



**ENVIRONMENT COMMITTEE PUBLIC HEARING – MARCH 6, 2020**

**TESTIMONY ON:**

**S.B. No. 299 (RAISED) AN ACT CONCERNING THE DISTRIBUTION OF SINGLE-USE PLASTIC STRAWS;**

**S.B. No. 301 (RAISED) AN ACT CONCERNING THE USE OF CHLORPYRIFOS;**

**H.B. No. 5339 (RAISED) AN ACT PROHIBITING THE RELEASE OF HELIUM BALLOONS INTO THE ATMOSPHERE; AND**

**H.B. No. 5341 (RAISED) AN ACT PROHIBITING THE SALE AND BREEDING OF CERTAIN CETACEANS**

The Maritime Aquarium at Norwalk is interested in providing testimony for the above bills in consideration by the Environment Committee, and thanks Co-Chairs Senator Cohen and Representative Demicco, Vice-Chairs Senator Kushner and Representative Gresko, Ranking Members Senator Miner and Representative Harding and esteemed members of the Environment Committee.

The following testimony is in support of **S.B. No. 299 (RAISED) AN ACT CONCERNING THE DISTRIBUTION OF SINGLE-USE PLASTIC STRAWS; S.B. No. 301 (RAISED) AN ACT CONCERNING THE USE OF CHLORPYRIFOS; and H.B. No. 5339 (RAISED) AN ACT PROHIBITING THE RELEASE OF HELIUM BALLOONS INTO THE ATMOSPHERE.** We are also providing testimony in opposition to **H.B. No. 5341 (RAISED) AN ACT PROHIBITING THE SALE AND BREEDING OF CERTAIN CETACEANS** on behalf of The Maritime Aquarium at Norwalk (TMA).



## **I) Institutional Background**

The Maritime Aquarium at Norwalk is a not-for-profit institution whose mission is to inspire people of all ages to appreciate and protect Connecticut's greatest natural resource, Long Island Sound and its ecosystem. We accomplish our mission with three major pillars that define our work: presenting dynamic, entertaining, and educational exhibits to 500,000 visitors annually; connecting with 80,000 students and children from throughout the CT-NY-NJ tri-state area, each year, through a wide range of programs and activities inside the Aquarium; in schools throughout the region; along the coasts, tidal basins, estuaries and marshes of Connecticut with shore-based activities; and on the RV *Spirit of the Sound*, our floating classroom where many children get to experience being on a vessel for the very first time as they learn about marine life in Long Island Sound.

The Maritime Aquarium is committed to exemplary animal care and welfare, educational and inspiring guest experiences, and a sustainably managed and healthy Long Island Sound ecosystem. Our research and conservation work includes numerous field projects in the Sound and its watershed, as well as cooperative efforts as far away as South America. We are one of three institutions in Connecticut to receive the prestigious accreditation of the Association of Zoos & Aquariums (or AZA).



**II) S.B. No. 299 (RAISED) AN ACT CONCERNING THE DISTRIBUTION OF SINGLE-USE PLASTIC STRAWS and H.B. No. 5339 (RAISED) AN ACT PROHIBITING THE RELEASE OF HELIUM BALLOONS INTO THE ATMOSPHERE.**

We strongly support both of these bills as they focus, in different ways, on removing plastics from our environment.

The issue of plastics in the environment is a serious concern. Plastics are pervasive in the consumer world – and as a result - are pervasive in our environment... particularly the oceans.

Statistics about plastics in the ocean are frightening:

- An estimated 9 million tons of plastic enter the oceans every year <sup>1</sup>
- By the year 2050, by weight, there may be more plastic in the ocean than fish.<sup>2</sup>
- Plastics in the environment never fully decompose. Instead, they break down into smaller and smaller pieces – eventually into microplastics – that remain in the environment.
- The United Nations Educational, Scientific and Cultural Organization estimates that plastic in our oceans kills more than 1 million sea birds per year and at least 100,000 mammals each year.<sup>3</sup>

Recycling is not enough. We must divest ourselves of the use of plastics.

