

**MAINE DEPARTMENT OF AGRICULTURE,  
CONSERVATION, AND FORESTRY**

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**IN RE: CITIZEN PETITION FOR RULEMAKING  
TO REQUIRE THE MAINE DEPARTMENT OF  
AGRICULTURE, CONSERVATION, AND  
FORESTRY TO FULFILL ITS STATUTORY  
DUTY UNDER 7-A M.R.S. § 202 TO PROTECT  
THE WELL-BEING OF FISH USED IN  
AQUACULTURE.**

*Filed by*

**152 VOTERS REGISTERED IN THE STATE OF  
MAINE**

*and*

**ANIMAL OUTLOOK**

**ORGANIC CONSUMERS ASSOCIATION**

**REGENERATION INTERNATIONAL**

**FRIENDS OF HARRIET L. HARTLEY  
CONSERVATION AREA**

**ANIMAL EQUALITY**

**FARM SANCTUARY**

**MAINE SEAWEED EXCHANGE**

**AQUATIC LIFE INSTITUTE**

**CITIZEN PETITION  
TO INITIATE RULEMAKING  
PURSUANT TO  
5 M.R.S. § 8055**

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**Filed August 1, 2022**

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**IN RE: CITIZEN PETITION FOR RULEMAKING TO REQUIRE THE MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION, AND FORESTRY TO FULFILL ITS STATUTORY DUTY UNDER 7-A M.R.S. § 202 TO PROTECT THE WELL-BEING OF FISH USED IN AQUACULTURE.**

NOW COME 152 registered voters in the state of Maine and 8 organizations pursuant to 5 M.R.S. § 8055 to petition the Department of Agriculture, Conservation and Forestry (“DACF”) to initiate rulemaking to protect the welfare of millions of fish confined in aquaculture facilities across the state and:

1. Officially designate the DACF—and more specifically, the agency’s Animal Welfare Program (“AWP”)—as the agency responsible for overseeing and enforcing compliance with animal cruelty laws and Best Management Practices (“BMPs”) in aquaculture facilities throughout the state.
2. Require that the DACF establishes BMPs for the welfare of fish in aquaculture facilities through administrative rulemaking and not through arbitrary deference to the private aquaculture industry.

Pursuant to 21-A M.R.S. § 354(7), the verified and certified signatures and the oath of the petition circulator have been submitted to the DACF simultaneously with this petition.

**I. SUMMARY**

The aquaculture industry in Maine is booming and across the state, millions of fish are confined to tanks and pens in aquaculture facilities. The highest levels of state government have committed to expand the industry, fueling growth with millions of dollars and long-term commitments to jobs and economic development. Maine has declared its intent to become a global leader in aquaculture.

Yet, while the state invests mightily in the growth of the aquaculture industry, a troubling vacuum in oversight exists. No single agency within the state of Maine is accountable for the humane and proper treatment of the millions of fish used in the state’s aquaculture industry. Despite overwhelming scientific evidence that fish are sentient, conscious, capable of pain,

suffering, and logical thought, the state provides no regulatory oversight to ensure Maine’s Animal Welfare Act is enforced across the hundreds of aquaculture facilities in the state. In fact, the agency statutorily designated by the Maine Legislature to enforce these laws—the Department of Agriculture, Conservation, and Forestry (“DACF”)—has openly disavowed this responsibility. Moreover, in the lone instance in which the DACF was compelled to enforce these laws—prompted only by the investigation of a non-profit organization—the agency deferred to insufficient standards set by the private aquaculture industry, an industry with no incentive to prioritize the welfare of animals.

The growth of aquaculture in Maine has outpaced the state’s ability to ensure the “humane and proper treatment” of animals used by this industry. Pursuant to this petition, the DACF must initiate rulemaking proceedings (1) to formally accept oversight for the welfare of fish in aquaculture facilities, including enacting appropriate training, policies and procedures, and (2) adopting Best Management Practices (“BMPs”) that ensure the humane and proper treatment of these animals as required by law.<sup>1</sup>

## **II. THE PARTIES**

### **A. The Petitioners**

This petition is brought by 152 **registered Maine voters** who live throughout Maine in 35 municipalities and represent a variety of interests. Each petitioner is concerned about the welfare of millions of fish confined in aquaculture facilities throughout the state and respectfully requests that the DACF use this petition as an opportunity to improve the living conditions of these animals by (1) formally accepting oversight for their welfare and (2) requiring the passage of BMPs through rulemaking versus deference to the aquaculture industry.

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<sup>1</sup> See 5.M.R.S. § 8055(3).

Founded in 1995, **Animal Outlook** (formerly “Compassion Over Killing”) is a national 501(c)(3) animal protection organization dedicated to exposing truth and inspiring change. Animal Outlook represents thousands of supporters nationwide including many residing in the state of Maine. Animal Outlook advocates against government policies that encourage or allow cruelty to farmed animals, conducts public education on the realities of industrialized animal agriculture, coordinates public campaigns to encourage the adoption of vegan diets, and conducts undercover investigations to expose cruelty at industrialized factory farms. In 2019, Animal Outlook (then known as Compassion Over Killing) conducted an undercover investigation of the Cooke Aquaculture hatchery<sup>2</sup> in Bingham, Maine. The investigation—widely covered by both local and national media<sup>3</sup>—documented Atlantic Salmon being slammed, stomped, violently thrown, and left in buckets to painfully suffocate and die.<sup>4</sup> Moreover, the investigation depicted fish living in filthy conditions, many suffering from spinal deformities and fungus that ate away their faces.<sup>5</sup>

**Organic Consumers Association** is an online and grassroots 501(c)3 nonprofit public interest organization whose mission is to protect and advocate for consumers' right to safe, healthful food and other consumer products, a just food and farming system and an environment rich in biodiversity and free of pollutants. OCA educates and advocates on behalf of organic

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<sup>2</sup> *Aquaculture: Sea of Suffering*, ANIMAL OUTLOOK, <https://animaloutlook.org/investigations/aquaculture/#:~:text=In%202019%2C%20Animal%20Outlook%20released,salmon%20aquaculture%20in%20the%20U.S.> (last visited Feb. 22, 2021).

<sup>3</sup> See N. Sambides, *Fish cruelty allegations prompt changes at Bingham salmon hatchery*, BANGOR DAILY NEWS, (Nov. 23, 2019), <https://bangordailynews.com/2019/11/23/news/fish-cruelty-allegations-prompt-changes-at-bingham-salmon-hatchery/> (last visited Mar. 14, 2021); N. Sambides, *State investigating Bingham salmon hatchery for alleged animal cruelty*, WGME, (Oct. 8, 2019), <https://wgme.com/news/local/state-investigating-bingham-salmon-hatchery-for-alleged-animal-cruelty> (last visited Mar. 14, 2021); *Seafood company under investigation after allegations of animal abuse*, THE GUARDIAN, <https://www.theguardian.com/environment/2019/oct/08/seafood-company-under-investigation-after-allegations-of-animal-abuse> (last visited Mar. 14, 2021); AP NEWS, *Hatchery investigated after hidden camera shows salmon abuse*, <https://apnews.com/article/003c5169d2a74c949b6844fdcabf90d6> (last visited Mar. 14, 2021).

<sup>4</sup> *Aquaculture: Sea of Suffering*, ANIMAL OUTLOOK, <https://animaloutlook.org/investigations/aquaculture/#:~:text=In%202019%2C%20Animal%20Outlook%20released,salmon%20aquaculture%20in%20the%20U.S.> (last visited Feb. 22, 2021).

<sup>5</sup> *Ibid.*

consumers, engages consumers in marketplace pressure campaigns, and works to advance sound food and farming policy through grassroots lobbying. We address crucial issues around food safety, industrial agriculture, genetic engineering, children's health, corporate accountability, Fair Trade, environmental sustainability, including pesticide use, and other food- and agriculture-related topics.

