



State-listed species habitat in New Bedford Harbor
Craffey, Paul (DEP) to: David Peterson
Cc. Dave Dickerson, Chet Myers

Superior Records Center

SITE: New Bedford

BREAK: 13.1

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Here is information regarding the State-listed species habitat in New Bedford Harbor.

-----Original Message-----

From: Chet Myers [mailto:cm Myers@apexcos.com]

Sent: Friday, March 11, 2011 10:16 AM

To: Craffey, Paul (DEP); Jay Borkland

Subject: RE: State-listed species habitat in New Bedford Harbor



SDMS DocID

512487

Paul,

I believe that is it. The Roseate Tern is federally listed, and both the Roseate and Common Terns are listed as state-listed species. New Bedford Harbor is within the daily flight radius (25 km) of the terns from the nearest known colony (nesting area), which is 17 km away.

If it is helpful, we did some research into whether or not it was likely that either tern was actually utilizing the area north of the Hurricane Barrier for foraging, and we determined that it was extremely unlikely. This was based not only on completed bird surveys conducted that failed to identify these birds inside the Hurricane Barrier (while bird surveys conducted outside of the Hurricane Barrier did identify these species), but also for the following reasons:

1). Food - The primary food source for the Common or Roseate Tern is the American sand lance, whose protective behavior appears to create a significant vulnerability to contaminated sediment. About 70% of the species' diet consists of sand lance. Both the Roseate Tern and the Common Tern forage by plunge-diving (diving from heights of between 1-12 meters and oven submerging to greater than 50 centimeters). Sand lance occur throughout the water column over sandy substrates into which they burrow. The sand lance burrows for rest and escape from predators; hence much time may be spent within the substrate, isolated from the water column. Due to this specific defensive behavior, the sand lance is particularly vulnerable to become contaminated by adjacent contaminated sediment, such as the high levels of PCBs within the contaminated sediment of New Bedford Harbor. It is likely the Common Tern and Roseate Tern's preference for American sand lance is the source of high levels of PCBs found in chicks found dead at Bird Island in 1970, and increased levels of PCBs within existing Roseate and Common Tern colonies. Therefore, foraging within New Bedford Harbor presents a particular risk to the Common and Roseate Tern, who both selectively forage for this fish. It is likely that, if Common and Roseate Terns ever foraged within New Bedford Harbor historically, that their preference for sand lance resulted in bioaccumulation of PCBs within the birds, perhaps resulting in higher chick mortality rates, such as those found dead at Bird Island in 1970. As a result of this preference, it appears that, at least until PCB contamination is removed from New Bedford Harbor, that areas north of the New Bedford Hurricane barrier represent poor foraging habitat for Common or Roseate Terns.

2). Noise - New Bedford Harbor is a highly industrialized area, and produces regular noise of human industrial and commercial activity. This includes the operation and repair of over 500 commercial fishing vessels, operation of dozens of fish processing plants, multiple cargo ship receiving facilities, multiple ship-yards, ferry boats, cruise ships, and repair yards. This activity produces a significant quantity of noise, particularly in the spring,

summer, and early fall, during which the activity within the harbor is at its peak, and when foraging for the Common or Roseate Tern would also be at its peak.

3). Human Activity - Most areas of New Bedford Harbor contain some level of human activity, be it industrial (ship-building, commercial fishing, cargo transport), commercial (recreational sailing or fishing vessels), or recreational (recreational fishing along the shoreline, recreational boating, mooring, canoeing or rowing). It is likely that this level of activity would be discouraging to the Common or Roseate Tern.

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-----Original Message-----

From: Craffey, Paul (DEP) [mailto:Paul.Craffey@state.ma.us]
Sent: Wednesday, March 09, 2011 10:59 AM
To: Jay Borkland; Chet Myers
Subject: FW: State-listed species habitat in New Bedford Harbor

Are there any other endangered or rare species in New Bedford Harbor?

-----Original Message-----

From: Peterson.David@epamail.epa.gov [mailto:Peterson.David@epamail.epa.gov]
Sent: Tuesday, March 08, 2011 10:09 AM
To: Craffey, Paul (DEP)
Cc: dickerson.dave@epamail.epa.gov
Subject: State-listed species habitat in New Bedford Harbor

Paul,

My understanding is that there are two species the state has designated the harbor rare species habitat for - the Common and Roseate Terns (as feeding areas). The state habitat designation number for the harbor is WH 2066. Do you know if there are any other state-listed species covered by the state-designation?