

# Go Fish:

## A Setback in Finfish Aquaculture in the Gulf

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Many countries get most of their seafood from aquaculture. In fact, aquaculture is the fastest growing major food production sector this century, with China producing the most. The United States may be losing out. It imports \$20.5 billion of seafood, both captured and farm-raised, per year. Additionally, the United States misses its share of the 19.3 million aquaculture jobs worldwide, according to the United Nations.<sup>1</sup>

### Aquaculture Authority in the Gulf

Aquaculture is distinguished from catching fish in the wild by the fact that in aquaculture, the fish, be it shellfish or finfish, are grown and fed at the direction of a human “farmer” in containers suitable to their natural habitat. When mature, the fish are brought ashore for sale. They are farmed, not caught.

The problem for finfish aquaculture in the United States is that there is no enabling act that regulates all aquaculture activities in the United States. The regulatory authority over marine aquaculture depends on whether the operation is within state waters or the Exclusive Economic Zone (EEZ) governed by the United States’ federal government, which, generally speaking, is more than three miles from a state’s coast. The National Oceanic and Atmospheric Administration (NOAA) has stepped into the void, using the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act or MSA) as the baseline authority for regulating aquaculture in the EEZ. In January 2016 NOAA finalized regulations to authorize finfish aquaculture in the Gulf of Mexico. The plan would require a permit from NOAA, as well as a permit from the U.S. Army Corps of Engineers (Corps) under Section 10 of the Rivers and Harbors Act to confirm that the

operation will not interfere with navigation, and a permit from the Environmental Protection Agency (EPA) under the Clean Water Act to verify that the operation will not contaminate the surrounding waters.

### Court Battles over Aquaculture

However, in September 2018, a court held that NOAA lacked the authority to issue the regulations, ruling them invalid. According to the court, Congress intended the MSA to govern the capture of wild fish, not fish farming. The dispute focused on interpreting the word “harvesting,” which is within the MSA’s definition of fishing. The MSA defines “fishing” as “catching, taking, or harvesting of fish.” The question is whether this definition of fishing includes aquaculture.

Typically, when the words of a statute are in dispute, courts turn to the common meaning of the word, such as how a dictionary defines it. That is what NOAA argued before the Eastern District of Louisiana: that the common meaning of harvesting is bringing in a crop. In this case, NOAA claimed the crop was fish. The act of fishing under the MSA would also include bringing in a crop of fish, argued NOAA, and therefore, the MSA applies to aquaculture. The parties who filed the suit, consisting of commercial fishing groups and food safety advocates, contended that “harvesting” could not be read independently of “catching” and “taking,” the two other elements in the definition of fishing. The federal district court for the Eastern District of Louisiana held that the MSA definition of fishing – “catching, taking, or harvesting of fish” – had to be read as a whole, and that catching and taking were words describing capturing a wild fish. According to the court, “harvesting should be read similarly to refer only to the traditional fishing of

wild fish.”<sup>22</sup> The court also considered the legislative discussions recorded when Congress crafted the MSA. Considering these factors together, the court concluded that fishing meant capturing wild fish, not bringing in a crop of fish.

That same dictionary argument yielded different results in a 2012 case before a federal district court in Hawai‘i. In that case, NOAA issued a permit for one aquaculture operation in which a boat towed a fish stock cage around federal waters off the coast of Hawai‘i. The plaintiffs argued that NOAA lacked jurisdiction under the MSA to regulate aquaculture. The Hawai‘i court reviewed the plaintiff’s argument that “harvesting” meant “catching and taking” fish. The court held that such a reading would make the definition of fishing internally redundant, i.e. it “would be equivalent to ‘the catching, taking, or the catching and taking of fish’.”<sup>23</sup> Thus, it ruled that the MSA authorized NOAA’s issuance of the permit. On appeal, the Ninth Circuit narrowed the holding, finding that issuing one permit for one specific operation did not function as a NOAA rule that aquaculture was a permitted activity under the MSA.<sup>4</sup> Under the law, NOAA may “review and issue special permits for proposals to fish ‘with any gear not normally permitted,’ [] under [NOAA’s] ‘generally conferred authority’.”<sup>25</sup>

