



# AquaBounty Exposed Report

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## SUMMARY

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The following report outlines testimony and photographic and video evidence provided by a former worker of AquaBounty Technologies (NASDAQ: AQB) that sheds new light on the corporation's mismanagement of a facility producing genetically engineered (GE) salmon in Indiana. This worker, Braydon Humphrey, witnessed consistent violations of standards for food safety and consumer health, worker safety, animal welfare, and environmental impact. The evidence collected here warrants further scrutiny and investigation so that the public can have a full understanding of impacts related to Aquabounty's facility in Albany, Indiana and ripple effects of other current and planned facilities. AquaBounty investor reports and forward-looking statements do not reflect the reality of the practices and conditions onsite as documented by Humphrey.

AquaBounty's GE 'AquAdvantage Salmon' (AAS) is engineered by artificially combining the genome of an Atlantic Salmon with the growth hormone gene from Chinook Salmon and DNA from the anti-freeze genes of an eel-like ocean pout. The result is a transgenic animal, involving the transfer of genes from one species into another. This engineered gene transfer causes the production of a growth hormone year-round, resulting in a fish that AquaBounty claims grows to market size (>4kg) in 18 months compared to 26 months for conventionally [farmed Atlantic salmon](#)<sup>1</sup>.

GE salmon is the first GE animal approved for human consumption and AquaBounty's expansion would set a global precedent for similar GE animal production. So far, the corporation has faced rejection due to [risk of escape](#)<sup>2</sup> and fines for repeatedly [violating environmental regulations](#)<sup>3</sup>. This synopsis provides new evidence substantiating claims of mismanagement, including but not limited to; FDA/OSHA violations, near and potential fish escapes, the use/mishandling of chemicals, poor biosecurity, and toxicological water conditions within the fish rearing areas and effluent discharge.

AquaBounty currently operates out of [various locations](#)<sup>4</sup>, including a 122,000-square-foot 1,200 metric ton facility in Albany, Indiana where they rear their GE salmon from eggs that are transported from their Rollo Bay, Prince Edward Island, Canada hatchery. AquaBounty is planning to build a \$329 million, 479,000-square-foot facility to produce 10,000 metric tons of genetically modified salmon a year, expecting it to serve as a model facility for [continued global expansion](#)<sup>5</sup>. This new facility intends to pump up to 5.25 million gallons a day (mgd) of water from the local Michindoh aquifer and dump just under that into the St. Joseph River. Many in the local community of Pioneer, Ohio, and throughout Williams County, as well as

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<sup>1</sup> AquaBounty Investor Presentation (November 2021), Page 22

<https://investors.aquabounty.com/static-files/f7c659e6-3f7e-4c31-afdb-ceb1af440e96>

<sup>2</sup> Salmon Business (2022) *Maine farm's controversial application rejected over concerns about AquaBounty's salmon eggs*

<https://salmonbusiness.com/maine-farms-controversial-application-salmon-farm-rejected/>

<sup>3</sup> Center for Food Safety. (2014) *AquaBounty Fined for Repeated Environmental Violations on GE Salmon*

<https://www.centerforfoodsafety.org/press-releases/3570/aquabounty-fined-for-repeated-environmental-violations-on-ge>

<sup>4</sup> <https://aquabounty.com/our-farms>

<sup>5</sup> AquaBounty Investor Presentation (November 2021), Page 18

<https://investors.aquabounty.com/static-files/f7c659e6-3f7e-4c31-afdb-ceb1af440e96>

those living within the tri-state Michindoh aquifer, [vehemently](#)<sup>6</sup> [oppose](#)<sup>7</sup> the new facility AquaBounty plans to build, having [major concerns](#)<sup>8</sup> with the impact of water usage. They have been ignored by local politicians who are [financially benefiting](#)<sup>9</sup> from the town's deal with AquaBounty. For example, in January 2021 Pioneer Mayor Edward Kidston purchased an 85-acre tract of land for \$600,000. In July 2021, a [purchase and sale order](#)<sup>10</sup> was in place with AquaBounty, and by May 2022 the land was sold for over \$2 million to be used for the planned facility. Kidston also owns Artesian of Pioneer, the water company hired to manage Aquabounty's test well drilling.

GE salmon poses a grave risk to wild Salmon that are already [facing](#)<sup>11</sup> a [myriad](#)<sup>12</sup> of [threats](#)<sup>13</sup>. The risk of genetically engineered salmon [escaping](#)<sup>14</sup> during egg or fish transports, rearing, onsite fish transfers, or discarding of presumed mortalities is ever-present while the AquaBounty facilities continue to operate. The impact of such an escape would be catastrophic through potentially outcompeting wild species for feed and space, interbreeding, and even failed fertilization with triploid individuals reducing critical wild Salmon spawning opportunities.

The information in this document was organized by members of the #BlockCorporateSalmon campaign, a national Black, Indigenous, People of Color-led campaign to educate the public on the ecological hazards of GE salmon and support the protection and restoration of wild Salmon. Inspired by the leadership of Indigenous Tribes protecting culturally significant wild Salmon stocks and the global food sovereignty movement, the #BlockCorporateSalmon campaign is calling for a global boycott of GE salmon. The campaign also supports the immediate halt to AquaBounty's proposed facility in Pioneer, Ohio and revoking the FDA's and Health Canada's approval of GE salmon and further GE animal approvals.

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<sup>6</sup> The Bryan Times. (June 28, 2022) *Alliance Working Against AquaBounty* [https://www.bryantimes.com/news/local/alliance-working-against-aquabounty/article\\_4af2e9ca-f2d7-54e2-a712-78b0ac4b0312.html?utm\\_medium=social&utm\\_source=facebook&utm\\_campaign=user-share](https://www.bryantimes.com/news/local/alliance-working-against-aquabounty/article_4af2e9ca-f2d7-54e2-a712-78b0ac4b0312.html?utm_medium=social&utm_source=facebook&utm_campaign=user-share)

<sup>7</sup> The Bryan Times. (June 29, 2022) *'Don't Give Up' Alliance Says* [https://www.bryantimes.com/news/local/don-t-give-up-alliance-says/article\\_b22d31ec-288e-509f-ab7e-544e3fbf5eea.html?utm\\_medium=social&utm\\_source=facebook&utm\\_campaign=user-share](https://www.bryantimes.com/news/local/don-t-give-up-alliance-says/article_b22d31ec-288e-509f-ab7e-544e3fbf5eea.html?utm_medium=social&utm_source=facebook&utm_campaign=user-share)

<sup>8</sup> Wane.com (June 22, 2022) *Environmentalists Concerned About Proposed Salmon Farm* <https://www.wane.com/news/local-news/environmentalists-concerned-about-proposed-salmon-farm/>

<sup>9</sup> The Bryan Times. (June 24, 2022) *AquaBounty Discusses Water, Kidston* [https://www.bryantimes.com/news/local/aquabounty-discusses-water-kidston/article\\_a6e1770e-be91-5295-9ca5-9fc2c076b168.html?utm\\_medium=social&utm\\_source=facebook&utm\\_campaign=user-share](https://www.bryantimes.com/news/local/aquabounty-discusses-water-kidston/article_a6e1770e-be91-5295-9ca5-9fc2c076b168.html?utm_medium=social&utm_source=facebook&utm_campaign=user-share)