**Regeneration International** is a U.S.-based international nonprofit organization whose mission is to promote, facilitate and accelerate the global transition to regenerative food, farming and land management for the purpose of restoring climate stability, ending world hunger and rebuilding deteriorated social, ecological and economic systems. We work with multiple stakeholders in key regions of the world who are committed to building alternative food and farming systems on a regional or national level. We are currently assisting in the building of numerous Regeneration Alliances, including those in South Africa, India, Mexico, Guatemala, Belize, Canada, and in the Midwest region of the U.S.A.

**The Friends of Harriet L Hartley Conservation Area** was formed in the Fall of 2019 to safeguard the coastal and intertidal land at the mouth of the Little River in Belfast and Northport, Maine, from industrial development, consistent with the wishes of the late Dr. Harriet L Hartley. Our long-range vision is to lead efforts to reclaim, restore, and conserve environmentally critical coastal and intertidal land around Penobscot Bay. Our immediate goal is to defend the registered, legally deeded conservation area against unlawful taking and development by a massive industrial-scale land-based fish CAFO. In so doing, we are committed to educating the public and policy makers in Maine about the regulatory challenges, animal welfare implications, and environmental risks of industrial scale aquaculture. We are a 501 C-3 Member Organization.

**Animal Equality** is a registered 501(c)(3) nonprofit animal protection organization whose

mission is to end cruelty to farmed animals, including fish. To that end, Animal Equality works to educate the public about the treatment of animals in the aquaculture industry and advocates for more meaningful standards to safeguard their welfare. Through petitions, social media, films, newsletters, undercover investigations, email alerts, litigation, and legislative initiatives, Animal Equality mobilizes its supporters to manifest a world in which all animals are respected and protected.

**Farm Sanctuary** is a 501(c)(3) nonprofit organization with 1.2 million members and constituents nationwide. Founded in 1986, Farm Sanctuary works to combat the abuses of animal agriculture, advocate for institutional reforms, and encourage a new understanding of farm animals through education and public awareness. The organization provides lifelong care for rescued farm animals at sanctuary locations in New York and California, and advocates for the protection of farm animals and the promotion of a just and compassionate food system through ballot initiatives, state and federal legislation, litigation, petitions for agency rulemaking, and corporate and consumer outreach.

The **Maine Seaweed Exchange**, a non-profit organization working towards the development of a responsible seaweed aquaculture industry, believes that our aquaculture industry practices should be conducted with integrity, respect, and accountability. The Maine Seaweed Exchange is dedicated to seaweed farming education; supporting seaweed farmers and their communities; research on seaweed farming and seaweed products; assisting industry partners in developing markets for seaweed products and increase distribution channels; identifying and assisting industry partners to develop branding/marketing opportunities; and creating and supporting innovation in the aquaculture seaweed industry.

**The Aquatic Life Institute** is a U.S.-based internationally focused non-profit dedicated to

improving fish welfare in both aquaculture and wild capture fisheries. ALI has grown a global coalition of over 100 animal rights and conservation non-profits and is deeply engaged in partnership with various certifiers including the ASC, MSC, and GLOBALG.A.P. Operating from effective altruism principles, ALI seeks to support and accelerate activities that positively impact aquatic life, focusing on the highest-impact welfare interventions for all aquatic animals on a global scale.

## **B. The Respondent**

The DACF is a state agency established “for the improvement of agriculture and the advancement of the interests of husbandry.”<sup>6</sup> The AWP is a division of the DACF<sup>7</sup> whose express purpose is to “ensure humane and proper treatment of animals by developing, implementing and administering a comprehensive program that upholds the animal welfare laws of Maine through communication, education and enforcement.”<sup>8</sup> The AWP “develops and implements policies and programs to effectively address complaints of animal cruelty.”<sup>9</sup>

## **III. STATUTORY AND REGULATORY FRAMEWORK**

### **A. The DACF has been charged by the Maine Legislature with ensuring the “humane and proper treatment” of all animals within the state—including fish used in aquaculture—and possesses the statutory authority to do so under the Maine Administrative Procedure Act, the DACF’s enabling statute, and Maine’s animal cruelty statute.**

The DACF’s responsibility to protect *all* animals across the state of Maine and its authority to adopt rules in order to fulfill this legislative mandate are equally clear. The DACF should invoke rulemaking proceedings to (1) formally accept accountability to safeguard the welfare of fish in

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<sup>6</sup> 7 M.R.S. § 1.

<sup>7</sup> Hereinafter, the phrase “the DACF” is used to collectively refer to the DACF as well as the AWP.

<sup>8</sup> *Animal Welfare*, DEP’T OF AGRIC., CONSERVATION AND FORESTRY, [https://www.maine.gov/dacf/ahw/animal\\_welfare/](https://www.maine.gov/dacf/ahw/animal_welfare/) (last visited Dec. 4, 2020).

<sup>9</sup> *Maine’s Animal Welfare Program Review for 2019*, DEP’T OF AGRIC., CONSERVATION AND FORESTRY, [http://lldc.mainelegislature.org/Open/Rpts/hv4764\\_a5m34\\_2019.pdf](http://lldc.mainelegislature.org/Open/Rpts/hv4764_a5m34_2019.pdf) (last visited Feb. 22, 2021).

aquaculture facilities and (2) adopt BMPs through rulemaking to promote the welfare of these animals.

Maine law plainly charges the DACF with providing for “the humane and proper treatment of animals.”<sup>10</sup> The statute does not exclude any specific animal from these protections. Maine law explicitly defines an animal as “every living, sentient creature not a human being,”<sup>11</sup> a definition that unquestionably encompasses the millions of fish confined to aquaculture facilities throughout the state.

Maine’s Administrative Procedure Act (“MAPA”) grants express authority to the DACF and other agencies to pass rules such as those requested by this petition.<sup>12</sup> Under the MAPA, the term “rule” is used broadly to encompass “the whole or any part of every regulation, standard, code, statement of policy, or other agency guideline or statement of general applicability, including the amendment, suspension or repeal of any prior rule, that is or is intended to be judicially enforceable and implements, interprets or makes specific the law administered by the agency, or describes the procedures or practices of the agency.”<sup>13</sup>

This rulemaking authority is echoed in the DACF’s own enabling statute which provides that the DACF “shall adopt, consistent with the Maine Administrative Procedure Act, . . . rules for carrying out this Title and all other statutes delegating responsibility to [the commissioner] or the department.”<sup>14</sup> Further emphasizing the DACF’s responsibility to make rules specifically for the protection of animals, Maine’s Animal Welfare Act places rulemaking responsibility on the DACF and states that it “may adopt any rules necessary or useful to carry out this chapter pursuant

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<sup>10</sup> 7 M.R.S.A. § 3902.

<sup>11</sup> 17 M.R.S. § 1011(2) and 7 M.R.S. § 3907(2).

<sup>12</sup> 5 M.R.S. § 8052.

<sup>13</sup> 5 M.R.S. § 8002(9).

<sup>14</sup> 7 M.R.S. § 12.

to the Maine Administrative Procedure Act.”<sup>15</sup>

Maine’s statutory scheme is clear—the DACF, as statutorily designated protectors of *all* animals within the state of Maine, including fish—possesses the lawful authority to adopt rules in furtherance of this obligation. Pursuant to this authority and obligation, the DACF should adopt rules formalizing its accountability for fish in aquaculture facilities and adopt meaningful BMPs through rulemaking to promote their well-being.

**B. The DACF must initiate rulemaking per 5 M.R.S. §§ 8001–11008.**

Because this petition was signed by 150 or more registered voters, the DACF is compelled to initiate the rulemaking requested herein. The right of Maine citizens to petition for rulemaking is safeguarded by the Maine Constitution which holds that “the people have a right at all times in an orderly and peaceable manner to assemble to consult upon the common good, to give instructions to their representatives, and to request, of either department of the government by petition or remonstrance, redress of their wrongs and grievances.”<sup>16</sup>

This right is further enshrined in the MAPA. The MAPA expressly sanctions citizen petitions, stating “any person may petition an agency for the adoption or modification of any rule.”<sup>17</sup> This principle has been upheld in Maine courts.<sup>18</sup>

In addition to their right to petition, Maine citizens have a right to require an agency to undertake rulemaking if their numbers are sufficient, which they are here. The MAPA provides that when 150 or more registered voters of the state submit a petition to adopt or modify a rule, “the agency shall initiate appropriate rulemaking proceedings within 60 days after receipt of the

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<sup>15</sup> 7 M.R.S. § 4017.