It would be easier if “fishing” had been defined as “catching fish,” but Congress seldom makes the path clear. Because multiple words were used for one task, two courts journeyed through dictionaries to sort out congressional intent; trips that yielded different results. When the definition of “fishing” in the MSA is read as a whole, arguably only the Eastern District of Louisiana’s reasoning withstands scrutiny. The core problem with the District of Hawai‘i’s argument, that “harvesting” leads to redundancy, is that it overlooks the fact that in this context “catching” and “taking” mean the same thing, too. The word “taking” in wildlife law does not mean “stealing,” as it would commonly. Instead, it means capturing or killing. Certainly nobody considers taking fish while lawfully fishing a criminal act. Instead, “taking” in this context is interpreted to mean the same as “catching.” Thus, the whole definition of “fishing” is an example of Congress using multiple words to refer to one thing, which, as the District of Hawai‘i court itself points out, is not unusual: the MSA

also defines “fishing vessel” to include “vessel, boat, ship, or other craft.” As the Louisiana court points out “[i]t is a fundamental canon of statutory construction that the words of a statute must be read in their context and with a view to their place in the overall statutory scheme.” Thus, that court’s rationale, which is that the legislative history “shows an intent to read ‘harvesting’ as the catching of wild fish,” supports the rule that the law cannot be applied to authorize aquaculture. That court also notes that to support NOAA’s view would amount to finding that Congress intended to authorize NOAA’s management of aquaculture simply by using the word “harvesting” in the definition of fishing, but without making any other mention of it anywhere else in the MSA.

Despite different interpretations of “harvesting” by two courts, the decisions can be read in harmony due to the factual differences. The District of Hawai‘i allowed one permit to be issued for one aquaculture operation, issued under NOAA’s general authority to permit catching fish with different gear. The Eastern District of Louisiana found that regulations issued to allow widespread commercial aquaculture operations in the Gulf of Mexico were contrary to the authority of the MSA, which pertains to catching wild fish. It seems possible that if a single commercial aquaculture operation applied for a single aquaculture permit for one facility in the Gulf of Mexico, irrespective of the now-defunct regulations, a court could find the operation was sanctioned under NOAA’s “generally conferred authority.”

Notably, prior to issuance of the now-defunct regulations, the Corps and EPA issued permits to a company to site an aquaculture facility seven nautical miles south of Perdido Key, Alabama in 2012 and 2013. However, the site was never brought to function – no cages or pens were placed in the water. This suggests that an aquaculture facility in the EEZ could be permitted without a permit from NOAA.

### **Practical Aspects of Finfish Aquaculture**

Additionally, while the Louisiana court’s ruling will curtail finfish aquaculture in the Gulf, it applies only to those species managed under the MSA. EEZ waters are still open for business for other species provided the operator gets the other permits from the Corps and EPA.

Finfish aquaculture is an expensive enterprise, unlikely to appeal to small farmers in the same way that shellfish aquaculture has. NOAA estimated that the smallest economically viable aquaculture operation in the Gulf EEZ would require an initial investment of \$2.89 million. The smallest viable operation would require six cages. NOAA estimated the costs of the equipment needed: an aquaculture support vessel – \$1.5 million; six cages – \$0.96 million, land and onshore support facilities – \$0.33 million, and service vessels – \$0.1 million. Additionally, the costs of feed, the fingerlings, and trips to and from the cages are expected to cost \$1 million for one grow-out cycle.<sup>6</sup> This amount does not take into account the permit fees (the NOAA permit was \$10,000 under the defunct regulations), nor the expense of acquiring a permit, which involves mapping, obtaining a certificate of suitability of the brood stock, and proof of a contract with a veterinarian or a fish pathologist/health inspector. Additionally, the operator would likely be required to post an assurance bond that will cover the cost of removing all components of the operation, including all the fish.

The regulations contemplated large cages anchored in areas that were twice as big as those pens to allow water to circulate. It would seem that any permit issued by the Corps or EPA would seek guidance from those defunct regulations, which were nullified for procedural, not substantive reasons. Regardless of the type of fish raised, finfish aquaculture requires a facility, which is a large netted/caged structure that is anchored to the ocean floor, and is used to raise fish with fins (i.e. not shrimp, crabs, oysters, mussels, or seaweed) to maturity for sale. Finfish aquaculture cages may be surface containers (this style is used frequently in foreign aquaculture in the Pacific Ocean), but to avoid damage from hurricanes and tropical storms, facilities in the Gulf likely would require submerged cages with floating markers. It is anticipated that a finfish aquaculture facility would use a remote feeding device, via mechanical means, rather than by having a farmer travel to the site. Perhaps facilities in state waters, being closer to shore, would not require mechanized feeding systems.

