



Connecticut Fund
for the Environment

Save the Sound®

Comments to address the decline of horseshoe crabs in Long Island Sound

Submitted by **Bill Lucey, Soundkeeper.**

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Connecticut Fund for the Environment/Save the Sound is a nonprofit organization representing over 4,200 member households and 10,000 activists statewide. Our mission is to protect and improve the land, air, and water of Connecticut and the entire Long Island Sound region. We use legal and scientific expertise and bring citizens together to achieve results that benefit our environment for current and future generations.

To: CT Department of Energy and the Environment - Marine Fisheries Division

The management of crab species is difficult given the wide variety of environmental factors and trophic relationships affecting populations over time. Population trends are typically tracked utilizing fishery-dependent catch per unit effort metrics. Fortunately, in Long Island Sound (LIS) there are additional datasets available to managers for LIS horseshoe crab stocks. Trawl surveys from CTDEEP and the Millstone Environmental Program indicate declining abundance as do spawning surveys conducted by the Limulus project run out of Sacred Heart University. All of these surveys indicate a long-term trend of a declining population along with reduced harvest records. It is important to acknowledge that there are confounding factors, such as the correlation between the declining number of fishermen pursuing the whelk fishery and the lack of nearshore juvenile assessments. The most targeted work is that of the Limulus Project which focuses on location specific spawning abundance, which coupled with their work demonstrating site fidelity through tagged individuals indicate a protracted decline in spawning biomass.

Therefore it is appropriate to enact restrictive management options to attempt to reverse the downward population trend. It is our understanding from the commercial harvester community that horseshoe crabs are by far the most effective bait for the whelk fishery therefore we do not support a full moratorium. Bait conservation and bait mixing will be necessary with reduced availability and could affect harvest rates. However, to test the effectiveness of a management action the change must be large enough to significantly reduce harvest across the entire population to see how it reacts. **Therefore we support “option 4b” presented during the CTDEEP Fisheries Division meeting on February 20th which closes harvest on either side of a changing lunar cycle.** This is the time that large aggregations come onto a beach to spawn.

Protecting spawning periods will theoretically increase larval production which may increase cohort strength. Larger cohorts should have an increased ability to survive pressures such as interspecies competition with invasive crustaceans, higher trophic predation and changing environmental conditions.

It is our opinion that commercial harvest is just one pressure on the population and not necessarily, nor likely, the primary cause of decline. There are probably several other factors in play causing the decline such as poor water quality, changing food webs, loss of spawning habitat and impacts from invasive crab species. However, when populations reach critically low levels it is important to manage the factors we have control over. It is unfortunate that once again the commercial fishing industry may have to take the brunt of conservation measures for a situation likely created by society as a whole.

In conclusion, regardless of which management option is selected, the measures should be mirrored by similar actions taken in New York's jurisdictional waters of Long Island Sound to create a level playing field for harvesters.

Respectfully submitted,

/s/ Bill Lucey

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