<sup>16</sup> ME. CONST. art. I, § 15.

<sup>17</sup> 5 M.R.S. § 8055.

<sup>18</sup> *Lewis v. State Dept. of Human Services*, 433 A.2d 743, 749 (Me., 1981).

petition.”<sup>19</sup>

The text of the proposed rules and signed petitions from over 150 Maine citizens, as verified and certified pursuant to 21-A M.R.S. § 354(7), have been submitted to the DACF simultaneously with this petition. Accordingly, by law, the DACF must initiate rulemaking proceedings pursuant to this petition within 60 days of its receipt.

#### IV. STATEMENT OF REASONS

##### **A. The rapid growth of Maine’s aquaculture industry means millions more fish will be deprived of government oversight to ensure even the most basic protections.**

In Maine and across the globe, aquaculture is a booming industry, meaning that more and more aquatic animals are subjected to life in industrial aquaculture facilities. According to the United Nations Food and Agriculture Organization (“FAO”), “[a]quaculture is the fastest growing food production sector in the world.”<sup>20</sup> The University of Maine estimates that across the world, 62% of food fish will be produced by aquaculture by the year 2030, requiring a 70% increase in global production.<sup>21</sup> In keeping with international trends, the aquaculture sector in the United States is growing rapidly and now constitutes a thriving industry. For example, in 2014, aquaculture production in the United States amounted to “608 million pounds [of fish] with a value of \$1.33 billion.”<sup>22</sup> In Maine—which is already recognized for producing high quality seafood<sup>23</sup>—aquaculture is also experiencing a surge in growth and is currently one of the state’s leading

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<sup>19</sup> 5 M.R.S. § 8055.

<sup>20</sup> *Maine Aquaculture-Economic Impact Report*, UNIVERSITY OF MAINE, (Jan. 2017), <https://cpb-us-w2.wpmucdn.com/wpsites.maine.edu/dist/1/43/files/2017/01/Aquaculture-Econ-Report-2511qf3.pdf> (last visited Feb. 28, 2021).

<sup>21</sup> *Ibid.*

<sup>22</sup> *Office of Science and Technology*, NATIONAL MARINE FISHERIES SERVICE, [https://www.st.nmfs.noaa.gov/Assets/commercial/fus/fus15/documents/03\\_%20Aquaculture2015.pdf](https://www.st.nmfs.noaa.gov/Assets/commercial/fus/fus15/documents/03_%20Aquaculture2015.pdf) (last visited Feb. 28, 2021).

<sup>23</sup> Abigail Curtis, *How Maine Became a Magnet for Land-Based Fish Farms*, BANGOR DAILY NEWS (June 3, 2019), <https://bangordailynews.com/2019/06/03/news/how-maine-became-a-magnet-for-land-based-fish-farms/>.

industries.<sup>24</sup>

While economists measure the growth of aquaculture in Maine by dollars and job growth, another important measurement is often overlooked—the number of individual, sentient animals the aquaculture industry uses. The number of animals used in aquaculture is so vast that—unlike other animals such as pigs, cows, and chickens—an accurate count of the individual animals involved is often abandoned in favor of an assessment of the total weight of animals used. As noted above, the United States’ aquaculture industry produced 608 million pounds of fish in 2014,<sup>25</sup> a number that translates to tens of millions of individual fish. The scale of industrial aquaculture facilities is staggering; in some cases individual tanks or pens can house a hundred thousand fish or more,<sup>26</sup> each one a living, conscious animal capable of experiencing pain and suffering.

Given the number of individual animals bred, raised, and killed in Maine by the aquaculture industry, it seems unconscionable that Maine’s regulatory scheme is virtually devoid of measures to ensure their welfare. In order to provide the most rudimentary protections to these animals, the DACF must accept the responsibility the state legislature has delegated to it by taking formal ownership over their welfare and establishing BMPs through rigorous rulemaking procedures.

**B. The science is clear: fish are conscious and sentient, and capable of experiencing fear and pain, forming relationships, and making logical decisions, all of which entitle them to legal protection.**

In recent years, the scientific community has reached a consensus that fish experience

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<sup>24</sup> *Maine Aquaculture-Economic Impact Report*, UNIVERSITY OF MAINE, (Jan. 2017), <https://cpb-us-w2.wpmucdn.com/wpsites.maine.edu/dist/1/43/files/2017/01/Aquaculture-Econ-Report-2511qf3.pdf> (last visited Feb. 28, 2021).

<sup>25</sup> *Aquaculture*, NATIONAL MARINE FISHERIES SERVICE, [https://www.st.nmfs.noaa.gov/Assets/commercial/fus/fus15/documents/03\\_%20Aquaculture2015.pdf](https://www.st.nmfs.noaa.gov/Assets/commercial/fus/fus15/documents/03_%20Aquaculture2015.pdf) (last visited Feb. 28, 2021).

<sup>26</sup> Joaquin Palomino, NATIONAL GEOGRAPHIC, *Is Salmon Raised on Land the Future of Seafood?*, June 7, 2015, <https://www.nationalgeographic.com/culture/article/150607-salmon-aquaculture-canada-fish-farm-food-world> (last visited Mar. 14, 2021); J. Bourne, Jr., NATIONAL GEOGRAPHIC, *How to Farm a Better Fish*, <https://www.nationalgeographic.com/foodfeatures/aquaculture/> (last visited Mar. 14, 2021).

conscious pain that cannot be dismissed as merely instinctive responses to harmful stimuli.<sup>27</sup> In other words, when fish are hurt, they suffer. The supporting evidence—including research showing that fish experience physiological reactions and change their behavior in response to painful stimuli<sup>28</sup>—conclusively shatters the myth that fish are unconscious and incapable of any sensations or reactions remotely recognizable to humans.<sup>29</sup>

In fact, fish anatomy, physiology, and behavioral responses show that fish feel pain in a way similar to many other animals.<sup>30</sup> Studies show that fish and other animals have specialized receptors called nociceptors.<sup>31</sup> These nociceptors detect potentially harmful stimuli<sup>32</sup> and sense harmful stimulants such as a variety of environmental factors including, but not limited to, changes in physical pressure, heat, and chemicals such as acid.<sup>33</sup> Studies of fish nociceptors and other neurologic characteristics have determined that fish possess the neuroanatomy necessary to experience pain.<sup>34</sup> Other studies prove that they experience pain by demonstrating that their behavior changes immediately after they are exposed to a harmful stimulus.<sup>35</sup>

In addition to experiencing pain, science has confirmed that fish can experience fear, but

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<sup>27</sup> Ferris Jabr, *It's Official: Fish Feel Pain*, SMITHSONIAN MAGAZINE (Jan. 8, 2018), <https://www.smithsonianmag.com/science-nature/fish-feel-pain-180967764/>.

<sup>28</sup> Donald M. Broom, *Fish Brains and Behaviour Indicate Capacity for Feeling Pain*, ANIMAL SENTIENCE (2016), <https://www.wellbeingintlstudiesrepository.org/cgi/viewcontent.cgi?article=1031&context=animsent>.

<sup>29</sup> V. Braithwaite, *Hooked on a myth*, LOS ANGELES TIMES, (Oct. 8, 2006), <https://www.latimes.com/archives/la-xpm-2006-oct-08-oe-braithwaite8-story.html> (last visited Mar. 14, 2021).

<sup>30</sup> Donald M. Broom, *Fish Welfare and the Public Perception of Farmed Fish*, PROCEEDINGS OF AQUAVISION (1999), [https://www.researchgate.net/profile/Donald\\_Broom/publication/299658973\\_Fish\\_welfare\\_and\\_the\\_public\\_perception\\_of\\_farmed\\_fish/links/5703f7aa08aef745f71489d3/Fish-welfare-and-the-public-perception-of-farmed-fish.pdf](https://www.researchgate.net/profile/Donald_Broom/publication/299658973_Fish_welfare_and_the_public_perception_of_farmed_fish/links/5703f7aa08aef745f71489d3/Fish-welfare-and-the-public-perception-of-farmed-fish.pdf).