<sup>10</sup> AQB SEC Filing for quarterly period ending June 30th 2021 <https://investors.aquabounty.com/node/10001/html>

<sup>11</sup> State of Salmon in Watersheds (2020) <https://stateofsalmon.wa.gov/executive-summary/challenges/climate/>

<sup>12</sup> Global Nonviolent Action Database (2004-2010) *Native Americans and Environmentalists Campaign to Remove Klamath Basin Dam* <https://nvdatabase.swarthmore.edu/content/native-americans-and-environmentalists-campaign-remove-klamath-basin-dam-2004-2010>

<sup>13</sup> UW News (2020) *Tire-related Chemical is Largely Responsible for Coho Salmon Deaths in Urban Streams* <https://www.washington.edu/news/2020/12/03/tire-related-chemical-largely-responsible-for-adult-coho-salmon-deaths-in-urban-streams/>

<sup>14</sup> Forbes (2022) *Fluorescent Transgenic Fish Escape Captivity Into Atlantic Forest Creeks Of Brazil* <https://www.forbes.com/sites/arrlscientist/2022/02/18/fluorescent-transgenic-fish-escape-captivity-into-atlantic-forest-creeks-of-brazil/?sh=4647770e7c7c>

Science Direct (2021) *Causal analysis of escape of Atlantic salmon and rainbow trout from Norwegian fish farms during 2010–2018* <https://www.sciencedirect.com/science/article/pii/S0044848620315684>

## LINKS TO PHOTO AND VIDEO EVIDENCE

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### Photo & Video Evidence

- [AquaBounty Exposed EVIDENCE \(public\)](#)
- *\*Please note: Primary section headers in this report serve as direct links to their corresponding sections in the Photo & Video Evidence document*

### Former Employee Contact

Braydon Humphrey - Interviews available upon request: blockcorporatesalmon@gmail.com

- Employee at AquaBounty's Indiana farm, Aquaculture Technician, December 2018 - January 2020
- Employee at Bell Aquaculture (site sold to AquaBounty), Aquaculture Technician, January 2016 - June 2017

## WORKER SAFETY VIOLATIONS

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AquaBounty has carelessly endangered their employees' safety and wellbeing throughout the existence of the Indiana facility by not adequately training its employees nor maintaining an adequately operable and non-hazardous facility. In this section you'll find information about severe instances of aerosolized hydrochloric acid affecting workers, improper chemical storage such as biogel, and coliform bacteria present in drinking water for workers on site, and correspondence that points to an overall culture of recklessness, lack of care for health consequences, absence of transparency, and unprofessionalism from management.

### Aerosolized Hydrochloric Acid

Video evidence provided by Humphrey documents a severe instance of plumes of hydrochloric acid fumes leaking from a barrel. Upon reporting it to the supervisor, they replied that "*safety would be a bigger priority from now on*" and attempted to brush the incident under the rug. According to Humphrey, the issue, however, continued after reinstallation of the pump through a second night, which fogged an entire building. No SDS for the hazardous chemical was available onsite per OSHA requirements, nor was there proper training provided.

### Lack of Training for Employees

Based upon the evidence presented by the former employee, it appears that AquaBounty's Indiana facility has failed on many fronts to meet even the minimal OSHA regulations in place to protect workers, and has put the workers in their facility at constant risk of injury. According to the former employee, there was no single manager on site who completed the OSHA-defined requirements for management training, and thus no qualified supervisors that worked on-site at the facility. Nor were there qualified machine handlers or

technicians on-site to operate heavy machinery. Newer employees were expected to work in confined spaces without any training or proper permitting for such work.

AquaBounty often promoted managers into their positions quickly, without adequate safety training. One example of a worker who gained a dangerous reputation for repeated misuse of heavy machinery was promoted to supervisor within three months of employment, and on one occasion sent another worker to the emergency room after an accident involving a 4 inch hose that hit another worker in the head resulting in a concussion. The former employee states that, on a whiteboard used for noting the number of workplace accidents, management did not update it to reflect the incident, suspectedly because corporate managers were visiting the next day. According to Humphrey, he took it upon himself to write up the accident on the whiteboard. The next day the note was noticed by the visiting higher ups and the farm manager was asked about it. He was unprepared to address the incident and was extremely embarrassed. He later admitted to holding a grudge from this situation.

### **Hygiene and Health Hazards**

According to the former employee, AquaBounty regularly uses caustic chemicals shipped in containers that are required by law to not be reused and returned to the supplier, but these empty containers were being repurposed for storing net dips or other forms of hazardous materials. Evidence indicates mislabeling and improper handling and storage of chemicals such as hydrochloric acid, virocid containers without lids, barrels full of mystery chemicals (and people joking about it), and a spray bottle labeled as alcohol that was actually full of paint thinner. AquaBounty's apparent improper storage of these concentrated toxic chemicals (on top of their reported poor fire safety as discussed below) are further cause for concern, creating a risk for workers and the environment.

The facility itself posed additional risks to workers. Pictures from the former employee appear to show high voltage electrical equipment that is unprotected from the facility's wet conditions, rusted fire extinguishers that were out-of-date and had their tags molded through, and other decrepit equipment, such as rusted ladder supports, described by the former worker as "*embarrassing [...] equipment that falls apart in your hands*". The photo evidence appears to show the improper storage of concentrated hydrochloric acid and other contaminants.

Humphrey recounts that buildings were not fully sealed against pests and that the radial flow settlers (large/heavy tanks providing supplemental water treatment in the main production building) were structurally off balance. The former worker states that he was once instructed to use duct tape to repair the nets to scoop up the fish. He says, "*I didn't feel like I was working for a multimillion-dollar international biotech company.*"

### **AquaBounty's Response When Made Aware**

In response to the hydrochloric acid incident and Humphrey expressing to workers and management that it was serious and concerning OSHA, Humphrey says his boss gave a sob story about his personal financial situation with his family to detract from what was happening. He gave two options for Humphrey, either "*continue working or contact*

*authorities and ruin everything we're trying to do here."* When Humphrey found an unmarked basic spiral-bound notebook that included handwritten notes saying; "*Braydon is a liability*", "*threatened to call OSHA*", "*keeping a list of hazards*", he considered it evidence of retaliation and contacted OSHA while still employed (a picture of the page with notes is located in the evidence document in the 'Other' section). Management then blamed him for not being timely about reporting various safety issues around the farm despite holding no special safety certifications or supervisory role in the company. AquaBounty fired Humphrey within a week of him contacting OSHA. Humphrey then filed an official complaint with OSHA.

In their rebuttal to Humphrey's case with OSHA, AquaBounty focused on discrediting Humphrey by focusing on his character and accusing him of not doing his work (which would have been refuted if AquaBounty handed over onsite surveillance footage), not showing up to his shift once, and looking through a notebook not intended for him (mentioned above). AquaBounty did not respond to the evidence of a hazardous workplace environment.

