

**From:** [Bilodeau, Stephanie A](#)  
**To:** [Perez, Chris](#); [DeLaGarza, Imer](#); [Gardiner, Dawn](#)  
**Subject:** RE: Draft summary to External Affairs for review.  
**Date:** Monday, April 24, 2023 3:20:41 PM

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Hey Chris,

A couple notes:

A piece of concrete approximately 3ft by 2ft with attached rebar was observed around 2,300ft from the launch mount. This just shows that even very large pieces of concrete were thrown a great distance from the pad.

The closest temperature logger is actually about 1,300ft from launch mount.

No dead birds were recovered, but should we mention the Northern Bobwhite nest?

Can we leave the note about the sound data at "there is a possibility for error" and remove the part about calibration? I know it was properly calibrated, just not sure if there was another potential unidentified source of error.

Thanks!  
Stephanie

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**From:** Perez, Chris <chris\_perez@fws.gov>  
**Sent:** Monday, April 24, 2023 1:35 PM  
**To:** DeLaGarza, Imer <Imer\_DeLaGarza@fws.gov>; Gardiner, Dawn <dawn\_gardiner@fws.gov>  
**Cc:** Bilodeau, Stephanie A <stephanie\_bilodeau@fws.gov>  
**Subject:** Draft summary to External Affairs for review.

All:  
See below and let me know if this is ok to send to external affairs or edit as needed and let me know.  
Thanks!

FWS Wildlife Biologist, Stephanie Bilodeau, and Willy Cupit from TPWD, as well as myself first visited the impacted area on Saturday April 22nd. We were not allowed in for more than 48 hours due to safety concerns from the extensive launch pad impacts. Numerous large concrete chunks, stainless steel sheets, metal and other objects hurled thousands of feet away most apparent at first impression overall. Here's what we've determined:

- Total areal extend of the debris field covered about 385 ac.
- Coordination and cooperation with SpaceX was good. However, access to the site was delayed by more than 48 hours due to pad safety concerns.

- No debris was documented on refuge fee-owned lands. All debris located on SpaceX and Boca Chica State Park lands.
- A 3.5 ac fire started south of the pad site on Boca Chica State Park lands.
- Plume cloud deposited what we believe is pulverized concrete as far away as Port Isabel, 6.5 miles to the NW of the pad site.
- Concrete chunks up to 7-inches in size were found as far as 2,680 feet from the pad site.
- No dead birds were recovered.
- Our 3 temperature loggers did not detect significant changes in ambient temperature during the launch. These sensors are placed between 1,456 feet to 3,050 feet away from pad site.
- Sound measuring equipment set up 2 miles from the launch site detected a maximum of 114.9db A-weighted during the launch. Levels above 100db A-weighted lasted for 1 minute (FWS preliminary data). It is important to note that this is not confirmed and there is a possibility for error since equipment may or may not be calibrated exactly.
- We plan to have a follow up meeting with FAA to discuss post launch event.
- Ecological Services is reviewing the need for re-consultation with FAA regarding compliance with the ESA.