Plastics will be difficult to remove from their use in durable goods, like auto parts, plumbing pipes and electronics. What we can easily fix now is our reliance on single-use plastics, which allow for quick consumer conveniences but with long-term environmental consequences. We must also look for ways to reduce direct sources of plastic debris – like helium balloons that often end up in the ocean once they fall from the air.

As a leader in Long Island Sound and ocean conservation, The Maritime Aquarium at Norwalk is doing its part for the environment by significantly reducing its employ of single-use plastics.

Gone from our facility are all drinking straws. Guests now have the option of boxed water or beverages in glass and aluminum containers, instead of in plastic bottles. Additionally, plastic



silverware, coffee lids and food containers have been replaced by biodegradable substitutes. Even our condiment containers have changed. Ketchup, mustard and other condiments are available only in large pump containers, for adding into small biodegradable paper cups. In the Aquarium's gift shop, plush animals no longer are stuffed with plastic beads, toys no longer have cellophane wrapping, and purchases no longer go into plastic bags. We are proud of our efforts at The Maritime Aquarium to eliminate single-use plastics. We embrace the opportunity to continue to educate our guests and our surrounding area on this critical issue.

These efforts reduce the amount of plastic waste generated by our facility – but, more importantly, they exemplify the behavior we want our guests to model within their everyday lives.

Modelling behavior as part of our mission is not sufficient, however, to address the problem. We strongly encourage governments to regulate and set standards of behavior that are in the public interest. Curtailing the automatic distribution of plastic straws and prohibiting the release of helium balloons – are two small ways that our state can make a big, positive impact on the environment. We implore you to support these bills.

<sup>1</sup> Jenna R. Jambeck,\* Roland Geyer, Chris Wilcox, Theodore R. Siegler, Miriam Perryman, Anthony Andrady, Ramani Narayan, Kara Lavender Law *Plastic waste inputs from land into the ocean (2015)* American Association for the Advancement of Science <https://science.sciencemag.org/content/sci/suppl/2015/02/11/347.6223.768.DC1/Jambeck.SM.pdf>

<sup>2</sup> World Economic Forum and Ellen MacArthur Foundation, with analytical support from McKinsey & Company *The New Plastics Economy: Rethinking the future of plastics (February 2016)* [https://www.ellenmacarthurfoundation.org/assets/downloads/news/New-Plastics-Economy\\_Background-to-Key-Statistics\\_19022016v2.pdf](https://www.ellenmacarthurfoundation.org/assets/downloads/news/New-Plastics-Economy_Background-to-Key-Statistics_19022016v2.pdf)

<sup>3</sup> United Nations Educational, Scientific and Cultural Organization (UNESCO) *Facts and Figures on Marine Pollution (2020)* [https://marinedebris.noaa.gov/sites/default/files/publications-files/2015\\_TurningTideonTrash\\_HiRes\\_Final.pdf](https://marinedebris.noaa.gov/sites/default/files/publications-files/2015_TurningTideonTrash_HiRes_Final.pdf)



### III) S.B. No. 301 (RAISED) AN ACT CONCERNING THE USE OF CHLORPYRIFOS.

The Maritime Aquarium at Norwalk is in support of the current outline of the law in banning its use in the State of Connecticut.

This chemical and other organophosphate pesticides are known to cause major detriments to human children<sup>4</sup> and to aquatic animals<sup>5</sup>. Organophosphate pesticide exposure is linked to:

- Developmental delays and neurological problems in children
- Declines in IQ and processing speed
- A higher incidence of ADHD and autism spectrum disorder - with the highest link specifically for chlorpyrifos

The evidence is mounting that ubiquitous exposure can cause serious developmental deficits, with the EPA concluding that those risks exist even at low exposure<sup>5</sup>.

The severe negative effects of this pesticide on humans are paralleled in the animal world.