### **OSHA's Response When Made Aware**

OSHA did an investigation and 3 months later dismissed Humphrey's claims (after he responded to AquaBounty's rebuttal). OSHA concluded that AquaBounty was justified in the reason they gave for firing him. Unfortunately, many of Humphrey's claims were not even considered nor mentioned by OSHA even though Humphrey provided photos and videos in the OSHA intake of violations besides the hydrochloric acid incidents.

## **PRODUCT QUALITY & CONSUMER HEALTH RISKS**

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AquaBounty claims they are "*raising nutritious salmon that is free of antibiotics and other contaminants*" and that their system is "*designed to prevent disease*", however this is far from the truth. New evidence shows an alarming history of food safety concerns and toxic conditions happening at the AquaBounty facility in Indiana that should make consumers, investors, and regulators question AquaBounty's ability to be trusted as a safe or successful producer of a food product intended for human consumption. Top concerns include an abundance of fiberglass particles, excessive toxins in the water, chemicals and heavy metals that AquaBounty specifically claims are not present, a willingness to use antibiotics, and actively hiding the truth of the failure of their system from the public, investors, and onsite visitors. According to the former employee, AquaBounty lost one third of their initial GE stock during their first-feeding systems due to an opportunistic fungus that completely covered their gills in a sticky gray mucus. Knowing one third of the initial Indiana GE stock died, and that they continued to experience high mortalities, is in itself is a red flag that confirms AquaBounty's operation does not in fact prevent disease but rather harbors it. The severe issues presented lay out AquaBounty's poor management, system failure, and overall prioritization of production goals over product quality and consumer health.

## A Myriad of Contaminants & Toxicological Conditions

AquaBounty raises its fish in a toxic cocktail of contaminants that causes major concerns in the quality and safety of their product. AquaBounty acquired the Indiana plant formerly used by Bell Aquaculture but they did not replace the aging infrastructure, leading to the delamination of the fiberglass tanks. Although the company claims using “*advanced water filtration[...]to remove pollutants*”, images and video in the evidence display a range of sizes of fiberglass particles massively polluting the water of the fish tanks, leaving crusty fiberglass layers and choking drains. These particles recirculate through the system and are constantly exposing and likely irritating the fish (e.g. eyes, gills, intestines, and skin) who swim in it their whole lives.

AquaBounty forces their fish to survive in near-death environments to try to meet their production goals. Daily testing of the water produced routine “abnormal” or “toxicological” water quality results, not only exceeding AquaBounty’s own set limits for water toxicity, but also regularly going over the range of what the lab’s refractometer could even measure. The intensive amount of fish excrement and fish feed within the overcrowded fish rearing system caused highly toxic concentrations of total ammonia nitrogen levels in the water. This further led to toxic levels of nitrite that were regularly present. According to the former worker, AquaBounty consistently could not get the nitrite low enough and managers would say that they “*did not actually know the effects of nitrite on the fish*” which led Humphrey to feel gaslit, as quick research will show that high levels of nitrite can cause fish to painfully suffocate. In an effort to dismiss established aquaculture knowledge and declare their own standard, the COO cruelly suggested for staff to experiment on small batches of fish to determine how high the levels of ammonia, nitrite, and other contaminants the fish could tolerate before succumbing to toxicity.

Another water contamination issue was caused by the amount of fish mortalities. According to the former employee, when removing morts from the tanks, some corpses were so decomposed that their skin and meat would cause clouds of organic matter to recirculate through the system. Images and text exchanges show high level management describing the decomposition of dead fish as “*sludge of [...] old fish*” and show evidence of fish corpses clogging screens and lining the bottom of fish tanks where they were left to rot. Humphrey recalls that the fish who were still alive regularly dined on the corpses.

Further, the former employee documents unsanitary practices and various bio-contaminants such as; fish feed scoops being placed on top of buckets reserved for handling fish mortalities, a roof leak that was right over the Radial Flow Settler (RFS) of one of the main production tanks (that returns some water to the Sump), and various images of mold growing in the facility. Other images of poor biosecurity and pests in the facility (discussed further below) could lead to possible diseases entering and further contamination.

## Chemicals & Heavy Metals

AquaBounty claims that they do not use [chemicals](#)<sup>15</sup>. However, due to these toxic water conditions the water must be treated. Water treatment involved regulating water pH levels using hydrochloric acid, a harsh chemical.

AquaBounty also claims [non-exposure to environmental contaminants](#)<sup>16</sup>. However, the former employee provides evidence for heavy metals, such as Iron, and describes their being a “near daily occurrence of visibly high iron levels in the well water” and that it was “definitely not clean enough to drink”. Images of a hose spouting well water shows reddish-brown water laden with iron which is especially toxic to fingerlings and younger fish development. Dirty and contaminated water, likely from iron and fiberglass, has also been documented in the main production sump, the reservoir that the fish tanks pull their water from.

## Willingness to Use Antibiotics

AquaBounty includes in their main talking points that they will [never use antibiotics](#)<sup>17</sup>, but the sickly conditions of their fish may have them act otherwise as has been [forewarned by consumer advocates](#)<sup>18</sup> and even the Canadian Department of Fisheries and Oceans that [concluded](#)<sup>19</sup> that AQB GE salmon are “more susceptible to *Aeromonas salmonicida*, a type of disease-causing bacteria”. On AquaBounty’s website they say: “The waters our Atlantic salmon swim in never come in contact with harmful diseases and toxins that can be a concern with traditional sea-cage farms and net pens. When we say our Atlantic salmon is a safe choice, we mean it”. To the contrary, as previously presented, the waters the fish are swimming in are toxicological and causing diseased-ridden fish. Although there is no documented usage of antibiotics, Humphrey describes a meeting with high-level corporate employees where they expressed the possible need to and willingness to use antibiotics. The evidence shows text messages between Humphrey and another employee commenting on the discussion of this after the meeting that this was stated.

## Staging Facility Conditions for Site Visits

AquaBounty seems far more concerned with impressing and deceiving the public and regulatory agencies than it is about the quality and condition of their salmon. The former employee recounts that “so much of what tours were seeing was very different from our typical day”. Employees were regularly instructed to stop feeding the fish 24 hours before on-site visits, as well as to introduce extra fresh water into the tanks in order to make the water look clearer than it normally was. Evidence in text messages between employees shows high level management (CFO & Farm Manager) instructing employees to obscure the

<sup>15</sup> AquaBounty Investor Presentation (November 2021), Page 11  
<https://investors.aquabounty.com/static-files/f7c659e6-3f7e-4c31-afdb-ceb1af440e96>

<sup>16</sup> AquaBounty Investor Presentation (November 2021), Page 2  
<https://investors.aquabounty.com/static-files/f7c659e6-3f7e-4c31-afdb-ceb1af440e96>  
<sup>17</sup> <https://aquabounty.com/our-salmon>