<sup>31</sup> Victoria Braithwaite and Philip Boulcott, *Pain Perception, Aversion, and Fear in Fish*, 75 DISEASES OF AQUATIC ORGANISMS 131 (2007).

<sup>32</sup> Lynne U. Sneddon, *Evolution of Nociception and Pain: Evidence from Fish Models*, THE ROYAL SOC'Y. 374 (2019).

<sup>33</sup> Victoria Braithwaite and Philip Boulcott, *Pain Perception, Aversion, and Fear in Fish*, 75 DISEASES OF AQUATIC ORGANISMS 131 (2007).

<sup>34</sup> Lynne U. Sneddon, *Pain Perception in Fish: Indicators and Endpoints*, 50 ILAR J. 338 (2009).

<sup>35</sup> *Ibid.*

that in some cases, their pain can be so severe that it overpowers their fear.<sup>36</sup> In a 2003 study of rainbow trout, researchers dropped colored Lego blocks in the fishes' tanks and observed that the trout displayed a typical fear response to the Legos—as they do with most unfamiliar objects, choosing to actively avoid these objects and breathing faster.<sup>37</sup> But when the researchers injected the trout with a painful stimulus (acetic acid), the trout didn't avoid the Legos as much. Researchers concluded that the pain “captures the animal's attention with only a relatively small amount of attention directed at responding to the fear of the novel object.”<sup>38</sup> Thus, fish are capable of experiencing both fear and pain, and the two adverse emotions may often compete for attention.

Yet another study demonstrated that fish remember pain.<sup>39</sup> In the study, researchers attached small heaters to goldfish and slowly increased the temperature.<sup>40</sup> Researchers injected half of the goldfish with morphine, and injected the other half with saline—hypothesizing that the fish injected with morphine would withstand higher temperatures than the fish injected with saline.<sup>41</sup> Both sets of fish reacted similarly to increasing levels of heat.<sup>42</sup> However, the study revealed that, following the test, the fish injected with morphine continued displaying normal behavior, while the fish injected with saline changed behavior—displaying “defensive behaviors, indicating wariness, or fear and anxiety.”<sup>43</sup> Researchers concluded that the fish cognitively processed and remembered the pain caused by increasing levels of heat; the memory of that pain

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<sup>36</sup>Lynne U. Sneddon, Victoria A. Braithwaite, Michael J. Gentle, *Novel Object Test: Examining Nociception and Fear in Rainbow Trout*, 4 THE J. OF PAIN 431 (2003).

<sup>37</sup> *Ibid.*

<sup>38</sup> *Ibid.*

<sup>39</sup> Janicke Nordgreen, et al., *Thermonociception in Fish: Effects of Two Different Doses of Morphine on Thermal Threshold and Post-Test Behaviour in Goldfish (Carassius auratus)*, 119 APPLIED ANIMAL BEHAVIOUR SCIENCE 101 (2009).

<sup>40</sup> *Ibid.*

<sup>41</sup> *Ibid.*

<sup>42</sup> *Ibid.*

<sup>43</sup> *Ibid.*

later led to behavior indicative of fear and anxiety.<sup>44</sup>

In addition to their capacity to experience fear and to feel and remember pain, research has shown that fish are conscious and use logic to make decisions.<sup>45</sup>

Fish exhibit social intelligence, which provides evidence that fish experience self-consciousness. Self-consciousness has been defined as the “experience of thinking about one’s own actions, contemplating potential scenarios in one’s head, and then acting in accordance with which scenario one deems best.”<sup>46</sup> For example, studies support that fish develop complex social interactions, including a 2001 study that focused on the relationship between two different fish, the blue streak cleaner wrasse and its “client” fish.<sup>47</sup> The blue streak cleaner wrasse eats parasites off the “client” fish, but the relationship and interaction between the two fish does not stop there. The study showed that the blue streak cleaner wrasse engaged in behavior, like touching the dorsal fins of the “client” fish in different ways to “alter client decisions over how long to stay for an inspection” and “stop clients from fleeing or aggressive chasing of the cleaner in response to a cleaner fish bite that made them jolt.”<sup>48</sup> The study demonstrated that fish can be “surprisingly intelligent”<sup>49</sup> and can engage in positive social collaborations with other fish.<sup>50</sup> Researchers concluded that this behavior would be impossible if both kinds of fish lacked self-consciousness and did not understand the consequences of their actions.<sup>51</sup>

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<sup>44</sup> *Ibid.*

<sup>45</sup> Logan Grosenick, Tricia S. Clement, & Russell D. Fernald, Fish can Infer Social Rank by Observation alone, 445 NATURE 429 (2007).

<sup>46</sup> Maximilian Padden Elder, *The Fish Pain Debate: Broadening Humanity’s Moral Horizon*, J. OF ANIMAL ETHICS (2014).

<sup>47</sup> Redouan Bshary & Manuela Würth, *Cleaner Fish Labroides dimidiatus Manipulate Client Reef Fish by Providing Tactile Stimulation*, 268 THE ROYAL SOC’Y. 1495 (2001).

<sup>48</sup> *Ibid.*

<sup>49</sup> Ed Yong, *The Fish That Makes Other Fish Smarter*, THE ATLANTIC, (Mar. 7, 2018), <https://www.theatlantic.com/science/archive/2018/03/the-fish-that-makes-other-fish-smarter/554924/> (last visited Mar. 23, 2021).

<sup>50</sup> Redouan Bshary & Manuela Würth, *Cleaner Fish Labroides dimidiatus Manipulate Client Reef Fish by Providing Tactile Stimulation*, 268 THE ROYAL SOC’Y. 1495 (2001).

<sup>51</sup> *Ibid.*

No longer are fish strange, alien beings whose experience bears no resemblance to our own. Science has conclusively proven that fish are conscious, sentient beings capable of logical decision-making and the formation of relationships. Moreover, fish can not only experience pain and fear, but remember them. Thus, fish, just like animals farmed on land, deserve protections to ensure their welfare in Maine’s booming aquaculture industry.

**C. Inadequate oversight of animal welfare in aquaculture facilities creates risks to human health, including zoonotic diseases and food safety concerns.**

The welfare of fish in industrial aquaculture facilities raises important concerns for human health. Welfare-related practices ranging from veterinary treatment to the provision of food and clean water can have profound impacts on humans who interact with or consume fish in industrial aquaculture facilities. According to the Center for Food Safety:

Industrial aquaculture also raises significant human health and food safety concerns. The antibiotics, pesticides and other chemicals that are heavily used to prevent disease and parasites in fish farming can accumulate in fish tissues. Additionally, the feed given to fish in aquaculture is made from wild-caught fish that may be heavily contaminated with dioxins and Polychlorinated Biphenyls (PCBs). Studies have found farmed fish to be less healthful than their wild counterparts, refuting the alleged advantages of eating aquaculture-sourced seafood.<sup>52</sup>

The Food and Agriculture Organization of the United Nations further states that:

Foodborne parasitic infections, foodborne disease associated with pathogenic bacteria, residues of agro-chemicals, veterinary drugs and heavy metal contamination have all been identified as potential hazards of aquaculture products.<sup>53</sup>

Even the industry association, the Global Aquaculture Alliance (“GAA”), notes the risk to human health, stating that “[a]s the practice of aquaculture increase globally, more and more individuals

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<sup>52</sup> *About Aquaculture*, CENTER FOR FOOD SAFETY, <https://www.centerforfoodsafety.org/issues/312/aquaculture/about-aquaculture#:~:text=Industrial%20aquaculture%20also%20raises%20significant,can%20accumulate%20in%20fish%20tissues.> (last visited Mar. 2, 2021).

