



Protecting the Common Waters of the Great Lakes Basin  
Through Public Trust Solutions

February 1, 2016

To: Chairman LaFontaine and members of the House Natural Resources Committee

From: Liz Kirkwood, Executive Director, FLOW (For Love of Water)

**Re: Testimony in support of House Bill 5255 (Bumstead)**

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FLOW (For Love of Water) is a Great Lakes water law and policy center whose mission is to protect the common waters of the Great Lakes through public trust solutions. Founded in 2011, FLOW is dedicated to educating citizens and leaders about the government's fiduciary trust responsibilities to protect and preserve our public waters for the benefit of current and future generations. **FLOW firmly supports HB 5255's ban on commercial cage (or net-pen) aquaculture in the Great Lakes, and urges you to support this bill.**

The vast literature of scientific evidence about the commercial cage (or net-pen) aquaculture industry raises substantial legal, environmental, aquatic resource, and water use impact issues that threaten the health and vitality of all waters. Here in the open waters of the Great Lakes, the introduction of net-pen aquaculture would directly violate Michigan's public trust obligation to manage and protect the waters and resources of the Great Lakes for the enjoyment of current and future generations. Recognizing that commercial aquaculture takes various forms, however, FLOW is not opposed to enclosed land-based aquaculture operations so long as they are hydrologically separated from public trust resources.

The Great Lakes define Michigan, our economy, and our *Pure Michigan* way of life. Proposed net-pen aquaculture in the Great Lakes and existing antiquated flow-through aquaculture operations on our rivers violate public trust and environmental laws because of the grave and unacceptable ecological risks associated with the practice.

**1. VIOLATION OF PUBLIC TRUST LAW AND NUMEROUS STATE AND FEDERAL ENVIRONMENTAL LAWS<sup>1</sup>**

By definition, cage aquaculture is subject to the common law public trust doctrine because cages can occupy from 10 to 500 acres of surface, water column, and in some instances are anchored to the bottomlands of the Great Lakes. The public trust doctrine applies to all bottomlands and waters of the Great Lakes up to the ordinary high-water mark, whether by common law<sup>2</sup> or statute

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<sup>1</sup> The scope of these threshold comments does not address the additional legal framework in depth, because the public trust law and the MEPA questions are primary and controlling. Other key state and federal environmental laws include the Aquaculture Development Act, Act 199 of 1996, Michigan Environmental Protection Act (MEPA), the 2012 Great Lakes Water Quality Agreement, and the 1972 Clean Water Act among others.

<sup>2</sup> *Illinois Central Railroad v. Illinois*, 146 US 387 (1892); *Obrecht v National Gypsum Co.*, 361 Mich 399 (1960); *Glass v. Goeckel*, 703 N.W.2d 58, 64–65, 73–74 (Mich. 2005); Joe Sax, The Public Trust Doctrine in Natural Resource Law, 68 Mich L. Rev. 41 (1970); James M. Olson, All Aboard: Navigating the Course

– the Great Lakes Submerged Lands Act (GLSLA), MCL 324.32501 *et seq.* The same is true for the provinces of Canada.<sup>3</sup> Accordingly, any decision involving enclosed pen concentrated fish-farming operations must be framed through the standards set forth under the public trust doctrine.

Public trust lands and waters cannot be exclusively controlled or occupied for primarily private purposes or operations to the exclusion of the public’s access to or enjoyment of any one of the protected trust uses. Protected public uses include navigation, commerce, boating, hunting and fishing, recreation, swimming, drinking water, and ecological values. These protected public trust uses are paramount to any lawful and reasonable riparian uses and exclusive to any other nonriparian uses. The public trust extends to the entire surface of a lake or stream and the lands beneath them.<sup>4</sup> The public trust also protects fish, fish habitat, and other valuable aquatic natural resources in these public trust waters or on their bottomlands.<sup>5</sup>

