



February 3, 2015

Agriculture Committee
Re: HB 5166, 5167, 5168

Dear Committee members:

The Michigan Environmental Council is a coalition of more than 70 member groups around the state. We have closely followed the aquaculture debate in Michigan since it was brought to our attention early last year.

The state has already detailed net-pen commercial aquaculture in the Great Lakes is not worth the risk in the science reports that were published last October. These reports confirm our primary concerns: disease, nutrients, and fish escapement. The reports also show that nothing could be done to truly mitigate those concerns in net pens.

We urge you to oppose House Bills 5166, 5167, and 5168. In addition to opening up our Great Lakes to potentially devastating net pen aquaculture, these bills also change a number of regulations regarding aquaculture and put all our lakes and streams at stake for the private gain of very few. Though there are numerous changes that put our waters at risk, we want to highlight these few: opening up to more invasive species, a conflicting regulatory regime with a confusing fee structure, exemption from MCL 324.48735 and repeal of part 459, and the removal of local control; in addition to our overarching concerns of disease, nutrient loading and fish escapement.

Invasive Species

House Bill 5166 adds Barramundi, also called Asian sea bass, to the approved species list, meaning it can be grown in Michigan with no restrictions. This fish can grow to six feet long and is considered an apex predator, they are voracious eaters and will swallow anything that fits in their mouth. These Asian sea bass can live solely in freshwater and can tolerate the lower end temperatures of our warm streams. The risk of allowing these with no restrictions is extreme, as we have to look no further than the Asian carp invasion from the south to know that though a species "should not" survive does not mean it will not survive. With our warming waters it is possible these species could escape and threaten our wild fisheries similar to the effect Asian carp would have.

Regulatory Regime

In addition to putting our waters in direct threat of a potentially devastating invasive species, HB 5166 creates a new regulatory regime that would

undermine the protection of our waters that the current regime helps to ensure. Though not perfect, our current regulatory regime includes necessary checks and balances on the process and gives the agencies with proper expertise the ability to fully evaluate a permit and issue based on the current science. With the strict timelines for the single joint permit under the proposed bill, the best science will likely get glossed over in order of meeting an arbitrarily set deadline.

Further, the creation of the new Office of Aquaculture Development within Michigan Department of Agriculture of Rural Development (MDARD) that is tasked with creating a single regulatory authorization seems troublesome. This agency would have the dual role of both promoting and of regulating the industry, which is a conflict of interest to say the least. Additionally, moving oversight of many of these permits from the Department of Environmental Quality, an regulatory based agency that has expertise from years of the permits to MDARD, an agency with much less experience with regulation will likely lead to many problems.

In addition, many of the references in HB 5166 conflict with language in HB 5167. HB 5167 leaves many of the permits under the purview of the DEQ, while at the same time referring back to the single permit issuance from the Office of Aquaculture Development in MDARD. This language leaves it unclear as to who will actually be regulating. This becomes very clear in two instances. The first is the call for a general permit for land based facilities and exempting certain water based facilities under National Pollutant Discharge Elimination System (NPDES). The second is the provisions regarding the Great Lakes Submerged Lands Act.

The call for a general permit for land based facilities is an inappropriate use of general permits. Aquaculture facilities already have to utilize the non-degradation language under NPDES permits. Creating a general permit will remove public input for each facility on what they discharge, as well as put at risk our ability to self regulate under the clean water act. Additionally, the language in HB 5167 calls on the DEQ to create the general permit and permit Concentrated Aquatic Animal Production Facility, yet rolls them into the combined permit in the new section 7a of HB 5166. It is best to leave these permits with the DEQ, as they have the expertise as a regulatory agency in NPDES to properly execute the permits

The provisions regarding the Great Lakes Submerged Lands Act, Part 325 of the Natural Resources and Environmental Protection Act (NREPA), are also troublesome. This portion of NREPA is derived from precedent set in the Supreme Court case *Illinois Central Railroad Co. v. Illinois*, 146 U.S. 387 (1892). Bottomlands leases under this part are still essentially regulatory questions though. The DEQ has developed expertise in granting these leases, and should remain as the lead agency in granting these leases, instead of wrapping them

into the single permit. In addition, the language here raises deeper legal questions that we are currently looking into.