<sup>53</sup> *Food safety and products from aquaculture*, UNITED NATIONS FOOD AND AGRICULTURE ORGANIZATION, <http://www.fao.org/3/w9542e/W9542e3.htm> (last visited Mar. 2, 2021).

will come into contact with zoonotic diseases specific to aquatic animals that have the potential to be transmitted to humans.”<sup>54</sup>

Importantly, many of the symptoms of disease in fish are visibly apparent and could be detected during routine animal welfare inspections, including “ulcerative lesions of the skin, lesions around the bases of the fins and anus, raised scales, abdominal distension and exophthalmia” as well as “lethargy, poor body condition, pigment changes, abdominal distention, exophthalmia, scale loss and skin ulcers.”<sup>55</sup>

Petitioner Animal Outlook’s investigation of Cooke Aquaculture in Bingham, Maine documented numerous instances of fish destined for human consumption showing visible signs of disease, parasites, or other potential food safety concerns.<sup>56</sup> The image below depicts one such instance in which fungus has eaten away the face of a fish:



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<sup>54</sup> *with fish, limiting zoonotic diseases*, GLOBAL AQUACULTURE ALLIANCE, *Working* <https://www.aquaculturealliance.org/advocate/working-with-fish-limiting-zoonotic-diseases/#:~:text=Zoonotic%20infections%20of%20Mycobacterium%20species,arms%20due%20to%20the%20bacteria's> (last visited Mar. 2, 2021).

<sup>55</sup> *Ibid.*

<sup>56</sup> *Aquaculture: A Sea of Suffering*, ANIMAL OUTLOOK, <https://animaloutlook.org/investigations/aquaculture/> (last visited Mar. 1, 2021).

The following image, taken during the same investigation, depicts a filthy “mortality pit”—mere feet from tanks housing fish destined for human consumption—where Cooke Aquaculture workers disposed of fungus-infected eggs as well as dead and deformed juvenile fish, all possible sources of contamination:



In addition to potential zoonotic diseases, problematic animal welfare practices such as those documented at Cooke Aquaculture could lead to “adulterated” fish and food safety concerns. Under the Federal Food, Drug, and Cosmetic Act (FDCA)—which covers fish sold for food—food is adulterated if “it consists in whole or in part of any filthy, putrid, or decomposed substance, or if it is otherwise unfit for food.”<sup>57</sup> Maine’s Food Law says the same.<sup>58</sup> Food may also be adulterated “if it has been prepared, packed, or held under insanitary conditions whereby it may have become contaminated with filth, or whereby it may have been rendered injurious to health.”<sup>59</sup>

Animal Outlook’s investigation of Cooke Aquaculture’s Maine facility documented fungal

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<sup>57</sup> 21 U.S.C § 342.

<sup>58</sup> 22 M.R.S. § 2156(A)(1)(F).

<sup>59</sup> 21 U.S.C § 342; accord 22 M.R.S. § 2156(A)(1)(D).

infections in tanks, including fungal growth on the mats supporting eggs and freshly hatched fish, as well as salmon with parts of their heads eaten away by fungus.<sup>60</sup> To protect against this fungus, workers sprayed formaldehyde—capable of burning the gills of fish swimming too close, and also injurious to humans—into the tanks of live fish,<sup>61</sup> exemplifying the connection between animal welfare and human health concerns.

The welfare of fish in aquaculture facilities is closely related to risks to humans consuming or interacting with these fish, including zoonotic diseases and food safety concerns. Not only does the absence of robust BMPs and oversight for the welfare of animals in aquaculture facilities compromise the well-being of fish confined to these facilities, it poses substantial risks to human health. The DACF must remedy its failure to monitor these facilities and establish meaningful BMPs by rulemaking pursuant to this petition.

## **V. PROPOSED REGULATORY CHANGES AND ADDITIONS**

### **A. The DACF should formally accept and acknowledge its oversight of the welfare of fish in aquaculture facilities and institute the necessary training and protocols to protect these animals from cruelty and neglect.**

As the agency explicitly designated by the Maine Legislature to ensure the humane treatment of animals across the state, the DACF must accept and acknowledge its responsibility for the welfare of animals used in aquaculture. In recognition of this responsibility, the DACF should institute the appropriate organizational, procedural, and training measures necessary to enforce the Maine Animal Welfare Act at aquaculture facilities across the state.

1. The Maine State Legislature has tasked the DACF with ensuring the welfare of fish used in aquaculture.

Maine law does not grant the DACF discretion to decide which animals it will and will not

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<sup>60</sup> ANIMAL OUTLOOK, Summary of Findings from Undercover Investigation of Cooke Aquaculture, p.5 (June 12, 2019).

<sup>61</sup> *Ibid.*

protect. The law is unambiguous in declaring that the DACF is accountable for the welfare of *all* animals in the state and nowhere in the law are fish used in aquaculture expressly or even impliedly excluded. The DACF must provide for “the humane and proper treatment of animals.”<sup>62</sup> The term “animal” means “every living, sentient creature not a human being,”<sup>63</sup> a definition that plainly encompasses fish. As discussed above,<sup>64</sup> fish are not only “living, sentient creature(s),” but they experience fear and pain, build relationships, and think logically. Maine’s statutory scheme makes clear that the humane treatment of fish—as with other animals—falls under the purview of the DACF.

In addition to tasking the DACF with ensuring the humane treatment of animals, the law prescribes the methods by which the agency shall achieve this goal, stating that “the (DACF) shall develop, implement and administer a comprehensive program that upholds the animal welfare laws of the State through communication, education and enforcement.”<sup>65</sup> As part of this “comprehensive program,” the DACF, “in cooperation with animal control officers, shall investigate complaints of cruelty to animals and enforce cruelty-to-animal laws.”<sup>66</sup>

The DACF must do this, as Maine law does not grant it discretion to selectively choose which statutes it will and will not enforce. Maine’s Animal Welfare Act makes clear that the DACF “shall diligently enforce *all* provisions of (the Maine Animal Welfare Act) and all other statutes delegating responsibility to . . . the department.”<sup>67</sup> In addition to Maine’s Animal Welfare Act, the DACF’s enabling statute emphasizes this point, stating that “[t]he commissioner is the chief

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<sup>62</sup> 7 M.R.S. § 3902.

<sup>63</sup> 17 M.R.S. § 1011(2).

<sup>64</sup> *See supra* § IV(B).

<sup>65</sup> 7 M.R.S. § 3902.

<sup>66</sup> 7 M.R.S. § 3906-B(11).

<sup>67</sup> 7 M.R.S. § 13 (emphasis added).

executive charged with the enforcement of *all* statutes delegating responsibility to him or the department and shall be vigilant in discovering violations thereof and making complaint to the proper authorities.”<sup>68</sup>

2. The DACF has abdicated its responsibility to ensure the humane and proper treatment of fish in aquaculture facilities.

The DACF has publicly touted its responsibility to protect the welfare of the state’s animals, proclaiming in a recent annual report that “Maine has been a leader in the animal welfare world for many years and it is our intention to continue those efforts using education and enforcement,”<sup>69</sup> yet has simultaneously abdicated that responsibility when it comes to fish in aquaculture facilities.

The DACF’s own records bear out this abdication. Most pointedly, as part of its inspection of Cooke Aquaculture following the Animal Outlook investigation, the DACF repeatedly asserted that it has no formal accountability for the welfare of animals in aquaculture facilities and, in fact, suggested that **no agency within the entire state** has such accountability. In the DACF’s final investigative report on Cooke Aquaculture, the DACF stated that they “determined that this type of operation *was not regulated by any state agency in Maine.*”<sup>70</sup> Moreover, despite the numerous statutes pointing to the DACF as accountable for ensuring the humane treatment of all of Maine’s animals, the DACF sought to shift responsibility elsewhere, recommending that “another state agency that specializes in aquatic animals look into developing oversight in animal care at this type of Aquaculture facility to ensure proper compliance with BMP’s in the future.”<sup>71</sup> The report

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<sup>68</sup> 7 M.R.S. § 2. (emphasis added).

<sup>69</sup> *Maine’s Animal Welfare Program Review for 2018*, DEP’T. OF AGRIC., CONSERVATION AND FORESTRY, [http://lldc.mainelegislature.org/Open/Rpts/hv4764\\_a5m34\\_2018.pdf](http://lldc.mainelegislature.org/Open/Rpts/hv4764_a5m34_2018.pdf) (last visited Feb. 22, 2021).

