July 28, 2010

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Subject: HSC Draft Addendum VI

Dear ASMFC,

Thank you for the opportunity to comment on **Draft Addendum VI to the Horseshoe Crab Fishery Management Plan.** Delaware Riverkeeper Network, NJ Audubon Society, American Littoral Society, NJ Conservation Foundation and Defenders of Wildlife do not support any of the options presented in Addendum VI.

We are opposed because there is no stand alone option for a full moratorium. A full moratorium option: is warranted by the data, is commensurate with legislation in force in one of the primary affected states, and is an option that has been placed for consideration in several of the previous Addendums that have struggled to address the harms to horseshoe crabs and migratory shorebirds that resulted from continued overharvesting. Failure to provide this as a viable option for consideration is arbitrary and capricious.

We are also opposed because of the inclusion of an option entirely reliant upon a model whose core assumptions and details have been questioned and challenged by scientific experts participating in the committees developing the model. While the concept of using a model in decisionmaking may be of future value, the model as it is currently structured, including some critical base assumptions, is not ready for real world use.

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We urge you to include in Addendum VI a stand-alone moratorium option and to select that option for implementation until such time as the experts' questions, concerns and challenges raised with regards to the ARM model are settled and the model is proven predicatively accurate with real world data so that in the future the ARM model may be successfully and effectively used for informing good decisions regarding horseshoe crabs, associated migratory shorebirds and other species dependent upon the horseshoe crab populations.

If you are unwilling to modify Addendum VI to include the stand along moratorium option, we urge you in the alternative to then adopt option 3 and put in place as part of that adoption a full moratorium on the harvest of both sexes of horseshoe crabs until all questions, concerns and scientifically based challenges to the model have been resolved. The option is currently written so as to adopt the ARM model and allow it to select which harvest package to implement – but in light of the scientific challenges at this time that could not yield an acceptable or defensible result.

According to the "Update to Status of the Red Knot Calidris canutus in the western Hemisphere, April 2010" issued by 19 scientific experts and institutions researching this issue in close and careful detail, while in 2009 egg densities on bay beaches did show some increases, those increases are merely a return to the low levels of recent years (i.e. 2005), and "there is no evidence of a significant increase in the mature horseshoe crab population". And there has not been a trend of increase in Red Knots or other shorebirds that suggests they are on the path to recovery and that therefore are no longer in need of, or entitled to, protection of their primary migratory food source, horseshoe crab eggs on the Delaware Bay stopover.

Regarding horseshoe crabs in the Delaware Bay, the Delaware Trawl Survey shows no significant trend of increase; neither does the Virginia Tech Offshore Trawl Survey. While there has been some indication of an increase in juveniles, the 2008 to 2009 data is not statistically significant and was not reflected throughout the area surveyed[1] and so cannot be reliably used to support the assertion of increased or demonstrated and sustainable recovery.

Even if there was a bump up in the number of crabs and/or eggs and/or shorebirds, the numbers are so far below historic levels this increase cannot be used to justify a return to business as usual – i.e. harvest of horseshoe crabs for use as bait of other species that are themselves in decline (such as eel and conch).

[1] Source: Update to Status of the Red Knot Calidris canutus in the western Hemisphere, April 2010

Furthermore, if one were to accept the assertion that there has been a minor bump up in 2009 of horseshoe crabs and/or eggs and/or shorebirds, to suggest that minor increases in a single year justifies a return to increasing harvest levels is indefensible. After all, it took shorebird, horseshoe crab and conservation organizations well over a decade of demonstrated and significant declines in birds and crabs and eggs to convince the ASMFC to take any action towards their successful protection. Why is it that a one year perceived bump up by some can be used to justify increased harvests when, by comparison, years of decline were not accepted as grounds for protection until precariously low levels were recorded for birds and crabs? In fact, with this in mind, "Mature and newly mature crabs, especially females, are the most important demographic groups in terms of producing eggs for birds; the relative abundance of both seems to have peaked during 2006-2008 but shown a decline in 2009."[2] So in fact if we want to go by a single year's data, it shows that crabs are still on the decline and so greater protections, i.e. a full moratorium, is needed and warranted.

In characterizing the horseshoe crab population as increasing – supporters of harvest are quick to compare this to a lack of population increase in shorebirds, specifically red knots. The suggestion is that horseshoe crab protections have not worked/are not warranted because it has not resulted in an immediate recovery of the shorebirds. This line of thinking is also highly flawed.

- ✓ First, those characterizing the crab increase are apparently including an increase in juveniles in their assessment. Historically the number of juveniles has not been included in the assessment of increase as related to shorebirds out of recognition that juveniles are not able to produce the eggs needed by the birds. Therefore, an increase in juveniles does not support renewed argument for harvest, as harvesters do not distinguish between adults and juveniles and in fact are eager to take the older and therefore larger breeding crabs for their harvest activities – the result being an increasing loss of breeding females and therefore needed eggs.
- ✓ Second, the volume of crabs and eggs is still far below historic levels – whereas in the past scientists found 50,000 eggs per square meter, over the last decade (2000-2009) trends indicate that the mean density of horseshoe crab eggs on NJ beaches has been 3,231 eggs/square meter over the last decade (2000-2009), and despite good conditions this year (2010) for spawning, the mean density of HSC eggs available to shorebirds (top 5cm of sand) remained at only 4,994 eggs/square meter. A slight increase in eggs to this degree does not provide the volume of nutrition needed to support the growth and increase of the shorebird populations dependent upon them.
- ✓ Third, that there hasn't been an immediate increase in migratory shorebird populations is not an indication that a reduction in horseshoe crab harvests is a

[2] Source: Update to Status of the Red Knot Calidris canutus in the western Hemisphere, April 2010

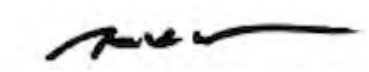
failing solution for protection of shorebirds. The rebound of the ecological balance and populations at issue here are complex and necessarily will take time. The lack of an immediate rebound in birds can in no way be used as a demonstration that protection of horseshoe crabs is not irreplaceably important to the protection and restoration of shorebird populations.

What is most clear is that:

- ✓ Horseshoe crab and shorebird populations remain well below historic levels leaving them highly vulnerable to changing conditions, and therefore actions cannot and should not be taken that risk reducing their numbers further;
- ✓ There is strong debate and challenge about key elements of the ARM model by scientists the ASMFC entrusted with its creation and/or evaluation and therefore it is not a sound basis for decisionmaking at this time; and
- ✓ The most risk averse strategy that provides the greatest chance for restoration of both horseshoe crabs and migratory shorebirds is a complete moratorium on the harvest of horseshoe crabs from the Delaware Bay until these species have recovered to historic levels and/or the ARM model scientific and technical concerns have been resolved to a degree it can be reliably used for interim decisionmaking of alternatives other than a full moratorium.

Therefore, we urge you to put forth and adopt the moratorium option until such time as the horseshoe crabs and the shorebirds have rebounded to historic sustainable levels.

Respectfully submitted,



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