Any federal permits issued would have to consider the environmental effects of the action, under the National Environmental Policy Act. One aspect of

environmental compatibility is the type of finfish allowed. It would be catastrophic to introduce an invasive species into the Gulf, and many consider genetically modified species, which could interbreed with native species in the case of escapement, also to be environmentally harmful. Thus, only certain fish likely would be allowed to be raised at an aquaculture facility in the Gulf: species native to the Gulf.

In addition to the type of fish posing an environmental threat, NOAA and the Corps also would have to evaluate the site location for environmental threats – such as the presence of endangered species, essential fish habitat, or marine protected areas; physical suitability – such as user conflicts with commercial or recreational fishing, oil drilling operations, and appropriate depth and currents; and navigability and national security – avoiding shipping lanes and military training or testing sites.

### Specific Aquaculture Projects in the Gulf

In addition to oyster farming, as discussed in *Oyster Aquaculture in the Gulf of Mexico*, there are two other aquaculture projects that the Mississippi-Alabama Sea Grant Consortium is working on: finfish aquaculture and blue crab aquaculture. The Mississippi-Alabama Sea Grant Legal Program (located in Oxford, MS) is working with the University of Southern Mississippi to assist an applicant with the finfish aquaculture permitting process. The grant from the Gulf States Marine Fisheries Commission for the project was issued before the court's nullification of the MSA permit. Despite lacking a general MSA permit for finfish aquaculture, the application process is continuing. The goal is to assist a commercial aquaculture operation in applying for the necessary permits. Although the MSA permit is not available, the Corps' permit would still be required, as would a Clean Water Act permit from the EPA.

At present, grant participants are mapping the areas in the Northern Gulf that would be suitable for aquaculture by this applicant. In addition to the environmental and safety factors discussed above, proximity matters in making an aquaculture enterprise practicable. For example, the hatchery fish must be transferred to the prospective site, so finding one that is just six miles away is much more practical than one that is

10 miles away, for example. Also, the mapping process considers proximity to fish processing centers to make harvest more cost-effective.

A separate finfish aquaculture pilot program is advancing in Florida near St. Petersburg. A first attempt at a novel floating cage structure for the project failed when it sank as it was being towed to sea. While the project is continuing, its exact status is unknown.

Additionally, as mentioned above, an aquaculture facility for federal waters south of Alabama received Corps and EPA permits in 2012 and 2013, but never placed any facilities in the water.

### Conclusion

While finfish aquaculture has significant economic benefits, operations in the Gulf of Mexico have been slow to start and were further delayed by an adverse decision nullifying the regulations for NOAA to issue permits for the activity. NOAA anticipates that starting an operation would require almost \$3 million, which limits the opportunity for small business owners to enter the market. Offshore aquaculture operations are complex; they must be large to be profitable, and they require

specialized innovative equipment, specific brood stock, and the capability to make transfers to and from shore. Such an operation must be permitted, a process that requires time and money. The Mississippi-Alabama Sea Grant Legal Program is continuing its work on a grant to advance an operator through the application process. As the project advances, updates will be posted on its website: <http://masglp.olemiss.edu>. ↗

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### Endnotes

1. Food and Agriculture Organization of the United Nations, [The State of World Fisheries and Aquaculture](#), p. 5 (Rome, 2018).
2. Gulf Fishermens Association v. National Marine Fisheries Service, 2018 WL 4587652, \*4 (E.D. La. Sept. 25, 2018).
3. Kahea v. National Marine Fisheries Service, 2012 WL 1537442, \*10 (D. Haw. Apr. 27, 2012).
4. Kahea v. National Marine Fisheries Service, 544 Fed. Appx. 675 (9th Cir. 2013) (*Kabea II*).
5. *Kabea II*, 544 Fed. Appx. at 675.
6. 81 Fed. Reg. 1781, 1789 (Jan. 13, 2016).



## IN SUM.

A Summation of the Facts and Figures of Interest in this Edition

★ Number of commercial oyster farms in the Gulf in 2009:	0
★ Number in Alabama today:	14
★ Number in Mississippi:	0
★ Estimated start up costs for finfish aquaculture in Gulf:	\$2.89 million
★ Sea Grant grant for blue crab aquaculture:	\$339,239