<sup>70</sup> Dep’t of Agric., Conservation, and Forestry, *Animal Welfare Program Final Investigative Report on Cooke Aquaculture, Complaint #20687* p.1. (emphasis added).

<sup>71</sup> *Id.* at p. 4.

concluded by suggesting specific agencies and remarking that “[h]aving other agencies such as DMR (the Department of Marine Resources) or IF&W (the Department of Inland Fisheries and Wildlife) oversee these operations with regular inspections could help prevent these kinds of complaints in the future.”<sup>72</sup>

The DACF’s abdication of its obligation to ensure the humane and proper treatment of fish in aquaculture facilities is borne out by other agency records beyond the Cooke Aquaculture investigation report. In March 2021, Animal Outlook submitted a request to the DACF under the Maine Freedom of Access Act.<sup>73</sup> The request sought “any inspection, audit, enforcement, or similar action taken by the Department of Agriculture, Conservation, and Forestry on any aquaculture facility or business” since January 1, 2018.<sup>74</sup> In response to the request, the DACF advised that the Cooke Aquaculture investigation report “is *the only record* our Department possesses in response to your request.”<sup>75</sup>

This response demonstrates that, aside from the Cooke Aquaculture investigation—which was initiated by pressure from Animal Outlook, a private non-profit organization—the agency has failed to undertake a single inspection, audit, or enforcement action at any aquaculture facility across the entire state in more than three years. The DACF has entirely shirked its responsibility for the welfare of fish in Maine aquaculture facilities, despite:

- The fact that the DACF is legally bound to ensure the humane treatment of *all* animals in Maine pursuant to numerous statutes;

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<sup>72</sup> *Ibid.*

<sup>73</sup> See 1 M.R.S. § 400, et seq.; Email containing Freedom of Access Act Request from Will Lowrey, Legal Counsel, Animal Outlook to Shannon Ayotte, Secretary Specialist, Dep’t. of Agric., Conservation, and Forestry (Mar. 5, 2021, 4:31pm).

<sup>74</sup> Email from Shannon Ayotte, Secretary Specialist, Dep’t. of Agric., Conservation, and Forestry to Will Lowrey, Legal Counsel, Animal Outlook (Mar. 8, 2021, 9:41am).

<sup>75</sup> *Ibid.*

- The presence of over 200 aquaculture facilities in the state<sup>76</sup> containing millions upon millions of conscious, sentient fish; and
- The fact that the DACF has publicly touted the value of proactive inspections of animal facilities in detecting cruelty.<sup>77</sup>

Despite its claims of being a leader in animal welfare, the DACF has elected not to enforce Maine’s animal cruelty laws in aquaculture facilities across the state. As a result, millions of fish in these facilities are deprived of government oversight and left to the whims of the private aquaculture industry, a problem the DACF must correct.

3. The DACF’s abdication of its responsibility for the welfare of fish in aquaculture is not justified by lack of expertise or deference to other state agencies.

The DACF’s refusal to assume responsibility for the welfare of fish in aquaculture facilities may be born from a lack of expertise, yet the absence of expertise is no justification to defy multiple statutory mandates, leaving millions of sentient creatures to the whims of an industry with little incentive to prioritize their well-being. In the Cooke Aquaculture investigative report, the DACF flatly states that it “has no experience investigating land-based aquaculture or Salmon up to this point”<sup>78</sup> and notes that its staff is lacking in “any fishery experience”<sup>79</sup> as it “traditionally investigates animal cruelty concerning [only] domestic animals such as dogs, cats, horses, and

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<sup>76</sup> *The future looks bright for Maine’s growing aquaculture industry*, NEWS CENTER MAINE, (May 2019), <https://www.newscentermaine.com/article/money/business/the-future-looks-bright-for-maines-growing-aquaculture-industry/97-946190fe-288b-465e-8052-9cea206528a0#:~:text=There%20are%20about%20200%20aquaculture,double%20over%20the%20next%20decade.> (last visited Mar. 8, 2021).

<sup>77</sup> See *Maine’s Animal Welfare Program Review for 2019*, DEP’T. OF AGRIC., CONSERVATION AND FORESTRY, (stating that “Some of the larger cruelty cases that Animal Welfare has investigated over the past year resulted from problems discovered during facility inspections.”).

<sup>78</sup> Dep’t of Agric., Conservation, and Forestry, *Animal Welfare Program Final Investigative Report on Cooke Aquaculture*, Complaint #20687, p.1.

<sup>79</sup> *Ibid.*

other land-based livestock.”<sup>80</sup>

But in areas beyond aquaculture, the DACF has assumed a broad scope of responsibilities and has shown itself capable of obtaining necessary training and expertise. For instance, the DACF’s scope—while inclusive of dogs and cats—also includes responsibility for such diverse subject areas as ensuring the state’s prohibition on veal and gestation crates is enforced<sup>81</sup> and investigating the detrimental impacts of animal waste on the waters of the state.<sup>82</sup> Moreover, the DACF has recently touted its abilities to learn new information, heralding a new animal control officer training program in its 2019 Annual Report.<sup>83</sup> The welfare of animals in aquaculture facilities is but a new and important subject area in which the DACF must bolster its internal training and protocol in order to fulfill its statutory mission.

The DACF’s abdication of oversight for the humane treatment of fish in aquaculture facilities is also not justified by its assertion that another state agency, such as the Department of Marine Resources (“DMR”), should bear responsibility for the welfare these animals. Under Maine law, the DMR was established:

to conserve and develop marine and estuarine resources; to conduct and sponsor scientific research; to promote and develop the Maine coastal fishing industries; to advise and cooperate with local, state and federal officials concerning activities in coastal waters; and to implement, administer and enforce the laws and regulations necessary for these enumerated purposes, as well as the exercise of all authority conferred by this Part.<sup>84</sup>

Even putting aside the fact that the DACF’s statutory mandate clearly holds it alone

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<sup>80</sup> *Ibid.*

<sup>81</sup> 7 M.R.S. § 4020.

<sup>82</sup> 7 M.R.S. § 17.

<sup>83</sup> *Maine’s Animal Welfare Program Review for 2019*, DEP’T. OF AGRIC., CONSERVATION AND FORESTRY, [http://lldc.mainelegislature.org/Open/Rpts/hv4764\\_a5m34\\_2019.pdf](http://lldc.mainelegislature.org/Open/Rpts/hv4764_a5m34_2019.pdf) (last visited Feb. 22, 2021) (noting that “In 2019, Animal Welfare entered into a contract with JPMA Staff Development Solutions to create a training program that would give the best information available for animal control officers while keeping the training cost low for the municipalities”).

<sup>84</sup> 12 M.R.S. § 6021.

accountable for “the humane and proper treatment of animals,”<sup>85</sup> the DMR’s statutory purpose is plainly incompatible with undertaking this same responsibility. First, the DMR’s purpose is devoid of any mention of animals, animal welfare, or humane treatment. In fact, the DMR is expressly tasked with “promot[ing] and develop[ing] the Maine coastal fishing industries,” a purpose that may often be at odds with the humane treatment of animals used by the industry.

Second, even if the DMR’s purpose were read to include the welfare of animals—which it does not—the agency’s purpose is focused largely on “coastal” regions and may not encompass inland aquaculture facilities such as Cooke Aquaculture’s Bingham hatchery, where Animal Outlook documented numerous instances of abuse and neglect.

Finally, if the legislature intended the DMR to bear this responsibility, evidence suggests that such a duty could have been—but was not—transitioned from the DACF to the DMR. In 2019, the Maine Legislature passed L.D. 1763, a bill that transitioned the responsibility for licensing of land-based aquaculture facilities from the DACF to the DMR.<sup>86</sup> While L.D. 1763 explicitly transferred the aquaculture facility licensing portion of the DACF’s duties to the DMR, the bill lacks any transfer of authority regarding oversight for the welfare of animals in these facilities. Clearly, Maine law provides a vehicle to transfer such responsibility between agencies and in fact, L.D. 1763 or another bill could have transferred oversight for the welfare of fish in aquaculture facilities, but did not. Accordingly, the responsibility for the welfare of animals in aquaculture facilities remains squarely with the DACF.