<sup>18</sup> Earth Island Journal (2015) *FDA’s Approval of GE Salmon Based on Bad Science, Say Consumer Advocates*  
[https://www.earthisland.org/journal/index.php/articles/entry/fdas\\_approval\\_of\\_ge\\_salmon\\_based\\_on\\_bad\\_science/](https://www.earthisland.org/journal/index.php/articles/entry/fdas_approval_of_ge_salmon_based_on_bad_science/)

<sup>19</sup> Friends of the Earth (2016) *Health Canadas Approval of GMO Salmon Denounced*  
<https://foe.org/news/2016-05-health-canadas-approval-of-gmo-salmon-denounced/>



reality of the amount of fish mortalities and quality of water prior to a tour visit, such as by turning around buckets dedicated for dead fish to hide the label that said “morts”, or to pause on removing morts from tanks using a lift (not approved by the FDA), because of how it would stir up clouds of decomposed corpses and cloud the water in the system. Humphrey also recalls employees being told to hide away large trash cans that were used to hold mortalities so people would not realize just how many fish were dying. *"Any visitor, including from the FDA, always had some amount of extra effort from the staff in staging conditions in anticipation of their arrival"* says Humphrey. Humphrey also recalls a newly hired employee claiming that if the FDA walked into the facility at that moment they would see numerous violations, from as simple as vertically standing pallets to as serious as infrastructure degradation.

### **Nutrition and Allergenicity**

AquaBounty's GE fish lacks the nutritional value eaters expect to find in salmon that has also led to its popularity as a healthy protein. The difference between the Omega 3/Omega 6 fatty acid profiles between wild caught Salmon, farmed salmon and the AquaAdvantage salmon is striking. Wild caught Salmon's ratio is 12 to 1, “ordinary” farmed salmon is 4 to 1, and AquaAdvantage GE salmon is 3.8 to 1. Many people eat salmon for its heart healthy Omega 3 anti-inflammatory properties. Omega 6 causes inflammation. According to Policy Director at the Center for Food Safety, Jaydee Hansen, *“AquaAdvantage has the poorest ratio of good fats to bad fats of all salmon.”*

In general, GE salmon has 65.4% less omega 3/6 fatty acids compared to wild Salmon<sup>20</sup>. This can be attributed to the fact that the feed given to GE salmon does not nutritionally compare to what wild Salmon are able to intake throughout their lives, swimming thousands of miles of rivers and oceans. The frankenfish also contains 5% less protein but 58% more total fat content compared to conventionally farmed salmon. In addition, GE salmon showed to have less percentages of a wide array of vitamins, minerals and essential amino acids than non-GE salmon. Further, as is common with other farm-raised salmon, AquaBounty also uses pigmentation supplements to give their GE salmon a pink color as opposed to what would otherwise be gray flesh. Eaters expecting the same nutritional benefits from GE salmon as they would expect from wild Salmon will be sorely disappointed.

There is also evidence that raises major red flags if GE salmon is even a safe choice of food. According to the FDA's assessment of GE salmon, the product contains “40% higher levels of a hormone called insulin-like growth factor 1, which has been shown to increase the risk of certain cancers. Additionally, GE salmon “exhibited as much as 52% higher levels of ‘allergenic potency,’ which indicates possible allergic reactions from consumers.”<sup>21</sup>

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<sup>20</sup> The Center for Food Safety. (2013). *Infographic: Nutrition Facts for GE AquaAdvantage Salmon*. Retrieved June 19, 2022, from <https://www.centerforfoodsafety.org/issues/309/ge-fish/fact-sheets/1768/infographic-nutrition-facts-for-ge-aquadvantage-salmon>

<sup>21</sup> Food and Water Watch. (2016). (issue brief). *Genetically Engineered Salmon: Deficient, Deformed, and Dangerous to You and the Environment*. Retrieved June 19, 2022, from [https://foodandwaterwatch.org/wp-content/uploads/2021/03/ib\\_1601\\_gesalmonupdate-web.pdf](https://foodandwaterwatch.org/wp-content/uploads/2021/03/ib_1601_gesalmonupdate-web.pdf)

## Strange Aftertaste

AquaBounty boasts about the taste of its GE salmon having a “*great-tasting and clean flavor*”. However, the former worker recalls after his departure from AQB, hearing from workers that after AquaBounty sent out AquaAdvantage salmon samples, many prospective buyers gave feedback about a strange and bad aftertaste.

These GE salmon do not travel the world like wild Salmon do in order to capture the nutrients from all the ecosystems they travel to. Further, they are swimming in toxic water that requires harsh chemicals to treat. Weeks before harvest, AquaBounty and other intensive/indoor aquaculture farms are required to pump large amounts of fresh water to fish tanks in flow-through design in order to wash out the high concentrations of ammonia that seeps into the meat during their captive lives. GE salmon is just not the nutritious and delicious food that AquaBounty talks about.

## FDA Failure & Poor Labeling Requirements

Recent investigations into the FDA have found that the FDA is failing to meet American consumers' expectations on food safety and nutrition and that the food side of the FDA has been incredibly ignored and [grown dysfunctional](#)<sup>22</sup>. The basis of the FDA's assessment of GE salmon is quite troubling. GE salmon is currently regulated as a veterinary drug rather than a food through the FDA. The scientists who reviewed the assessment had backgrounds in veterinary medicine and biotechnology instead of nutrition or food sciences. The study, by design, was limited in scope, and a comprehensive study to assess potential human health risks from eating this product has not been conducted. It is dangerous to not employ the precautionary principle for the first ever genetically engineered animal intended for human consumption.

Adding to the growing mistrust of consumers with the agencies in charge of food regulation is the fact that requirements to label genetically engineered ingredients, if any at all, are not easy nor accessible for consumers to identify. The new “National Bioengineered Food Disclosure Standard” does little to help consumers identify if there are genetically engineered ingredients in a food item as it does not apply to all GE food items. In the cases where an item would need a label it would only require as much as a QR code or a number to call and would not have to explicitly state an ingredient is genetically engineered.

However, these minimal labeling requirements only apply to food items found in grocery or retail stores but do not apply to food items found on a menu at restaurants or food service establishments. This is concerning as AquaBounty seems to be targeting their sales to the restaurant industry where their product will not have to be labeled as genetically engineered for consumers. AquaBounty's GE salmon is currently allowed to be on the market even though a recent lawsuit declared the approval of GE salmon unlawful, requiring the FDA to go back and conduct a full environmental impact review to be fully approved. Despite this

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<sup>22</sup> Politico. (2022) *The FDA's Food Failure*. Retrieved June 21, 2022, from <https://www.politico.com/interactives/2022/fda-fails-regulate-food-health-safety-hazards/>

AquaBounty says it is harvesting their GE salmon. It is not known who is currently purchasing these harvests or what the final product may be.

## CONTAINMENT BREACHES & EFFLUENT WATER POLLUTION

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Not only is AquaBounty compromising worker safety in the production of its frankenfish, but the waterways that its land-based farms are dependent on are also threatened. Although AquaBounty's website boasts that they are "responsibly raising Atlantic salmon", the impact that its current and proposed farms have on the surrounding aquifers and rivers is anything but responsible.