Finally, the last part of the regulatory regime proposed looks to entirely gut the current fees that are charged for the up to 11 permits required for aquaculture. The proposed fee for a registration is \$100, with a renewal fee of \$75 and a yearly maintenance fee of \$75. The larger issue is that it is unclear whether that is the fee for the "single joint authorization" as set out in new section 7a or whether each permit would still get to charge a separate fee. Based on language in HB 5167, it seems the intent is to make that \$100 fee the only fee needed for a facility. Many of these permits are highly technical and highly studied, and based on either a staff time calculation or a calculation based on pollutants added it is clear these fees are deficient and this program would not pay for itself. Further, there is no language that splits these fees with DEQ, for their possible portion.

Exemption from MCL 342.4875 and Repeal of Part 459

HB 5167 would result in significant exemptions from permitting under these parts for aquaculture facilities. The exemptions would allow an aquaculture facility to take fish from the inland water of the state for the purposes of cultivating them with no permit at all. This would mean that an aquaculture facility could take an unlimited amount of wild fish for use in aquaculture facilities.

In addition the repeal of part 459 leads to more confusion of the regulatory regime. Since the bill repeals part 459, and 324.48735 contains multiple direct reference to permits under that part, it is unclear what permits may be needed for private game fish ponds.

Local Control

HB 5167 and 5168 drastically reduce the amount of local oversight in aquaculture. In addition to the issuance of a General Permit, where locals would not have the ability to give input into the specifics of a given permit, the call for the creation of Generally Accepted Agricultural Management Practices (GAAMPs) for siting these facilities completely overrides local control. As we have seen with other siting GAAMPs, the creation of these by the Agriculture Commission would put aquaculture under Right to Farm and completely override local zoning ability.

Disease

We have seen diseases like Bacterial Kidney Disease run rampant through the Great Lakes. The threat from disease coming from aquaculture is twofold. It includes both introduction of new diseases and mutation and amplification of diseases that are already here.

In 2007, a bay in Chile that was full of fish farms saw over 65% of the farmed fish die from Infectious Salmon anemia (ISA). Chile has been fighting this ISA

outbreak for the last 8 years. ISA occurs in many other places where salmonids are farmed, including Norway and Eastern Canada. ISA is devastating in that it can be asymptomatic but contagious for a long time, and can ultimately reach a 90% mortality rate. The latest research shows that ISA is likely also present in British Columbia fish farms, and may be tied to the wild salmon decline near these farms. Access to these farms for researchers has been impossible to get, leading to having an unclear connection between the wild salmon die off and the farms.

ISA is a top-risk disease, and we have already seen many mutations occur. Though rainbow trout currently are not susceptible to ISA, they can be carriers of the virus and can spread it to other fish. This disease therefore would at a minimum put our salmon fishery at risk. The close confinement and sheer number of fish associated with net pen aquaculture also increases the chances of a mutation that would affect rainbow trout, since the more fish it infects, the more opportunities it has to mutate. All countries that do a lot of fish farming—even those with strong regulations—have issues with disease outbreaks. The only sure way to keep disease like ISA out of the Great Lakes is not allow the farms where it can quickly breed and easily mutate.

Nutrients

There is simply no way to treat or contain the nutrients released from a net pen system in the form of fish waste and excess food. We are beyond the point where we can just use the Great Lakes to dilute our pollutants. At this point, adding more nutrients to the lake system increases the risk of nuisance and toxic algal blooms. We already see outbreaks across the Great Lakes, not just in Lake Erie. Excess nutrients also increase the risk of anoxic “dead zones” in the lakes.

These nutrient-driven problems are already occurring. In 1998, authorities shut down a Great Lakes fish farm in Canadian waters after it caused both algal blooms and anoxic conditions. Years later these ecological effects were still ongoing. The science panel found that these nutrient contributions would be detrimental both to the environment and to business. The phosphorus loads from fish farms will contribute to the total maximum loads the lakes can handle, meaning that other industry may be forced out.

