

**From:** [Perez, Chris](#)  
**To:** [Orms, Mary](#); [DeLaGarza, Imer](#); [Gardiner, Dawn](#); [Bilodeau, Stephanie A](#); [Perez, Sonny](#)  
**Subject:** Re: This video shows the extent of damage  
**Date:** Monday, April 24, 2023 7:19:46 AM

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Let me check on that.

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**From:** Orms, Mary <mary\_orms@fws.gov>  
**Sent:** Monday, April 24, 2023 1:59:28 AM  
**To:** DeLaGarza, Imer <Imer\_DeLaGarza@fws.gov>; Perez, Chris <chris\_perez@fws.gov>; Gardiner, Dawn <dawn\_gardiner@fws.gov>; Bilodeau, Stephanie A <stephanie\_bilodeau@fws.gov>; Perez, Sonny <sonny\_perez@fws.gov>  
**Subject:** Re: This video shows the extent of damage

Chris, are they going to map the debris? The take associated with debris and fire plume is found on figure 26 and 27 of the 2022 BO. If debris or fire was outside those boundaries on the figures then we did not analyze that for take associated with debris and heat plume and they may need to reinitiate. Plus we would also like info on sound , decibels levels.

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**From:** DeLaGarza, Imer <Imer\_DeLaGarza@fws.gov>  
**Sent:** Sunday, April 23, 2023 2:03:49 PM  
**To:** Perez, Chris <chris\_perez@fws.gov>; Orms, Mary <mary\_orms@fws.gov>; Gardiner, Dawn <dawn\_gardiner@fws.gov>; Bilodeau, Stephanie A <stephanie\_bilodeau@fws.gov>; Perez, Sonny <sonny\_perez@fws.gov>  
**Subject:** Re: This video shows the extent of damage

Thank you Chris & Stephanie

I will call you first thing Monday morning so we can put things together.

Imer

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**From:** Perez, Chris <chris\_perez@fws.gov>  
**Sent:** Saturday, April 22, 2023 10:27 PM  
**To:** Orms, Mary <mary\_orms@fws.gov>; DeLaGarza, Imer <Imer\_DeLaGarza@fws.gov>; Gardiner, Dawn <dawn\_gardiner@fws.gov>; Bilodeau, Stephanie A <stephanie\_bilodeau@fws.gov>; Perez, Sonny <sonny\_perez@fws.gov>  
**Subject:** Re: This video shows the extent of damage

Was finally able to get to the impacted areas today. Stephanie and I will put something together in a bit more detail. Willy Cupit from TPWD joined us. Large concrete chunks hurled thousands of feet away most apparent at first impression overall. One chunk with rebar measuring 47 inches x 12 inches was found about over 1,000 feet away. On the north side a

large area of white powdery coating which I believe is pulverized concrete blanketed the tidal flats. This I believe was part of a plume which deposited this powdery concrete all the way to Port Isabel. No dead birds were found in any of the areas we searched. Concrete chunks were distributed all over the tidal flats along with impact craters; some of which were more than a foot deep. About 4ac burned on State Park lands south of the launch site. All impacted areas were on State Park lands or SpaceX property. No debris was found on refuge fee owned land. The furthest concrete chunk was found about 2,680 feet away from the pad site. Concrete chunks and rebar were scattered on the beach east of the launch pad. One snowy plover actually remained on the nest even during the launch as captured by our wildlife cam set up the night before, only to be predated by a coyote. One egg remained but still being attended to. This nest was 4,224 feet from the launch site. Another nest of 7 eggs we believe was of a meadowlark was lost in the fire along with several blue land crabs.

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**From:** Orms, Mary <mary\_orms@fws.gov>

**Sent:** Saturday, April 22, 2023 9:03 AM

**To:** Perez, Chris <chris\_perez@fws.gov>; DeLaGarza, Imer <Imer\_DeLaGarza@fws.gov>; Gardiner, Dawn <dawn\_gardiner@fws.gov>; Bilodeau, Stephanie A <stephanie\_bilodeau@fws.gov>; Perez, Sonny <sonny\_perez@fws.gov>

**Subject:** Re: This video shows the extent of damage

Did you get to go on-site yesterday?

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**From:** Perez, Chris <chris\_perez@fws.gov>

**Sent:** Friday, April 21, 2023 10:35:37 PM

**To:** DeLaGarza, Imer <Imer\_DeLaGarza@fws.gov>; Gardiner, Dawn <dawn\_gardiner@fws.gov>; Bilodeau, Stephanie A <stephanie\_bilodeau@fws.gov>; Orms, Mary <mary\_orms@fws.gov>; Perez, Sonny <sonny\_perez@fws.gov>

**Subject:** This video shows the extent of damage

[https://youtu.be/ViAb3vYIh\\_8](https://youtu.be/ViAb3vYIh_8)

The explosion was so extensive it sent concrete chunks flying into the surf. They have to re-design the entire pad. They need a flame diverter or flame trenches and a water deluge system!  
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