### **Dirty and Unsafe Water at Indiana Farm**

The Indiana-based farm has a track record of unsafe and polluted waters both at the facility and leaving the facility into surrounding waters. At one point, workers were advised to bring their own water to work indicating that the water at the facility wasn't safe for workers to drink. No immediate actions were taken to fix this. This incident points to the farm's documented history of having coliforms in the drinking water when it was owned by Bell Aquaculture. The farm had not been updated when AquaBounty took over operations and problems with water quality persisted under AquaBounty's management.

AquaBounty's fish and the surrounding environment also suffer from the company's negligence towards clean water. Due to the high ammonia levels and toxicological water conditions in the fish rearing system, AquaBounty has received several notices of noncompliance with regard to their effluent water. In October 2019, the Indiana facility received a letter of noncompliance from the Indiana Department of Environmental Management where the ammonia levels in their waste lagoons were 5% over the permitted limit. While in this case the levels are not especially over the limit, what is concerning is that, according to the former worker, during this time AquaBounty was operating at less than half capacity and still could not handle the amount of toxins that the fish created. In July 2020, June 2021, and May 2021, AQB received several other notices of noncompliance for their effluent water being significantly over the limit of ammonia those entire months.

In March 2021, AquaBounty issued an incident report with the Indiana Department of Environmental Management where the plant spilled an estimated 15,000 gallons of tank water around the lift station near the rearing areas. This was a serious containment violation with tank water full of fiberglass particles, fish corpses, and fish waste spilling to the ground of the facility. Another image shows a tank of caustic water with a leaking valve placed outside the main production building and allowed to drain. The former worker notes there is a neighbor that grows crops immediately adjacent to the AquaBounty property.

## High Risk of Fish Escapes

AquaBounty claims their system is “*designed to prevent escapement and impacts on the broader ecosystem*” and that there is no risk of escape because the GE fish grow in a land-based facility. However, the company’s reckless management of their Indiana facility includes dangerous fish handling practices that do not properly contain their GE fish and reveals the irresponsibility of this corporation. Photos show many instances of containment breaches and fish escaping from tanks as well as use of water flow and drainage practices in violation of FDA containment regulation. Further, because of the high level of mortality and sick fish, tons of fish routinely end up in the farm’s dumpsters, some possibly still alive. There are no special containment practices when the GE fish are disposed of in the dumpster outside the facility. Raccoons and other wild animals have often been spotted foraging fish from the facility’s dumpsters. It would not be hard for a wild animal to drag and release a GE fish into the nearby effluent or body of water. And in at least one severely concerning incident (not witnessed directly by Humphrey but recounted by another employee that was present), during a fish transfer from one building to another, a major spill occurred that landed many GE fish on the ground within 20 feet of the effluent for the entire facility’s property risking the escape of these novel GE fish into the local waterway. Despite AquaBounty’s claims of its systems being “*designed to prevent disease*”, disease was prevalent amongst the cohorts of fish raised as the high level of mortality and other evidence suggests. If the fish do escape from these conditions, their diseases and altered genetics escape with them, putting wild Salmon and the environment further at risk.

## So-called “High-tech monitoring and biosecurity systems”

AquaBounty might have an intention to create biosecure systems, but the reality is much different. The evidence shows various incidents of wild animals and pests breaching the company’s biosecurity system, such as frogs and rats finding their way into the plant (even getting into the fish feed). The former worker describes discarded fish being scavenged by wild animals. Images also show fish that were able to jump out of their tanks, even though there are supposed to be nets over the tanks to keep the fish safe and to prevent any potential for them to escape. Text exchanges between workers show instances of them cleaning out bugs and mosquito larvae harboring in stagnant water in the plant as well as a maggot infestation in a trash can.

With the new Ohio facility, AquaBounty is working with construction and design partners, boasting that this new 10,000 metric ton facility in Pioneer will be a state-of-the-art system to increase their GE fish yields. While they may create better infrastructure than the Indiana farm, AquaBounty personnel are ultimately the ones that will be operating the facility and their track record in safe and secure managing practices is abysmal. AquaBounty has not met the level of rigor to claim that they have “high-tech monitoring and biosecurity systems”. If they have not been able to handle the requirements to properly manage their Indiana production, it is doubtful they will be able to manage the increased demand of the planned Ohio facility.

## Potential Impacts to the Local Watershed

With the planned construction of a new AquaBounty facility in Pioneer, Ohio, the spread of water pollution and risk of escape increases and enters another community. The village of Pioneer sits on top of the Michindoh Aquifer which provides clean drinking water to communities in three different states - Michigan, Indiana, and Ohio. As one community member from Pioneer describes it, “[The] water is currently so pure, it does not need to be filtered. [I] don’t want to use it to fill a fish tank and dump it every day.” AquaBounty should not be given any benefit of the doubt on managing their wastewater for this new facility if their past history is rife with irresponsible actions on their impact on local waterways.

## ANIMAL ABUSE

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AquaBounty’s website claims that the GE fish “enjoy a clean environment, where they have adequate space to swim and school naturally.” The truth is much darker. Aquabounty creates abusive and inhumane conditions for these frankenfish. It is blatantly obvious that Aquabounty has no respect for the rights of the Salmon and Salmon People who are culturally and ancestrally tied to the fish and the waterways they inhabit. While the creation of GE salmon is an insult to wild Salmon and Indigenous people tied to the Salmon, the inhumane treatment of these frankenfish is another red flag.

### Rupturing Stomachs from Abnormal Growth

Aquabounty designed their frankenfish to grow abnormally fast as a way to reduce the amount of feed needed to reach market size. As explained to Humphrey by the hatchery manager, Tess Boyer, this physiology caused common occurrences of ruptured stomachs. This led to many mortalities at the Indiana farm. This fact is extremely alarming in many ways (suffering, impacts of genetic leaks into wild pop., etc) but may be most significant to investors around concerns of financial viability.

### Unnatural Confinement & Inhumane Fish Density

AquaBounty claims their fish “school naturally”, however, the truth is these fish are barely surviving horrible tank conditions with inhumane fish density. While Salmon do school naturally in the wild, they school loosely. According to the former worker, there were many cases of fish fin erosion caused by the high density in the tanks. Fish density is discussed with production emphasis and not humane treatment.

### Suffering & Inhumane Killing

AquaBounty claims that its GE salmon is cared for “in the most humane way possible.” However, the Indiana farm also had persistent contamination from deteriorating fiberglass of the tanks likely to cause eye, skin, gill, and intestinal irritation. The evidence shows injuries, high mortalities, and preventable suffering. With water quality being so low,

workers could not keep track of individual fish health and many fish could not be effectively euthanized if ill or suffering from pain. This led to countless dead fish regularly covering the bottom of tanks.

AquaBounty also has a track record of using unnecessary, abusive and inhumane methods of impromptu killing of fish by stomping on them, using hammers, or whacking them on the side of tanks. Farmed salmon facilities should be using a strategic percussive blow, ideally by using a mechanical device, to slaughter or euthanize fish to minimize suffering according to salmon welfare certifications. It is clear from Humphrey's testimony that AquaBounty does not consistently follow industry best practices for fish euthanization and leans on inhumane methods. With little to no training and proper equipment for workers to slaughter GE salmon in this industrial setting where thousands of fish are raised, hundreds of thousands of fish suffer under AquaBounty's lack of care.