In addition, the public value of public trust waters, bottomlands, natural resources and public uses are presumed; any private interest seeking to alter, use, control, or occupy these public trust waters has the burden of proof showing no public value and no material impairment. Courts have readily imposed a burden of proof on the person proposing the use or transfer of a public trust resource.<sup>6</sup> The burden is based on the government’s duty to ensure there is no improper alienation or impairment, and the fact that the public value of public trust waters or resources is presumed to be substantial or immeasurable.<sup>7</sup>

Finally, the duty on the state to affirmatively protect these waters, bottomlands, natural resources and ecosystem, and public trust uses is “solemn” and “perpetual.” In North Dakota, the Supreme Court ruled that this duty included evaluating and establishing a long-term water plan to ensure no impairment of water resources under the state’s public trust responsibility.<sup>8</sup> In Michigan, courts have imposed a procedural duty to ensure that public trust standards or principles have

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for Universal Adoption of the Public Trust Doctrine, 15 Vt. J. Env. L. 148-151 (2014). All eight Great Lakes states recognize these public trust protected uses, which cannot be impaired or subordinated to private uses; private riparian uses on navigable waters are those connected to use and enjoyment of riparian land, such as docks, wharves, fishing, drinking and domestic water, irrigation for growing food, and commercial use of water, so long as it is reasonable. While private uses are not property rights, the right to use is subject to ‘reasonableness’ and the public trust and protected uses in the navigable water. Maude Barlow and James Olson, Report to the International Joint Commission on the Principles of the Public Trust Doctrine, December 2011, at 8-25, 28-31; see also James Olson, All Aboard, *supra*, at 151-163. Along with the states, Canada and the provinces recognize in some form that water is public or held by the Crown in trust to assure navigation, boating and fishing (distinct from exclusive occupation of public waters for private fish-farming operations. *Id.* pp. 164-166.

<sup>3</sup> *Queen v. Meyers* [1853] 3 U.C.P. 305, 357 (Can.) (the right of the crown or sovereign is paramount to private uses: “Great Lakes and streams which are in fact navigable ... must be regarded as vested in the Crown in trust for the public uses for which nature intended them – that the Crown, as the guardian of public rights, is entitled to prosecute [for the removal of impairment or obstruction] ... which it is bound to protect and preserve for public use.”)

<sup>4</sup> *Michigan v. Broedell*, 112 N.W.2d 517, 518-519 (Mich. 1965).

<sup>5</sup> *People v Babcock*, 38 Mich App 336 (1972).

<sup>6</sup> *Grosse Isle Twp v Dunbar & Sullivan Dredging Co.*, 167 N.W.2d 311, 316 (Mich. Ct. App. 1969) (holding that substantial public value of navigable waters for public use is presumed); *In re Water Use Applications (Waihole II)*, 93 P.3d 643, 657-658 (Haw. 2004).

<sup>7</sup> *Obrecht*, 105 N.W.2d at 149-151; *Ill. Cent. R.R. Co. v. Illinois*, 146 U.S. 387 (1892). This is akin to the precautionary principle, in that it would require, as a result of the nature of the public trust itself, a denial of the application to use until adequate information was submitted to establish no violation of the basic public trust principles would occur.

<sup>8</sup> *United Plainsmen Ass’n v. N.D. Water Conservation Comm’n*, 247 N.W.2d 457 (N.D. 1976).

been met based on duly recorded findings of fact.<sup>9</sup>

Applying public trust law to the proposed occupancy and the operation of concentrated fish production, it is clear that net-pen aquaculture in the open waters of the Great Lakes would expressly violate the standards because it:

- necessarily excludes public access and uses,
- produces likely impacts to the trust resource from fish waste, nutrient loading, and water quality degradation,
- results in unintended escaped fish pumped with antibiotics and interferes with the genetic diversity of wild fish populations; and
- interferes with the rights of boating, fishing, swimming, and other forms of paramount public uses that are expressly protected by the public trust doctrine.

