

From: [Dawn Whitehead](#)
To: [Orms, Mary](#)
Subject: Re: [EXTERNAL] Fw: Photos from the SpaceX debris field
Date: Friday, April 28, 2023 10:42:28 AM

You please and it needs to go to Joan for review. Amy wanted it to go pretty quickly and say if this or this occurred then we recommend reopening the consultation.

Get the proper process documented

[Sent from Yahoo Mail for iPhone](#)

On Friday, April 28, 2023, 10:32 AM, Orms, Mary <mary_orms@fws.gov> wrote:

Looks bad. Are we, or are you or me, preparing a draft letter for reinitiation?

From: Dawn Whitehead <edwhitehead@yahoo.com>
Sent: Friday, April 28, 2023 9:24 AM

To: Orms, Mary <mary_orms@fws.gov>; Perez, Chris <chris_perez@fws.gov>
Subject: [EXTERNAL] Fw: Photos from the SpaceX debris field

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[Sent from Yahoo Mail for iPhone](#)

Begin forwarded message:

On Thursday, April 27, 2023, 11:23 AM, ESG Hound <esghound@substack.com> wrote:

[Open in app or online](#)

Photos from the SpaceX debris field

Environmental Impacts remain unknown

ESG HOUND
APR 27





SHARE

I'm going to cut to the chase here. Unless you've been sleeping under a rock (or rather a mini-van sized exploded concrete block) you're aware that SpaceX's initial launch of the Starship Superheavy caused some damage to the surrounding wildlife habitat. I covered the basics here yesterday:



SpaceX's Texas Rocket Caused a Big Mess - What's Next?

ESG HOUND · APR 26

[Read full story](#)

I've got some photos taken as part of a Biological Survey completed two days after the launch event. These images are all licensed under Creative Commons to be shared by the public and to prevent another claim on them for DCMA shenanigans. I am not the photographer; they can be shared with attribution as outlined on the album linked at the bottom.



A Dead Bobcat can be seen on the Side of Highway 4 in Boca Chica

The Bobcat is not an endangered species. SpaceX was required to increase signage along Highway 4, and use employee shuttle busses as a condition of the PEA/FONSI approval. FAA has not shared the status of these corrective actions.



Northern Bobwhite eggs discolored by a wildfire started by the SN24 test launch.



Northern Bobwhite Eggs - Closeup

This nest is likely abandoned, and the eggs were destroyed as the result of a 3.5 acre fire. The N. Bobwhite is not an endangered species but shares an overlapping habitat with the Piping Plover and Red Knots.



A fresh Snowy Plover nest scrape (bottom) with debris landing marks nearby (top).

The above image shows a scrape (simple sand nest), common to shorebirds in the region, of a Snowy Plover. This is part of the Critical Wildlife habitat protected under the Endangered Species Act. Medium to Large pieces of debris from the pad can be seen in the same image.



Fine concrete containing dust

The above image may look benign, but this soft crushable debris, from the dissicated launch pad, was consistently spread throughout hundreds of acres surrounding the launch pad.

Concrete, when exposed to water, can increase the pH of the water, **often drastically so**, and can be toxic to micro and macrobiota and wildlife. The mixture may contain metals or other pollutants.



“Hundreds to thousands” of pieces of medium to large debris, as shown, were strewn in the habitats adjacent to the launch pad.



Algal Flats, with damage from ejected debris.

These lands may look like a big field of mud, but the surface is a complex and sensitive crust of algae that serves as critical habitat needed for the Piping Plover and Red Knots, two protected species under the Endangered Species Act. There is no known way to facilitate algal formation; it can take 5-10 years to return to its natural state.



Metal Debris in the Boca Chica State Park



A grass fire in the area surrounding the launch site, estimated at 3.5 acres by the Fish and Wildlife Service. Fires *were* expected in the PEA, though the extent and probability was unclear.



Concrete Block with Rebar in the Surrounding State Park

They say an image is worth a thousand words, [so have a look for yourself.](#)

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Thanks for reading! Eric



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