## UNSUSTAINABLE

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AquaBounty claims they are a "*sustainable*" company and that their land-based recirculating aquaculture system (RAS) producing genetically engineered fish is the answer to global food demands and climate change issues. They also claim their system results in a "*reduced carbon footprint*" and "*no risk of pollution to marine ecosystems*". However, these claims are deceptive as they obscure the reality of what it takes to operate such an intensive facility.

### **Huge Energy & Water Usage**

These types of facilities have tremendous energy bills in order to operate around the clock electrical demands, including but not limited to; lighting, water pumps, water chillers, heating, air conditioning, etc. AquaBounty's Indiana Farm has electrical bills (supplied by coal) that are on average over \$10,000 every month. The Indiana facility has a 1,200 metric ton capacity. The new Ohio facility AquaBounty plans to construct is aiming to produce 10,000 metric tons of GE fish per year. If the current smaller facility requires such a high energy consumption, what will the energy usage of this new much larger facility be?

These Frankenfish are forced to survive in unnatural high-density tanks with poor water conditions that require enormous water usage to flush the foul water in the tanks. The Indiana farm requires 1.45 million gallons per day (MGD) of water to operate. The larger planned Ohio facility intends to pump 3 to 5 MGD from the Michindoh Aquifer and dump into the St. Joseph river. AquaBounty is currently seeking approval for a second water withdrawal permit from the Ohio Dept. of Natural Resources to increase their allotment to up to 5.25 MGD and nullify their current permit of up to 3 MGD. While AquaBounty claims that it is possible for these systems to recirculate 99% of the water and they claim to have "*greater than 95% of water recycled*", it is not usually functioning this way, meaning millions of gallons of water (perhaps 20% of the water or more according to Humphrey) eventually becomes foul and more water needs to be pumped to exchange it. Even a small percentage of water

leaving the system adds up to an enormous amount. Furthermore, the water that is leaving the facility is in dismal quality aforementioned and documented in the evidence.

### **Chemical Noxious Waste**

Because these GE fish are confined in an unnatural body of water, the water has to be tested daily and managed for the fish to have any chance to survive. The chemicals required for the daily water analysis accumulate significant noxious waste, such as cadmium and mercury. AquaBounty uses Nessler's Reagent (SDS) to test for ammonia on a daily basis, as well as NitriVer, and NitraVer. Many of these chemicals used for water testing and others used for water treatment (such as hydrochloric acid) must be disposed of as hazardous waste. Further, as discussed previously, AquaBounty's poor oversight and improper storage of various harsh chemicals are cause for concern around their ability to prevent spills in the surrounding environment. These externalized environmental costs are not being factored into AquaBounty's green-washed "sustainability" claims.

### **Fish Feed & Liquid Oxygen Demands**

The most expensive input required for AquaBounty to operate is the fish feed. There is also a heavy use of artificial oxygen used, requiring at least one weekly tanker of liquid oxygen shipped to the Indiana farm to keep fish alive in these unnatural land-based tanks. Not only does the transportation of this liquid oxygen and fish feed contribute to fossil fuel emissions, but further, the industrial agricultural production of the feed is degenerative to the ecosystem. Fish feed in general has primarily consisted of fish meal which complicates the claim that farmed fish reduces ocean fishing. However, while AquaBounty tries to get away with stating that GE fish feed, primarily made of GE soy, is somehow a suitable and more sustainable option than fish meal, the fact is; GE soy, being intensively grown across the globe in the US, Brazil, China and elsewhere, is a main contributor to deforestation and loss of biodiversity, chemical runoff and poisonous waterways, and the disappearance and severe degradation of soil globally. These industrial farming practices have an immense carbon footprint. Soy fish feed is not a sustainable product as AquaBounty claims.

### **So-called "Local" "Seafood"**

Most respectable food procurement assessment tools define "*local*" as sourcing ~250 miles from where it was served. AquaBounty's facility in Indiana and its new proposed facility in Ohio are in the heart of the country, strategically placed to target consumers away from any natural Salmon habitat. AquaBounty promotes their GE salmon as "local" and as offering "*reduced transportation to consumption*" as a way to claim that they are a green company concerned about their carbon footprint and climate chaos. AquaBounty's GE salmon does not have a low carbon-footprint nor does it fit the definition of "local" for most food procurement assessment tools like the Real Food Calculator, ASHEE STARS, and even corporate food service companies like Bon Appetit Management Company.

## ABOUT AQUABOUNTY

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AquaBounty Technologies is a biotech corporation that has patented genetically engineered (GE) “salmon” under the name AquAdvantage Salmon (AAS). In November of 2015 the United States Food and Drug Administration authorized this GE salmon as the first GE animal approved for human consumption in the US (approval in Canada followed suit in 2016). However, on November 5th, 2020 a [federal judge ruled](#)<sup>23</sup> that the FDA ignored serious possible environmental consequences by approving genetically engineered salmon and was in violation of the National Environmental Policy Act. The judge also ruled that the FDA approval was in violation of the Endangered Species Act, as the agency did not consult with the National Marine Fisheries Service and the Wildlife Service before taking any action that “may affect” a listed or endangered species. Despite the plaintiffs winning this legal battle, AquaBounty Technologies has been running business as usual at their facility in Albany, Indiana where it is growing and attempting to harvest GE salmon for sale despite wide [public dissent](#)<sup>24</sup>.

While AquaBounty boasts having 30 years of experience with their product and had promised its investors that it would release GE salmon into the market by March 2020, the company has pushed back deadline after deadline, and it is unclear if any of their product has reached the market as no company has confirmed any sale of it and the only distributor, Samuels & Son, who publicly said they would sell it [backed out](#)<sup>25</sup>, deciding to “wait until [the] product was successfully introduced in the marketplace”. AquaBounty’s incompetence in growing and harvesting GE salmon, in addition to egregious harm to water, the environment, and animal welfare is happening at a time when the aquaculture industry is looking to expand and consolidate more than ever. The lack of scrutiny over AquaBounty’s business is setting the bar negligently low for GE products even as they impact public and environmental health for generations to come.