## **2. POLLUTION, WATER QUALITY DEGRADATION, AND RESULTING ALGAL BLOOMS**

Untreated fish waste laden with nitrogen and phosphorous from net-pen and flow-through operations is released directly into our waters, contributing to and potentially triggering similar toxic algae “dead zones” like the one in the summer of 2014 that shut down Toledo’s drinking water supply.

A typical 200,000-fish salmon farm, for example, creates as much fecal matter as a city of 65,000 people, making the Great Lakes “a toilet bowl,” according to Senator Rick Jones (R-Grand Ledge). According to the testimony of the Michigan Resource Stewards’ James E. Johnson, a retired Michigan DNR Fisheries Research Biologist:

Using Great Lakes water to assimilate such a potentially large amount of nutrient-laden waste is an inappropriate allocation of public trust resources to one private enterprise sector and further limits others who might also wish to share the limited budget for P [phosphorus] loading (see Interim Phosphorus Loading Targets, Annex 4 of the Great Lakes Water Quality Agreement). [http://ijc.org/en\\_/GLWQA\\_2012\\_Annexes](http://ijc.org/en_/GLWQA_2012_Annexes) One small operation raising 2 million pounds of rainbow trout per year would release as much P as if the City of Alpena were allowed to release all its wastewater totally untreated. A 50-million-pound operation would release 1.5-2 times as much P as would the City of Grand Rapids if its wastewater were untreated.

Promotion of cage aquaculture in Michigan is tantamount to establishing two sets of water quality standards for Michigan: one for Great Lakes cage aquaculture, which would be generally exempted from effluent treatment requirements, and another for the rest of us, which requires diligent efforts at solids and nutrient removal.

The combination of climate change, water levels, invasive species, nutrient levels, and algal blooms further puts the Great Lakes fishery and ecosystem at risk.

## **3. FARM FISH HEALTH AND DISEASE**

Diseases like infectious salmon anemia (ISA), viral hemorrhagic septicemia (VHS), that start in net-pen and flow-through aquaculture operations can quickly spread and mutate to wild

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<sup>9</sup> *Obrecht, supra* note 7, at 149-151.

populations, threatening the Great Lakes' aquatic ecosystem and the 38,000 jobs and \$4 billion annual impact tied to Michigan's sport fishing industry.<sup>10</sup> The rampant impacts of disease are well documented around the world, devastating fish farms in Norway, Scotland, Chile, New Brunswick, and Maine. In Chile, for example, following an earthquake, over 65 percent of the farmed fish died from infectious disease.

#### 4. WILD FISH GENETIC DIVERSITY THREATENED BY FUGITIVE FARM FISH

Escapement from cage or net-pen operations is inevitable due to harsh weather, ice damage, operator error, defects in the cases, etc. Reports in British Columbia indicate 400,000 fish escaping from their nets with another 400,000 in Scotland. These fugitive fish, in turn, compete with wild fish for food, disrupt their natural reproduction cycles and threaten their genetic diversity, thereby reducing the chances of survival for wild fish populations.

#### CONCLUSION

For the foregoing reasons, FLOW urges you to support HB 5255's ban on commercial cage aquaculture in the Great Lakes. Thank you for protecting our public trust aquatic resources and keeping them free from fish waste pollution, toxic algal blooms, disease, and unnatural competition.

Sincerely,



Liz Kirkwood  
Executive Director  
FLOW (For Love of Water)



Jim Olson  
Founder and President  
FLOW (For Love of Water)

cc: Rep. Jon Bumstead,  
Rep. Anthony Forlini,  
Rep. Andrea LaFontaine,  
Rep. Ken Goike,  
Rep. Lisa Posthumus Lyons,  
Rep. Bruce Rendon,  
Rep. Ed McBroom,  
Rep. Julie Plawecki,  
Rep. Charles Smiley,  
Rep. John Kivela

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<sup>10</sup> See [http://asafishing.org/uploads/2011\\_ASASportfishing\\_in\\_America\\_Report\\_January\\_2013.pdf](http://asafishing.org/uploads/2011_ASASportfishing_in_America_Report_January_2013.pdf)