The DACF’s assertion that the Department of Inland Fisheries and Wildlife (“DIFW”) bears this responsibility fares only slightly better. The DIFW was established:

to preserve, protect and enhance the inland fisheries and wildlife resources of the State;

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<sup>85</sup> 7 M.R.S. § 3902.

<sup>86</sup> An Act To Transfer Responsibility for Licensing of Land-based Aquaculture from the Department of Agriculture, Conservation and Forestry to the Department of Marine Resources L.D. 1763, 129<sup>th</sup> Me. Legis. (2019).

to encourage the wise use of these resources; to ensure coordinated planning for the future use and preservation of these resources; to provide for effective management of these resources; and to use regulated hunting, fishing and trapping as the basis for the management of these resources whenever feasible.<sup>87</sup>

Admittedly, the DIFW “has responsibility for investigations carried out on behalf of the State in matters related to the status and needs of any inland fisheries and wildlife species,”<sup>88</sup> a delegation that could theoretically encompass the welfare of fish in aquaculture facilities. However, a closer look at the duties of the DIFW reveals that the agency’s fishing responsibilities are largely focused on things such as fishing licenses and permits,<sup>89</sup> the stocking of inland lakes and streams,<sup>90</sup> and the protection of endangered species near proposed aquaculture facilities—not on commercial aquaculture.<sup>91</sup> Safeguarding the welfare of fish used in industrial aquaculture is not within the DIFW’s scope.

4. The DACF should formally acknowledge accountability for and take measures to provide robust oversight for the welfare of animals in aquaculture facilities.

Maine cannot simultaneously seek to “become a global leader in land-based aquaculture”<sup>92</sup> and exercise no oversight of the welfare of fish in aquaculture facilities. Aquaculture is already a large industry in Maine, and Governor Mills’s 10-year plan to expand it<sup>93</sup> only makes this a bigger issue. Maine law requires that the DACF is accountable for the welfare of *all* animals in the state, including animals used in the state’s booming aquaculture industry. DACF’s arguments that it is

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<sup>87</sup> 12 M.R.S. § 10051.

<sup>88</sup> 12 M.R.S. § 10103.

<sup>89</sup> *Fishing in Maine*, MAINE DEP’T. OF INLAND FISHERIES AND WILDLIFE, <https://www.maine.gov/ifw/fishing-boating/fishing/index.html> (last visited Mar. 14, 2021).

<sup>90</sup> *Hatcheries*, MAINE DEP’T. OF INLAND FISHERIES AND WILDLIFE, <https://www.maine.gov/ifw/fish-wildlife/hatcheries/index.html> (last visited Mar. 14, 2021).

<sup>91</sup> *Aquaculture in Maine*, MAINE DEP’T. OF MARINE RESOURCES, *Conducting* <https://seagrant.umaine.edu/wp-content/uploads/sites/467/2019/03/2011-dmr-conducting-aquaculture-in-maine.pdf> (last visited Mar. 14, 2021).

<sup>92</sup> *Land Based Aquaculture*, MAINE DEP’T. OF ECONOMIC AND COMMUNITY DEVELOPMENT, <https://www.maine.gov/decd/businessdevelopment/landbasedaquaculture> (last visited Feb. 28, 2021).

<sup>93</sup> Sam Hill, *Maine’s 10-year economic development plan spotlights aquaculture*, SEAFOOD SOURCE, (Jan. 23, 2020), <https://www.seafoodsource.com/news/aquaculture/maine-10-year-economic-development-plan-spotlights-aquaculture> (last visited Feb. 28, 2021).

ill-equipped and underprepared do not justify its shirking of this mandatory mission. The DACF should undertake rulemaking to formally acknowledge its accountability for the welfare of fish used in aquaculture in Maine and should adopt and implement the measures it needs—such as staff training—to ensure the agency can protect the millions of animals used in this industry from cruelty and neglect, as the Maine State Legislature has tasked it to do.

**B. Maine should pass aquaculture BMPs through robust rulemaking and not arbitrarily defer to low standards set by the aquaculture industry.**

Maine law places the momentous responsibility of determining the legality of practices impacting the welfare of millions of animals on the DACF, a determination that should be made with great care and deliberation. Maine’s animal cruelty statute provides for an affirmative defense to animal cruelty when “the animal is kept as part of an agricultural operation and in compliance with best management practices for animal husbandry as determined by the department.”<sup>94</sup>

The investigation of Cooke Aquaculture reveals the critical nature of such a determination. In the course of that investigation, the DACF arbitrarily accepted guidance from the aquaculture industry—the very industry that profits from packing more fish into each tank and handling them more rapidly—and without any further consultation or public input, turned that industry guidance into law for millions of sentient animals across the state of Maine. The DACF’s investigative report on Cooke Aquaculture plainly states that the DACF, short on resources, undertrained, and ill-equipped to handle an aquaculture investigation, simply deferred to the aquaculture industry itself to set BMPs that will dictate the suffering of millions of animals for years to come. The report states that the AWP reviewed GAA Best Aquaculture Practices (“BAPs”) online and then directly contacted GAA.<sup>95</sup> After the call, the AWP was “able to ascertain that the BAP’s [sic] are what the

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<sup>94</sup> 7 M.R.S. § 4011.

<sup>95</sup> Dep’t of Agric., Conservation, and Forestry, Animal Welfare Program Final Investigative Report on Cooke

state would consider Best Management Practices (BMPs) for this type of farming.”<sup>96</sup> Moreover, “[u]pon review of (a blank inspection form provided by GAA), it was determined by AWP that the state can recognize GAA BAPs as best management practices by the state for the purpose of the investigation since the state does not currently have BMPs in place for this type of agriculture.”<sup>97</sup>

The consequences of this decision cannot be overstated. Faced with a complex and unfamiliar subject matter, the Maine government’s organization in charge of animal welfare—the AWP—unilaterally and without any input or consideration beyond a single telephone conversation with the aquaculture industry and review of a blank form, accepted the industry’s low standards as the state’s BMPs, standards that will ultimately dictate how countless animals will be treated, handled, and killed in aquaculture facilities across the state.

At Cooke Aquaculture, a single tank often held more than 100,000 fish. Across Maine, there are millions of fish in hundreds of aquaculture facilities. Each fish is a living, sentient being capable of experiencing fear and pain, and yet, with a self-avowed lack of experience, minimal deliberation, and complete deference to the private aquaculture industry, the AWP established unacceptably weak animal welfare standards for every single one of these animals.

The GAA certification program adopted by the DACF has been roundly criticized for lenient standards that allow cruel practices. For example, a 2020 study of aquaculture certification schemes<sup>98</sup> by Compassion in World Farming found the GAA standards deficient in a number of critical animal welfare areas, including:

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Aquaculture, Complaint #20687, p. 2.

<sup>96</sup> *Ibid.*

<sup>97</sup> *Ibid.*

<sup>98</sup> *Fish Certification Schemes*, COMPASSION IN WORLD FARMING, <https://www.ciwf.org.uk/our-campaigns/rethink-fish/fish-certification-schemes/> (last visited Mar. 14, 2021).

- Failure to “enforce a maximum number of fish per square meter for any species other than Atlantic Salmon – and even this number is far higher than what (is recommended) for good welfare”;
- Allowing farms to “use a constant stream of antibiotics as a preventative measure for disease with vet oversight, which increases the chance of antibiotic resistance in humans”;
- Failing to limit how long a fish can be deprived of food, allowing farmers to starve fish for days or weeks, a practice witnessed during Animal Outlook’s investigation that resulted in fish pecking out the pupils of other fish in search of food;<sup>99</sup>
- Failing to require enrichment for farmed fish, “resulting in barren farm environments (that) limit the expression of natural behaviors” and “negative impacts on the physical and mental health of the fish, with many experiencing inescapable and debilitating boredom”; and
- Failing to specify the methods of stunning and killing that should be used for each species, meaning that “countless fish could endure painful deaths . . . that can last over an hour” due to unique physiological characteristics.

