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Subject: SpaceX post launch impact assessment
Date: Monday, April 24, 2023 4:35:55 PM

Hi Aubry:

So, 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 staff has been ongoing. 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.
- A plume cloud of what we believe is pulverized concrete deposited material as far away as to city of Port Isabel, some 6.5 miles to the NW of the pad site.
- Concrete chunks 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 and recommendations.
- Ecological Services is reviewing the need for re-consultation with FAA regarding compliance with the ESA.
- FWS will be coordinating with FAA's safety staff on their site assessment.
- The FAA authorized SpaceX to conduct the mishap investigation, in accordance with their FAA-approved mishap plan, under FAA oversight. ASA-300's Mishap Response Program is overseeing the investigation.

Let me know if you need anything else or would like to review your draft release.
Thanks!