### AquaBounty Documents & Presentations

*“At AquaBounty Technologies, Inc. (NASDAQ: AQB), we believe we are a leader in aquaculture, leveraging decades of technology expertise to deliver game-changing solutions that address food insecurity and climate change issues, while improving efficiency, sustainability and profitability. AquaBounty provides fresh Atlantic salmon to nearby markets by raising its fish in carefully monitored land-based fish farms through a safe, secure and sustainable process. The Company’s land-based Recirculating Aquaculture System (“RAS”) farms, located in Indiana, United States and Prince Edward Island, Canada, are close to key consumption markets and are designed to prevent disease and to include multiple levels of fish containment to*

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<sup>23</sup> Center For Food Safety (2020), *Federal Court Declares GE Salmon Unlawful*  
<https://www.centerforfoodsafety.org/press-releases/6186/federal-court-declares-genetically-engineered-salmon-unlawful>

US District Court (November 5th, 2020), *Institute for Fisheries Resources, et al., Plaintiffs, v. US FDA, et al., Defendants*  
[https://www.centerforfoodsafety.org/files/2020-10-05-ecf-285--order-granting-in-part-and-denying-msj\\_03835.pdf](https://www.centerforfoodsafety.org/files/2020-10-05-ecf-285--order-granting-in-part-and-denying-msj_03835.pdf)

<sup>24</sup> Center for Food Safety (2013), *Nearly 2 Million People Tell FDA Not to Approve GE Salmon*  
<https://www.centerforfoodsafety.org/press-releases/215/nearly-2-million-people-tell-fda-not-to-approve-ge-salmon>

<sup>25</sup> Civil Eats (June 2022), *GMO Salmon Is (Sort of) on the Market. Here’s What It Means*  
<https://civileats.com/2022/06/24/gmo-salmon-is-sort-of-on-the-market-heres-what-it-means/>



*protect wild fish populations. AquaBounty is raising nutritious salmon that is free of antibiotics and other contaminants and provides a solution resulting in a reduced carbon footprint and no risk of pollution to marine ecosystems as compared to traditional sea-cage farming. For more information on AquaBounty, please visit [www.aquabounty.com](http://www.aquabounty.com) or follow us on Facebook, Twitter, LinkedIn and Instagram.”*

- AquaBounty Investor Presentation (November 2021)  
<https://investors.aquabounty.com/static-files/f7c659e6-3f7e-4c31-afdb-ceb1af440e96>
- AquaBounty Investor Presentation (May 2021)  
<https://investors.aquabounty.com/static-files/4b3ba142-f721-4794-801e-ec5e7e062913>
- AquaBounty Virtual Farm Tour: <https://youtu.be/vAaLNE28fvA>
  - Transcript of Video:  
[https://aquabounty.com/video-transcripts/AquaBounty\\_Video\\_Transcript.txt](https://aquabounty.com/video-transcripts/AquaBounty_Video_Transcript.txt)
- AquaBounty Press Release (April 2022) *AquaBounty Begins Construction of State-of-the-Art, Land-based Salmon Farm with Groundbreaking Ceremony in Pioneer, Ohio*  
<https://investors.aquabounty.com/news-releases/news-release-details/aquabounty-begins-construction-state-art-land-based-salmon-farm>
- AquaBounty Informational PDF (2016) *AquAdvantage Salmon; Climate Smart Aquaculture*  
[https://aquabounty.com/wp-content/uploads/2016/10/FFE\\_2016\\_EAS-Aquabounty.pdf](https://aquabounty.com/wp-content/uploads/2016/10/FFE_2016_EAS-Aquabounty.pdf)
- FDA AquAdvantage Salmon Fact Sheet  
<https://www.fda.gov/animal-veterinary/aquadvantage-salmon/aquadvantage-salmon-fact-sheet>
- Q&A on FDA’s Approval of AquAdvantage Salmon  
<https://www.fda.gov/animal-veterinary/aquadvantage-salmon/qa-fdas-approval-aquadvantage-salmon>

## OSHA POLICY

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### OSHA Policy Text

The document link below provides bolded sections that highlight aspects of OSHA policy that, according to Humphrey, were likely violated at the AquaBounty Indiana farm.

- [https://docs.google.com/document/d/10\\_18Y3NAaYuOPIWSHu2wu6cLAWlBXv-QECDvuBk7LT8/edit?usp=sharing](https://docs.google.com/document/d/10_18Y3NAaYuOPIWSHu2wu6cLAWlBXv-QECDvuBk7LT8/edit?usp=sharing)

## POLITICAL RESPONSE

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Every GE salmon egg that is transported to the Indiana facility comes from AquaBounty’s first facility in Prince Edward Island (PEI), Canada. According to CBAN (Canadian Biotechnology Action Network), just one year after telling the province that its new facility at Rollo Bay would not have any GE salmon, AquaBounty asked the PEI government to approve the construction of the world’s first GE fish factory. On May 19, 2016 AquaBounty’s

Environmental Impact Statement said, “The proposed facility at Rollo Bay West will have no GMO salmon.” On April 12, 2017, AquaBounty’s Amended Environmental Impact Statement says, “AquaBounty will rear AquaAdvantage Salmon, a sterile genetically modified salmon, from eyed egg to market size within the production facility.” That same year, AquaBounty expanded its production into the U.S. by acquiring the Indiana facility from Bell Aquaculture. This year, AquaBounty held a groundbreaking ceremony in Pioneer, Ohio where it has plans to build a second U.S.-based facility which the company claims will produce even more GE salmon than the Indiana plant. Despite these expansions, the company has falsely presented a picture of success.

### Global Rejection of GE Fish

More than 2 million people submitted comments opposed to AquaBounty’s FDA approval due to environmental and public-health concerns. Article by the Center for Biological Diversity [here](#).

- In a 2013 *New York Times* [poll](#), three-quarters of respondents said they wouldn’t eat GE salmon.
- More than 60 supermarket chains totaling more than 9,500 stores nationwide — including Costco, Kroger, Safeway, Trader Joe’s and Whole Foods — have made a commitment to not sell GE salmon.
- According to a National Public Radio [poll](#), 80 percent of Americans who regularly eat fish said it was “important” or “very important” that their seafood is sustainable, which was defined as still being plentiful for future generations and caught using methods that cause minimal harm to other marine animals. AquaBounty’s GE salmon do not meet these criteria.
- Surveys have shown that [92 percent](#) of Americans want genetically engineered fish to be clearly labeled. And since the FDA didn’t require labeling of the GE salmon, AquaBounty has said it plans to misleadingly market the fish as “Atlantic salmon” to consumers.

### Controversy in Panama

AquaBounty stated its specific plans (in various documents to the US and Canadian governments) to produce GM Atlantic salmon eggs in PEI, ship them to Panama to grow out and process for export. However, the Government of Panama had not yet approved commercial production of the GE salmon before the company began asking the PEI government to permit construction of new buildings to grow 250 metric tons of GE Atlantic salmon every year. In 2014, the Government of Panama fined AquaBounty for breaching some national environmental laws during its research and development of the GE salmon. One pager: <https://cban.ca/wp-content/uploads/pei-fish-factory-flyer-april-2017.pdf>.

AquaBounty’s facility in Panama suffered a huge containment breach in 2008 that the company rarely speaks about. Here are two articles documenting this:

- <https://www.outsideonline.com/outdoor-adventure/environment/genetically-engineered-salmon-could-soon-run-wild/>

- <https://gizmodo.com/you-could-be-eating-genetically-engineered-frankenfish-5916306>

### **Opposition in Canada**

The Canadian Aquaculture Industry Association, the International Salmon Farmers Association, and Marine Harvest, the largest producer of farmed salmon, do not support the introduction and commercial production of GE fish. If GE salmon were to be approved for consumption, Marine Harvest asked for it to be specifically labeled. In 2014, 76 fisheries and oceans conservation, environmental and social justice groups endorsed a statement objecting to raising GM fish and eggs.