- Exposed animals are at increased risks for predation - which significantly affects the survival of those species.
- NOAA's National Marine Fisheries Service (NMFS) notes that many animals protected by the Endangered Species Act are likely to be affected by this chemical.<sup>6</sup>
- For Long Island Sound, animals that are expected to experience a reduction in abundance and productivity include shortnose sturgeon, Atlantic sturgeon, and all of the endangered sea turtle summer visitors, to name a few.

Because of these deleterious effects, many other states have already, or are looking to, ban this pesticide. The Maritime Aquarium at Norwalk supports this bill, particularly because it not only bans the use of this deadly pesticide, but also because it provides a way to transition growers to more sustainable methods. We urge you to support it also.

<sup>4</sup> Hertz-Picciotto I, Sass JB, Engel S, Bennett DH, Bradman A, Eskenazi B, et al. (2018) *Organophosphate exposures during pregnancy and child neurodevelopment: Recommendations for essential policy reforms*. PLoS Med 15(10):e1002671. <https://doi.org/10.1371/journal.pmed.1002671>

<sup>5</sup> U.S. EPA. *Chlorpyrifos: Revised Human Health Risk Assessment for Registration Review*. US Environmental Protection Agency Washington, DC; 2016. Document ID: EPA-HQ-2015-0653-0454. Available from: <https://www.regulations.gov/document?D=EPA-HQ-OPP-2015-0653-0454>.

<sup>6</sup> National Marine Fisheries Service. (2017). *Biological Opinion on the Environmental Protection Agency's Registration of Pesticides containing Chlorpyrifos, Diazinon, and Malathion*. Washington, D.C. <http://doi.org/10.7289/V5CJ8BQM>



#### **IV) H.B. No. 5341 (RAISED) AN ACT PROHIBITING THE SALE AND BREEDING OF CERTAIN CETACEANS.**

This bill would be prohibitive of advancing our state's efforts to support the existing NOAA's National Marine Fisheries Service (NMFS) recovery plan for cetaceans, particularly as is relevant for beluga whales in our state.

Our sister institution, The Mystic Aquarium, is equipped with a staff of five full-time scientists dedicated to studying and increasing general knowledge of beluga whales. This team has a long history of conducting research that will benefit the knowledge, management, and future of threatened beluga populations. Having already conducted successful studies of noise impact, stress levels, and reproductive status, to name a few, scientists at Mystic continue to search for and find new methods of ensuring these animals' continued health in human care and in the wild.

Mystic Aquarium's research includes the following investigations:

- Health and the physiological response to environmental stressors
- Development of non-invasive techniques to assess health in wild beluga populations
- Beluga hearing and the potential impacts of marine sound on the wild populations
- Development of photogrammetry to more accurately measure the size, body condition and reproductive status of wild beluga populations
- Dive physiology of belugas to better understand how anthropogenic stressors that interrupt diving are impacting health of wild populations
- Baseline understanding of the microbiome of belugas so that bacterial infections and other diseases adversely impacting beluga populations can be understood
- Evaluating beluga behavior and reproduction patterns in a controlled setting to better understand optimal conditions for reproduction in the wild
- Testing deployment and viability of telemetry devices and cameras for deployment on wild populations

The research being conducted by Mystic Aquarium cannot be done in the wild. As one of the few aquariums registered as a USDA research facility and with a full-time research team specifically dedicated to beluga whales, Mystic Aquarium's work takes place in a state-of-the-art facility designed specifically for the research and care of these animals. The passage of HB 5341 would put the continued advancement of this science in jeopardy, and contribute to an erosion of husbandry and veterinary capacity in the rescue and rehabilitation of wild cetaceans.

#### **V) CONCLUSION**

As a leader in marine science and conservation, The Maritime Aquarium thanks the Environment Committee for its efforts particularly in the areas of conservation and pollution control. Your efforts greatly affect our state and our larger, global community. We thank you for the opportunity to provide testimony on the four proposed bills.