The U.S. Shorebird Conservation Partnership

Building Collaborative Action for Shorebird Conservation

27 April 2016

Mr. Eric Schrading, Supervisor
New Jersey Field Office
U.S. Fish and Wildlife Service
4 East Jimmie Leeds Road, Unit 4
Galloway, NJ 08205-4465

cc: Ms. Wendi Weber, Regional Director, USFWS
Mr. Richard Boornazian, Assistant Commissioner, NJ DEP

Dear Mr. Schrading:

The Council of the U.S. Shorebird Conservation Partnership (USSCP) recommends thorough public review of plans to expand aquaculture activities in sensitive Red Knot habitats in Delaware Bay, including input from the shorebird science and conservation community to design appropriate studies of potential impacts, and establish a formal adaptive management system, before expansion of existing activities proceeds.

The USSCP and its Council are a partnership of individuals and organizations who are expert in the long-term conservation of the Western Hemisphere's shorebirds. USSCP representatives have extensive experience in shorebird conservation, and include Federal agencies, State agencies, and non-governmental organizations. We work collaboratively to address shorebird conservation issues and propose solutions.

We are writing to express our support for improved science and management approaches that minimize the potential adverse effects of near-shore intertidal oyster aquaculture infrastructure and related activities on recovering populations of Red Knots, which depend on abundant eggs of horseshoe crabs as foraging resources to fuel successful long-distance migrations. The Red Knot has recently been assigned the protections of the Endangered Species Act as a threatened species. It is not clear what impacts the proposed aquaculture expansion will have on Red Knot recovery, and it is imperative to understand potential impacts from aquaculture development before proceeding with expanded development activities.

We have two primary concerns with current plans to expand aquaculture in areas where Red Knots use Delaware Bay intertidal and shoreline habitats: 1) the need to rebuild horseshoe crab egg densities to a level that supports a recovered population; and 2) the need to minimize potential disturbance to foraging and sheltering Red Knots.

The fundamental conservation issue in Delaware Bay underlying the status of the Red Knot is their access to intertidal areas with overabundant horseshoe crab eggs that become available for

knot foraging. A key step to the recovery of the population is rebuilding the egg densities to levels required to support foraging red knots, which is estimated at 50,000 eggs/m^2. The area where expansion is proposed is a 4.6-mile stretch of intertidal habitat in Delaware Bay that hosts tens of thousands of Red Knots during migration and accounts for >10% of the spawning beaches of horseshoe crabs. This concentrated use of a stopover site is critical to the Red Knot's recovery. Because a Recovery Plan has not yet been completed, it is impossible to assess the potential impacts of expanded aquaculture on future recovery efforts.

Based on a number of published scientific papers, it is understood that human activity and aquaculture infrastructure could impede recovery of the Red Knot. Such a large-scale expansion of aquaculture in Delaware Bay could have significant impacts on the species' feeding and sheltering behavior. Rebuilding body mass in Delaware Bay is crucial for successful migration of Red Knots to their breeding grounds. We do not currently understand the potential impacts of the aquaculture infrastructure to horseshoe crab movement and reproduction, or to Red Knot weight gain at Delaware Bay, and we recommend these potential impacts be studied carefully before expansion is considered.

We propose that a formal adaptive management system, with a well-conceived study design and sufficient funding for monitoring, evaluation, and formulation of effective management actions, be established before aquaculture development is expanded. There are several untested assumptions in the proposed plans, including: 1) movement of crabs around impediments, 2) the ultimate effects of infrastructure and maintenance activities on egg densities, 3) effects of ATVs on sediment compaction and benthic communities supporting the crabs, and 4) the effects of excluding Red Knots from targeted areas on population size and body condition.

Based on existing science, the risk to Red Knot recovery of the proposed expansion of aquaculture cannot be adequately predicted. Given that the Red Knot is a threatened species, and that this particular stretch of Delaware Bay is so critical to the species' ecology, we recommend generating the needed science to inform the path forward.

Thank you for considering our collective input into this important process.

Sincerely,

Stephen Brown, PhD.
On behalf of the U.S. Shorebird Conservation Partnership Council