic Sea Farm farmers are just attempting to by-pass DMR limitations on lease holds and exploit DMR loopholes for their own benefit.

Below are additional questions and comments that track the bills language.

Thank you for your kind consideration.

HP 1054, LD 1596
An Act to Support Maine's Sea Farmers

Questions and Comments from Springtide Seaweed, LLC and the Maine Seaweed Exchange.

"Operational type" means, with respect to an aquaculture operation conducted pursuant to a lease issued under this section or section 6072-A, the method by which the aquaculture operation engages in aquaculture. An aquaculture operation may have only one operational type. "Operational type" includes bottom operations, submerged operations or surface operations.

Questions:
Why is it necessary to define operational types? Why is only one "operational type" allowed?

Comments: The DMR Maine lease process requires a complete outline of all gear to be utilized on a site, making no requirements of what type of gear is allowed, and without making distinctions of any kind regarding "operational type". Instead, the department reviews the lease application, and along with public input and defined criteria, makes a decision whether or not to allow the proposed gear and activities on the lease site. This allows for a wide range of types of gear and operations on farms.

As Maine aquaculture is a newly evolving industry, there is, and will continue to be, strong innovation in the types of gear, crops, and activities utilized and trialed. The leasing process should not attempt to restrict innovation and diversity in farming in any way. The most sustainable and efficient farm models of the future are likely to be integrated farms, similar to the polyculture farms on land, where bottom, surface, and submerged gear types are all utilized to cultivate a range of four-season crops.

Sec. 2. 12 MRSA §6072, sub-§4, ¶H, as enacted by PL 1987, c. 453, §1, is amended to read:
(Existing language) Include an environmental evaluation of the site upon which the decision to seek a lease was made. The evaluation shall must include, but not be limited to, bottom characteristics, resident flora, fauna and hydrography of the site if appropriate for the proposed lease.

(Added language) If an applicant is required to include a video recording of the site or other information collected through a site dive as part of the environmental evaluation under this paragraph and the applicant is required to pay the cost associated with the site dive, the department shall allow the applicant to contract with any qualified 3rd-party entity to conduct the site dive and may not require the site dive to be conducted by a 3rd-party entity selected by the department.

Questions: How would the DMR be able to sufficiently review the evaluation of a 3rd party?

Comments:

There is already a process in place for the DMR to review a lease site for specific criteria in order to allow activities on a lease. The lease and proposed use evaluations are all done by DMR. This allows for the department to collect, review and make decisions in a standardized process. Any outside data collection by 3rd parties could allow for misrepresentation, fraud, or differing methods, and create inequity in analysis and decision making. This approach would also normalize placing expensive burdens on the farmer, making it difficult for smaller farms to afford the expenses around obtaining a lease. Moreover, there does not seem to be a need to create a 3rd party, self funded option. The DMR has a process that covers this aspect of evaluating the lease, and so this amendment does not improve the process.

Sec. 4. 12 MRSA §6072, sub-§13-B is enacted to read:
13-B. Modification of operational type or principal aquaculture gear. Notwithstanding any provision of this chapter to the contrary and in accordance with rules adopted by the department pursuant to this subsection, a person holding an aquaculture lease issued pursuant to this section may modify the operational type of the person's aquaculture operation or the design of the principal aquaculture gear used by the person without the need for an amendment to the person's issued lease, as long as:
A. As determined by the commissioner, the modification will not significantly increase navigational hazards caused by the aquaculture operation or the environmental effects of the aquaculture operation;
B. The modification will not cause the operational type of the aquaculture operation to change from bottom operations or submerged operations to surface operations; and
C. The modification will not cause the operational type of the aquaculture operation to change from bottom operations to submerged operations.
The department shall adopt rules to implement this subsection. Rules adopted by the department pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

Questions:
If you can't move from bottom to submerged, or bottom to surface, or submerged to surface, what does this section intend to allow? To allow for submerged or surface to bottom? What is this amendment for? Is there a need for this?

Comments:
Any lease application or amendment process has to go through review by the DMR. Amendments can be helpful to farmers to allow for new types of gear or crops as their farms evolve with changing markets or climates. This proposed language appears to attempt to allow farms to move gear to the bottom of their farms without going through an amendment process with the DMR. One of the reasons that DMR requires a detailed amendment application process is to have on record the design and current use of the farm, and ensures that the species cultivated have an approved source of seed, and are in compliance with regulations. This can assist with any enforcement or renewal decisions required. There doesn't seem to be a need to change the existing law for this activity.

Sec. 5. 12 MRSA §6072-A, sub-§10-A is enacted to read:

10-A. Site dive requirement. If the department requires a video recording or other information to be collected through a site dive of a proposed lease site under this section and the applicant is required to pay the cost associated with the site dive, the department shall allow the applicant to contract with any qualified 3rd-party entity to conduct the site dive and may not require the site dive to be conducted by a 3rd-party entity selected by the department.

Questions:
Why would the DMR require a 3rd party site dive? How would data collection and analysis be standardized?

Comments:
Any requirements of a 3rd party site dive to be paid for by the applicant moves what could be considerable extra costs onto the small farmer, who might not be able to afford 3rd party contractors. Also, would the definition of a "site dive" include robotics, or would it have to be done by human divers? Some of the farms are in very deep water and are dangerous places to dive.

Sec. 7. 12 MRSA §6080, sub-§8 is enacted to read:
8. Subcommittee established. The chair and vice-chair of the council shall establish and appoint council members to a subcommittee of the council to study and address equity issues for persons seeking to enter the aquaculture industry and seeking to access aquaculture grants; issues encountered by small aquaculture facilities; and methods of ensuring the aquaculture industry is inclusive and representative of the State as a whole. The subcommittee shall report its findings and any recommendations to the council in a manner directed by the chair and vice-chair.

Questions:
If the advisory council's purpose is to make recommendations to the DMR commissioner and Legislature regarding matters of interest to the aquaculture industry, how does a subcommittee that studies "equity issues" fit into the advisory council's mission? Where in the Maine law does inequity in aquaculture exist?

Comments:
This requirement to develop a subcommittee to "study and address equity issues for persons seeking to enter the aquaculture industry and seeking to access aquaculture grants; issues encountered by small aquaculture facilities; and methods of ensuring the aquaculture industry is inclusive and representative of the State as a whole" does not fall under the Aquaculture Advisory Council's mission. There are no equity issues in the Maine aquaculture statutes. All people have equal access to the leasing and licensing process. This requirement is vague and undefined. Issues about unfairness in grants, "small facilities", or inclusivity are not issues that will be solved by the legislature or the DMR. The aquaculture industry is mostly a collection of private companies, individuals, institutions, and farmers, and operate outside of the scope of this proposed subcommittee.

Sec. 8. Department of Marine Resources; shellfish hatchery guidelines. The Department of Marine Resources shall establish guidelines for the operation and administration of shellfish hatcheries that receive state funding and that are operated by tribal governments or by nonprofit

organizations or other nongovernmental entities. The department shall make the guidelines established pursuant to this section available to those entities and to the public and shall take all reasonable actions to ensure compliance with the guidelines by those entities.

Questions:
Which hatcheries receive State funding? What qualifies as State funding? What guidelines would DMR create? How would this be different from existing regulations around seed source, production, etc?

Comments:
It is unclear what this proposed language accomplishes.