### **Legal Opposition to GE salmon by Tribes**

The safety of AquaAdvantage Salmon – from both an ecological and public health standpoint – has been called into question by Northwest Tribes as well as prominent environmental and food safety groups. Northwest Tribes have taken these actions to block the approval of GE salmon to protect Salmon Nation:

- The Muckleshoot Indian Tribe and the Affiliated Tribes of Northwest Indians called on the FDA to deny all applications to distribute genetically engineered salmon in the U.S. without prior completion of an Environmental Impact Statement and scientific review that sufficiently consulted with Northwest Treaty Tribes. This legal requirement was not honored.
- The National Congress of American Indians joined this effort, and passed a resolution to “oppose the introduction of and sale of genetically engineered salmon in the United States if the FDA decides to allow it and requests tribal consultation on the matter before any action by the FDA.” Tribes were never consulted.
- In late 2015, the Yurok Tribe in California passed a tribal ordinance banning genetically engineered salmon from their territory to protect Klamath River salmon.
- In July 2016, Quinault Indian Nation (consisting of the Quinault and Queets tribes and descendants of five other coastal tribes in Washington state) joined 11 other organizations to bring a lawsuit against the FDA for approving AquaBounty’s genetically engineered salmon.

### **FDA Lawsuit**

On November 19, 2015 the FDA made the decision to approve an application by AquaBounty Technologies, Inc. to develop, market and sell genetically engineered salmon for human consumption. The complaint argues that the FDA made the decision without considering or fully disclosing the environmental and other risks of the unprecedented decision. Further, the plaintiffs argued that the decision is in violation of the Federal Food, Drug and Cosmetics Act, the National Environmental Policy Act and the Administrative Procedure Act by not adequately assessing the full range of potentially significant environmental and ecological effects of the decision. The plaintiffs specifically raised concerns about the FDA’s assessment of the likelihood that the engineered salmon would escape from captivity and adversely affect normal and endangered salmon. The lawsuit was initiated by

several nonprofits that advocate for commercial fisherman, environmental protection, preservation and protection of salmon and/or food safety including the Institute for Fisheries Resources, Pacific Coast Federation of Fishermen's Associations, Golden Gate Salmon Association, Kennebec Reborn, Friends of Merrymeeting Bay, Cascadia Wildlands, Center for Biological Diversity, Ecology Action Centre, Friends of the Earth, Food and Water Watch, the Quinault Indian Nation and Center for Food Safety. (article)

On February 5th, 2021 a federal judge ruled the FDA ignored serious possible environmental consequences by approving genetically engineered salmon and was in violation of the National Environmental Policy Act. The judge also ruled the FDA approval was in violation of the endangered species act, as the agency did not consult with the National Marine Fisheries Service and the Fish and Wildlife Service before taking an action that "may affect" a listed or endangered species. Despite the plaintiffs winning this legal battle, AquaBounty Technologies has been running business as usual at the facility in Indiana.

### **Proposed New AquaBounty Facility in Ohio**

In July 2021, AquaBounty (AQB), a land-based aquaculture corporation, announced plans to build an 11-acre indoor facility in Pioneer, Ohio, (Williams County) capable of producing 10,000 metric tons of genetically engineered (GE) salmon per year. This "all in one" aquaculture facility would be one of the largest in the world, where it would hatch, raise, process, and sell GE salmon.

The immediate concern of nearby communities is AQB's need to withdraw over 5 million gallons of water EVERY day from the Michindoh Aquifer. The Michindoh Aquifer is the only source of water for Williams County and for almost 400,000 people living in 9 counties across MI, IN and OH. No one can guarantee the communities that withdrawing 5 million gallons a day will not affect the ability of the aquifer to regenerate and not cause wells to go dry. Nearly 5 million gallons of wastewater will be discharged EVERY day into the nearby east branch of the St Joseph River, the water supply for hundreds of thousands of people in Fort Wayne, IN.

The Michindoh Aquifer and St Joseph River lie in the Great Lakes basin. "Currently, every ton of salmon produced in aquaculture creates about 92.6 to 145.5 pounds of nitrogen waste and 15.9 to 23.1 pounds of phosphorous waste (World Resources Institute - 2019)." Lake Erie is already suffocating from a serious algae bloom problem. This will just add to that problem. The St Joseph River is a tributary of the Maumee River, which empties into Lake Erie. If GE salmon were to escape, they could wreak havoc on the Great Lakes ecosystem.

Six months before AQB's plan was made public, acreage (83 acres) was purchased for \$600,000 by Kidston Consulting, whose president is Ed Kidston. Ed Kidston is also the mayor of the village of Pioneer. A few months later, this land was annexed from an adjacent township into the industrial park of the village of Pioneer at the urging of Ed Kidston and Megan Hausch, executive director of WEDCO (Williams County Economic Corporation). Prior to the land being annexed, \$50,000 was offered to the trustees by Kidston and Hausch at two township meetings to agree to the annexation, but both offers were refused.

On May 17, 2022, AQB purchased the 83 acres from Kidston Consulting for \$2,073,875.00.

Test wells were being drilled for Artesian of Pioneer on land surrounding the village of Pioneer during this time. Artesian of Pioneer, whose president is Ed Kidston, will sell and treat the water being supplied to AQB's Pioneer facility.

On October 6, 2021, the Chief of the Ohio Department of Natural Resources (ODNR) Division of Water Resources received a Water Withdrawal and Consumptive Use Permit Application from AquaBounty Farms Ohio, LLC for a proposed well field near Pioneer, Ohio with a new capacity for ground water withdrawals from the Michindoh Aquifer of 3 million gallons per day (gpd) for use at its planned aquaculture facility.

Over 1200 comments were submitted by the public to the ODNR. The comments were overwhelmingly opposed to the AquaBounty project. Yet on March 14, 2022, the Chief of the ODNR's Division of Water approved the permit with conditions. The conditions contain monitoring requirements which will be performed by AquaBounty, not an independent party.

On April 20, 2022, AQB held a ceremonial groundbreaking at the proposed Pioneer, OH, site.

On May 12, 2022, AQB submitted another Water Withdrawal and Consumptive Use Permit Application to ODNR for a proposed well field east of Pioneer, Ohio with a new capacity for ground water withdrawals from the Michindoh Aquifer for 5.25 mgd for use at its planned aquaculture farm. [On September 29, 2022](#), the Chief of the ODNR Division of Water Resources issued an Order approving this Application and issuing a Withdrawal and Consumptive Use Permit (Permit) to AquaBounty with Conditions. The Permit is expressly conditioned upon AquaBounty obtaining a National Pollutant Discharge Elimination System (NPDES) Permit from the Ohio Environmental Protection Agency (Ohio EPA) for its return of water back to the Lake Erie watershed as described in the Application. That wastewater discharge from the aquaculture farm into the East Branch of the St. Joseph River just Northeast of the Village of Pioneer, falls under the jurisdiction and authority of Ohio EPA, not ODNR.

For more on the local context please contact [Williams County Alliance: wmscoa@yahoo.com](mailto:wmscoa@yahoo.com)