Some have argued that adding nutrients to certain sites in the lakes would be beneficial, as there are sites that are nutrient poor. There are no truly nutrient poor locations in the Great Lakes. Instead, the largest problem comes from the Zebra and Quagga mussels that have invaded our waters. These mussels remove the nutrients from the water column and take them to the benthos, where they allow the mussels to grow and reproduce. All adding more nutrients to the lake will do is increase the risk of algal blooms and anoxic zones, and produce more mussels.

The state has worked hard for many years to address the nutrient loading issues in the lakes. Michigan has forced wastewater treatment plants to decrease their loads, has banned phosphorus use on residential lawns, and is working on ways to get more farms to address nutrient runoff. The total maximum loads in the Great Lake Water Quality agreements should not be looked at as a quota to reach, and more phosphorus should not be added to the lakes for the benefit of a few. It is patently unfair to allow some users to put more untreated phosphorus in the lakes, when we are asking others to spend millions of dollars a year to keep as much possible out.

Escapement

The science panel also confirmed our worst fears about fish escapement. The panel report found these fish “can survive multiple years, move 100s of kilometers, even into other lakes, and likely reproductively interact with extant populations.” These escapes will occur, as despite best efforts and best practices, documented large scale escapes have occurred around the world. These include a storm event in Scotland freeing 300,000 fish, and 40,000 fish escaping in British Columbia through simple worker error when employees accidentally cut the net during cleaning.

These escapes risk the genetic diversity of our wild stock, as to be economically viable this fish have to be a different strain than what is released into the wild. Additionally, though the farms may stock fish that are bred to be sterile, this is not a perfect breeding system, according to the science panel it is at best 94% sterile. These fish will interact and could breed with wild strain putting the ecology of the lake systems at risk. These fish could outcompete our wild stock, and do not have the same instincts or behaviors as the wild fish.

There are other options

To us, the most telling thing about the reports is the economics involved in Great Lakes net pens. The science panel report states that allowing these net pens in the lakes would make other forms of aquaculture—the forms that can be environmentally friendly and truly sustainable—at a competitive disadvantage. The economic reports also state that the first two net pens, each producing 1 million pounds of fish a year, would create only 44 total jobs statewide. That estimate is based on an assumed market price for fish that one of the state’s other reports says is probably higher than realistic. These farms would put Michigan’s 38,000-job, \$4.2 billion sport fishing industry at risk, for 44 jobs. To us, this is not a fair trade.

Instead of looking at net pens in the Great Lakes, the state’s investment of time should be directed at developing regulatory certainty for land-based systems. The state should look at a general permit for recirculating aquaculture systems (RAS). These systems are truly the future of aquaculture. RAS is done on land, in tanks, where there is no risk of fish escapes or disease outbreaks in our wild

fish. RAS operations recycle 99% of the water they use, and the nutrients produced can be an input for growing other crops instead of simply a waste byproduct.

Net pen aquaculture presents unacceptable risks and pushes the cost of waste treatment onto the public. Our children and grandchildren will bear the cost of this subsidy for private interests, possibly by losing the ability to use and enjoy the Great Lakes as we do today. We feel that net pen aquaculture is a step backward for the state, and for the aquaculture industry.

These bills go even further and remove any possibility of an effective regulatory regime for aquaculture in this state. Instead of creating a conflicting regulatory regime with a myriad of exemptions, we should focus on creating certainty for the industry. We have the chance to create a sustainable aquaculture industry in the state. We have the chance to build regulations from the ground up for the first time for an agricultural practice, and we should take advantage. Michigan should be a leader and create a strong regime that bans irresponsible net pens and we should look forward and support the sustainable RAS fish farms that can be built in an environmentally sound fashion.

Thank you,

A handwritten signature in cursive script that reads "Sean Hammond".

Sean Hammond, Esq.
Deputy Policy Director
Michigan Environmental Council