The DACF has been tasked with developing robust, meaningful BMPs that would alleviate significant suffering among the millions of fish confined to Maine’s aquaculture facilities. The DACF need not—and should not—defer to the aquaculture industry’s anemic and toothless standards. The agency “may adopt any rules necessary or useful to carry out” Maine’s animal cruelty laws.<sup>100</sup> In fact, Maine law encourages the DACF commissioner to personally acquaint himself or herself with the animal welfare practices and not simply defer to the industry. The law states that the commissioner “shall by personal observation, investigation and correspondence acquaint himself with the methods and wants of practical husbandry.”<sup>101</sup>

At least one other state has established robust aquaculture BMPs without arbitrary deference to the aquaculture industry, and Maine should follow suit. Florida, one of the leaders in

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<sup>99</sup> See *Aquaculture: A Sea of Suffering*, ANIMAL OUTLOOK, <https://animaloutlook.org/investigations/aquaculture/> (last visited Mar. 14, 2021).

<sup>100</sup> 7 M.R.S. § 4017.

<sup>101</sup> 7 M.R.S. § 2.

domestic aquaculture, has created aquaculture BMPs through rulemaking<sup>102</sup> that are “specifically for Florida aquaculture.”<sup>103</sup> These BMPs explicitly prioritize animal welfare, stating:

Successful aquatic animal husbandry demands that animals be held in optimal environments and fed a high quality diet. Aquatic animals intended for human consumption shall be quickly prepared for rapid processing. Euthanasia, slaughter, or depopulation shall be performed quickly and in a manner to limit the stress to the animal. Aquatic animals reared for stocking in public waters shall be transported under optimal environmental conditions.<sup>104</sup>

Pursuant to the state’s emphasis on animal welfare, the BMPs specify other rules and practices focused on animal welfare, including euthanasia, cruelty, shipment, transportation, and the use of chemicals and drugs.<sup>105</sup>

The DACF’s deference to the GAA for establishing animal welfare standards is doubly concerning given the GAA’s failure to enforce these low standards, a fact that suggests the entire certification program is more focused on consumer perception than actually improving the operation of aquaculture facilities. While the GAA purportedly strives to ensure animal welfare, food safety, fair labor practices, and environmental sustainability through its BMPs, it has repeatedly failed. In fact, Cooke Aquaculture was a GAA-certified facility at the time of Animal Outlook’s investigation. Yet despite the evidence Animal Outlook captured, the GAA conducted an audit afterward and allowed Cooke to retain its certification—essentially dismissing the hours of cruelty and neglect *documented on video* and concluding instead that it “accepted the corrective actions that Cooke Aquaculture enacted.”<sup>106</sup> When asked why GAA audits failed to detect

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<sup>102</sup> Rule 5L: 3.004 - Aquaculture Best Management Practices Manual, FLORIDA DEP’T OF AGRIC. AND CONSUMER SERV., Rule <https://www.flrules.org/gateway/ruleNo.asp?id=5L-3.004> (last visited Mar. 24, 2021) (“Latest version of the final adopted rule presented in Florida Administrative Code.”)

<sup>103</sup> *Aquaculture Best Management Practices, 2016*, FLORIDA DEP’T OF AGRIC. AND CONSUMER SERV., [https://www.fdacs.gov/content/download/64045/file/BMP\\_Rule\\_and\\_Manual\\_FINAL.pdf](https://www.fdacs.gov/content/download/64045/file/BMP_Rule_and_Manual_FINAL.pdf) (last visited Mar. 14, 2021).

<sup>104</sup> *Ibid.*

<sup>105</sup> *Ibid.*

<sup>106</sup> C. White, *Maine, GAA conclude audits into Cooke’s Bingham facility accused by vegan activist group of cruelty*

conditions exposed and recorded by Animal Outlook, GAA said that it was “not in a position to comment”<sup>107</sup> and provided no further explanation for its program’s failure.

Cooke Aquaculture is not the only example where GAA failed to enforce its own standards. In 2013, a GAA-certified seafood facility was found responsible for instances of labor abuse. This behavior fell out of line with both GAA’s BAPs as well as labor laws.<sup>108</sup> Yet despite noncompliance with BAPs, the facility did not lose GAA certification as an audit conducted well after the violations occurred concluded that there was “no evidence . . . substantiating the severe allegations.”<sup>109</sup>

Both in Maine and beyond, the GAA certification program and its low standards have proven incapable of preventing violations, including cruelty to and neglect of fish confined to aquaculture facilities. The DACF is fully authorized to pass aquaculture BMPs through rulemaking. Florida, a leader in the aquaculture industry has done just that and has chosen to prioritize the welfare of fish in aquaculture facilities. Maine, with its burgeoning aquaculture industry, should follow suit and initiate the development of aquaculture BMPs through rulemaking versus simply deferring to the aquaculture industry.

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*to animals*, SEAFOOD SOURCE, (Nov. 22, 2019), <https://www.seafoodsource.com/news/aquaculture/maine-gaa-conclude-audits-into-cooke-s-bingham-facility-accused-by-vegan-activist-group-of-cruelty-to-animals> (last visited Mar. 12, 2021).

<sup>107</sup> P. Withers, *N.B. seafood giant won't be disciplined after animal cruelty investigation*, CBC, (Dec. 11, 2019), <https://www.cbc.ca/news/canada/nova-scotia/cooke-aquaculture-hidden-camera-maine-agriculture-department-investigation-1.5392581> (last visited Mar. 12, 2021).

<sup>108</sup> *GAA Responds to Labor Abuse Accusations at Thai Facility*, GLOBAL AQUACULTURE ALLIANCE, (June 2013), <https://www.aquaculturealliance.org/blog/gaa-responds-to-labor-abuse-accusations-at-thai-facility/> (last visited Mar. 24, 2021).

<sup>109</sup> *GAA Takes Action Following Labor Allegations at Narong Seafood*, GLOBAL AQUACULTURE ALLIANCE ((July 2013), <https://www.aquaculturealliance.org/blog/gaa-takes-action-following-labor-allegations-at-narong-seafood/> (last visited Mar. 24, 2021).

## **VI. CONCLUSION**

Maine law plainly designates the DACF as the agency accountable for ensuring the humane and proper treatment of animals across the state. This responsibility unquestionably includes fish used in aquaculture facilities. Science has demonstrated that these animals are conscious, sentient beings capable of pain and suffering and worthy of protection. Yet, while the Maine aquaculture industry booms, the millions of fish languishing in aquaculture facilities across the state have essentially no protections from cruelty and neglect.

The DACF has openly abdicated its responsibility for oversight of these animals' welfare and, in doing so, has allowed the private aquaculture industry to establish its own self-serving standards for how fish may be treated in Maine. The DACF must remedy this troubling gap in Maine's regulatory scheme. Pursuant to this petition, the DACF should initiate rulemaking proceedings to (1) formally acknowledge its oversight of the welfare of fish in state aquaculture facilities, and (2) adopt meaningful BMPs to ensure their protection.

## **VII. APPENDIX**

1. Verified and certified signatures of registered voters
2. Oath of petition circulator
3. Materials circulated during petition drive
4. Animal Outlook's Summary of Findings from Undercover Investigation of Cooke Aquaculture (June 12, 2019)
5. Letter from Becca Franks, Ph.D., Visiting Assistant Professor, Department of Environmental Studies, New York University to Mike Wolf, former Director of Investigations, Animal Outlook regarding Cooke Aquaculture Investigation (June 6, 2019)
6. Animal Outlook's Cooke Aquaculture Animal Cruelty Documentation and Legal Evaluation (June 12, 2019)
7. Department of Agriculture, Conservation, and Forestry's Animal Welfare Program Final Investigative Report on Cooke Aquaculture – Complaint #20687
8. Freedom of Access Act request from Will Lowrey, Legal Counsel, Animal Outlook to Shannon Ayotte, Secretary Specialist, Department of Agriculture, Conservation, and Forestry (March 5, 2021)
9. Email from Shannon Ayotte, Secretary Specialist, Department of Agriculture, Conservation, and Forestry to Will Lowrey, Legal Counsel, Animal Outlook (March 8, 2021) responding to Freedom of Access Act request
10. Florida Department of Agriculture and Consumer Services, Aquaculture Best Management Practices Manual (November 2016)